



U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

Northwest California

Integrated Resource Management Plan

Analysis of the Management Situation Revision

June 2021

Prepared by:
US Department of the Interior
Bureau of Land Management

Cover Photo: Laura Brodhead
Sacramento Rail Trail, Chamise Peak and
Keswick Lake in the Redding Field Office

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APPENDIX

A	Chapter 2 Maps
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ACRONYMS AND ABBREVIATIONS

Full Phrase

°C	degrees Celsius
ACEC	area of critical environmental concern
AMP	allotment management plan
AMS	analysis of the management situation
AOP	annual operating plans
ASR	annual species review
AUM	animal unit month
BLM	Bureau of Land Management
BMP	best management practice
C	custodial
CAL FIRE	California Department of Fire Protection
Cal-IPC	California Invasive Plant Council
CalPIF	California Partners in Flight
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CDF	California Department of Forestry
CDFA	California Department of Food and Agriculture
CDFW	California Department of Fish and Wildlife
CFL	commercial forest land
CFR	Code of Federal Regulations
CMA	Cooperative Management Area
CNDDDB	California Natural Diversity Database
CNPS	California Native Plant Society
COPC	California Ocean Protection Council Science Advisory Team Working Group
CO ₂	carbon dioxide
CO ₂ e	carbon dioxide equivalent
CRMP	cultural resources management plan
CSI	conservation success index
CWA	Clean Water Act
CWMA	coordinated weed management area
CWPP	community wildlife protection plan
DBH	diameter at breast height
DPC	desired plant community
DPS	distinct population segment
dv	deciviews
EA	environmental assessment
EIS	environmental impact statement
EPA	US Environmental Protection Agency
ERMA	extensive recreation management area
ESA	Endangered Species Act
ESU	evolutionary significant unit
FERC	Federal Energy Regulatory Commission

FHWA	Federal Highway Administration
FLPMA	Federal Land Policy and Management Act
FMP	fire management plan
FO	field office
FONSI	finding of no significant impact
Forest Service	United States Department of Agriculture Forest Service
FORVIS	Forest Vegetation Inventory System
FPA	Federal Power Act
FRCC	fire regime condition class
FUP	free use permit
FWFMP	Federal Wildland Fire Management Policy
G	global
GHG	greenhouse gas
GIS	geographic information systems
GVC	Grass Valley Creek
HAP	hazardous air pollutants
HFI	Healthy Forest Initiative
HMA	herd management area
HMP	habitat management plan
HOL	Hands on the Land
HSU	Humboldt State University
I	improve
IDT	interdisciplinary team
ISRMP	Interlakes Special Recreation Management Plan
KGS	known geologic structure
LSR	late successional reserves
M	maintain
MAMU	marbled murrelet
MBF	thousand board feet
MCV	The Manual of California Vegetation
MIST	minimum impact suppression tactics
Mm	millimeters
MMT	million metric tons
MOU	memorandum of understanding
MPR	mineral potential report
MW	megawatts
NAAQS	National Ambient Air Quality Standards
NCA	National Conservation Area
NCCRP	Northern California Coast Range Preserve
NCIP	Northwest California Integrated Resource Management Plan
NCL	national conservation lands
NCSO	Northern California-southern Oregon
NEPA	National Environmental Policy Act
NGO	non-governmental organization

NHPA	National Historic Preservation Act
NHT	National Historic Trail
NISIMS	National Invasive Species Information Management System
NMFS	National Marine Fisheries Service
NPS	National Park Service
NRA	National Recreation Area
NRCS	Natural Resources Conservation Service
NREL	National Renewable Energy Laboratory
NRHP	National Register of Historic Places
NSO	northern spotted owl
NWFP	Northwest Forest Plan
OFM	outcome-focused management
OHV	off-highway vehicle
ONA	outstanding natural area
ORV	outstandingly remarkable value
PFC	proper functioning condition
PG&E	Pacific Gas and Electric Company
PM	particulate matter
PSD	Prevention of Significant Deterioration of Air Quality
R&PP Act	Recreation and Public Purposes Act
R&VS	recreation and visitor services
RAC	resource advisory council
RCD	Resource Conservation District
RCO	resource condition objective
RDM	residual dry matter
Reclamation	Bureau of Reclamation
RM	river mile
RMA	recreation management area
RMP	resource management plan
RNA	research natural area
ROD	record of decision
ROW	right-of-way
R.S.	Revised Statute
RUP	recreation use permit
S	state
SAF	Society of American Foresters
SFP	special forest product
SHPO	state historic preservation office/officer
SIP	[California] State Implementation Plan
SMARA	Surface Mining and Reclamation Act
SOD	sudden oak death
SRMA	special recreation management area
SRP	special recreation permit
SYU-15	Final Timber Management Environmental Assessment: Sustained Yield Unit 15
T&E	threatened and endangered
TCP	traditional cultural property

TMA	travel management area
TMDL	total maximum daily load
USC	United States Code
USDA	United States Department of Agriculture
USDI	US Department of the Interior
USFWS	US Fish and Wildlife Service
USGS	US Geological Survey
VMAP	Vegetation Management Action Portal
VRI	Visual Resource Inventory
VRM	Visual Resource Management
WCF	Weaverville Community Forest
WHT	Wild Horse Territory
WMA	weed management area
WNS	white-nose syndrome
WRCS	Western Regional Corridor Studies
WSA	wilderness study area
WSR	wild and scenic river
WUI	wildland urban interface

Chapter I. Introduction

I.1 INTRODUCTION

The US Department of the Interior (USDI), Bureau of Land Management's (BLM), Northern California District, Redding and Arcata Field Offices (FOs) are undertaking resource management planning that will revise and update management direction set forth in their respective current resource management plans (RMPs), including the Arcata Resource Area Resource Management Plan and Environmental Impact Statement Record of Decision (herein Arcata RMP 1992; USDI BLM 1992a), and the Redding Resource Management Plan and Record of Decision (herein Redding RMP 1993; USDI BLM 1993). The planning process will result in the development of a single new RMP that will cover both FOs, titled The Northwest California Integrated Resource Management Plan (NCIP), an environmental impact statement (EIS), and a record of decision (ROD).

The NCIP crosses administrative boundaries and captures efficiencies by sharing FO staff, resources, and contractors throughout the planning process.

The BLM's RMPs form the basis for every action and approved use on BLM-administered lands. A RMP is a planning-level document, generally prepared by BLM FOs for lands within their boundaries, explaining how the BLM will manage areas of public land over a period of time. RMPs contain decisions that guide future management actions and subsequent site-specific implementation decisions, establish goals and objectives for resource management (desired outcomes), and identify measures needed to achieve these goals and objectives (management actions and allowable uses). The BLM develops RMPs and makes decisions using the best information available and extensive public involvement. RMPs may be revised or amended as the BLM acquires information and knowledge of new circumstances relevant to land and resource values, uses, and environmental concerns.

An EIS will be prepared as part of the RMP revision. An EIS is a document required by the National Environmental Policy Act (NEPA) for federal government agency actions that may potentially "significantly affect the quality of the human environment." An EIS describes the positive and negative environmental effects of a proposed agency action and describes alternatives to the proposed actions.

The NCIP will provide management direction for subsequent activity-level planning efforts and site-specific projects that occur in the Arcata and Redding FOs. The NCIP and the EIS will be completed in accordance with BLM planning regulations and requirements set forth by the Federal Land Policy and Management Act of 1976 (FLPMA) and the NEPA and will be prepared in close consultation and collaboration with appropriate tribal governments and federal, state, county, and local agencies. The public will also have opportunities for input throughout the development of the RMP and EIS.

I.2 PURPOSE OF THE ANALYSIS OF THE MANAGEMENT SITUATION

Preparing the analysis of the management situation (AMS) is one of the beginning steps in developing an RMP. The purpose of the AMS is to summarize the current management of BLM-administered lands, gather data, conduct resource inventories, assess current resource conditions and trends in public use, and identify opportunities for changes to the management of BLM-administered lands. During the development of the RMP and EIS, the BLM staff uses the AMS for internal scoping, formulating a range of

reasonable alternatives, and preparing the “affected environment” and the “no action alternative” sections of the EIS.

The process for the development, approval, maintenance, and amendment or revision of RMPs is initiated under the authority of the FLPMA and the NEPA. The planning process to develop the NCIP includes the following steps:

- Complete the AMS
- Issue a notice of intent to prepare the RMP and associated EIS
- Conduct Public Scoping (the public process to assist in the identification of planning issues)
- Develop alternatives to address planning issues
- Analyze the effects of the alternatives
- Select a preferred alternative
- Prepare a draft RMP/draft EIS
- Provide a 90-day public comment period
- Prepare a proposed RMP/final EIS based on comments received
- Provide a 30-day public protest period upon publication of the proposed RMP/final EIS
- Approve the RMP through a ROD once the protests have been resolved
- Implement, monitor, and evaluate plan decisions

I.3 NEED FOR A NEW RESOURCE MANAGEMENT PLAN

The FLPMA requires that the BLM “develop[s], maintain[s], and, when appropriate, revise[s] land use plans” (43 United States Code [USC] 1712 (a)). Many factors affecting daily management decisions faced by the FOs have changed since the development of the existing Arcata and Redding RMPs (USDI BLM 1992a, 1993). Some of these factors are updated special status species lists, endangered species recovery plans, new developments in alternative energy production, population growth, the advent of geographic information systems (GIS) mapping technology, shifting focus away from annual quotas for forestry and fire programs, and increases in recreational use. Additional resource information, changing social climates, new technologies, and federal mandates have also generated important justifications for revising these RMPs.

An evaluation of the 1992 Arcata RMP (USDI BLM 1992a) was conducted in 2009. The evaluation involved Arcata FO staff, California State Office staff, and staff from other FOs. The evaluation recommended a revision of the RMP, including new planning decisions in order to provide clear program guidance, focused management, and improved ability to facilitate efficient decision-making. The 2009 evaluation found that the Arcata FO was experiencing issues that were not considered in the 1992 RMP and that some resources or issues were addressed only incidentally; these resources or issues now require greater attention, including changes in land tenure, wilderness designations, climate change, new species listings, new forest pathogens, and sea level rise. In addition, changes to BLM policy regarding visual resources, wilderness, climate change, renewable energy potential, travel management, fuels, and invasive, nonnative species have occurred. In particular, wildfire in the region has become uncharacteristically more intense due to climate change and previous suppression policies. Though current wildfire policy has adapted to these changes, there is a need to implement flexible treatment and management strategies.

Evaluations of the 1993 Redding RMP (USDI BLM 1993) were conducted in 2002 and 2009. The evaluation involved staff from the Redding FO, California State Office, and two neighboring BLM FOs (Arcata and Eagle Lake). Both efforts identified a substantial need for a RMP revision. The overarching goal for the Redding RMP 1993 was consolidation of land; however, little attention was given to how newly acquired lands would be managed once they were acquired. The evaluations discovered that while significant progress has been made in the implementation of the RMP, particularly in relation to land tenure objectives for consolidation, the changed land tenure pattern has also triggered the need for resource inventories; it also created new management issues, such as increased public interest in fuels management, the need to reevaluate desired future conditions, and the need to reassess some of the previous determinations regarding area of critical environmental concern (ACEC) and special recreation management area (SRMA) eligibility. Additionally, while the existing Redding RMP continues to provide basic guidance for resource-related activities, resources have also undergone substantial changes in conditions, management objectives, and emerging issues.

Incorporating over two decades of scientific studies and new management approaches into a revised RMP will greatly benefit future decision-making and bring FO planning guidance into compliance with legislative mandates, Executive Orders, departmental policies, and current land management standards. The NCIP will also facilitate coordination of the Arcata and Redding FO land management with that of adjacent public lands managed by the United States Department of Agriculture (USDA) Forest Service (Forest Service), Bureau of Reclamation (Reclamation), US Fish and Wildlife Service (USFWS), other federal and state agencies, and Native American tribes.

I.4 GENERAL DESCRIPTION OF PLANNING AREA, GEOGRAPHIC SCOPE, AND RESOURCES/PROGRAMS

The planning area is the overall geographical area the BLM must consider during the land use planning effort. The planning area boundary includes all lands regardless of jurisdiction or ownership. However, the BLM will only make decisions on lands that fall within the decision area, but it will consider how these decisions affect adjacent lands. The decision area is the subset of BLM-administered lands within the larger planning area for which the BLM has the authority to make land use and management decisions.

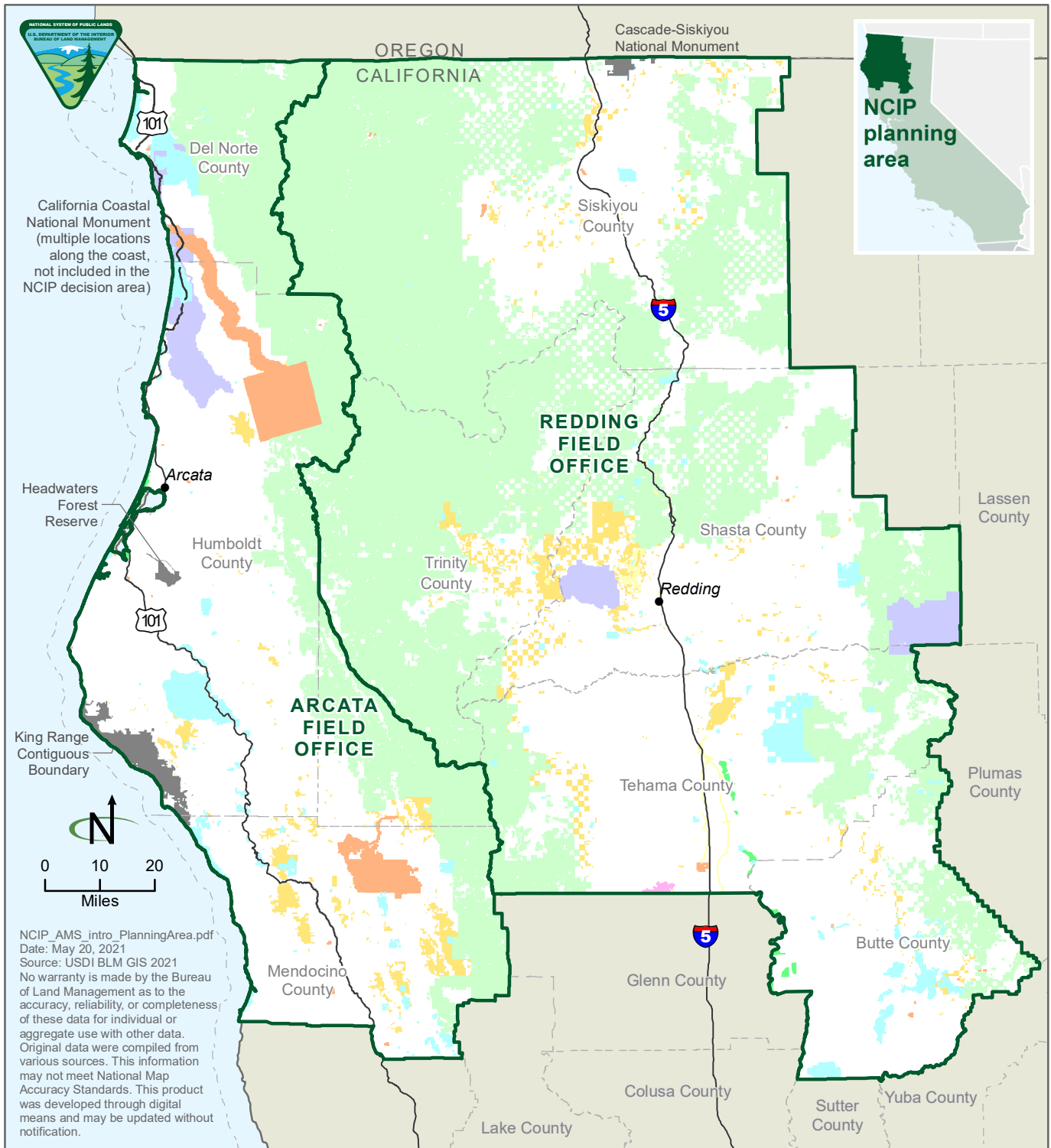
The planning area, approximately 14.4 million acres in northwest California, encompasses lands within the Arcata and Redding FO boundaries of which the BLM manages approximately 382,000 surface acres and an additional 307,000 subsurface (mineral) acres (**Table I-1**). Eight counties fall within the planning area: Mendocino, Humboldt, Del Norte, Siskiyou, Trinity, Shasta, Tehama, and Butte. Approximately 70 percent of the planning area is within the boundaries of the 1994 Northwest Forest Plan (NWFP; USDA and USDI 1994), with eastern areas located outside of the NWFP boundary. Planning will occur over a broad geographic scale, recognizing the unique sets of issues, resources, and communities within the diverse northwestern California region. The planning area and decision areas are shown in **Map I-1**, **Map I-2**, and **Map I-3**.

Table I-1. Geographic Areas Relating to the NCIP Planning Area

Geographic Area	Acres
Planning area total acres	14,458,500
Decision area total acres	689,100
Decision area surface acres	382,200
Decision area subsurface (mineral) acres	306,900

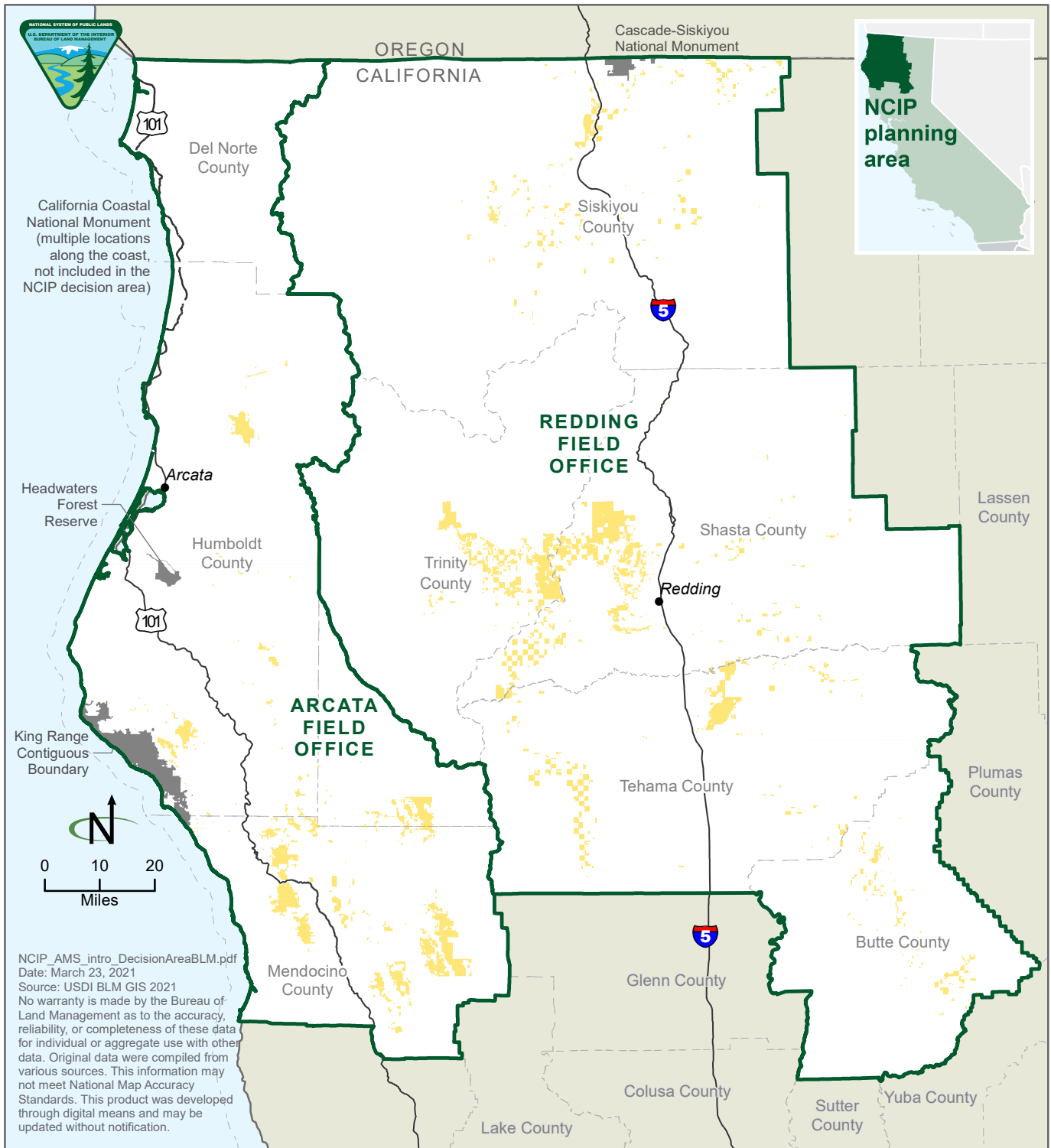
Source: USDI BLM GIS 2021

I. Introduction (General Description of Planning Area, Geographic Scope, and Resources/Programs)



**Map 1-1
Planning Area**

- | | | |
|---------------------------|------------------------------|--|
| Bureau of Land Management | State | Bureau of Reclamation |
| Forest Service | US Fish and Wildlife Service | Other federal |
| Private | National Park Service | Not included in the NCIP decision area |
| Tribal Reservation | Department of Defense | |



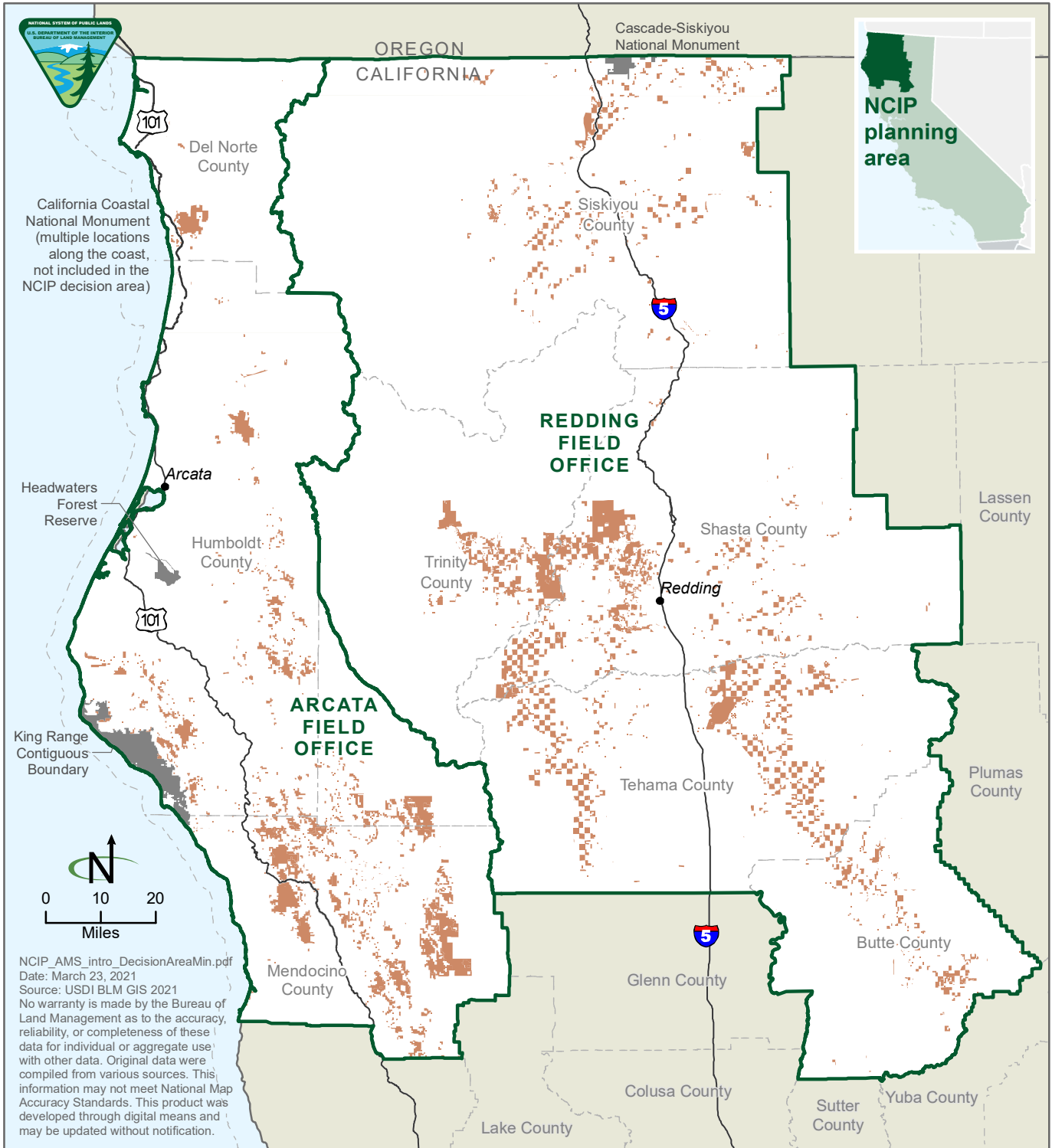
NCIP_AMS_intro_DecisionAreaBLM.pdf
 Date: March 23, 2021
 Source: USDI BLM GIS 2021
 No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data. Original data were compiled from various sources. This information may not meet National Map Accuracy Standards. This product was developed through digital means and may be updated without notification.

**Map 1-2
 BLM Surface Decision Area**

- BLM-administered lands (i.e., the BLM surface decision area)
- Not included in the NCIP decision area

The purpose of the Analysis of the Management Situation (AMS) is to summarize current management on BLM-administered lands and to inventory data in preparation for the resource management plan. The AMS is not considered a decision document.

I. Introduction (General Description of Planning Area, Geographic Scope, and Resources/Programs)



Map 1-3
BLM Subsurface Decision Area

- BLM-administered surface lands and subsurface mineral estate (i.e., the BLM subsurface decision area)
- Not included in the NCIP decision area

BLM-administered lands within the Arcata and Redding FOs are generally surrounded by private lands managed for industrial timber production, ranching, agriculture, and rural home development, although some lands are adjacent to national forests and other state and federal lands (e.g., Reclamation, National Park Service [NPS], and USFWS). The planning area also represents a diversity of social and cultural values. The population within northwestern California has been growing and shifting over the past 20+ years. In some counties, such as Tehama, the population has increased by almost 30 percent.

An assortment of resources is represented within the planning area, which spans from the Pacific coast to the Sierra Nevada, including a diversity of vegetation communities such as coastal dunes, coniferous forest, chaparral, grassland, and oak woodland.

Tribal lands and reservations for a number of federally recognized Native American tribes fall within the planning area. In addition, BLM-administered lands include sacred sites, gathering areas, and other places important to tribes. Management of these lands requires consultation and collaboration between the BLM and the tribes, including development of stewardship contracts within tribal ancestral lands.

The planning area includes four national conservation lands (NCL) units with separate RMPs: Headwaters Forest Reserve (2004), King Range National Conservation Area (NCA; 2005), Cascade-Siskiyou National Monument (2008), and the California Coastal National Monument (2005) (**Map I-1**). This RMP revision will not amend decisions made in these four NCL units; however, it will address the relationship of these four units with the other public lands in the planning area.

The revised RMP must be compatible with recent RMPs for these NCL units. Other NCLs within the planning area include three wild and scenic rivers (WSRs): the Klamath, Trinity, and Eel. In addition to the NCLs, there is a total of 16 ACECs within the planning area, providing important protections and educational opportunities for cultural resources, fish and wildlife resources, and natural systems and processes. Five are designated as ACECs, nine are research natural areas (RNAs), and two are outstanding natural areas (ONAs).

The FLPMA defines ACECs as areas where “special management attention is required . . . to protect and prevent irreparable damage to important historic, cultural, or scenic values, fish and wildlife resources and other natural systems or processes, or to protect life and safety from natural hazards.” RNAs are a type of ACEC; the BLM defines RNAs as “special management areas designated . . . to preserve and protect typical or unusual ecological communities, associations, phenomena, characteristics, or natural features or processes for scientific and educational purposes. They are established and managed to protect ecological processes, conserve biological diversity, and provide opportunities for observation for research and education.” ONAs are also a type of ACEC; the BLM defines ONAs as “an area with high scenic values that has been little altered by human impact” (see **Table 2-69**, below).

Other lands within the planning area include the Six Rivers, Shasta-Trinity, Klamath, Lassen, Plumas, and Mendocino National Forests; Lassen Volcanic and Redwoods National Parks; Whiskeytown and Smith River National Recreation Areas (NRAs); the Sacramento, Castle Rock, and Humboldt Bay National Wildlife Refuges; and Black Butte Lake (managed by the Army Corps of Engineers). Reclamation manages numerous land holdings and facilities within the planning area, including six hydroelectric dams and lands that are co-managed under a memorandum of agreement with the Redding FO near the Shasta

Dam and Keswick Reservoir. In addition to federally managed lands, there are an extensive number of state-managed beaches, parks, wildlife areas, and recreation areas.

I.5 ORGANIZATION OF THE ANALYSIS OF THE MANAGEMENT SITUATION

This AMS is organized into 11 chapters:

- Chapter 1 (*Introduction*)—Provides general information. Explains the purpose of this AMS document and provides an overview of the BLM’s planning process.
- Chapter 2 (*Area Profile*)—Characterizes existing resources, resource uses, special designations, and social and economic conditions within the planning area, including existing conditions, anticipated trends, and forecast, and provides context.
- Chapter 3 (*Current Management Direction*)—Describes current management direction based on existing RMPs and amendments, by program. Chapter 3 creates a foundation for the no action alternative of the EIS.
- Chapter 4 (*Management Opportunities*)—Investigates the effectiveness of current management direction, described in Chapter 3, and identifies possible management opportunities. Chapter 4 guides public scoping and serves as a starting point for alternative formulation for the EIS.
- Chapter 5 (*Consistency and Coordination with Other Plans*)—Lists other non-BLM plans (including land use plans), mandates, and authorities within the planning area the BLM will consider during development of the NCIP. Chapter 5 also identifies opportunities for enhancing coordination or gaining expertise through cooperating agency/tribal relationships.
- Chapter 6 (*Specific Mandates and Authority*)—Describes other laws (federal, state, local), regulations, and policy (including BLM policy) applicable to each resource that must be considered in the development of the NCIP.
- Chapter 7 (*Envisioning Report*)—Summary of the process and results of public “Envisioning” meetings, an early outreach effort focused on gathering information regarding the public’s values for BLM-administered lands.
- Chapter 8 (*Scoping*)—Summary of the process and results of public scoping. The purpose of scoping is to define the early and open process for determining the extent of issues to be addressed in the planning process.
- Chapter 9 (*Contributors*)—Names and roles for members of the NCIP interdisciplinary team (IDT) and others who have assisted with the writing and preparation of this document.
- Chapter 10 (*Glossary of Terms*)—A glossary of terms used throughout the document.
- Chapter 11 (*References*)—Complete list of references used in the development of this document.

Chapter 2. Area Profile

2.1 REGIONAL CONTEXT

2.1.1 Geographic Location

The planning area encompasses approximately 14.4 million acres in northwest California and contains portions of seven US Environmental Protection Agency (EPA) level III ecoregions (EPA 2013 revised): Cascades, Central California Valley, Coast Range, Klamath Mountains/California High North Coast Range, Sierra Nevada, Eastern Cascade Slopes and Foothills, and Central California Foothills and Coastal Mountains. Each ecoregion is described briefly in the sections below.

Cascades

- Mountainous terrain includes both active and dormant volcanoes and has been affected by alpine glaciers. The ecoregion is characterized by steep ridges and river valleys in the west and a high plateau in the east. Elevations range from 800 feet to 14,000 feet.
- The climate is described as mild-to-severe mid-latitude, varying by elevation, with mostly dry warm summers and relatively mild to cool very wet winters. The mean annual temperature ranges from approximately -1 degree Celsius (°C) to 11°C. Annual precipitation ranges from 45 inches to 140 inches.
- The ecoregion is characterized by extensive and highly productive coniferous forests. Lower elevation forests include Douglas-fir (*Pseudotsuga menziesii*), western hemlock (*Tsuga heterophylla*), western red cedar (*Thuja plicata*), big leaf maple (*Acer macrophyllum*), and red alder (*Alnus rubra*). Higher-elevation forests include Pacific silver fir (*Abies amabilis*), mountain hemlock (*Tsuga mertensiana*), subalpine fir (*A. lasiocarpa*), noble fir (*A. procera*), and lodgepole pine (*Pinus contorta*). The southern portion of the ecoregion includes Shasta red fir (*A. magnifica* var. *shastensis*) and white fir (*A. concolor*).

Central California Valley

- The terrain consists of mostly flat fluvial plains and terraces with few low hills with deep, marine and non-marine sedimentary deposits of clays, sands, silts, and gravels. Volcanism is evident where volcanic intrusion is extensive, notably in Tehama County near the Sacramento Bend ACEC. Elevations range from sea level (within the ecoregion, but outside the effective planning area) to about 700 feet. Soils are generally deep, well drained, and loamy or clayey.
- The climate is a mild, mid-latitude Mediterranean climate. The region has long, hot, dry summers and mild, slightly wet winters. The mean annual temperature ranges from approximately 15°C to 19°C. The mean annual precipitation ranges from 5 inches in the south (within the ecoregion, but outside the effective planning area) to 30 inches in the north.
- With some exceptions, the natural vegetation has been changed or lost due to human activities. Historically, the ecoregion contained extensive grasslands and prairies consisting of bunchgrasses, perennial and annual grasses, and forbs. Forest types include valley oak (*Quercus lobata*) savanna and riparian woods of oak (*Quercus* spp.), willow (*Salix* spp.), western sycamore (*Platanus racemosa*), and Fremont cottonwood (*Populus fremontii*).

Coast Range

- The terrain includes steeply sloping dissected mountains, hills and low mountains, coastal headlands, high and low marine terraces, sand dunes, and beaches. Elevations range from sea level to over 4,000 feet. The area is considered geologically young with common occurrences of landslides and debris slides.
- The climate types are described as marine West Coast and Mediterranean-type climates, with warm, relatively dry summers and mild, very wet winters. The mean annual temperature ranges from approximately 6°C to 14°C depending upon elevation and latitude. The mean annual precipitation ranges from about 40 inches to over 200 inches.
- Coniferous forests are prevalent. Sitka spruce (*Picea sitchensis*) forests and coastal redwood (*Sequoia sempervirens*) forests are characteristic of coastal regions, while a mosaic of western red cedar, western hemlock, and Douglas-fir blanket inland areas. Forests in the region have been managed widely for timber production with some areas dominated by forest plantations. Other common species include red alder, big leaf maple, vine maple (*Acer circinatum*), California rhododendron (*Rhododendron macrophyllum*), salal (*Gaultheria shallon*), salmonberry (*Rubus spectabilis*), and Oregon grape (*Berberis* spp.).

Klamath Mountains/California High North Coast Range

- The ecoregion consists of dissected mountainous terrain with steep slopes, folded mountains, foothills, terraces, and floodplains. Elevations range from about 400 feet to over 8,000 feet. The region contains diverse and complex geology and soils. Ultramafic parent material and scattered areas of serpentine soils occur and influence vegetation patterns in some areas.
- The climate is mild, mid-latitude Mediterranean, marked by warm summers with a lengthy summer drought, and mild winters. The mean annual temperature ranges from approximately 5°C at higher elevations to 14°C in valleys and in southern parts of the region. The mean annual precipitation ranges from about 20 inches to over 120 inches in higher terrain.
- The diverse vegetative assemblage includes mixed conifer forests with Douglas-fir, white fir, incense cedar (*Calocedrus decurrens*), tanoak (*Notholithocarpus densifolius*), Jeffrey pine (*Pinus jeffreyi*), Shasta red fir, sugar pine (*P. lambertiana*), ponderosa pine (*P. ponderosa*), chinquapin (*Chrysolepis chrysolepis*), and canyon live oak (*Quercus chrysolepis*). Lower elevations contain chaparral, common juniper (*Juniperus communis*), Oregon white oak (*Q. garryana*) woodlands, madrone (*Arbutus menziesii*), California black oak (*Q. kelloggii*), ponderosa pine, and grasslands.

Sierra Nevada

- The region is characterized by hilly to steep mountain relief. Elevations range from about 1,300 feet up to 14,495 feet on Mt. Whitney, the highest point in the lower 48 United States (within the ecoregion, but outside the effective planning area). Areas of metamorphic and volcanic rocks are mostly found in the northern portion of the ecoregion.
- The climate ranges from severe to mild mid-latitude climate with Mediterranean characteristics. It has mild to hot, dry summers and cool to cold wet winters. The mean annual temperature ranges from approximately -3°C at high elevations to 17°C at low elevations in the southwest. The mean annual precipitation ranges from 6 inches in the eastern lowlands to over 100 inches on high-elevation peaks.

- Vegetation consists of a diverse array of temperate coniferous forests. In the foothills at the lowest elevations, the vegetation grades from chaparral and oak woodland to mostly ponderosa pine on the west side and lodgepole pine on the east side, to mid-elevation mixed conifer forests of ponderosa pine, sugar pine, incense cedar, Douglas-fir, and white fir, to high-elevation white fir and California red fir (*Abies magnifica*) forests. In the subalpine zone, lodgepole pine, Jeffrey pine, western white pine (*Pinus monticola*), limber pine (*Pinus flexilis*), and aspen (*Populus tremuloides*) dominate, with high-elevation alpine conditions also present.

Eastern Cascade Slopes and Foothills

- The Eastern Cascades formed from tectonic uplift with mountain ranges and valleys oriented north-to-south. It is a relatively young ecoregion with lava flows, volcanic cones and buttes common throughout (EPA 2002). Elevations vary widely but most peaks are between 3,000 and 7,000 feet. In the plateau regions, elevation generally varies from 200 to 2,000 feet.
- The Eastern Cascades lie within the rain shadow of the Cascade Mountains. Mean annual precipitation varies from 20 inches in the eastern and southern sections of the ecoregion to 120 inches in the area bordering the higher Cascade Mountains. Precipitation (either rain or snow) occurs mostly in the fall, winter, and spring.
- The ecoregion is dominated by forest cover. Fire has played an important role in forest composition and structure. Ponderosa pine is the dominant tree species, with lodgepole pine common in the drier portions of the ecoregion.

Central California Foothills and Coastal Mountains

- Surrounding the lower and flatter Central California Valley, most of the region consists of open low mountains or foothills, but there are some areas of irregular plains and narrow valleys.
- The Mediterranean climate of hot dry summers and cool moist winters is similar to that described above for the California Central Valley.
- The vegetative cover mainly consists of chaparral and oak woodlands; grasslands occur in some lower elevations, and patches of pine are found at higher elevations. Large areas managed as ranch lands are grazed by domestic livestock. Relatively little land has been cultivated. Natural vegetation includes interior live oak (*Quercus wislizeni*) woodlands and blue oak (*Quercus douglasii*), black oak, and foothill pine (*Pinus sabiniana*) woodlands to the east.

Ecoregions within the planning area are, in general, oriented from north to south (**Map 2-25, Appendix A**). The Klamath Mountains and Coast Range ecoregions comprise the largest proportion of the planning area (**Table 2-1**).

2.1.2 Ecoregion Condition

Although the planning area is generally located in some of the most remote and unpopulated areas in California, people have altered natural ecological conditions in much of the area due to land use and management over the past century or more. Ecoregion condition within the planning area has been affected by the increase in frequency, magnitude, and intensity of wildland fire, population growth, and urbanization, exacerbated by observed and projected climatic changes (see Vegetation Forecast Section 2.2.13.4, **Maps 2-22 through 2-28, Appendix A**). The ecoregions experienced frequent fires from natural ignition sources and through management by Native American tribes. Starting in the early

Table 2-1. Ecoregions of the NCIP Planning Area

Ecoregion	Total Ecoregion Acres	Total Ecoregion Acres within NCIP Planning Area	Percent of Ecoregion within NCIP Planning Area	BLM-Administered acres by Ecoregion within NCIP Planning	Relative Percent (%) of BLM-Administered Lands to Total Acres of Ecoregion within NCIP Planning Area
Coast Range	8,558,484	1,778,457	21%	38,587	2%
Klamath Mountains/ California High North Coast Range	11,949,581	7,588,277	63%	227,986	3%
Sierra Nevada	12,879,128	295,990	2%	3,384	1%
Central California Valley	11,487,979	728,313	6%	489	< 0.1%
Central California Foothills and Coastal Mountains	18,941,138	761,339	10%	91,070	12%
Eastern Cascade Slopes and Foothills	11,137,192	484,789	4%	15,585	3%
Cascades	3,434,702	1,669,106	49%	10,047	< 1%

USDI BLM 2016a

twentieth century, fires were prevented; later in the twentieth century, active fire suppression throughout the region was implemented. Urban and rural development, including structures and roads, has accelerated over time. Below are qualitative and limited quantitative descriptions of changes in each ecoregion occurring within the planning area.

In general, the 382,000 surface acres of BLM-administered lands within the planning area are located both to the west and the east of approximately 6 million acres of National Forest System lands comprising the Klamath, Shasta-Trinity, Six Rivers, and Mendocino National Forests. BLM-administered lands are mostly surrounded by private lands (**Map 1-1**). Because BLM-administered lands comprise only small proportions of individual ecoregions (**Table 2-1**), BLM management has little influence on the overall ecological trajectory of any single ecoregion. However, BLM-administered lands provide unique or rare habitat conditions for plants and animals generally not found on surrounding National Forest System lands. Management of BLM and National Forest System lands within much of the planning area are under the guidance of the NWFP, which focuses on recovery of species dependent on late-seral coniferous forests and on recovery of Pacific salmon species. BLM-administered lands often provide habitat and watershed connectivity with National Forest System lands.

Vegetation changes to ecoregions within the planning area are described below.

Cascades

Forest is the dominant land cover class in the Cascades; in 2000, forest comprised 82.8 percent of the ecoregion (USGS 2012). Results from US Geological Survey (USGS) land cover study (USGS 2012) found that from 1973 to 1992, the ecoregion experienced a net loss of forest of approximately

4,170 square miles. This trend reversed itself during 1992–2000 with a 4,250-square-mile gain in forest. As a result, there was a net gain in forest cover during the study period (USGS 2012). Timber harvest was the dominant reason for this change and focused mostly on private lands within the ecoregion. Much of this loss and gain occurred in the states of Washington and Oregon, outside this planning area.

Central California Valley

USGS (2012) estimates approximately 12 percent of the land cover in this ecoregion was changed between 1973 and 2000. The largest change occurred in grassland cover, which decreased by approximately 5 percent. The dominant conversion of cover type has been from grassland to agriculture. A major driver for change in this ecoregion has been population growth and expansion of urban areas (USGS 2012), especially along the Sacramento River within the planning area.

Coast Range

The ecoregion is dominated by approximately 73 percent forest cover. Overall, forest cover decreased in the ecoregion between 1973 and 2000 by approximately 5 percent, primarily due to timber harvest (USGS 2012).

Klamath Mountains/California High North Coast Range

Approximately 75 percent of the Klamath Mountains ecoregion is forested. Between 1973 and 2000, forest cover was reduced by approximately 1 percent, representing the lowest change of any Pacific Northwest ecoregion. Timber harvest was the primary cause of land cover change (USGS 2012).

Sierra Nevada

The ecoregion is dominated by approximately 70 percent forest currently. Grassland/shrublands comprise approximately 20 percent of land cover. From 1973 to 2000, the ecoregion experienced a 3.5 percent decrease in forest cover. In comparison with other ecoregions, the overall change in cover in this ecoregion is low to moderate (USGS 2012). It is important to note that since the USGS published this information in 2012, recent fires and pests (e.g., bark beetles) have increased in the planning area.

Eastern Cascade Slopes and Foothills

Compared with other ecoregions in the planning area, the land cover in this ecoregion is more diverse, with approximately 53 percent forest cover and 33 percent grassland/shrubland cover. Between 1973 and 2000, the areal extent of land use and land cover change in the Eastern Cascades was 12 percent. Compared with other western ecoregions, change in the Eastern Cascades was above average.

Central California Foothills and Coastal Mountains

The Central California Foothills and Coastal Mountains comprise a mix of grasslands and shrublands. Much of the ecoregion is grazed by domestic livestock. Increases in agricultural activity, especially in the southern portion of the ecoregion that is outside of the planning area, have occurred in recent decades.

2.1.3 Unique or Important Features

BLM-administered lands within the planning area contain unique and important features such as rare vegetation communities, habitat types, geology, and cultural features. Important biotic communities include those associated with ultramafic soils, native dune habitat, low-elevation old-growth Douglas-fir habitat, large river riparian habitat, wetland habitat, vernal pools, and migration corridors.

2.1.4 Climate Change

The planning area is characterized by a Mediterranean climate with warm, dry summers and cool, wet winters (**Chart 2-1**, **Chart 2-2**, and **Chart 2-3**). Rain dominates precipitation in the planning area. However, higher-elevation areas have a winter snowpack that is important in sustaining streamflows in the dry season. The snow-dominated areas, mostly outside of BLM-administered lands, also support vegetation communities not seen in the more rain-dominated systems. **Map 2-1 (Appendix A)** includes air basins, which are geographical divisions the state uses to manage air resources, that are included in the planning area.

Along the coast, the maritime climate promotes milder temperatures with cooler summer high temperatures and warmer winter minimum temperatures compared to inland areas. Coastal fog is common throughout the year, but especially in summer. Coastal vegetation communities reflect this cooler, wetter setting.

Climate change will likely affect BLM-administered lands within the planning area. While projected changes in temperature, precipitation, and sea level rise differ based on modeling assumptions, each of these climate components is expected to change during the implementation of the NCIP. By accounting for the potential effects of climate change during the planning process, the BLM can make management decisions that reflect anticipated impacts on vulnerable resources and therefore assure with higher probability that the BLM can be attaining its stated planning goals.

Tide gauge data show global sea levels have risen approximately 3.4 millimeters per year (.13 inches per decade) since 1993, approximately double the rate of the previous century (California Ocean Protection Council Science Advisory Team Working Group [COPC] 2017). Along the Northern California coastline, ongoing tectonic processes of crustal uplift and subsidence compound observed sea level changes. Where the coast is subsiding, observed sea level changes are greater than global projections. North of Cape Mendocino, where long-term crustal uplift is occurring, sea level rise is expected to be less than global projections, shown by the Crescent City tide gauge recording an average relative sea level change of -0.8 millimeters per year over 84 years (COPC 2017). However, recent work focusing on Humboldt Bay has shown localized subsidence occurring, and the rate of sea level rise is two to three times greater than global projections (Laird 2015; Anderson 2015b; Patton 2013).

Chart 2-1. Mean High Temperatures across the NCIP Planning Area (1981–2010; data from usclimatedata.com)

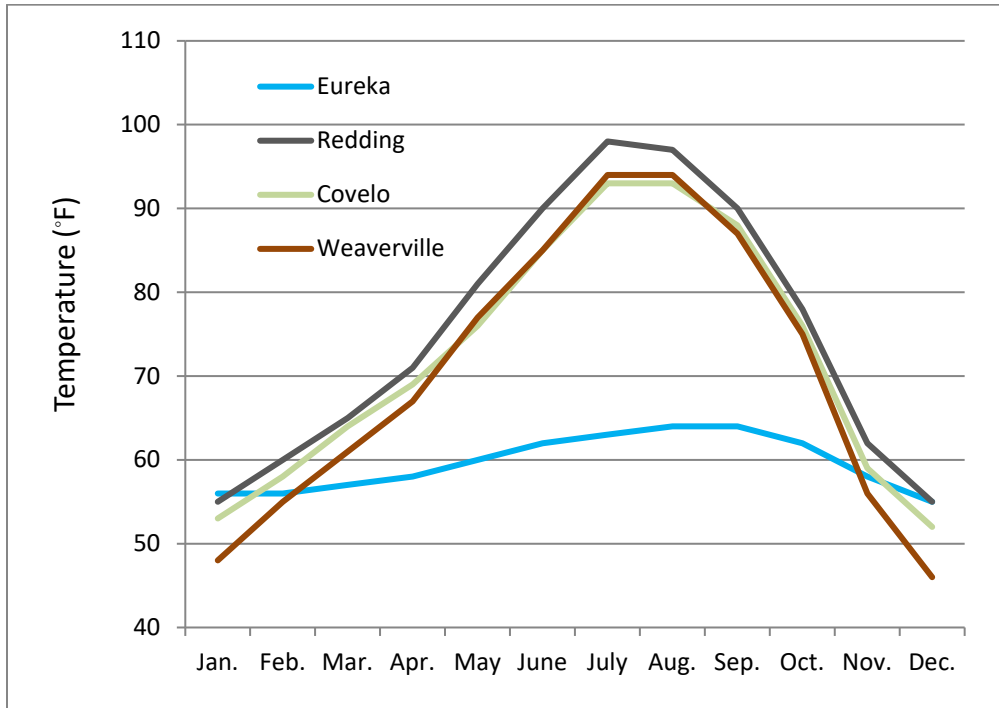


Chart 2-2. Mean Low Temperatures across the NCIP Planning Area (1981–2010; data from usclimatedata.com)

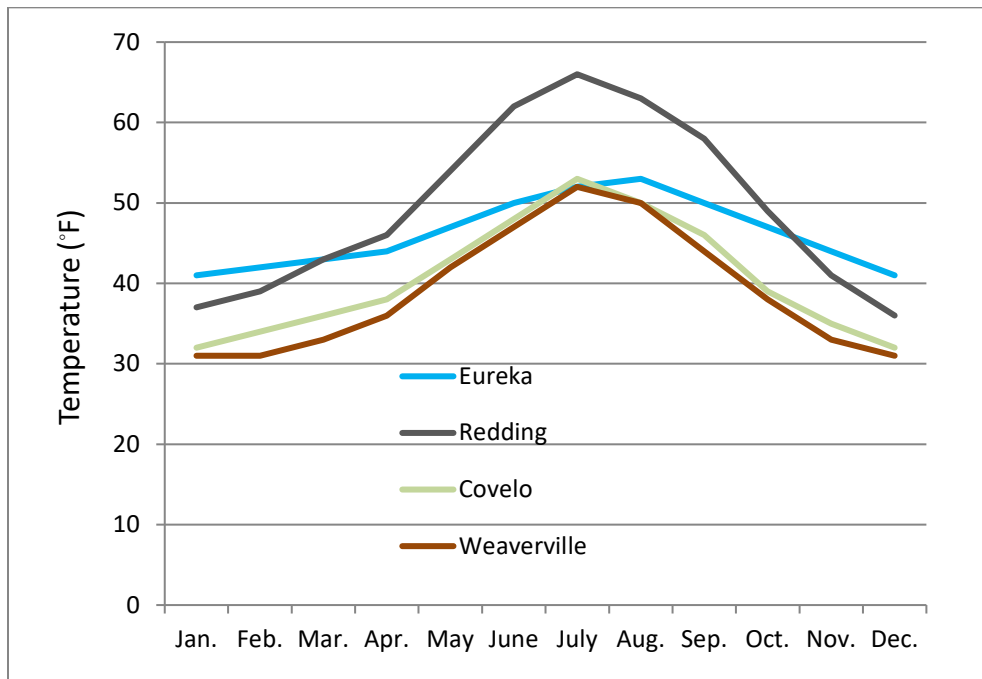
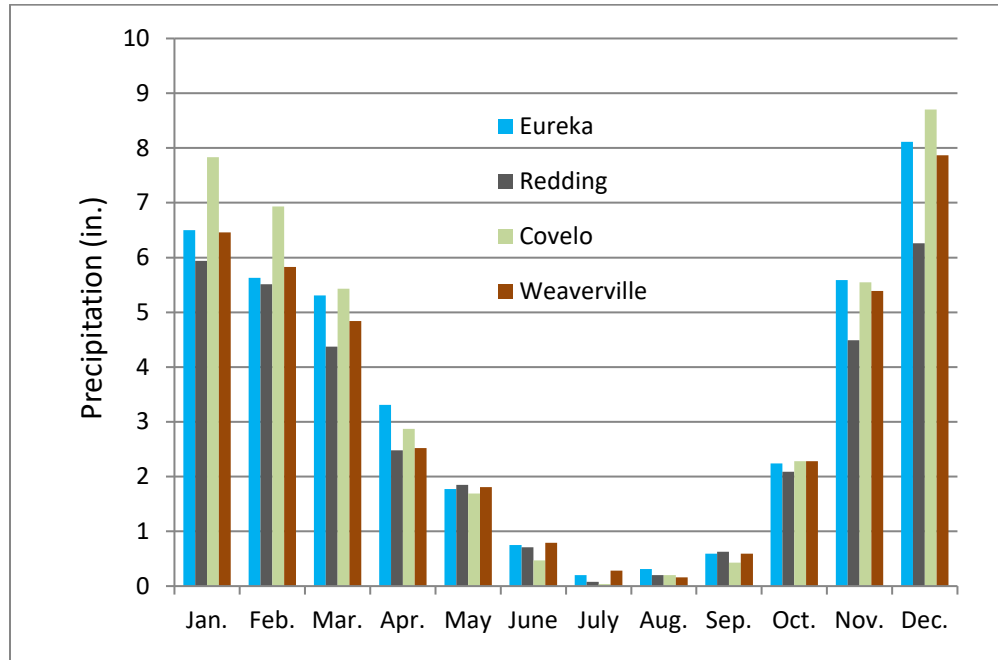


Chart 2-3. Average Monthly Precipitation across the NCIP Planning Area (1981– 2010; data from usclimatedata.com)



Current Greenhouse Gas Emissions

The major sources of greenhouse gas (GHG) emissions in Northern California are power plants, industrial processes, and waste disposal (EPA 2020a). In 2017, carbon dioxide (CO₂) emissions in California from fossil fuel consumption were 115.9 million metric tons, or 7.8 percent of the total US emissions. More than half of the state's energy-related CO₂ emissions were from the electric power sector (US Energy Information Administration [EIA] 2020). Emissions of GHGs in the planning area in 2017 are provided in **Table 2-2**. The data are not a full representation of GHG emissions in each basin; rather, they are a representation of the emissions in the relevant counties for the planning area in each basin.

GHG emissions may differ greatly from year to year and from region to region within a year because of the occurrence of wildfires. The other categories of emissions likely vary little from year to year because they come from ongoing human activities. Apart from wildfire emissions, the GHG production in the Northeast Plateau Air Basin is very low.

Temperature Shifts as Climate Changes

Climate data indicate increasing minimum air temperatures across Northern California, which includes the planning area (**Table 2-3**) (LaDochy et al. 2007). Generally, increasing temperature is expected to promote a more rain-dominated hydrology, with a reduction in both the spatial and temporal extent of seasonal snowpack. As this snowmelt water supply is reduced, ecosystem changes may occur in ecosystems currently adapted to the water provided by spring and summer snowmelt.

Table 2-2. Northern California CO₂e Emissions in 2017 by Air Basin (in Tons)

Category	North Coast Air Basin	Northeast Plateau Air Basin	Sacramento Valley Air Basin
	Del Norte, Humboldt, Mendocino, and Trinity Counties	Siskiyou County	Butte, Shasta, and Tehama Counties
Fires	84,687	13,413,937	9,825
Fuel Combustion	223,437	0	0
Industrial Processes	0	32,832	496,553
Miscellaneous†	0	0	0
Mobile*	531,600	787,401	1,147,246
Waste Disposal	86,971	18	108,912
Total	926,695	14,234,187	1,762,536

Source: EPA 2019b, EPA 2020a

Note: Totals may not add up exactly as shown due to rounding. Carbon dioxide equivalent (CO₂e) is in tons and assumes an EPA-recommended 100-year global warming potential of 25 for methane (CH₄) and 298 for nitrous oxide (N₂O) from the Intergovernmental Panel on Climate Change Fourth Assessment Report (IPCC 2007).

† Miscellaneous categories include bulk gasoline terminals, commercial cooking, gas stations, miscellaneous non-industrial (not elsewhere classified), and solvent use.

*The mobile category includes both on-road vehicles and non-road sources that use gasoline, diesel, and other fuels.

Table 2-3. Projected Air Temperature Increases over Various Time Periods across Northern California

Projected Timeframe:	Annual: 8°C to 9.3°C	Summer: 17.9°C to 21.5°C	Winter: 0.08°C to -0.46°C
2034	+0.5°C to +1.5°C	+0.6°C to +2.1°C	+0.1°C to +1.4°C
2064	+0.8°C to +2.3°C	+1.1°C to +3.4°C	+0.9°C to +2.4°C
2099	+1.5°C to +4.5°C	+1.6°C to +10°C	+1.7°C to +4°C

Source: Cayan et al. 2008; Hayhoe et al. 2004; Pierce et al. 2013; Thorne et al. 2015

More recent data from EcoAdapt suggest that by 2100, the change in average annual temperature will range from a 2.2°C to 5.5°C increase compared with temperatures from 1951 to 1980, with a 2.0°C to 5.8°C increase in average winter minimum temperatures and a 2.8°C to 6.7°C increase in maximum summer temperatures (EcoAdapt 2019). Additionally, it has been found that from 1900 to 2009 the difference in average annual temperatures has changed from a 0.03°C year-to-year decrease to a 0.2°C increase (EcoAdapt 2019).

The planning area hosts a number of species and ecosystems dependent on cold water. As temperatures increase, water temperature can become a limiting factor, restricting the range of species such as salmonids. Excessive temperatures across the planning area already impair water quality, with many watersheds listed under the Clean Water Act (CWA) as temperature impaired (see **Section 2.2.15**). Ongoing climate changes will likely exacerbate these impairments.

Similarly, changes in the air temperature regime influence terrestrial biota. Shifts in the distribution and composition of vegetation communities occur as temperatures shift outside of physiological tolerance for a given species.

Extreme temperature events (e.g., summer heat waves and warm winter days) are expected to become more frequent. For example, various scenarios show summer heat waves becoming two to three times

more frequent for Northern California (Cayan et al. 2008; Gershunov and Guirguis 2012; Hayhoe et al. 2004).

Storm Frequency and Intensity with Changing Climate

Climate change is expected to result in greater variability of storm frequency and intensity, which is expected to result in more intense droughts coupled with more intense storms (Cayan et al. 2016; Dettinger 2016; Yoon et al. 2015). Changes in annual and seasonal precipitation totals (**Table 2-4**) are difficult to forecast with a low confidence in any trends (EcoAdapt 2016).

Table 2-4. Projected Precipitation Changes over Various Time Periods within the NCIP Planning Area

Future Year	Change over Historic Annual Precip. (750 to >1,000 mm)	Change over Historic Summer Precip. (14 mm)	Change over Historic Winter Precip. (386 to >650 mm)
2034	-0.4% to +7%	-29% to +44%	-5% to +13%
2064	-3% to +3.4%	-67% to +35%	-5% to +6%
2099	-30% to +18%	-68% to -4%	-9% to +4%

Source: Cayan et al. 2008; Hayhoe et al. 2004; Koopman et al. 2009; Snyder et al. 2004, EcoAdapt 2016

Note: mm=millimeters

More recent data from EcoAdapt suggest that by 2100, the change in average annual precipitation will range from a 19 percent decrease to 27 percent increase, compared with precipitation from 1951 to 1980 (EcoAdapt 2019).

Sea Level Rise as the Result of Climate Change

Sea level rise is a critical issue facing coastal areas. Compounding observed sea level changes are ongoing tectonic processes that deform the coastline. North of Cape Mendocino the shoreline is shaped, in part, by a convergent plate margin. An ongoing cycle of strain accumulation and release both between (interseismic) and during large earthquakes (coseismic) produces a complex pattern of crustal uplift and subsidence. The overall geologic trend of the Northern California coast is uplift, thereby reducing the effects of sea level rise from global predictions (NRC 2012). However, finer scale investigations around Humboldt Bay reveal long-term subsidence, exacerbating the effects of sea level rise (Laird 2015; Anderson 2015b). The combination of rising seas and subsiding coastal lands in the vicinity of Humboldt Bay results in a rate of sea level rise two to three times higher than other portions of the California coast (Cascadia GeoSciences 2013).

Maintaining the resilience of coastal areas to accommodate rising sea levels is important for inland communities (Crooks 2004). For example, dune systems that provide buffering between coastal and inland areas may be able to transgress, or migrate landwards, in response to elevated sea level and retain their buffering function, though the specific mechanisms of this are difficult to forecast (Carter 1991).

Climate Change Effects on Resources

Climate change effects to temperature, precipitation, and sea level rise will affect BLM-administered lands and resources differently throughout the planning area. Coastal areas are less likely to be impacted by temperature changes but are the only lands subjected to rising sea levels. Inland areas will be more

affected by changes in temperature and perhaps extreme heat events. The effects of climate change to specific resources are discussed by resource in **Section 2.2**.

Vegetation communities play a central role in either mitigating or responding to climate change. Healthy forests, for example, sequester carbon, and forests in the planning area have some of the highest carbon sequestration rates in California. Managing for diverse, ecologically resilient landscapes and healthy forests will be central to adapting to a changing climate. However, due to drought and abnormally warm temperatures, wildfires in California have become more severe, with eight of the 20 largest fires in California's history occurring since 2017 and the area burned annually by wildfires in California increasing since 1950 (California Air Resource Board [CARB] 2020). The area burned by wildfire since 1950 also may be due to non-climate change factors, such as a marked increase in human population; a great number of ignitions have a human source.

2.2 RESOURCES

2.2.1 Air

Air quality includes air quality management, interagency coordination, smoke abatement for prescribed fire, and air quality impact assessment. The BLM is responsible for considering and incorporating air quality into multiple-use programs, managing the public lands in a manner that will protect air quality, and complying with applicable laws, statutes, regulations, standards, and implementation plans. Air pollutants addressed in this document include criteria air pollutants, hazardous air pollutants (HAPs), fugitive dust, and sulfur and nitrogen compounds, which could contribute to visibility impairment and atmospheric deposition.

Indicators

The following indicators are used to measure current condition and trends:

- National Ambient Air Quality Standards (NAAQS)
- The State of California Ambient Air Quality Standards
- Prevention of Significant Deterioration of Air Quality (PSD) program of the Clean Air Act

NAAQS standards are established by the EPA. Concentrations of air pollutants greater than the primary NAAQS represent a risk to human health, while concentrations above the secondary NAAQS represent a risk to public welfare or the environment. Federal criteria are set for six common air pollutants often referred to as criteria pollutants, which include carbon monoxide, lead, sulfur dioxide, particulate matter smaller than 10 and 2.5 microns (PM₁₀ and PM_{2.5}, respectively), ozone, and nitrogen dioxide. The California Air Resources Board (CARB) has set additional regulations focusing on motor vehicle pollution and ambient air quality beyond the NAAQS, including standards for hydrogen sulfide, vinyl chloride, and visibility reducing particles. The PSD program of the Clean Air Act ensures that air quality in areas meeting the NAAQS does not significantly deteriorate, while maintaining an allowable margin for future industrial growth. Under the PSD program, each area in the United States is classified by the ambient air quality in that region according to the following system:

- PSD Class I Areas: Areas for which pristine air quality is desirable (such as national parks, wilderness areas, and Native American Indian reservations) are accorded the strictest protection from air quality degradation. Only very small incremental increases in pollutant concentrations are allowed in order to maintain superior air quality in these areas. It is

important to note that BLM wilderness areas, all created after the establishment of Class I areas, do not fall under this category, with one exception. The only case where a BLM Class I wilderness area occurs is when BLM-administered land was added to the Yolla Bolly-Middle Eel wilderness subsequent to the determination of Class I areas (i.e., a national forest or national park wilderness) under the Clean Air Act.

- PSD Class II Areas: All areas that are not designated Class I are designated Class II. Moderate incremental increases in pollutant concentration are allowed, although the concentrations are not allowed to reach the concentrations set by NAAQS.
- PSD Class III Areas: Originally envisioned for highly industrialized areas, no areas have yet been designated Class III. Concentrations in these areas would be allowed to increase up to the NAAQS.

Federal Class I areas in the planning area are Redwood National Park, Marble Mountain Wilderness, Lava Beds National Monument, Yolla Bolly-Middle Eel Wilderness, Thousand Lakes Wilderness, and Lassen Volcanic National Park (**Map 2-1, Appendix A**).

Data and scientific knowledge is evaluated periodically to revise standards at national and state levels. Criteria air pollutants are monitored in the planning area—maps of state and local air monitoring stations are available at the CARB website (CARB 2016). Local air districts are established as regional regulatory agencies with responsibilities for controlling air pollution from stationary sources. These districts, among other things, coordinate prescribed burning activities to aid in avoiding adverse impacts on communities.

Current Condition

Air quality is good throughout the planning area, although Butte County and a portion of Tehama County are marginal nonattainment with some of the federal NAAQS criteria pollutants (8-hour ozone, 2008 and 2015) (EPA 2020b). In 2015, the EPA tightened the previous 0.075 parts per million ozone standard to 0.070 parts per million. A summary of the nonattainment areas is in **Table 2-5**.

Table 2-5. Nonattainment Counties in the NCIP Planning Area

County	Area Name	NAAQS	Year	Classification	Whole or Part of County
Butte	Chico, CA	8-hour ozone	2008	Marginal	Part
Butte	Butte County, CA	8-hour ozone	2015	Marginal	Whole
Tehama	Tuscan Buttes, CA	8-hour ozone	2008	Marginal	Part
Tehama	Tuscan Buttes, CA (Rural Transport)	8-hour ozone	2015	Marginal	Part

Source: EPA 2020b

Generally, poor air quality in the planning area occurs around cities and towns located in valleys from winter wood burning, particularly during temperature inversions. Motor vehicle use throughout the year, seasonal prescribed fire, and timber operations are some of the more notable pollution sources. Some pollutants in the planning area originate from the heavily populated Sacramento metropolitan area to the south, outside of the planning area, and are transported in the air northward. Exceptional events may occur throughout the planning area, most notably during summer wildfires. These events contribute to the most extreme pollution periods, often lasting several weeks or more (for example, see the Northeast Plateau Air Basin in **Table 2-2**).

Additionally, while logging emissions are not the same magnitude of emissions as heavy on-road traffic, residential wood burning stoves for home heating, or prescribed fires, non-road logging equipment is a common emission source that is exempt from the CARB statewide regulations for in-use, off-road, diesel-fueled fleets. Monitoring data for other indicators are not readily available, or they are uncertain, for large portions of the NCIP. **Table 2-6** summarizes criteria pollutant emissions in the planning area by air basin.

Table 2-6. Northern California Criteria Pollutant Emissions in Tons by Air Basin for 2017

North Coast Air Basin							
Del Norte, Humboldt, Mendocino, and Trinity Counties							
Category	CO	NO_x	PM₁₀	PM_{2.5}	SO₂	VOCs	HAPs
Agriculture	0	0	456	15	0	309	79
Biogenics*	38,317	1,561	0	0	0	218,048	0
Dust	0	0	4,816	171	0	0	0
Fires	18,478	4	25	754	0	635	1,580
Fuel combustion	628	306	484	440	87	65	29
Industrial processes	109	6	64	57	2	63	3
Miscellaneous†	0	0	14	70	0	40	268
Mobile	789	1,291	151	13	4	128	252
Waste disposal	547	0	160	115	6	573	41
Total	58,868	3,168	6,171	1,634	99	219,861	2,251

CO=carbon monoxide, NO_x=nitrous oxide, PM₁₀=particulate matter 10 micrometers or less in diameter, PM_{2.5}=particulate matter 2.5 micrometers or less in diameter, SO₂=sulfur dioxide, VOC=volatile organic compounds, HAPs=hazardous air pollutants

Northeast Plateau Air Basin

Siskiyou County

Category	CO	NO_x	PM₁₀	PM_{2.5}	SO₂	VOCs	HAPs
Agriculture	0	0	1	147	0	0	2
Biogenics*	14,089	1,118	0	0	0	105,013	0
Dust	0	0	4,169	404	0	0	0
Fires	1,398,741	13,501	0	0	158	170	10,699
Fuel combustion	1,567	8	1	0	28	29	64,327
Industrial processes	0	0	0	9	0	0	1
Miscellaneous†	0	0	0	12	0	24	85
Mobile	1,691	490	11	26	0	6	79
Waste disposal	0	0	451	431	17	0	32
Total	1,416,089	15,118	4,634	1,029	204	105,242	75,225

Sacramento Valley Air Basin

Butte, Shasta, and Tehama Counties

Category	CO	NO_x	PM₁₀	PM_{2.5}	SO₂	VOC	HAPs
Agriculture	0	0	861	0	0	312	1
Biogenics*	15,248	1,767	0	0	0	135,552	0
Dust	0	0	922	249	0	0	0
Fires	2,190	0	2,195	0	0	4,902	290
Fuel combustion	16	79	219	992	33	1,416	36
Industrial processes	1	603	334	33	8	120	7
Miscellaneous†	92	0	36	55	0	154	195
Mobile	7,295	7,554	61	40	1	6	286

Category	CO	NO _x	PM ₁₀	PM _{2.5}	SO ₂	VOC	HAPs
Waste disposal	0	0	0	0	0	206	159
Total	24,842	10,003	4,627	1,368	42	142,669	974

Source: EPA 2019b

Note: Totals may not add up exactly as shown due to rounding.

*Biogenic emissions are those derived from natural processes, such as vegetation and soil.

† Miscellaneous categories include bulk gasoline terminals, commercial cooking, gas stations, miscellaneous non-industrial (not elsewhere classified), and solvent use.

Trends

Historical trends for ambient concentrations of criteria air pollutants within the planning area show no significant deterioration over the last 20 years; however, wildfires have contributed to periods of very poor air quality, with PM₁₀ and PM_{2.5} levels well above the 24-hour standard of 5 micrograms per cubic meter.

CO₂, PM₁₀, and PM_{2.5} emissions due to wildfires have all been shown to have an increasing trend in California, according to data from 2000 to 2019, following the similarly increasing trend of annual wildfire burn acreage (CARB 2020a). Prescribed fire emissions in the 2000–2019 period range from 0.16 million metric tons (MMT) CO₂ in 2016 to 1.9 MMT CO₂ in 2006, with a statewide annual average of 0.68 MMT CO₂. The California Department of Forestry and Fire Protection (CAL FIRE) estimates that 4.2 million acres were burned in 2020. Using the preliminary wildfire perimeter data available from the National Interagency Fire Center, CARB staff's preliminary draft estimate of 2020 wildfire emissions is 112 million metric tons of CO₂. CARB staff plans to analyze and update 2020 wildfire emission estimates when final 2020 fire perimeters become available in mid-2021 (CARB 2020b).

Prescribed fires are used to prevent future wildfires from occurring. They are managed and controlled to prevent damage to the environment and are not allowed to create poor air quality conditions.

According to NPS data for Class I areas in the planning area, visibility trends recorded in Lassen Volcanic National Park, Lava Beds National Monument, and Redwood National Park remained relatively unchanged from 2009 to 2018 (the 10-year trend shows no statistically significant trend on the 20 percent clearest days and 20 percent haziest days). Visibility at all three areas is currently classified as “fair,” with the 5-year average (2014–2018) measured visibility, or haze index, on mid-range days of 6.4 deciviews (dv) at Lassen Volcanic National Park, 6.5 dv at Lava Beds National Monument, and 11.1 dv at Redwood National Park. These haze indices are 2.7 to 3.5 above the estimated natural conditions. Nitrogen deposition trend data are available only for Lassen Volcanic National Park, where the trend remained relatively unchanged from 2009 to 2018 (USDI NPS 2020).

Forecast

Generally, good air quality is expected to continue within the planning area. Federal and state emission regulations continue to tighten emission limits, thereby reducing emissions from many existing sources. For some pollutants, particularly nitrogen dioxide, total emissions in the planning area could potentially decrease from current levels if current population and industrial activity remain stable or increase slightly. Compliance attainment levels for the NAAQS and California Ambient Air Quality Standards are expected to continue. The EPA continually reviews the NAAQS and sets more stringent ambient standards over time for some pollutants. The Exceptional Event Rule, which could classify smoke from

wildland vegetation burning, is also being reviewed, with a probable alteration to include some form of pollution associated with prescribed burning and wildland fire events managed for resource benefits.

Although GHG emissions are analyzed in the Climate Change section, there are climate change impacts on air resources, and air resource management impacts on climate change, such as through black carbon, dust/albedo, etc. These items may be analyzed further in the future.

Key Features

The BLM must continue to work with CARB, local air districts, and cooperators during activities that may degrade air quality, such as construction, road decommissioning, prescribed fire, and during special events and incidents such as wildfire suppression.

2.2.2 Cave and Karst Resources

In 1988, the United States government passed the Federal Cave Resources Act of 1988 (16 USC 4301–4310) with the Final Rule presented in 1993 (43 Code of Federal Regulations [CFR] 37). This rule requires identification, protection, and maintenance, to the extent practical, of significant caves on lands administered by the federal government. According to the rule, “Cave means any naturally occurring void, cavity, recess, or system of interconnecting passages beneath the surface of the earth or within a cliff or ledge, and which is large enough to permit a person to enter, whether the entrance is excavated or naturally formed. Such terms include any natural pit, sinkhole, or other feature that is an extension of a cave entrance, or which is an integral part of the cave.” Furthermore, cave resources include, but are not limited to, biotic, cultural, mineralogic, paleontologic, geologic, and hydrologic resources. Such resources occur in many parts of the Redding FO area due to geologic conditions and less so within the Arcata FO area due mainly to lithological circumstances.

BLM 8380 Manual sets overall policy and direction for cave and karst resources. A resultant handbook (USDI BLM 2008b) provides users with a reference for resource identification, significance nomination and designation, inventory and monitoring, planning, outreach, and other aspects of the cave and karst resources management program. In both the Redding and Arcata FOs, this program has been ad hoc, primarily tied to the cultural resources program. With this new plan, there is an opportunity to be proactive in managing known caves and those to be discovered in the future. The Rule also states that each agency FO will retain appropriate documentation for all significant caves located within its administrative boundaries including a statement of finding signed and dated by the authorized officer, and the information used to make the determination. Such documentation exists in part for caves with cultural resource values.

Nomination Evaluation Criteria

Caves, as they are discovered or recognized from existing records, can be nominated as significant following the Federal Cave Resources Protection Act.

Nominations will be evaluated using the criteria for significant caves. A significant cave on federal lands shall possess one or more of the following features, characteristics, or values: (1) biota, (2) cultural, (3) geologic/mineralogic/paleontologic, (4) hydrologic, (5) recreational, or (6) educational or scientific.

The purpose of designating caves as significant is to identify those caves that contain features or resources needing protection under the Federal Cave Resources Protection Act. In many instances, the

fact that a cave or karst feature fits the definition of a cave is enough to qualify it as significant. The intent of designating a cave as “significant” is: 1) to verify that the feature is indeed a cave, 2) to form the basis of an inventory for the cave, and 3) to have it entered into BLM records. The Significant Cave Inventory Criteria can be found in 43 CFR 37.11(c) ().

Significance Criteria

The cave must meet at least one of the criteria given in 43 CFR 37, subpart B, 37.11 (c):

Biota: The cave provides seasonal or year-long habitat for organisms or animals or contains species or subspecies of flora or fauna that are native to caves, or are sensitive to disturbance, or are found on state or federal sensitive, threatened, or endangered species lists.

Cultural: The cave contains historic properties or archaeological resources (as described in 36 CFR 60.4 and 43 CFR 7.3) or other features that are included in or eligible for inclusion in the National Register of Historic Places (NRHP) because of their research importance for history or prehistory, historical associations, or other historical or traditional significance. Three caves within the Bend ACEC of Tehama County, professionally tested by archaeologists, contain extraordinary scientific information. Certain caves may possess religious or spiritual value to Native American Indian tribes or individuals.

Geologic/Mineralogic/Paleontologic: The cave possesses one or more of the following features:

- a) Geologic or mineralogic features that are fragile, or that exhibit interesting formation processes, or that are otherwise useful for study.
- b) Deposits of sediments or features useful for evaluating past events.
- c) Paleontologic resources with potential to contribute useful educational and scientific information.

Hydrologic: The cave is a part of a hydrologic system or contains water that is important to humans, biota, or development of cave resources.

Recreational: The cave provides or could provide recreational opportunities or scenic values.

Educational or Scientific: The cave offers opportunities for educational or scientific use; or, the cave is virtually in a pristine state, lacking evidence of contemporary human disturbance or impact; or, the length, volume, total depth, pit depth, height, or similar measurements are notable.

Developing a better understanding of the cave resources and their condition can help avoid a number of problems such as:

Soil Disturbance and Compaction: This disrupts the action of small cave- or karst-dwelling species that need loose, fluffy soils in which to lay their eggs. It also can prevent certain mineral growth, such as gypsum crystals, and may disrupt or destroy certain archaeological remains.

Disruption of Species Habitat: Interfering with roosting bat populations and other species that are sensitive to human traffic. Known roosting areas include Barnum and Pluto Caves and Sheep Rock in Siskiyou County.

Introduction of Contaminants: This can be in the form of trash, spilled food, introduced bacteria and other microbes into the cave. It can also be in the form of pollutants filtering into the cave system from the surface.

Visitor Use Impacts: Visitor use can cause problems with soil compaction, habitat disturbance, and introduction of contaminants as well as other direct impacts such as broken formations and graffiti.

White Nose Syndrome: White-nose syndrome (WNS) is a disease affecting hibernating bats. It is named for the white fungus that appears on the muzzle and other parts of the bats. WNS is associated with extensive mortality of bats in eastern North America and has recently been found in several populations in the West. The BLM recognizes that there are knowledge gaps concerning WNS etiology and epidemiology; however, the BLM is committed to implementing measures to prevent and reduce the impacts of WNS. The BLM may adjust its policy on WNS as more information becomes available through ongoing monitoring and research efforts.

In 2010, the BLM issued WO Instruction Memorandum 2010–181 to give national direction on how to prepare for the anticipated occurrence of WNS (UDSI BLM 2010a).

BLM employees involved in this program may include cave specialists, outdoor recreation planners, wildlife biologists, archaeologists, hydrologists, geologists, range conservationists, and others who have an interest in speleology and the management of caves and karst landscapes.

Indicators

The prime indicators for the presence of caves as defined are locations of volcanic and limestone lithology, areas of rock mass-wasting, tectonism, or differential weathering of rock units where cavities can be created, and water or wind-formed caves such as along the littoral fringe and where less-indurated rock units may be deformed by aeolian action. Some of these caves may be difficult to access due to cliffs, dense vegetation, rock fall, steep walls, and narrow entrances or passageways.

Current Conditions

There are over 50 caves (almost all rock-shelters) recorded within the archaeological database for the Redding FO and handful of others for the Arcata FO area. In some cases, rock-shelters with Native American Indian remains have been looted or damaged by cattle use, as in the Sheep Rock area. Rock-shelters in the southern Cascades have been prime targets for looters. Pluto Cave has both historic graffiti and modern graffiti on its walls, although much of this is on Forest Service portions of the cave system. Eight rock-shelters in the southern Cascade foothills of the Redding FO area have been partially excavated through permitted activities as part of cooperative or mitigation-based research. At least one rock-shelter in the Arcata FO area has been partially excavated. Field inventories and assessments for caves with other resource values have not been office priorities in the past.

Caves and karst lands are not well understood, and their management requirements are often not apparent. The management of the subsurface is largely dependent on the appropriate management of the surface. The two are inextricably connected. In karst lands, what happens on the surface affects the subsurface and vice versa. Karst topography is a minor part of BLM-administered lands within the Redding FO area and absent within the Arcata FO area.



Archaeological Excavation in the Paynes Creek Cave (BLM photo)

Trends

Without a rigorous monitoring and inventory program, it is difficult to calculate trends in both the resource value and condition of known caves. Ad hoc inventory and recognition of the importance of a variety of cave resources should lead to a better perception of the value of this resource type and open up management opportunities of a wide spectrum.

Forecast

It is expected that there will be an increased recognition among agency staff and the public of the value of various cave resources. This should lead to more management and public attention to these resources. Key cave resources may become worthy of ACEC designation as is currently the case with the Deer Creek/Ishi ACEC in Tehama County. Sheep Rock in Siskiyou County may prove another candidate for such a designation. The sensitivity of some cave resources may prevent public disclosure.

Key Features

The BLM and its cooperators should identify and designate significant caves and protect caves under consideration for significance designation. Below is a bullet list of desired management actions:

- Protect significant caves through restrictions.
- Enter into agreements with scientific and recreational interest groups.
- Ensure caves and their resources are included in all land use planning actions.

- Foster communication, cooperation, and exchange of information between land managers, those who use caves, and the public; also work with groups, such as the Shasta Area Grotto of the National Speleological Society.
- Maintain confidentiality of cave locations.
- Provide cave resource information when in compliance with a detailed approved request.
- Make permits available for collection of cave resources, after review of a detailed written request following resource-specific guidance/procedures.
- Involve tribes in management decisions and information sharing regarding caves and their resources and/or traditional cultural values.

2.2.3 Coastal Resources and Management

The Northern California coast within the planning area extends from the Oregon border south to the City of Fort Bragg in Mendocino County. In general, the coast is rugged and remote, containing rocky headlands, sedimentary bluffs, and sandy shores. Embayments include Crescent City, Trinidad, Humboldt Bay, and Noyo Harbor. Humboldt Bay is an estuary that includes the mouths of six small watersheds and is the largest estuary in California north of San Francisco Bay. Communities along the coastal strip include Crescent City, Trinidad, Arcata, Eureka, Westport, and Fort Bragg. In general—and compared to most of the California coast—the coast within the planning area is sparsely populated and relatively undeveloped. The Humboldt Bay area is the most populated area of the coastal strip, within the planning area.

Although most of the lands along the California Coast are private, the planning area contains an extensive network of public lands managed by federal, state, county, and city governments. These areas include Redwood National and State Parks, California State Parks (Pelican State Beach, Tolowa Dunes State Park, Del Norte Coast Redwoods State Park, Prairie Creek Redwoods State Park, Humboldt Lagoons State Park, Patrick's Point State Park, Trinidad State Beach, and MacKerricher State Park), Eureka Dunes, Elk River Wildlife Sanctuary, Manila Community Services District, US Fish and Wildlife Service Refuges, as well as BLM-administered lands including the King Range NCA.

BLM-administered coastal areas within the planning area provide popular recreational resources with a variety of uses. Hiking trails and broad vistas are present, while developed off-highway vehicle (OHV) use occurs at Samoa Dunes Recreation Area. Equestrian use occurs at Ma-le'l Dunes CMA and the Mike Thompson Wildlife Area. The Ma-le'l Dunes are a National Natural Landmark as of January 2021 and are managed cooperatively with US Fish and Wildlife staff at Humboldt Bay Fish and Wildlife Refuge.

These coastal areas contain unique vegetation communities reflective of the dynamic coastal environment. With rising sea levels, these areas face unique threats including changes in coastal dunes and increased coastal bluff erosion. Along the north and south spits, the dune system separates Humboldt Bay and its surrounding agricultural lowlands from the Pacific Ocean.

The western snowy plover (*Charadrius nivosus* ssp. *nivosus*) is a small shorebird that is federally listed as threatened under the Endangered Species Act (ESA). Western snowy plover Recovery Unit 2 stretches along the Del Norte, Humboldt, and Mendocino coastlines. The western snowy plover breeds primarily above the high tide line on coastal beaches, sand spits, dune-backed beaches, sparsely vegetated dunes, beaches at creek and river mouths, and salt pans at lagoons and estuaries. In winter, western snowy

plovers are found on many of the beaches used for nesting as well as on beaches where they do not nest. Habitat degradation caused by human disturbance, urban development, introduced beachgrass (*Ammophila* spp.), and expanding predator populations have resulted in a decline in active nesting areas and in the size of the breeding and wintering populations.

Indicators

The indicators for Coastal Resources include physical processes, human use and biological features. These indicators reflect, in part, the dynamic environment of the coastal areas, high visitor use and unique habitats.

Sea level rise vulnerability/resilience. Coastal resources are threatened by rising sea levels. This threat may vary along the coast within the planning area. For example, coastal lands surrounding Humboldt Bay are highly vulnerable to rising sea level. Conversely, steep, rocky coastal areas may be less impacted by rising sea levels. Adjacent landownership may also influence vulnerability by limiting options for the migration of species and natural coastal processes. The resilience of coastal areas is important for inland communities as landforms and vegetation communities may be able to buffer some of the impacts of ongoing sea level rise. For example, dune systems may be able to migrate and retain some level of separation between the dynamic beach environment and more developed inland areas.

Coastal Erosion. Erosion is a common facet of the dynamic coastal environment. The beaches, dunes, and coastal headlands are subject to a variety of erosive forces from storm surges, large wave events, tsunamis, earthquakes, changes in sediment deposition patterns due to jetties and river flooding, and rising sea levels.

Visitor Use. Coastal areas in the planning area provide a variety of recreation opportunities. Uses include OHV use in designated areas, such as the Samoa Dunes riding area; access for surfing; equestrian use; hiking; angling; and research (e.g., paleontological investigations, dunes monitoring, and coastal processes).

Recreation and Accessibility. Access to coastal areas provides a valuable recreation resource in the planning area. The coastal areas provide access to a wide range of user groups.

Development. Development along the coast consists of both private residential development and infrastructure such as roads and pipelines. Currently, little energy development exists and the prospect of oil and gas development, while present in the area, remains low.

Rare or Unique Habitats. The coastal strip provides a mosaic of habitats not found elsewhere in the planning area. The combination of coastal climate and the dynamic seashore setting has sculpted dune systems, coastal headlands and uniquely adapted vegetation communities. The area contains extremely rare dune mat habitat and coastal wetlands and connects estuarine environments to the Pacific Ocean.

Current Conditions

Current conditions characterize the status of physical processes operating in the coastal environment, characteristics of human use and special habitats found only in these coastal areas.

Current Physical and Biological Features

Sea Level Rise Vulnerability/Resilience. Sea level rise is ongoing along the coastal areas. For Humboldt Bay, where much of the planning area lands are situated, sea level rise is compounded by tectonic subsidence. Using tidal records from the North Spit, since 1977, Humboldt Bay is subsiding, and its average rate of relative sea level rise is 4.73 millimeters per year (18.6 inches per century). This is greater than anywhere else in California (Laird 2018).

Coastal Erosion. Coastal erosion is prominent along the coastal bluffs, where weak rocks are vulnerable to wave erosion. Large landslides are frequent in the area. Recent El Niño events, particularly during the winter of 2015/2016, also produced extensive beach and dune erosion along the margins of Humboldt Bay. This erosion has encroached into the Samoa Dunes riding area, toppling boundary fences and making beach access difficult in places due to the steep scarping that occurred along the foredunes. Ongoing sea level rise is also contributing to coastal erosion and is discussed further in the trends and forecast sections.

Rare or Unique Habitats. *Ammophila arenaria*, commonly known as European beach grass, has invaded dune niches along the North and South Spits of Humboldt Bay. Broad swaths of native plant communities are displaced when European beach grass establishes, with at least six federally listed endangered plant species showing population impacts in the presence of beach grass on Californian coastal dunes (Pickart 1997). In addition to European beachgrass, several other invasive species present additional management challenges such as English ivy, ice plant, and yellow bush lupine.

Extensive restoration efforts have occurred along the Mike Thompson Wildlife Area, South Spit CMA, Samoa Dunes, and Ma-le'l Dunes. These efforts have focused on the restoration of the native dune mat habitat and snowy plover habitat. In some cases, these areas are subject to special management considerations or closures. See below for a summary of these. A more extensive discussion on these efforts is provided in the vegetation sections.

Several protected areas are designated along the coast to protect native flora and fauna. These include:

Mike Thompson Wildlife Area, South Spit Humboldt Bay. A 20-acre restoration area along the South Spit is closed to all public use. Temporary closures may be implemented to protect nesting snowy plovers.

Samoa Dunes Recreation Area Vegetation Enclosure. The northeastern most 40 acres of the Samoa Dunes recreation area has been set aside for the protection and research of native plants with an emphasis on the endangered Humboldt Bay wallflower (*Erysimum menziesii* ssp. *eurekaense*).

Ma-le'l Dunes CMA, including the Manila Dunes Outstanding Natural Area and ACEC. Hiking is allowed only on designated trails to protect vulnerable dune mat habitats.

In addition to BLM protected areas, the USFWS manages the Lanphere Dunes as part of the Humboldt Bay National Wildlife Refuge. Many of these areas contain extremely rare native dune mat habitat. Over the past several decades, various native dune habitats and processes have become invaded by nonnative species, changing the structure and functions of the dune environments.

Recreation and Accessibility

Visitor Use. Coastal areas routinely receive high visitor use. Visitor use surveys for the majority of BLM-administered coastal areas reveal a diversity of users (Martin 2016). Hiking/walking, wildlife viewing, and dog walking were listed as the most common uses of the coastal areas. However, the areas also provide equestrian and OHV access and provide for additional activities such as fishing, surfing, and biking (see Recreation and Accessibility below and **Section 2.3.9** for allowable uses in the current coastal access areas). Experiencing natural surroundings and enjoying the area's wildlife, scenery, views, and aesthetics were rated as the two most important reasons for people visiting the BLM coastal sites (Martin 2016).

Recreation is the dominant use across the coastal areas. Along the Mike Thompson Wildlife Area, dispersed recreation occurs with limited vehicle access to the waveslope via designated routes across the dunes. The North and South jetties create the channel connecting Humboldt Bay to the ocean. These jetty areas provide access to anglers, hikers, and surfers. The Samoa Dunes Recreation Area is a popular OHV off-road riding area, particularly during the summer. The Ma-le'i Dunes CMA provides equestrian and hiker access.

Access for various users is summarized in **Table 2-7**. More detailed descriptions of access and uses are provided in the recreation section.

Development. Development along the coastal areas is largely confined to the communities of Crescent City, Fort Bragg, Manila, Samoa, and Trinidad.

Trends

Trends for Coastal Resources focus on those influenced by ongoing climate and sea level changes, restoration, and visitor use.

Sea Level Rise Vulnerability/Resilience. Sea level rise is a prominent threat to the coastal environments. The exact magnitude of sea level rise varies along the coastline. Sea level changes are composed of two parts—*isostatic* and *eustatic* changes. *Eustatic* changes are changes in the volume of ocean water, and this effect is global. More local *isostatic* changes are dictated by changes in land elevations. In the plan area, the dominant *isostatic* changes are tectonically controlled. Where the land submerges, apparent sea level rise is greater than those observed where the land is uplifting. Along the Northern California coastline, patterns of uplift and subsidence are complex and not well understood. Where detailed analyses have been attempted, such as near Humboldt Bay, a complex pattern of ongoing uplift and subsidence is apparent, as the coastal region is compressed and extended by regional tectonic forces. The result is that many areas along Humboldt Bay, with a subsiding coastline, will experience sea level rises much greater than those predicted for simple *eustatic* projections (Cascadia GeoSciences 2013).

Coastal Erosion. In addition to rising sea levels, which are expected to exacerbate coastal erosion, increased storm severity and associated storm surges and large waves will also increase coastal erosion. For example, during the winter of 2015/2016, El Niño-influenced storms resulted in high tides that were over a foot above predicted levels. These combinations of higher-than-expected tides and large waves will continue to change the beach and dune environments through a combination of erosion and deposition.

Table 2-7. Access and Recreational Uses at Coastal Access Sites in the NCIP Planning Area

Site	Hiking	Equestrian	OHV	Vehicle	Dogs	Mountain Biking	Camping	Hunting/Fishing
Mike Thompson, South Spit Cooperative Mgmt. Area	4.5 miles of beach, dunes, and marsh	Horses are allowed on the ocean side of South Jetty Road	None	Vehicles allowed on the waveslope only. Must enter through the designated access corridors and obey the 15 miles per hour speed limit. Closed 1 mile south of jetty from Mar 1 to Sept 15.	Must be leashed between March 1 and Sept 15 on the ocean side of South Jetty Road.	None	None	Waterfowl hunting (Oct–Jan): 9 access spurs along bay side of South Jetty Rd. Fishing is very popular and regulated by the California Department of Fish and Wildlife (CDFW) (“free” from the jetty if surrounded by water on three sides).
Samoa Dunes	Hiking trail through wetland protection area	None	295 acres open for OHV riding (see regulations)	Allowed on roads and beach	Leashed in parking lot; voice control elsewhere.	None	None	Fishing is very popular and regulated by the CDFW (“free” from the jetty if surrounded by water on three sides).
Ma-le’I Dunes	Miles of trails	Allowed on Lutguk trail, waterline right-of-way (ROW) and the waveslope	None	Allowed to South parking daily; North parking lot Friday–Monday.	Allowed only in Ma-le’I South. Leashed in parking lot; voice control on trails.	None	None	No hunting; fishing is regulated by the CDFW. Slough access from North parking lot; shore fishing is allowed outside of the Samoa State Marine Conservation Area.

Visitor Use. Visitor use is expected to increase along the coast correlated to increasing population. Any effects of climate change that produce an increase in the number of days that inland areas experience extreme heat conditions (see **Section 2.1.4**) would likely result in episodes of increased coastal recreation from people seeking temporary relief from extreme heat.

Recreation and Accessibility. Recreation use is expected to increase commensurate with increasing visitation. Similarly, various means of access and use is expected to increase. Existing access points are expected to experience increasing usage with a consequent increase in facility maintenance needs and potential resource disturbances.

Development. Development along the coastline is not expected to increase in the near term. Observed and forecast sea level rise is expected to reduce development along low-lying coastal areas. Oil and gas deposits may be developed, but existing information indicates the oil and gas deposits are limited in extent and likely not economically feasible to extract. However, as demand for oil and gas increases, more interest in developing these areas may occur over the longer term.

Rare or Unique Habitats. The numbers of nonnative species and the extent of areas affected by nonnative species have been increasing over the past several decades. Locally, though, several cooperative efforts have increased the areal extent of the dune mat habitat. This trend towards restoration of the dunes is expected to continue in the short term, and various agencies manage lands to promote native species and ecosystems. However, increasing visitor use and coastal erosion will introduce significant threats to these vulnerable habitats.

Forecast

Sea Level Rise. Rising sea levels are a growing threat to coastal areas. As discussed previously, portions of Humboldt Bay have the highest rate of sea level rise in California due to a combination of tectonic subsidence and ongoing eustatic sea level increases (18.6 inches per century; Laird 2018). This continuing and accelerating rise in sea levels will result in increased coastal erosion and impacts on coastal landforms and the habitats they support.

Coastal Erosion. Notable changes in the coastal landscape are expected to occur over the next several decades. The coastline is a dynamic environment, experiencing dramatic shifts in location and form over the very recent geologic record. With sea level and climate change predictions factored in, these changes will continue to occur. The response of specific landforms to these various stressors is difficult to predict. Simplified models of dune transgression suggest a dune field that migrates landwards in response to increased sea level. However, how this actually occurs is likely a complex interrelationship of dune washovers, nearshore erosion and continual reworking of dune deposits (Davis 1992).

Visitor Use. The forecast for visitor use is expected to follow expected trends of increasing usage.

Recreation and Accessibility. Ongoing sea level rise and coastal erosion will introduce challenges for providing longer-term, stable access to coastal areas. Well-established access points may be increasingly threatened by coastal erosion (**Map 2-2, Appendix A**).

Development. Coastal development has long been a challenge along the California coastline. Increasing demands for private development and consequent access limitations threaten to limit access to coastal

areas and impact coastal resources. As climate changes continue to accrue, changes in the physical setting of the coastline will present new societal challenges to coastal development. As the US and California move toward developing low-carbon energy sources, grid connections and port services are more abundant and readily accessible in southern California, which may facilitate near-term (up to 2027) development in these areas in support of offshore wind (NREL 2016). While some ports and harbors may have sufficient infrastructure to support industrial-scale offshore wind deployment, it is expected that some ports in California will require upgrades (NREL 2016).

Rare and Unique Habitats. Special habitats and species dependent on them will be threatened by increased visitation and effects from a changing climate.

Key Features

Key features for coastal resources are the various landforms present along the coastline and recreation access points. Coastal terrains consist of rock headlands, barrier dunes, and coastal bluffs.

A key feature of coastal areas, particularly the coastal dunes, is providing a buffer between the ocean and inland environments. The dunes serve as a dynamic system, changing in response to a variety of factors including local tectonics, climatic fluctuations, sediment supply, vegetation, wind patterns and development (Wiedemann 1984; Reckendorf 1998). Sea level rise represents one of the most significant challenges along the coastal strip. The ability of dunes to adapt to sea level rise is well documented in the geologic literature (e.g., NRC 2012, Davis 1992), but more site-specific responses are difficult to predict. Fundamental to this is maintaining resilient dunes systems that can adapt to changing conditions (Crooks 2004). A key piece to this is allowing for space for dune migration.



Native Vegetation on Coastal Dunes near the Ma-le'i Dunes

Photo courtesy of Andrea Pickart, USFWS Humboldt Bay National Wildlife Refuge.

2.2.4 Cultural Resources

Cultural resources are objects that are made and/or assigned value by humans (e.g., historic places, buildings, documents, roads, artifacts, battlefields and other landscapes, hunting camps, mines, sites, or places that are tightly bundled up with a community's ongoing identity). Cultural resources can be both objects and cultural practices, such as pine needle baskets and the practice of annually harvesting the pine needles by basketmakers in a particular basketmaking tradition.

Prehistoric cultural resources are associated with Native American cultures that existed prior to regional settlement by Euro-American populations and are generally buried or surface archaeological sites. Historic cultural resources are associated with post-Euro-American regional settlement (although other ethnic groups are represented in the archaeological and historic records) and can include both archaeological sites and the remains of structures. It should be noted that prehistoric sites, according to tribal accounts, have their own history.

Known cultural resources in the planning area are extremely diverse in age, complexity, fragility, significance, and interpretive promise. These resources mirror the range of changing past human behavior and lifeways in dynamic environmental settings related to fluctuating climates, landforms, hydrology, coastlines, and vegetation and animal communities. Archaeologists have found evidence of continuous human residency in North America dating back at least 12,000 years ago (e.g., Erlandson et al. 2011). Ancestors of Native American Indian tribes have left behind widespread vestiges of their cultures, changing cultures still vibrant to this day. Only in the last 200 years or so have other cultures entered the landscape, from European and American explorers and Mexican land grantees, to waves of fortune seekers following the Northern California gold discoveries of 1848. Following these early settlers were homesteaders, timber workers, sheep and cattle herders, farmers, anglers, government and military missions, railroaders and industrial entrepreneurs, copper miners, dam builders, recreationalists, and others.

Prehistoric Cultural Resources

While the Redding and Arcata FOs have different historic and prehistoric trajectories, a few broad statements can be made for the two regions. Human occupation of the resource areas likely dates to the Late Pleistocene, or 12,000 years ago or more. Since that time, there has been a general increase in population and the use of storable resources, such as salmon and acorns, and a decrease in mobility. It is possible that prehistoric archaeological remains can be found beneath the current ocean surface near the coast. The prehistoric archaeological resources found in the planning area tend to be chipped stone and ground stone with fewer perishable artifacts recovered, but shell and bone tools are present. Prehistoric archaeological sites can include lithic scatters, small seasonal camps, rock shelters, large permanent village sites with extensive midden deposits, and ceremonial sites such as rock art, prayer seats, or dance houses. The prehistoric period for each FO is discussed in greater detail below.

NCIP Planning Area within the Redding Field Office

The BLM has prepared a Class I Cultural Resources Overview and Existing Information Inventory for the NCIP planning area. The report assembled chronological sequences for prehistoric and ethnographic archaeology across the planning area (King et al. 2016). The study does not attempt to synthesize or rewrite the chronologies; rather, the narrative highlights periods, geographies, and studies that contribute the most important information to the basic history of cultural development in the planning area.



Excavation of Prehistoric House Foundation, Paynes Creek, Tehama County (BLM photo)

The prehistoric cultural history in the Redding FO covers five geographic regions: the Upper Klamath, the North Coast and Klamath Mountains/North Coast Ranges, Sacramento Valley, Sierra Nevada and Adjacent Lowlands, and the Southern Cascade Foothills and Lake Britton Area. Each area has specific cultural traits and patterns, as detailed in King et al. 2016; however, a few general statements can be made.

Few Terminal Pleistocene sites have been located in Northern California, but Clovis points have been recovered at a few sites in northeast California demonstrating occupation during this period (McGuire 2010). No extinct megafauna (or other faunal remains) have been identified in direct association with these points, but it is assumed that Late Pleistocene peoples were highly mobile hunter-gatherers that focused on both megafauna and smaller game and a variety of floral resources.

Soon after the Early Holocene climate stabilized, evidence for seed and nut use appears in the archaeological record in the form of milling stones and hand stones. This use of seeds and nuts can be seen in much of California at this time and formed the basis of subsistence, in addition to the use of both large and small game. Climatic instability and drought in the Middle Holocene led to fewer resources available; this can be seen in the archaeological record by fewer sites in general and specialized resource acquisition at the sites with artifacts showing a focus on hunting or gathering resources (White et al. 2005; King et al. 2016). Around 2,500 years ago, the climate stabilized again, and population density begins to increase in the planning area with a corresponding increase in sedentism. Long distance trade increases in importance at this time.

The Medieval Warm Period begins around 900 years before present. The increase in aridity associated with this period sees a disruption in previously established cultural traditions and the emergence of the

ethnographically recognizable traditions. The bow and arrow is adopted with accompanying smaller projectile points, fishing technology becomes more elaborate, and fish become more important for subsistence, and mortars and pestles become more common than the milling stones and handstones (White et al. 2005; King et al. 2016). The reliance on storable resources like acorns and fish, especially salmon, allowed for the development of large, sedentary villages.

By the time of European contact, the Sacramento Valley had among the highest population densities in North America (Driver and Massey 1957). Other river valleys in the planning area also had high population densities and sedentary villages, although seasonal or hunting camps were still employed for utilizing resources outside the immediate village area.

NCIP Planning Area within the Arcata Field Office

The Class I Cultural Resources Overview assigns cultural chronologies for the Arcata FO to the geographic areas covering the North Coast and Klamath Mountains/North Coast Ranges (King et al. 2016). Northwest California's coastal location allowed prehistoric inhabitants to use a wide variety of marine resources, but offshore conditions are variable, and there are different cultural traditions in the northern and southern portions of the region. In the northern portion of the Arcata planning area, the cultural traditions and languages were more aligned with the Northwest Coast and its maritime adaptation, while the south was more aligned with California languages and cultural traditions, with a focus on littoral and terrestrial resources (Hildebrandt 2007).

Like north-central California, a few Clovis points have been found in Northwest California, suggesting Late Pleistocene occupation, but again there are few associated artifacts to provide contextual information regarding Late Pleistocene lifeways.

The archaeological record of the Early and Middle Holocene time is sparse, but the few sites that exist suggest that inhabitants used seasonal resources and maintained a mobile residential pattern. The appearance of milling stones in the Early Holocene suggests early use of seeds and nuts, like much of California at this time. After around 2,000 years before present, the northern area intensified marine resources use, including salmon, and developed sedentary villages. These villages included more complex architecture and social stratification than found in earlier periods (King et al. 2016). These northern groups developed ocean-going canoes and were able to use the plentiful marine resources off the coast in addition to salmon and other riverine resources and terrestrial fauna.

Salmon were not plentiful in the southern streams, and these groups continued a more diversified subsistence pattern with higher mobility patterns than that seen in the north. Residents would winter in large villages and subsist on stored food. From the spring through fall, however, smaller groups would gather seasonal resources from temporary camps. Both coastal littoral resources and inland terrestrial resources were used.

Historic Period Cultural Resources

Historic period cultural resources within northwestern California reflect varied and widespread activities. The initial entrance of Europeans and Americans into the lands occupied by indigenous peoples was part of an era of colonial expansion with claims by Spain and later Mexico. Native American groups were severely disrupted by the initial and subsequent intrusions. The early explorers and trappers were followed by the trickle of Mexican land grantees and the western movement of settlers

from the Eastern United States. The discovery of gold in 1848 in the Sierra and North Coast ranges led to the massive influx of fortune seekers and their supporters. These hardy workers of many ethnic groups continued to find mineral riches in numerous parts of the planning area west of the Cascades and Sacramento Valley. There followed periods of continued settlement with the accompanying development of transportation networks, military oversight, government land surveying, lumbering, milling, fishing, agriculture and animal husbandry, public works projects, scientific exploration, and tourism and recreation.

Early Explorations and Commerce

The Spanish entry into the New World had minor influences on the planning area. Along the coast from the 1500s, there were Spanish and other European ships plying the waters during explorations and trade journeys. Bruno de Hezeta and Juan Francisco de la Bodega y Quadra landed in Trinidad Bay in 1775. Jonathan Winship with the Russian-American Company was the first European to explore Humboldt Bay in 1806. The Russian forays into California in the early 1800s likely had influence on the coastal areas. Inland, Spanish explorers reached the southerly reaches of the planning area along the Feather River, with Gabriel Moraga arriving in 1808 and Luis Arguello in 1820-1821. With Mexican independence, the Sacramento Valley was divided into land grants held by Euro-Americans such as John Bidwell, Peter Lassen, Pierson B. Reading, and others. These ranchos served as agricultural centers and stopovers by the westward-bound emigrants from the East who followed now-famous routes such as the Lassen, Nobles and Yreka trails. Shortly after Mexico won its independence from Spain in 1821 and before the Gold Rush of 1848–49, there was a string of American and European fur trapper forays through the area in addition to military or government expeditions.



Gold Rush-era Stacked Mine Tailings from Ohio Flat in Trinity County

Mining

The California Gold Rush and the economic, transportation, and settlement boom that followed left a major heritage footprint in the planning area. Landscapes were changed, towns established and abandoned, trails and roads developed, further disruptions occurred in the lives of Native American populations, and agriculture, animal husbandry, and logging enterprises were launched. With the Gold Rush came Americans, Mexicans, Chileans, Chinese, French, and many other nationalities. Native American Indians were used as laborers early on, eventually being relegated to reservations or scattered from their home bases.

Following the Gold Rush boom, gold mining (and other lesser minerals) went through periods of boom and bust. Limited mining continues to this day. As technologies improved and investment grew, there were major recovery efforts radically changing the landscape. Today, this is evidenced by mined ground, tailings and waste rock piles, adits and shafts, cabin foundations, and ditches and splintered streams and rivers. A major boom occurred in the Redding area in the late nineteenth-early twentieth centuries with the production of copper, a legacy that led to a denuded landscape over many square miles and evidence of mining and mining infrastructure.

Agriculture/Animal Husbandry

While the Native American Indians practiced a form of native crop management, Euro-American methods of agriculture were radically different and significantly altered the landscape. The planning area was attractive to growing wheat, hay, barley, potatoes, vegetables, and cultivated orchards. Flour mills were inaugurated in some locations along drainages powered by the flowing waters. Cultivars such as apple and pear trees and grapevines can still be found around old settlements and homesteads throughout the planning area. Cattle and sheep were introduced to the southerly reaches of the planning area by the Spanish. The Gold Rush brought with it additional herds of cattle and sheep, which were often moved seasonally from lower to higher elevations in search of forage and fresh water. Livestock camps, stone walls, fences and trails, and roads are all associated with these operations. Other economically important livestock included hogs and turkeys.

Logging and Lumber Manufacture

By the 1850s, timber resources were recognized in many parts of the planning area as more valuable than gold, and this industry remains important to this day. The first lumber mill near the coast in the planning area was set up at Eureka in 1852. Humboldt Bay became an important port for seagoing vessels to move the lumber to markets. As logging progressed, the timber industry and its employees had to move further inland to harvest untouched areas. In locations beyond the western Coast Range, forest harvesting remained a function of transportation systems, including the use of rivers, flumes, wagon roads, and railroads. Sawmills were often developed near the timber harvest areas. The mining industry and associated settlements needed lumber for buildings, flumes, sluices, and mine bracing. The export of lumber products to metropolitan areas was an early economically important industry and continues to be significant today.

Maritime Activities

The Humboldt coast has a long history of commercial fishing and canneries, lumber and other commodities shipping, and lighthouse facilities. Commercial fishing (of salmon in particular) began in the 1860s and continues to be a major part of the local economy.

Transportation

Mines and settlements throughout the planning area needed supplies and transportation ease leading to the formation of commercial centers such as Red Bluff, Union (present Arcata), Trinidad, Yreka, Shasta, Weaverville, Oroville, and others. Archaeological evidence of the wagon trains and pack trains are found along abandoned trails or their modern replacements. Historic railroads and railroad remnants occur throughout the planning area. The railroads were developed for specific industries such as the lumber business but also for enhanced commercial development and communication. These railroads started in the early 1870s and were built by many ethnic groups. Both abandoned and extant railroads include various historic sites such as construction camps, infrastructure elements including bridges and signals, blacksmith areas, dumps, ovens, and others. The steel rails opened up areas for the development of towns and smaller settlements. Even the land offered by the government for the construction of the Oregon and California Railroad, among others, led to a square mile checkerboard of federal and private ownership affecting land management to this day.

In addition to the railroads, roads, pack trails, sled roads, stage routes, and emigrant trails generally run east-west in the eastern part of the planning area. The coast was generally served by ships traveling north-south, and goods were taken inland via the east-west trails, and later by a north-south road. Also important are the various Native American Indian trails, many running along major mountain ridges and some of which laid the foundation for later trails and roads. With the advent of automobile use, many of the wagon roads were improved leaving historic bridges, support walls, cut-and-fill remnants, and other features. Along many of the routes there are also traces of telephone and telegraph systems including wire, posts, and insulators.

Military

With statehood in 1850 came government oversight, scientific and exploratory expeditions, and the creation of land divisions. Conflicts with tribes led to the foundation of scattered military posts such as Fort Humboldt in Eureka, Fort Jones by the current town of the same name, and Fort Reading near Anderson. Besides early military-related explorations and expeditions, the United States military was called in to curtail Native American-settler conflicts as settlement expanded and the resource areas important to the Native lifeways were subsumed by developments. Forts were established, small engagements occurred, and volunteer militias were noted in their subduing and often slaughtering of Indians. Most such activities were on private land, but there was the likelihood of conflict zones and military trails on federal lands. Eventually, the indigenous landowners were pushed to reservations or remote areas or put to work on farms and ranches.

During World War II, the threat of a Japanese invasion along the Pacific coast resulted in the placement of radar sites, ammunition bunkers, and other features, some on federal land. During the Cold War, military infrastructure related to Soviet military threats led to other developments along the coast and in select interior areas as near Chico where missile silos were constructed.

Public Works Projects

The development of public works such as dams, reservoirs, transmission lines, light houses, breakwaters, levees, canals, power plants, highways, bridges, and rip-rap along drainages has left material/engineering remains on the landscape. Hydroelectric dams were constructed in the early twentieth century with small cities rising up in their shadow with accompanying camps, hospitals, mining, and transportation

facilities. The remnants of structures and debris related to these projects can be found on public land in the planning area.

Public Land Use/Tourism/Recreation

Public lands have offered less costly opportunities for economically marginalized individuals and families in the West (especially with population growth) to seek residential independence and financial gain. By the late nineteenth century, with the development of better roads and railroads and the rise of the middle and upper classes and more leisure time, individuals and families sought out recreation opportunities in the great outdoors. Some of these developments can be found on or adjoining public lands. Rural residences and camps from the late 1800s well into the twentieth century are commonly found on publicly administered land.

Historic-Era Native Americans

With the influx of settlers associated with the Gold Rush, life radically changed for the Native Americans in the planning area. The destructive nature of gold mining profoundly changed the landscape and hydrology of the region, affecting game distribution, salmon runs, and general resource distribution. The logging industry further denuded the available resources in the planning area, and livestock grazing, and the spread of invasive weeds affected plant communities that were subsistence resources; these made it difficult for Native Americans to maintain their traditional lifeways.

In addition, Euro-American settlers were antagonistic toward local Native Americans (and other ethnic groups). Multiple massacres of Native Americans were recorded throughout the planning areas. The United States government established reservations for many, but not all, of the tribes established in the region. Reservation life was not pleasant for the Native Americans who lost access to many of their traditional hunting and gathering resources and were denied many of the benefits promised in the treaties. In the 1950s and 1960s, the US government attempted to dissolve many of the rancherias and reservations that had been established for the Northern California tribes and remove their status of federal recognition. Some tribes were able to re-establish their status and reservations due to the federal government's inability to provide services and rights granted in the original treaties and subsequent termination agreements.

Nineteen federally recognized tribes claim traditional territory in the Redding FO; fourteen federally recognized tribes claim traditional territory within the Arcata FO (see **Table 2-31** in **Section 2.2.12**). Due to federal resettlement plans associated with the treaties, multiple cultural groups can be associated with one reservation and the same cultural group may have been settled on multiple different reservations. Federal recognition is associated with the reservation, not encompassing the tribe or tribes. For instance, for federal recognition purposes, the Wiyot people associated with the Table Bluff Reservation, Bear River Rancheria and the Blue Lake Rancheria are considered three different federally recognized tribes. Federal law requires consultation with all tribes claiming traditional territory for any federal action.

Indicators

The primary indicator for the condition of cultural resources is whether an archaeological site or historic property maintains its integrity. A loss of integrity is equated to the loss or diminishing of the characteristics that affect the cultural or scientific value or the loss or diminishing of the characteristics

that determine significance for listing on the NRHP. A property is considered to have retained its integrity if it retains the essential physical characteristics that enable it to convey its historic identity.

The NRHP recognizes seven aspects of integrity: location, design, setting, materials, workmanship, feeling, and association. To retain integrity, a site or property should possess most, if not all, of the aspects. Buried or surface archaeological sites may not possess design, materials, or workmanship, for example, but may still be considered to maintain the other aspects if the site has not suffered significant artifact displacement. The characteristics that determine a site's significance under NRHP, or its cultural value, can be affected by physical destruction, damage, or alteration of the resource; isolation of the resource; alteration of setting; neglect resulting in deterioration or destruction; or the transfer, sale, or lease of the resource.

Actions that can negatively affect site integrity include natural weathering, erosion, wildfire, ground disturbance, grazing, recreation use, unauthorized collection, intrusions to setting, and vandalism. This loss affects the completeness and accuracy of the scientific information that can be derived from a resource; the aesthetic, historic, or interpretive value of the resource; and/or the importance of the resource in maintaining social and cultural traditions.

In addition to assessing integrity, cultural resources are evaluated for significance under National Historic Preservation Act (NHPA) Section 106. Cultural resources that are evaluated as significant are eligible for listing on the NRHP and qualify for additional consideration under federal law. Cultural resources are considered significant under Section 106 if they are: a) associated with events that have made a significant contribution to the broad patterns of our history, b) associated with the lives of persons significant to our history, c) embody distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possesses high artistic value, or that represent a significant and distinguishable entity whose components may lack individual distinction, or d) have yielded, or may be likely to yield, information important in prehistory or history.

In addition to the physical remains of archaeological sites and historic structures and districts, a third category of cultural resources is a traditional cultural property (TCP). TCPs are "Properties of traditional religious and cultural importance to an Indian Tribe or Native Hawaiian organization may be determined to be eligible for inclusion on the National Register" (NHPA Section 101(d)(6)(A)). TCPs are identified and evaluated by the tribe that assigns the cultural value.

Federal protection applies to both sites and structures that are listed on or eligible to be listed on the NRHP. In addition, cultural resources on federal lands are protected under the Antiquities Act of 1906 and the Archaeological Resources Protection Act of 1979, even if they have been determined to be ineligible for listing on the NRHP. The FLPMA and other laws, regulations, executive orders, etc. offer management consideration for archaeological sites and Native American values.

Federal land managers may protect and use cultural sites for their educational or recreational opportunities, regardless of eligibility. If reasonable for the land management action, cultural resources should be avoided as a protective measure. Increased access or use of an area with cultural resources has the potential to damage, destroy, or otherwise alter the characteristics that provide cultural and scientific value.

Current Conditions

At this time, the vast majority of the recorded cultural resources on the lands administered by the BLM in the planning area are archaeological sites. At present, about 15 to 20 percent of the land within the planning area has been inventoried for cultural resources. Some older inventories do not meet modern Class III standards (intensive survey), and those conducting earlier inventories recorded prehistoric cultural resources but not necessarily historic sites. Cultural resources inventories have led to the documentation of approximately 1,650 prehistoric and historic archaeological sites and isolated artifacts or features on BLM-administered lands in the planning area.

Six properties on BLM-administered land in the planning area are listed on the NRHP (**Table 2-8**). Many additional properties have met the eligibility criteria but have not yet been listed or have not been evaluated for inclusion in the NRHP.

Table 2-8. Properties Listed on the NRHP in Redding and Arcata FOs

NRHP Name	Location	County	Listed as	Date Listed	Relationship to NCIP Planning Area
Upper Klamath River Stateline Archaeological District	Upper Klamath River vicinity	Siskiyou	District	2017	BLM-administered land, Redding FO
Forks of Butte	Forks of Butte Recreation Area	Butte County	District	2004	BLM-administered land, Redding FO
Swasey Discontinuous Archaeological District	Swasey Drive ACEC, near Redding, CA	Shasta County	District	2003	BLM-administered land, Redding FO
French Gulch Historic District	French Gulch, CA	Shasta County	District	1972	Partial BLM-administered land, Redding FO
Sulphur Creek Archaeological District	Near Deer Creek Canyon	Tehama County	District	1980	BLM-administered land, Redding FO
Helena Historic District	Helena, CA, near Shasta-Trinity National Forest	Trinity County	District	1984	BLM-administered land, Redding FO

Overall, known site numbers, densities, and periods of use vary for historic-era and prehistoric sites, and the sites are unevenly distributed across the landscape. Various factors, such as vegetation cover or the depositional environment, can affect the identification of cultural resources. Historic sites tend to dominate in both the Redding and Arcata FOs. Historic sites are more visible and easily distinguished by such factors as structural remains, the presence of cultivars, and ground disturbance associated with mining or other activities. Older, buried sites are more difficult to identify and may require testing or excavation, in addition to field surveys to identify. In addition, many of the older sites have been destroyed or disturbed due to mining activity in the river drainages.

Land management may also affect the identification of cultural resources in the planning areas. That is, federal regulations require inventory for cultural resources prior to the implementation of any action. A higher density of cultural resources will be identified in areas that have experienced federal actions in comparison with those locations of the planning areas in which federal actions have not occurred. Current federal guidance provides for a 50-year minimum for site identification; new historic sites can

be added yearly to the corpus of locations considered in cultural resource management, irrespective of significance.

Due to the variability in landscape use in both prehistoric and historic times affecting the location of cultural resources, coupled with the location of known sites being tied predominantly to modern land use, it is difficult to accurately predict locations of unrecorded cultural resources that may impact future planning needs. As part of the Class I Overview, the BLM developed GIS-based sensitivity models for prehistoric (both surface and subsurface) and historic site potential. It did this to assist with planning and prioritizing future cultural resource investigations.

Trends

The two broad agents of change that adversely affect cultural resources in the planning area are natural processes and human-mediated damage. Examples of change caused by people include actions permitted or authorized by the BLM such as mining, recreation, or infrastructure development, as well as activities that are related to emergency fire suppression, casual use, or actions not authorized by the BLM, such as illegal dumping, looting of archaeological sites, or marijuana grow operations. Examples of changes that are caused by natural processes include wildland fires, erosion and deposition, landform mass-wasting processes, inadvertent animal disturbance (such as burrowing rodents), and natural weathering.

In general, the trend in conditions of cultural resources is downward. Optimally, the condition of cultural resources on BLM-administered land in the planning area should be stable and, where possible, the educational and interpretive use or scientific investigation of the sites should be increased. However, natural processes and damage related to modern human use of the landscape causes deteriorating conditions. Multiple activities negatively affect the integrity of cultural resources including illegal removal of artifacts, ground disturbance associated with recreational activity, limited law enforcement, drought and wildfire intensity, wildfire suppression, erosion, mass wasting and bioturbation, aging historic structures, and grazing practices. Cultural resources located near urban or rural settlements or other high-use areas are at greater risk for damage, removal, or alteration caused by humans and their equipment. However, cultural resources in more remote areas are still at risk for damage, removal, and alteration.

Wildland fires occur regularly in the planning area and have become increasingly destructive. Such fires have a severe effect on the cultural resources where they occur. Damage can be somewhat limited if a Resource Advisor accompanies the fire crew; however, contemporary human safety outweighs resource protection, and damage to cultural resources often cannot be avoided.

Unless withdrawn from mineral entry, under current federal law BLM policies permit mining wherever it is legally allowable and where it does not adversely affect critical resources. Mining activity increases following market trends. This contemporary mining activity can damage known and unknown cultural resources. For instance, people will use metal detectors at old mining locations to look for gold, but instead uncover base metal cans and other materials. These materials are then left exposed. In addition to small disturbances such as these, reopening historic mines can cause damage to historic features.

Passive and active recreation activities on public lands have also increased over the years. More remote areas are becoming accessible, and sites can be accidentally or intentionally damaged where encountered.

Active cultural resource management including site protective barriers and fencing around sites, signing, interpretation, educational outreach, construction of shaded fuel breaks, administrative actions to withdraw areas from mineral entry and vehicle use, trespass resolution, monitoring, and law enforcement outreach have lessened looting and site damage in individual cases of past site impairment and in areas with more public visibility. On the other hand, the proliferation of metal detecting use has caused damage to historic sites, especially where access has been made easier.

Forecast

It is expected that the condition of cultural resources within the planning area will continue to deteriorate unless withdrawn from mineral entry. Current management practices that emphasize multiple uses, in contrast to preservation and improved access to public lands, allow for increased access to cultural resources that had been protected by their remote location. Federal actions like timber sales, the creation of recreation trails, and the increased use of public lands can lead to increased damage and destruction to cultural resources via direct and indirect effects. For example, among other intentional and unintentional impacts, there could be increased vehicle traffic, which can cause direct damage to a site. There could also be indirect effects, such as erosion, which can also have damaging consequences to sites; visitors can remove artifacts from their original context or remove them completely from sites or damage architectural features; and resource extraction can damage the setting of a site. Damage to a site or its setting can affect its integrity and therefore negatively impact its cultural or scientific value; however, active fuels' removal projects overall can lessen fire impacts on cultural resources.

Due to an expected increase in recreational usage coupled with continued commercial usage, there is a higher potential for cultural resources being illegally removed or damaged. The limited ability of law enforcement officers to protect cultural resources is expected to continue; without enforcement of federal laws regarding the protection of cultural resources, damage and destruction is expected to continue. On-going permitting of BLM-authorized activities including mining, grazing, recreation, and energy development has the potential to negatively impact the integrity of cultural resources. In addition to human-based agents of destruction, it is expected that large-scale climate change including sea level rise and wildland fires will continue to occur in the planning area and will negatively impact or destroy cultural resources.

The Redding and Arcata FOs have developed site sensitivity models for both prehistoric and historic resources to aid in planning. When appropriate for protection, cultural resources may be included in ACECs. Select localities of heritage resources may also have individual cultural resource activity plans implemented and management tools, such as historic property treatment plans or mitigation plans associated with specific project activities.

In many cases, the BLM and other federal agencies are moving away from site-specific plans toward landscape-level planning; however, this type of planning is still in the early stages and no formal process or document has yet been developed. Because nomination to the NRHP and the completion of planning documents place the location of the site into the public realm, completions of plans and nominations will need to balance public awareness while maintaining a level of confidentiality to protect the site from additional damage.

In response to the increased wildland fire hazards, the BLM expects it will need to conduct more monitoring, stabilization, and proactive surveys in areas targeted for fuels reduction, forest resilience,

timber salvage sales, emergency fire suppression, and other wildfire prevention and recovery activities. This may also lead to increased discovery and management of cultural resources in wilderness areas. In addition, management of cultural resources will be increasingly coordinated with adjoining administrative units, including the Forest Service, NPS, Reclamation, tribal governments, and local city and county governments.

Key Features

Various federal laws and the current plans for the resource areas require that the BLM identify areas of significant historic properties for protection, enhancement, complimentary use, and public enjoyment. While significant cultural resources are unpredictably disbursed across the landscape, certain areas have higher potential to produce these resources. For instance, major river drainages were important locations for both prehistoric and historic land use patterns. Known locations of historic mines, early townsites, and transportation corridors are also likely to yield significant cultural resources. Many of these areas have a high potential for interpretive signage that can further educate the public about protecting cultural resources.

2.2.5 Fish/Special Status Fish/Aquatic Habitat

The NCIP area includes seven EPA level III ecoregions (**Map 2-25, Appendix A**), which include a wide variety of aquatic habitat types from seasonal aquatic habitat in uplands (e.g., vernal pools) to permanent flowing and non-flowing waters (streams and lakes). BLM ownership in the NCIP is broken and discontinuous. As a result, public lands and associated aquatic habitats are often an inholding surrounded by other federal or private lands. Public lands may possess only a segment of a larger stream system or a portion of a reservoir, wetland, or vernal pool. On a regional scale, the BLM is a minor landowner compared to Forest Service-administered lands and private property, owning just 3 percent of the land.

Regional habitat connectivity projects are difficult without partnerships and support from adjacent landowners. In many instances, private property adjacent to BLM-administered land has different management objectives than public lands. Commercial timber land surrounds many of the forested public land parcels. Intensive ranching on private lands is common around public land parcels in foothill oak woodlands, grasslands, and brushy areas.

Fisheries and aquatic community resources that occur on public lands in the planning area are as diverse as the landscapes and include stock ponds and vernal pools, ponds and reservoirs, estuaries, and river systems. Many species that rely on these aquatic systems occur throughout the planning area seasonally, such as salmonids, or all year, such as native mussels. Additionally, many species have life stages or cycles that may only rely on the aquatic resources on a limited basis such as amphibians, which have an aquatic-dependent life stage, and fish, which require permanent water.

The NWFP allocates land use on 24.4 million acres of federal forest in western Washington, western Oregon, and northwestern California including much of the planning area. In addition to the land use allocations assigned within the NWFP, an additional feature of the NWFP is the Aquatic Conservation Strategy, which "... was developed to restore and maintain the ecological health and aquatic ecosystems contained within them on public lands" (B-9 NWFP).

Although the eastern portions of the Redding FO are not included in the NWFP, those anadromous fish producing watersheds within this region are encompassed by the 1995 Decision notice/decision record,

finding of no significant impact (FONSI), environmental assessment (EA), and appendices for the implementation of interim strategies for managing anadromous fish-producing watersheds in eastern Oregon and Washington, Idaho, and portions of California, commonly referred to as PACFISH (USDI BLM 1995b). Since 1995, 13 fish and 4 aquatic invertebrates within the planning area have been listed as threatened or endangered under the federal ESA (listed in **Table 2-14**). The BLM Arcata and Redding Field Offices completed Section 7 consultations with the National Marine Fisheries Service following listing of anadromous salmonids, and updated ESA consultations are a component of this RMP revision process. It was determined, by the BLM as documented in PACFISH, that the PACFISH interim management direction is in conformance with the 1993 Redding RMP, specifically the resource condition objectives (RCOs) for the enhancement and protection of anadromous fisheries and riparian resources (USDI BLM 1995b).

Indicators

The condition of fisheries habitat is fundamentally linked to the condition of the adjacent riparian habitat, including vegetation, water quality, and stream channel characteristics. Riparian vegetation moderates water temperatures, increases bank stability, supports invertebrates—a food source and critical food-web component—filters and entrains sediment, provides in-stream habitat for fish, and provides organic material for aquatic insects. Thus, indicators of the health of fish populations and their habitat are tied to riparian conditions. Other elements critical to aquatic habitat and suitable fish habitat, including riparian habitat, are water quality, water quantity, and the presence/absence of nonnative competitors or predators.

Easily measurable indicators include the presence/absence of natives and nonnatives, miles of fish-bearing streams, number and acres of fisheries reservoirs, and number of threatened and endangered (T&E) or special status species. Supplementary indicators include size distribution, angling days for reservoirs, if available. Additionally, general riparian condition can be linked to evaluations of proper functioning condition (PFC).

Current Conditions

The wide dispersal and scattered parcel distribution of BLM-administered lands in the planning area results in aquatic habitat for specific streams and rivers crossing land owned by different entities, making it difficult to describe specific habitat conditions relative to single landownership. As a result, the current conditions of aquatic resources in the planning area are presented in terms of overall habitat conditions, type (lentic or lotic), and fish species distribution and diversity.

Aquatic habitats within the planning area are diverse and consist of rivers, streams, springs, seeps (generally referred to as lotic or flowing systems) and lakes, reservoirs, and ponds (generally referred to as lentic or still water systems), which provide year-round (perennial) or seasonal (intermittent) habitat for fish, aquatic invertebrate, amphibian, and reptile species.

In 2013, Trout Unlimited developed the California Freshwater Conservation Success Index (CSI): An Assessment of Freshwater Resources in California (Fesenmyer et al. 2013), with focus on lands managed by the BLM. This planning tool assists the BLM in:

- 1) identifying key areas for meeting population objectives for aquatic species/communities and habitat objectives, including the conservation of high aquatic biodiversity areas that are relatively intact and restoration opportunities within important biodiversity/species areas that are degraded; and

- 2) providing consistent guidance and data for addressing aquatic dependent resources with the RMP process and for evaluating action or project proposals.

The assessment tool focuses on aquatic species and habitats, the condition of those habitats, and threats those resources will likely face in the future. The CSI uses a common conservation planning approach of subwatershed scale data summary and scoring, synthesizing and interpreting spatial data for 43 metrics consolidated into 22 indicators.

Indicators include but are not limited to aquatic system status and habitat integrity, future security, current and historical observations, modeled distributions, management area designations such as USFWS Critical Habitat designations, and approximated range information for a suite of aquatic species. Each indicator receives a score ranging from 1 through 5 representing poor through exceptional conditions (**Map 2-3, Appendix A**). Each indicator is organized into a group that can be summed for overall scores related to Range-wide Conditions, Population Integrity, Habitat Integrity, and Future Security. Scores can be further organized to identify conservation strategies that may be appropriate in watersheds given the pattern of species occurrence, habitat condition, and likely future threats, providing a landscape-scale blueprint for management efforts on public and private lands (Fesenmyer et al. 2013).

Maps 2-3 and 2-4, Appendix A, represent two outputs from the CSI. **Map 2-3** depicts one of six habitat integrity indicators within the CSI, Connectivity, and **Map 2-4** depicts the Total Score, which is the summary score of all indicators. Scoring occurs at the subwatershed scale (12-digit hydrologic unit (USDA NRCS, USDI, USGS, and EPA 2008), equivalent to approximately 10,000 acres. Represented in the map is a broad suite of population metrics, anthropogenic stressors, and environmental conditions that have been assigned a score based on the best scientific understanding of the significance of the particular data. The Total Score is a summary score, which has the potential to range from 6 to 30 with higher scores representing better conditions. It is important to note that the CSI is a broad-scale snapshot based upon data gathered from 2000 to 2010 and does not provide trend data nor capture the variability within a particular factor.

Lotic Systems

Approximately 778 miles and 1,817 acres of riparian floodplain habitat occur on BLM-administered lands within the planning area, of which 523 miles has been identified as perennial fish bearing stream and river corridors. Major inland waterways within the Klamath, Sacramento-San Joaquin, and Coast Range systems include the Eel, Mattole, Smith, Mad, Sacramento, Klamath, Pit, Scott, Shasta, and Trinity Rivers, as well as Clear, Mill, Deer, Battle, Butte, Cow, and Cottonwood Creeks. **Table 2-9** identifies the lotic systems encompassed by the planning area and describes the diversity of fish species present.

These streams and their tributaries are also included in the Northwest Stream Temperature Database (Isaak et al. 2016), which is maintained by the Forest Service Rocky Mountain Research Station. **Map 2-5, Appendix A**, shows mean August water temperatures in the stream systems in the Redding and Arcata FOs. Clearly, there are large areas of stream systems that have been historically warm; however, it is highly likely that fire impacts that have occurred between 2017 and 2020 will exacerbate temperature issues. The extent of fire effects on riparian areas, especially bankside vegetation, is likely to expand areas where temperatures exceed 14°C.

Table 2-9. Lotic Systems and Fish Diversity within the NCIP Planning Area

Basin	Lotic Systems Encompassed	Fish Species Diversity by Family (including Aquatic Invasive Species)
North Coast	Eel, Mattole, Smith, Mad Rivers and their associated Estuaries, and Redwood Creek	Petromyzontidae, Acipenseridae, Cyprinidae, Osmeridae, Catostomidae, Salmonidae, Cottidae, Embiotocidae, Gasterosteidae, Gobidae, Pleuronectidae, Clupidae, Atherinopsidae, Ictaluridae, Percidae
Sacramento-San Joaquin	Sacramento, Pit, McCloud, Clear, Mill, Deer, Battle, Butte, Cow, and Cottonwood Creeks	Petromyzontidae, Acipenseridae, Cyprinidae, Osmeridae, Catostomidae, Salmonidae, Cottidae, Gasterosteidae, Ictaluridae, Poecilidae, Moronidae, Centrarchidae
Klamath	Klamath, Trinity, Scott, and Shasta Rivers	Petromyzontidae, Cyprinidae, Catostomidae, Salmonidae, Cottidae, Ictaluridae

The Northwest Stream Temperature Database also provides stream temperature projections for 2040 (**Map 2-6, Appendix A**) and 2080 (**Map 2-7, Appendix A**). While some of the areas of higher temperatures do show increases, one of the most important things to note is that colder streams will tend to maintain those conditions through the next 60 years. Those areas warrant the highest level of protection.

Aside from streams and their riparian areas, vernal pools and pool complexes have been at risk from fires that occurred between 2017 and 2020 (**Map 2-8, Appendix A**). That risk is likely to increase over time.

Additionally, a number of ACECs were created in previous planning efforts to protect riparian and wetland habitats and associated aquatic organisms (See **Section 2.4.1**).

Lentic Systems

The still waters encompassed by lentic systems include natural and modified wetlands, human-made ponds, and reservoirs as well as other features on the landscape such as seeps and springs, bedrock basins, stock ponds, vernal pools, and floodplain habitat adjacent to riverine systems. Within the planning area, these features range in size from the 30,000-acre Lake Shasta Reservoir to unnamed stock ponds or vernal pools less than 100 square feet in size.

Within the planning area, 2,016 acres of BLM-administered lands are encompassed by recreational fishing reservoirs. Some of these lands fall within, and in many cases are subsurface, existing reservoirs such as Oroville and Iron Gate Reservoirs. Within the planning area, the BLM manages, helps manage, or provides access to eight of these reservoirs (**Table 2-10**). With the exception of Buckhorn (Grass Valley Creek) and Keswick Reservoirs, most of these are small reservoirs occurring entirely on BLM-administered land and stocked by the BLM and/or CDFW with a few species apiece, primarily largemouth bass (*Micropterus salmoides*), red-eared sunfish (*Lepomis microlophus*), and channel catfish (*Ictalurus punctatus*) or rainbow trout (*Oncorhynchus mykiss*). Buckhorn and Keswick Reservoirs are located on Reclamation-managed land; however, the BLM manages the land around the reservoirs.

Table 2-10. Reservoirs Managed by the BLM within the NCIP Planning Area

Reservoir	Manager/Ownership	Species Found	Acres
Buckhorn Reservoir/Grass Valley Creek Reservoir	Reclamation	Rainbow Trout, Golden Shiner	37
Keswick Reservoir	Reclamation	Nonnative Game Fish, Nonnative Panfish, Nonnative Catfish Rainbow Trout, Brown Trout	513
Coyote Pond	BLM Redding	Nonnative Game Fish, Nonnative Panfish, Nonnative Catfish	3
Bass Pond	BLM Redding	Nonnative Game Fish, Nonnative Panfish, Nonnative Catfish	2
Union Hill Pond	BLM Redding	Nonnative Game Fish, Nonnative Panfish,	12
Osprey Pond	BLM Redding	Nonnative Game Fish, Nonnative Panfish, Nonnative Catfish	6
Rocky pond	BLM Redding	Nonnative Game Fish, Nonnative Panfish,	12
Blue pond	BLM Redding	Amphibians	2

Source: USDI BLM 2016a

In addition to these reservoirs and ponds, the BLM manages multiple seeps and springs, bedrock basins, stock ponds, modified and natural vernal pools, and wetland complexes, which provides habitat to a suite of aquatic-dependent biota such as beaver, waterfowl, multiple crustacean groups including fairy, tadpole and clam shrimp, and crayfish, amphibians, spring snails, and others (**Table 2-11**). These wetland features may be perennial or seasonal and range in size from smaller than 100 square feet to larger than 60 acres. Additionally, the BLM Redding FO manages the Paynes Creek Wetland Complex. It is made up of a complex of managed wetlands and fishing ponds, amounting to approximately 160 acres, and the Corning Vernal Pool Complex, totaling 40 acres. On BLM-administered lands within the planning area, there are more than 717 of these features, totaling more than 425 acres of upland lentic resources.

Table 2-11. Notable Lentic Systems on BLM-Administered Lands within the NCIP Planning Area

Wetland	Species Found	Acres
Paynes Creek Wetland Complex ¹	Fish, beaver, waterfowl, shorebirds, wading birds, crayfish, amphibians, reptiles, aquatic invertebrates	160
Tamarak Lake ²	Waterfowl, amphibians, aquatic invertebrates	37
Butte Valley ³	Amphibians, aquatic invertebrates	23
Honeybee Wetlands	Amphibians, aquatic invertebrates	2
Spring Branch Plains Vernal Pool Complex	Amphibians, aquatic invertebrates	43
Hog and Hoggett Lake	Waterfowl, amphibians, aquatic invertebrates	21
Lacks Creek ponds	Amphibians, aquatic invertebrates	2
Corning Vernal Pool Complex	Vernal pool fairy shrimp	40

Source: USDI BLM 2016a; confirmed by Steven Laymon at the BLM Redding FO

¹Seventeen acres attributed to Rocky, Bass, and Coyote Pond is incorporated into the 160 acres associated with the Paynes Creek Wetland Complex.²Thirty-seven acres of the 72-acre Tamarak Lake are BLM-administered lands.³Butte Valley wetlands incorporate a minor portion of the 3,000-acre Meiss Lake managed by the CDFW.

Aquatic Organisms

Of the approximately 66 native freshwater, estuarine, or anadromous fish species (Moyle 2002) that occur in California, approximately 45 occur within the planning area. Thirty-one species of nonnative fish occur in the planning area, totaling approximately 76 fish species in the planning area (**Table 2-12**).

Seven of these species have identified subspecies or possess distinct ranges reproductively isolated from the population as a whole, or are considered distinct population segments (DPSs), or evolutionary significant units (ESUs).

When these additional 24 subspecies, DPSs, or ESUs are taken into consideration, approximately 62 of California's of 124 native inland fishes (Moyle et al. 2015) occur within the planning area (**Table 2-13**).

In addition to these fish species, a multitude of aquatic invertebrates and Priority Habitats associated with both lentic and lotic systems have been identified that occur within the planning area. However, only those species identified as requiring special management considerations as nonnative aquatic invasive species, T&E species, species of special management concern, or BLM sensitive species have been incorporated into **Table 2-14**. For identified sensitive aquatic amphibian and reptile species, see **Section 2.2.17** (Wildlife/Special Status Species).

Table 2-12. Fish Species Occurring in the NCIP Planning Area

Family	Common Name	Scientific Name	Native/ Nonnative	Lifestyle	Lentic/Lotic
Lamprey, Petromyzontidae	Klamath River Lamprey	<i>Lampetra similis</i>	Native	Anadromous	Lotic
Lamprey, Petromyzontidae	Pacific brook lamprey	<i>Lampetra pacifica</i>	Native	Anadromous	Lentic/Lotic
Lamprey, Petromyzontidae	Pacific Lamprey	<i>Entosphenus tridentata</i>	Native	Anadromous, Freshwater	Lotic
Lamprey, Petromyzontidae	Pit-Klamath brook lamprey	<i>Lampetra lethophaga</i>	Native	Freshwater	Lotic
Lamprey, Petromyzontidae	River lamprey	<i>Lampetra ayresi</i>	Native	Anadromous	Lentic/Lotic
Lamprey, Petromyzontidae	Western brook lamprey	<i>Lampetra richardsoni</i>	Native	Freshwater	Lotic
Sturgeon, Acipenseridae	Green sturgeon	<i>Acipenser medirostris</i>	Native	Anadromous	Lentic/Lotic
Sturgeon, Acipenseridae	White sturgeon	<i>Acipenser transmontanus</i>	Native	Anadromous	Lentic/Lotic
Minnnows, Cyprinidae	Blue chub	<i>Gila coerulea</i>	Native	Freshwater	Lotic
Minnnows, Cyprinidae	California roach	<i>Hesperoleucus symmetricus</i>	Native	Resident	Lentic/Lotic
Minnnows, Cyprinidae	Carp	<i>Cyprinus carpio</i>	Nonnative	Resident	Lentic/Lotic
Minnnows, Cyprinidae	Fathead minnow	<i>Pimephales promelas</i>	Nonnative	Resident	Lentic/Lotic
Minnnows, Cyprinidae	Goldfish	<i>Carassius auratus</i>	Nonnative	Resident	Lentic/Lotic
Minnnows, Cyprinidae	Hardhead	<i>Mylopharodon conocephalus</i>	Native	Resident	Lentic/Lotic

2. Area Profile (Fish/Special Status Fish/Aquatic Habitat)

Family	Common Name	Scientific Name	Native/Nonnative	Lifestyle	Lentic/Lotic
Minnnows, Cyprinidae	Hitch	<i>Lavinia exilicauda</i>	Native	Resident	Lentic/Lotic
Minnnows, Cyprinidae	Klamath tui chub	<i>Siphatales bicolor</i>	Native	Freshwater	Lentic/Lotic
Minnnows, Cyprinidae	Red shiner	<i>Notropis lutrensis</i>	Nonnative	Resident	Lentic/Lotic
Minnnows, Cyprinidae	Sacramento blackfish	<i>Orthodon microlepidotus</i>	Native	Resident	Lentic/Lotic
Minnnows, Cyprinidae	Sacramento pikeminnow ¹	<i>Ptychocheilus grandis</i>	Native	Freshwater	Lentic/Lotic
Minnnows, Cyprinidae	Sacramento splittail	<i>Pogonichthys macrolepidotus</i>	Native	Resident	Lentic/Lotic
Minnnows, Cyprinidae	Speckled dace	<i>Rhinichthys osculus</i>	Native	Resident	Lentic/Lotic
Minnnows, Cyprinidae	Golden shiner	<i>Notemigonus chrysoleucas</i>	Nonnative	Freshwater	Lotic
Suckers, Catostomidae	Klamath largescale sucker	<i>Catostomus snyderi</i>	Native	Freshwater	Lotic
Suckers, Catostomidae	Klamath smallscale sucker	<i>Catostomus rimiculus</i>	Native	Freshwater	Lotic
Suckers, Catostomidae	Lost River sucker	<i>Deltistes luxatus</i>	Native	Freshwater	Lotic
Suckers, Catostomidae	Sacramento sucker	<i>Catostomus occidentalis</i>	Native	Resident	Lentic/Lotic
Suckers, Catostomidae	Shortnose sucker	<i>Chasmistes brevirostris</i>	Native	Freshwater	Lotic
Suckers, Catostomidae	Tahoe sucker	<i>Catostomus tahoensis</i>	Nonnative	Resident	Lentic/Lotic
Bullhead Catfish, Ictaluridae	Black bullhead	<i>Ameiurus melas</i>	Nonnative	Freshwater	Lotic
Bullhead Catfish, Ictaluridae	Brown bullhead	<i>Ameiurus nebulosus</i>	Nonnative	Freshwater	Lentic, Lotic
Bullhead Catfish, Ictaluridae	Channel catfish	<i>Ictalurus punctatus</i>	Nonnative	Resident	Lentic/Lotic
Bullhead Catfish, Ictaluridae	White catfish	<i>Ameiurus catus</i>	Nonnative	Resident	Lentic/Lotic
Bullhead Catfish, Ictaluridae	Yellow bullhead	<i>Ameiurus natalis</i>	Nonnative	Freshwater	Lotic
Smelts, Osmeridae	Delta smelt	<i>Hypomesus transpacificus</i>	Native	Resident	Lentic/Lotic
Smelts, Osmeridae	Eulachon	<i>Thaleichthys pacificus</i>	Native	Anadromous	Lotic
Smelts, Osmeridae	Wakasagi	<i>Hypomesus nipponensis</i>	Nonnative	Freshwater	Lentic, Lotic
Salmon and Trout, Salmonidae	Coastal cutthroat trout	<i>Oncorhynchus clarki clarki</i>	Native	Freshwater	Lotic
Salmon and Trout, Salmonidae	Chum salmon	<i>Oncorhynchus keta</i>	Native	Anadromous	Lotic
Salmon and Trout, Salmonidae	Southern Oregon Northern California Coast Coho salmon	<i>Oncorhynchus kisutch</i>	Native	Anadromous	Lotic

2. Area Profile (Fish/Special Status Fish/Aquatic Habitat)

Family	Common Name	Scientific Name	Native/Nonnative	Lifestyle	Lentic/Lotic
Salmon and Trout, Salmonidae	Steelhead trout	<i>Oncorhynchus mykiss</i>	Native	Anadromous	Lentic/Lotic
Salmon and Trout, Salmonidae	Kokanee salmon	<i>Oncorhynchus nerka</i>	Nonnative	Freshwater	Lentic, Lotic
Salmon and Trout, Salmonidae	California Coast Fall Chinook	<i>Oncorhynchus tshawytscha</i>	Native	Anadromous	Lotic
Salmon and Trout, Salmonidae	Brown trout	<i>Salmo trutta</i>	Nonnative	Resident	Lentic/Lotic
Salmon and Trout, Salmonidae	Bull trout	<i>Salvelinus confluentus</i>	Native	Anadromous, Freshwater	Lotic
Salmon and Trout, Salmonidae	Brook trout	<i>Salvelinus fontinalis</i>	Nonnative	Freshwater	Lotic
Livebearers, Poeciliidae	Mosquitofish	<i>Gambusia affinis</i>	Nonnative	Resident	Lentic/Lotic
Sticklebacks, Gasterosteidae	Threespine stickleback	<i>Gasterosteus aculeatus</i>	Native	Resident	Lentic/Lotic
Sculpins, Cottidae	Coastrange sculpin	<i>Cottus aleuticus</i>	Native	Amphidromous	Lotic
Sculpins, Cottidae	Klamath Lake sculpin	<i>Cottus princeps</i>	Native	Freshwater	Lentic
Sculpins, Cottidae	Lower Klamath marbled sculpin	<i>Cottus klamathensis polyporus</i>	Native	Freshwater	Lotic
Sculpins, Cottidae	Prickly sculpin	<i>Cottus asper subspecies</i>	Native	Amphidromous, Estuarine, Freshwater	Lotic
Sculpins, Cottidae	Riffle sculpin	<i>Cottus gulosus</i>	Native	Resident	Lentic/Lotic
Sculpins, Cottidae	Rough sculpin	<i>Cottus asperrimus</i>	Native	Freshwater	Lotic
Sculpins, Cottidae	Slender sculpin	<i>Cottus tenuis</i>	Native	Freshwater	Lotic
Sculpins, Cottidae	Staghorn sculpin*	<i>Leptocottus armatus</i>	Native	Amphidromous, Estuarine, Freshwater	Lotic
Striped Basses, Moronidae	Striped bass	<i>Morone saxatilis</i>	Nonnative	Anadromous	Lentic/Lotic
Striped Basses, Moronidae	White bass	<i>Morone chrysops</i>	Nonnative	Resident	Lentic/Lotic
Sunfishes, Centrarchidae	Black crappie	<i>Pomoxis nigromaculatus</i>	Nonnative	Resident	Lentic/Lotic
Sunfishes, Centrarchidae	Bluegill	<i>Lepomis macrochirus</i>	Nonnative	Resident	Lentic/Lotic
Sunfishes, Centrarchidae	Green sunfish	<i>Lepomis cyanellus</i>	Nonnative	Resident	Lentic/Lotic
Sunfishes, Centrarchidae	Largemouth bass	<i>Micropterus salmoides</i>	Nonnative	Resident	Lentic/Lotic
Sunfishes, Centrarchidae	Pumpkinseed	<i>Lepomis gibbosus</i>	Nonnative	Freshwater	Lentic
Sunfishes, Centrarchidae	Redear sunfish	<i>Lepomis microlophus</i>	Nonnative	Resident	Lentic/Lotic
Sunfishes, Centrarchidae	Sacramento perch	<i>Archoplites interruptus</i>	Native	Freshwater	Lotic
Sunfishes, Centrarchidae	Smallmouth bass	<i>Micropterus dolomieu</i>	Nonnative	Resident	Lentic/Lotic

Family	Common Name	Scientific Name	Native/ Nonnative	Lifestyle	Lentic/Lotic
Sunfishes, Centrarchidae	Spotted bass	<i>Micropterus punctulatus</i>	Nonnative	Freshwater	Lotic
Sunfishes, Centrarchidae	White crappie	<i>Pomoxis annularis</i>	Nonnative	Resident	Lentic/Lotic
Perches, Percidae	Bigscale logperch	<i>Percina macrolepida</i>	Nonnative	Resident	Lentic/Lotic
Perches, Percidae	Yellow perch	<i>Perca flavescens</i>	Nonnative	Freshwater	
Surfperches, Embiotocidae	Shiner perch	<i>Cymatogaster aggregata</i>	Native	Estuarine	Lotic
Surfperches, Embiotocidae	Tule perch	<i>Hysterocarpus traskii</i>	Native	Resident	Lentic/Lotic
Gobies, Gobidae	Tidewater goby*	<i>Eucyclogobius newberryi</i>	Native	Estuarine	Lotic
Righteye flounders, Pleuronectidae	Starry flounder*	<i>Platichthys stellatus</i>	Native	Estuarine	Lotic
Herrings, Clupidae	American shad	<i>Alosa sapidissima</i>	Nonnative	Anadromous	Lentic/Lotic
Herrings, Clupidae	Treadfin shad	<i>Dorosoma petenense</i>	Nonnative	Resident	Lentic/Lotic
Silversides, Atherinopsidae	Topsmelt*	<i>Atherinops affinis</i>	Native	Estuarine	Lotic

Source: Moyle 2002; Moyle et al. 2015

* Identified species are marine fishes that frequent fresh or brackish water.

Table 2-13. Fish Subspecies, DPSs, or ESUs Occurring in the NCIP Planning Area

Family	Common Name	Scientific Name	Native/ Nonnative	Lifestyle	Lentic/ Lotic
Suckers, Catostomidae	Humboldt sucker	<i>Catostomus occidentalis humboldtianus</i>	Native	freshwater	Lotic
Suckers, Catostomidae	Jenny Creek sucker (Klamath smallscale sucker)	<i>Catostomus rimiculus</i>	Native	freshwater	Lotic
Sticklebacks, Gasterosteidae	Coastal Threespine Stickleback	<i>Gasterosteus aculeatus</i>	Native	Resident	Lentic/Lotic
Sticklebacks, Gasterosteidae	Inland Threespine Stickleback	<i>Gasterosteus aculeatus microcephalus</i>	Native	Resident	Lentic/Lotic
Salmon and Trout, Salmonidae	Coastal cutthroat trout	<i>Oncorhynchus clarki clarki</i>	Native	Anadromous	Lotic
Salmon and Trout, Salmonidae	Southern Oregon- Northern California coast Coho salmon	<i>Oncorhynchus kisutch</i>	Native	Anadromous	Lotic
Salmon and Trout, Salmonidae	Central California Coast Coho salmon	<i>Oncorhynchus kisutch</i>	Native	Anadromous	Lotic
Salmon and Trout, Salmonidae	Klamath Mountains Province Summer steelhead	<i>Oncorhynchus mykiss</i>	Native	Anadromous	Lotic
Salmon and Trout, Salmonidae	Northern California summer steelhead	<i>Oncorhynchus mykiss</i>	Native	Anadromous	Lotic
Salmon and Trout, Salmonidae	Northern California winter steelhead	<i>Oncorhynchus mykiss</i>	Native	Anadromous	Lotic

Family	Common Name	Scientific Name	Native/Nonnative	Lifestyle	Lentic/Lotic
Salmon and Trout, Salmonidae	Redband trout	<i>Oncorhynchus mykiss gairdneri</i>	Native	Freshwater	Lotic
Salmon and Trout, Salmonidae	Central Valley steelhead DPS			Anadromous	Lotic
Salmon and Trout, Salmonidae	Coastal rainbow trout	<i>Oncorhynchus mykiss irideus</i>	Native	Freshwater	Lotic
Salmon and Trout, Salmonidae	Central Valley steelhead DPS	<i>Oncorhynchus mykiss</i>	Native	Anadromous	Lotic
Salmon and Trout, Salmonidae	Upper Klamath-Trinity Fall Chinook salmon	<i>Oncorhynchus tshawytscha</i>	Native	Anadromous	Lotic
Salmon and Trout, Salmonidae	Upper Klamath-Trinity Spring Chinook salmon	<i>Oncorhynchus tshawytscha</i>	Native	Anadromous	Lotic
Salmon and Trout, Salmonidae	Central Valley fall-run Chinook salmon	<i>Oncorhynchus tshawytscha</i>	Native	Anadromous	Lotic
Salmon and Trout, Salmonidae	Central Valley late fall-run Chinook salmon	<i>Oncorhynchus tshawytscha</i>	Native	Anadromous	Lotic
Salmon and Trout, Salmonidae	Central Valley spring-run Chinook salmon	<i>Oncorhynchus tshawytscha</i>	Native	Anadromous	Lotic
Salmon and Trout, Salmonidae	Central Valley winter-run Chinook salmon	<i>Oncorhynchus tshawytscha</i>	Native	Anadromous	Lotic
Salmon and Trout, Salmonidae	Southern Oregon-Northern California coastal Chinook salmon	<i>Oncorhynchus tshawytscha</i>	Native	Anadromous	Lotic
Minnnows, Cyprinidae	Klamath speckled dace	<i>Rhinichthys osculus klamathensis</i>	Native	Freshwater	Lotic
Sculpins, Cottidae	Bigeyed marbled sculpin	<i>Cottus klamathensis macrops</i>	Native	Freshwater	Lotic
Sculpins, Cottidae	Lower Klamath marbled sculpin	<i>Cottus klamathensis polyporus</i>	Native	Freshwater	Lotic

Source: USDI BLM 2016a

Table 2-14. Threatened, Endangered, and Special Status Species and Aquatic Habitats

Common Name	Scientific Name	Federal Status	Critical Habitat	State Status	Climate Vulnerable*	Habitat
Central Valley fall-run Chinook Salmon	<i>Oncorhynchus tshawytscha</i>	BLM Priority	N/A	SSC	Yes	Anadromous
Central Valley late fall-run Chinook Salmon	<i>Oncorhynchus tshawytscha</i>	BLM Priority	N/A	SSC	Yes	Anadromous
Central Valley spring-run Chinook Salmon	<i>Oncorhynchus tshawytscha</i>	T	Yes	T	No	Anadromous
Central Valley winter-run Chinook Salmon	<i>Oncorhynchus tshawytscha</i>	E	Yes	E	No	Anadromous
Upper Klamath-Trinity fall-run Chinook Salmon	<i>Oncorhynchus tshawytscha</i>	BLM Priority	N/A	SSC	No	Anadromous

2. Area Profile (Fish/Special Status Fish/Aquatic Habitat)

Common Name	Scientific Name	Federal Status	Critical Habitat	State Status	Climate Vulnerable*	Habitat
Upper Klamath-Trinity spring-run Chinook Salmon	<i>Oncorhynchus tshawytscha</i>	BLM Priority	N/A	SSC	Yes	Anadromous
California Coastal Chinook Salmon	<i>Oncorhynchus tshawytscha</i>	BLM Priority	N/A	SSC	Yes	Anadromous
Coho salmon	<i>Oncorhynchus kisutch</i>	T	Yes	NT	Yes	Anadromous
Coho salmon	<i>Oncorhynchus kisutch</i>	T	Yes	-	Yes	Anadromous
Green Sturgeon (Southern DPS)	<i>Acipenser medirostris</i>	T	Yes	SSC	Yes	Anadromous
Jenny Creek Sucker	<i>Catostomus rimitulus</i>	BLM Priority	N/A	-	Not in SWAP	Resident
Lost River Sucker	<i>Deltistes luxatus</i>	E	Yes ¹	SE/FP	No	Resident
Pacific Lamprey	<i>Lempetra tridentata</i>	BLMS	N/A	SSC	Yes	Anadromous
Interior Redband Trout	<i>Oncorhynchus mykiss newberri</i> and <i>O. m. stonei</i>	BLM Priority	N/A	-	Not in SWAP	Resident
Rough sculpin	<i>Cottus asperrimus</i>	BLMS	N/A	T FP	No	Resident
Shortnose Sucker	<i>Chamistes brevirostris</i>	E	Yes ¹	E FP	No	Resident
Central California Coast Steelhead ¹	<i>Oncorhynchus mykiss</i>	T	Yes	NT	Yes	Anadromous
Central Valley Steelhead	<i>Oncorhynchus mykiss</i>	T	Yes	NT	Yes	Anadromous
Klamath Mountains Province steelhead ^{1**}	<i>Oncorhynchus mykiss</i>	BLM Priority	N/A	SSC	Yes	Anadromous
Coastal Cutthroat Trout	<i>Oncorhynchus clarki</i>	BLM Priority	N/A	SSC	Yes	Anadromous
Tidewater goby ¹	<i>Eucyclogobius newberryi</i>	E	Yes	E SSC	Yes	Resident
Eulachon (Southern DPS)	<i>Thaleichthys pacificus</i>	T	Yes	NT/ SCC	Yes	Anadromous
Bull trout	<i>Salvelinus confluentus</i>	Extinct	Yes ¹	E	Yes	Resident
Delta smelt	<i>Hypomesus transpacificus</i>	E	Yes ¹	E	Yes	Resident
Aquatic Invertebrates: Shasta crayfish	<i>Pacifastacus fortis</i>	E	No	E	No	-
Aquatic Invertebrates: Conservancy fairy shrimp	<i>Branchinecta conservatio</i>	T	Yes	-	No	-
Aquatic Invertebrates: Vernal pool fairy shrimp	<i>Branchinecta lynchi</i>	T	Yes	-	No	-
Aquatic Invertebrates: Vernal pool tadpole shrimp	<i>Lepidurus packardii</i>	E	Yes	-	No	-
Aquatic Mollusks: Nugget pebblesnail	<i>Fluminicola seminalis</i>	BLM Priority	N/A	-	Not in SWAP	-
Aquatic Mollusks: Western pearlshell mussel	<i>Margaritifera falcata</i>	BLM Priority	N/A	-	Yes	-
Aquatic Mollusks: Western ridged mussel	<i>Gonidea angulata</i>	BLM Priority	N/A	SI	Yes	-
Aquatic Mollusks: Oregon floater	<i>Anodonta oregonensis</i>	BLM Priority	N/A	-	Yes	-

Common Name	Scientific Name	Federal Status	Critical Habitat	State Status	Climate Vulnerable*	Habitat
Aquatic Mollusks: California floater	<i>Anodonta californiensis</i>	BLM Priority	N/A	-	Yes	-

Source: USDI BLM 2016a

Federal Status E=endangered, T=threatened, BLM S=BLM sensitive species

State Status: Fully Protected=FP, CDFW species of special concern=SSC, S1=NatureServe State Conservation Rank of S1 (invertebrates), NT=No take allowed by state and/or federal harvesting/fishing regulations

¹ Although designated, no critical habitat occurs on BLM-managed land..

*As indicated and described in the State Wildlife Action Plan (SWAP) 2015

Special Status Species and Aquatic Habitats

The BLM conserves habitat for special status species that occur on BLM-administered lands (**Table 2-14**). Special status species include species that are federally listed as threatened or endangered under the ESA. Additionally, there are a suite of non-listed species that include BLM sensitive species and priority species. BLM sensitive species are those species that require special management consideration to reduce the need for listing as well as all federal candidate species, proposed species, and delisted species in the 5 years following delisting. BLM priority species are those species or habitats recognized as significant for at least one factor such as density, diversity, size, public interest, remnant character, or age.

At the field level, the BLM implements conservation strategies, such as those found in recovery plans, cooperative agreements, state wildlife action plans, and other strategies (e.g., *Freshwater Mussels of the Pacific Northwest*, *Habitat Management Guidelines for Amphibians and Reptiles of the Northwestern United States and Western Canada*) for BLM special status species. The BLM also conducts and maintains inventories of BLM special status species on BLM-administered lands. The ultimate goal of the BLM's special status species program is to conserve and recover these species.

Threatened and Endangered Species

There are 13 fish and 4 aquatic invertebrates listed as T&E under the ESA known to occur in the planning area; these are listed in **Table 2-14**, above.

Special Status Species

In addition to the identified T&E species above, the following 16 non-listed species and 2 habitat types have been identified as either priority species or habitat, or as BLM sensitive species requiring special management consideration (**Table 2-14**). The two habitat types have been identified in the BLM's existing land use planning documents or have been designated or identified through another mechanism, such as essential fish habitat, as described by the Magnuson-Stevens Fishery Conservation and Management Act (NOAA and National Marine Fisheries Service 2007), as amended, or federally designated critical habitat, as delineated by the USFWS or by the National Marine Fisheries Service (NMFS).

All of the following species are found within California's inland waters; are not already listed under the federal ESA; are of high interest to the public, or are experiencing, or have formerly experienced, population declines or range retractions that, if continued, could qualify them for listing as threatened or endangered; and have naturally small populations exhibiting high susceptibility to risk from stressors that, if realized, could lead to declines that would qualify them for listing as a BLM sensitive species or as a federally threatened or endangered species.

BLM Priority Aquatic Habitat Types: Anadromous Salmonid, Steelhead, and “Fisheries” Habitat

- Within the planning area, 523 miles of anadromous salmonid, steelhead and fisheries habitat has been identified to occur on BLM-administered lands.

Wetland and Riparian Habitat

- Within the planning area, 778 miles of riparian habitat has been identified to occur on BLM-administered lands.
- Within the planning area, 1817 acres of wetland habitat has been identified to occur on BLM-administered lands.

Aquatic Invasive Species

Invasive species are becoming an increasing concern worldwide, and the rapid expansion of global travel has increased the number of potential introduction pathways (Hulme 2009); numerous species of aquatic invasive species occurring across the planning area have been implicated in the decline of populations of native species. The adverse effects of invasive species (e.g., disruption of ecological processes, competition with native species for resources, reduction of biological diversity) have been well-documented (Mack and D’Antonio 1998). More than 50,000 nonnative species have been introduced in the United States alone, resulting in estimated economic damages of \$120 billion per year (Pimentel et al. 2005). The field of invasion ecology continues to grow, and research often focuses on preventing the establishment of an invasive species in nonnative regions. It is well established that early detection and rapid response are vital components of invasive species eradication efforts (Mehta et al. 2007, Simpson et al. 2009). However, a multitude of invasive species has already become established all over the world in habitats with land uses ranging from completely undeveloped to urban.

Additionally, through the mechanism of invasional meltdown, which is the process by which a group of nonnative species acts in concert, aquatic invasive species may facilitate one another’s invasion, increasing the likelihood of survival and potentially the ecological impact of aquatic invasive species (Simberloff and Von Holle 1999). For example, Adams, Pearl and Bury (2003) noted that the bullfrog invasion in Oregon is facilitated by the presence of nonnative fish, which increase tadpole survival by reducing predatory macroinvertebrate densities. Red swamp crayfish (*Procambarus clarkii*) has been found to promote and maintain other invasive species populations including largemouth bass (*Micropterus salmoides*) and pike (*Esox lucius*) by serving as a primary food source (Hickley et al. 1994; Elvira et al. 1996).

Aquatic systems and associated biotic communities are very susceptible to introduced species colonization and structure alterations due to widespread alterations in hydrologic regime, community composition, and other human-induced habitat alterations. Multiple pathways have provided for and continue to provide for dispersal of aquatic invasive organisms, including release by individuals seeking to establish a food or sport resource; aquarium trade; use as bait or forage; organisms that were introduced for food, fur, or sport that subsequently escaped or were intentionally released; pest or bio-control; erosion control; introductions by agencies for game enhancement; and dispersal from naturalized populations.

Typically, invasive species possess rapid growth, high fecundity, polytrophism, resistance to extreme environmental conditions, and resistance to disease. Ilhéu et al. (2007) characterizes successful invaders as possessing a tolerance to wide environmental conditions, omnivory, rapid growth, dispersal, breeding

in ephemeral habitats, and other traits associated with opportunism. Additionally, invasive species typically thrive in new habitats because they generally lack predators and other natural controls such as disease or parasites (Shea and Chesson 2002; Torchin et al. 2003). **Table 2-15** provides an overview of aquatic invasive species found within the planning area.

Table 2-15. Aquatic Invasive Species Found within the NCIP Planning Area

Invertebrate, Vertebrate, Fish, Plants, or Marine Organisms	Category	Common Name	Scientific Name
Invertebrates	Mollusks	Zebra Mussel ¹	<i>Dreissena polymorpha</i>
Invertebrates	Mollusks	Quagga Mussel ¹	<i>Dreissena rostriformis bugensis</i>
Invertebrates	Mollusks	New Zealand mudsnail	<i>Potamopyrgus antipodarum</i>
Invertebrates	Mollusks	Asian clam	<i>Corbicula fluminea</i>
Invertebrates	Mollusks	Mystery snails	<i>Bellamyia spp.</i>
Invertebrates	Crustaceans	Red swamp crayfish	<i>Procambarus clarkii</i>
Invertebrates	Crustaceans	Signal Crayfish	<i>Pacifastacus leniusculus</i>
Invertebrates	Crustaceans	Virile crayfish	<i>Orconectes neglectus</i>
Invertebrates	Crustaceans	Ringed crayfish*	<i>Orconectes virilis</i>
Vertebrates	Amphibians	American bullfrog	<i>Lithobates catesbeianus</i>
Vertebrates	Reptiles	Red-eared slider	<i>Trachemys scripta elegans</i>
Vertebrates	Reptiles	Snapping Turtle	<i>Chelydra serpentina</i>
Vertebrates	Mammals	Muskrat	<i>Ondatra zibethicus</i>
Vertebrates	Mammals	Nutria* ¹	<i>Myocastor coypus</i>
Fish	Nonnative aquarium fish	Goldfish	<i>Carassius auratus</i>
Fish	Nonnative panfish	Black crappie	<i>Pomoxis nigromaculatus</i>
Fish	Nonnative panfish	Bluegill	<i>Lepomis macrochirus</i>
Fish	Nonnative panfish	Green sunfish	<i>Lepomis cyanellus</i>
Fish	Nonnative panfish	Pumpkinseed	<i>Lepomis gibbosus</i>
Fish	Nonnative panfish	Redear sunfish	<i>Lepomis microlophus</i>
Fish	Nonnative panfish	White crappie	<i>Pomoxis annularis</i>
Fish	Nonnative panfish	Yellow perch	<i>Perca flavescens</i>
Fish	Nonnative game fish	Largemouth bass	<i>Micropterus salmoides</i>
Fish	Nonnative game fish	Smallmouth bass	<i>Micropterus dolomieu</i>
Fish	Nonnative game fish	Spotted bass	<i>Micropterus punctulatus</i>
Fish	Nonnative Trout	Brook trout	<i>Salvelinus fontinalis</i>
Fish	Nonnative Trout	Brown trout	<i>Salmo trutta</i>
Fish	Nonnative Trout	Kokanee salmon	<i>Oncorhynchus nerka</i>
Fish	Nonnative anadromous fish	American shad	<i>Alosa sapidissima</i>
Fish	Nonnative anadromous fish	Striped bass	<i>Morone saxatilis</i>
Fish	Nonnative catfish	Black bullhead	<i>Ameiurus melas</i>
Fish	Nonnative catfish	Brown Bullhead	<i>Ameiurus nebulosus</i>
Fish	Nonnative catfish	Channel catfish	<i>Ictalurus punctatus</i>
Fish	Nonnative catfish	White catfish	<i>Ameiurus catus</i>
Fish	Nonnative catfish	Yellow bullhead	<i>Ameiurus natalis</i>
Fish	Others	Common Carp	<i>Cyprinus carpio</i>
Fish	Others	Fathead minnow	<i>Pimephales promelas</i>
Fish	Others	Red shiner	<i>Notropis lutrensis</i>
Fish	Others	Golden shiner	<i>Notemigonus chrysoleucas</i>
Fish	Others	Tahoe sucker	<i>Catostomus tahoensis</i>

Invertebrate, Vertebrate, Fish, Plants, or Marine Organisms	Category	Common Name	Scientific Name
Fish	Others	Wakasagi	<i>Hypomesus nipponensis</i>
Fish	Others	Mosquitofish	<i>Gambusia affinis</i>
Fish	Others	White bass	<i>Morone chrysops</i>
Fish	Others	Bigscale logperch	<i>Percina macrolepida</i>
Fish	Others	Treadfin shad	<i>Dorosoma petenense</i>
Fish	Others	Klamath tui chub	<i>Siphatales bicolor bicolor</i>
Fish	Others	Sacramento Pikeminnow	<i>Ptychocheilus grandis</i>
Plants	Algae	Didymo	<i>Didymosphenia geminata</i>
Marine Organisms		Eastern softshell clam	<i>Mya arenaria</i>
Marine Organisms		Australian burrowing isopod	<i>Sphaeroma quoianum</i>

Source: USDI BLM 2016a

Note: Sacramento pikeminnow are only invasive to the Eel River; they are native elsewhere in the planning area.

! Invasive mussels and nutria have not been documented in the planning area but do occur in connected waterways.

* The species does not occur in the NCIP planning area; however, suitable habitat is present, and it occurs in either connected waterways or on the periphery of the NCIP planning area.

Trends

From approximately 1780 to 1980, approximately 53 percent of aquatic (wetland) habitat within the conterminous United States has disappeared or undergone conversion (Mitsch and Gosselink 2007). In California alone, by the mid-1980s, more than 85 percent of wetlands had been lost (Dahl and Allord 1996). The loss or degradation of aquatic habitat has likely affected multiple species that depend upon these environments and has directly been attributable to their listing under the ESA. Species including vernal pool tadpole shrimp, California red-legged frog, tiger salamander, giant garter snake, Delta smelt, yellow-billed cuckoo, and many others were listed under the ESA. Multiple other species such as native mussels, Pacific lamprey, foothill yellow-legged frog and western pond turtle are currently undergoing population declines due to the loss or degradation of aquatic habitat.

Multiple drivers associated with the declining trends continue to affect the native fish of California. Declines in native fishes have been attributed to the obstruction of migratory pathways from dams, irrigation diversion, and channel modification; degradation of spawning and rearing habitat; angling mortality; and competition, predation, and hybridization with invasive species (Lee et al. 1997).

Although written in 1995 *Fish Species of Special Concern in California* (Moyle et al. 1995) provides a succinct summary regarding the ongoing downward trends of fish populations in California:

Although the native fishes are admirably suited for surviving the vagaries of nature, they have done poorly when forced to compete with humans for the waters that are their homes. Most streams have been dammed, diverted, turned inside out by mining, or altered by poor watershed management. Many lakes and marshes have been drained or filled in. Waters of all types have been polluted to one degree or another. Furthermore, numerous nonnative fishes have been introduced that compete with or prey on the natives. The decline of California's fishes, and of other aquatic organisms, will continue, and many extinctions will occur unless the widespread nature of the problem is recognized, and a systematic effort is made to protect aquatic habitats in all drainages.

Further evidence related to the downward trend of California's native fisheries is provided in the 2015 edition of *Fish Species of Special Concern in California* (Moyle et al. 2015):

In 1975, 6 species were considered extinct, but most species (64 percent) were considered stable. There has been only one recognized extinction in the intervening years, but the numbers of listed and imperiled species have steadily increased so that, in 1989, 15 species (13 percent) were formally listed as threatened or endangered under state and federal endangered species acts and 50 (44 percent) were regarded as imperiled (Moyle et al. 1989 in Moyle et al 2015). By 1995, the numbers were 18 (16 percent) listed and 53 (46 percent) imperiled (Moyle et al. 1995). Of the 124 species considered for this report, 7 are extinct, 31 (25 percent) are officially listed, and 62 (50 percent) are considered of critical, high or moderate concern, which means that at least 81 percent of California's native fishes are imperiled or extinct.

Species declines in aquatic ecosystems, however, are not limited to fishes. Although trout, salmon, sturgeon, suckers, lamprey, and other native fish species and associated habitats demonstrate that the conservation of native fishes spans multiple species, functional groups and habitat types, Ricciardi and Rasmussen (1999) determined that extinction rates are five times higher for freshwater fauna in the United States than for mammals, birds, or other terrestrial species. Additionally, Williams et al. (1993) determined more than two-thirds of known species of freshwater mussels are at risk of extinction, and nearly half of all freshwater crayfishes in the United States and Canada are at risk (Taylor et al. 2007) of extinction.

In examining California's nonnative fish and aquatic organism populations, their continued expansion within the state suggests that their populations are trending up and will continue to do so, putting native species under increased downward pressure as identified above.

Forecast

Both climate change and short-term variation in weather patterns may contribute to changes in stream systems such as flow, temperature, and turbidity. Aquatic systems are never static but are constantly changing in response to environmental variations such as summer heat and winter ice, droughts and floods, and longer-term climatic changes. Lotic systems depend on high-water events to create fish habitat such as scour pools for winter or low-water habitat, large woody debris, undercut banks to create overhead cover, and the cleaning of sediment out of spawning gravels. Living in a dynamic environment, fish tolerate and even need such periodic disruptions to their stream habitats. However, such disruptions, if they are too extreme or occur too frequently, can adversely affect fish habitat and can permanently reduce or eliminate fish populations from some stream reaches or even entire stream systems. Interacting species may respond differently to these events and conditions, potentially resulting in the uncoupling of trophic interactions (Winder and Schindler 2004).

Many climate change predictions include increased duration and frequency of droughts, an increase in extreme precipitation events, and increased surface water temperatures. Increased temperatures can contribute to a decline in fish populations, especially in cold-water fisheries.

Although the BLM has placed an emphasis on preserving and protecting special status species and habitat and has implemented programs such as the Aquatic Conservation Strategy, activities identified in recovery planning, and conservation planning efforts, the wide dispersal and scattered parcel distribution of BLM-administered lands in the planning area results in aquatic habitat for specific streams and rivers crossing land owned by different entities, making it difficult to effectively promote species and habitat conservation.

Within the planning area, a focused restoration effort targeting aquatic habitat occurs however, as a whole, these habitat types are experiencing a reduction in habitat quality and quantity due to in part to a more variable climate and the expansion of human communities and a subsequent competition for existing resources. The effects of habitat loss and degradation, urbanization, and climate change, in combination with reduced population sizes, range restrictions, and competition for resources from human communities in addition to competition with habitat generalists, both introduced and native, continue to exert negative population pressures upon identified aquatic resources and species, many of which are habitat specialists. Ultimately, this pressure has the potential to result in localized extinctions of specialized species and their replacement by generalist species, resulting in functional homogenization at the community level (Clavel et al. 2011). As functional homogenization occurs across the landscape, there is the potential for ecological homogenization to occur (see McKinney and Lockwood 1999) with the resultant ecosystem simplification potentially jeopardizing the future resilient adaptive capacity of ecosystems within the planning area (Olden et al. 2004).

As noted in *Native Fish Conservation Areas: A Vision for Large-Scale Conservation of Native Fish Communities* (Williams et al. 2011)

...threats to aquatic biodiversity appear to be accelerating due to four primary factors: increasing fresh water demand for a growing human population (Postel 2000; Deacon et al. 2007), wildland development and conversion (Hudy et al. 2008), spreading invasive species (US Environmental Protection Agency [EPA] 2008), and rapid climatic change (Poff et al. 2002; Haak et al. 2010). There is also increasing evidence for a synergy among these factors, especially invasive species and climate change, which would result in new invasion pathways and more rapid spread of invasive species (Rahel and Olden 2008).

Based upon trend data, above forecast information, and the assessment conducted by Moyle et al. (2013), which concluded that cold water fishes are likely to continue a downward trend toward extinction while most alien fishes will continue to increase in abundance and range, native fish and aquatic species populations are forecasted to continue to decline. It can be expected that “The decline of California’s fishes, and of other aquatic organisms, will continue, and many extinctions will occur unless the widespread nature of the problem is recognized, and a systematic effort is made to protect aquatic habitats in all drainages” (Moyle et al. 1995). A more recent plan developed for CalTrout (Moyle et al. 2017) lays out six steps to provide extinction protection: protect the best strongholds; protect and restore source waters; restore productive and diverse habitats; adopt reconciliation ecology as the basis for management (i.e., wild fish in working landscapes); improve habitat connectivity and passage to historical spawning and rearing habitat; and improve genetic management.

Key Features

As identified in previous planning efforts, continued emphasis on the restoration and protection of anadromous salmonid, steelhead, and “fisheries” habitat along with wetland and riparian habitat has occurred. Aquatic habitat should continue to be prioritized as identified in recovery and conservation planning efforts. Any efforts to enhance and restore riparian communities should be encouraged including aquatic invasive species control efforts and thinning overstocked forest stands as a strategy to increase flows.

Water diversions will continue to be examined closely when working with water development interests, so that flow management will account for important aquatic habitat within the planning area to ensure adequate water supply to support fisheries and associated aquatic systems.

The BLM should consider the enhancement of reservoir fisheries habitat with native lentic species when possible and appropriate and consider where appropriate the replacement of nonnative aquatic species with appropriate native species. Where a nonnative sport fishery is desired, the BLM shall consider ways to enhance the desired sport fishery, especially those in short supply in the planning area and the education of public land users regarding the effects of translocating associated nonnative aquatic invasive species.

2.2.6 Forestry

The BLM-administered lands within the planning area are diverse in nature. These lands also consist of many different forest types that include Sierra Nevada Mixed Conifer, Oak Woodland, Riparian Forests, Chaparral, and Coastal Forests (**Map 2-20, Appendix A**). BLM-administered lands exist within a landscape matrix composed of private land and other federal and state lands administered by the Forest Service, NPS, USFWS, USDI Bureau of Indian Affairs, and California State Parks. Neighboring private timber lands are predominately owned by Sierra Pacific Industries, Fruit Growers Supply Company, and Timbervest.

BLM forests and woodlands are managed under environmental quality protection principals in accordance with the FLPMA, including the principles of multiple use and sustained yield; the NWFP, Sustained Yield Unit 15 (SYU-15); and the Healthy Forest Restoration Act of 2003. Values and uses associated with forests, such as aesthetics, recreation, timber production, water quality, wildlife habitat, and wilderness, are managed through an ecologically based program that emphasizes biological diversity, sustainability, and long-term forest health.

The 2018 Farm Bill amended the Healthy Forest Restoration Act to promote cross-boundary fuels reduction and forest management projects and allocated up to \$20 million in yearly appropriations through 2023 to accomplish this goal. The Farm Bill describes multiple authorities that can be used to work across jurisdictional boundaries and promotes innovations, including biomass utilization. Executive Order 12855, published in December 2018, directs the USDI to implement forest management projects that reduce fire risk and promote public safety. Secretarial Order 3372, signed in January 2019, directs the USDI to actively manage land to reduce catastrophic wildfire and protect wildlife, habitat, and watersheds.

Roughly 40 percent of the commercial forest land (CFL) within the planning area is currently being managed under the guidance of the NWFP. This plan was designed to help restore the population numbers of the northern spotted owl (NSO) and its habitat as well as to maintain and restore the distribution, diversity, and complexity of riparian features (see **Section 2.2.17, Wildlife/Special Status Wildlife**).

The NWFP changed the way forests within these areas are managed, with current emphasis placed on the restoration and preservation of specific habitat qualities and riparian areas, while still maintaining sustained yield and multiple-use principles when possible. Non-NWFP lands are managed under the principals of multiple use, sustained yield, and the Healthy Forest Restoration Act of 2003.

Over the past 5 years, fires have significantly altered the vegetation landscape in the planning area, resulting in significant changes to forests and woodlands (**Map 2-20, Appendix A**). See **Section 2.2.16, Wildland Fire Management**, for additional information on the recent fires.

Indicators

BLM-administered lands within the planning area have been inventoried since the publishing of the last RMPs. Both FOs within the planning area historically used the Forest Vegetation Inventory System (FORVIS), a BLM inventory process and database. Both the Redding and Arcata FO lands are currently being re-inventoried as a part of the RMP revision process. Updated inventory data will allow for further analysis of future land management decisions and the calculation of the probable sale quantity, as described in the Land Use Planning Handbook Appendix C, page 14 (USDI 2010b). Lands classified as late successional reserves (LSR) are not to be included in the allowable sale quantity and the probable sale quantity calculation. Additionally, both FOs are transitioning to a new forestry database called Micro*Storms. The inventory data contained in FORVIS and EcoSurvey will provide more detailed information within the CALVEG categories described in the vegetation section (**Section 2.2.13**).

Current Condition

The forest resources of the planning area have been broken down into dominant overstory types for better understanding of different variables and treatments conducted upon the different forest types. Lands within the planning area that are subject to the NWFP are divided into categories according to the NWFP. These categories are Late Seral Forest Matrix, Congressionally Reserved, and Managed Late Successional Areas. These categories contain both conifer and oak-dominated stands.

Vegetation Structural Groups within the NCIP Planning Area

Forest inventory data for the planning area are also available as part of a contractor-produced forest inventory database, which includes lands in both FOs. The inventory data are correlated to the Forest Service Forest Inventory and Analysis program.¹ Under this program, the Forest Service collects, analyzes, and reports information on the status and trends of forests.

Table 2-16 summarizes lands in the planning area by forest inventory classes. Classes are generally broad; however, more detailed information is available. Vegetation is classified according to four major structural groups: barrens or sparsely vegetated areas, grasslands, shrublands, and forests and woodlands. These are described in further detail in **Section 2.2.13, Vegetation**.

Table 2-16. Vegetation Structural Groups within the NCIP Planning Area

Vegetation Classification	NCIP Planning Area (Acres)	BLM-Administered Land (Acres)	Percentage of Planning Area
Barrens	166,400	2,700	1
Grasslands	1,799,400	20,100	5
Shrublands	1,112,800	74,500	20.
Forest and woodlands	10,939,000	280,800	73
Other (water, urban areas, non-forest)	352,900	3,900	1

Source: USDI BLM GIS 2021

¹ More information is available at <https://www.fia.fs.fed.us/>.

Trends

Declining Forest Health

Insects and disease are native drivers of disturbance that can elevate stand-scale mortality above typical background mortality rates associated with competition and stand development. Endemic disease and mortality are expected to occur in forests with high ecological integrity. However, climate change and other stressors, including drought, may interact with insects and disease, resulting in uncharacteristic levels of tree mortality.

Native insects and pathogen activity are expected to increase as trees experience more stress associated with climate change and drought conditions (see **Section 2.1.4**, Climate Change); however, the effects are likely to be variable and differ geographically as well as among species (Chmura et al. 2011; Kolb et al. 2016; Sturrock et al. 2011). In addition to affecting host species, climate change will also affect population dynamics and geographic distributions of pathogen and insect species. Pathogen activity is likely to increase in areas where pathogens typically infect drought-stressed host species, while the effects of climate change on pathogens that proliferate under moist conditions may be more variable and difficult to predict (Sturrock et al. 2011). Warmer winters and hotter droughts are expected to enable insects to move into previously unsuitable habitat (Bentz et al. 2010, 2016).

Other native pathogens affecting vegetation in the region are laminated root rot (*Phellinus sulphurascens*; formerly *P. weirii*), which affects Douglas-fir, true firs (*Abies* spp.), and mountain hemlock. Armillaria (*Armillaria ostoyae*) affects Douglas-fir, hemlocks (*Tsuga* spp.), pines (*Pinus* spp.), and other species. Annosus root disease (*Heterobasidion annosum*) affects firs, pines, hemlocks, and other species. Black stain root disease (*Leptographium wageneri*) affects Douglas-fir and ponderosa pine. Several other types of pathogens are also present, including rusts (*Cronartium* spp.) and mistletoes (*Arceuthobium* spp. and *Phoradenron* spp.).

Several species of insects, including bark beetles and defoliators, are also native to the planning area. Insects are more prevalent in drier vegetation zones. Mountain pine beetle has the potential to cause extensive mortality in lodgepole pine (*Pinus contorta*) and also affect other species of pines, including ponderosa pine, sugar pine (*Pinus lambertiana*), western white pine (*Pinus monticola*), and whitebark pine (*Pinus albicaulis*). Defoliating insects are also common; though they often do not result in mortality, they may reduce growth and make trees more susceptible to other insect infestations. Several species of pine are susceptible to outbreaks of pandora moth (*Coloradia pandora*), and ponderosa pine is also susceptible to pine butterfly (*Neophasia menapia*). Douglas-fir is also susceptible to Douglas-fir beetle (*Dendroctonus pseudotsugae*), especially after blowdown from wind events.

Nonnative, invasive plants; insects; and disease can have major economic and ecological effects on forests (Lovett et al. 2016). One issue facing forests within the planning area is sudden oak death (SOD), caused by *Phytophthora ramorum* and species susceptible to *Phytophthora ramorum*. SOD is of particular concern because it has caused extensive mortality of tanoak, coastal live oak (*Quercus agrifolia* var. *oxyadenia*), California black oak (*Q. kelloggii*), and several other oaks in coastal forests of Northern California and southern Oregon.

Meentemeyer et al. (2004) presents a model for predicting the spread and establishment of SOD in plant communities in California. The California Oak Mortality Task Force is already using this model to target early detection monitoring and predict oak and tanoak (*Notholithocarpus densiflorus*) mortality. Based on the combined effects of spatial variability in climate (i.e., 30-year monthly averages [1961–1990]) and host vegetation (i.e., USDA CALVEG dataset) for each month of the pathogen's general reproductive season (December–May), the model predicts the risk of continued spread and establishment. The five predictor variables are a host species index and four temperature and moisture variables (i.e., precipitation, relative humidity, and minimum and

maximum temperature). This model is used for lands within the planning area to help manage and identify at-risk lands. **Table 2-17** displays the acreages at risk for SOD within BLM-administered lands. **Map 2-10, Appendix A** depicts current SOD mortality locations and the areas where SOD may spread. Warmer and wetter winters intensify the risk of infection. The area affected by sudden oak death is predicted to increase tenfold by the 2030s under projected warmer and wetter conditions (Meentemeyer et al. 2011).

Table 2-17. Acreages at Risk for Sudden Oak Death in the NCIP Decision Area

Field Office	Acres at Risk (Percentage of Field Office)				
	Very High	High	Moderate	Low	Very Low
Arcata	1,168 (0.88%)	30,072 (23%)	28,872 (22%)	60,279 (45%)	12,942 (10%)
Redding	0	0	13,645 (5%)	173,166 (68%)	67,603 (27%)

Source: USDI BLM GIS 2021

The invasive pathogen white pine blister rust (*Cronartium ribicola*) is a major threat to whitebark pine and both western white pine and sugar pine (Goheen and Goheen 2014). Port Orford cedar (*Chamaecyparis lawsoniana*) is susceptible to a lethal, nonnative root pathogen (*Phytophthora lateralis*) that can be spread over long distances via organic matter carried on boots, vehicles, and animal hooves, and by water (Jules et al. 2002).

Wildland Urban Interface

Wildland urban interface (WUI) is also a key designation in the current management of planning area lands. These lands are a primary focus area for active forest management. WUI is defined as “the area where houses meet or intermingle with undeveloped wildland vegetation. The WUI is thus a focal area for human environment conflicts, such as the destruction of homes by wildfires, habitat fragmentation, introduction of exotic species, and biodiversity decline” (Radeloff et al. 2005). More about WUI and the amount within the planning area can be found in **Section 2.2.16, Wildland Fire Management**.

Past Treatment

Another factor affecting the current condition of the lands within the planning area is past treatment. **Table 2-18** lists forestry projects that have occurred within the planning area within the last 10 years at the Arcata and Redding FOs, whose lands now make up the planning area. Past treatment objectives have varied. In general, treatments have been designed to reduce hazardous fuels, lessen the chances of a stand-replacing wildfire, increase forest health, promote restoration of late-succession forest characteristics, and restore native grasslands and reduce conifer encroachment in prairie habitat. Restoration treatments have also yielded commercial timber and other alternative forest products. While effective on a local scale, past treatments have typically not met the pace and scale of current ecological needs on the planning area scale.

Conifer Dominant Forest Resources

Within the Conifer Dominant Forest, CFLs are areas that may be able to sustain a commercial harvest (removal of trees greater than 8 inches DBH) (DBH is defined as diameter at breast height, or 4.5 feet from the ground level on the uphill side of the tree), while the non-commercial forest land may be in need of pre-commercial harvest (harvest of trees less than 7.9 inches DBH).

Table 2-18. Forestry Projects Occurring within the NCIP Planning Area within the Last 10 Years

Year	Field Office	Sale Name	Acres Treated	Firewood Removed (Cords)	Biomass Offered (Green Tons)	Biomass Removed (Green Tons)	MBF Removed (Thousand Board Feet)	Type of Treatment
2011	Arcata	Dingman Ridge PCT	101	—	—	—	—	Pre-commercial thinning
2011	Arcata	Lacks Creek Oak Woodland Restoration	12	—	—	—	—	Oak woodland restoration
2011	Arcata	Faulkner Prairie	9	—	—	—	—	Restoration harvest
2011	Redding	Union Hill Dead Pine Removal	5	20	—	—	—	Salvage
2011	Redding	Mining District (WCF Stewardship)	135	—	—	200	—	Commercial thin
2011	Redding	Hoadley Biomass	3	—	—	100	—	Cull decks sold
2011	Redding	Jennings Ridge	62	—	—	670	440	Forest health thin
2011	Redding	Bureau of Reclamation County Line	14	—	—	50	29	Salvage
2011	Redding	Jennings Ridge Plantation Thinning	20	—	—	—	—	Hand cut and pile
2011	Redding	Interlakes Sale	201	—	—	1,000	555	Commercial thin
2011	Redding	Washington Mine Free Use	1	3	—	—	—	Trees for mining timbers
2011	Redding	Southfork Mountain Salvage	20	240	—	—	—	Salvage
2011	Redding	Turnpike	77	—	—	—	290	Forest health thin
2011	Redding	Goose Ranch	23	—	—	350	—	Biomass
2011	Redding	Rattlesnake Fire	13	—	—	—	100	Salvage
2012	Arcata	Lacks Thin Pile and Slash	8	—	—	—	—	Hand cut and pile
2012	Arcata	Lacks Creek Thin Pile and Slash	101	—	—	—	—	Hardwood thinning
2012	Redding	Highland Ridge VI	66	20	434	400	140	Commercial thin
2012	Redding	Indian Creek	44	—	—	—	102	Commercial thin
2012	Redding	Butte Thin	133	—	1,883	1,200	1,275	Forest health thin
2012	Redding	Hoadley Commercial Firewood	3	30	—	—	—	Cull decks sold

Year	Field Office	Sale Name	Acres Treated	Firewood Removed (Cords)	Biomass Offered (Green Tons)	Biomass Removed (Green Tons)	MBF Removed (Thousand Board Feet)	Type of Treatment
2012	Redding	Bureau of Reclamation Steiner Flat Sale	25	—	—	100	15	Commercial thin
2012	Redding	Bohemotash Thin	90	—	—	—	—	Hand cut and pile
2013	Arcata	Beaver Ridge Handpile	25	—	—	—	191	Oak woodland restoration
2013	Arcata	Pine Ridge Firewood Piling	48	—	—	—	—	Hardwood thinning
2013	Arcata	Stormy Saddle Oak Woodland Restoration	37	—	—	—	—	Oak woodland restoration
2013	Redding	Flat Creek II	109	—	—	872	—	Biomass
2013	Redding	Jennings Ridge II	62	—	—	670	—	Biomass
2014	Arcata	Beaver Ridge	50	—	—	—	191	Restoration harvest
2014	Arcata	Pine Ridge Hardwood Thin	58	—	—	—	—	Hardwood thinning
2014	Arcata	Lacks Creek Tan Oak Sprout Control	28	—	—	—	—	Hardwood thinning
2014	Arcata	Lake Mountain PCT	60	—	—	—	—	Pre-commercial thinning
2014	Arcata	Lacks Creek Sudden Oak Death Mitigation Unit A	142	—	—	—	—	Hardwood thinning
2014	Redding	Caltrans Buckhorn Capstone Harvest	12	100	—	424	68	Clear cut
2014	Redding	Cambelville II	114	—	1,200	1,200	1,680	Forest health thin
2014	Redding	SPI Bully Fire Salvage ROW	3	14	24	—	17	Commercial thin
2015	Redding	Caltrans Emergency	2	41	—	—	10	Clear cut
2015	Redding	Caltrans Buckhorn Slide Harvest	2	7	12	—	17	Clear cut
2015	Redding	Green Cherry	11	—	—	—	15	Commercial thin
2016	Arcata	Lacks Creek SOD Unit B	156	—	—	—	—	Hardwood thinning
2016	Arcata	Prosper Ridge MRC Agreement	40	—	—	—	—	Prairie restoration
2016	Redding	Baker Cypress ROW	6	—	—	—	26	Clear cut

Year	Field Office	Sale Name	Acres Treated	Firewood Removed (Cords)	Biomass Offered (Green Tons)	Biomass Removed (Green Tons)	MBF Removed (Thousand Board Feet)	Type of Treatment
2016	Redding	Brown's Fire Bulk Firewood	1	50	—	—	—	Salvage
2017	Arcata	Lacks Creek SOD Unit C	41	—	—	—	—	Hardwood thinning
2017	Arcata	Lacks Creek Trailhead Thin & Tanoak Sprout Removal	32	—	—	—	—	Hardwood thinning
2017	Redding	GVC Mainline Thin	64	—	—	—	452	Thinning
2018	Arcata	King Peak Road	65	—	—	—	—	Shaded fuelbreak
2018	Arcata	Lacks Creek Pine Ridge Thinning	100	—	—	—	—	Hardwood thinning
2019	Arcata	Lacks Creek UCCE	184	—	—	—	—	Forest health thinning
2019	Redding	Hoadley Peak Salvage	122	—	2,202	—	1,220	Salvage
2020	Arcata	Giham Butte	81	20	—	—	—	Forest health thinning
2020	Arcata	Lacks Creek Landscape Restoration	438	—	17,670	—	—	Forest health thinning
2020	Arcata	Alicia Pass Mastication	60	—	—	—	—	Forest health thinning
2020	Redding	Eastside Salvage Negotiated Biomass	0	—	10,000	—	—	None
2020	Redding	Dean Road Salvage Negotiated Sale	9	—	700	—	55	Salvage
2020	Redding	Camp Fire Salvage	197	—	9,300	—	1,883	Regeneration
TOTALS			3,841	579	43,425	7,036	8,109	

Source: USDI BLM GIS 2021

PCT= Pre-commercial thin, WCF= Weaverville Community Forest, MRC= Mattole Restoration Council, UCCE= University of California Cooperative Extension

The coniferous commercial species present within the Conifer Dominant Forest are sugar pine (*Pinus lambertiana*), Ponderosa pine (*Pinus ponderosa*), Douglas-fir (*Pseudotsuga menziesii*), incense cedar (*Calocedrus decurrens*), redwood (*Sequoia* spp.), white fir (*Abies concolor*), and red fir (*Abies magnifica*).

Oak Woodland Forest Resources

Little to no active management has occurred in these forest types over the past 20 years under the current RMPs, with the exception of small treatments in the Weaverville Community Forest (WCF) and Lacks Creek Management Area. Work has occurred in conifer-dominated forests to restore some forest openings, and thinnings have occurred to focus on restoration of hardwood species, but in the dominant Oak Woodland forest type, little has been done.

Riparian Forests

The Riparian Forest community type is the most dispersed forest type occurring in the planning area. Riparian forests occur adjacent to the larger streams and rivers, within smaller canyons, and in stand-alone saturated areas not associated with streams. These forests are generally associated with surface water but can also occur in areas with high water tables. Mapping riparian areas yields length and acreage values; however, there is no available vegetation classification protocol that separates out the riparian forest component from other riparian vegetation species to determine acres of riparian forest, but instead is listed strictly as riparian.

Common riparian species include cottonwood, alder, birch (*Betula* sp.), big-leaf maple (*Acer macrophyllum*), valley oak (*Quercus lobata*), and several species of willow (*Salix* spp.). Some of the riparian forest stands are experiencing impacts from wildlife, human sources, livestock browsing, insects, disease, and conifer encroachment. Most forest treatments or activities avoid these areas due to water quality concerns. Restoration treatments in riparian areas are generally aimed at planting native species to provide overstory shading and cooling effects for streams and treating invasive, nonnative weed populations; therefore, active forest management is not usually needed to meet objectives in these areas.

A healthy forest is resilient to natural disturbances such as wildfire, insect infestations, and disease outbreaks. Most of the forests in the planning area show one or more indicators of poor health, including too many small-diameter trees, small crown ratios, moderate to high fuel accumulations, limited herbaceous production, and increased bark beetle activity. Overall, unmanaged forests and woodlands are in decline in the planning area. Recent treatments have moved the treated forest toward a much healthier condition or the desired condition.

Special Forest Products

Special forest products is a term used to describe non-timber vegetative material, such as mushrooms, seeds, berries, greenery, and fuelwood. Special forest products may be harvested on BLM-administered lands for recreation, personal use, or income.

Table 2-19 lists special forest product (SFP) sales within the planning area over the last 5 years. SFPs are forest products not calculated in the typical board foot (12 inches x 12 inches x 1 foot) style of measurement. This table is meant to describe the trends of SFP sales within the area.

Table 2-19. Special Forest Product (SFP) Sales for the NCIP Planning Area over the Last 5 Years

Field Office	Category	FY2016 Received	FY2016 Permits	FY2017 Received	FY2017 Permits	FY2018 Received	FY2018 Permits	FY2019 Received	FY2019 Permits	FY2020 Received	FY2020 Permits
Arcata	Floral & Greenery	\$0	0	\$0	0	\$20	1	\$20	1	\$0	0
Arcata	Mushrooms—Fungi	\$870	36	\$475	19	\$150	7	\$0	0	\$0	0
Arcata	Native Seed—Misc.	\$0	0	\$712	1	\$0	0	\$60	1	\$0	0
Arcata	Seed & Seed Cones	\$0	0	\$0	0	\$0	0	\$661	1	\$0	0
Arcata	Transplants	\$0	0	\$0	0	\$0	0	\$120	1	\$0	0
Arcata	Wood Products	\$82,150	96	\$1,960	93	\$2,300	110	\$820	40	\$870	35
Arcata	Total	\$3,020	132	\$3,147	113	\$2,470	118	\$1,680	44	\$870	35
Redding	Boughs— Coniferous	\$0	0	\$0	0	\$0	0	\$100	1	\$0	0
Redding	Burls & Miscellaneous	\$160	2	\$0	0	\$109.99	4	\$39	2	\$0	0
Redding	Edibles & Medicinals	\$0	0	\$9,944.00	4	\$13,328	1	\$0	0	\$10,000	1
Redding	Floral & Greenery	\$0	0	\$55	2	\$0	0	\$0	0	\$200	2
Redding	Native Seed—Misc.	\$0	0	\$100	1	\$0	0	\$0	0	\$110	1
Redding	Seed & Seed Cones	\$0	0	\$0	0	\$0	0	\$60	2	\$0	0
Redding	Wood—Biomass	\$0	0	.05	1	\$0	0	\$0	0	\$11	3
Redding	Wood—Fuelwood	\$3,041	11	\$5,4789	62	\$869	25	\$1,983	64	\$330.00	16
Redding	Wood—Other (MBF)	\$0	0	\$0	0	\$0	0	\$10,226	5	\$2,644	4
Redding	Total	\$3,201	13	\$15,578	70	\$14,307	30	\$12,408	74	\$13,295	27

Source: USDI BLM 2016a

Forestry Stewardship Agreements

Stewardship agreements have played a role in the past management of the planning area lands. These agreements and contracts are defined by the stewardship handbook as:

The primary objective of stewardship contracting is to achieve any of the following land management goals: (1) Road and trail maintenance or obliteration to restore or maintain water quality; (2) Soil productivity, habitat for wildlife and fisheries, or other resource values; (3) Setting of prescribed fires to improve the composition, structure, condition, and health of stands to improve wildlife habitat; (4) Removing vegetation or other activities to promote healthy forest stands, reduce fire hazards, or achieve other land management objectives; (5) Watershed restoration and maintenance; (6) Restoration and maintenance of wildlife and fish; and (7) Control of noxious and exotic weeds and re-establishing native plant species.

These agreements and contracts are used to assist the BLM in the management of its public lands through partnerships with local entities. These mechanisms also assist the BLM with increased scoping of project-level decision-making and enable the exchange of goods (timber, firewood, biomass, etc.) for services on public lands. These mechanisms allow money to be used from timber receipts to improve public lands through the activities listed above.

Table 2-20 lists stewardship agreements that the two FOs within the NCIP have entered into over the course of the last 20 years, as of January 2021.

Table 2-20. Stewardship Agreements within the NCIP Planning Area in the Last 20 Years

Stewardship Agreement	Year Entered	Year Expired/Expires	Acres	Partner	MBF Removed
Weaverville Community Forest	2005	2015	1,000	Trinity County Resource Conservation District	1,700
Interlakes	2009	2019	54,000	Western Shasta Resource Conservation District	775
Lacks Creek Restoration	2010	2020	8,673	Hoopla Valley Tribe	0
Grass Valley Creek Watershed	2012	2022	16,000	Trinity County Resource Conservation District	0
Weaverville Community Forest II	2015	2025	3,000	Trinity County Resource Conservation District	0
Baker Cypress	2015	2025	200	Humboldt State University	0

Source: USDI BLM 2016a

Grass Valley Creek

In 1993, the BLM Redding FO acquired approximately 16,500 acres within the Grass Valley Creek (GVC) watershed of Trinity County, an area that contains highly erosive, decomposed granitic soils

(Shasta Bally batholith). Due to past land management practices, this mixed conifer-oak forest land was contributing high levels of sedimentation to the GVC and Trinity River watersheds. For nearly 28 years, the BLM, with help from several nonprofit organizations, have been completing an extensive soil

stabilization and rehabilitation program by stabilizing stream courses, removing old forest roads, and re-vegetating exposed slopes.

Most of the GVC area has a large backlog of needed forest health and hazard fuels reduction treatments along with road and trail maintenance. Dense forests need thinning and existing roads need maintenance. Federal, state, and local Trinity County organizations and the public support improving the health of the Trinity River and its tributaries, and this stewardship agreement look to improve that health. Key objectives include improving anadromous fisheries habitat and creating fire resilient forests, while promoting the forest products industry. Assistance from other organizations greatly facilitates achieving GVC watershed objectives and maintains this area for future public use and enjoyment.

This stewardship agreement includes implementing forest health, resource management, and forestry projects or harvesting and fuels reduction activities, such as selection cutting timber and biomass sales, hazard fuels reduction, wildlife and botanical surveys, habitat improvement, vegetation monitoring, watershed restoration, road stabilization and maintenance, and recreation development. These projects would further the goals to maintain and improve healthy conditions of the GVC and Trinity River watersheds. The stewardship agreement area includes BLM-administered lands within the GVC watershed and a small portion of BLM-administered lands within the upper portion of the Indian Creek watershed (16,604 acres).

Weaverville Community Forest I and II

The Redding FO was approached by the Weaverville, California, community in 2005, through the Trinity County Resource Conservation District (RCD) to establish a “Weaverville Community Forest” on federal lands managed by the BLM adjacent to the community of Weaverville. There were a number of community “visioning” meetings to define the community goals for these forested lands and to match those with BLM’s management objectives for the property. An agreement was reached between BLM and the community to establish a long-term stewardship agreement using the Trinity County RCD as the recipient and a core group of community members to develop the plans, both short and long-term. California BLM worked closely with the Washington Office in the development of the agreement, which was approved in September 2005. WCF II was established in 2015. A completely new agreement was offered by the BLM, and Trinity County RCD was the recipient of the new agreement. The new WCF is composed of 3,000 acres of NCIP BLM-administered lands within the Weaverville Basin, three times the acreage of the original agreement.

Interlakes

The Interlakes Stewardship Agreement was an agreement that combined goals of the Redding FO and the Western Shasta RCD for the health and enhancement of land in the Upper Clear Creek Watershed. The Interlakes Stewardship Agreement encompassed approximately 54,000 acres and included the 30,000-acre Chappie-Shasta OHV Area—a public recreation area with over 150 miles of trails and roads that receive moderately heavy use. Approximately 50 percent of the lands were obtained through land tenure transactions with industrial timberland owners. Most of this area has a large backlog of improvement projects for forest health along with road and trail maintenance. Dense forests need thinning, and OHV roads and trails are getting overgrown and need maintenance to provide a well-maintained recreation area that is ecologically healthy, more accessible for recreationists, more fire resistant, with less road and trail erosion.

There were a number of goals, including projects to improve forest health, reduce fire hazards, and maintain and improve the OHV area, including the road systems that were brought forward. Funding for projects was generated from product sales, including thinning, biomass utilization, firewood, native tree seedlings, Christmas tree permits, and additional items that were developed throughout the course of the agreement. Funding was also solicited from various state and federal agency grant programs and contributions from recreational organizations and foundations. Volunteer assistance from organizations also helps in maintaining the area for future public use and enjoyment.

Baker Cypress

In 1993, the BLM Redding FO acquired approximately 60 acres of land bordering an existing parcel in Eastern Shasta County. The Pacific Gas and Electric Company (PG&E) acquired the new land from other private companies and then deeded the parcels to the BLM as part of a mitigation effort for a gas pipeline within the existing BLM parcel. This mitigation effort aimed to promote the health of a stand of Baker cypress (*Hesperocyparis bakeri*), a rare species of cypress tree, which would be impacted by the construction of the pipeline. The mitigation plan called for the acquisition and subsequent protection of surrounding Baker cypress stands, as well as the restoration of the area directly impacted by the construction of the pipeline. This restoration consisted primarily of cutting and chipping conifers along the pipeline and planting Baker cypress seedlings. In addition, hand cut and pile along Tamarack Road was planned.

This parcel is located 8 miles south-southwest of Burney, just east of Tamarack Road, in the western halves of Sections 24 and 25, Township 34 North, Range 2 East. This agreement covers the whole 178 acres of this parcel. The surrounding area consists almost exclusively of privately managed CFL. Baker cypress is not a commercially desirable species and, as such, is often subjected to vegetation type conversions.

In the 1993 Redding RMP, this area was designated as an RNA and an ACEC. The 1993 Redding RMP argues for the designation of this area as an ACEC because the location “warrants protection from any further disturbance” in order to ensure a suitable “population for further research and study of this interesting but vulnerable species.”

Baker cypress is thought to only exist in 11 disparate locations throughout the northern Sierra Nevada, Cascade, and Siskiyou Mountains. There is a high diversity and genetic differentiation between the various populations of Baker cypress, which increases the need to protect each distinct stand. Baker cypress can grow in association with chaparral, mixed evergreen, or montane coniferous forest in generally infertile soils from elevations of 3,795 to 7,042 feet. Baker cypress is a California Native Plant Society (CNPS) list 4 species, meaning that it is a species of limited distribution in California. Baker cypress is a fire-adapted species with closed, or serotinous, cones that only open after a fire. Additionally, the seeds need high light situations and exposed mineral soils in order to germinate, characteristics often found after an area has burned. However, after years of fire suppression regeneration is often limited.

Since the new land was acquired by the BLM and the parcel’s designation as an RNA and ACEC was finalized in 1993, no management actions or research attempts have occurred on this land. The Baker cypress stands in this area are showing signs of senescence. Many trees have been blown over by high

winds. Additionally, many Baker cypress trees are being overtopped and shaded out by other conifer species. These factors make this area a candidate for ecological research on stand regeneration.

In 2015, the BLM entered into a 10-year stewardship agreement with Humboldt State University (HSU) to partner on the management and research within the Baker Cypress ACEC. The focus of the agreement is to revitalize Baker cypress growth within the stand, reduce competition and overcrowding caused mainly by ponderosa pine and white fir, and conduct experiments and research to better understand this rare tree.

Lacks Creek Restoration

The Lacks Creek Management Area is 8,673 acres of forest land in the planning area that has the focus of extensive active management over the last 15 years due to the vegetation composition, geographic location, and other resource uses resulting in active forest management. The majority of the Lacks Creek Management was acquired in 2004, previously owned by private timber companies. Old-growth Douglas-fir was logged prior to BLM ownership, and without additional active management, much of the land came back as overstocked, unhealthy tanoak and young fir stands. Lacks Creek is adjacent to a rapidly expanding SOD infection that has also been detected on BLM-administered lands, resulting in multiple mitigation treatments. Aside from conifer thinning and oak woodland restoration treatments, resource uses including recreation, habitat restoration, native plant restoration, fuelwood gathering, and fuels management treatments have made Lacks Creek a focal area of BLM management in recent years.

Other Forestry Agreements and Contracts

The BLM engages in other agreements and contracts with partner organizations, which support reforestation, fuels reductions, watershed stabilization, and noxious weed treatments. These other agreements and contracts are summarized in **Table 2-21**.

Table 2-21. Other Non-Stewardship Forestry Agreements and Partnerships in the NCIP Planning Area in the Last 5 Years

Agreement or Contract Name	Year Entered	Year Expires	Acres	Partner	Project Focus
Sudden Oak Death Detection	2014	N/A	400	University of California Cooperative Extension	Monitoring
Coastal Prairie Encroachment	2016	N/A	40	Mattole Restoration Council	Restoration
Lacks Creek Greenhouse Gas Reduction & Monitoring	2019	N/A	200	University of California Cooperative Extension	Forest health and fuels reduction and monitoring
Good Neighbor Authority Service Agreement—Carr Fire Watershed Stabilization and Weed Treatments	2019	2022	20	Western Shasta Resource Conservation District	Watershed stabilization and weed treatments
California Camp Fire Climate Resilient Reforestation Project	2019	2025	2,000	American Forests	Reforestation

Agreement or Contract Name	Year Entered	Year Expires	Acres	Partner	Project Focus
Gilham Butte	2020	N/A	81	Mattole Restoration Council & Save the Redwoods League	Forest health and fuels reduction
Good Neighbor Authority Service Agreement—Lewistown Community Protection	2020	2025	250	Trinity County Resource Conservation District	Fuel's reduction
Good Neighbor Authority Service Agreement—Post Carr Fire Trail and Cultural Site Restoration and Hazard Mitigation	2020	2025	713	Western Shasta Resource Conservation District	Fuel's reduction

Source: Personal communication with Leana Weissberg, forest specialist, BLM Redding FO, on January 4, 2020

Forecast

Forecasting of NCIP forested lands is difficult due to the variability of wildfires, climate change, insect outbreaks, and drought in the planning area. These variables can affect any of the lands within the NCIP, dramatically changing the possibilities and management goals for a specific area.

There is continued demand for forest products within the planning area. Lumber mills are located in Anderson, Weaverville, Yreka, Lincoln, Oroville, Chester, Shasta Lake, Arcata, and Eureka. There are also biomass facilities located in Anderson, Burney, Chester, Blue Lake, and Eureka. Biomass production may increase if the number and extent of fuel reduction projects expand. Demand for biomass material also may increase if demand for alternative energy sources grows and incentives for biomass utilization promote economic opportunities. Refer to **Section 2.3.10**, Renewable and Alternative Energy Development, for a more through description of areas suitable for sustainable biomass extraction.

Rights-of-Way

There is a consistent need for ROWs on BLM-administered lands within the planning area. These areas, both newly established and existing, require removal of vegetation for construction and maintenance of the ROW lands. Due to recent fires, proactive hazardous fuels treatments are being pursued in ROWs and increased ROW buffers. In the future, areas of critical forest resources may be considered for exclusion from future ROWs in order to be consistent with the management goals of the species or habitat type. Corridors may also be established that future ROW permits would need to go through to restrict habitat fragmentation, increased risk of wildfire, and the visual degradation caused by ROWs.

Climate Change

Section 2.1.4, Climate Change, is relevant. A general warming and drying trend in the planning area would lead to increased drought stress and tree mortality from beetle and other insect attack. Some habitat types may become smaller, in particular those that are at the higher, cooler elevations. As temperatures increase, these areas may see a greater abundance of traditionally lower-elevation species. These shifts may lead to an increase in range of lower-elevation trees, while decreasing that of higher-elevation species.

Saw Timber

Government initiatives, including the National Fire Plan of 2001 (Public Law 106–291), Healthy Forest Restoration Act of 2003, and Healthy Forest Initiative (HFI), have called for the treatment of forests and woodlands to reduce fire and insect threats and improve overall forest health, while also providing incentives for the development of local, community-based forest product businesses.

Special Forest Products

Continued demand for SFP is expected to continue and will likely increase as a move towards more renewable energy continues (information regarding renewable energy in the planning area can be found in **Section 2.3.10**, Renewable and Alternative Energy Development).

Fuelwood is in consistent demand within the planning area. This source of home heating plays an important role in the economies of rural areas, as well as a source of alternative heat for those within urban areas. Fuelwood is often a cheaper, more attainable heating source for those more economically disadvantaged as well.

Biomass also plays an important role in in the SFP portfolio of the planning area. Demand for biomass is expected to grow, as alternative energy becomes more common. Also, biomass can be used for the development of wood pellets, which can be used as a source of heat, for power, and for soil amendments (biomass can be turned into biochar, which is a very effective soil amendment). River restoration projects are also using biomass material to help better mimic natural conditions.

Other SFPs are part of the portfolio of forest products for which permits are issued in the planning area, including manzanita burls and branches, walnuts, pine nuts, mushrooms, boughs, wildings, and Christmas trees. Demand for these products is expected to continue and possibly increase.

Key Features

There are several areas within the planning area that are of key importance, or of likely high use into the future, and have been of high use or importance in the past. These areas are listed below with a brief description of the area.

Grass Valley Creek Watershed: The Carr Fire burned portions of this watershed in 2018; however, this area is expected to remain a key feature in the BLM-administered forested lands. The GVC area of the planning area is dominated by Sierra Mixed Conifer Forests, and the soils are made up of predominantly decomposed granitic soils. The area was owned by a private timber company prior to BLM management and was managed extensively for timber resources. Since BLM acquisition of the area (some 16,000 acres), the BLM has worked with the Trinity County Resource Conservation District to mitigate erosion issues caused by previous management. Since then, roads have been re-habilitated and some closed, Reclamation built a dam within the area to restrict the flow of soil deposition into the local waterways, and post-fire tree planting has occurred in riparian corridors.

The area is currently inaccessible to public motor vehicle use, as only administrative access is authorized through a private road entering the area. However, people park on Highway 299 and walk into this area. Future management may include stand thinning for forest health and road improvements and developments for greater public access (**Map 2-11, Appendix A**).

Weaverville Community Forest: These lands are expected to continue to increase in use and as a key feature in the NCIP-managed forested lands. This area in the past has been part of several forest health treatments, oak woodland restoration thinnings, and fuels projects. The area has also been on the edge of several large wildfires, and two small wildfires entered the WCF proper in 2015. There are extensive nonmotorized recreational trails throughout the area, as well as roads that are the only access to multiple private holdings and homes within the area. The town of Weaverville is an “At-Risk Community,” so fuels projects and forest thinnings will continue to be a priority within this area (**Map 2-12, Appendix A**).

Interlakes: These lands are expected to continue to increase in use and as a key feature in the NCIP-managed forested lands. The area also contains the Chappie-Shasta OHV Area (see **Section 2.3.10, Recreation and Visitor Services**). This area has intensive OHV use with trails and roads throughout most of the area. These acres are also home to both commercial and non-commercial forest lands. Future forest health thinnings and pre-commercial thinnings are expected to continue within the area, and continued trail and road maintenance will be necessary due to continually increasing amounts of motorized recreation (**Map 2-13, Appendix A**). This area was affected by recent wildfires.

Baker Cypress ACEC: These lands are expected to continue to increase in use and as a key feature in the NCIP-managed forested lands. A management plan and a research plan are being written for the area, and active management for the health of Baker cypress is expected to continue and increase over the course of the 10-year agreement and possibly beyond (**Map 2-14, Appendix A**).

Sacramento Bend ACEC: The Sacramento Bend ACEC consists of 19,000 acres of NCIP BLM-administered lands. These lands are expected to continue to increase in use and as a key feature in the forested lands within the planning area. These lands represent the largest contiguous acreage of oak woodland within the planning area. Because of this feature, the Sacramento River Bend ACEC is a key feature of the forest resources of the planning area (**Map 2-15, Appendix A**).

Lacks Creek: Lacks Creek’s proximity to mills and several biomass-processing facilities has made several forest treatments more economically attractive in recent years than they are in other BLM Arcata FO forestlands. Lacks Creek has also been the focus of an assistance agreement with the Hoopa Valley Tribe since 2005. In 2019, a California Climate Initiative grant from CalFire was awarded to the field office, allowing nearly 1,500 acres of landscape-level forest health and fuels reduction to be conducted at Lacks Creek. This project improved forest health, reduced the likelihood of high-severity fire, and increased landscape resiliency to SOD. The emphasis on work in this area and likely increased public use of the area are expected to continue (**Map 2-16, Appendix A**). Human use of the area may increase the susceptibility of trees to SOD as ground disturbance and contaminated footwear may spread the fungus.

Coastal Forest Lands: The Ma-le’l Dunes is a 152-acre coastal property consisting of coastal dune plant communities including several acres that offer an example of maritime-influenced, Sitka spruce-shore pine forest. This coastal dune forest is an important part of the RNA and ACEC. Vegetation collection is only authorized May through October in order to protect non-vascular plant communities and forest vegetation. Continued and likely increased public use of the area is expected to continue (**Map 2-17, Appendix A**).

Butte Creek and Larabee Butte: These two parcels comprising 2,254 acres are being targeted for forest restoration treatments to meet multiple resource objectives over the planning period. Butte Creek (1,263 acres; **Map 2-18, Appendix A**) and Larabee Butte (991 acres; **Map 2-19, Appendix A**) both contain dense Douglas-fir plantations that will need pre-commercial and commercial thinning treatments in coming years. Both areas are also closed to expanding SOD infection centers. Furthermore, both areas have reasonably good existing access and are relatively close to sawmill and biomass processing facilities. The emphasis on work in this area and likely increased public use of the area are expected to continue, which could increase the risk of SOD infection.

2.2.7 Lands with Wilderness Characteristics

Under FLPMA, wilderness preservation is part of the BLM's multiple-use mandate and is recognized as part of a spectrum of resource values to be considered during land use planning. Section 201 of FLPMA requires the BLM to maintain, on a continuing basis, an inventory of all public lands and their resources and other values, which includes wilderness characteristics.

The Wilderness Act of 1964 declares federal lands must have certain characteristics to be considered wilderness, including the following:

- They must be in a generally natural condition.
- They must have outstanding opportunities for solitude or a primitive and unconfined recreation.
- They must be at least 5,000 acres or large enough to preserve and use as wilderness.
- They may contain ecological, geological, or other features of scientific, scenic, or historical value.
- They must be managed to preserve their wilderness character.

The inventory of lands with wilderness characteristics further includes unroaded areas of any size adjacent to existing wilderness study areas (WSAs). BLM Manual 6310, Conducting Wilderness Characteristics Inventory on BLM Lands, establishes a protocol for defining "roads" for the purposes of the inventory (USDI BLM 2012f).

Indicators

In general, discussions of potential impacts on wilderness characteristics tend to be more qualitative in nature, measured by the overall visual quality, naturalness, wildness, and symbolic values of an area that may be affected. Indicators of wilderness characteristics include changes to a wilderness inventory unit's size, naturalness, and outstanding opportunities for solitude or primitive and unconfined recreation. Indicators that can be measured include changes to route designations, including the number of unauthorized trails; the number of encounters with other users; and anticipated facility development.

Current Conditions

In 2015, the BLM began a lands with wilderness characteristics inventory. Wilderness characteristics inventory reports are summarized in **Table 2-22**.

Table 2-22. Wilderness Characteristics Inventory Summary

Area Name	Acreage Containing Lands with Wilderness Characteristics	Does the Area, or a Portion of the Area, Have Wilderness Characteristics?
Camp St. Michael (Subunits 3 and 4)	76	Yes
Lacks Creek	8,949	No
Red Mountain	319	Yes
Cahto Peak (Subunit 1)	314	Yes
Yolla Bolly (Subunits 1, 2, and 3)	236	Yes
Gilham Butte (Subunit 1)	5,894	Yes
Brushy Mountain (Subunit 1)	5,525	Yes
Eden Valley	4,592	No
Chappie Shasta (Subunit 3)	7,337	Yes
Grass Valley South (Subunit 1)	7,710	Yes
Sacramento River Bend (Subunit 2)	6,667	Yes
Trinity Alps (Subunit 4)	226	Yes
Grass Valley North	5,540	No
Ishi Management Area	190 parcels ranging in size from 1.3 acres-1,853 acres	No

Source: USDI BLM GIS 2021

The inventory does not represent a formal land use allocation or a final agency decision. If the BLM concludes that lands have wilderness characteristics, it will consider these lands through an open and transparent land use planning process with full public participation and input. If the BLM concludes through this process that protection of wilderness characteristics is appropriate, the BLM shall manage to preserve wilderness characteristics, again as part of the BLM's public process.

Trends

Various management decisions have allowed changes in land characteristics to occur. Travel management designations that were completed in the last 20 years provide a good example of recent management decisions that reflect this trend. Through these travel management designations, the BLM designated roads as open, closed, or for administrative use only. Roads previously designated as closed or for administrative use only are no longer being used and are slowly naturalizing. In some instances, they are already difficult to find on the ground, particularly when the BLM actively decommissioned them through restoration efforts. Over time, this naturalization process will result in more lands that appear natural and may meet the criteria for possessing wilderness characteristics.

Lands with wilderness characteristics are also trending toward improvement in their natural condition. The imprint of human activities is receding from these areas, with the exception of disturbances caused by wildfire suppression activities. These activities included creating bulldozer lines and tree falling to stop the spread of wildfires, thereby affecting wilderness landscape and naturalness.

Forecast

The BLM will continue to manage lands with wilderness characteristics to preserve their wilderness character. BLM Manual 6320, Considering Lands with Wilderness Characteristics in the BLM Land Use Planning Process (Public), establishes BLM policy on considering lands with wilderness characteristics in land use plans and land use plan amendments or revisions (USDI BLM 2012b).

Current management plans do not provide the proper direction regarding the management of lands that possess wilderness characteristics, and they are currently not given priority over other resources or resource uses. Through the land use planning process, the BLM will consider the wilderness characteristics of public lands in the planning area and determine how to manage these lands as part of the BLM's multiple-use mandate.

Development of non-mechanized trails is worth exploring in the Redding FO. Providing challenging, solitary, unique hiking experience in areas suitable to non-mechanized trails may improve access and diversify recreational experiences. There is currently an abundance of multi-use trails popular with and tailored to the mountain bike community, and a large offering of OHV trails. The advent of electric bikes also increases the appeal of dedicated, true hiking trails for those seeking more solitary, quieter nature experiences. The identified land areas high in wilderness characteristics may open the opportunity for such development of non-mechanized trails.

Key Features

No key features were identified.

2.2.8 Invasive, Nonnative Plants

The BLM implements multiple strategies in combating invasive species. The BLM coordinates with internal resource specialists, local coordinated weed management areas (CWMAs), county and state governments, nonprofits, and private landowners in the planning area to detect and treat invasive weeds. This cooperative interdisciplinary, interagency, and multi-stakeholder effort supports an integrated weed management program to combat the threats posed by invasive species. A coordinated strategy means that there are more people looking for and treating invasive, nonnative, and noxious plants in a strategic manner on public lands.

Although the BLM participates in the control of large infestations, the agency's primary focus is providing adequate capability to detect and treat smaller weed infestations in high-risk areas before they have a chance to spread. As in the adage, "An ounce of prevention is worth a pound of cure," it is much more cost effective to prevent rather than control large weed infestations. Prevention, early detection, and rapid response are crucial in dealing with the spread of invasive species in order for the BLM to improve and maintain ecosystem health.

BLM support for integrated weed management comes from executive orders, legislation, and strategic documents, including the following:

- Federal Noxious Weed Act of 1974, Public Law 93-692, as amended (7 USC 2814)
- Final Environmental Impact Statement for Vegetation Treatments on BLM Lands in Thirteen Western States (USDI BLM 1991)
- National Invasive Species Act of 1996 (16 USC 4701 et seq.)
- Partners Against Weeds Initiative (USDI BLM 1996)
- Executive Order 13112 (1999), Invasive Species (dated Feb 3, 1999)
- National Fire Plan of 2001 (Public Law 106-291)
- Noxious Weed Control and Eradication Act of 2004 (Public Law 108-412)

- Vegetation Treatments Using Herbicides on Bureau of Land Management Lands in 17 Western States Programmatic Environmental Impact Statement (USDI BLM 2007a)
- Record of Decision for Vegetation Treatments Using Herbicides on Bureau of Land Management Lands in 17 Western States Programmatic Environmental Impact Statement (USDI BLM 2007b)
- Record of Decision for Vegetation Treatments using Aminopyralid, Fluroxypyr, and Rimsulfuron on Bureau of Land Management Lands in 17 Western States Programmatic Environmental Impact Statement (USDI BLM 2016b)
- 2008-2012 National Invasive Species Management Plan (US National Invasive Species Council 2008)
- National Seed Strategy for Rehabilitation and Restoration 2015–2020 (USDI 2015)
- BLM Manual 9015 – Integrated Weed Management (USDI BLM 1992c)

Invasive, nonnative plants include noxious weeds as well as other plants that are not native to the United States. An invasive species is defined as “a species that is nonnative to the ecosystem under consideration and whose introduction causes or is likely to cause economic or environmental health or harm to human health.” (US National Invasive Species Council 2008). These species make efficient use of local natural resources difficult and may interfere with management objectives for the site. According to California Department of Food and Agriculture (CDFA) Code 5004, a “noxious weed” includes any species of plant that is, or is liable to be, troublesome, aggressive, intrusive, detrimental, or destructive to agriculture, silviculture, or important native species, and difficult to control or eradicate, which the director, by regulation, designates to be a noxious weed.

Indicators

According to Joe DiTomaso of UC Davis, there are approximately 4,200 native plants in California, 1,200 nonnative plants, and 200 species that are both invasive and nonnative. It is the component that is both invasive and nonnative that is of greatest concern. Indicators used to describe the condition of noxious weeds and invasive plants include:

- The distribution and abundance of known invasive, nonnative, or noxious weeds in the planning area; and
- Classification/Rating.

Information on the distribution of nonnative plants is essential for strategic planning of management efforts. There has been an effort in the past few years to compile and share data at a statewide level. Occurrence data from land managers and the public at large has been collected and then aggregated at Calflora, a public website for learning about plants that grow wild in California. Herbarium specimens are collected throughout the state to represent distribution of plants and shared with local herbariums who in turn share them with the Consortium of California Herbaria.

CalWeedMapper is a website created and maintained by the California Invasive Plant Council (Cal-IPC) that integrates the Calflora and Consortium of California Herbaria datasets. This information is augmented by expert knowledge provided by land managers. The resulting information provides comprehensive information on plant distribution at the scale of a USGS 7.5-minute quadrangle. These

data provide the best available information on the distribution of nonnative plants and are appropriate for strategic planning on the landscape scale.

CalWeedMapper uses this “quad data” to generate a document of management opportunities based on the distribution of all species within 50 miles of a specified region. Management opportunities are described for each plant as surveillance, eradication, or containment targets. These opportunities are identified per their spatial distribution, where surveillance species are absent from the region but within 50 miles; eradication species are infested quads surrounded by two concentric bands of absent quads, and containment species are the remaining species found in the region.

The BLM has developed data collection and metadata standards incorporated into new agency-wide applications called the National Invasive Species Information System (NISIMS) and the Vegetation Management Action Portal (VMAP). An aim of NISIMS and the VMAP is to improve data collection, storage, and analysis, and to reduce discrepancies. Once all FOs have successfully entered all historical data available and are functional in collecting current infestation, treatment, and monitoring data, NISIMS will provide managers current conditions and trends of various invasive weed communities on BLM-administered lands. However, because weed distributions cross jurisdictional boundaries, NISIMS is not suitable for landscape-wide analysis where the BLM only owns scattered parcels, as is the case in a majority of the planning area. Because the database is incompletely populated, it is not useful as a tool to illustrate invasive weed trends on BLM-administered land at this time. Its most current utility is site-specific infestation and treatment tracking.

Current Conditions

Table 2-23 lists invasive, nonnative weeds present or within 50 miles of the planning area and includes local, regional, and statewide levels of management concern. **Table 2-23** is derived from CalWeedMapper occurrence data from Calflora and the Consortium of California Herbaria, as well as local expert knowledge, contrasted with the planning area boundary. Information on the prioritization rating of each species is included in the table. The table also notes if infestations of each species are known to occur on BLM-administered lands in the planning area and if the species is currently actively treated in the planning area. Management opportunities are noted for each species.

Weed Prioritization Definitions

There are several statewide, regional, and local definitions and contexts to consider when determining management approach to for a given invasive, nonnative weed. The following definitions describe how the CDFA, Cal-IPC, and two local weed management areas (WMAs) within the planning area define and prioritize weeds.

Table 2-23. Invasive, Nonnative Weeds Present or within 50 Miles of the NCIP Planning Area

Species	Common Name	Cal IPC Rating	CDFA Rating	HWMA Rating ¹	Known on BLM-Administered Land in Planning Area-Arcata/Redding/or BOTH	Redding Management Opportunity	Arcata Management Opportunity	Actively Treated on BLM? X=yes (A-Arcata, R-Redding)	Suitable 2050
<i>Acacia dealbata</i>	silver wattle	Moderate		Moderate	Redding	Containment	Containment		+
<i>Acacia melanoxylon</i>	black acacia, blackwood acacia	Limited			Arcata	Containment	Containment		
<i>Acaena novae-zelandiae</i>	biddy-biddy	Watch	Noxious	Red Alert	No				
<i>Acroptilon repens</i>	Russian knapweed	Moderate	Noxious		No	Containment	Surveillance		
<i>Aegilops triuncialis</i>	barb goatgrass	High	Noxious		Redding	Containment	Containment		+
<i>Ageratina adenophora</i>	croftonweed, eupatorium	Moderate			Both				+
<i>Agrostis stolonifera</i>	creeping bentgrass	Limited		High	Both	Containment	Containment		
<i>Agrostis avenacea</i>	Pacific bentgrass	Limited			No	Containment	Surveillance		
<i>Ailanthus altissima</i>	tree-of-heaven	Moderate	Noxious	High	Redding	Containment	Containment	X	+
<i>Albizia julibrissin</i>	mimosa	Not Listed			Redding			X	
<i>Alhagi maurorum</i>	camelthorn	Moderate	Noxious		No	Containment	Surveillance		
<i>Allium triquetrum</i>	three-cornered leek	Watch		Moderate	Arcata				
<i>Alternanthera philoxeroides</i>	alligator weed	High-Alert	Noxious		No	Eradication	None		
<i>Ammophila arenaria</i>	European beachgrass	High		High	Arcata	Surveillance	Containment	X	
<i>Anthonxanthum odoratum</i>	sweet vernal grass	Moderate			Both	Containment		X	
<i>Arctotheca calendula</i> (= <i>Arctotheca calendula</i> fertile)	fertile capeweed	Moderate	Noxious	Red Alert	No	Surveillance	Containment		
<i>Arctotheca prostrata</i> (= <i>Arctotheca calendula</i> infertile)	sterile capeweed	Moderate		Monitor	No	Surveillance	Containment		
<i>Arundo donax</i>	giant reed	High	Noxious	Monitor	Redding	Containment	Containment	X	
<i>Asparagus asparagoides</i>	Bridal creeper	Moderate Alert			Both				+
<i>Asphodelus fistulosus</i>	onionweed	Moderate Alert	B		Both				
<i>Atriplex semibaccata</i>	Australian saltbush	Moderate			No	Surveillance	Surveillance		
<i>Avena barbata</i> and <i>A. fatua</i>	(slender) wild oat	Moderate			Both	Containment	Containment		
<i>Bassia hyssopifolia</i>	fivehook bassia	Limited			No	Containment	Surveillance		

Species	Common Name	Cal IPC Rating	CDFA Rating	HWMA Rating ¹	Known on BLM-Administered Land in Planning Area-Arcata/Redding/or BOTH	Redding Management Opportunity	Arcata Management Opportunity	Actively Treated on BLM? X=yes (A-Arcata, R-Redding)	Suitable 2050
<i>Bellardia trixago</i>	bellardia	Limited		EDRR	Arcata-Eradicated	Containment	Surveillance	XA	
<i>Berberis darwinii</i>	Darwin's barberry	Watch		Monitor	No				
<i>Brachypodium distachyon</i>	annual false-brome, false brome	Moderate			Redding	Containment	Surveillance		-
<i>Brachypodium sylvaticum</i>	perennial false-brome	Moderate	Noxious		No	Surveillance	Containment		
<i>Brassica nigra</i>	black mustard	Moderate			Both	Containment	Containment		
<i>Brassica rapa</i>	birdsrape mustard, field mustard	Limited			Both	Containment	Containment		
<i>Brassica tournefortii</i>	Saharan mustard, African mustard	High			No	Eradication	Surveillance		
<i>Briza maxima</i>	big quakinggrass, rattlesnakegrass	Limited		High	Both	Containment	Containment	X	
<i>Bromus diandrus</i>	ripgut brome	Moderate		High	Both	Containment	Containment	X	+
<i>Bromus hordeaceus</i>	soft brome	Limited			Both	Containment	Containment		
<i>Bromus japonicus</i>	Japanese brome, Japanese chess	Limited			Redding	Containment	Eradication		
<i>Bromus madritensis ssp. rubens</i>	red brome	High			Redding	Containment	Containment	X	+
<i>Bromus tectorum</i>	downy brome, cheatgrass	High	C		Both	Containment	Containment	XR	+
<i>Buddleja davidii</i>	butterfly bush	Not Listed		Moderate	Both			X	
<i>Cakile maritima</i>	European sea-rocket	Limited			Arcata	Surveillance	Containment		
<i>Calystegia silvatica</i>	false bindweed	Not Listed		High	No				
<i>Carduus acanthoides</i>	plumeless thistle	Limited	Noxious		Redding	Containment	Containment		
<i>Carduus nutans</i>	musk thistle	Moderate	Noxious		Redding	Containment	Surveillance	X	-
<i>Carduus tenuiflorus</i> and <i>C. pycnocephalus</i>	slenderflower and Italian thistle	Limited	Noxious	High	Both	Containment	Containment	XA	
<i>Carpobrotus chilensis</i>	sea-fig, iceplant	Moderate			Arcata	Surveillance	Containment	X	
<i>Carpobrotus edulis</i>	hottentot-fig, iceplant	High		High	Arcata	Surveillance	containment	X	
<i>Carthamus lanatus</i>	wooly distaff thistle	Moderate	Noxious		No	Containment	Containment		
<i>Catalpa bignonioides</i>	catalpa	Watch			Redding	Containment		X	

Species	Common Name	Cal IPC Rating	CDFA Rating	HWMA Rating ¹	Known on BLM-Administered Land in Planning Area-Arcata/Redding/or BOTH	Redding Management Opportunity	Arcata Management Opportunity	Actively Treated on BLM? X=yes (A-Arcata, R-Redding)	Suitable 2050
<i>Centaurea jacea notho</i> ssp. <i>pratensis</i> (= <i>Centaurea debeauxii</i>)	meadow knapweed	Moderate	Noxious	Red Alert	No	Containment	Containment		
<i>Centaurea calcitrapa</i>	purple starthistle	Moderate	Noxious		No	Containment	Containment		+
<i>Centaurea diffusa</i>	Diffuse knapweed	Moderate	Noxious	Red Alert	Redding	Containment	Containment	X	-
<i>Centaurea melitensis</i>	Malta starthistle, tocalote	Moderate	Noxious	Moderate	Both	Containment	Containment	XA	+
<i>Centaurea solstitialis</i>	yellow starthistle	High	Noxious	High	Both	Containment	Containment	X	+
<i>Centaurea stoebe</i> ssp. <i>micranthos</i> (= <i>Centaurea maculosa</i>)	spotted knapweed	High	Noxious	High	Redding	Containment	Containment	X	
<i>Centaurea virgata</i> ssp. <i>squarrosa</i>	squarrose knapweed	Moderate	Noxious		Redding	Containment	Containment		
<i>Chondrilla juncea</i>	rush skeletonweed	Moderate	Noxious		Redding	Containment	Containment		
<i>Cirsium arvense</i>	Canada thistle	Moderate	Noxious	High	Both	Containment	Containment	X	
<i>Cirsium vulgare</i>	bull thistle	Moderate	Noxious	High	Both	Containment	Containment	X	
<i>Coincya monensis</i>	coincya	Not Listed	Noxious	Red Alert	No				
<i>Conicosia pugioniformis</i>	narrowleaf iceplant	Limited			Both				
<i>Conium maculatum</i>	poison-hemlock	Moderate		Moderate	Both	Containment	Containment	X	
<i>Cordyline australis</i>	giant dracaena	Limited			No		Containment		
<i>Cortaderia jubata</i>	jubata grass	High		High	Arcata	Surveillance	Containment	X	
<i>Cortaderia seloana</i>	Pampas grass	High		High	Arcata	Containment	Containment	X	
<i>Cotoneaster franchetii</i>	orange cotoneaster	Moderate			Arcata	Eradication	Containment	X	
<i>Cotoneaster lacteus</i>	Parney's cotoneaster	Moderate			Redding	Eradication	Containment		
<i>Cotoneaster pannosus</i>	silverleaf cotoneaster	Moderate		High	Arcata	Containment	Containment	XA	
<i>Cotula coronopifolia</i>	brassbuttons	Limited			Both	Containment	Containment		
<i>Crataegus monogyna</i>	hawthorn	Limited			No	Containment	Containment		
<i>Crococsmia x crocosmiiflora</i>	montbretia	Limited		Moderate	No	Surveillance	Containment		
<i>Crupina vulgaris</i>	common crupina, bearded creeper	Limited	A Proposed		No	Surveillance	None		
<i>Cynara cardunculus</i>	artichoke thistle	Moderate	Noxious		No	Eradication	Eradication		
<i>Cynodon dactylon</i>	Bermuda grass	Moderate	D		Redding	Containment	Containment		
<i>Cynoglossum officinale</i>	houndstongue	Moderate			No	Containment	Surveillance/Eradication		

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<i>Cynosurus echinatus</i>	hedgehog dogtailgrass	Moderate			Both	Containment	Containment		+
<i>Cytisus scoparius</i>	Scotch broom	High	Noxious	High	Both	Containment	Containment	X	+
<i>Cytisus striatus</i>	Portuguese broom	Moderate	B		Both				
<i>Dactylis glomerata</i>	orchardgrass	Limited			Both	Containment	Containment		+
<i>Delairea odorata</i>	Cape-ivy	High	Noxious	High	Arcata	Surveillance	Containment		
<i>Descurainia sophia</i>	flixweed, tansy mustard	Limited			Redding	Containment	Containment		
<i>Digitalis purpurea</i>	foxglove	Limited		Moderate	Arcata	Containment	Containment	X	
<i>Dipsacus fullonum</i> and <i>D. sativus</i>	common and Fuller's teasel	Moderate		Moderate	Both	Containment	Containment	XA	
<i>Dittrichia graveolens</i>	stinkwort	Moderate	Noxious		Redding	Containment	Containment	X	
<i>Echium candicans</i>	pride-of-Madeira	Limited		Proposed for consideration	Both		Surveillance		+
<i>Egeria densa</i>	Brazilian Egeria	High	Noxious	Red Alert	Redding	Containment	Surveillance		
<i>Ehrharta calycina</i>	purple veldtgrass	High			No	Surveillance	Eradication		
<i>Ehrharta erecta</i>	erect veldtgrass	Moderate			No	Surveillance	Containment		
<i>Ehrharta longiflora</i>	long-flowered veldtgrass	Moderate Alert			Both				
<i>Eichhornia crassipes</i>	water hyacinth	High Alert	NR		Both	Containment			
<i>Eichornia crassipes</i>	water hyacinth	High			No	Containment	Surveillance		
<i>Elaeagnus angustifolia</i>	Russian-olive	Moderate			No	Containment	None		
<i>Elymus caput-medusae</i> (= <i>Taeniatherum caput-medusae</i>)	medusahead	High	Noxious	High	Both	Containment	Containment	XR	
<i>Emex spinosa</i>	spiny emex, devil's-thorn	Moderate Alert			Both				+
<i>Erica lusitanica</i>	Spanish heath	Limited		High	Arcata	Surveillance	Eradication		
<i>Erodium cicutarium</i>	redstem filaree	Limited			Both	Containment	Containment		
<i>Eucalyptus camaldulensis</i>	red gum	Limited			No	Containment	Surveillance		
<i>Eucalyptus globulus</i>	Tasmanian blue gum	Moderate		Monitor	Arcata	Containment	Containment	X	
<i>Euphorbia lathyris</i>	gopherweed	Watch		Red Alert	No				
<i>Euphorbia oblongata</i>	oblong spurge	Limited	Noxious	Red Alert	No	Containment	Containment		

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<i>Euphorbia terracina</i>	carnation spurge	Moderate Alert	B		Both				
<i>Euphorbia virgata</i> (= <i>Euphorbia esula</i>)	leafy spurge	High	Noxious	Red Alert	Redding	Containment	Containment	X	
<i>Fallopia japonica</i> (= <i>Polygonum cuspidatum</i>)	Japanese knotweed	Moderate	Noxious	Red Alert	Arcata-Eradicated	Containment	Containment	XA	
<i>Fallopia sachalinensis</i> (= <i>Polygonum sachalinense</i>)	sakhalin knotweed	Moderate	Noxious		No	Eradication	None		
<i>Festuca arundinacea</i>	tall fescue	Moderate		Monitor	Both	Containment	Containment	X	
<i>Festuca myuros</i> (= <i>Vulpia myuros</i>)	rattail fescue	Moderate			Both	Containment	Containment	X	
<i>Festuca perenne</i> (= <i>Lolium multiflorum</i>)	Italian ryegrass	Moderate			Both	Containment	Containment		
<i>Ficus carica</i>	edible fig	Moderate			Redding	Containment	Eradication	X	+
<i>Foeniculum vulgare</i>	fennel	High		High	Arcata	Containment	Containment	X	
<i>Genista monosperma</i>	bridal broom	Moderate Alert	B		Both				
<i>Genista monspessulana</i>	French broom	High	Noxious	High	Both	Containment	Containment	X	+
<i>Geranium dissectum</i>	cutleaf geranium	Moderate			Both	Containment	Containment		
<i>Geranium purpureum</i>	little robin	Limited			Both	Surveillance	Surveillance		
<i>Geranium robertianum</i>	herb Robert	Watch		High	No				
<i>Glebionis coronaria</i> (= <i>Chrysanthemum coronarium</i>)	crown daisy	Moderate			No	Surveillance	None		
<i>Glyceria declinata</i>	waxy mannagrass	Moderate			No	Containment	Containment		
<i>Halogeton glomeratus</i>	Halogeton	Moderate	Noxious		No	Surveillance	None		
<i>Hedera helix</i> and <i>H. canariensis</i>	English ivy, Algerian ivy	High		High	Both	Containment	Containment	XA	+
<i>Helichrysum petiolare</i>	licoriceplant	Limited			Both				
<i>Helminthotheca echioides</i> (= <i>Picris echioides</i>)	bristly oxtongue	Limited			Arcata	Containment	Containment		
<i>Hesperocyparis macrocarpa</i>	Monterey cypress				Both				
<i>Hirschfeldia incana</i>	shortpod mustard, summer mustard	Moderate		Moderate	Redding	Containment	Containment		

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<i>Holcus lanatus</i>	common velvet grass	Moderate		Moderate	Arcata	Containment	Containment	XA	+
<i>Hordeum marinum</i>	Mediterranean barley	Moderate			Both	Containment	Containment		
<i>Hordeum murinum</i>	hare barley	Moderate			Both	Containment	Containment		
<i>Hydrilla verticillata</i>	hydrilla	High	Noxious	Red Alert	Redding	Containment	Surveillance		
<i>Hydrocharis morsus-ranae</i>	European frogbit	High	A	Watch	No				
<i>Hypericum calycinum</i>	creeping St. John's wort	Watch		Monitor	No				
<i>Hypericum canariense</i>	Canary Island hypericum	Moderate	Noxious		No	Surveillance	Containment		
<i>Hypericum perforatum</i>	common St. John's wort, klamathweed	Moderate	Noxious	Monitor	Both	Containment	Containment	XR	
<i>Hypochaeris glabra</i>	smooth catsear	Limited		Moderate	Both	Containment	Containment		
<i>Hypochaeris radicata</i>	rough catsear, hairy dandelion	Moderate			Both	Containment	Containment		
<i>Ilex aquifolium</i>	English holly	Moderate		High	Arcata	Surveillance	Containment	X	
<i>Iris pseudacorus</i>	yellowflag iris	Limited		Moderate	Both	Containment	Containment	X	
<i>Isatis tinctoria</i>	Dyer's woad	Moderate	Noxious		Redding	Containment	Containment	X	
<i>Kochia scoparia</i>	kochia	Moderate			No	Containment	Containment		
<i>Lepidium appelianum</i> (=Cardaria pubescens)	hairy whitetop	Limited	Noxious		Redding	Containment	Surveillance		
<i>Lepidium chalepense</i> (=Cardaria chalepensis and C. draba)	lens-podded hoary cress	Moderate	Noxious		Redding	Containment	Containment	X	
<i>Lepidium latifolium</i>	perennial pepperweed	High	Noxious		Redding	Containment	Containment	X	
<i>Leucanthemum vulgare</i>	ox-eye daisy	Moderate			Both	Containment	Containment		
<i>Ligustrum</i> spp.	privet	Not Listed			Redding			X	
<i>Limnobiium laevigatum</i>	South American spongeplant	High	A	Watch	Redding	Containment	Eradication		
<i>Limnobiium spongia</i>	South American spongeplant	High Alert	A		Redding	Containment	Surveillance		
<i>Linaria dalmatica</i> ssp. <i>dalmatica</i> (=Linaria genistifolia ssp. <i>dalmatica</i>)	Dalmatian toadflax	Moderate	Noxious	Red Alert	Redding	Containment	Containment	X	

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<i>Linaria vulgaris</i>	yellow toadflax, butter and eggs	Moderate			Redding	Eradication	Containment	X	-
<i>Lobularia maritima</i>	sweet alyssum	Limited			Both	Containment	Eradication		
<i>Lotus corniculatus</i>	birds foot trefoil	Watch		Monitor	No				
<i>Ludwigia hexapetala</i>	Uruguay and creeping water-primrose	High	Noxious		Redding	Containment	Containment		
<i>Ludwigia peploides</i>	creeping water primrose	High			Redding	Containment	Containment	X	
<i>Lupinus arboreus</i>	yellow bush lupine	Not Listed		High	Arcata			X	
<i>Lythrum hyssopifolium</i>	hyssop loosestrife	Limited			Both	Containment	Containment		
<i>Lythrum salicaria</i>	purple loosestrife	High	Noxious	Red Alert	No	Containment	Containment		
<i>Marrubium vulgare</i>	white horehound	Limited			Both	Containment	Containment		
<i>Maytenus boaria</i>	mayten				No	Surveillance	Surveillance		
<i>Medicago polymorpha</i>	California burclover	Limited			Both	Containment	Containment		
<i>Mentha pulegium</i>	pennyroyal	Moderate			Both	Containment	Containment		
<i>Mesembryanthemum crystallinum</i>	crystalline iceplant	Moderate			Both				
<i>Myoporum laetum</i>	myoporum	Moderate			Both				
<i>Myosotis latifolia</i>	common forget-me-not	Limited			No	Surveillance	Containment		
<i>Myriophyllum aquaticum</i>	parrotfeather	High		Red Alert	Redding	Containment	Containment		
<i>Myriophyllum spicatum</i>	Eurasian watermilfoil	High		Red Alert	Redding	Containment	Containment	X	
<i>Nerium oleander</i>	oleander	Watch			Redding			X	
<i>Nicotiana glauca</i>	tree tobacco	Moderate			No	Containment	Surveillance		+
<i>Olea europaea</i>	olive	Limited			Redding	Containment	Surveillance		
<i>Ononis alopecuroides</i>	foxtail restharrow	Limited	A		Both				
<i>Onopordum acanthium</i>	Scotch thistle	High	Noxious		Redding	Containment	Eradication		
<i>Oxalis pes-caprae</i>	Bermuda buttercup	Moderate		Red Alert	Arcata	Containment	Containment	X	
<i>Oxalis rubra</i>	red oxalis	Not Listed		Monitor	No				
<i>Parapholis strigosa</i>	hairy sickle grass	Not Listed		Monitor	No				
<i>Parentucellia viscosa</i>	yellow glandweed, sticky parentucellia	Limited		Monitor	Arcata	Containment	Containment		
<i>Pennisetum clandestinum</i>	kikuyugrass	Limited	Noxious		Redding	Eradication	Surveillance		
<i>Pennisetum setaceum</i>	crimson fountaingrass	Moderate			No	Surveillance	Containment		+

Species	Common Name	Cal IPC Rating	CDFA Rating	HWMA Rating ¹	Known on BLM-Administered Land in Planning Area-Arcata/Redding/or BOTH	Redding Management Opportunity	Arcata Management Opportunity	Actively Treated on BLM? X=yes (A-Arcata, R-Redding)	Suitable 2050
<i>Phalaris aquatica</i>	hardinggrass	Moderate		High	Arcata	Containment	Containment		
<i>Phalaris arundinaceae</i>	reed canary grass	Not Listed		High	No				
<i>Phoenix canariensis</i>	Canary Island date palm	Limited			No	Surveillance	None		
<i>Phragmites australis</i> (invasive genotype)	common reed	Not Listed	C	High	Arcata			X	
<i>Phyllostachys</i> spp.	bamboo	Not Listed			Redding			X	
<i>Phytolacca americana</i>	common pokeweed	Limited			Redding	Containment	Surveillance	X	
<i>Pinus radiata</i> cultivars	Monterey pine				Both				
<i>Pittosporum undulatum</i>	pittosporum	Watch		Moderate	No				
<i>Plantago lanceolata</i>	buckhorn plantain, English plantain	Limited			Both	Containment	Containment		
<i>Poa pratensis</i>	Kentucky bluegrass	Limited			Both	Containment	Containment		
<i>Polypogon monspeliensis</i>	rabbitsfoot polypogon	Limited		Monitor	Both	Containment	Containment		
<i>Potamogeton crispus</i>	curlyleaf pondweed	Moderate			Redding	Containment	Containment		
<i>Prunus cerasifera</i>	cherry plum	Limited			Redding	Containment	Containment	X	
<i>Pyracantha angustifolia, crenulata, serratus, etc.</i>	pyracantha, firethorn	Limited			Both	Containment	Containment	X	
<i>Ranunculus repens</i>	creeping buttercup	Limited			Arcata	Eradication	Containment		
<i>Raphanus sativus</i>	radish	Limited			Both	Containment	Containment		
<i>Ricinus communis</i>	castor bean	Limited			No	Eradication	None		
<i>Robinia pseudoacacia</i>	black locust	Limited			Redding	Containment	Containment	X	
<i>Rubus armeniacus</i> (= <i>Rubus discolor</i>)	Himalaya berry	High		High	Both	Containment	Containment	X	
<i>Rumex acetosella</i>	red sorrel, sheep sorrel	Moderate		Moderate	Both	Containment	Containment	XA	
<i>Rumex crispus</i>	curly dock	Limited			Both	Containment	Containment		
<i>Rytidosperma pectinatum</i> (= <i>Danthonia pilosa</i>)	hairy oat grass	Limited			No	Surveillance	Containment		
<i>Saccharum ravennae</i>	ravennagrass	Moderate			No	surveillance	Surveillance		
<i>Salsola paulsenii</i>	barbwire Russian-thistle	Limited	Noxious		No	Surveillance	none		
<i>Salsola soda</i>	opposite-leaf Russian thistle	Moderate			No	Surveillance	Surveillance		

Species	Common Name	Cal IPC Rating	CDFA Rating	HWMA Rating ¹	Known on BLM-Administered Land in Planning Area-Arcata/Redding/or BOTH	Redding Management Opportunity	Arcata Management Opportunity	Actively Treated on BLM? X=yes (A-Arcata, R-Redding)	Suitable 2050
<i>Salsola tragus</i>	Russian thistle	Limited	C		Redding	Containment	Containment		
<i>Salvia aethiopsis</i>	Mediterranean sage	Limited	Noxious		Redding	Containment	Surveillance		
<i>Salvinia molesta</i>	giant Salvinia	High Alert	A		Both				
<i>Saponaria officinalis</i>	bouncingbet	Limited			Redding	Containment	Containment		
<i>Schinus molle</i>	Peruvian peppertree	Limited			No	Containment	None		
<i>Schinus terebinthifolius</i>	Brazilian peppertree	Limited			Both				
<i>Schismus arabicus</i> and <i>S. barbatus</i>	Mediterranean grass	Limited			No	None	Surveillance		
<i>Senecio elegans</i>	redpurple ragwort	Not Listed		Watch	No				
<i>Senecio jacobaeae</i>	tansy ragwort	Limited	Noxious	High	Both	Containment	Containment	XA	
<i>Senecio minimus</i> and <i>S. glomeratus</i> (= <i>Erechtites minima</i> and <i>E. glomerata</i>)	Australian fireweed	Moderate			Arcata	Surveillance	Containment		
<i>Sesbania punicea</i>	red sesbania, scarlet wisteria	High	Noxious		Redding	Containment	Surveillance/Eradication	X	-
<i>Silybum marianum</i>	blessed milkthistle	Limited			Both	Containment	Containment	X	
<i>Sinapis arvensis</i>	wild mustard, charlock	Limited			Redding	Containment	Eradication		
<i>Sisymbrium irio</i>	London rocket	Moderate			No	Eradication	None		
<i>Solanum elaeagnifolium</i>	silverleaf nightshade	Watch			Redding			X	
<i>Sorghum halepense</i>	Johnsongrass	Watch	Noxious		Redding			X	
<i>Spartina alterniflora</i>	salt-water cordgrass	Not Listed	Noxious	Watch	No				
<i>Spartina anglica</i>	common cordgrass	Moderate Alert	B		Both				
<i>Spartina densiflora</i>	dense-flowered cordgrass	High		High	Arcata	None	Containment	X	
<i>Spartina patens</i>	saltmeadow cord grass	Limited	B		Both				
<i>Spartium junceum</i>	Spanish broom	High	Noxious	High	Both	Containment	Containment	X	+
<i>Stipa capensis</i>	Mediterranean steppegrass	Moderate Alert			Both				
<i>Stipa manicata</i> (= <i>Nassella manicata</i>)	tropical needlegrass	Limited			No	Surveillance	None		

Species	Common Name	Cal IPC Rating	CDFA Rating	HWMA Rating ¹	Known on BLM-Administered Land in Planning Area-Arcata/Redding/or BOTH	Redding Management Opportunity	Arcata Management Opportunity	Actively Treated on BLM? X=yes (A-Arcata, R-Redding)	Suitable 2050
<i>Stipa miliacea</i> var. <i>miliacea</i> (= <i>Piptatherum miliaceum</i>)	smilgrass	Limited			Redding	Containment	Eradication		+
<i>Tamarix aphylla</i>	athel tamarisk	Limited			Both				
<i>Tamarix parviflora</i>	smallflower tamarisk	High	Noxious		Redding	Containment	Eradication	X	
<i>Tamarix ramosissima</i>	saltcedar, tamarisk	High	Noxious		Redding	Containment	Eradication	X	
<i>Tanacetum vulgare</i>	common tansy	Moderate			No	Containment	Containment		
<i>Tetragonia tetragonioides</i>	New Zealand spinach	Limited			No	Surveillance	Eradication		
<i>Torilis arvensis</i>	hedgearsley	Moderate			Both	Containment	Containment		+
<i>Triadica sebifera</i> (= <i>Sapium sebiferum</i>)	Chinese tallowtree	Moderate			Redding	Containment	None		
<i>Tribulus terrestris</i>	puncturevine	Watch	Noxious		Redding			X	
<i>Trifolium hirtum</i>	rose clover	Moderate			Both	Containment	Containment		
<i>Ulex europaeus</i>	gorse	High	Noxious	Red Alert	No	Surveillance	Containment		
<i>Undaria pinnatifida</i>	wakame	Limited			Both				
<i>Verbascum thapsus</i>	common mullein, wooly mullein	Limited			Both	Containment	Containment	X	
<i>Verbena bonariensis</i> and <i>V. litoralis</i>	purpletop vervain and shore vervain				Redding	Surveillance	Surveillance		
<i>Vinca major</i>	big periwinkle	Moderate		High	Both	Containment	Containment	XA	
<i>Washingtonia robusta</i>	Mexican fan palm	Moderate			No	Eradication	None		
<i>Watsonia meriana</i>	bulbil watsonia	Limited	B	Red Alert	Both	Surveillance	Containment		
<i>Zantedeschia aethiopica</i>	calla lily	Limited			Arcata	Surveillance	Containment	X	
<i>Zostera japonica</i>	japanese eelgrass	Not Listed	Noxious	Red Alert	Arcata				

Source: USDI BLM 2016a

Notes: ¹ Humboldt County WMA Ratings are Red Alert, High Priority, Moderate Priority, Early Detect/Eradicate To Be Conservative, Watch List, and Monitor/Research. Descriptions for these ratings are given below.

California Department of Food and Agriculture Pest Plant Ratings

On a statewide scale, the CDFA maintains a California Noxious Weeds List (CDFA 2016a) and a Pest Rating list (CDFA 2016b) that respectively focus on species of statewide concern that are known management problems, and that also tend to be problems for agricultural production. A summary of their ratings are shown below:

- Noxious—CDFA states that if a plant is found to probably be “troublesome, aggressive, intrusive, detrimental, or destructive to agriculture, silviculture, or important native species, and difficult to control or eradicate,” the CDFA will designate the plant as a noxious weed (CDFA 2015).
- A—Pests of the agricultural industry or environment that score high and are not known to occur or under official control in the State of California.
- B—Pests of the agricultural industry or environment that score medium to high and which are of limited distribution in the State of California.
- C—Pests of the agricultural industry or environment that score medium to low and are of common occurrence and generally distributed in California.
- D—Organisms that score low and are known to be of little or no economic importance to the agricultural industry or environmental detriment, have an extremely low likelihood of invasiveness, are known to be a parasite or predator or pathogen of a pest, or are an otherwise beneficial organism.
- Q—Pests of the agricultural industry or environment that score high and that are not known to occur or where their California distribution is unknown and that are otherwise suspected of being economically harmful to the agricultural industry or the environment and that may not be completely identified or for which there is inadequate available scientific information.

California Invasive Plant Council Ratings

On a statewide scale, Cal-IPC maintains an inventory of invasive plants in California that are of regional or statewide concern and are known management problems. The Cal-IPC inventory focuses on invasive plant species that tend to be problems in wildlands with an ecological effect. A summary of the Cal-IPC ratings is shown below:

- High—These species have severe ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal and establishment. Most are widely distributed ecologically.
- Moderate—These species have substantial and apparent—but generally not severe—ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal, though establishment is generally dependent upon ecological disturbance. Ecological amplitude and distribution may range from limited to widespread.
- Limited—These species are invasive, but their ecological impacts are minor on a statewide level or there was not enough information to justify a higher score. Their reproductive biology and other attributes result in low to moderate rates of invasiveness. Ecological amplitude and distribution are generally limited, but these species may be locally persistent and problematic.

Humboldt Weed Management Area Ratings

The Humboldt County and Del Norte County WMAs worked together for years to prioritize weed management regionally. The following are management priorities relevant to weeds found within Humboldt and Del Norte Counties, current as of June 2010.

- **Red Alert**—These species are present in the WMAs and have very few populations and/or very limited distribution, such that complete eradication is possible, even if it takes repeated eradication efforts. The potential for spread and agronomic, economic, or wildland impact is severe. This is an early detection, rapid response action category. These localized and satellite species, once located, will be actively managed.
- **High Priority**—These species are present in the WMAs and are under ongoing, active management. They are affecting agronomic, economic, or wildland resources. Combined efforts between members of the WMA can significantly work towards complete eradication or containment of these species. Efforts include direct weed control, public education and outreach, prevention, mapping, and others.
- **Moderate Priority**—These species are known to be invasive in various environments and have known ecological impacts. Treatment of these species occurs, often packaged as part of an overall weed abatement program for a given project area.
- **Early Detect/Eradicate To Be Conservative**—These species represent an early detection, rapid response category for more modestly invasive species with subtle to moderately projected ecological impacts. They are treated with an eradication response to be on the conservative side of invasive species management.
- **Watch List**—These species are not present in the WMAs but may occur in adjacent WMAs and have known vector processes where the risk of introduction is high and the potential for invasiveness is high, such that once detected, they would become red alert species. This category includes introduced species that have been observed in Humboldt County in the past and were completely eradicated, but could potentially reappear, such as salt-water cord grass (*Spartina alterniflora*).
- **Monitor/Research**—The group is uncertain where to rank these species; they seem like they could be a problem and are showing signs and patterns of invasiveness but are not as high a priority as other species. For now, the best course of action taken for these species is to observe, map, or set up study plots to quantify its spread or patterns of invasiveness. Species in this group are also subject to current research, including experimental treatment plots.

Magnitude of Targeted Management

Approximately 236 species of invasive, nonnative plants are mapped within the planning area. Of those, approximately 187 are in surveillance, containment, or eradication categories; 171 are known to occur on BLM-administered land; and 77 of these are currently subject to active management for control and/or eradication. Overall, the planning area contains a very large number of invasive species with complex distributions, due to the highly diverse ecosystems and geographical features in the planning area.

Distribution of Invasive Plants

The distribution of invasive, nonnative plants in a given region is a moving target wherein plants are continually expanding or contracting in reaction to management or natural influences. Deliberate and

unintended introductions, climate, fires and fire management, vulnerability of a particular niche within an ecosystem, and land uses interact together to influence distribution changes. For example, French broom (*Genista monspessulana*) is an invasive shrub that colonizes disturbed roadsides and adjacent grasslands. French broom is often introduced through road maintenance activities associated with the use of gravel from infested borrow sites. Once established, French broom spreads to other vulnerable grasslands, aided by bird dissemination.

Another example is stinkwort (*Dittrichia graveolens*), an invasive forb that is rapidly expanding its range in California (Brownsey et al. 2013). Stinkwort is found in disturbed areas and thrives in burned areas. Fire, as both a natural phenomenon and a management tool, can lead to the increased distribution of invasive plants such as stinkwort. Coordination between the BLM, applicable counties, the California Department of Forestry (CDF) and Fire Protection (CAL FIRE), and the California Department of Transportation (Caltrans) can prevent future infestations and limit indirect introductions to uninfected habitats.

Prevention Measures

Prevention measures include coordinated WMA efforts to conduct public outreach such as participating in special events, development and distribution of publications, tool loan programs, theater ads, and regional nursery education.

Internally, the BLM includes standard stipulations for all projects or applicable ROWs, for example, to minimize risk of new invasive, nonnative plant introductions or spread. Some examples of stipulations include the following:

- All heavy equipment and vehicles contracted to conduct project activities should be inspected and cleaned of any reproductive plant parts prior to entry on BLM-administered lands.
- Any fill material to be imported into any project site should be inspected and determined to be invasive, nonnative weed free prior to import.
- Roadside trees should be maintained to the maximum extent practicable to provide sufficient shade to limit opportunity for infestation by sun-loving weeds.
- Should contractor recognize an invasive, nonnative weed infestation in or around project site, he/she should report it immediately to a BLM representative.

Invasive Species Control

In treating infestations, the BLM uses an integrated management approach in the planning area that employs the method or combination of methods that will have the greatest positive effect with the minimum negative environmental impact. The BLM uses manual, biological, mechanical, and chemical control methods. Early detection and rapid manual response is most commonly applied, with an integrated use of mechanical, biological, and chemical control where the successful eradication of a target weed requires additional methods.

The BLM currently collaborates with partners through WMAs, RCDs, watershed councils, county department of agriculture offices, and cooperative range improvement agreements with grazing lessees, and through assistance agreements and contracts to control invasive, nonnative plants. Volunteers also play a significant role in helping land managers remove weeds from public lands. Weed management projects, including surveying for new infestations and treatments, are often a big focus of post-fire response.

Examples of current integrated management plans applicable to the planning area include the Japanese Knotweed Control Protocol for the Arcata FO (USDI BLM 2006) and the Integrated Weed Management Plan for the Battle Creek Watershed Manton, California 2012–2016 (Tehama County RCD 2013).

Trends

The introduction and spread of invasive, nonnative plants continue to be affected by infrastructure maintenance, drought stress upon native plant communities, increasing recreation use, wildfire, and forestry and grazing operations. In many areas, established weed populations continue to expand, and new species are appearing in areas surrounding the planning area.

Vectors of invasive plant spread are often associated with natural or human-made disturbances, such as along waterways, roads, ROWs, and in areas of ground disturbance associated with wildfire, fire-suppression activities, or overused rangeland areas. In some locations within the planning area, invasive, nonnative species have spread out from historically disturbed areas to form a major portion of the vegetation community.

A major driver of this trend is the increase in large, high-severity fires within the region. Approximately 15 percent of the land within the planning area burned between 2016 and 2020, creating areas of disturbance with conditions that favor the increased spread of invasive, nonnative plants. Fire management techniques such as prescribed burns, fuel breaks, and mechanical harvesting can create ideal conditions for invasion of nonnative plants by increasing disturbance areas and providing a vector for invasive plant spread (Brooks and Lusk 2008).

However, some regional eradication efforts are underway, such as the Humboldt WMA's effort to remove populations of six species of invasive plants at a variety of sites in and near riparian areas in Humboldt and Del Norte Counties. Key watersheds to be protected include the Eel River, the Klamath River, and the Smith River. This strategic regional effort aims to eradicate all populations of six listed invasive, nonnative weeds, including three species of knotweed. Many local control successes in specific management areas have been achieved on BLM-administered lands through initial treatment and vigilant, annual follow-up and retreatment of known sites, recorded in GIS and NISIMS, for any new plants that may have emerged from remnant root systems or persistent seed banks.

Prevention measures would continue to be incorporated into all NEPA documents, contracts, ROWs, and leases.

Forecast

Additional legislation may continue to be enacted in order to limit the introduction and spread of invasive species. Several new laws, executive orders, and initiatives have resulted in increasing weed awareness and the impacts associated with noxious/invasive species. Cooperative efforts among local, state, and federal entities will continue to be strengthened. Given the potential for the continued spread of invasive species, particularly with plant community stress related to climate change, fires, and increased emphasis on prescribed burns and fuels treatment, it is critical to incorporate preventative measures and best management practices (BMPs) into conditions of approval for any surface-disturbing activity.

Additional data and inventory needs are ongoing to identify areas susceptible to encroachment by invasive plants. Treatment costs will likely continue to rise; therefore, focus on early detection and rapid response should be a priority. Control and containment along more easily accessible areas (e.g., roads, campgrounds, and facilities) should occur first.

Cal-IPC has modeled 32 invasive, nonnative species for range extension or reduction relative to baseline and projected climate models available in CalWeedMapper. Of the modeled species, 21 have been forecast for expansion with current climate trends, and 11 have been forecast for distribution reductions. Variables affecting future invasive weed populations and spread will be unique to each species, but it appears from the 32 modeled species that distribution changes should be expected based on climate trends alone. Careful attention should be paid to modeling projections for known invasive species with high negative impacts, as projections could influence strategic management prioritization and decision-making.

CalWeedMapper also models suitable range based on climate using Maxent modeling software that relies on current species occurrence data in California and climate data for California. Projections of future suitable range use an ensemble of 17 global circulation models for the mid-twenty-first century with climate change scenarios from the International Panel on Climate Change (IPCC 2007) and climate projections from PRISM, (a Parameter-elevation Regressions on Independent Slopes Model developed in the 1990's (Daly 2013)). Models were based on temperature and precipitation variables from Bioclim, a climate trend dataset available for ecological modeling.

CalWeedMapper displays projected suitable range in 2010, projected suitable range in 2050, and the change (expansion or reduction) in range between those dates. Suitable range for 2050 shows areas where at least four of the 17 global circulation models agreed. This is denoted in **Table 2-23** with a "+" for expansion and a "-" for reduction for species where range data were available. Cal-IPC's projections are based on climate only and do not consider factors such as soil, vegetation communities, and methods of spread.

Key Features

When identifying management priorities based on probability of success, appropriate spatial scales must be considered. On a statewide scale, the CDFA and CAL-IPC maintain an inventory of invasive plants in California (Cal-IPC 2006 and updates). Both lists focus on species of statewide concern that are known management problems with different emphases on agricultural lands or wild lands. Also, these lists are not all inclusive, and some nonnative plants have proven invasive at a local or ecosystem-defined level that may only be known at the FO or WMA level. Naturalized, nonnative plants may require active management if they are found to be locally invading an ecological niche for which they are not naturalized, and their invasion is having a negative impact. For this reason, local FO and WMA priorities are considered in the strategic approach to managing invasive, nonnative weeds.

2.2.9 Paleontology

Paleontological resources constitute a fragile and nonrenewable scientific record of the history of life on Earth. BLM policy is to manage paleontological resources for scientific, educational, and recreational values and to protect or mitigate these resources from adverse impacts. To accomplish this goal, paleontological resources must be professionally identified and evaluated, and paleontological data should be considered as early as possible in the decision-making process.

Paleontological resources are managed according to BLM 8270 Handbook (USDI BLM 1998a) and Instructional Memoranda 2009-011 (USDI BLM 2009a) and 2016-124 (USDI BLM 2016c), the latter of which is the most recent update to the Potential Fossil Yield Classification (PFYC) system. This system establishes a ranking of paleontological potential that can be assigned to geologic units and sets management and mitigation recommendations for each ranking.

Paleontological resources are known to occur within the planning area. Locating, evaluating, and classifying paleontological resources, and development of management strategies must be based upon the best science available (USDI BLM Manual H-8270-1.A.1). In 2017, the Inventory of Existing Data for Paleontological Resources and Potential Fossil Yield Classification GIS Database (Shapiro 2017) was completed to inform the Northwest California Integrated Resource Management Plan. This inventory report documents known fossil localities in the northwest California area and assigns BLM PFYC rankings to all geologic units mapped at the 1:100,000 scale. This includes GIS data for these assessments of sensitivity as well as a BLM management layer. In addition, this report outlines key areas of research needs, areas that may require enhanced protection, and those that may be appropriate for public collecting.

Indicators

Resource condition is assessed by field observations, paleontological reports, commercial site reports, and project review. The primary resource indicator is a loss of fossil resources or those characteristics that make a fossil locality or feature important for further scientific investigation. Natural weathering, decay, erosion, improper collection, and vandalism can have a permanent adverse effect on those characteristics that are important to the analysis of the paleontological resources and convey their scientific importance.

Current Conditions

There has been no permitted fossil research since previous planning efforts in the early 1990s. There are occasional inquiries in the offices regarding locations where fossil hunting is permitted. Invertebrate or plant fossil collecting, which is allowed without a permit in limited quantities, occurs infrequently on BLM-administered lands. Neither the Redding nor Arcata FOs has conducted paleontological studies on any internal projects except on a very limited basis where sedimentary beds would be exposed through ground disturbance. Such observations are conducted by staff that is generally not formally trained in paleontology, usually archaeologists and geologists. The condition of fossil-bearing beds since previous planning efforts has not been evaluated. However, by its very nature erosion can sometimes be beneficial in exposing hidden fossils.

Trends

The desired condition of paleontological resources on federal lands is that they remain stabilized and protected from adverse effects due to natural and human processes. The current management trend for the resources in the Redding and Arcata FOs is toward continued scientific research; additional monitoring, protection, and interpretive signage; and increased opportunities for environmental education and interpretive use.

Recreational use is expected to gradually increase as population pressures increase. The discovery of new fossil-bearing locales would increase use and the potential for damage. In coastal areas, increasing coastal erosion due to sea level rise, denudation from increased fire intensity and frequency, and other

effects of climate change may increase erosion; this could result in exposure and subsequent loss of paleontological deposits. Distribution of the paleontological overview to select parties and institutions may stimulate research and educational opportunities.

Forecast

Based on current management practices, improved access to public lands, increased urbanization, increased recreational use, and limited law enforcement presence, the potential for paleontological resources being illegally removed or damaged is expected to increase. Consequently, the forecast is currently for a continuing downward trend in resource condition.

On the other hand, the completion of the inventory report (Shapiro 2017) that provides an overview of paleontological resources within the planning area may stimulate scientific research and educational outreach. This professionally prepared review of paleontological resources in the planning area also provides information on existing resources to guide management decisions. This allows for targeted management for protection, evaluation, and interpretation.

Key Features

Paleontological deposits are currently known in Paleozoic and younger deposits across the planning area. In the inventory report, Shapiro (2017) identified five key areas of fossil-bearing deposits: Paleozoic-Triassic Island Arc Deposits, Coast Range Accretionary Wedge, Cretaceous Forearc Deep and Shallow Deposits, Cenozoic Marine Deposits, and Cenozoic Terrestrial Deposits. No permitted fossil collecting by scientific institutions has been conducted in the planning area. It is unknown if limited personal, informal fossil collecting is being conducted. Provided that the fossils collected are common invertebrates or plants in limited quantities, such collection is legal. Collecting of vertebrates or rare invertebrates or plants, however, is not allowed without a permit.

2.2.10 Soils

Soils are a living system consisting of nutrient and hydrologic cycles, energy flows, and other ecological processes. The distribution and occurrence of soils depends on a number of factors including the interaction of relief (slope and slope length), soil parent material (geology), living organisms, climate, and time. These variables help create complex and diverse soils and influence land use and management. Great differences in soil properties can be observed within short distances. Soils in the planning area provide the foundation for habitat (e.g., vegetation or wildlife) and for resource uses (e.g., livestock grazing or recreation).

Risks associated with soil stability and erosion potential depend on the soil's properties, climate, and slope, which can vary greatly throughout the planning area. Soil properties drive decision-making for optimal siting of infrastructure, such as roads, trails, and facilities. Surface land uses can compact or displace topsoil and damage or remove vegetation or other ground cover, which may result in accelerated erosion and loss of soil productivity.

Indicators

Indicators of soil resource condition and quality can be categorized into four general groups: visual, physical, chemical, and biological (USDA NRCS 2015).

- **Visual indicators** are changes in soil characteristics that are visible to the human eye, including exposure of subsoil, change in soil color, ponding, runoff, plant response, weed species, blowing soil, and soil erosion (gullies, headcuts) and deposition (accretion).
- **Physical indicators** refer to the arrangement of solid particles and soil pores. Examples include topsoil depth, bulk density (porosity versus compaction), and aggregate stability. Physical indicators primarily reflect limitations to root growth, seedling emergence or the movement of water (infiltration, recharge, lateral flow, discharge) within the soil profile.
- **Chemical indicators** include measurements of pH, salinity, alkalinity, organic matter, cation-exchange capacity, nutrient cycling, and the concentrations of elements that are macronutrients (nitrogen, phosphorus, calcium), micronutrients (e.g., boron), and potential contaminants. Soil chemistry affects soil-plant relations, water quality, buffering capacities, availability of nutrients and water to plants and other organisms, and mobility of contaminants.
- **Biological indicators** include measurements of micro- and macro-organisms, their activity, or byproducts such as mycorrhizal fungi and enzymes.

Current Conditions

Data sources for the planning area soils include soil survey data and regional assessments (e.g., Natural Resources Conservation Service [NRCS] regional soil mapping, although gaps remain in this dataset in areas such as the King Range NCA), rangeland health assessments, field observations, vegetation monitoring, grazing allotment evaluations, and baseline data generated from previous NEPA analyses. Soils in approximately 87 percent of the Redding FO and 62 percent of the Arcata FO are rated as severe for erosion potential. This indicates that significant, regular erosion is expected, forest roads and trails require frequent maintenance, and erosion control measures are frequently required to reduce sedimentation in nearby streams and waterbodies.

In general, soils developed on highly weathered rock of the Coast Ranges are prone to high rates of erosion, particularly when the soils are bare (void of vegetation) and/or on steep slopes. Certain circumstances heighten the risk for soil erosion (for example, in areas underlain by decomposed granitic rocks in the GVC watershed in the Trinity River drainage). Soils developed from the weathering of ultramafic rock, such as serpentine soils or outcrops, are known for their high concentrations of heavy metals, particularly chromium and nickel (Gough et al. 1989; Morrison et al. 2009; Morrison et al. 2015). Serpentine soils are also known for their abundance of magnesium and iron and their deficiency in macronutrients such as calcium, nitrogen, phosphorus, potassium, and sulfur. These harsh conditions can pose a public health threat from weathered asbestos if it becomes airborne and breathed by humans. These soils are also toxic to most plants, but also promote unique vegetation communities adapted specifically to these environments.

Past human activities such as logging, mining, and smelting have resulted in substantial impacts related to soil erosion, the effects of which are still apparent today. In the late 1800s through 1919, copper mining and smelting operations emitted toxic sulfur dioxide fumes that devastated agricultural lands throughout Shasta County and wiped out over 180,000 acres of forest. Areas devoid of vegetation were prone to wildfires and also experienced significant erosion issues that continued through the 1960s (CalFire 2008). Despite decades of replanting efforts and erosion control programs, erosion from this area continues to affect waterways (BLM 2005b).

Over a third of the Redding FO has experienced severe wildfires in recent years. These fires have likely changed the physical and chemical properties of the underlying soils. Loss of surface vegetation and subsurface root systems exposes sediments to wind and water erosion and increases vulnerability to invasive plant species, limiting the regrowth of healthy native vegetation. Fires can cause soil particles to become coated with hydrophobic organic compounds, which decreases the soil's ability to absorb water, causing increased runoff and flooding. Loss of soil carbon and nitrogen in the topsoil further affects water retention and soil stability, which can be exacerbated over time if vegetation regrowth is not sufficient to reintroduce these nutrients into the soil matrix. Fires also kill many of the microbiota that are important to soil function.

These physical and chemical changes create instability in the soil, which could lead to erosion, debris flows, landslides, and other geologic hazards, especially on steep slopes; however, in the absence of additional disturbance, soils are generally expected to rebound and recover naturally over time. Post-fire recovery efforts, therefore, focus on emergency slope stabilization, prevention of sedimentation in waterways, repair of drainage features along roadways, and revegetation. Emergency stabilization and rehabilitation are still occurring in burned areas throughout the planning area, in accordance with the applicable burned area emergency response (BAER) and burned area rehabilitation (BAR) plans.

Trends

Trends in soil conditions vary depending on the dominant land use. In many areas, particularly lands acquired by the BLM in the last few decades, legacy impacts of past timber harvest are gradually diminishing, although these former practices still contribute to high-severity wildfires that affect soil quality. Many roads in the planning area are experiencing increasing vehicle use, with consequent strain on the road and associated sedimentation impacts. Grazing and rangeland areas remain stable or are improving in soil conditions. Construction of rangeland and grazing improvements has slowed in recent years.

Forecast

Future localized impacts on soil resources may occur as a result of authorized or unauthorized OHV use, development and associated use of recreation facilities such as trails or campgrounds, timber harvesting, development and maintenance of ROWs, catastrophic wildfire, wildfire suppression activities, the use of prescribed fire to reduce fire risk, continued livestock grazing on existing livestock allotments, and the development of mineral resources. All of these activities have the potential to create both short- and long-term impacts on soils.

Continued use of BMPs for stormwater management, erosion prevention, wildfire prevention, and post-fire response will increase vegetative ground cover, reduce soil damage and loss, reduce sedimentation to streams and rivers, and maintain or improve soil condition and fertility. These BMPs are derived from several internal and external guidance documents and regulations, including BLM handbooks, and the nonpoint source pollution permitting program under the State Water Resources Control Board.

The cumulative amount of surface disturbance or vegetation manipulation that can be supported by soils in the planning area has not been determined. However, it is widely recognized that there is a limit to the amount of disturbance that can occur in any watershed without producing significant impacts on soil conditions. Continued soil monitoring strategies, such as rangeland health assessments and soil burn

severity mapping, are needed to quantify and evaluate direct and cumulative impacts on soil resources so that the level of acceptable soil disturbance can be accurately determined.

Climate change will play a role in future soil conditions. The effects of climate change on the soil resource may be subtle and gradual. Detection of these changes would require longer term monitoring targeted at specific soils supporting unique features (e.g., rare vegetation communities) or providing key ecosystem functions (e.g., erosion control, carbon sequestration). In addition, climate change effects on soil resources may be synergistic with other ecosystem changes, such as changes in microbial communities, vegetation types, and rainfall patterns. Land uses, particularly those with surface disturbance, when combined with warmer temperatures and alterations in the hydrologic cycle and the resulting shifts in vegetative communities could result in an amplification of impacts on the soil resource, such as increasing soil salinity, altering carbon cycling, and changes in soil respiration.

Key Features

Key features for soil resources include sensitive soils that have severe erosion potential such as decomposed granitics, soils on steep slopes, or areas with high soil burn severity. Soils developed from the weathering of ultramafic rock throughout the planning area, such as serpentine soils, support unique plant communities with many rare species present.

Certain high-quality farmlands are protected under the Farmland Protection Policy Act. For the purpose of the Farmland Protection Policy Act, farmland includes prime farmland, unique farmland, and land of statewide or local importance.

2.2.11 Special Status Plants

The planning area is geographically and ecologically diverse, spanning portions of seven ecoregions. A total of 202 potential special status species occur within the seven ecoregions of the planning area. Special status plant species are those that have the following characteristics:

- They have been proposed for listing under provisions of the ESA or are officially listed as threatened or endangered (16 USC 1531–1534).
- They are candidates for listing as threatened or endangered under the provisions of the ESA and are managed as BLM sensitive species.
- They have been delisted for a 5-year period and are managed as BLM sensitive species.
- They have been designated by the BLM California State Director (State Director) as sensitive. The State Director has conferred sensitive status on California State endangered, threatened, and rare species; on species with a California Rare Plant Rank of 1B (plants rare, threatened, and endangered in California and elsewhere) on the Special Vascular Plants, Bryophytes, and Lichens List maintained by the CDFW that are on BLM-administered lands or affected by BLM actions and that are not already special status plants by virtue of being federally listed or proposed (unless specifically excluded by the State Director on a case-by-case basis); and on certain other plants the State Director believes meet the definition of Sensitive.

Federally listed and BLM sensitive vascular and non-vascular plant species presently occurring on BLM-administered land, by EPA level III ecoregion, are shown in **Table 2-24**. Some BLM sensitive plants occur in more than one ecoregion. Currently, there are four federally listed plant species (**Table 2-25**) and 44 BLM sensitive plant species (**Table 2-26**) known to occur on BLM-administered land within the planning area. Of these 44 species, nine occur in areas that experienced wildfire events in the last 5 years.

In general, the BLM contributes to the conservation of special status plants as evidenced by the relative percentage of BLM sensitive plants known on BLM-administered land compared to the potential number of special status plants known to occur in a given ecoregion within the planning area. Based on numbers alone, **Table 2-24** displays the important role that the BLM plays in the conservation of an array of special status plants, particularly in the Central California Foothills/Coastal Mountains, Central Valley, and Sierra Nevada ecoregions. However, it is well known that when looking at individual species distributions, the importance of the BLM’s role in conservation will certainly be unique to a given distribution and prioritized at a more detailed level of planning.

Table 2-24. Federally Listed and BLM Sensitive Plant Species* within the NCIP Planning Area by Level III EPA Ecoregion

Species	Total Number of Species	Coast Range	Klamath Mountains/CA High North Coast Range	Central CA Foothills/Coastal Mountains	Central California Valley	East Cascades Slopes and Foothills	Cascades	Sierra Nevada
Federally listed on BLM-administered lands	5	3	1	1	1	1	1	0
BLM sensitive species* occurring on BLM-administered lands	88	14	42	31	2	9	7	8
Total number of potential special status species* by ecoregion within the planning area	202	94	226	53	34	26	105	24
Percentage of special status plants* on BLM-administered land relative to total potential in the planning area by ecoregion	26%	18%	19%	60%	9%	38%	8%	33%

Source: Data derived from the intersection of the California Natural Diversity Database (CNDDDB) with the EPA level III ecoregion layer and the BLM-administered lands layer.

*BLM sensitive plant species combine federally and state-designated species and California Native Plant Society IB-ranked species. (Note: a species can occur in more than one ecoregion.)

Table 2-25. Federally Listed Plant Species in the NCIP Planning Area Known to Occur on BLM-administered Land

Species	Federal Designations	Total Acres of Occupied Habitat/Total Population/Total Occurrences in CNDDB Database	Acres of Occupied Habitat/occurrences on BLM-Administered Land	Acres Recently Burned on BLM-Administered Land	USFWS Recovery Plan	Management Area(s)
Beach layia <i>Layia carnosa</i> (USFWS 2011a)	Endangered	456 acres	152 acres	0	Recovery Plan for Seven Coastal Plants and the Myrtle's Silverspot Butterfly	Samoa Peninsula
McDonald's rockcress <i>Arabis mcdonaldiana</i> (USFWS 2013)	Endangered	Approximately 100 acres	80 acres	0	McDonald's Rockcress Recovery Plan	Red Mountain
Menzies' wallflower <i>Erysimum menziesii</i> (USFWS 2008)	Endangered	~50,000 plants	~10,000 plants	0	Recovery Plan for Seven Coastal Plants and the Myrtle's Silverspot Butterfly	Samoa Peninsula
Slender Orcutt grass <i>Orcuttia tenuis</i> (USFWS 2005, 2009b)	Threatened	108 occurrences	15 occurrences	0	Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon	Ishi Sacramento River Shasta

Indicators

Habitat loss, competition from invasive, nonnative species, predation, disease, climate change, and other factors are responsible for species decline and imperilment. Habitat loss and modification due to human activity are the greatest threats to ecosystems, particularly for those species adapted to specific ecological niches. BLM practices are intended to sustain and promote species that are legally protected and prevent those species that are not yet legally protected from needing such protection.

Indicators that special status plants and their habitats are being properly managed, maintained, or enhanced include the following:

- Populations of endemic and protected species, including population levels and density, distribution and range, age class structure, and genetic diversity. Population and biological data for several special status species are tracked by the BLM, the USFWS, the CDFW, as well as the CNPS and the California Lichen Society.
- Suitable habitat for endemic or protected species.

Current Conditions

BLM Sensitive Species List Summaries

The BLM recognizes species as BLM sensitive if they are ranked by the CNPS as List IB or IA. Other species that don't meet these criteria may be included as well if mandated by the state or other entities. A summary of CNPS rankings is shown below:

- 1A—Plants presumed extirpated in California and either rare or extinct elsewhere
- 1B—Plants rare, threatened, or endangered in California and elsewhere
- 2A—Plants presumed extirpated in California but common elsewhere
- 2B—Plants rare, threatened, or endangered in California, but more common elsewhere
- 3—Plants about which more information is needed - a review list
- 4—Plants of limited distribution - a watch list

The CNPS classification is further refined by the following threat rank classification:

- 0.1—Seriously threatened in California (over 80 percent of occurrences threatened/high degree and immediacy of threat)
- 0.2—Moderately threatened in California (20–80 percent of occurrences threatened/moderate degree and immediacy of threat)
- 0.3—Not very threatened in California (less than 20 percent of occurrences threatened/low degree and immediacy of threat or no current threats known)

Natural Heritage Program Ranking System

The international network of Natural Heritage Programs employs a standardized ranking system to denote global (G) (range-wide) and state (S) status (NatureServe 2015). Species are assigned numeric ranks ranging from 1 (highest risk, greatest concern) to 5 (demonstrably secure), reflecting the relative degree of risk to the species' viability, based upon available information. Subspecies, plant varieties, and other designations below the level of the species may be assigned global T-ranks. A T-rank is appended

to the G-rank for the included species. Most taxa given such ranks have trinomial (three-word) rather than binomial (two-word) scientific names. Global and state heritage information provides additional context as to how narrowly or broadly rare a given species is when compared to CNPS rankings.

- G1 S1: Critically Imperiled—At very high risk of extinction due to extreme rarity (often 5 or fewer populations), very steep declines, or other factors
- G2 S2: Imperiled—At high risk of extinction due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors
- G3 S3: Vulnerable—At moderate risk of extinction due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors
- G4 S4: Apparently Secure—Uncommon but not rare; some cause for long-term concern due to declines or other factors
- G5 S5: Secure—Common; widespread and abundant

Federally Listed Species

Four federally listed plant species currently occur in the planning area (**Table 2-25**). The USFWS has designated critical habitat for slender Orcutt grass (*Orcuttia tenuis*), and there are completed recovery plans for all listed species in the planning area. The species are summarized in **Table 2-25** and described briefly.

McDonald's rockcress

McDonald's rockcress (*Arabis macdonaldiana*) is a perennial herbaceous member of the Brassicaceae (mustard family) and was the first plant species to be listed as endangered under the ESA in 1978. McDonald's rockcress is characterized by lavender or crimson-purple flowers and a deep green rosette of broadly spoon-shaped leaves from which short flowering stems arise. It is particularly striking when observed amidst the often barren, steep, serpentine rocky slopes on which it occurs. The species is distinguished from other rockcress species by its less than 1 inch long, toothed, generally hairless leaves at the base of the plant.

McDonald's rockcress occurs in soils derived from ultramafic parent material, containing high levels of heavy metals and low levels of nutrients. Its habitat ranges from barren gravel slopes to open scrub and pine woodlands. Approximately 85 percent of its distribution occurs within the BLM Red Mountain ACEC and wilderness area within the Red Mountain Management Area. Recent monitoring data compared with baseline data show the population beginning to decline, although no single cause has been attributed to it. Current threats to the species are lack of fire, climate change, genetic impoverishment, and a remote, yet persistent, threat of mining. Since the time of listing, the threat from mining has been reduced, but the threat is not entirely eliminated based on the expiration or forfeiture of several previously valid mining claims in the Red Mountain Wilderness (USFWS 2019c).



McDonald's rockcress (*Arabis macdonaldiana*)

Menzies' wallflower

Menzies' wallflower (*Erysimum menziesii*), one of several species of wallflower growing along the coast of California, was federally listed endangered under ESA in 1992. Menzies' wallflower is a low, succulent, short-lived perennial member of the mustard family. Like other wallflowers in the genus, Menzies' wallflower produces dense clusters of bright yellow flowers in the winter and early spring (February to April). The fruits mature by mid-June, but the seeds remain attached to the fruit walls after dehiscence. The seeds disperse over a long period. The majority of seeds fall directly below the maternal plant, resulting in this plant's patchy distribution. Menzies' wallflower, as it is currently taxonomically accepted (taxonomic genetic work is ongoing to formally redefine the species complex) is known from 16 or more sites, scattered within four dune systems in northern and central California: Humboldt Bay in Humboldt County, Ten Mile River in Mendocino County, the Marina Dunes at Monterey Bay, and the Monterey Peninsula in Monterey County. Menzies' wallflower occurs on BLM-administered lands in the planning area within the Samoa Peninsula and Scattered Tracts management areas within the Coast Range ecoregion.



Menzies' wallflower (*Erysimum menziesii*)

The Menzies' wallflower occurs in semi-stable dunes, usually in low native vegetation known as "dune mat." The total population of wallflowers around Humboldt Bay was estimated at over 50,000 plants in 2006 (with plants on BLM-administered lands accounting for approximately 10,000 plants), representing

a substantial increase since initial estimates of about 20,000 in 1989. Much of the increase is correlated with extensive restoration work and invasive plant removal, a principal threat, conducted since 1988. In other parts of its range, Menzies' wallflower remains threatened by invasive species encroachment, deer predation, recreational impacts, and sand mining. Overall, the risk to the Menzies' wallflower around Humboldt Bay appears to have decreased, while the risk to the other populations has stayed the same or increased.

Beach layia

Beach layia (*Layia carnosa*) is an herbaceous, pioneering, annual member of the sunflower family (Asteraceae) that was federally listed as endangered in 1992 and proposed to be reclassified as threatened in 2020. Beach layia inhabits coastal dunes and scrub habitats below 60 meters in elevation and blooms between March and June. Beach layia is believed to have been extirpated from San Francisco County and is now only known to occur in Monterey, Marin, Humboldt, and Santa Barbara Counties.

Within the planning area, this species occupies approximately 456 acres, with 152 occupied acres on BLM-administered lands (USFWS 2011a). This species is typically restricted to dune mat and northern foredune grassland plant communities, but also occurs in lower densities along margins of lupine scrub, herbaceous hollows, trails, and open areas with moving sand. Threats to beach layia include stabilization of mobile, sandy substrates as a result of encroachment of invasive, nonnative vegetation; changing climate conditions; erosion and disturbance caused by pedestrian, equestrian, OHV, and grazing activity; and vertical land movement leading to shoreline erosion (USFWS 2018). Beach layia occurs on BLM-administered lands in the planning area within the Samoa Peninsula and Scattered Tracts Management Areas within the Coast Range ecoregion.



Beach layia (*Layia carnosa*)

Slender Orcutt grass

Slender Orcutt grass (*Orcuttia tenuis*) is an annual member of the grass family (Poaceae) that was federally listed as threatened in 1997. Slender Orcutt grass has narrow stems ranging from 5–20 centimeters in height. The sparsely hairy plant grows as a single stem or as a small multi-stemmed tuft. The leaves are 1.5–2 millimeters wide. The inflorescence usually comprises more than half of the plant's height. Identifying features include sticky, glandular spikes and toothed lemmas.

Slender Orcutt grass occurs in naturally occurring vernal pools associated with volcanic deposits. However, the species has been known to occupy other natural or artificial seasonal wetlands. The species is known to occur in a wide elevation range (27–1,756 meters) and over a large variety of

vegetation types ranging from grassland and oak woodland to mixed conifer forest, silver sagebrush flats, and sedge meadows. Currently, there are 104 occurrences documented in the CNDDDB within the planning area and 15 (13.8 percent) of those occur on BLM-administered land.

In 2005, the USFWS created critical habitat designations for slender Orcutt grass. In the entire range of the species, 94,692 acres were designated as critical habitat. A total of 67,400 acres (71.2 percent) occurs within the planning area. The BLM administers 15,800 acres of critical habitat (16.7 percent of critical habitat total) in the Sacramento River and Ishi Management Areas within the Central California Foothills and Coastal Mountains' ecoregion.

Threats to vernal pool ecosystems include habitat loss and fragmentation due to urban development, loss of habitat due to agriculture conversion, altered hydrology, invasion by nonnative weeds, under- or overgrazing, and inadequate regulatory mechanisms. Additional threats to slender Orcutt grass include off-road vehicle disturbance, especially around the Redding area.



Slender Orcutt grass (*Orcuttia tenuis*)

BLM Sensitive Vascular Plant Species

There are 44 known BLM sensitive designated vascular plant species (**Table 2-26**) in the planning area (12 in the Arcata FO and 32 in the Redding FO). There are 68 suspected BLM sensitive vascular plant species in the planning area with 17 in the Arcata FO and 51 in the Redding FO (**Table 2-27**). Suspected species are those that could occur on BLM-administered land due to the presence of appropriate habitat and proximity to known populations. The species list was updated in January 2020.

NWFP Survey and Manage and NFWP-related BLM Sensitive Non-vascular and Vascular Plant Species

In 1994, the BLM and the Forest Service adopted standards and guidelines for the management of habitat for late-successional and old-growth forest related species within the range of the NSO, commonly known as the NWFP. As part of this plan, mitigation measures were included for management of known sites, site-specific pre-habitat disturbing surveys, and/or landscape scale surveys for about 400 rare and/or isolated species. Currently, the BLM complies with the ROD and Standards and Guidelines for Amendments to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines (USDA and USDI 2001), incorporating 2001, 2002, and 2003 Annual Species Review (ASR) updates (USDI BLM 2016d).

Table 2-26. BLM Sensitive Vascular Plant Species Known on BLM-Administered Land in the NCIP Planning Area

Common Name	Scientific Name	Global Rank/State Rank	CNPS Rank	Arcata/Redding	Current Management Unit
pink sand-verbena	<i>Abronia umbellata</i> var. <i>breviflora</i>	G4G5T2/S2	1B.1	Arcata	Samoa Peninsula
coastal marsh milk-vetch	<i>Astragalus pycnostachyus</i> var. <i>pycnostachyus</i>	G2T2/S2	1B.2	Arcata	Scattered tracts
three-fingered morning-glory	<i>Calystegia collina</i> ssp. <i>tridactylosa</i>	G4T1/S1	1B.2	Arcata	Covelo vicinity
Humboldt Bay owl's-clover	<i>Castilleja ambigua</i> var. <i>humboldtensis</i>	G4T2/S2	1B.2	Arcata	Scattered tracts
Pt. Reyes birds-beak	<i>Chloropyron maritimum</i> ssp. <i>Palustre</i>	G4T2/S2	1B.2	Arcata	Scattered tracts
Red Mountain buckwheat	<i>Eriogonum kelloggii</i>	G2/S2	1B.2	Arcata	Red Mountain
Mendocino gentian	<i>Gentiana setigera</i>	G2/S1	1B.2	Arcata	Red Mountain
Pacific gilia	<i>Gilia capitata</i> ssp. <i>Pacifica</i>	G5T3/S2	1B.2	Arcata	Lacks Creek
dark-eyed gilia	<i>Gilia millefoliata</i>	G2/S2	1B.2	Arcata	Samoa Peninsula
short-leaved evax	<i>Hesper-evax sparsiflora</i> ssp. <i>brevifolia</i>	G4T2T3/S2S3	1B.2	Arcata	Samoa Peninsula
Red Mountain stonecrop	<i>Sedum laxum</i> ssp. <i>eastwoodiae</i>	G5T2/S2	1B.2	Arcata	Red Mountain
Red Mountain catchfly	<i>Silene campanulata</i> ssp. <i>campanulata</i>	G5T3Q/S3	4.2	Arcata	Red Mountain
woolly balsamroot	<i>Balsamorhiza lanata</i>	G3/S3	1B.2	Redding	Klamath, Scott Valley, Trinity
big-scale balsamroot	<i>Balsamorhiza macrolepis</i>	G2/S2	1B.2	Redding	Ishi, Yolla Bolly
Sulphur Creek brodiaea	<i>Brodiaea matsonii</i>	G1/S1	1B.1	Redding	Shasta
Indian Valley brodiaea	<i>Brodiaea rosea</i> ssp. <i>Rosea</i>	G2/S2	3.1	Redding	Yolla Bolly
Greene's mariposa	<i>Calochortus greenei</i>	G3/S3	1B.2	Redding	Klamath
Shasta chaenactis	<i>Chaenactis suffrutescens</i>	G3/S3	1B.3	Redding	Klamath, Scott Valley, Trinity, Yolla Bolly
dwarf soaproot	<i>Chlorogalum pomeridianum</i> var. <i>minus</i>	G5T3/S3	1B.2	Redding	Yolla Bolly
Shasta clarkia	<i>Clarkia borealis</i> ssp. <i>arida</i>	G3T2/S2	1B.1	Redding	Ishi
northern clarkia	<i>Clarkia borealis</i> ssp. <i>borealis</i>	G3T3/S3	1B.3	Redding	Shasta
white-stemmed clarkia	<i>Clarkia gracilis</i> ssp. <i>albicaulis</i>	G5T2/S2	1B.2	Redding	Ishi, Yolla Bolly
Mosquin's clarkia	<i>Clarkia mosquinii</i>	G2/S2	1B.1	Redding	Ishi
silky cryptantha	<i>Cryptantha crinita</i>	G2/S2	1B.2	Redding	Ishi, Sacramento River, Shasta, Yolla Bolly
clustered lady's slipper	<i>Cypripedium fasciculatum</i> *	G4/S4	4.2	Redding	Trinity

2. Area Profile (Special Status Plants)

Common Name	Scientific Name	Global Rank/State Rank	CNPS Rank	Arcata/Redding	Current Management Unit
mountain lady's slipper	<i>Cypripedium montanum*</i>	G4/S4	4.2	Redding	Trinity
Brandegee's eriastrum	<i>Eriastrum brandegeae</i>	G1Q/S1	1B.1	Redding	Trinity, Yolla Bolly
Stony Creek spurge	<i>Euphorbia ocellata</i> subsp. <i>rattanii</i>	G4T1T2/S1S2	1B.2	Redding	Ishi, Yolla Bolly
Scott Mountain bedstraw	<i>Galium serpicum</i> ssp. <i>scotticum</i>	G4G5T2/S2.2	1B.2	Redding	Klamath, Scott Valley, Shasta, Trinity
Boggs Lake hedge-hyssop	<i>Gratiola heterosepala</i>	G2/S2	1B.2	Redding	Ishi, Yolla Bolly
Stebbins's harmonia	<i>Harmonia stebbinsii</i>	G2/S2	1B.2	Redding	Yolla Bolly
Tehama County western flax	<i>Hesperolinon tehamense</i>	G2/S2	1B.3	Redding	Yolla Bolly
Red Bluff dwarf rush	<i>Juncus leiospermus</i> var. <i>leiospermus</i>	G2T2/S2	1B.1	Redding	Ishi, Sacramento River, Shasta, Yolla Bolly
legenere	<i>Legenere limosa</i>	G2/S2	1B.1	Redding	Ishi, Sacramento River, Shasta, Yolla Bolly
Heckner's lewisia	<i>Lewisia cotyledon</i> var. <i>heckneri</i>	G4T3/S3?	1B.2	Redding	Ishi, Klamath, Trinity
cut-leaved ragwort	<i>Packera eurycephala</i> var. <i>lewisrosei</i>	G4T2/S2	1B.2	Redding	Ishi
Ahart's paronychia	<i>Paronychia ahartii</i>	G2/S2	1B.1	Redding	Ishi, Sacramento River, Yolla Bolly
Scott Valley phacelia	<i>Phacelia greenei</i>	G2/S2	1B.2	Redding	Scott Valley, Trinity
Hall's rupertia	<i>Rupertia hallii</i>	G2G3/S2S3	1B.2	Redding	Ishi
Sanford's arrowhead	<i>Sagittaria sanfordii</i>	G3/S3	1B.2	Redding	Ishi, Sacramento River, Shasta
Canyon Creek stonecrop	<i>Sedum obtusatum</i> ssp. <i>paradisum</i>	G4G5T2/S2	1B.3	Redding	Ishi, Shasta, Trinity
Butte County checkerbloom	<i>Sidalcea robusta</i>	G2/S2	1B.2	Redding	Ishi
Butte County golden clover	<i>Trifolium jokerstii</i>	G2/S2	1B.2	Redding	Ishi
Shasta huckleberry	<i>Vaccinium shastense</i> spp. <i>shastense</i>	G3/S3	1B.3	Redding	Shasta

Source: BLM GIS 2021

* NWFP Survey and Managed vascular plant species

Table 2-27. Suspected BLM Sensitive Vascular Plant Species for the NCIP Planning Area

Common Name	Scientific Name	Global Rank/State Rank	California Rare Plant Rank	Federal Status	Field Office
Raiche's manzanita	<i>Arctostaphylos standfordiana</i> ssp. <i>raichei</i>	G3T2/S2	IB.1		Arcata
Humboldt milk-vetch	<i>Astragalus agnicidus</i>	G3/S3	IB.1		Arcata
deceiving sedge	<i>Carex saliniformis</i>	G2/S2	IB.2		Arcata
Mendocino Coast paintbrush	<i>Castilleja mendocinensis</i>	G2/S2	IB.2		Arcata
Whitney's farewell-to-spring	<i>Clarkia amoena</i> ssp. <i>whitneyi</i>	G5T1/S1	IB.1		Arcata
serpentine cryptantha	<i>Cryptantha dissita</i>	G2/S2	IB.2		Arcata
Snow Mountain willowherb	<i>Epilobium nivium</i>	G2G3/S2S3	IB.1		Arcata
Mad River fleabane daisy	<i>Erigeron maniopotamicus</i>	G2/S2?	IB.2		Arcata
thin-lobed horkelia	<i>Horkelia tenuiloba</i>	G2/S2	IB.2		Arcata
perennial goldfields	<i>Lasthenia californica</i> ssp. <i>macrantha</i>	G3T2/S2	IB.2		Arcata
western lily	<i>Lilium occidentale</i>	G1/S1	IB.1	Endangered	Arcata
Baker's meadowfoam	<i>Limnanthes bakeri</i>	G2/S1	IB.1		Arcata
Wolf's evening-primrose	<i>Oenothera wolfii</i>	G3/S3	IB.1		Arcata
white-flowered rein orchid	<i>Piperia candida</i>	G2/S2	IB.3		Arcata
Hoover's semaphore grass	<i>Pleuropogon hooverianus</i>	G5T2/S2	IB.1		Arcata
Siskiyou checkerbloom	<i>Sidalcea malviflora</i> ssp. <i>Patula</i>	G5T1/S1	IB.2		Arcata
coast checkerbloom	<i>Sidalcea oregana</i> subsp. <i>eximia</i>	G1/S1	IB.2		Arcata
red-flowered bird's-foot trefoil	<i>Acmispon rubriflorus</i>	G2/S2	IB.1		Redding
Jepson's onion	<i>Allium jepsonii</i>	G2/S2	IB.2		Redding
bent-flowered fiddleneck	<i>Amsinckia lunaris</i>	G3/S3	IB.2		Redding
scabrid alpine tarplant	<i>Anisocarpus scabridus</i>	G2G3/S2S3	IB.3		Redding
Klamath manzanita	<i>Arctostaphylos klamathensis</i>	G3/S3	IB.2		Redding
Jepson's milk-vetch	<i>Astragalus rattanii</i> var. <i>jepsonianus</i>	G4T3/S3	IB.2		Redding
Ferris's milk-vetch	<i>Astragalus tener</i> var. <i>ferrisiae</i>	G1T1/S1	IB.1		Redding
silky balsamroot	<i>Balsamorhiza sericea</i>	G4Q/S3	IB.3		Redding
Serpentine Rockcress	<i>Boechera serpenticola</i>	G1/S1	IB.2		Redding
long-haired star-tulip	<i>Calochortus longebarbatus</i> var. <i>longebarbatus</i>	G4T3/S3	IB.2		Redding
Shasta River mariposa	<i>Calochortus monanthus</i>	GH/SH	IA		Redding
Siskiyou mariposa lily	<i>Calochortus persistens</i>	G1/S1	IB.2	Candidate	Redding
Castle Crags harebell	<i>Campanula shetleri</i>	G2/S2	IB.3		Redding
Klamath sedge	<i>Carex klamathensis</i>	G2/S2	IB.2		Redding

2. Area Profile (Special Status Plants)

Common Name	Scientific Name	Global Rank/State Rank	California Rare Plant Rank	Federal Status	Field Office
pink creamsacs	<i>Castilleja rubicundula</i> ssp. <i>rubicundula</i>	G5T2/S2	1B.2		Redding
Hoover's spurge	<i>Chamaesyce hooveri</i>	G3/S1	1B.2	Threatened	Redding
Ashland thistle	<i>Cirsium ciliolatum</i>	G3T3/S3	2B.1		Redding
Mildred's clarkia	<i>Clarkia mildrediae</i> ssp. <i>mildrediae</i>	G4G5T1/S1	1B.3		Redding
pallid bird's-beak	<i>Cordylanthus tenuis</i> ssp. <i>pallescens</i>	G2/S2	1B.2		Redding
Mt. Eddy draba	<i>Draba carnosula</i>	G2/S2	1B.3		Redding
Oregon fireweed	<i>Epilobium oreganum</i>	G3/S3	1B.2		Redding
Siskiyou fireweed	<i>Epilobium siskiyouense</i>	G5T2/S2	1B.3		Redding
Ahart's buckwheat	<i>Eriogonum umbellatum</i> var. <i>ahartii</i>	G3G4T2/S2	1B.2		Redding
blushing wild buckwheat	<i>Eriogonum ursinum</i> var. <i>erubescens</i>	G3/S2	1B.3		Redding
ephemeral monkeyflower	<i>Erythranthe inflatula</i>	G4T3/S3	1B.2		Redding
Scott Mtn. fawn lily	<i>Erythronium citrinum</i> var. <i>roderickii</i>	G3/S3	1B.3		Redding
adobe-lily	<i>Fritillaria pluriflora</i>	G2/S2	1B.2		Redding
Niles's harmonia	<i>Harmonia doris-nilesiae</i>	G1G2/S1	1B.1		Redding
Henderson's horkelia	<i>Horkelia hendersonii</i>	G1/S1	1B.1		Redding
Castle Crags ivesia	<i>Ivesia longibracteata</i>	G2/S2.2	1B.3		Redding
Pickering's ivesia	<i>Ivesia pickeringii</i>	G2/S2	1B.2		Redding
Colusa layia	<i>Layia septentrionalis</i>	G5T2/S2	1B.2		Redding
Mt. Tedoc linanthus	<i>Leptosiphon nuttallii</i> ssp. <i>howellii</i>	G3/S3	1B.3		Redding
Cantelow's lewisia	<i>Lewisia cantelovii</i>	G4T3/S1	1B.2		Redding
Bellinger's meadowfoam	<i>Limnanthes floccosa</i> ssp. <i>bellingermana</i>	G1/S1	1B.2		Redding
Butte County meadowfoam	<i>Limnanthes floccosa</i> ssp. <i>californica</i>	G4T2/S2	1B.1	Endangered	Redding
veiny monardella	<i>Monardella venosa</i>	G2/S2	1B.1		Redding
Baker's navarretia	<i>Navarretia leucocephala</i> ssp. <i>bakeri</i>	G1/S1	1B.1		Redding
Shasta snow-wreath	<i>Neviusia cliftonii</i>	G3/S3	1B.2		Redding
hairy orcutt grass	<i>Orcuttia pilosa</i>	G2/S2	1B.1	Endangered	Redding
Shasta orthocarpus	<i>Orthocarpus pachystachyus</i>	G1/S1	1B.1		Redding
Layne's butterweed	<i>Packera layneae</i>	G3/S3	1B.2	Threatened	Redding
thread-leaved beardtongue	<i>Penstemon filiformis</i>	G1/S1	1B.3		Redding
closed-throated beardtongue	<i>Penstemon personatus</i>	G3/S3	1B.2		Redding
Cooke's phacelia	<i>Phacelia cookei</i>	G1/S1	1B.1		Redding
Siskiyou phacelia	<i>Phacelia leonis</i>	G3/S1	1B.3		Redding
Yreka phlox	<i>Phlox hirsuta</i>	G4/S2	1B.2	Endangered	Redding
Howell's alkali-grass	<i>Puccinellia howellii</i>	G2/S2	1B.1		Redding
showy raillardella	<i>Raillardella pringlei</i>	G2/S2	1B.2		Redding
California beaked-rush	<i>Rhynchospora californica</i>	G4T2Q/S2	1B.1		Redding
Columbia yellow cress	<i>Rorippa columbiae</i>	G2/S2	1B.2		Redding

Source: BLM GIS 2021

Beginning in 2004, the Forest Service and BLM led an effort to remove the survey and manage a portion of the NWFP, which BLM California recognized as potentially litigious. With the issuance of the 2007 ROD to Remove or Modify the Survey and Manage Mitigation Measure Standards and Guidelines (USDI BLM 2007c), BLM California decided to add 49 species from the survey and manage list to the BLM sensitive species list for plants that are known or reasonably suspected to occur within the Arcata and Redding FO areas. The 2007 ROD was enjoined from being implemented in December 2009. After 7 years of litigation, the 2007 ROD was formally reversed. In 2014, the District Court for the Western District of Washington issued a remedy order in the case of Conservation Northwest et al. v. Bonnie et al., No. 08-1067- JCC (W.D. Wash.)/No. 11-35729 (9th Cir.) that is summarized below:

- 1) Follow the 2001 Survey and Manage ROD and Standards and Guidelines
- 2) Apply the “Pechman exemptions”
 - a. thinnings in forest stands younger than 80 years of age;
 - b. culvert replacement/removal;
 - c. riparian and stream improvement projects; and
 - d. hazardous fuel treatments applying prescribed fire for noncommercial projects.
- 3) Implement the 2001, 2002, and 2003 ASR modifications to the survey and manage species list, except for the changes made for the red tree vole

Of the original list of 400 survey and manage species, 49 non-vascular fungi, bryophytes, and lichens and two vascular plants are known or reasonably suspected on BLM-administered lands in the planning area. In 2007, these were added to the BLM California sensitive species list, as described above. While different policies, the conservation outcomes and protections offered by the NWFP’s survey and manage program and the BLM sensitive species program are largely similar; complying with both policies often adds a redundant administrative layer for all but the four species in **Table 2-30** that have been removed from survey and manage requirements.

Strategic surveys have been conducted for all survey and manage categories of species known or suspected in the Arcata FO area. Strategic surveys have not been documented in the Redding FO. However, if strategic surveys have not been determined to be formally complete for a given species of Category B fungi, lichens, and bryophytes, Category B species still require “equivalent-effort” pre-disturbance surveys when habitat-disturbing activities are planned within old-growth forests.

Pre-disturbance surveys are required for eight Category A (Manage All Known Sites) species (see **Table 2-28**), as well as two uncommon, Category C (Manage High-Priority Sites) vascular plant species: clustered lady’s slipper (*Cypripedium fasciculatum*) and mountain lady slipper (*C. montanum*). All remaining survey and manage species known or suspected to occur in the planning area (aside from the two vascular plants and eight Category A species) are shown in **Table 2-29** and **Table 2-30** and represent Category B (Pre-Disturbance Surveys not Practical/Manage All Known Sites), Category D (Pre-Disturbance Surveys not Practical/Manage High-Priority Sites), Category E (Status Undetermined/Manage All Known Sites), and species removed from survey and manage requirements as a result of ASRs.

In January 2020, the special status species lists were updated. After consideration of the BLM special status species policy and distribution information obtained through strategic surveys in the Arcata FO, 31 non-vascular species were removed from the Arcata Special Status Plant list. The Redding FO does

not have sufficient distribution information from strategic surveys; therefore, no non-vascular plants were removed from the Redding Special Status Plant list. **Table 2-29**, **Table 2-30**, and **Table 2-31** note where species are currently considered BLM special status species.

Table 2-28. Non-Vascular Survey and Manage Category A Species

Non-Vascular Type	Scientific Name	Common Name	Known or Suspected	Affected Field Office(s)
Lichen	<i>Bryoria pseudocapillaris</i>	horsehair lichen	Known	Arcata
Lichen	<i>Bryoria spiralifera</i>	twisted horsehair lichen	Known	Arcata
Lichen	<i>Lobaria oregana</i>	lettuce lung	Known	Arcata
Lichen	<i>Vermilacinia cephalota</i> (was <i>Niebla</i> in 2003 ROD)	powdery fog lichen	Known	Arcata
Lichen	<i>Teloschistes flavicans</i>	orangebush lichen	Suspected	Arcata
Lichen	<i>Usnea longissima</i>	old man's beard	Known	Arcata
Bryophyte	<i>Ptilidium californicum</i>	Pacific fuzzwort	Known Suspected	Arcata Redding*
Bryophyte	<i>Tetraphis geniculata</i>	bent-kneed four-tooth moss	Suspected	Arcata

Source: USDI BLM 2016a

*These species are currently on the Redding and Arcata sensitive species plant list due to a lack of strategic surveys necessary to consider removal.

Table 2-29. Category B, Category D, and Category E Known and Suspected Species in the NCIP Planning Area*

Non-Vascular Type	Scientific Name	Common Name	Survey and Manage Category	Known or Suspected	Affected Field Office(s)
Fungi	<i>Albatrellus caeruleoporus</i>	blue-pored polypore	B	Suspected	Arcata
Fungi	<i>Albatrellus ellisii</i>	Greening goat's foot	B	Suspected	Arcata
Fungi	<i>Albatrellus flettii</i>	blue-capped polypore	B	Suspected	Arcata
Fungi	<i>Boletus haematinus</i>	red-pored bolete	B	Suspected	Arcata
Bryophyte	<i>Buxbaumia viridis</i>	green bug moss	E	Known Suspected	Arcata Redding*
Fungi	<i>Choiromyces venosus</i>	hypogeous truffle	B	Known	Arcata
Fungi	<i>Clavariadelphus ligula</i>	strap coral	B	Suspected	Arcata
Fungi	<i>Clavulina castanopes</i> var. <i>lignicola</i>	hairy-stemmed coral	B	Suspected	Arcata
Fungus	<i>Clitocybe subditopoda</i>	little brown mushroom	B	Known	Arcata
Fungus	<i>Cordyceps ophioglossoides</i>	truffle eater	B	Suspected	Arcata
Lichen	<i>Dendriscoaulon intricatum</i>	northern moon shrub	E	Known Suspected	Arcata Redding*
Fungus	<i>Dendrocollybia racemosa</i> (was <i>Collybia</i> in 2003 ROD)	no common name	B	Known Suspected	Arcata Redding*
Fungus	<i>Dermocybe humboldtensis</i>	little green mushroom	B	Known	Arcata
Fungus	<i>Entoloma nitidum</i>	indigo entoloma	B	Known	Arcata
Fungus	<i>Gymnopilus punctifolius</i>	blue-green gymnopilus	B	Known	Arcata
Fungus	<i>Hydropus marginellus</i>	little brown mushroom	B	Known	Arcata

Non-Vascular Type	Scientific Name	Common Name	Survey and Manage Category	Known or Suspected	Affected Field Office(s)
Fungi	<i>Leucogaster citrinus</i>	yellow false truffle	B	Known	Arcata
Fungi	<i>Mycena quinaultensis</i>	little brown mushroom	B	Known	Arcata
Bryophyte	<i>Orthodontium gracile</i>	slender thread moss	B	Suspected	Arcata
Lichen	<i>Pannaria rubiginosa</i>	petaled mouse	E	Suspected	Arcata
Fungus	<i>Phaeocollybia californica</i>	California phaeocollybia	B	Known Suspected	Arcata Redding*
Fungus	<i>Phaeocollybia olivacea</i>	olive phaeocollybia	E	Known Suspected	Arcata Redding*
Fungus	<i>Phaeocollybia piceae</i>	spruce phaeocollybia	B	Known	Arcata
Fungus	<i>Phaeocollybia pseudofestiva</i>	no common name	B	Suspected	Arcata
Fungus	<i>Phaeocollybia scatesiae</i>	no common name	B	Known	Arcata
Fungus	<i>Phaeocollybia spadicea</i>	spadicea phaeocollybia	B	Known Suspected	Arcata Redding*
Fungus	<i>Polyzellus multiplex</i>	blue chanterelle	B	Suspected	Arcata*
Fungus	<i>Ramaria amyloidea</i>	pinkish coral mushroom	B	Known	Arcata
Fungus	<i>Ramaria aurantiiscescens</i>	yellow coral mushroom	B	Known	Arcata
Fungus	<i>Ramaria cyaneigranosa</i>	pinkish coral mushroom	B	Suspected	Arcata
Fungus	<i>Ramaria largentii</i>	orange coral mushroom	B	Known	Arcata
Fungus	<i>Sarcodon fuscoindicus</i>	violet hedgehog	B	Known	Arcata
Fungus	<i>Sowerbyella rhenana</i>	stalked orange peel fungus	B	Suspected Suspected	Arcata Redding*
Fungus	<i>Sparassis crispa</i>	cauliflower mushroom	D	Known	Arcata
Fungus	<i>Spathularia flavida</i>	fairy fan	B	Known Suspected	Arcata Redding*

Source: USDI BLM 2016a and BLM GIS 2020

*These species are currently on the Redding and Arcata sensitive species plant list due to a lack of strategic surveys necessary to consider removal.

Table 2-30. Non-Vascular Species Removed from Survey and Manage Requirements and BLM Sensitive Species Plant List(s)

Type	Species	Common Name	Action that Removed from Survey and Manage (S&M) Compliance	Known or Suspected	Field Office(s)
Lichen	<i>Bryoria tortuosa</i>	yellow-twist horsehair lichen	Removed during 2002 ASR (was Category A)	Known Known	Arcata Redding*
Lichen	<i>Heterodermia leucomelos</i>	Ciliate strap-lichen	Removed from S&M in 2001 ROD	Known	Arcata
Lichen	<i>Kaernefeltia californica</i>	seaside thornbush	Removed from S&M in 2001 ROD	Known	Arcata
Lichen	<i>Ramalina pollinaria</i>	dusty ramalina	Removed from S&M in 2002 ASR (was Category E)	Known	Arcata

Source: USDI BLM 2016a

*This species is currently on the BLM sensitive species plant list but could be removed since it was removed from survey and manage requirements prior to the 2007 ROD. If it does not meet BLM sensitive species requirements, it should be removed from special status designation.

Trends

Climate change will have varying and potentially dramatic effects on annual and perennial special status plant populations and their habitats. Often special status plants are already occupants of a limited ecological niche. Impacts to survival, reproduction, and gene flow may inhibit their ability to adapt in a way that might keep pace with climatological changes. There will likely be impacts on successful germination and survival through vulnerable life stages, dormancy, reproduction, precocious senescence (from drought stress or high temperatures), and others. Phenology of plants is affected by climate change. Pollination services may become mismatched between plants, wildlife, and pollinators, altering historical and expected phenological partnerships between them. Increased fire return intervals may affect plant populations as well.

Examples of some key habitats that may experience effects from climate change are coastal dunes, due to dune erosion or rapid accretion related to sea level rise, or vernal pools, due to prolonged patterns of drought. Two listed plant species that inhabit coastal dunes adjacent to Humboldt Bay are likely to have their resilience tested sooner rather than later due to effects of climate change. Laird (2013) reports that “sea level is rising in Humboldt Bay at a rate of 18.6 inches per century, which is the highest rate in California.” This trend must be taken into account when forecasting the role of BLM-administered lands in conservation of sensitive species core populations. Some habitats are already, or may become, native plant refugia from the effects of climate change, such as areas of unique or limiting soil characteristics. For example, serpentine or volcanic soils already have reduced impact from invasive and/or nonnative plant competition, as well as a tendency to host more drought-tolerant flora.

Forecast

The future of special status plant distribution, management, resilience, and recovery from landscape disturbances within the planning area depends on the degree to which threats under management control can be eliminated or ameliorated and populations and their habitat can be restored and protected. Increased emphasis on fuels treatments may put pressure on special status plant populations through habitat reduction and an increased opportunity for invasive species to take over. However, increased stand-destroying, high-severity fires due to historical fire suppression techniques may permanently alter these habitats and cause more harm to rare plant populations (USDA Forest Service 2000). See **Section 2.2.16**, Vegetation Type Change for more on this topic.

Key Features

Key features for special status plants related to land use allocations include historical, occupied, and suitable habitats; core populations; and landscape connectivity features to encourage physical migration and genetic adaptation to changing climatic conditions. Key habitats include ACECs with special status plants, serpentine soils, coastal dunes, perennial streams, riparian and wetland vegetation, and other rare, unique, or diverse habitats. The BLM should continue to improve the knowledge base of distribution and status of these species across the planning area and develop and apply standardized protection measures to enhance the conservation and recovery of these species. Particular care should be taken to protect habitats that have high rates of endemism (for example, protecting serpentine soils from fire management techniques such as dozer lines, when feasible).

2.2.12 Tribal Consultation/Interests

Federally Recognized Tribes and Laws Regarding Consultation

A number of acts of federal legislation, including the NHPA, NEPA, FLPMA, American Indian Religious Freedom Act of 1978, Native American Graves Protection and Repatriation Act of 1990, Executive Order 13007 of 1996, and Executive Order 13175 of 2000, direct the BLM to consult with tribal governments to improve stewardship of tribal resources on public lands. Safeguarding the availability of both locations and resources required for traditional practices, the preservation of sacred features and, as well as the proper procedures for unanticipated discoveries of human remains or other sacred objects associated with the tribes are important responsibilities. These responsibilities require the BLM to develop government-to-government relationships with federally recognized Native American Indian tribes that are known to have a historical association with the public land in the management unit. This often includes tribal governments no longer located in Northern California.

There are 10 federally recognized tribes or tribal entities (25 USC 479(a)) claiming traditional use or resources in the Arcata FO, 15 federally recognized tribes or tribal entities claiming traditional use of the resources in the Redding FO, and four federally recognized tribes or tribal entities claiming traditional use of the resources in both FO areas (**Table 2-31**). Each tribe or organization maintains a general concern for the protection of and access to areas of traditional and religious importance, as well as the welfare of plants, animals, air, landforms, and water on reservation and public lands. In addition to these general concerns, individual tribes have specific treaty rights or tribal concerns that may vary within the planning area.

Table 2-31. Federally Recognized Tribes within the NCIP Planning Area¹

Organization	Tribal Affiliation	BLM Field Office
Bear River Band of Rohnerville Rancheria ²	Wiyot/Mattole/Bear River/Wiyot	Arcata
Berry Creek Rancheria	Maidu	Redding
Big Lagoon Rancheria	Yurok/Tolowa	Arcata
Blue Lake Rancheria ²	Wiyot/Yurok/Tolowa	Arcata
Cachil DeHe Band of Wintun Indians of the Colusa Indian Community of the Colusa Rancheria	Wintun	Redding
Cahto Tribe of the Laytonville Rancheria	Cahto	Arcata
Cher-Ae Heights Indian Community of the Trinidad Rancheria ²	Yurok/Miwok/Tolowa	Arcata
Confederated Tribes of Grand Ronde ²	Chasta (Shasta)/Chasta Costa/Chinook/French-Canadian Iroquoain/Kalapuya/Santiam/Tualatin/Yamhill/Yoncalla/Marys River band/Mohawk/Molalla/Lower Umpqua/Rogue River peoples/Talekma/Upper Umpqua peoples//Lower Rogue Athapascan peoples/Tillamook	Redding

Organization	Tribal Affiliation	BLM Field Office
Confederated Tribes of Siletz Indians of Oregon	Alsea/Yaquina/Chinook/Clatsop/Coos/Hanis/Miluk/Kalapuya/Santiam/Tualatin/Yamhill/Yoncalla/Marys River band/Molalla/Lower Umpqua/Siuslaw/Shasta/Klamath River peoples/Rogue River peoples/Klickitat/Takelma/Dagelma/Latgawa/Cow Creek/Tututni/Applegate River/Chetco/Chasta Costa/Euchre Creek/Galice Creek/Mikonotunne/Pistol River/Port Orford/Sixes/Tolowa/Upper Umpqua/Upper Coquille/Yashute/Lower Rogue Athapascan peoples/Tillamook/Siletz/Salmon River/Nestucca/Nehalem/Tillamook Bay	Redding
Elk Valley Rancheria ²	Tolowa/Yurok	Arcata
Enterprise Rancheria ²	Maidu	Redding
Greenville Rancheria of Maidu Indians	Maidu	Redding
Grindstone Indian Rancheria of Wintun-Wailaki Indians of California	Wintun/Wailaki	Redding
Hoopa Valley Tribe ²	Hoopa (Hupa)	Arcata/Redding
Karuk Tribe of California ²	Karuk	Arcata/Redding
The Klamath Tribes	Klamath, Modoc, and Yahooskin	Redding
Mechoopda Indian Tribe of the Chico Rancheria ²	Maidu	Redding
Modoc Tribe of Oklahoma	Modoc	Redding
Mooretown Rancheria	Konkow/Maidu	Redding
Paskenta Band of Nomlaki Indians	Nomlaki	Redding
Pit River Tribe ²	Big Bend, Burney, Likely, Lookout, Montgomery Creek, Roaring Creek, and XL Ranch Rancherias	Redding
Quartz Valley Reservation	Klamath, Karuk, and Shasta	Redding
Redding Rancheria	Wintu, Pit River, and Yana	Redding
Resighini Rancheria	Yurok	Arcata
Round Valley Reservation ²	Yuki/Concow/Little Lake Pomo/Nomlaki/Wailaki/Pit River	Arcata/Redding
Sherwood Valley	Pomo	Arcata
Tolowa Dee-ni' Nation ²	Tolowa	Arcata
Wiyot Tribe (formerly Table Bluff Reservation-Wiyot Tribe) ²	Wiyot	Arcata
Yurok Reservation ²	Yurok	Arcata/Redding

¹Unrecognized tribal entities in the NCIP planning area that are acknowledged by the State of California include the following: Konkow Valley Band of Maidu, Nor-el-Muk Nation, Pakan-Yan Maidu Band of Strawberry Valley Rancheria, Shasta and Upper Klamath Indians, Shasta Nation, Sinkyone Intertribal Wilderness Council, Tsangwe Council, Tsurai Ancestral Society, Winnemen Wintu, Wintoon Tribe, Wintu Tribe, and Toyon Center

²Tribes that currently have a Tribal Historic Preservation Office(r)

Treaty Rights

There are no known congressionally approved treaties in effect within the Arcata FO or Redding FO.

Traditional Use and Sacred Sites

In addition to general rights to access natural, medicinal, and sacred resources or places guaranteed to all federally recognized tribes, the Hupa, Yurok, and Karuk were guaranteed membership in the Klamath River Basin Fisheries Task Force under the Klamath Act of 1986, which mandated the rebuilding of the Klamath River's fisheries. The Act states that "the Klamath and Trinity Rivers provide fishery resources necessary for Indian subsistence and ceremonial purposes, ocean commercial harvest, recreational fishing, and the economic health of many local communities" (16 USC 460ss (2)). The Klamath Act expired in 2006, but members of the aforementioned tribes continue to be involved in salmonid habitat restoration projects within the planning area.

Traditional Use Areas

In 2007, the BLM, in cooperation with the Forest Service, the California Indian Basketweavers Association, and the California Indian Forest and Fire Management Council, developed a traditional gathering policy covering culturally utilized non-timber plants and fungi. Free use without permit is granted at the local level for personal, community, and other non-commercial uses. The agreement ensures access to gathering areas and expands opportunities for involvement in local land management decisions to enhance traditional plant populations.

Rights of Access

A number of modern cemeteries used or visited by local tribes are located on BLM-administered land, including the Martin-Angle Cemetery in Butte County and the Central Valley Indian Cemetery in Shasta County. Other historic-era cemeteries of concern to tribes that are on BLM-administered lands in Cedar Gulch in Siskiyou County, Kett in Shasta County, and Salt Flat in Trinity County are not currently being used for interment; however, they may need additional protection if disturbance is noted. The BLM is committed to continue to allow access to these burial places and provide protection from disturbance as needed.

Sensitive Information Management

The BLM manages sensitive tribal information collected through consultation, including electronic and hard copy files, by using a geospatial layer consistent with the management of public lands. The geospatial layer of historic and current acquired tribal information facilitates the avoidance or mitigation for future projects, including visual effects on sacred sites and TCPs during the planning phase. All sensitive cultural information in any form (digital or otherwise) is protected as allowed by law and regulation. Section 9(a) of the Archaeological Resources Protection Act and 54 USC 307103 (old Section 304 of the NHPA) authorize federal agencies to protect and restrict access to information about historic and archaeological resources. This protection exists because nonrenewable cultural resources may be fragile and subject to damage or destruction by theft, vandalism, and unauthorized public visitation. The extent to which sensitive tribal information can be maintained as confidential depends on the degree to which it fits within one of the Freedom of Information Act's nine exemptions.

Trends

At a national level, tribal governments are increasingly asking for co-management of public lands. Bears Ears National Monument in Utah is one example. Locally, tribes have become more active in both natural and cultural resource management.

In the planning area, most of this engagement has focused on river restoration projects that protect and enhance the traditional salmon fisheries but is also expanding toward wildfire management and sacred site protection. Native American tribal members and staff are becoming increasingly educated on archaeological matters, attending field schools and college and university courses to prepare tribal monitors trained in archaeological theory and techniques, in addition to traditional tribal knowledge. A renewed focus on the effects of dominant colonial historical narratives has led to alternative approaches to archaeological investigations, such as minimizing excavation of Native American Indian archaeological resources.

Environmental justice issues, such as environmental protection, rights to autonomy and land management, and access to and restoration of traditional use areas are also ongoing concerns. Most consultation to date has been NEPA-driven; the BLM does not have a dedicated tribal liaison at the federal, state, or local level to engage on issues beyond project-specific concerns. In practice, it typically falls on the local archaeologist to administer and safeguard information gathered through the consultation process.

Forecast

The BLM expects to see updated guidance for government-to-government consultation issued at the national level in response to the growing concern for better relations among tribal and federal government and to facilitate co-management of public resources. Locally, the Arcata and Redding FOs also expect to have more engagement with non-federally recognized tribes within the planning area. Tribal involvement in cultural and natural resources management will continue to increase as more tribal members (rather than non-Native experts) serve as Tribal Historic Preservation Officers and tribal environmental and cultural resource protection departments become increasingly professionalized. In particular, the renewed focus on wildland fire management within the planning area will provide opportunities to incorporate traditional tribal knowledge and expertise into land management activities. The trend toward incorporating alternatives to traditional archaeological investigations for treatment and protection of cultural and tribal resources will likely continue, as will conversations regarding environmental justice as part of, or in addition to, the typical NEPA-driven consultation process.

2.2.13 Vegetation

Vegetation is a fundamental and dynamic resource that supports, is influenced by, or is integrated with other natural resources, change agents (such as climate and fire), and land use. Vegetation management seeks to describe, conserve, or achieve plant communities that support ecological health and sustainable resource use within each ecoregion.

Vegetative communities are complex and interdependent groups of plant species that capture light energy, cycle nutrients, fix carbon, and influence the atmosphere, water, and soil. They are a critical component of, and contribute valuable services to, a healthy ecological system. In addition, vegetative communities provide for many of the more commonly recognized resources and uses on public lands, including wildlife habitat, recreation, scenic beauty, watershed function, forest products, and livestock

grazing. Healthy vegetative communities are self-perpetuating and resilient to natural fluctuations and change. Vegetation management aims to support diverse, vigorous, fire-resilient, and productive plant communities of native and other desirable species at viable population levels commensurate with the species and habitat's potential in an ecoregional, community, and population context.

Indicators

Indicators used to measure current condition and trends include the following:

- **Structural vegetation cover.** Structural vegetation cover has implications for management considerations relating to wildlife habitat needs, grazing land suitability, commercial forestry, and recreational opportunities.
- **Vulnerable vegetation communities.** Global and state vulnerable plant communities reflect the overall status of a community throughout its global and state range, respectively. Increases in the number of vulnerable plant communities or vulnerability ranking status and special status species may be an indicator of increased stress upon native plant communities, if survey distribution and data collection intensity remains comparable across time.
- **Invasive, nonnative species.** Invasive, nonnative plant species can reflect the overall health of a plant community. The impact of an invasive species is relative to the ecological function it may or may not disrupt, density, and distribution for a given plant community, cover type, management area, ecoregion subdivision, or ecoregion.
- **Degree of fragmentation.** Intact, un-fragmented vegetation landscapes are present at a relevant management scale for a given plant community, cover type, ecoregion subdivision, or ecoregion. Habitat fragmentation leads to a reduction in the total area of habitat to support biological processes, a decrease in the interior ratio relative to the edge in related edge-effect impacts, an isolation of one habitat fragment from another, and a continued decrease in the average size of each patch of habitat. Fragmentation also limits seed dispersal in species whose seeds do not travel far (e.g., valley oak and blue oak). Ground Transportation Linear Feature data can be used to identify un-fragmented areas that may be determined to be vegetation conservation management priorities.
- **Diversity.** Vegetation diversity provides a mosaic of native plant communities and age classes across the landscape sufficient to sustain recruitment and mortality fluctuations. Current CALVEG cover data and forestry data show a diversity of native plant communities and age classes across the landscape. Future on-the-ground, change-detection monitoring will be used in conjunction with past and future mapping efforts to assess changes.
- **Resilience.** Resilience determines how a vegetation community responds to isolated or landscape-wide impacts. Maintaining or returning to PFC relative to the associated landform reflects resilience. Climate change may lead to changes in persistence and/or resilience of a vegetation community, ecoregion subdivision, or ecoregion. Future landscape-wide assessment methods, such as interdisciplinary rangeland health assessments that could be expanded beyond grazing allotment analysis, or the BLM Assessment Inventory Monitoring method could potentially be expanded to BLM-administered lands within the entire planning area to gain a broader view of large-scale vegetation resilience and function. Baseline and climate change trend modeling compared with vegetation type parameter needs may offer indicators of future change, resilience, or persistence of the selected vegetation type for a given scale. This information could contribute to new ideas for proactive management.

Current Conditions

The vegetation in the planning area is part of the California Floristic Province, a zone of Mediterranean-type climate that has high levels of plant endemism (plants unique to a defined, geographic region), as shown in **Map 2-22, Appendix A**.

The high plant diversity present in the planning area is described in this document in terms of assemblages of native species and is classified by ecoregion. As described in **Section 2.1**, ecoregions are identified by similarities in geology, physiography, vegetation, climate, soils, land use, wildlife distributions, and hydrology. The EPA level III and IV ecoregions, developed by the EPA, USGS, and the Commission for Environmental Cooperation are the ecoregion standard units being used to generally describe vegetation for the planning area.

The vegetation within the planning area is extremely diverse and includes portions of seven EPA level III ecoregions (**Map 2-25, Appendix A, and Table 2-1**), and 33 EPA level IV subdivisions (**Map 2-23, Appendix A, and Table 2-32**).

The relative role that BLM-administered land plays in vegetation management depends on two main factors: 1) the quantity of BLM-administered land within a given ecoregion for the planning area relative to the whole ecoregion, and 2) specific species or vegetation community distributions within the planning area, relative to the ecoregion as a whole. For example, the BLM administers over 227,000 acres in the Klamath ecoregion; however, only 63 percent of the ecoregion occurs in the planning area, and of that, the BLM administers only 3 percent (**Table 2-1**). Though the portion of ecoregions managed by the BLM may be small, it may represent a large part of an area where conservation measures can be implemented. Further, because the BLM manages in concert with other agencies, adjacent landowners, or through regional land use plans such as the NWFP, the BLM can influence comprehensive vegetation management strategies across the planning area.

Structural Vegetation Cover

Vegetation structure is the organization of live and dead individuals that give a stand its physical appearance. Vegetation structure consists of a series of attributes like density, cover, leaf area, size distribution, and spatial organization that have major impacts on productivity, competition, resource availability, wildlife habitat, micro- and meso-climate, and many other important variables.

Table 2-32. Level IV Ecoregion EPA Subdivision Descriptions within the NCIP Planning Area

This table helps to define finer scale ecological units that reflect plant communities and diversity based on geology, climate, and elevation.

Ecoregion (EPA Level III)	Subdivisions (EPA Level IV Subdivisions)	Subdivision Description	Total Acres in Planning Area	BLM- Administered Surface Acres in Planning Area
Coast Range	Coastal Lowlands	The Coastal Lowlands contain beaches, dunes, and marine terraces below 400 feet elevation. Wet forests, lakes, estuarine marshes, and tea-colored (tannic) streams are characteristic features of the landscape. Wetlands have been widely drained with many converted to dairy pastures. Residential, commercial, and recreational developments are expanding in the coastal corridor. In California, the region includes the Crescent City Plain and Humboldt Bay Flats and Terraces. Soil moisture regimes are udic and aquic and soil temperatures are isomesic. Dune communities, grassland, coastal scrub, beach shore pine (<i>Pinus contorta</i> var. <i>contorta</i>), bishop pine (<i>P. muricata</i>), and Sitka spruce are typical. Riparian areas contain red alder, conifers, bigleaf maple, salmonberry, California rhododendron, and willows.	180,300	1,100
Coast Range	Fort Bragg/ Fort Ross Terraces	The Fort Bragg/Fort Ross Terraces form an elevated coastal plain that has less relief (200–800 feet) than the adjacent mountains of northern Franciscan redwood forest. Quaternary and Tertiary sandstones and mudstones form the terraces, and some areas are deeply dissected, forming ravines that expose Cretaceous sedimentary rocks. Elevations range from sea level to about 1,300 feet. Soil moisture regimes are udic and some aquic, and soil temperatures are isomesic. Monthly and annual temperature variations are minimal and summer fog is common. Vegetation includes coastal grasslands and shrubs, stunted beach pine, bishop pine, or pygmy cypress (<i>Hesperocyparis pigmaea</i>), along with areas of some grand fir (<i>Abies grandis</i>) and western hemlock. Terrace soils are typically unsuitable for redwoods, although they do occur in ravines and some bluffs.	10,300	<1
Coast Range	Northern Franciscan Redwood Forest	The low mountains of the Northern Franciscan Redwood Forest lie entirely within the coastal fog zone and are characteristically covered by fog-dependent coast redwoods and Douglas-fir. Historically, unbroken redwood forests occurred and moderated local climate by trapping coastal fog and producing shade. The combination of shade, root competition, young soils with a deep organic debris layer on the surface, occasional fire, and silting by floods limits the number of plant species that occur here. The region extends north only about 10 miles into Oregon, near Brookings. In some factors, this region has more similarities to temperate rain forests of the Oregon and Washington Coast Ranges than to redwood forest regions to the south. Dominated by conifers, the region also includes western hemlock, western red cedar, Port Orford cedar (<i>Chamaecyparis lawsoniana</i>), grand fir, and some Sitka spruce near the coast. Hardwoods such as red alder and tanoak occur. Fine and fine-loamy, isomesic Ultisols and Alfisols are typical soils.	933,700	1,700

Ecoregion (EPA Level III)	Subdivisions (EPA Level IV Subdivisions)	Subdivision Description	Total Acres in Planning Area	BLM- Administered Surface Acres in Planning Area
Coast Range	Coastal Franciscan Redwood Forest	The main part of the Coastal Franciscan Redwood Forest extends through Mendocino County from just south of the King Range to just south of the Russian River in Sonoma County. Unlike the conifer-dominated redwood forests to the north, these central redwood forests typically consist of a mixture of conifers and hardwoods. Vegetation includes a multi-story canopy of redwood, Douglas-fir, tanoak, bigleaf maple, evergreen shrubs, and various grasses. In the southern portions in Sonoma County, there are more coast live oaks and grassland savannas intermixed with denser areas of forest. The near-coastal part of the region that is influenced more by fog has more redwoods and similarities to redwood forests to the north. The soil temperature regimes are mostly isomesic and mesic. Soil moisture regimes are predominantly udic, ustic, and xeric. Runoff is rapid and many of the smaller streams are dry by the end of the summer. Natural lakes are absent.	248,400	2,700
Coast Range	King Range/ Mattole Basin	In contrast to the redwood forests to the north and south, the vegetation of the King Range/Mattole Basin ecoregion includes a mixed evergreen forest of Douglas-fir, tanoak, and madrone, as well as areas of grassland. Prairies and coastal scrub cover many of the headlands. Although this is one of the wettest spots in California, the King Range rises above the coastal fog. In summer, warm, dry, offshore winds also help keep the fog away, making the King Range too dry to support the redwood forests that surround it on three sides. The King Range thrusts 4,000 feet above the Pacific, making this area one of the most spectacular and remote stretches of coastline in the continental US in the northern part of the region, the Bear and Mattole rivers drain a hilly to steep landscape of mixed evergreen forest, with a land cover that includes a relatively greater amount of annual grasslands than in the redwood forests to the north or the south. Timber production, livestock grazing, and recreation are principal land uses.	469,900	32,100
Klamath Mountains/ California High North Coast Range	Outer North Coast Ranges	Just inland from the redwood forests of the Coast Range, the Outer North Coast Ranges ecoregion occurs in the central part of the Northern California Coast Ranges. It is characterized by high rainfall and mixed evergreen and mixed hardwood forests including Douglas-fir, tanoak, Oregon white oak, and some needlegrass (<i>Stipa</i> spp.) grasslands. Some redwood occurs in areas closest to the coast. Mountain peaks are lower than those in the High North Coast Ranges ecoregion to the east. The soil temperature regimes are predominantly mesic, with some thermic in the southern part of the region. Soil moisture regimes are xeric. Landslides occur frequently in this region, and high sediment loads occur in streams and rivers. All but the larger streams are dry by the end of the summer. Natural lakes are absent, but there are a few reservoirs.	1,483,900	71,400

Ecoregion (EPA Level III)	Subdivisions (EPA Level IV Subdivisions)	Subdivision Description	Total Acres in Planning Area	BLM- Administered Surface Acres in Planning Area
Klamath Mountains/ California High North Coast Range	High North Coast Ranges	The High North Coast Ranges include the higher-elevation part of the northern California Coast Ranges that are far enough inland to have little oceanic influence on climate. The ecoregion has more winter snow and more montane and subalpine coniferous forest than Outer North Coast Ranges to the west. Cretaceous sandstone, mudstone, blueschist, and metasedimentary rocks are typical. Elevations are mostly 3,000 to 7,000 feet, with a high point on Mt. Linn at 8,092 feet. Common vegetation includes mixed conifer and Douglas-fir forests, along with tanoak. White fir forest and some red fir occur at higher elevations. Soil temperature regimes are predominantly mesic, with some frigid and minor areas of cryic. Soil moisture regimes are almost exclusively xeric. All but the larger streams are dry through much of the summer.	711,700	26,000
Klamath Mountains/ California High North Coast Range	Western Klamath Low Elevation Forests	The Western Klamath Low Elevation Forests are at elevations generally less than 3,500 feet. Douglas-fir and Port Orford cedar occur on lower slopes, grading into Douglas-fir and tanoak, or higher with canyon live oak. Red and white (<i>Alnus rhombifolia</i>) alders are typical along streams. Mixed oak stands occur on drier sites. The region is generally wetter and has a somewhat denser forest landscape than the drier Eastern Klamath Low Elevation Forests to the east.	1,093,500	200
Klamath Mountains/ California High North Coast Range	Eastern Klamath Low Elevation Forests	The Eastern Klamath Low Elevation Forests ecoregion is geologically and botanically diverse and has some drier forests than the Western Klamath Low Elevation Forests to the west. Elevations are generally below 3,500 feet. Forest and woodland types vary and can include areas of Douglas-fir, ponderosa pine, canyon live oak, and knobcone pine (<i>Pinus attenuata</i>), along with chaparral of chamise, deer brush (<i>Ceanothus</i> spp.), and manzanita (<i>Arctostaphylos</i> spp.). Along streams, cottonwoods, white alder, and willows occur. Soil temperatures are mesic to near thermic, and soil moisture regimes are mostly xeric.	1,664,200	104,700
Klamath Mountains/ California High North Coast Range	Klamath River Ridges	The Klamath River Ridges have a dry, continental climate and receive, on average, 25 to 35 inches of precipitation annually. Higher altitudes and north-facing slopes have Douglas-fir and white fir; lower elevations and south-facing slopes are mostly ponderosa pine and western juniper, species that are more drought resistant than other vegetation types found in this greater ecoregion. Some Oregon white oak occurs, and canyon live oak can grow on steep rocky slopes. This area has less precipitation, more sunny days, and a greater number of cold, clear nights than the Inland Siskiyou to the northwest in Oregon or the western Klamath Mountains in California. Mesic soil temperatures and xeric soil moisture regimes predominate.	305,500	11,700

Ecoregion (EPA Level III)	Subdivisions (EPA Level IV Subdivisions)	Subdivision Description	Total Acres in Planning Area	BLM- Administered Surface Acres in Planning Area
Klamath Mountains/ California High North Coast Range	Marble/ Salmon Mountains- Trinity Alps	The Marble/Salmon Mountains-Trinity Alps ecoregion includes the Salmon Mountains, Marble Mountains, and Trinity Alps in the montane elevations mostly from 3,500 or 4,000 feet up to about 7,000 feet. The rugged region has steep slopes and numerous canyons and narrow mountain valleys. Granitic, metavolcanic, and metasedimentary rocks occur including some areas of serpentinized peridotite. Soil temperature regimes are predominantly frigid, and soil moisture regimes are xeric. The climate is colder than surrounding lower-elevation ecoregions. Forests include Douglas-fir, white fir, and at higher elevations, red fir.	647,100	300
Klamath Mountains/ California High North Coast Range	Duzel Rock	The Duzel Rock ecoregion is slightly lower with less relief than Klamath Mountain regions immediately north or south and it has more juniper and big sagebrush (<i>Artemisia tridentata</i>), along with scattered woodland. Ponderosa pine, Oregon white oak, and areas of Jeffrey pine occur. Some Douglas-fir is found at higher elevations and on north slopes. Curl-leaf mountain-mahogany (<i>Cercocarpus ledifolius</i>) is common in the western and southern parts. The geology is mostly Cambrian through Devonian metasedimentary and minor metavolcanic rocks including metamorphosed conglomerate, sandstone, shale, chert, limestone, and basalt. Soil temperature regimes are mesic with some frigid at higher elevations, and soil moisture is xeric. The region drains to the Scott and Shasta Rivers.	175,700	7,300
Klamath Mountains/ California High North Coast Range	Eastern Klamath Montane Forest	Typically at elevations above 4,000 feet, the Eastern Klamath Montane Forests ecoregion includes a mosaic of forest and chaparral types. It often has more open tree canopies and understories than western Klamath regions. White fir, incense cedar, Douglas-fir, ponderosa pine, and sugar pine are dominants, with mountain dogwood (<i>Cornus nuttallii</i>) in the understory. Some minor areas of Shasta red fir or California red fir occur at high elevations. Black and canyon live oaks mix with scattered conifers on drier sites, with understories of huckleberry oak (<i>Quercus vacciniifolia</i>) and other chaparral species.	287,900	4,800
Klamath Mountains/ California High North Coast Range	Scott Mountains	The Scott Mountains ecoregion is dominated by ultramafic rocks with Mesozoic mafic intrusions, along with some granitic rocks near the Trinity Alps and at Castle Crags. Elevations are generally 3,000 to 7,000 feet. Soil temperature regimes are mostly frigid, with some mesic at low elevations. Soil moisture regimes are xeric. It has more ultramafic rocks and less precipitation than the Marble/Salmon/Trinity Alp region to the west. Common vegetation includes Jeffrey pine, mixed conifer, and white fir. The ecoregion drains to the Trinity, Sacramento, Scott, and Shasta Rivers.	350,300	600
Klamath Mountains/ California High North Coast Range	Rogue/ Illinois/ Scott Valleys	The Rogue/Illinois/Scott Valleys ecoregion supports Oregon white oak and California black oak woodland, ponderosa pine, and grassland. As in most developed valleys, vegetation is greatly altered, with only a few remnants of oak savanna, prairie vegetation, or seasonal ponds remaining. Land cover includes pastureland, cropland, orchards, grassland, and developed, with patches of woodland mostly near the margins. In California, the Scott Valley is a nearly level alluvial basin along the Scott River, with mesic soil temperatures and aridic soil moisture regimes.	67,400	400

Ecoregion (EPA Level III)	Subdivisions (EPA Level IV Subdivisions)	Subdivision Description	Total Acres in Planning Area	BLM- Administered Surface Acres in Planning Area
Sierra Nevada	Northern Sierran Lower Montane Forest	Generally lower in elevation than adjacent mid-montane forests, the Northern Sierra Lower Montane Forests have a mix of montane hardwood, montane hardwood-conifer forest, and mixed conifer forest. Elevations are mostly 2,000–4,000 feet, with a few higher areas. It has less ponderosa pine than found in regions to the south. Douglas-fir is a more widespread conifer, and hardwoods include canyon live oak, interior live oak (<i>Quercus wislizeni</i>), black oak, and tanoak. Annual precipitation is somewhat higher than immediately south. Geology is a complex mix of Mesozoic granitic rocks, Jurassic to Triassic metavolcanics, and some Mesozoic to Paleozoic metasedimentary and ultramafic rocks.	281,800	3,700
Central California Valley	Sacramento/Feather River Alluvium	The Sacramento/Feather Riverine Alluvium ecoregion consists of nearly level floodplains and levees associated with the Sacramento, Feather, and lower Yuba and Bear Rivers. Much of the unweathered gravel, sand, and silt deposits are in contact with present day river systems and have constantly changing morphology. Flows of the major rivers are artificially controlled and confined by built levees. Entisols, Mollisols, and Alfisols are more common compared to the Vertisols typical of the adjacent basins of Butte, Sutter and Colusa basins. Vina, Columbia, Riverwash, Sycamore, Shanghai, Gianella, and Parrott are representative soil series. The xeric soils are moderately well to somewhat poorly drained and support pasture, wheat, fruit and nut orchards, and woody wetlands. Cottonwoods and mixed willows occur along with some grasslands. Affected in parts by historic mining practices in the Sierra Nevada, the riverine region includes areas of gold field tailings on the Yuba and Feather Rivers.	114,400	0
Central California Valley	Riverine Alluvium Northern Terraces	The Northern Terraces ecoregion occurs on gently sloping to sloping terraces and alluvial fans at the northern end and eastern side of the Sacramento Valley. It is mostly rolling grassland and has less agriculture than found in the alluvium of adjacent North Valley Alluvium or in the floodplain soils of Sacramento/Feather River Alluvium. It also generally lacks the oaks that are found upslope in the Central Valley Foothills. Soil temperature regimes are thermic and soil moisture regimes are xeric. Common soil series include Tuscan and Anita on the east and Corning, Redding, Hillgate, and Newville on the west. Although the terraces of the Tuscan Formation on the east have geological and soil differences from the Tehama Formation terraces on the west, the landforms, climate, vegetation, and land cover are generally similar. The vegetation of annual grasses and forbs is used mostly for dryland range and pasture. A few areas of blue oak woodlands occur, primarily at higher elevations. Vernal pools are found in some areas. Streams drain mostly to the Sacramento River.	256,300	0

Ecoregion (EPA Level III)	Subdivisions (EPA Level IV Subdivisions)	Subdivision Description	Total Acres in Planning Area	BLM- Administered Surface Acres in Planning Area
Central California Foothills and Coastal Mountains	Foothill Ridges and Valleys	The Foothill Ridges and Valleys ecoregion includes ridges, steep hills, and narrow valleys in the interior northern California Coast Ranges. It extends from the Vaca Mountains and Blue Ridge in the south, to the Bald Hills in the north near the Klamath Mountains. It is generally higher and hillier than to the east, but lower and drier than ecoregions to the west. Soil temperature regime is thermic, and soil moisture regime is xeric. Common vegetation includes purple needlegrass (<i>Stipa pulchra</i>), blue oak, chamise (<i>Adenostoma fasciculatum</i>), and foothill pine.	440,200	45,600
Central California Foothills and Coastal Mountains	Tuscan Flows	The Tuscan Flows ecoregion is a gently southwest-sloping plateau with some steep canyons and a few steep volcanic cones. Although the region is geologically related to the southwest end of the Cascades, it has ecosystem similarities to the Sierra Nevada foothills portion of this ecoregion. Blue oak woodlands, annual grasslands, and foothill pine occur.	630,400	23,4600
Central California Foothills and Coastal Mountains	Tehama Terraces	The Tehama Terraces ecoregion forms a dissected plain between the coastal hills to the west and the western margin of the Sacramento Valley. Quaternary alluvial and colluvial materials overlie slightly consolidated Pliocene sandstone and conglomerate. The soil temperature regime is thermic and soil moisture regime is xeric. Common vegetation includes blue oak; needlegrass dominates on some fine-textured soils, and vernal pools are common.	534,300	6,650
Central California Foothills and Coastal Mountains	Northern Sierran Foothills	The Northern Sierran Foothills ecoregion consists of moderately steep to steep mountains and hills at the western foot of the northern and central Sierra Nevada. The Melones Fault Zone is in this unit. Geology is a complex mix of mafic volcanics, granodiorite, slate and graywacke, argillite and quartzite, and some ultramafic bands of peridotite and serpentinite. Soil temperature regime is thermic; soil moisture regime is xeric. Common vegetation includes needlegrass and annual grasslands, chamise, manzanita, interior live oak, ceanothus, blue oak, and foothill pine. Runoff is rapid; streams drain to the Feather, Sacramento, and San Joaquin Rivers.	148,800	6,700

Ecoregion (EPA Level III)	Subdivisions (EPA Level IV Subdivisions)	Subdivision Description	Total Acres in Planning Area	BLM- Administered Surface Acres in Planning Area
Central California Foothills and Coastal Mountains	North Coast Range Eastern Slopes	The North Coast Range Eastern Slopes ecoregion is along the steep north-trending east edge of the Northern Coast Range mountains of ultramafic and associated rocks of an ophiolite sequence. It has more relief and higher elevations than Foothill Ridges and Valleys to the east with mostly chaparral vegetation compared to the grassland and blue oak to the east. It has few conifers compared to the higher High North Coast Ranges to the west. Elevations range from about 450 feet near Lake Berryessa to the highpoint 3,196-foot Brushy Skyhigh, and relief is mostly 500–1,200 feet. Common vegetation series include leather oak (<i>Quercus durata</i>) on serpentine soils, chamise on serpentine and other shallow soils, and mixed conifer on deeper, mesic soils. Some hills contain McNab (<i>Hesperocyparis macnabiana</i>) or Sargent cypress (<i>H. sargentii</i>) or some foothill and knobcone pine. Areas of blue oak woodland occur in the lower, flatter areas. All but the larger streams are dry through most of the summer. Soil temperature regimes are mostly thermic but are mesic on some north-facing slopes and at higher elevation. Soil moisture regimes are xeric.	35,200	4,100
Central California Foothills and Coastal Mountains	Upper Sacramento River Alluvium Foothill Ridges and Valleys	The Upper Sacramento River Alluvium ecoregion includes the floodplains and terraces of the Sacramento River and lower Cottonwood Creek in the area between Redding and Red Bluff. It is flatter and has more cropland and irrigated hay and pastureland than the adjacent Tehama Terraces that are mostly rolling and dissected woodlands and grasslands used for grazing. Although it has similarities to the northern portions of the Sacramento/Feather River Alluvium in the Central California Valley, this narrow region is influenced by the surrounding oak woodlands. Natural vegetation consists mostly of riparian woodlands of Fremont cottonwood, western sycamore, willow, box elder (<i>Acer negundo</i>), and valley oak, and in higher areas some blue oak woodland and savanna.	65,500	4,600
Eastern Cascade Slopes and Foothills	Klamath/Goose Lake Basins	The Klamath/Goose Lake Basins ecoregion covers river floodplains, terraces, and lake basins. A variety of wildrye (<i>Elymus</i> spp.), bluegrass (<i>Poa</i> spp.), and wheatgrass (<i>Agropyron</i> spp.) species once covered the basins, but most of the wet meadows and wetlands have been drained for agriculture. Sagebrush and bunchgrass occur in upland areas. Several marshland wildlife refuges are key to preserving regional biodiversity, particularly for at-risk bird and fish species. In California, Butte Valley is also included in the region. Although the Butte Valley area has some differences from Lower Klamath and Tule Lake Basins, it also has pasture and cropland.	63,600	600
Eastern Cascade Slopes and Foothills	Modoc Lava Flow and Buttes	The Modoc Lava Flows and Buttes ecoregion is a volcanic plateau surrounding the Medicine Lake Highlands that occur in the Cascades. It is lower and drier than those highlands with more juniper and pine. Soil temperature regimes are mesic, and soil moisture regimes are aridic and xeric. Common vegetation includes mostly western juniper, big sagebrush, and native grassland. Water drains down through joints in the basalt rock to the groundwater reservoir, limiting overland flow of water and development of stream channels on the volcanic plateau.	36,800	1,600

Ecoregion (EPA Level III)	Subdivisions (EPA Level IV Subdivisions)	Subdivision Description	Total Acres in Planning Area	BLM- Administered Surface Acres in Planning Area
Eastern Cascade Slopes and Foothills	Shasta Valley	The semi-arid Shasta Valley is located in the rainshadow of the Klamath Mountains on the west and the Cascades to the east. Quaternary alluvium occurs along with small hills of Tertiary volcanic rocks protruding through the alluvium. Quaternary debris avalanche flow deposits and Quaternary basalt flows also occur. Nearly level to moderately sloping floodplains, terraces, and alluvial fans are found here along with undulating lava flows and many small, moderately sloping to moderately steep hills on the alluvial plain. Elevations range from about 2,500 feet to 3,700 feet on the highest hill. Soil temperature regimes are mesic, and soil moisture regimes are aridic, xeric, and aquic. Big sagebrush, western juniper, annual grasslands, and sedge (<i>Carex</i> spp.) meadow communities are the main vegetation types. Most streams and rivers originate in adjacent mountain ecoregions. Lake Shastina is a large reservoir, and other small ponds occur in the region. Agriculture is affected by local springtime flooding and a short growing season, restricting crops to pasture, alfalfa, small grains and some limited field crops. Cattle production is a prominent use of the region.	227,800	2,500
Eastern Cascade Slopes and Foothills	Southern Cascades slope	Only a small arm of the Southern Cascades Slope ecoregion occurs in California, with most of it extending to the Upper Klamath Lake in Oregon. It is a transitional zone between the Cascades and the drier Eastern Cascade Slopes and Foothills. Ponderosa pine woodland becomes mixed with white fir, incense cedar, Shasta red fir, and Douglas-fir at higher elevations.	22,600	3,000
Eastern Cascade Slopes and Foothills	Old Cascades	The Old Cascades ecoregion is composed of foothills and low mountains of middle Tertiary volcanic rocks north of Mt. Shasta and extending up the Klamath River into Oregon. Soil temperature regimes are mesic and soil moisture regimes are xeric. Big sagebrush and other shrublands are widespread, with some Oregon white oak north of the Klamath River and on north-facing slopes. Some ponderosa pine and mixed conifer forest occurs on north-facing slopes at higher elevations. Wedgeleaf ceanothus (<i>Ceanothus cuneatus</i>) and native grassland communities are common on south-facing slopes at lower elevations. Water drains to the Klamath River.	132,900	3,900
Cascades	California Cascades Eastside Conifer Forest	The California Cascades Eastside Conifer Forest ecoregion is drier than the other California Cascades regions. It is dominated by ponderosa pine and, in some areas, Jeffrey pine, where conditions are harsher. In lower, drier areas, the region blends into the western juniper and sagebrush fields more typical of adjacent Eastern Cascade Slope and Foothills. The region wraps around to the west side (i.e., Mt. Shasta foothills) as similar dry conditions exist from the rain shadow cast by the Klamath Mountains to the west. Elevations range from 3,000 to 7,100 feet.	152,400	1,700

Ecoregion (EPA Level III)	Subdivisions (EPA Level IV Subdivisions)	Subdivision Description	Total Acres in Planning Area	BLM- Administered Surface Acres in Planning Area
Cascades	Southern Cascade Foothills	The Southern Cascades Foothills ecoregion of volcanic hills and plateaus is mostly in the 2,000- to 4,000-foot elevation range, stretching from the town of Paradise in the south to the Pit River in the north. It contains dry-mesic mixed conifer forest and lower montane black oak-conifer forest and woodland. Ponderosa pine is abundant along with some Douglas-fir, and, at higher elevations, white fir. Hardwoods are typically black oak and canyon live oak. Soil temperature regimes are mostly mesic with some frigid, and soil moisture regimes are xeric.	374,800	6,300
Cascades	Low Southern Cascades Mixed Conifer Forest	The Low Southern Cascades Mixed Conifer Forest ecoregion is generally lower in elevation and less rugged than the more highly dissected Western Cascades Montane Highlands to the north in Oregon. Although still mostly a mesic mixed conifer region, the climate is drier than in the western Cascades of Oregon, and the vegetation reflects it. Sierra Nevada species such as incense cedar, white fir, Shasta red fir, and Jeffrey pine that tolerate prolonged summer drought are present. Shrubs such as manzanita and ceanothus are common. Curl-leaf mountain-mahogany, big sagebrush, and antelope bitterbrush (<i>Purshia tridentata</i>) occur as well, with their dispersion centers in the Great Basin regions further east. River and stream discharge is also significantly lower than in systems to the north. Soil temperature regimes are mesic and frigid, and the soil moisture regime is xeric. Elevation ranges from about 3,000 to 7,600 feet.	791,500	2,000
Cascades	High Southern Cascades Montane Forest	The High Southern Cascades Montane Forest ecoregion is an undulating, volcanic plateau containing isolated buttes, cones, and peaks. Some parts of the region are glaciated. The terrain is less dissected than the Southern Cascades. In California, elevations of the region range mostly from 5,500 feet to 8,500 feet. Cryic soils support mixed coniferous forests dominated by mountain hemlock and lodgepole pine. White fir and Shasta red fir also occur in the region. This region has a longer summer drought and intermittent streams.	317,800	100

Source: USDI BLM GIS 2021

In **Table 2-33**, vegetation is classified according to four major structural groups: barrens or sparsely vegetated areas, grasslands, shrublands, and forests and woodlands. Acres recently burned, between 2016 to 2020, are also identified by structural group. Structural cover has implications for management considerations relating to wildlife habitat needs, grazing land suitability, fuels management, commercial forestry, and recreational opportunities.

Table 2-33. Vegetation Structural Groups within the NCIP Planning Area

Vegetation Group	NCIP Planning Area (Acres)	BLM-Administered Land (Acres)	Percentage of Planning Area
Barrens	166,400	2,700	1.00
Recently burned	14,900	500	0.11
Grasslands	1,799,400	20,100	5.00
Recently burned	121,600	2,300	0.85
Shrublands	1,112,800	74,500	20.00
Recently burned	238,000	27,600	1.65
Forest and woodlands	10,939,000	280,800	73.00
Recently burned	2,107,400	87,400	14.65
Other (water, urban areas, non-forest)	352,900	3,900	1.00
Recently burned	8,400	1,000	0.06

Source: USDI BLM GIS 2021

Barrens

Barrens represent sparsely vegetated plant communities in the CALVEG database that include cover types such as coastal dunes or lava flows. Barrens account for approximately 2,700 acres of BLM-administered land or one percent of the planning area.

Grassland

Grasslands represent open grass and meadow types that cover approximately 20,100 acres of BLM-administered land or 5 percent of the planning area. Cover types within the grassland group are coastal prairies, valley grassland, and montane meadows. The grassland type provides important foraging habitat for big game and raptors and is critical for the survival of grassland-adapted species. Grasslands are the appropriate structural vegetation group for livestock grazing, although they are susceptible to invasive, nonnative weeds. When inappropriate use causes a high level of disturbance, invasive species can establish quickly after introduction and outcompete native species. In the coastal zone, grasslands are susceptible to shrub and conifer encroachment if not used sufficiently and/or burned at appropriate fire return intervals.

Shrubland

Shrublands cover approximately 28,900 acres of BLM-administered land or 20 percent of the planning area. Shrubland cover types include the north coastal shrub, coastal sage shrub, chamise chaparral, scrub oak-mixed chaparral, ceanothus-mixed chaparral, montane shrubland, bitterbrush, curleaf mountain-mahogany-bluebunch wheatgrass, basin big sagebrush, mountain big sagebrush, low sagebrush, other sagebrush types, snowbush, and chokecherry-serviceberry-rose types.

Serpentine chaparral occurs both in mixed and montane chaparral where serpentine soils are weathered from ultramafic parent material. The relative high concentration of heavy metals paired with

the low concentration of macro-nutrients in serpentine soils results in less productive, widely spaced plant communities. This also results in highly diverse plant communities adapted to these conditions, many of which are rare and endemic species (EcoAdapt 2019).

In certain areas, this vegetation type provides winter range for elk (*Cervus elephus*) and black-tailed mule deer (*Odocoileus hemionus columbianus*). Bobcats (*Lynx rufus*) are often encountered in Northern California shrublands, and rodent species and reptiles are diverse and widespread. Many bird species are found in these shrublands. Some of the more widespread taxa include California thrasher (*Toxostoma redivivum*), spotted towhee (*Pipilo maculatus*), California towhee (*Melospiza crissalis*), Bell's sparrow (*Artemisospiza belli*), rufous-crowned sparrow (*Aimophila ruficeps*), California quail (*Callipepla californica*), blue-gray gnatcatcher (*Poliophtila caerulea*), wrentit (*Chamaea fasciata*), Bewick's wren (*Thryomanes bewickii*), California scrub-jay, (*Aphelocoma californica*), and hummingbirds (*Selasphorus* spp.).

Forest and Woodlands

There are several forest and woodland types within the planning area. For the purposes of this RMP, the Society of American Foresters (SAF) forest cover type classification has been selected to describe the different forest compositions. Forest and woodlands comprise approximately 280,800 acres of BLM-administered land or 73 percent of the planning area. Additional information regarding management of forests and woodlands is found in the Forestry Section (**Section 2.2.6**).

Forest types cover approximately 175,000 acres, or 45 percent of the BLM-administered land in the planning area (**Table 2-34**). Dominant coniferous SAF cover types represented include Douglas-fir, ponderosa pine, redwood, western white pine, and fir-spruce. Other key conifers include knobcone pine, foothill pine, and western juniper. Wildlife species associations vary by forest type and seral stage. Conifer dominant, old-growth forests provide habitat for species of conservation concern like the northern and California spotted owls (*Strix occidentalis caurina* and *S. occidentalis occidentalis*, respectively), marbled murrelet (*Brachyramphus marmoratus*), northern goshawk (*Accipiter gentilis*), and Pacific fisher (*Pekania pennanti*; see **Section 2.2.17**, Wildlife/Special Status Wildlife).

The Pacific marten's optimal habitats are various mixed evergreen forests with more than 40 percent crown closure, with large trees and snags. Important habitats include red fir, lodgepole pine, subalpine conifer, mixed conifer, Jeffrey pine, and eastside pine (NatureServe 2020). Habitat with limited human use is important. The Pacific marten requires a variety of different-aged stands, particularly old-growth conifers, and snags, which provide abundant cavities for denning and nesting. The Pacific marten tends to travel along ridgetops and rarely moves across large areas devoid of canopy cover. Small clearings, meadows, and riparian areas provide foraging habitats, particularly during snow-free periods.

Table 2-34. Society of American Foresters Cover Types Intersected with NWFP-Designated Acres in the NCIP Planning Area

Forest Group Data Source: CALVEG Table 60D SAF Western Forest Type Groups	BLM Field Office	BLM- Administered Acres	Northwest Forest Plan (NWFP) Designated Acres: Late Successional Reserve	NWFP Designated Acres: Managed Late Successional Area	NWFP Designated Acres: Adaptive Mgmt. Areas	NWFP Designated Acres: Other*	NWFP Designated Acres: Congressionally Reserved	NWFP Designated Acres: No Designation	Non-NWFP Acres
Douglas-fir	Arcata	58,406	30,850	4,272	—	5,236	18,044	4	—
Douglas-fir	Redding	26,903	2,384	—	416	16,079	22	—	8,002
Hemlock– Sitka Spruce	Arcata	40	—	—	—	—	—	40	—
Hemlock– Sitka Spruce	Redding	—	—	—	—	—	—	—	—
Ponderosa Pine	Arcata	6,619	2,946	3	—	1,118	2,552	—	—
Ponderosa Pine	Redding	58,697	112	—	1,038	20,895	13	—	36,639
Western White Pine	Arcata	3,150	587	—	—	30	2,533	—	—
Western White Pine	Redding	170	—	—	—	65	—	—	105
Fir-Spruce	Arcata	2,025	9	—	—	81	1,935	—	—
Fir-Spruce	Redding	17,842	86	—	116	10,967	36	—	6,637
Redwood	Arcata	623	316	—	—	32	275	—	—
Redwood	Redding	—	—	—	—	—	—	—	—
Non- commercial	Arcata	12,973	3,974	219	—	5,867	2,897	16	—
Non- commercial	Redding	44,610	139	—	31	10,777	64	—	33,609
Hardwoods	Arcata	24,768	9,511	2	—	4,593	10,624	38	—
Hardwoods	Redding	27,205	849	—	60	11,900	20	—	14,376
Not SAF designated	Arcata	25,000	4,265	138	—	5,804	13,377	1416	—
Not SAF designated	Redding	78,961	107	—	147	13,373	34	—	65,300

Source: USDA and USDI 1994 and Society of American Foresters 1980

* All Other NWFP designated lands (OTHER)—This category encompasses other federal lands designated through individual land management plans as Administratively Withdrawn, Matrix, Riparian Reserves, and occupied marbled murrelet sites as defined in the Northwest Forest Plan.

Each SAF Forest Type Group is composed of multiple SAF Forest Types, listed and numbered below:

Douglas-fir (group 11): Includes Interior Douglas-fir (210), Pacific Douglas-fir (229), Douglas-fir–Western Hemlock (230), Port Orford Cedar (231), Douglas-fir–Tanoak–Pacific Madrone (234), and California Coastal Conifers (261)

Ponderosa Pine (group 13): Includes Interior Ponderosa Pine (237), Western Juniper (238), Pacific Ponderosa–Douglas-fir (244), Pacific Ponderosa Pine (245), and Jeffrey Pine (247)

Fir-Spruce (group 17): Includes Mountain Hemlock (205), Red Fir (207), White Fir (211), Grand Fir (213), and Sierra Mixed Conifer (243)

Redwood (group 18): Includes Redwood (232) only

Non-commercial Group (group 19): Includes White Bark Pine (208), California Black Oak (246), Knobcone Pine (19), Blue Oak–Gray Pine (250), and California Cypress (260)

Hardwoods (group 20): Includes Aspen (217), Red Alder (221), Oregon White Oak (233), Cottonwood–Willow (235), Canyon Live Oak (249), and California Coast Live Oak (255)

No SAF Forest type designation (group 0): Includes Hard Chaparral (262), Nonnative Conifer Forest (263) Nonnative Mixed Forest (264), and Nonnative Hardwood Forest (265)

Woodland/hardwood cover types comprise approximately 109,100 acres (non-commercial and Hardwood types from **Table 2-34**), or 28 percent of the BLM-administered land in the planning area. The major hardwoods upon these landscapes include oaks such as Oregon white oak, black oak, canyon live oak, interior live oak, blue oak, and valley oak. Oak woodlands are home to upland game, small- and medium-sized mammals, birds, reptiles, and amphibians. They also have significant cultural values in certain areas to local Native American tribes within the planning area. Other hardwood areas are dominated by red alder and big leaf maple more coastally, and Fremont cottonwood, western sycamore, willows, and box elder along riparian areas throughout the Central Valley, Foothills, and Interior Mountains.

Vulnerable Vegetation Communities

Vegetation management and planning also consider vulnerable vegetation communities. The *Manual of California Vegetation* (MCV) by Sawyer, Keeler-Wolf, and Evens (2009) and CDFW CNDDDB recognize Natural Community Conservation ranks using NatureServe's Heritage Program methodology. Global and state vulnerable plant communities reflect the overall status of a community throughout its global and state range, respectively. Vulnerable plant community ranks are distinguished between global (G) and state (S) status and are defined as vulnerable (3), imperiled (2), or critically imperiled (1), as described in **Section 2.2.11**, Special Status Plants.

There are 23 vulnerable to critically imperiled plant community types within the planning area, though not all are known to occur on BLM-administered land. Vulnerable plant community types do not necessarily contain rare plant species, though they often do. These communities are instead recognized for their value in providing a specific, homogenous plant assemblage and ecological value upon on the landscape.

Table 2-35 lists plant communities that are ranked vulnerable to critically imperiled in the planning area using the Holland (1986) nomenclature used by the CNDDDB. National Vegetation Classification System compliant plant community series consistent with MCV are included in parentheses below the Holland vegetation community type that was searched in the CNDDDB.

Table 2-35. Vulnerable to Critically Imperiled Vegetation Types on BLM-Administered Lands within the NCIP Planning Area

Plant Community (Holland Type) and MCV Series Names (in Italics)	Global Rank	State Rank	Ecoregion	BLM Management Areas	Occurs on BLM-Administered Lands
Active Coastal Dunes (<i>sand verbena-beach bursage series</i>)	G3	S2	Coast Range	Scattered Tracts; Samoa Peninsula	Yes
Alkali Seep (<i>ditch-grass series</i>)	G3	S2	Cascades; Klamath Mountains/California High North Coast Range	Ishi; Shasta	Yes
Coastal and Valley Freshwater Marsh (<i>yellow pond lily, pondweed with floating or submerged leaves, duck weed, cattails, bulrush series</i>)	G3	S2	Central California Valley; Coast Range	Ishi; Sacramento River; Scattered Tracts	Yes
Coastal brackish marsh (<i>includes bulrush and cattail series</i>)	G2	S2.1	Coast Range	Scattered Tracts	Yes
Coastal terrace prairie (<i>Pacific reedgrass, California oatgrass, tufted hairgrass series</i>)	G2	S2.1	Coast Range	Scattered Tracts	Yes
Fen	G2	S1.2	Cascades; Coast Range, Klamath Mountains/California High North Coast Range	Klamath; Red Mountain; Scattered Tracts	Yes
Grand fir forest (<i>grand fir series</i>)	G1	S1.1	Coast Range	Scattered Tracts	--
Great Valley Cottonwood Riparian Forest (<i>black willow, Fremont cottonwood, mixed willow series</i>)	G2	S2	Central California Foothills and Coastal Mountains; Central California Valley	Ishi; Sacramento River; Shasta; Yolla Bolly	Yes
Great Valley Oak Riparian Forest (<i>valley oak series</i>)	G1	S.1	Central California Foothills and Coastal Mountains; Central California Valley	Ishi; Sacramento River; Shasta; Yolla Bolly	Yes
Great Valley Willow Scrub (<i>Arroyo, mixed, Pacific willow series</i>)	G3	S3	Central California Foothills and Coastal Mountains; Central California Valley	Ishi; Sacramento River; Shasta	Yes
Northern Basalt Flow Vernal Pool	G3	S2	Central California Foothills and Coastal Mountains; Central California Valley	Ishi	Yes
Northern Coastal Bluff Scrub (<i>blue blossom, salal-black huckleberry series</i>)	G2	S2	Coast Range	Scattered Tracts	Yes
Northern Coastal Salt Marsh (<i>cordgrass, pickleweed, saltgrass series</i>)	G3	S3	Coast Range	Samoa Peninsula; Scattered Tracts	Yes

Plant Community (Holland Type) and MCV Series Names (in Italics)	Global Rank	State Rank	Ecoregion	BLM Management Areas	Occurs on BLM-Administered Lands
Northern Foredune Grassland (<i>native dunegrass series</i>)	G1	S1	Coast Range	Samoa Peninsula; Scattered Tracts	Yes
Northern Interior Cypress Forest (<i>includes Baker's cypress, Sargent's cypress and McNab cypress alliances</i>)	G2	S2	Cascades; Central California Foothills and Coastal Mountains; Coast Range; Klamath Mountains/California High North Coast Range	Ishi; Klamath; Red Mountain; Shasta	Yes
Northern Vernal Pool	G2	S2	Cascades	Klamath	Yes
Northern Volcanic Mud Flow Vernal Pool	G1	S2	Central California Foothills and Coastal Mountains; Central California Valley	Ishi	Yes
Northern Hardpan Vernal Pool	G3	S3	Central California Valley	Ishi; Yolla Bolly	Yes
Serpentine Bunchgrass (<i>foothill needlegrass, Idaho fescue and one-sided bluegrass series</i>)	G2	S2	Coast Range; Klamath Mountains/California High North Coast Range	Klamath; Red Mountain	Yes
Sitka Spruce Forest (<i>Sitka spruce series</i>)	G1	S1	Coast Range	Scattered Tracts	Yes
Sphagnum Bog	G3	S1	Cascades; Coast Range	Ishi; Scattered Tracts	--
Valley Needlegrass Grassland (<i>desert, nodding, one-sided, purple needlegrass series</i>)	G3	S3	Central California Foothills and Coastal Mountains; Central California Valley	Yolla Bolly, Sacramento River	Yes
Valley Oak Woodland (<i>valley oak series</i>)	G3	S2	Klamath Mountains/California High North Coast Range	Covelo Vicinity; Scattered Tracts	Yes

Source: CDFW 2021a intersected with NCIP planning area (USDI BLM GIS 2021) and BLM management areas (USDI BLM GIS 2021)

Community types meeting a vulnerability rank of 3 or greater were queried within the planning area. BLM community occurrence data are based on CNDDDB geospatial data query results, combined with National Vegetation Classification System/MCV series descriptions, CNDDDB species known site data, FO mapping, and professional field knowledge. Reporting of plant communities to the CNDDDB has been limited and not emphasized. Some series or types are present on BLM-administered lands but are not recorded in the CNDDDB. The known CNDDDB occurrences of ecologically restricted species such as vernal pool dependent species, for example, indicate that specific plant communities are indeed present on BLM-administered land. There are currently 23 vulnerable to critically imperiled vegetation communities known on BLM-administered land within the planning area.

Many vulnerable plant communities are within the sensitive habitats shown on **Map 2-24, Appendix A**, which depicts a portion of a statewide analysis derived from the CDFW Areas of Conservation

Emphasis II project (CDFW 2016a, 2021c). Contributing sources of data to the sensitive habitat areas map include the National Wetland Inventory, Department of Water Resources Land Cover, Ducks Unlimited, California Lakes, Department of Forestry and Fire Protection, Robert F. Holland vernal pool data, CNDDDB rare natural communities, and sensitive habitat data from 40 fine-scale Vegetation Classification and Mapping Program (VegCAMP) vegetation maps.

Trends

Natural vegetation is typically defined by a variety of influences including soil type, elevation, topography, and climate. In modern history, vegetation has experienced a fairly static climate regime. Other factors contributing to the type and distribution of natural vegetation involve human disturbance, such as by development, or changes to land uses and practices.

Fire is also a primary influencer of vegetation type change. High-severity fires have affected large areas in the planning area over the past few years (see **Section 2.2.16**) and have had major effects on vegetation types and trajectories. The forests/woodlands and shrublands vegetation types have experienced the most fires with 2,107,400 acres and 238,000 acres burned within the past few years, respectively (see **Table 2-34**). Some burned areas may never return to their previous assemblages, as much of the vegetation in the planning area has a moderate to mid-high vulnerability to climate stress due to projected climate change (Thorne et al. 2016).

The trend for native plant communities in the planning area is variable. For some coastal or vulnerable plant communities under active management, there is an upward trend. For coniferous-dominated forest areas under drought stress, there may be a downward trend with shifts in structural vegetation cover, for example. Hardwood forests dominated with tanoak and California bay may see a downward trend due to SOD disease and treatment management, for example, which might affect community structure and diversity, as well as the interdependent relationships with wildlife.

In areas near or next to urban centers or roads, there has been a trend of increased fragmentation and accompanying dewatering of watersheds associated with illegal cultivation practices. Invasive weeds are trending toward increase in most areas, opportunistically spreading with disturbance, development, and climate stress. A trend toward increased annual or seasonal drought, and an increased fire return interval may affect the resistance to insects or disease, and therefore resilience of a given plant community, and thereafter its vegetation structure, diversity, and invasive weed status.

With so many influences, it is difficult to predict if overall native plant diversity would decline as ongoing speciation that gives rise to new species, and low extinction rates have historically been a constant in the California Floristic Province. According to Lancaster and Kay (2013), California's topographic complexity is a key feature that provides some climatic buffering under changing climates that favor plant species persistence and diversification. However, flatter regions or rain shadow areas may not be as resistant to range reductions or even species loss. While plant community structure, range of distribution, and associations are likely to dramatically shift in the future, new incoming vegetation communities may develop resilience to ongoing climatic change or new disturbance regimes. However, it is unknown how temporal or persistent any new equilibrium might be, as there is no known endpoint for change in the future.

Forecast

Climate change will likely be a strong vector of potentially dramatic effects on vegetation distribution, reproductive success, and plant-wildlife relationships in the planning area. Impacts to plant survival, reproduction, and gene flow may inhibit many plant communities' ability to adapt in ways that might keep pace with climatological changes. Expansion, contraction, or reorganization of some plant communities will likely occur. Refugia such as riparian areas, topographically diverse or higher-elevation areas, and areas within climatological influence of the coast may be able to accommodate cold-adapted plant communities that are unable to tolerate extended heat or drought. Conversely, warm-adapted plants may expand in areas previously occupied by cold-adapted plants. For example, as higher elevations warm and receive less snow, some cold-intolerant plants may be able to expand into higher areas, competing with pre-existing species, particularly during times of disturbance and recovery. There will also likely be temporal and spatial impacts on phenology (life stages) such as germination and growth, dormancy, reproduction, and senescence.

Phenology of plants and plant communities, in general, is affected by climate change. The timing of wildlife and pollinator needs and their important interactions with respect to plant resources available or services needed by plants may become mismatched, potentially compromising co-dependent ecological resource partnerships.

Drought-triggered plant stress, mortality, related insect and invasive weed infestations, and wildfires have occurred all over the state of California, including within the planning area. Tree mortality and insect infestation has increased over the past 4 years (2011–2015) with sustained drought stress. A recent USDA (2016) technical report documents the overarching trends related to drought for United States forests and rangelands and details the far-reaching implications and impacts already in motion.

Butz and Safford (2010, 2011) report the following projections applicable to the planning area:

- Temperature may warm by about -13°C by 2100, with precipitation remaining similar or slightly reduced compared to today. Most models agreed that summers would be drier than they are currently, regardless of levels of annual precipitation because of increased evapotranspiration.
- Evergreen conifer forests in inland northwest California show significant declines and subsequent replacement by Douglas-fir–tanoak forest and tanoak–madrone–oak forest under most future climate scenarios.
- Projected vegetation changes along the coast are much less dramatic, due to maritime buffering of changes in temperature and precipitation.
- For inland northern California, a large expansion of grassland was projected, due primarily to increased fire frequency in shrublands and forest; grasslands were not projected to increase notably in moister forest habitats closer to the coast.
- Increased frequency and/or intensity of fire in coniferous forest in California could alter forest species composition and reduce the size and extent of late-successional refugia. Thus, if fire becomes more active under future climates, there may be significant repercussions for old-growth forest and old-growth-dependent biota.

Vegetation modeling data that forecast vegetation extent relative to potential climate trend scenarios have been completed for most California ecological subregions, with the exception of the Great Valley/Central California Valley ecoregion.

Safford, North, and Meyer (2012) describe modeling that Lenihan et al. (2003, 2008) have completed, as follows:

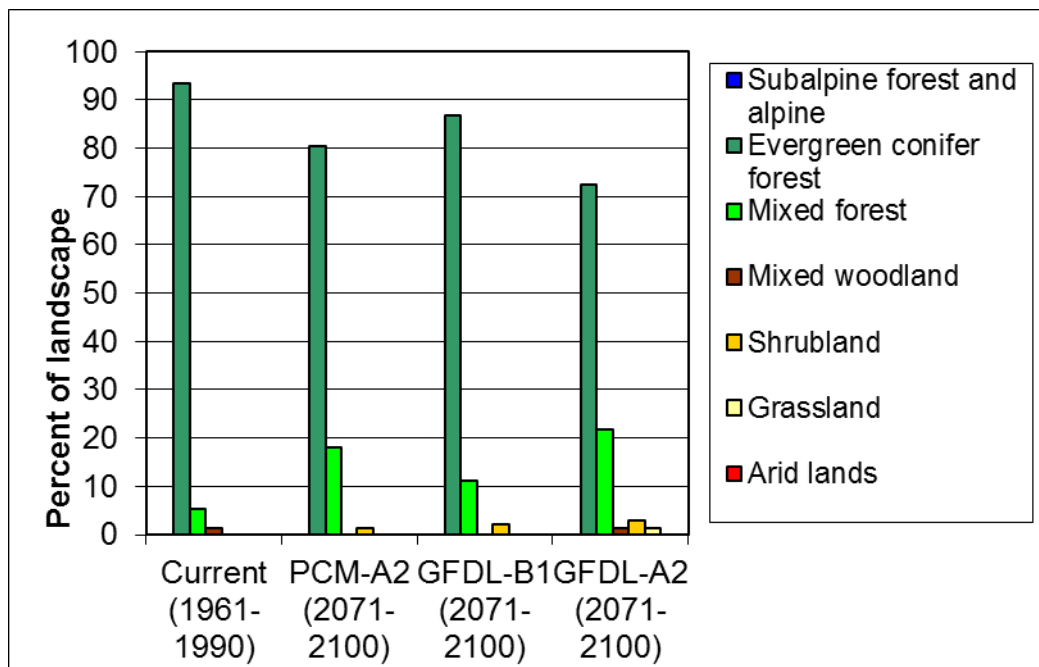
Lenihan et al. (2003, 2008) used a dynamic ecosystem model (“MCI”) that estimates the distribution and productivity of terrestrial ecosystems such as forests, grasslands, and deserts across a grid of 100 km² (38.6 mi²) cells. To date, this is the highest resolution at which a model of this kind has been applied in California. Based on their modeling results, Lenihan et al. (2003, 2008) projected that forest types and other vegetation dominated by woody plants in California would migrate to higher elevations as warmer temperatures make those areas suitable for colonization and survival. For example, with higher temperatures and a longer growing season, the area occupied by subalpine and alpine vegetation was predicted to decrease as evergreen conifer forests and shrublands migrate to higher altitudes. Under their “wetter” future scenarios (i.e., slightly wetter or similar to today), Lenihan et al. (2003, 2008) projected a general expansion of forests in the Sierra Nevada, especially in the north and at higher elevations. With higher rainfall and higher nighttime minimum temperatures, broadleaf trees (especially oak species) were predicted to replace conifer-dominated forests in many parts of the low- and middle-elevation Sierra Nevada. Under their drier future scenarios, Lenihan et al. (2003, 2008) predicted that grasslands would expand, and that increases in the extent of tree-dominated vegetation would be minimal. An expansion of shrublands into conifer types was also predicted, owing to drought and increases in fire frequency and severity, but increasing fire frequency in the Sierra Nevada may replace much low- to middle-elevation shrubland with grassland. Hayhoe et al. (2004) also used the MCI ecosystem model to predict vegetation and ecosystem changes under a number of different future greenhouse gas emissions scenarios. Their results were qualitatively similar to the Lenihan et al. (2003, 2008) results.

The Ecological Subregions used by Lenihan (**Map 2-25, Appendix A**) for modeling are derived from ecological units delineated at the Province level (Bailey et al. 1994) and then further broken into subregions (Miles and Goudey 1997). These subregions were adopted in 1994 by the Forest Service as a planning standard. Forest Service ecological subregions consider factors such as climate, physiography, water, soils, air, hydrology, and potential natural communities. Similarly, EPA level III ecoregions are identified by similarities in geology, physiography, vegetation, climate, soils, land use, wildlife distributions, and hydrology. The EPA level III ecoregions developed by the EPA, USGS, and Commission for Environmental Cooperation are the ecoregional standard being used for the planning area. Forest Service Ecological Subregion and EPA level III ecoregion delineations produce subtle differences. Both are shown in **Map 2-25, Appendix A** for easy comparison when interpreting vegetation extent graphics.

Hugh Safford, Regional Ecologist for the Forest Service’s Pacific Southwest Region (California, Hawaii, and Pacific Islands) and research faculty associate with the Department of Environmental Science and Policy, University of California–Davis, developed graphics from data provided by Lenihan et al. (2008); these are illustrated in **Chart 2-4** through **Chart 2-10** below. The graphics follow the Forest Service Ecological Subregions and contain the results of three models of potential future vegetation extent in years 2071–2100, compared to the most recent currently known extent. The models are broad enough that the BLM does not feel the recent local fires would change these trends. The three scenarios that the models were based on are as follows:

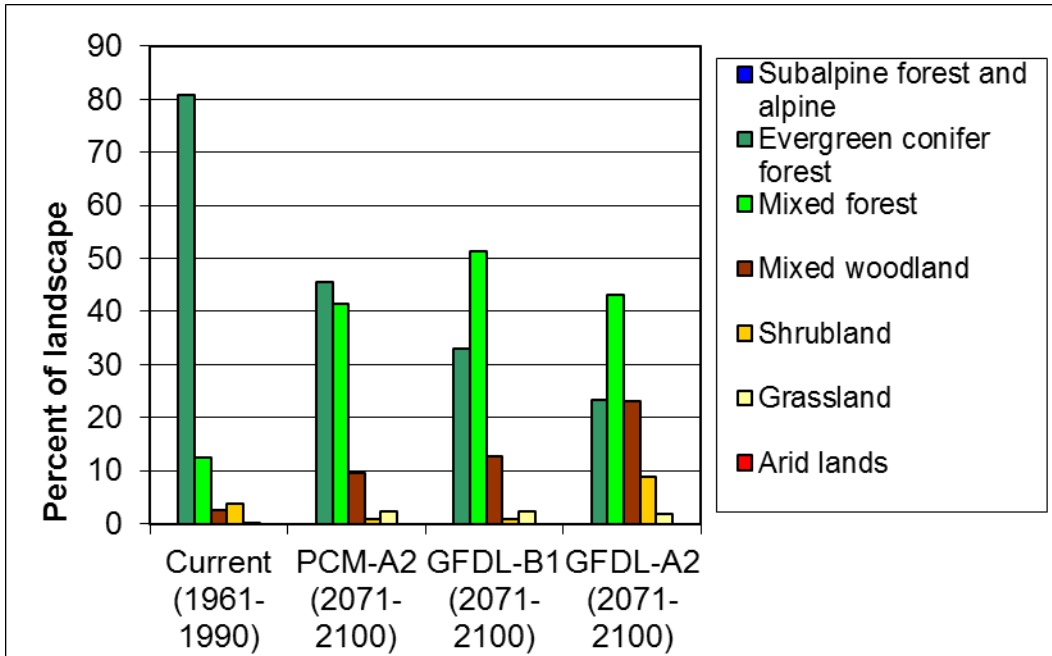
- The PCM-A2 model reflects a trend of similar precipitation as today, with a $<3^{\circ}\text{C}$ temperature increase.
- The GFDL-B1 model reflects a trend that is moderately drier than today, with a moderate temperature increase ($<3^{\circ}\text{C}$).
- The GFDL-A2 model reflects a much drier climate than today and much warmer ($>4^{\circ}\text{C}$).

Chart 2-4. Predicted Vegetation Extent for the Northern California Coast (263A)



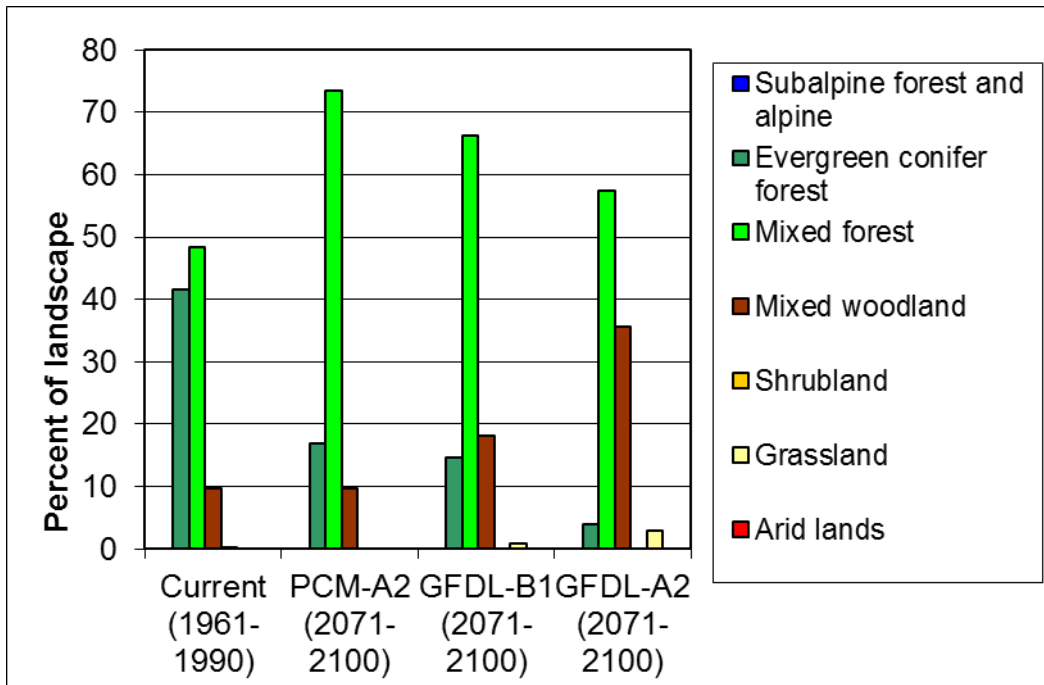
Source: Lenihan et al. 2008

Chart 2-5. Predicted Vegetation Extent for the Klamath Mountains (M261A)



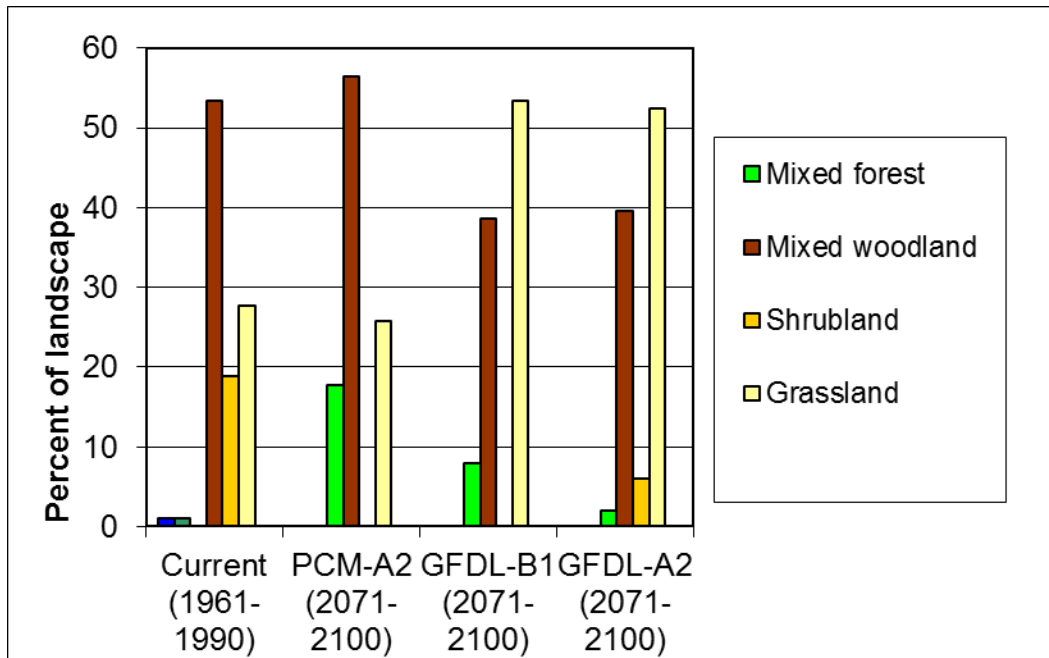
Source: Lenihan et al. 2008

Chart 2-6. Predicted Vegetation Extent for Northern California Coast Ranges Region (M261B)



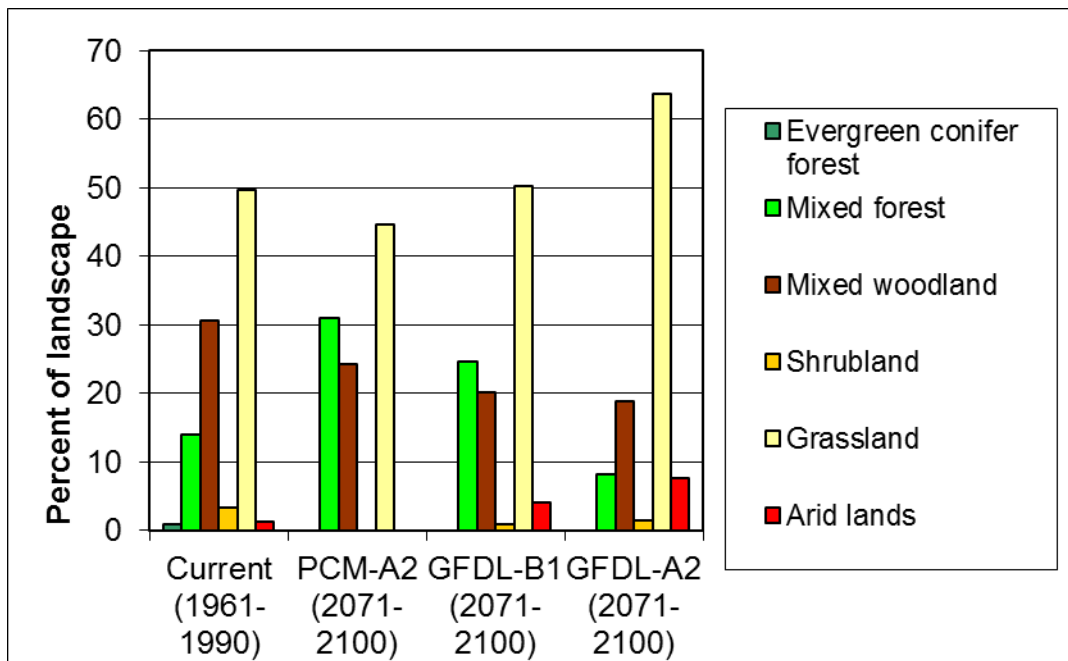
Source: Lenihan et al. 2008

Chart 2-7. Predicted Vegetation Extent for Northern California Interior Coast Range (M261C)



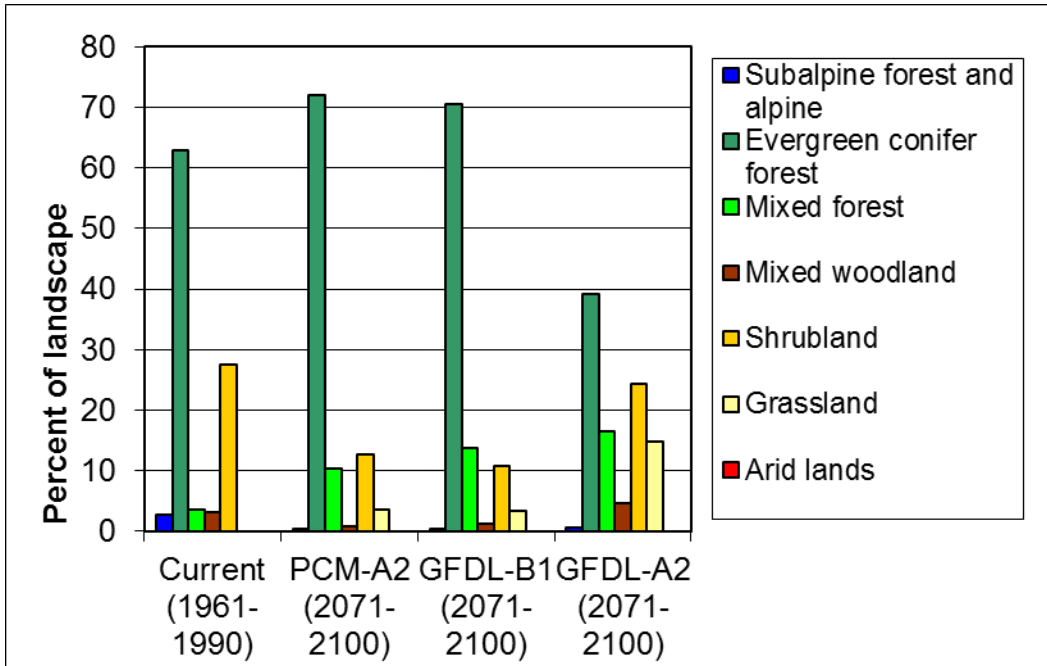
Source: Lenihan et al. 2008

Chart 2-8. Predicted Vegetation Extent for Sierra Nevada Foothills Region (M261F)



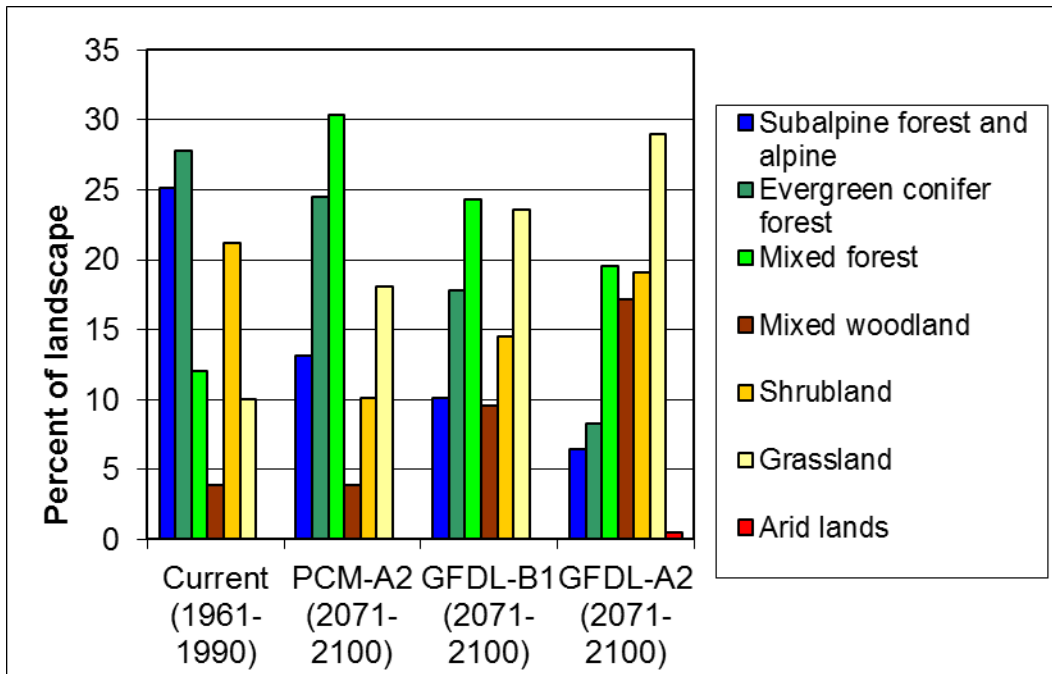
Source: Lenihan et al. 2008

Chart 2-9. Predicted Vegetation Extent for Cascades and Eastern Cascades Slopes and Foothills Regions (M261D)



Source: Lenihan et al. 2008

Chart 2-10. Predicted Vegetation Extent for Sierra Nevada Region (M261E)



Source: Lenihan et al. 2008

Analysis of climate trends for coastal California conducted by Fernandez, Hamilton, and Kueppers (2015) aligns with Butz and Safford (2010) findings for warmer temperatures. However, for the immediate coast and in the vicinity of coast redwood habitat, variability due to wind-driven upwellings of cold water may limit future increases in coastal temperatures. Combining historical high-resolution, historic climate records with coarse, climate projection models, Fernandez and colleagues' study refines the climate forecast for coastal California over the next 15 years (2020–2030) with a warmer, normal rainfall future likely in the near term. Under these conditions, climatically livable or suitable habitat for coast redwood would expand in its northern range, but significantly contract at the southern end of its current range.

Understanding and planning for vegetation management, resilience, and conservation can be aided by studies that model climate trajectory with potential suitable habitat. The BLM should, to the extent practicable, manage with consideration of providing landscape connectivity for plant communities to expand into potential suitable habitat as informed by climate trajectories and scientific and relevant modeling results. Management practices that may enhance ecosystem resilience and sustainability by removing or reducing other, non-climate stressors should be considered and applied wherever possible; examples might be reductions of stem densities of smaller fire-intolerant trees and increased use of wildland fire to improve forest stand health.

The draft California Carbon Action Plan and Tree Mortality Task Force is working to set statewide and regional goals for forest vegetation to support climate adaptation strategies that may be most appropriate at ecoregional scales. Future incorporation of regionally appropriate goals into the resource management planning process, as they become finalized by the Tree Mortality Task Force, may lead to improved vegetation management and conservation effectiveness.

Several vulnerable plant communities that are inside the boundaries of ACECs, designated wilderness areas, and specially designated wildlife areas can be adequately protected from several forms of recreational impact. However, within and outside of those areas, there remains a high potential for a suite of changes and potential adverse impacts on native plant communities resulting from climate change or other uses of public land (such as dozer lines and ROWs for energy transmission or new clean energy development projects). The BLM can play a conservation role in preventing small and large-scale habitat fragmentation in order to support successful pollination, reproduction, gene flow, adaptation, and healthy population sizes. The BLM has an opportunity to provide, to the greatest extent practicable, maintenance of native landscapes that can provide ecological function and resilience to disturbance. It is important that BLM work to conserve areas of intact native vegetation to prevent plants and communities that are common today from becoming the new special status plants and vulnerable plant communities of tomorrow.

Key Features

The factors below should be considered when making management decisions that affect vegetation such as ROWs, grazing allocations, land disposals, timber harvest, fuels treatments, or the development of new recreation areas.

Global and Regional Biodiversity

Areas of vegetation that contribute to biodiversity on a regional or global scale should be managed to maintain and/or enhance those high-quality conditions. Riparian areas are widely recognized for their

important contributions to biodiversity in the arid West and should be included in this group. Habitats with serpentine soils should also be a focus of conservation concern due to their high rates of endemism and biodiversity (Rajakaruna and Boyd 2014).

Global biodiversity hotspots are shown in **Map 2-26, Appendix A**. The red, hotspot area visible over the state of California corresponds to the California Floristic Province, in which the planning area falls. According to the criteria developed by Myers et al. (2000), a hotspot must meet two thresholds in order to qualify: 1) it must have at least 1,500 endemic, native vascular plant species; and 2) it must have already lost at least 70 percent of its primary, native vegetation. For the planning area, native plant biodiversity can be seen in **Map 2-27, Appendix A**. It shows native plant species richness across EPA III ecoregions as obtained from the CDFW Areas of Conservation Emphasis II project. The Klamath Mountains and Sierra Nevada ecoregions are the most biodiverse areas in the planning area; special consideration should be made to ensure habitat connectivity and prevention of fragmentation to support healthy ecological conditions and gene flow.

Pristine Vegetative Communities

Areas that support pristine or otherwise intact, un-fragmented vegetation should be managed to maintain these qualities. Areas considered as high-quality examples of common vegetation communities should be conserved to prevent them from becoming the vulnerable to critically imperiled communities of the future. **Map 2-28, Appendix A** reflects largely protected natural landscape blocks that are a combination of designated wilderness areas and parks and natural areas that are protected from conversion from natural land status. These areas are not representative of all pristine or un-fragmented blocks of natural vegetation, as the natural landscape blocks shown in **Map 2-28, Appendix A** exclude conservation easement areas and natural areas that lack a formal protective mechanism. While the natural landscape blocks shown are relatively protected from further vegetation fragmentation in the future, many pristine areas outside of those shown remain vulnerable.

Essential Connectivity—Species Migration Corridors

Corridors that allow for upward, downward, or trans-regional migration of species should be maintained or re-established where possible and managed for high levels of vegetation health. Development, high-impact recreation use, or other forms of fragmentation within intact, un-fragmented, high biological value areas that can also serve as plant and animal species migration corridors should be discouraged to the maximum extent practicable.

Map 2-28, Appendix A shows the planning area as it relates to the portion of a statewide network of 850 largely protected and relatively intact natural landscape blocks (ranging in size from 2,000 to about 3.7 million acres) connected by 192 essential connectivity areas analyzed by the CDFW Biological Information and Observation System (CDFW 2016b). These essential connectivity areas correlate to areas of high biological value that consider essential or designated critical habitat for threatened or endangered species, presence of wetlands or vernal pools, biodiversity hotspots based on rarity-weighted richness indices from CNDDDB records, and BLM ACECs designated for biological values. The corridors also reflect the ease, or lack of surface resistance, by which species can move freely across the natural landscape, determined by least-cost corridor modeling. The results of least-cost modeling are shown by an indexed ranking where a value of 0 to 50 reflects the least cost to species and the greatest permeability of movement, and the value of 100 reflects the greatest cost to species and the least permeability of movement.

There are fewer essential connectivity areas than natural landscape blocks. This is because each essential connectivity area serves to connect at least two, and as many as fifteen, natural landscape blocks. Due to the broad, statewide nature of this map and its focus on connecting very large blocks of mostly protected natural lands, the network omits many areas that are important to biological conservation. The purpose of the map is to focus attention on large areas important to maintaining ecological integrity at the broadest scale. Natural areas excluded from this broad-brush essential connectivity network should not be considered as unimportant to connectivity conservation or to sustaining California's natural heritage.

National Native Seed Strategy

The National Seed Strategy for Rehabilitation and Restoration 2015–2020 (USDI 2015) recognizes the importance of healthy native plant communities as an essential foundation for ecosystem integrity and diversity. Healthy native plant communities create habitat for animals; provide ecosystem services that sustain people, their communities, and their economies; and have intrinsic and irreplaceable biotic value that will become increasingly important in the future. The strategy's vision is "the right seed in the right place at the right time," and the mission is "to ensure the availability of genetically appropriate seed to restore viable and productive plant communities and sustainable ecosystems." The BLM strives to meet the four goals of the strategy:

- Identify seed needs and ensure the reliable availability of genetically appropriate seed
- Identify research needs and conduct research to provide genetically appropriate seed and to improve technology for native seed production and ecosystem restoration
- Develop tools that enable managers to make timely, informed seeding decisions for ecological restoration
- Develop strategies for internal and external communication

Honeybee and Other Pollinator Support through Vegetation Management

Vegetative communities provide substantial floral resources to native and nonnative pollinators that provide a vital service to sustaining vegetation itself and agricultural resources on or adjacent to public land. The White House (2015) released *National Strategy to Promote the Health of Honeybees and Other Pollinators*, which calls upon federal agencies to review any new or renewing land management contracts and grants for the opportunity to include requirements for enhancing pollinator habitat. The BLM will begin to integrate pollinator-friendly native plant species (native plant species that provide pollen and nectar) into the restoration work taking place in post-fire rehabilitation and stabilization seedings, fuels treatments, or other projects that use seeding or seedlings. Immediate measures to support pollinators may include planting pollinator-friendly vegetation and increasing flower diversity in plantings, limiting mowing practices, and avoiding the use of pesticides in sensitive pollinator habitats through integrated vegetation and pest management practices.

Key actions the BLM will take to restore and maintain habitat for pollinators include:

- Use at least one pollinator-friendly native plant species in all vegetation management projects involving the use of seedings or seedlings. Work toward the goal of providing a suite of early blooming to late-blooming flowering plants to ensure that floral resources are available for pollinators throughout the growing season.

- Implement seeding protocols identified in the National Native Seed Strategy (USDI 2015). Use the national network of native seed reserves and storage facilities created by implementation of the strategy and the BLM-led Seeds of Success (USDI BLM 2016e) national native seed collection program to identify for collection those species most important for pollinators locally and increase their availability in plant materials programs.
- Include species with high pollen and nectar resources and consider the use of native milkweed (*Asclepias* spp.) seed or plugs, especially when planning and implementing restoration projects where monarch butterflies migrate through the BLM-administered lands to their overwintering areas in coastal California or in Mexico.
- Check with the National Seed Warehouse to ensure the use of currently available pollinator-friendly native seed.
- Include considerations in line with other pollinator work to restore the monarch butterfly migration to wintering grounds in Mexico or along the California Coast by providing nectar and pollen plants, as well as native milkweeds, in vegetation treatments and habitat improvement projects. Coordinate with county weed programs to manage existing milkweed populations on public lands as a native plant resource, rather than as noxious weeds or undesirable species.

2.2.14 Visual Resources

The visual resources throughout the planning area are extremely diverse, including ocean landscapes, dunes, forested mountains, snow-covered mountains, rolling hills, flat valleys, oak savannah, large and small rivers, WSRs, and reservoirs. The scenic quality of the planning area is a very important component of the local and regional economy. Many people live and recreate in the planning area because of the area's special visual features, and travelers throughout the United States and around the world find the scenery to be an important part of their visit. Scenery is a valued amenity to local communities within the planning area, contributing to the quality of life, economic value of tourism, recreation, and associated businesses. Visitors to Northern California expect to see high-quality scenic values and are contributors to the state's economy. There are several eligible or designated scenic highways/byways (Highway 299, 36, 96, and 44; US Highway 101; and Interstate 5) within the planning area. The region also includes several nationally and state-designated WSRs (Eel River system, Trinity River, Van Duzen River, and Klamath River).

Indicators

The BLM Visual Resource Management (VRM) system is a way to identify and evaluate scenic values so that appropriate levels of management can be determined. The VRM system is used to ensure that BLM management actions on public lands protect the visual qualities of the landscape. It is the intent and policy of the BLM that the visual resource values of public lands must be considered in all land use planning efforts and surface-disturbing activities. Projects must be considered on a site-specific basis as to their impact on the project area's VRM objectives before approving or denying a particular action, and a reasonable attempt must be made to minimize the visual impacts of the proposal.

Indicators used to measure visual resources include Visual Resource Inventory (VRI) values and VRM classes.

Visual Resource Inventory Values

VRI values are established during a comprehensive inventory process. The inventory records three components described below:

- **Scenic Quality Evaluation:** Scenic quality is a measure of the visual appeal of a tract of land.
- **Sensitivity Level Analysis:** Sensitivity levels are a measure of public concern for scenic quality.
- **Distance Zone Delineation:** Landscapes are subdivided into three distanced zones based on relative visibility from travel routes or observation points. The three zones are foreground-midground, background, and seldom seen.

Based on these three inventory factors, all BLM-administered lands are placed into one of four inventory classes. VRI Classes I and II are the most visually valued, Class III represents a moderate visual value, and Class IV has the least visual value.

Class I is assigned to those areas where a management decision has been made previously to maintain a natural landscape. This includes areas such as national wilderness areas, the wild section of national WSRs, and other congressionally and administratively designated areas where decisions have been made to preserve a natural landscape. Classes II, III, and IV are assigned based on a combination of scenic quality, sensitivity level, and distance zones, following a matrix or GIS overlay process, as identified in BLM Handbook H-8410-1 (USDI BLM 2016f).

Visual Resource Management Classes

In determining the management of visual resource values, the RMP will designate all BLM-administered lands into VRM classes. The RMP alternatives must include and analyze a full range of VRM classification scenarios in relationship to various land use development goals identified for the planning area. The VRM class designations, other land uses, and desirable outcomes need to be reasonably compatible with one another and are the result of broad-scale RMP decisions that balance multiple-use objectives. The VRM Classes are described below:

- **VRM Class I Objective:** The objective of this class is to preserve the existing character of the landscape. This class provides for natural ecological changes; however, it does not preclude very limited management activity. The level of change to the characteristic landscape should be very low and must not attract attention. Designated wilderness areas, WSAs, and “wild” sections of WSRs are designated VRM Class I.
- **VRM Class II Objective:** The objective of this class is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.
- **VRM Class III Objective:** The objective of this class is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.

- **VRM Class IV Objectives:** The objective of this class is to provide for management activities that require major modifications of the existing character of the landscape. The level of change to the characteristic landscape can be high. These management activities may dominate the view and be the major focus of viewer attention. However, every attempt should be made to minimize the impact of these activities through careful location, minimal disturbance, and repeating the basic elements.

Current Condition

Neither the 1993 Redding RMP (USDI BLM 1993) nor the 1992 Arcata RMP (USDI BLM 1992a) and Arcata RMP Forest Plan Amendment (USDI BLM 1995a) identify visual resource values from a comprehensive inventory process. These planning documents also did not establish comprehensive VRM management classes, which are needed to set the standards for how the inventoried visual values will be managed. In the 1993 Redding RMP, VRM prescriptions were limited to only those areas assigned VRM Class I and Class II, and prescriptions were not assigned to areas where lower VRM classes were determined. Both FOs evaluated visual resources as part of resource management activity and project planning, for example, when writing EAs for particular projects.

A VRI of the planning area was completed in June 2015 under a contract by Otak, Inc. (Otak, Inc. 2015a, 2015b). The inventory methodology and approach followed BLM Handbook H-8410-1 (USDI BLM 2016f). All BLM-administered lands, including subsurface minerals and split-estate, were inventoried. Lands in the planning area administered by other agencies with visual or scenic resource programs, such as the Forest Service, were also inventoried. This was done to provide a context and understanding of visual values in the planning area.

Table 2-36 through **Table 2-45** show the acreages of the three VRI components (scenic quality, sensitivity, and visual distance zones) as well as final VRI classes. Note that VRI classes are informational in nature and provide the basis for considering visual values in the RMP process. They do not establish management direction and should not be used as a basis for constraining or limiting surface-disturbing activities.

Table 2-36. Acres of Scenic Quality Rating—Redding Field Office

Scenic Quality Rating	Acreage	Percentage
A	4,953,900	51
B	3,902,220	40
C	926,600	9

*Note: This table includes all BLM-administered WSR acreages as VRI Class I. Only “wild” sections of WSRs are automatically assigned a VRM Class I designation during the RMP process.

Table 2-37. Acres of Sensitivity Level—Redding Field Office

Sensitivity Level	Acreage	Percentage
High	3,067,700	31
Moderate	4,210,800	43
Low	2,504,200	26

*Note: This table includes all BLM-administered WSR acreages as VRI Class I. Only “wild” sections of WSRs are automatically assigned a VRM Class I designation during the RMP process.

Table 2-38. Acres of Visual Distance Zone—Redding Field Office

Visual Distance Zone	Acreage	Percentage
Foreground/ Middleground	7,170,800	73
Background	481,100	5
Seldom Seen	2,130,700	22

*Note: This table includes all BLM-administered WSR acreages as VRI Class I. Only “wild” sections of WSRs are automatically assigned a VRM Class I designation during the RMP process.

Table 2-39. Acres of VRI Classes—Redding Field Office

*VRI Class	Acreage	Percentage
I	0	0
II	5,664,400	58
III	1,440,000	15
IV	2,678,200	27

*Note: This table includes all BLM-administered WSR acreages as VRI Class I. Only “wild” sections of WSRs are automatically assigned a VRM Class I designation during the RMP process. VRI data is not available for Scott Valley, Shasta Lake, Trinity Lake, Lake Orville, Humboldt Bay, and the towns of Arcata, Myrtle town, and Cutten.

Table 2-40. Surface Acreage of VRI Classes on BLM-Administered Lands—Redding Field Office

*VRI Class	Acreage	Percentage
I	7,319	3
II	194,444	74
III	30,855	12
IV	31,031	12

*Note: The table above includes all BLM-administered WSR acreages as VRI Class I. Only “wild” sections of WSRs are automatically assigned a VRM Class I designation during the RMP process. VRI data is not available for Scott Valley, Shasta Lake, Trinity Lake, Lake Orville, Humboldt Bay, and the towns of Arcata, Myrtle town, and Cutten.

Table 2-41. Acres of Scenic Quality Rating—Arcata Field Office

Scenic Quality Rating	Acreage	Percentage
A	384,700	9
B	4,074,700	91
C	0	0

*Note: This table includes all BLM-administered WSR acreages as VRI Class I. Only “wild” sections of WSRs are automatically assigned a VRM Class I designation during the RMP process. This table also includes data from the King Range NCA and Headwaters Forest Reserve, which are part of the Arcata FO, but not part of the NCIP planning area.

Table 2-42. Acres of Sensitivity Level—Arcata Field Office

Sensitivity Level	Acreage	Percentage
High	1,678,300	38
Moderate	1,162,500	26
Low	1,618,600	36

*Note: This table includes all BLM-administered WSR acreages as VRI Class I. Only “wild” sections of WSRs are automatically assigned a VRM Class I designation during the RMP process. This table also includes data from the King Range NCA and Headwaters Forest Reserve, which are part of the Arcata FO, but not part of the NCIP planning area.

Table 2-43. Acres of Visual Distance Zone—Arcata Field Office

Visual Distance Zone	Acreage	Percentage
Foreground/Middleground	2,721,600	61
Background	243,600	5
Seldom Seen	1,494,300	34

*Note: This table includes all BLM-administered WSR acreages as VRI Class I. Only “wild” sections of WSRs are automatically assigned a VRM Class I designation during the RMP process. This table also includes data from the King Range NCA and Headwaters Forest Reserve, which are part of the Arcata FO, but not part of the NCIP planning area.

Table 2-44. Acres of VRI Classes—Arcata Field Office

*VRI Class	Acreage	Percentage
I	0	0
II	1,356,700	30
III	1,314,600	30
IV	1,790,500	40

*Note: This table includes all BLM-administered WSR acreages as VRI Class I. Only “wild” sections of WSRs are automatically assigned a VRM Class I designation during the RMP process. This table also includes data from the King Range NCA and Headwaters Forest Reserve, which are part of the Arcata FO, but not part of the NCIP planning area. VRI data is not available for Scott Valley, Shasta Lake, Trinity Lake, Lake Orville, Humboldt Bay, and the towns of Arcata, Myrtle town, and Cutten.

Table 2-45. Surface Acreage of VRI Classes on BLM-Administered Land—Arcata Field Office

*VRI Class	Acreage	Percentage
I	105,513	52
II	28,522	14
III	50,645	25
IV	19,311	9

Source: USDI BLM 2016g

*Note: This table includes all BLM-administered WSR acreages as VRI Class I. Only “wild” sections of WSRs are automatically assigned a VRM Class I designation during the RMP process. This table also includes data from the King Range NCA and Headwaters Forest Reserve, which are part of the Arcata FO, but not part of the NCIP planning area. VRI data is not available for Scott Valley, Shasta Lake, Trinity Lake, Lake Orville, Humboldt Bay, and the towns of Arcata, Myrtle town, and Cutten.

Public demand for natural and cultural resource uses and protection within the planning area and changes in socioeconomics have resulted in varying types of impacts on visual resources and how these landscapes are valued. The Redding and Arcata FO lands have an abundance of resources such as minerals, water, wildlife, vegetation, and recreation that have all been used by various means over the past several decades.

Mining, logging, recreational developments, ROWs, communication sites, and other developments have created contrasts with the characteristic landscape throughout the planning area. Additionally, large-scale, catastrophic wildfires in recent years have influenced the characteristic landscape by altering vegetation patterns and vegetation quality, which are highly valued in the planning area. What has changed substantially over the past several decades and plays the larger role in current conditions is how people value the landscape, and from where they are viewing it. An abundance of private lands is spread throughout and among the fragmented public lands. Housing developments on these private parcels has increased the number of people viewing more remote parcels of public land that were previously seldom seen. These people also place higher value on the scenery, because it serves as the backdrop to dream homes and quiet retreats.

Outdoor recreation use in the area also continues to increase, and these recreationists place high value on the scenery of the area, as it is part of their recreational experience. There are also noticeable shifts in the values that local communities ascribe to public lands and the scenery that they provide. These historically resource-extraction or industrially based community economies are aligning themselves with trends in outdoor recreation and a tourism-based economy. This shift is largely based on the proximity to the adjacent public land resources, which allow not only for active participation in activities such as hiking and floating down the river, but also for experiencing the passive values that they provide in the form of scenic landscapes that accentuate positive recreational experiences. Communities are placing higher values on the scenic qualities as a way of attracting visitors to the area.

Trends and Forecast

Several natural and human-caused disturbances consistently affect the scenic quality of the planning area. Extensive wildfires from 2017 to 2020 have significantly impacted the visual landscape. Based on observed trends, ongoing wildfire and additional, continued requirements for energy and communication infrastructure will continue to be a challenge to managing the visual landscape.

It is anticipated that current conditions outlined above will be exacerbated in the future, placing higher demands on public lands as a visual resource. Contrasts within the landscape will continue to occur as demand for extractive resources and the influence of large-scale, catastrophic wildfires continue. Since the 2015 VRIs, approximately 1,183,800 acres (22 percent) of Scenic Quality A (high scenic quality) lands in the planning area have been affected by wildfire, with an additional 1,321,800 acres (17 percent) of Scenic Quality B (above-average scenic quality) lands affected by wildfire.

Additionally, with population growth the BLM anticipates a continuation of the subdivision of adjacent lands into more undeveloped areas and the introduction of sensitive viewers, as communities and visitors increasingly focus on outdoor recreation. As a result, it is going to be more and more difficult to manage for multiple resources within the planning area while at the same time managing for the scenic values that the public holds in high regard. The RMP revision will have to carefully evaluate the planning area's scenic resources and visual values, as identified in the VRIs. It will also need to evaluate the

demands of other resources highlighted in other chapters of this document in order to provide a balanced approach to managing public lands in the Redding and Arcata FOs. Based on this evaluation, VRM classes would be prescribed to provide guidance for future management decisions, while maintaining scenic quality and visually sensitive areas in the planning area.

Key Features

Approximately 91 percent of the Redding FO has high (A rating) to moderate (B rating) scenic quality, and 100 percent of the Arcata FO has moderate to high scenic quality. Approximately 74 percent of the Redding FO and 64 percent of the Arcata FO have moderate to high sensitivity to visual change.

Approximately 73 percent of the Redding FO and 61 percent of the Arcata FO are viewed from the foreground-midground zone, which is approximately 3 to 5 miles from travel routes. Together, these factors contribute to the public land users placing a high value on the visual environment. Cultural modifications throughout the inventory area tend to add little or no visual variety to the area and introduce only minor discordant elements, such as power lines. The inventory area offers some elements of visual scarcity, such as Mount Shasta, which are distinctive, unique, and memorable when viewed from near or afar.

A large portion of the Redding FO land base is inventoried as VRI Class II, with some smaller areas inventoried as VRI Class III or VRI Class IV. Only a very small portion of Redding FO lands are considered VRI Class I (wilderness areas, WSAs, and “wild” sections of designated WSRs). Approximately 0 percent of the Arcata FO land base was inventoried as VRI Class I, 30 percent inventoried as VRI Class II, 29 percent as VRI Class III, and 40 percent as VRI Class IV.

2.2.15 Wildland Fire Management

The Federal Wildland Fire Management Policy (FWFMP) was developed by the Secretaries of the Departments of Interior and Agriculture in 1995 in response to the significant increases in the frequency, size, and catastrophic nature of wildfires in the United States. The FWFMP was updated in 2001 (*Review and Update of the 1995 Federal Wildland Fire Management Policy*) to direct federal agencies to achieve balance between fire suppression to protect life, property, and resources, regulate fuels, and maintain healthy ecosystems (USDI et al. 2001).

The 2009 Guidance on Implementation of Federal Wildland Fire Management Policy issued a memorandum to the National Wildfire Coordinating Group executive board on a 2008 memorandum they issued entitled Modification of Federal Wildland Fire Policy Guidance, and among other things categorized two distinct types of fires: unplanned ignitions (wildfires) and planned ignitions (prescribed fires). The FLAME Act of 2009 directed the Secretary of the Interior and the Secretary of Agriculture, acting jointly, to submit to Congress a report that contains a cohesive wildfire management strategy. The National Strategy: The Final Phase of the Development of the National Cohesive Wildland Fire Management Strategy (USDI and USDA 2014a), and The National Action Plan: An Implementation Plan for the National Cohesive Wildland Fire Management Strategy (USDI and USDA 2014b), the culmination of this direction, were both completed in 2014.

The National Strategy recognizes and accepts fire as a natural process necessary for the maintenance of many ecosystems and strives to reduce conflicts between fire-prone landscapes and people. By simultaneously considering the role of fire in the landscape, the ability of humans to plan for and adapt

to living with fire, and the need to be prepared to respond to fire when it occurs, the National Cohesive Strategy takes a holistic approach to the future of wildland fire management.

The Wildland Fire Leadership Council, an intergovernmental committee established by the Secretaries of Agriculture and the Interior to support the implementation and coordination of the FWFMP adopted the following vision for the next century:

To safely and effectively extinguish fire, when needed; use fire where allowable; manage our natural resources; and as a Nation, live with wildland fire.

The primary, national goals identified as necessary to achieving the vision are:

- **Restore and maintain landscapes:** Landscapes across all jurisdictions are resilient to fire-related disturbances in accordance with management objectives.
- **Fire-adapted communities:** Human populations and infrastructure can withstand a wildfire without loss of life and property.
- **Wildfire response:** All jurisdictions participate in making and implementing safe, effective, efficient risk-based wildfire management decisions.

The National Strategy identifies the following guiding principles and core values for wildland fire management to guide fire and land management activities:

- Reducing risk to firefighters and the public is the first priority in every fire management activity.
- Sound risk management is the foundation for all management activities.
- Land must be actively managed to make it more resilient to disturbance, in accordance with management objectives.
- Community and individual responsibilities should be improved and sustained to prepare for, respond to, and recover from wildfire through capacity-building activities.
- Rigorous wildfire prevention programs are supported across all jurisdictions.
- Wildland fire, as an essential ecological process and natural change agent, may be incorporated into the planning process and wildfire response.
- Fire management decisions are based on the best available science, knowledge, and experience, and used to evaluate risk versus gain.
- Local, state, tribal, and federal agencies support one another with wildfire response, including engagement in collaborative planning and the decision-making processes that take into account all lands and recognize the interdependence and statutory responsibilities among jurisdictions.
- Where land and resource management objectives differ, prudent and safe actions must be taken through collaborative fire planning and suppression response to keep unwanted wildfires from spreading to adjacent jurisdictions.
- Safe aggressive initial attack is often the best suppression strategy to keep unwanted wildfires small and costs down.
- Fire management programs and activities are economically viable and commensurate with values to be protected, land and resource management objectives, and social and environmental quality considerations.

The National Action Plan is a companion to the National Strategy, supports its implementation, and recognizes that achieving the national goals requires that the nation address four broad challenges:

- Managing vegetation and fuels
- Protecting homes, communities, and other values at risk
- Managing human-caused ignitions
- Safely, effectively, and efficiently responding to wildfire

The National Action Plan identifies management options to address these challenges, with consideration for climate change, an expanding wildland/urban interface, disturbance-sensitive species, and vegetation stressed due to drought, insect, disease, invasive species, and legacy management.

The Western Regional Strategy Committee is chartered to the Wildland Fire Leadership Council to facilitate and support implementation of the National Strategy across the western region of the United States through the Western Regional Action Plan. In alignment with the National Strategy, the mission of the Western Regional Strategy Committee is to:

“. . . promote and facilitate enabling conditions for stakeholder action towards Resilient Landscapes, Fire Adapted Communities, and a Safe Effective, Risk-Based Wildfire Response across the geographic and political boundaries of the western landscape using a network approach” (WRSC 2020; page 1).

The intent of this framework is to consider and use the full range of strategic options to achieve objectives as described in land use plans and RMPs and tear down the development of tactical options at the local level through fire management plans (FMPs). The BLM currently uses the Wildland Fire Decision Support System and Interagency Fuel Treatment Decision Support System, including Fuel Treatment Effectiveness Modeling, in its fire planning. Accordingly, the RMP process serves as an opportunity to develop and analyze overall strategies to guide and facilitate subsequent implementation-level FMPs within the framework of the Wildland Fire Decision Support System and Interagency Fuel Treatment Decision Support System planning systems. FMPs are dynamic documents that are reviewed annually and updated as new information becomes available. FMPs are supplemented by operational plans that address preparedness, dispatch functions, prescribed fire and fuels reduction treatments, and prevention and mitigation.

Fire planning will include objectives developed collaboratively to include tribal, interagency, nonprofit, and private interests, integrating fire management objectives for tribal values, traditional prescribed fire practices, and communities most impacted by climate changes. Objectives will be consistent with regional, state, and local efforts, such as The National Strategy and Western Regional Action Plan, the Fire Climate Task Force, California Hazard Mitigation Plan Committee, and Community Wildfire Protection Plans.

Indicators

Typical Indicators used to measure current condition and trends are as follows:

- Fire regime condition class (FRCC)
- Fire occurrence

A natural fire regime is a general classification of the role fire would play across a landscape in the absence of modern human intervention but including the influence of aboriginal burning (Agee 1993; Brown 1995). Coarse-scale definitions for natural (historical) fire regimes have been developed by Hardy et al. (2001) and Schmidt et al. (2002) and interpreted for fire and fuel management by Hann and Bunnell (2001). Fire regime classification is generally interrelated with condition class. A simplified classification lists five natural (historical) fire regimes based on average number of years between fires (fire frequency) combined with the severity (amount of replacement) of the fire on the dominant overstory vegetation as follows:

- 1) Frequency of 0–35 years and low (surface fires most common) to mixed severity (less than 75 percent of the dominant vegetation replaced).
- 2) Frequency of 0–35 years and high (stand replacement) severity (greater than 75 percent of the dominant overstory vegetation replaced).
- 3) Frequency of 35–200 years and mixed severity (less than 75 percent of the dominant vegetation replaced).
- 4) Frequency of 35–200 years and high (stand replacement) severity (greater than 75 percent of the dominant overstory vegetation replaced).
- 5) Frequency of 200+ years and high (stand replacement) severity.

Condition Class refers to the current and desired resource conditions related to fire management. The classification system describes the extent to which vegetation departs from reference conditions (or how the current vegetation differs from a particular reference condition). Departures could be the result of changes in vegetation characteristics, fuel composition, fire frequency or severity, burn pattern and extent, or from other disturbances, such as insects and disease mortality. The three condition classes used are:

Condition Class 1—Fire regimes are within historical ranges. The risk of losing key ecosystem components from fire occurrence remains relatively low.

Condition Class 2—Fire regimes have been moderately altered from their historical range by either increased or decreased fire frequency. A moderate risk of losing key ecosystem components has been identified for these lands. Fire frequencies have increased or decreased from historical range by one or more return interval resulting in moderate changes to size, frequency, intensity, or severity of fires.

Condition Class 3—Fire regimes have been significantly altered from their historical range. Because fire regimes have been extensively altered, risk of losing key components from fire is high. Fire frequencies have departed from historical frequencies by multiple return intervals, resulting in dramatic changes to the size, frequency, intensity, or severity of fires.

Fire occurrence can be the result of lightning, industrial activities, public utilities, camping, on-highway vehicles, OHVs, target shooting, and fireworks or incendiary devices. Fire occurrence data are recorded on a district level.

It should be noted that FRCC data and mapping do not exist for the planning area. Accordingly, current conditions are best described through vegetation condition class, as described in the vegetation section (**Section 2.2.13** of this AMS). The vegetation condition class is a measure of vegetation departure and

indicates the degree to which current vegetation is different from estimated historical vegetation reference conditions (LANDFIRE 2021).

Current Conditions

Fire Regime and Condition Class

LANDFIRE, a national-level geospatial database that describes vegetation and wildland fuel and fire regimes, is the only available FRCC dataset that currently exists for the planning area. This dataset, however, has several data gaps and other anomalies that conflict with locally observed conditions; thus, it is not deemed an appropriate reference of actual conditions. Overall, it is estimated that no more than a third of the planning area is in a Condition Class 1 status, with two-thirds or more of the planning area in Condition Class 2 or 3. A summary of vegetation types and fire regimes (http://www.fs.fed.us/database/feis/fire_regime_table/PNVG_fire_regime_table.html) is available through the Forest Service.

Vegetation condition class is a simple categorization used to indicate the general level to which current vegetation is different from the estimated historical vegetation reference conditions.

The planning area is composed of fire-adapted ecosystems. The historical role of fire, occurring as lightning or cultural fire use by Native Americans, has had a profound impact on the development and maintenance of these ecosystems. The vegetation structure and composition and annual natural fire occurrence clearly indicate that wildland fire has been and is still a major component of the landscape. With increased human use and settlement within and around BLM-administered lands, wildfire remains one of the highest potential risks to life, property, and resources. Each year, this wildland fire risk is growing (**Map 2-9, Appendix A**) as fire frequency, size, and severity increase. The biggest challenge is balancing the hazards and benefits of fire, while maintaining the area's natural fire-adapted ecosystem.

Fire protection for these lands is provided under the California Master Cooperative Wildland Fire Management and Stafford Act Response Agreement. Under this agreement, the California Department of Fire Protection (CAL FIRE), the Forest Service, and the NPS have agreed to assume wildfire protection responsibility for BLM-administered lands in the NCIP. Annual operating plans (AOP) are developed for specific regions of the planning area. These AOP are cooperatively developed by, and agreed upon, by each agency and updated annually. These AOP address appropriate tactics for fire suppression in various areas, restrictions on specific methods in special management areas, and processes to step up operations as changes occur and thresholds are exceeded.

Special management areas where restrictions on normal suppression methods apply include such areas as federal wilderness areas, WSAs, federal WSRs, ACECs, designated critical habitat for T&E species, sensitive cultural sites, botanical areas, and areas with naturally occurring asbestos. In most of these areas, the use of dozers for fireline construction is the most impactful action and should be avoided, except in situations where life and property are directly threatened. The use of dozers in wilderness and/or WSAs requires authorization from the authorized federal agency administrator.

Hazardous fuel treatments are conducted to support resource management goals related to vegetation, forestry, terrestrial and aquatic wildlife, cultural resources and recreation. In addition, treatments are conducted to support or respond to the protection or enhancement of community wildland fire protection goals coordinated through Fire Safe Councils, cooperator groups, and/or community wildland

fire protection plans. Tools available to attain these goals include prescribed fire (both pile and broadcast burning), mechanical fuel reduction (includes hand tools or large machines to remove or alter fuels) and other methods such as goat browsing or chemical treatments. Evaluation of resource objectives, constraints, and other factors are used to determine which treatment or treatment combination will be most effective in reaching the stated goals. More common hazardous fuel reduction projects include pile burning of slash residues resulting from forestry, recreation or WUI fuel-reduction treatments, and low to moderate severity broadcast fire of prairies, oak woodlands, or conifer forests to attain resource management objectives pertaining to the restoration or maintenance of ecosystems.

Prescribed fire is based on sound risk management, taking into account economic feasibility, the best science available, cooperation with other agencies and tribes, and consideration for public health and environmental quality. Not all the land within the planning area is expected to be burned in a prescribed fire, as risk management, logistics, and resource values may make prescribed fire untenable. Specific burn units and acreages shall be determined after thorough analysis of fuel loads, seral stages, and affected resources. Prescribed fire plans will provide burn objectives, prescriptions, and contingency plans in case the prescription is exceeded, or suppression action is needed. Burning will only occur with authorization from the Air Quality Management District with jurisdictional authority. On average, 680 acres are treated on an annual basis within the planning area (**Table 2-46**).

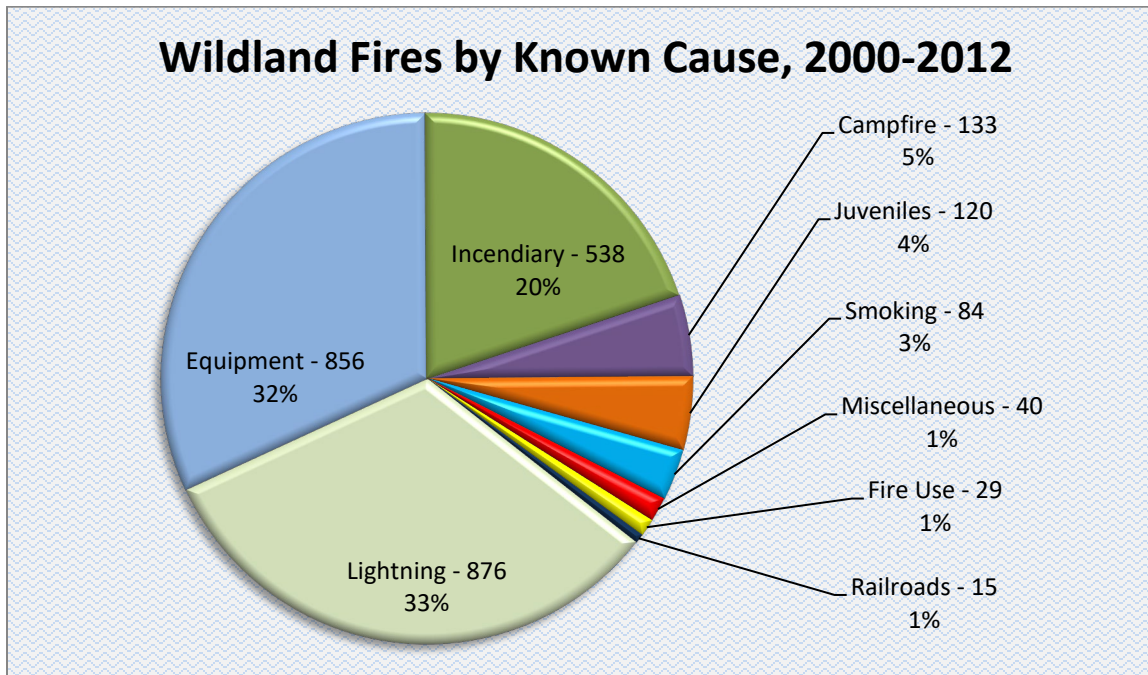
Table 2-46. Average Hazardous Fuels Treatment Acreage for NCIP Planning Area (2003–2015)

Treatment Method	Wildland Urban Interface (WUI) Treatment Area (Acres)	Non-WUI Treatment Area (Acres)
Prescribed Fire	240	121
Mechanical	218	93
Other	8	0

Sources: USDA and USDI 2016

Fire Occurrence

BLM policy requires that statistical data be collected for all wildland fires occurring on BLM-administered lands. The number and cause of fire are primary attributes that are tracked in the data. The data in **Chart 2-11** show totals for fires by cause category over the recent history. **Map 2-21** in **Appendix A** depicts the locations of recent fires in and adjacent to the planning area.

Chart 2-11. Wildland Fires by Known Cause in Northern California BLM-Administered Lands

Source: Wildland Fire Management Information, US Department of Interior, Bureau of Land Management, National Interagency Fire Center Fire Reporting, BLM - California (CA) - NorCal District (CA-NOD). Complete fire reports only, 01/01/2000 through 02/07/2012. Note: The percentages in this figure only represent 2,690 fires with specified causes - percentages do not include an additional 927 reported fires (27 percent of 3,617 total fires reported from 2000-2012) for unknown causes.

Trends

Wildland Urban Interface

As populations within the planning area have increased over the last 40 years, the WUI has expanded (**Table 2-47**). Development slowed during the economic downturn of the late 2000s, but this is expected to be temporary. Increased WUI infrastructure includes power lines, pipelines, communication sites, public boundaries adjacent to private homes and improvements, roads and travel routes, and recreational use and facilities. Fuels management and wildfire mitigation activities are planned to reduce the risk to these values. Much of the costliest fire suppression efforts occur within and adjacent to the expanding WUI.

Table 2-47. Population within the NCIP Planning Area (1970–2019)

County	1970	1980	1990	2000	2010	2019
Humboldt	99,768	108,525	119,746	126,403	134,623	135,558
Mendocino	51,282	66,738	80,859	86,396	87,841	86,749
Del Norte	14,665	18,217	23,986	27,471	28,610	27,812
Siskiyou	33,257	39,732	43,743	44,230	44,900	43,724
Trinity	7,679	11,858	13,052	13,006	13,786	12,535
Shasta	77,994	115,613	148,606	163,782	177,223	180,080
Tehama	29,630	38,888	49,913	56,136	63,463	65,084
Butte	102,758	143,851	183,652	203,926	220,000	219,186
Total	417,033	543,422	663,557	721,350	770,446	770,728

Nonnative Species

Some exotic species are inhibited by frequent fire return intervals, whereas others flourish with frequent disturbance. Fire suppression operations are either surface or vegetation disturbing, and the impacts increase susceptibility to exotic species. The potential impacts of exotic species invasions, and mitigation measures to reduce spread, are considered in planning fire suppression, fuels reduction, and emergency stabilization and rehabilitation activities. Treating exotic species and regular monitoring are key to maintaining healthy landscapes.

Vegetation Type Change

Significant changes in vegetation dominance and type conversion will occur in the absence of disturbance in the form of fire events, such as conifer expansion into oak woodlands, monocultures, soil nitrogen loss in pine forests, and significant build up in fuels leading to wildfire intensity and severity outside normal adaptation.

Forecast

As the WUI expands and with the increased warming associated with climate change, fire frequency, suppression costs, and damages from fire and suppression activities and exotic species infestations are expected to increase. This is evidenced by the 2020 fire season, which was the largest wildfire season recorded in California, with the length of the overall fire season and extent of fires increasing across the state (CAL FIRE 2021). Vegetation and fuels management opportunities, including prescribed fire, will continue to become more challenging. This is due to the increased fire risk, coupled with public and adjacent landowner's concerns, smoke management needs, and requirements of special management areas, such as wildernesses and WSAs. This, combined with increased fuels reduction needs, will result in fuels and vegetation management needs becoming more dynamic and complex. Adaptive management will be necessary as climate change produces variable impacts on weather patterns and vegetation types across the planning area.

Key Features

The planning area will continue to experience wildland fires of all sizes. The primary objective will remain firefighter and public safety, followed by protecting urban interface and infrastructure, watershed and forest health, cultural/traditional, and ecological values. Processes to sustain or improve upon these objectives would include mechanical fuel reduction, prescribed fire, chemical or biological treatments, and management of fires for multiple resource objectives. The land pattern within the planning area is conducive to use of a variety of different management options to implement these processes. Larger parcels of BLM-administered lands would be the priority areas for managing wildfires to benefit resources, and for large-scale prescribed fire.

In the NCIP planning area, there are numerous small parcels of BLM-administered land, where fuels management would be primarily through mechanical, chemical, or biological vegetation treatments. Priority would be given to project areas that could be implemented in a cooperative effort with adjacent landowners, nonprofit organizations, and tribal, state, and federal partners. Priority would also be given to projects that could be conducted over larger and contiguous areas, and projects designed through collaboration with tribal, interagency, nonprofit, and private partners. Such treatments have greater effectiveness at meeting resource and management objectives. The BLM will continue to develop the fire and fuel management program to protect at-risk values and communities most vulnerable to wildfire

impacts, while enhancing and maintaining the health of landscapes and providing the opportunity for vital ecological processes to occur.

2.2.16 Wildlife/Special Status Wildlife

As discussed previously, the planning area includes seven EPA level III ecoregions. Healthy wildlife populations are directly tied to habitat quality, and most habitat in the planning area is in good to excellent condition. BLM ownership in the NCIP is discontinuous and, as a result, public lands are often an inholding surrounded by other federal or private lands. On a regional scale, the BLM is a minor landowner compared with Forest Service holdings and private property, owning just 3 percent of the land. For example, the BLM manages just 4.3 percent of the NSO designated critical habitat in the NCIP boundary and 10.5 percent of the marbled murrelet (MAMU; *Brachyramphus marmoratus*) designated critical habitat. The BLM does not manage any designated critical habitat for the red-legged frog (*Rana draytonii*), although they are found in the planning area boundary.

Regional habitat connectivity projects are difficult without partnerships and support from adjacent landowners. In many instances, private property adjacent to BLM-administered land has different management objectives than public lands. Commercial timber land surrounds many of the forested public land parcels. Intensive ranching on private lands is common around public land parcels in foothill oak woodlands, grasslands, and brushy areas.

Wildlife using public lands in the planning area is as diverse as the landscapes. Many species occur seasonally or all year. Avian species are more likely to use portions of the planning area seasonally as they migrate. The planning area contains numerous prominent ridges that are important flight corridors for raptors. Big game species are generally non-migratory and instead move up and down slope depending on the season and weather conditions.

The NWFP is an overarching land use planning document that allocates land use on 24.4 million acres of federal forest in western Washington, western Oregon, and northwestern California, including much of the planning area. Eastern portions of the Redding FO are not included in the NWFP. The NWFP originated as a type of settlement between logging interests and environmental groups after years of logging protests and concerns regarding newly designated federally threatened species MAMU and NSO. Many species not state- or federally listed as threatened or endangered were listed as survey and manage species under the NWFP. Survey and manage species were identified as species in decline but not covered by federal or state ESA protection. Many survey and manage species are often not well studied and poorly understood.

The NWFP assigned federal lands one of eight land use allocations. Land use allocations determine how much and what types of land management can occur on each parcel. Most of the forested lands in the Arcata FO were designated as LSR with the remaining forested lands designated as matrix. Matrix lands are those lands where “timber harvest and other silvicultural activities would be conducted in that portion of the matrix with suitable forest lands...” (USDA and USDI 1994). The Redding FO has relatively little LSR and a higher proportion of matrix lands in areas covered by the NWFP.

Indicators

Fish and wildlife indicators include direct measurement or indices of species composition, structure, diversity, and relative abundance of fish, wildlife, and habitats within the planning area, as well as

distribution, pattern, and connectivity of populations and habitats. Each of these measurements reflects ecosystem function and sustainability.

Special status wildlife has one or more of the following characteristics:

- They have been proposed for listing under provisions of the ESA or are officially listed as threatened or endangered (16 USC 1531–1534).
- They are candidates for listing as threatened or endangered under the provisions of the ESA and are managed as BLM sensitive species (BLM Handbook 6840—Special Status Species Management).
- They have been de-listed for a 5-year period and are managed as BLM sensitive species.
- They have been designated by the California State Director (State Director) as sensitive. The State Director has conferred sensitive status on California State endangered, threatened, and rare species that are on BLM-administered lands or affected by BLM actions and that are not already special status plants by virtue of being federally listed or proposed (unless specifically excluded by the State Director on a case-by-case basis), and on certain other plants the State Director believes meet the definition of sensitive.

Habitat loss; competition from invasive, nonnative species; predation; disease; climate change; fire; and other factors are responsible for species decline and imperilment. Habitat loss and modification due to human activity are the greatest threats to ecosystems, particularly for those species adapted to specific ecological niches. BLM practices are intended to sustain and promote species that are legally protected and prevent those species that are not yet legally protected from needing such protection.

Indicators that special status plants and their habitats are being properly managed, maintained, or enhanced include the following:

- Populations of endemic and protected species are stable or increasing within suitable habitat.
- Habitat for endemic or protected species is available in the planning area and is of a high enough quality to provide for their recovery and long-term survival.

Special status species indicators include population levels and density, breeding status, distribution and range, age class structure, and genetic diversity. Population and biological data for several special status species are tracked by the BLM, the USFWS, and CDFW.

Emphasis on Habitat

The BLM works with partner agencies, non-governmental organizations (NGOs), and private entities to improve habitat conditions. Unlike many BLM FOs, the discontinuous landownership patterns in the planning area make managing habitat at landscape levels challenging. The CDFW is directly responsible for managing population levels while the BLM is responsible for managing fish and wildlife habitat quantity and quality in a condition that will sustain desired levels of species. Population data are tracked by the CDFW for game animals and, increasingly, for key nongame species. While the CDFW is interested primarily in population dynamics and demographics, the principal indicator used by the BLM is habitat condition based on plant community attributes and a site's capacity to sustain native wildlife species. Within this framework, the BLM focuses on key animal species and their habitats. Indicators of

habitat condition include plant species composition, cover, vigor, production, browse levels, and animal indices such as wildlife sign (including scat, tracks, and nests) and animal health.

The BLM collects fish and wildlife data on public lands, providing glimpses of the regional status of most wildlife species, particularly when adjacent land has different management objectives. The CDFW collects a substantial amount of harvest information for game species and maintains the CNDDDB, a clearinghouse for species information used by government agencies and NGOs. Information available for non-game species is much less consistent than for big game, waterfowl, and T&E species. Federally listed and candidate species in the planning area receive most of the monitoring effort from the BLM.

Additional wildlife monitored in the planning area includes NWFP monitored species, as well as deer, elk, fishers, salamanders, songbirds, small mammals, insects, and pollinators. Species listed under the NWFP survey and manage protocols are surveyed in the Redding FO, while the Arcata FO surveys for NSO, MAMU, Pacific marten, deer, elk, fishers, salamanders, snowy plovers, songbirds, and small mammals. No populations of Survey and Manage wildlife species were found in the Arcata FO, but the Redding FO manages land with several species of terrestrial mollusks. Survey and Manage plant species do occur in both FOs. Monitoring efforts generally provide trend data and not population estimates.

Forested areas in the planning area were historically part of the region's logging-based economy. Many of the public land parcels within the planning area are at various stages of post-logging regrowth and are correspondingly suitable to species. Timber management practices ranged from replanting of native species after logging to clear cutting with no post treatment. Different stages of forest regrowth affect species differently as some species are old-growth dependent, some favor fresh shoots of new growth, and some are generalists able to survive and thrive in multiple habitat types. Timber harvest practices have substantially reduced the acreage in old growth and created an abundance of edge habitats throughout forested landscapes, which are less favorable for old-growth dependent species.

Development has continued to approach public lands within the planning area. Development primarily is a result of urban expansion and, in some areas, proliferation of subdivisions with high rates of marijuana cultivation sites. Development continues to shrink the available habitat and degrade the remaining habitat in a number of ways. Development results in increased roads along with road collisions, noise, trash, and contaminants. Roads can serve as corridors for new species of wildlife that may not have traveled through the previously undisturbed habitat.

Listed and Sensitive Species

The planning area contains habitat used by numerous terrestrial wildlife species that are federally listed under the ESA and the California ESA or are listed as a BLM sensitive species (**Table 2-48**). Bald eagle (*Haliaeetus leucocephalus*), brown pelican (*Pelicanus occidentalis*), and peregrine falcon (*Falco peregrinus*) populations have successfully recovered and have been delisted by the USFWS. Critical habitat for the following federally listed terrestrial wildlife species occurs in the planning area: MAMU, NSO, western snowy plover, and yellow-billed cuckoo (USFWS 2020a, 2012, 2020b, 2020c, 2020d, 2020e). For identified sensitive fish and aquatic invertebrate species, see **Section 2.2.5**, Fish and Aquatic Species/Special Status Fish.

Table 2-48. Federal and State ESA-Listed Species, BLM Sensitive Species, and Species from Past Planning Documents

Category	Common Name	Scientific Name	Federal Status	State Status	BLM Status	Other Status	Occurs in Planning Area
Mammals	Columbian white-tailed deer	<i>Odocoileus virginianus leucurus</i>	FD				NO
Mammals	Fringed myotis	<i>Myotis thysanodes</i>			S		YES
Mammals	Gray wolf	<i>Canis lupus</i>	FD	SE			YES
Mammals	Long-eared myotis	<i>Myotis evotis</i>			S		YES
Mammals	Pacific fisher Northern California-southern Oregon (NCSO) DPS	<i>Pekania pennanti (pacifica)</i>		SSC	S	SSC	YES
Mammals	Pacific marten Coastal DPS	<i>Martes caurina</i>	FT				
Mammals	Ring-tailed cat	<i>Bassariscus astutus</i>		CDFW fully protected			YES
Mammals	Pallid bat	<i>Antrozous pallidus</i>			S	SSC	YES
Mammals	Sierra Nevada red fox	<i>Vulpes vulpes necator</i>		ST			NO
Mammals	Townsend's big-eared bat	<i>Corynorhinus townsendii</i>			S	SSC	YES
Mammals	Western mastiff-bat	<i>Eumops perotis californicus</i>			S	SSC	YES
Mammals	Wolverine	<i>Gulo gulo</i>		ST			NO
Mammals	Yuma myotis	<i>Myotis yumanensis</i>			S		YES
Birds	Bald eagle	<i>Haliaeetus leucocephalus</i>	FD	SE	S	EA	YES
Birds	Bank swallow	<i>Riparia riparia</i>		ST	S		YES
Birds	Black brant	<i>Branta bernicula</i>				SSC	YES
Birds	Brown pelican	<i>Pelicanus occidentalis</i>	FD	SD	S	SF	YES
Birds	Burrowing owl	<i>Athene cunicularia</i>			S	SSC	YES
Birds	California black rail	<i>Laterallus jamaicensis coturniculus</i>		ST	S		NO
Birds	California spotted owl	<i>Strix occidentalis occidentalis</i>			S	SSC	YES
Birds	Golden eagle	<i>Aquila chrysaetos</i>			S	EA	YES
Birds	Greater sandhill crane	<i>Grus canadensis tabida</i>		ST	S	SF	YES
Birds	Marbled murrelet	<i>Brachyramphus marmoratus</i>	FT				YES
Birds	Northern goshawk	<i>Accipter gentilis</i>			S	SSC	YES
Birds	Northern spotted owl	<i>Strix occidentalis caurina</i>	FT	ST	S	SSC	YES
Birds	Peregrine falcon	<i>Falco peregrinus</i>	FD	FD			YES
Birds	Short-tailed albatross	<i>Phoebastria (= Diomedea) albatrus</i>	FE				NO
Birds	Swainson's hawk	<i>Buteo swainsoni</i>		ST	S		YES
Birds	Tricolored blackbird	<i>Agelaius tricolor</i>			S	SSC	YES
Birds	Western snowy plover	<i>Charadrius nivosus ssp. nivosus</i>	FT			SSC	YES
Birds	White-tailed kite	<i>Elanus leucurus</i>			S		YES
Birds	Willow flycatcher	<i>Empidonax traillii</i>		SE			YES
Birds	Yellow-billed cuckoo (Western DPS)	<i>Coccyzus americanus</i>	FT	SE			YES

Category	Common Name	Scientific Name	Federal Status	State Status	BLM Status	Other Status	Occurs in Planning Area
Birds	2ndary cavity nesters						YES
Reptiles	Mountain kingsnake	<i>Lampropeitis zonata</i>			S	SSC	YES
Reptiles	Giant garter snake	<i>Thamnophis gigas</i>	FT	ST			NO
Reptiles	Southwestern pond turtle	<i>Emys marmorata pallida</i>			S	SSC	YES
Amphibians	California red-legged frog	<i>Rana draytonii</i>	FT			SSC	YES
Amphibians	California tiger salamander	<i>Ambystoma californiense</i>	FT	ST		SSC	NO
Amphibians	Foothill yellow-legged frog	<i>Rana boylei</i>		ST	S	SSC	YES
Amphibians	Oregon spotted frog	<i>Rana pretiosa</i>	FT		S	SSC	YES
Amphibians	Shasta salamander	<i>Hydromantes shastae</i>		ST	S		YES
Amphibians	Sierra Nevada yellow-legged frog	<i>Rana sierrae</i>	FE				NO
Amphibians	Siskiyou mountain salamander	<i>Plethodon stormi</i>		ST			NO
Amphibians	Western spadefoot	<i>Spea hammondi</i>			S	SSC	YES
Invertebrates	Hooded lancetooth	<i>Ancotrema voyanum</i>			S		YES
Invertebrates	Mardon skipper	<i>Polites mardon</i>			S		NO
Invertebrates	Oregon shoulderband	<i>Helminthoglypta hertleini</i>			S		YES
Invertebrates	Oregon silverspot butterfly	<i>Speyeria zerene hippolyta</i>	FT				NO
Invertebrates	Siskiyou shoulderband	<i>Monadenia chaceana</i>			S		YES
Invertebrates	Tehama chaparral	<i>Trilobopsis tehamana</i>			S		YES
Invertebrates	Trinity bristlesnail	<i>Monadenia infumata ssp. setosa</i>		ST			YES
Invertebrates	Trinity shoulderband	<i>Helminthoglypta talmadgei</i>			S		YES
Invertebrates	Valley elderberry longhorn beetle	<i>Desmocerus californicus dimorphus</i>	FT				YES
Invertebrates	Shasta sideband	<i>Monadenia troglodytes troglodytes</i>			S		
Invertebrates	Wintu sideband	<i>Monadenia troglodytes wintu</i>			S		
Invertebrates	Shasta chaparral	<i>Trilobopsis roperi</i>			S		
Invertebrates	Shasta hesperian	<i>Vespericola shasta</i>			S		

Sources: USFWS 2020a, 2020b, 2020c, 2020d, 2020e

FE=Federally Endangered, FT=Federally Threatened, FC=Federal Candidate, FD=Delisted due to recovery, ST=State Threatened, S=BLM Sensitive Species, SSC=State Species of Special Concern

Current Conditions

Wildlife habitat is directly linked to vegetation condition. Despite increasingly frequent drought years in the planning area, forested parcels have not experienced widespread tree kills as a result of drought stress or beetle infestation. Some areas have seen increases in weed species, particularly thistles, as the lack of moisture prevents the vigorous growth of grasses. In some areas, weeds are kept in check with manual labor, as discussed in the Vegetation section (**Section 2.2.13**).

Recent wildfires have largely affected wildlife habitat in the Redding FO, where approximately 30 percent of the land base burned between 2018 and 2020. Although the full extent of habitat loss has yet to be assessed, large areas of chaparral and forested habitat were altered due to burning. This includes approximately 20,000 acres of NSO critical habitat with low to severe burn severity (**Table 2-49** and **Map 2-29, Appendix A**).

Table 2-49. Burn Severity of Northern Spotted Owl Habitat

Burn Severity	Acres
High	6,000
Moderate	7,000
Low	6,000
Little to none	1,000
Total	20,000

Source: USDI BLM GIS 2021

The extent of fire effects on wildlife generally depends on the extent of change in habitat structure and species composition caused by the fire. Fires often cause short-term increases in habitat features used by some wildlife species; for example, an increase in herbaceous vegetation may benefit ungulates. However, fires cause decreases in features used by others; for example, a decrease in mature trees would have adverse effects for NSOs (Smith 2000).

Habitat characteristics are closely allied with vegetation types and condition. The Vegetation section of this document (**Section 2.2.13**) provides an analysis of vegetation coverages in each ecoregion. The percentage of public lands in each ecoregion varies from a high of 12 percent to less than 1 percent in the Central Valley. The remaining ecoregions range from 1 to 3 percent.

Past management practices are an important factor in determining current habitat quality. Coast Range Mixed Hardwood Stands have been heavily logged, with many of the large conifer trees removed. Hardwood species, primarily tanoak and Pacific madrone (*Arbutus menziesii*), now dominate stands once dominated by Douglas-firs. The Arcata FO manages some of the last intact old-growth Douglas-fir stands in the Coast Range. Tanoak is a significant food source for bear, deer, and elk; however, the lack of large Douglas-firs in logged areas is detrimental to NSO, MAMU, and Pacific fisher, which use that habitat for roosting, nesting, and foraging. Prairies interspersed in forested areas in the Arcata FO have been restored to historical boundaries in several areas.

Surface water is in poor condition in many areas due to pumping, storage, and in some cases, chemicals. Multiple drought years have exacerbated the problem. The health of wetlands, riparian areas, and springs remains an important objective for terrestrial and aquatic wildlife. Protecting and/or improving water flow and water quality is beneficial to all species through improved habitat conditions and water availability during low flow years. A multitude of factors is contributing to low flows and poor water quality that is detrimental to the health of animals drinking surface water and may reduce the range of wildlife that requires access to surface water. A reduced range means a lowered ability to search for high-quality food and reduced health. See **Section 2.2.5**, Fish and Aquatic Species/Special Status Fish, and **Section 2.2.15**, Water Resources, for a detailed description of surface water and riparian conditions in the planning area.

Protected Areas

Public lands protected for wildlife include the Mike Thompson Wildlife Area, South Spit Humboldt Bay, which is owned by the CDFW and managed by the BLM under a deed of conservation easement. Management goals for the wildlife area are to protect and enhance wildlife and wildlife habitat. Breeding season closures are placed at South Spit annually to protect a western snowy plover (*Charadrius nivosus nivosus*) breeding area. In addition, temporary fencing closures are erected to protect nests that occur outside of the habitat restoration area. Snowy plover nests located outside of the closed area are protected with signage and temporary fencing.

Additionally, ACECs in both FOs provide for the protection of unique plant communities, watersheds, and natural processes that benefit wildlife. The Arcata FO manages ACECs for the protection of old-growth Douglas-fir stands in the Lacks Creek Management Area, Larabee Valley, Gilham Butte, and laqua Buttes. The Redding FO manages an ACEC for the protection of Baker cypress (*Hesperocyparis bakeri*). Wildlife species dependent on those types of habitat benefit from the ACEC designation.

The Payne's Creek Wetland Complex, within the Sacramento River Bend ACEC, is comprised of 93 acres of managed wetlands and several natural and human-made vernal pools. This area provides habitat for waterfowl, shorebirds, wading birds, beaver, river otter, amphibians, reptiles, and aquatic invertebrates. A management objective is to enhance existing waterfowl habitat. The new plan proposes an ACEC that includes a vernal pool complex, which would benefit species associated with this habitat type (see **Section 2.2.5**, Fish and Aquatic Species/Special Status Fish).

Corridors

There are several localities in the planning area where land acquisitions and/or swaps would consolidate ownership and provide long-term protection for wildlife and habitat in that area. One such effort that occurred in the early 2000s was known as the Redwoods to the Sea Wildlife Corridor. The goal was to connect Humboldt Redwoods State Park with the King Range NCA. Gilham Butte, a large parcel of public land, is between the two. Numerous parcels were acquired by the BLM and California State Parks, but the effort ultimately lost steam and did not achieve the goal. Private lands in the area have since been subdivided with many of the subdivisions becoming marijuana cultivation sites. Subdivisions are a threat to wildlife habitat within the planning area.

Relatively minor land acquisitions in the areas of Gilham Butte, laqua Buttes, Larabee Valley, and Red Mountain could create large parcels of public lands to protect habitat. Examples are Larabee Buttes and Butte Creek in Larabee Valley, adjacent plots that each total around 2,000 acres and contain the last old-growth Douglas-fir in that area; Red Mountain (South Fork Eel River Wilderness), which could be connected to the North Red Mountain parcels pending acquisition of private land; and several clustered parcels in the laqua Buttes, which could be connected and provided with public access with relatively small acquisitions. The Redding FO has some tracts of checkerboard ownership that are potential wildlife corridors.

The native plant biodiversity map provided as **Map 2-27, Appendix A** is also relevant to wildlife, as vegetation is a major component of wildlife habitat.

Trends

Population Trends

Population trends for most wildlife species are not monitored closely. Current understanding of population trends for different species in the planning area depends on the level of data collected for those species. Game species and federally listed species that are regularly monitored have the best data. Non-game species receive less monitoring effort and consequently have less data available. Estimated populations trends for federally listed, state-listed, and BLM sensitive wildlife occurring in the NCIP are provided in **Table 2-50**.

Federally Listed Species

NSO populations are still declining due to various factors, particularly rangewide competition from the nonnative barred owl and high-severity wildfire. Approximately 20,000 acres of NSO habitat were burned with varying severity in 2020 (USD I BLM GIS 2021). This has likely caused a loss of habitat features, such as mature and old-growth trees, abundant logs, and standing snags, used by owls, particularly in habitat that was more severely burned (**Table 2-49**). Results of a recent meta analysis suggested that NSO populations are declining throughout the range of the subspecies, with annual rates of decline accelerating in many areas (Dugger et al. 2016). Factors negatively affecting NSO populations were barred owls, primarily by decreasing apparent survival and increasing local territory extinction rates; the amount of suitable owl habitat; local weather; and regional climatic patterns (Dugger et al. 2016).

The implementation of the NWFP curtailed logging on federal lands and concentrated the logging on private timber lands. This has allowed development of new NSO habitat; however, the combined effects of climate change, high-severity wildfire, and past management practices are changing forest ecosystem processes and dynamics. Moreover, the expansion of barred owl (*Strix varia*) populations is altering the capacity of intact habitat to support NSO. These stressors are of such imminence, intensity, and magnitude to indicate that the NSO is now in danger of extinction throughout all of its range (USFWS 2020f).

In December 2020, the USFWS found that reclassifying the NSO from a threatened species to an endangered species is warranted but is precluded by higher priority actions (USFWS 2020f).

MAMU are considered stable to declining as they continue to lose nesting habitat. In the USFWS 5-year review of the species, survey data (2001–2017) showed evidence of a positive trend in the MAMU population in conservation zone 4, which overlaps the planning area; however, the data did not reveal a significant negative or positive trend in the MAMU population at the listed-range scale (USFWS 2019a). This reflects trends before the effects of recent wildfires on nesting habitat.

MAMU require large old-growth conifer trees with large lateral limbs with a flat mossy surface for use as nest platforms. Trees with the proper limb structure take hundreds of years to grow. MAMU are also impacted by the increased corvid predation that is correlated with the increase in human populations close to MAMU nest colonies (Peery and Henry 2010). Most of the remaining suitable old-growth stands in the planning area are fully protected under the management of the NPS and California State Parks; however, the 2020 wildfires have likely caused a decrease in nesting habitat in the Redding FO.

Table 2-50. Population and Habitat Trends for Federally Listed, State-Listed, and BLM Sensitive Wildlife Occurring in the NCIP

Category	Common Name	Ecoregions	Population Trend	Habitat Trend	Forecast
Mammals	Fringed myotis	CR, KM, FH, C, EC, SN	Unknown	Unknown	Unknown
Mammals	Gray wolf	KM, EC, C, SN	Newly reestablished	Unknown	Stable
Mammals	Long-eared myotis	CR, KM, FH, C, EC, SN	Unknown	Unknown	Unknown
Mammals	Ring-tailed cat	CR, KM, FH, C, EC, SN, CV	Unknown	Unknown	Unknown
Mammals	Pacific fisher NCSO DPS	CR, KM, C, EC, SN	Stable to declining	Declining	Declining
Mammals	Pacific marten Coastal DPS	CR	Declining	Declining	Declining
Mammals	Pallid bat	CR, KM, FH, C, EC, SN, CV	Unknown	Unknown	Unknown
Mammals	Townsend's big-eared bat	CR, KM, FH, C, EC, SN, CV	Unknown	Unknown	Unknown
Mammals	Yuma myotis	CR, KM, FH, C, EC, SN, CV	Unknown	Unknown	Unknown
Birds	Bald eagle	CR, KM, FH, C, EC, SN, CV	Federally delisted, increasing	Stable	Stable
Birds	Bank swallow	CR, KM, FH, C, EC, SN, CV	Unknown	Unknown	Unknown
Birds	Black brant	CR	Stable	Stable	Stable
Birds	Brown pelican	CR	Federally delisted, stable	Stable	Stable
Birds	Burrowing owl	CR, KM, FH, C, EC, SN, CV	Unknown	Declining	Declining
Birds	California spotted owl	C, EC, SN	Declining	Declining	Declining
Birds	Golden eagle	CR, KM, FH, C, EC, SN, CV	Unknown	Stable	Unknown
Birds	Greater sandhill crane	CR, KM, FH, C, EC, SN, CV	Stable	Stable	Stable
Birds	Marbled murrelet	CR	Stable To Declining	Declining	Declining
Birds	Northern goshawk	CR, KM, FH, C, EC, SN, CV	Unknown	Unknown	Unknown
Birds	Northern spotted owl	CR, KM	Declining	Unknown - Declining	Declining
Birds	Peregrine falcon	CR, KM, FH, C, EC, SN, CV	Federally delisted, stable	Unknown	Stable
Birds	Swainson's hawk	CR, KM, FH, C, EC, SN, CV	Unknown	Unknown	Unknown
Birds	Tricolored blackbird	CV	Declining	Unknown	Declining
Birds	Western snowy plover	CR	Increasing in planning area	Stable	Stable
Birds	White-tailed kite	CR, KM, FH, C, EC, SN, CV	Unknown	Unknown	Unknown
Birds	Willow flycatcher	CR, KM, FH, C, EC, SN, CV	Unknown	Unknown	Unknown

Category	Common Name	Ecoregions	Population Trend	Habitat Trend	Forecast
Birds	Yellow-billed cuckoo	CR	Unknown	Unknown	Unknown
Birds	Secondary cavity nesters	CR, KM, FH, C, EC, SN, CV	Unknown	Unknown	Unknown
Reptiles	Mountain king snake	CR, KM, FH, C, EC, SN, CV	Unknown	Unknown	Unknown
Reptiles	Southwestern pond turtle	None	Unknown	Unknown	Unknown
Amphibians	California red-legged frog	CR, FH, EC	Unknown	Unknown	Unknown
Amphibians	Foothill yellow-legged frog	CR, KM, FH, C, EC, SN	Stable	Stable	Unknown
Amphibians	Oregon spotted frog	C, EC	Newly listed	Unknown	Unknown
Amphibians	Shasta salamander	KM	Unknown	Unknown	Unknown
Amphibians	Sierra Nevada yellow-legged frog	SN	Unknown	Unknown	Unknown
Amphibians	Western spadefoot	CV, FH	Unknown	Unknown	Unknown
Invertebrates	Hooded lancetooth	KM	Unknown	Unknown	Unknown
Invertebrates	Oregon shoulderband	KM,	Unknown	Unknown	Unknown
Invertebrates	Siskiyou shoulderband	KM	Unknown	Unknown	Unknown
Invertebrates	Tehama chaparral	KM, FH	Unknown	Unknown	Unknown
Invertebrates	Trinity bristlesnail	KM	Unknown	Unknown	Unknown
Invertebrates	Trinity shoulderband	KM	Unknown	Unknown	Unknown
Invertebrates	Valley elderberry longhorn beetle	CV, FH	Unknown	Unknown	Unknown
Invertebrates	Shasta sideband	CR, KM, FH, C, EC, SN, CV	Unknown	Unknown	Unknown
Invertebrates	Wintu sideband	CR, KM, FH, C, EC, SN, CV	Unknown	Unknown	Unknown
Invertebrates	Shasta chaparral	CR, KM, FH, C, EC, SN, CV	Unknown	Unknown	Unknown
Invertebrates	Shasta hesperian	CR, KM, FH, C, EC, SN, CV	Unknown	Unknown	Unknown
Invertebrates	Vernal pool fairy shrimp	CV, FH	Stable	Stable on BLM-administered land	Stable on BLM-administered land
Invertebrates	Vernal pool tadpole shrimp	CV, FH	Stable	Stable on BLM-administered land	Stable on BLM-administered land

Source: USDI BLM 2016a

CR=Coast Range, C=Cascades, KM= Klamath Mountains, FH=Foothills, SN=Sierra Nevada Mountains, CV=Central Valley, EC=Eastern Cascades

MAMU spend most of the year foraging on the open ocean. Ocean conditions will have an impact on prey concentration and foraging location (Piatt et al. 2007), and therefore nesting productivity of MAMU. MAMU that are in good condition at the start of the summer breeding season are more likely to breed successfully. Ocean conditions and prey availability during the nesting season are key components of the MAMU life cycle that are outside the planning decision of the NCIP.

Western snowy plovers in the planning area have recently increased from the historical low population of 19 individuals in 2009. The population has since risen to approximately 80 individuals during the 2020 breeding season. The population increase is largely due to immigration from other recovery units and the increased breeding success at South Spit and other breeding sites. Snowy plovers experienced exceptional breeding success at South Spit during the 2016–2019 breeding seasons.

Common ravens (*Corvus corax*) predated approximately 75 percent of South Spit nests during the 2020 season. The South Spit had more breeding adults (38) and more nests (78) than any previous year recorded. The high nest total was a result of re-nest attempts after failed first nests. Snowy plovers will attempt multiple nests if nests fail due to predation or poor placement on the waveslope. Implementation of management practices that address the predation, habitat loss, and human disturbance are recommended to improve habitat quality across breeding sites (Feucht et al. 2018).

The BLM manages several potential breeding habitat areas: South Spit, Ma-Le'l Dunes, and Samoa Recreation Area. Snowy plovers have been documented nesting in the Eureka Riding Area portion of the Samoa Recreation Area for the first time in 2021. Prior to the emergence of South Spit as a primary breeding area in 2016, snowy plover breeding activity was concentrated at Clam Beach, which is managed by Humboldt County. Western snowy plover breeding at the Samoa Recreation Area presents a particular management challenge, as the area is a designated OHV area, one of only two on the entire California coast. There have been immediate conflicts between vehicles and snowy plover nests as vehicles crushed several nests in 2021. The BLM has implemented plover protection areas by installing temporary fencing and signage around active nests as soon as the nests are discovered.

Brown pelicans have rebounded enough that they have been federally delisted, and the population is currently stable. The recovery was due primarily to the ban of the insecticide DDT (USFWS 2009a). Brown pelicans roost at numerous sites along coastal California including those managed by the BLM.

Peregrine falcons forage on beaches in the Arcata FO and rock outcrops in Siskiyou County within the Redding FO where they are known to nest.

Bald eagle populations have recovered, and the species is now federally delisted. Bald eagle populations are steady to increasing. The recovery was due primarily to the ban of DDT (USFWS 2007a). Bald eagles are observed around Humboldt Bay and major waterways in the planning area. They forage in rivers, estuaries, and wetlands managed by the BLM. The Bald and Golden Eagle Protection Act (16 USC 668-668d) currently prohibits the take of bald eagles without a permit issued by the Secretary of the Interior.

There are several records of yellow-billed cuckoo in the planning area (Coast Range), and they have been observed less than 10 miles from BLM-administered land. These birds use a variety of riparian habitats, particularly woodlands with cottonwoods and willows, and dense understory foliage appears to

be an important factor in nest site selection. Breeding habitat loss from clearing and removing riparian forest for agriculture, urban development, and flood control is a primary threat (USFWS 2017).

The USFWS has determined that there are two distinct West Coast populations of fisher: the Southern Sierra Nevada DPS and the NCSO (West Coast) DPS (USFWS 2020g); the latter occurs in the planning area. In November 2019, the USFWS published a reversal in a proposed rule to list the West Coast DPS of fisher as threatened (USFWS 2019b). It is likely that this decision, which leaves that population without ESA protections, will be litigated.

Loss of habitat and mortality related to pesticides are leading causes of this species' decline (Gabriel et al. 2012; Gabriel et al. 2018). Rodenticide (likely from marijuana cultivation) has been detected in nearly 80 percent of fishers tested and has been identified as causing direct mortality (Thompson et al. 2014). Fishers depend on mature and old-growth forests, primarily coniferous forests with fairly dense canopies and large trees, snags, and downed logs. Populations have likely been adversely affected by 2020 wildfires, particularly in severely burned areas where such features were lost. High-severity wildfires can negatively affect fisher habitat by reducing large trees and dense forested stand structure and by removing suitable fisher habitat from the landscape for a long period of time (e.g., more than 100 years).

A pair of gray wolves established a territory on the Oregon/California border within the Redding FO. The pair (the Shasta Pack [no longer in existence]) successfully bred in 2015 (CDFW 2015a). These are the first known breeding wolves in California for many decades (CDFW 2015b). Future population and range expansion are likely, and multiple other wolf sightings have been made in northeastern California, including a suspected second pair, the Whaleback Pair, with breeding potential (CDFW 2021b).

California red-legged frog populations have suffered a 70 percent reduction in habitat primarily to agricultural and urban development. The California red-legged frog populations remain depressed. The USFWS is currently in the process of a 5-year review.

Oregon spotted frogs were listed as federally threatened in 2014. Their population continues to decline due to loss of habitat, especially breeding habitat; wetland drainage; and an increase in nonnative aquatic species (USFWS 2014). The Oregon spotted frog historically ranged in the Cascade Mountains of Washington, Oregon, and California to the Pit River Drainage. The USFWS has noted they are likely extirpated from California (USFWS 2014).

Big Game Species

Table 2-51 summarizes population trends for big game species in the planning area. Big game species are described briefly below the table.

Table 2-51. Big Game Trends in the NCIP Planning Area

Common Name	Scientific Name	Population Trend	Habitat Trend
Elk	<i>Cervus elaphus</i>	Increasing	Increasing
Deer	<i>Odocoileus hemionus</i>	Stable to decreasing	Stable to increasing
Pigs	<i>Sus scrofa</i>	Increasing	Increasing (range expansion)
Bear	<i>Ursus americana</i>	Increasing	Decreasing
Antelope	<i>Antilocapra americana</i>	Absent	Stable

Source: CDFW 2018a, 2018b, 2020b, 2020c.

Three subspecies of elk occur in California: Roosevelt (*Cervus canadensis roosevelti*), Rocky Mountain (*C. c. nelsoni*), and tule (*C. c. nannodes*). Roosevelt elk populations are generally increasing across their range in northwestern California (CDFW 2018a). The BLM has a limited number of parcels in the planning area currently used by Roosevelt elk. Roosevelt elk are found near the coast in the Coast Range and Klamath Mountains ecoregions. Tule elk historically were abundant in the central valley of California. The CDFW has transplanted herds to new locations as exiting herds continue to grow. In the planning area, tule elk are found in the Coast Range Foothill, and Central Valley ecoregions. Rocky Mountain elk are the most common elk subspecies found in the United States. Their range includes the Great Basin and extends into northeastern California and the eastern portion of the Redding FO in the Eastern Cascades and Cascades ecoregions. All the elk subspecies populations and ranges appear to be expanding, with the statewide population estimated at approximately 12,900 individuals collectively of all three subspecies (CDFW 2018a).

There are six subspecies of mule deer (*Odocoileus hemionus*) in California: Columbian black-tailed deer (*Odocoileus hemionus columbianus*; Northern California and Pacific Northwest), California mule deer (*O. h. californicus*; west side of the Sierra Nevada down to the south coast), desert/burro mule deer (*O. h. eremicus*; southwest California, northwest Mexico and Arizona), southern mule deer (*O. h. fuliginatus*; southernmost California and Baja California), Rocky Mountain mule deer (*O. h. hemionus*; northwest California, western and central North America), and Inyo mule deer (*O. h. inyoensis*; Sierra Nevada, California) (CDFW 2020a).

As of 2017, the statewide deer population was estimated at 532,621. Populations are considered stable to slightly declining from population peaks of the 1960s (CDFW 2020b). Population levels are below desired levels. Loss of habitat is the major factor contributing to the decline of black-tailed deer; however, recent wildfires may have increased habitat in the planning area by creating access to improved forage in the recently burned areas. Road collisions, weather patterns, predation, and disease outbreaks are all additional contributing factors to current population levels.

The planning area contains 11 hunt zones managed by the CDFW. Populations in five of the 11 zones are below the 5-year average, populations in three of the zones are close to the 5-year average, and populations in three of the zones are above the 5-year average.

Wild pig populations are rising and range expansion is happening throughout Northern California (CDFW 2016d). Oak woodlands, grasslands, and brush areas are all suitable for pigs. Pigs in the Arcata FO are typically residents of adjacent private property and venture onto public lands during time of abundant foods such as the fall acorn crops. The Redding FO manages parcels with transient and resident pig populations. In the 2016–2017 hunting season, 4,637 wild pigs were reported taken statewide, representing an 8.9 percent increase from the 2015 season (CDFW 2018b); however, wild pig harvest within the Arcata and Redding FOs represents a fraction of statewide harvest (936 in 2017).

Two subspecies of black bear are recognized in California, the northwestern black bear (*Ursus americana altifrontalis*) and the California black bear (*U. a. californiensis*). These subspecies are thought to be geographically distinguished by the crest of the Klamath Mountains. Differences in vegetation, water availability, and bear density allow biologists to differentiate three regional subpopulations of black bears in California—North Coast/Cascade, Sierra, and Central Western/Southwestern. The North Coast/Cascade subpopulation occurs north and west of the Sierra Nevada and comprises roughly half of the statewide black bear population.

Statewide black bear populations appear to be increasing in recent years with an estimated statewide population of 30,000 to 40,000 individuals (CDFW 2020c). The planning area contains numerous areas of high-density bear use indicating good habitat conditions. However, recent wildfires have decreased the overall availability of bear habitat until the vegetation regrowth is sufficient to support bears.

Pronghorn antelope are not currently found in the planning area (CDFW 2016c). The Redding FO and CDFW continue to explore possibilities of reintroductions to re-establish herds in historic range.

Wild Horses and Burros

Portions of the McGavin Peak Wild Horse Territory (WHT) and the Pokegama Herd Management Area (HMA) occur in the planning area. The McGavin Peak WHT is administered by the Goosenest Ranger District, Klamath National Forest, and is located in Siskiyou County, California, about 7 miles west of Dorris. The McGavin Peak WHT consists of 3,860 acres of Forest Service land, 1,860 acres of BLM-administered land, and 10,325 acres of private land. Both the Forest Service and BLM-administered lands are scattered tracts, which cannot support a sustainable herd. Decisions regarding the McGavin Peak WHT can be located in the Land and Resources Management Plan for Klamath National Forest (USDA Forest Service 2010). Due to the limited amount of contiguous federal land in the McGavin Peak WHT, BLM management is not appropriate.

The Pokegama HMA is administered by the BLM Lakeview District, Klamath Falls Resource Area, and decisions regarding herd management are found in the 2002 Pokegama Wild Horse Herd Management Area Plan (USDI BLM 2002a). The HMA lies primarily in Oregon but does include portions in California, north of the Klamath River west to Jenny Creek. In California, part of the Pokegama HMA is in the Cascade Siskiyou National Monument (which is not in the decision area), and part of the HMA is outside of the monument (and still in the decision area). The HMA encompasses 80,885 acres, of which BLM California accounts for approximately 710 acres, or less than 1 percent of the total HMA. The herd consists of roughly 30 to 50 animals.

A small population of feral horses has populated BLM-administered land following the release of captive animals in the 1930s; however, it is not managed as a wild horse population.

No further decisions are required concerning these herds. Wild horses and burros do not currently occur within the planning area. Therefore, no determinations are needed regarding their management.

Other Wildlife

In addition to listed and sensitive species and big game, public lands in the planning area provide habitat to a multitude of wildlife species, as expected when considering such a large area with diverse habitats. The CDFW regulates the take of game species, furbearers, and non-game species that can be taken with a hunting, fishing, or trapping license. With some exceptions, species not specifically listed by the CDFW are protected.

The variety of available habitats in the planning area provides food, shelter, and breeding areas for numerous birds, reptiles, amphibians, and insects. Most of the wildlife species in the planning area are not inventoried, and reliable information about population size and trends is not available. Range information for reptiles and amphibians in the planning area is available at Californiaherps.com. **Table 2-52** lists reptiles and amphibians likely to be found within the planning area.

Table 2-52. Partial List of Reptiles and Amphibians Found in the NCIP Planning Area

Reptile and Amphibian Category	Common Name	Scientific Name	Ecoregions
Salamanders	Northwestern salamander	<i>Ambystoma gracile</i>	CR, KM
Salamanders	Southern song-toed salamander	<i>Ambystoma macrodactylum sigillatum</i>	KM
Salamanders	Clouded salamander	<i>Aneides ferreus</i>	CR
Salamanders	Speckled black salamander	<i>Aneides flavipunctatus flavipunctatus</i>	CR, KM, CA
Salamanders	California slender salamander	<i>Batrachoseps attenuatus</i>	CR, KM, C, FH
Salamanders	Coastal giant salamander	<i>Dicamptodon tenebrosus</i>	CR, KM
Salamanders	Oregon ensatina	<i>Ensatina eschscholtzii oregonensis</i>	CR, KM
Salamanders	Painted ensatina	<i>Ensatina eschscholtzii picta</i>	CR
Salamanders	Sierra nevada ensatina	<i>Ensatina eschscholtzii platenta</i>	SN
Salamanders	Southern torrent salamander	<i>Rhyacotriton variegatus</i>	CR
Salamanders	Dunn's salamander	<i>Plethodon dunni</i>	CR
Salamanders	Del Norte salamander	<i>Plethodon elongatus</i>	CR
Salamanders	Siskiyou Mountains salamander	<i>Plethodon stormi</i>	KM
Newts	Rough-skinned newt	<i>Taricha granulosa</i>	CR, KM,
Frogs and Toads	Boreal toad	<i>Anaxyrus boreas boreas</i>	CR, KM
Frogs and Toads	California toad	<i>Anaxyrus boreas halophilus</i>	CR, KM, C, SN, FH, CV, EC, C
Frogs and Toads	Coastal tailed frog	<i>Ascaphus truei</i>	CR, KM
Frogs and Toads	American bullfrog	<i>Lithobates catesbeianus</i>	CR, KM, C, SN, FH, CV, EC, C
Frogs and Toads	Northern pacific treefrog	<i>Pseudacris regilla</i>	CR
Frogs and Toads	Northern red-legged frog	<i>Rana aurora</i>	CR
Frogs and Toads	Foothill yellow-legged frog	<i>Rana boylei</i>	CR, KM, C, SN, FH, CV, EC, C
Frogs and Toads	Cascades frog	<i>Rana cascadae</i>	KM, C, FH, EC
Snakes	Northern rubber Boa	<i>Charina bottae</i>	CR, KM, C, SN, FH, EC
Snakes	Western yellow-bellied racer	<i>Coluber constrictor mormon</i>	CR, KM, C, SN, FH, CV, EC
Snakes	Common sharp-tailed snake	<i>Contia tenuis</i>	CR, KM, C, SN, FH, EC
Snakes	Ring-necked snake	<i>Diadophis punctatus</i>	KM, C, SN, FH, EC, C
Snakes	Desert nightsnake	<i>Hypsiglena chlorophaea</i>	CR, KM, C, SN, FH, EC
Snakes	California kingsnake	<i>Lampropeltis californiae</i>	CR, KM, C, SN, FH, CV, EC
Snakes	Pacific gopher snake	<i>Pituophis catenifer catenifer</i>	CR, KM, C, SN, FH, CV, EC
Snakes	Coast garter snake	<i>Thamnophis elegans terrestris</i>	CR
Snakes	Mountain garter snake	<i>Thamnophis elegans elegans</i>	KM, C, SN, FH, CV, EC
Snakes	Northern Pacific rattlesnake	<i>Crotalus oreganus oreganus</i>	
Lizards	California whiptail	<i>Aspidoscelis tigris munda</i>	CV
Lizards	Northern alligator lizard	<i>Elgaria coerulea</i>	KM, C, SN, FH, CV, EC

Reptile and Amphibian Category	Common Name	Scientific Name	Ecoregions
Lizards	Skilton's skink	<i>Plestiodon skiltonianus skiltonianus</i>	CR, KM, C, SN, F, CV, EC
Lizards	Northwestern fence lizard	<i>Sceloporus occidentalis occidentalis</i>	CR, KM, C
Turtles	Western pond turtle	<i>Emys marmorata</i>	CR, KM, C, SN, FH, CV, EC
Turtles	Red-eared slider	<i>Trachemys scripta elegans</i>	KM, FH

Source: USDI BLM 2016a

CR=Coast Range, C=Cascades, KM= Klamath Mountains, FH=Foothills, SN=Sierra Nevada Mountains, CV=Central Valley, EC=Eastern Cascades

Habitat Quality Trends

Trends in habitat quality are highly variable, depending on which species is being considered and on the location of habitat improvement and restoration projects. Ownership largely influences habitat quality due to different management objectives. Forestry practices that promote old-growth characteristics improve habitat quality of forested habitats on public lands (except for early seral-adapted species).

The Redding and Arcata FOs have limited extractive resource demands and are not subjected to projects that cause significant large-scale habitat degradation, such as mining, alternative energy, intensive livestock grazing, or fluid mineral extraction. Commercial logging is generally conducted on second-growth stands. Old-growth stands are left intact under the NWFP.

With the exception of restored areas, the more heavily the land is used for commercial purposes, such as logging and grazing, the less likely the habitat will be of high quality for wildlife. In many instances, some species will benefit while others will be negatively impacted by the same management action. For example, in NSO areas, commercial logging will result in unsuitable habitat for decades, but the same logged-over area will provide deer with high-quality forage for several years.

Ecological factors, such as drought and wildfire, also strongly influence habitat conditions. The predicted increasing frequency of high-severity wildfires will continue to decrease habitat for old-growth-dependent species, such as the NSO, MAMU, fisher, and Pacific marten. Habitat recovery and species recolonization will depend on the burn size and severity, the season of burn, and individual species' ability to thrive in the altered, often simplified, structure of the post-fire environment (Smith 2000).

Small mammals and ungulates may increase in abundance following initial disturbance but may decrease as stands age (Fisher and Wilkinson 2005; Smith 2000). In contrast, old-growth species will avoid stand-replacement burns until forests recover. It generally takes over 75 years for forests to reach the old-growth stage (and it may take 150–250 years for forests west of the Cascade Range [USDA and USDI 1994]). This is characterized by heterogeneous canopy and stand structure, developed understory, large trees and snags, downed wood material, and canopy gaps (Fisher and Wilkinson 2005).

Riparian habitat quality is improving as a result of restoration projects within the planning area. Some riparian areas receive heavy visitor traffic and remain below full potential. Riparian corridors are generally at acceptable habitat quality levels; however, trash dumping and semi-permanent camping by the homeless are negatively affecting areas in the Redding FO. See **Section 2.2.5**, Fish and Aquatic Species/Special Status Fish, and **Section 2.2.15**, Water Resources, for a detailed description of trends for aquatic and riparian conditions in the planning area.

Oak grasslands of the foothills continue to shrink due to private development. Increased development affects adjacent public land due to increased use and related noise, trash, and public safety concerns. The CDFW has modeled species richness and sensitive habitat to assist land management decisions by identifying high-risk areas. The models indicate habitats in the Central Valley and the surrounding oak foothills are at the highest risk. Rare species richness increases east to west, with a distribution that generally follows the Trinity River Canyon, Coast Range, and western Klamath Mountains. However, the rare species richness model breaks down when weighted across multiple models, although the Trinity River Canyon and the northern Coast Range remain highly important.

Public land located closer to urban centers is likely to have a negative trend due to increased use. User-related impacts increase the closer the site is to population centers. Rolling oak grasslands and the northern Sacramento Valley are more likely to be impacted by development. Public demand for multiple-use trails is increasing. Though the multiple-use trails only disturb a narrow, linear footprint, they can degrade habitat quality due to increased use, dogs, trash, and noise. In many areas, trails may become or lead to homeless encampments with semi-permanent shelters and no adequate sanitation. Marijuana cultivation continues to expand towards and sometime encroach onto public lands. In addition to altering vegetation and blocking waterways, evidence of rodenticide-related illness and mortality in numerous wildlife species exists. Some of the impacted species are federally and state protected.

Coastal properties continue to improve in direct response to dune restoration efforts. European beachgrass (*Ammophila arenaria*) has been mechanically removed, and native plants have successfully recolonized the treated area.

Forecast

Terrestrial wildlife will follow the trends of the vegetative community. Climate change is likely to result in a less productive landscape and associated habitats. In general, less productive habitats will be able to support less wildlife. The coverage of large conifer forests will likely decrease as the climate dries, particularly for the redwood and Douglas-fir areas. The EPA also predicts the range of some coniferous species will move northward and upslope (EPA 2016). The practical impact of climate change during the life of this document is likely limited but the longer-term trend will continue. Species requiring cool wet areas are at the most risk, as those areas are likely to shrink; however, there are likely some species that will benefit from changing vegetation composition. Species using grasslands, brush, and oak woodlands may increase with the increases in those habitats. Habitat generalists such as black bears and black-tailed deer are able to exploit resources in multiple habitat types and are more adaptable to climate change than species requiring a narrow set of habitat characteristics.

Warmer and drier conditions due to climate change also influence wildlife habitat by increasing the frequency and severity of wildfires (CARB 2020). Wildlife habitat loss and alterations due to fire can be expected to continue into the future.

Fuel treatments and restoration projects for burned areas, such as replanting, may help to improve habitat resilience to such disturbances as climate change and wildfire. However, restoration will need to incorporate the best available science on tools and methods, as guidelines may change with changing climate conditions. An example of guidelines that may change is selecting which species to use for revegetation.

Key Features

Key features for wildlife are those that contribute to group and individual health and the ability to successfully reproduce at or above replacement level. A population that is reproducing below replacement levels is shrinking and may eventually become extinct. Terrestrial wildlife needs food, water, and shelter available throughout the year if they are to thrive. The types of food, water, and shelter required vary by species. Habitat specialists such as the NSO are obligated to mature, structurally complex stands with enough of a prey base to sustain themselves and possibly provide for offspring. Deer on the other hand may use multiple habitat types during a single day. The key habitat types identified by BLM biologists include the following:

- Mature/old growth conifer and mixed hardwood forest stands.
- Wetland, riparian areas, and springs.
- Snowy plover nesting habitat.
- Coastal and inland prairies.
- Rock outcroppings supporting nesting raptors.
- Vernal pool habitat.

2.3 RESOURCE USES

2.3.1 Comprehensive Trail and Travel Management

Travel management pertains to the infrastructure and legal requirement to provide the public the opportunity to access and use specific public lands within the planning area. The BLM's travel management program addresses transportation and access needs for recreationists, ranchers, miners, energy developers, researchers, and others. The travel and transportation network on public lands is a vital link that enables use and management of these lands. BLM Manual 1626-Travel and Transportation Management (USDI BLM 2016h) requires the establishment of a long-term, sustainable, multi-modal transportation system of open areas, roads, primitive roads, and trails that addresses public and administrative access needs to and across BLM-administered lands and related waters.

The transportation network in the planning area consists of federal and state highways, paved or unpaved county roads, paved or unpaved BLM roads built to facilitate industrial development, unpaved two-track roads, single-track trails for OHVs, and single-track trails for hiking, biking, and/or equestrian use. There is an extensive network of BLM roads, which consists of graded gravel roads with associated stormwater ditches that are regularly maintained, and user-created routes that rarely receive maintenance. Nonmotorized transportation networks include trails for pedestrian, equestrian, and cycling activities.

Recreational OHV clubs and organizations are present in the communities within the planning area. These groups hold OHV endurance, race, and challenge course events. OHVs are used in the planning area for recreation and leisure activities, ranching, forestry, and mineral exploration.

Current Level/Location of Use

OHV Recreation Areas

There are two established OHV Recreation Areas within the planning area. The Redding FO manages the Chappie-Shasta Off-Highway Vehicle Area, and the Arcata FO manages the Samoa Dunes Recreation

Area. These areas are specifically managed to provide high-quality OHV recreation opportunities while offering a variety of other recreation opportunities such as biking, hiking, wildlife viewing, and fishing. Both of these areas are highly popular OHV recreation destinations and provide the majority of OHV recreation use within the planning area.

Travel Management Areas

BLM FOs can, where appropriate, delineate travel management areas (TMAs) that meet the RMP objectives. Where there are unique or shared circumstances, high levels of controversy, or complex resource considerations, TMAs may be delineated to address particular concerns and prescribe specific management actions for a defined geographic area. While no designated TMAs exist within the planning area, the current management plan has addressed travel management on a case-by-case basis through land use plans, activity level plans, and specific closures. It should be noted that travel management for WSAs is limited to ways and trails that were existing at the time the area was designated as a WSA.

OHV Area Designations

Regulation 43 CFR 8342.1 requires the BLM to establish motorized travel designations for all public lands to promote public safety, protect resources, and minimize conflicts between multiple-use groups. This is usually accomplished through the designation of OHV management areas. During the RMP planning process, areas or roads must be classified as Open, Limited, or Closed to motorized travel activities. For legislative purposes, 42 CFR 8340.0-5 defines an OHV as “any motorized vehicle capable of or designated for, travel on or immediately over land, water, or other terrain.” In general, the OHV term refers to off-road motorcycles, all-terrain and utility-terrain vehicles, jeeps, specialized four-wheel drives such as rock crawlers, race trucks and buggies, and snowmobiles. Certain authorized vehicles were excluded from this definition, including non-amphibious registered motorboats; any military, fire, emergency, or law enforcement vehicles being used for emergency purposes; vehicles whose use is expressly authorized by the authorized officer, or otherwise officially approved; vehicles in official use; any combat or combat support vehicle when used in times of national defense emergencies; and Class 1, 2, and 3 electric bikes (e-bikes). The national objectives for OHV management are to provide for OHV use while protecting natural resources, promoting public safety, and minimizing conflicts among the various users of public lands.

An *Open* designation would allow for areas of unfettered motorized travel, regardless of existing roads or trails. A *Closed* designation means an area is closed to motorized travel activities to protect public health and safety and to protect significant resource values with the exception of administrative use. A *Limited* designation may have various meanings: limited to types or modes of travel, such as foot, equestrian, bicycle, motorized; limited to existing roads and trails; or limited to designated trails, closed at certain times of the day or season of the year, or for other reasons that would have to be specified in the designation. Public lands that have not been designated are generally managed as open areas until a travel management plan has been completed or the RMP designates OHV areas. While there is no comprehensive travel management plan for the planning area, several site-specific acreage designations have occurred through various land use plans or *Federal Register* notices (**Table 2-53**).

Table 2-53. Existing Motorized Travel Designations in the NCIP Planning Area

Name	BLM-Administered Acres ¹	OHV Designation
Baker Cypress ACEC	169	Limited
Butte Creek ACEC	2,921	Limited
Clear Creek Greenway	5,129	Limited
Chappie-Shasta OHV Area	36,512	Limited
Deer Creek ACEC	576	Closed
Dry Creek	135	Closed
General-Rest of Field Office	124,403	Not Designated
Grass Valley Creek Watershed	14,887	Limited
Hawes Corner ACEC	39	Closed
Interlakes SRMA and West French Gulch	45,572	Limited
Klamath River	3,138	Limited
Sacramento River Bend ACEC	19,957	Limited
Sacramento River Island ACEC	91	Closed
Shasta Valley Wetlands	221	Limited
Trinity	28,015	Limited
Upper Klamath River	202	Limited
Samoa Dunes	125/175	Limited/Closed
Manila Dunes	112	Closed
Lacks Creek Management Area	9,218	Closed except Pine Ridge Road and maintained spurs
Butte Creek Management Area (Arcata)	2,254	Closed except Butte Creek and Larabee Butte roads
Red Mountain Management Area, WSR corridor, Elder Creek ACEC, and Red Mountain ACEC	41,877	Closed
Red Mountain Management Area, other than WSR corridor, Elder Creek ACEC, and Red Mountain ACEC	20,034	Limited to roads
Covelo Vicinity Management Area, WSR corridor	68,184	Closed
Covelo Vicinity Management Area, other than WSR corridor	62,248	Limited to roads
Scattered Tracts Management Area, WSR corridor	12,327	Closed
Scattered Tracts Management Area, other than WSR corridor	12,062	Limited to roads

Source: USDI BLM 2016a

¹Acreage based upon available data; actual acreage may vary based upon use of old documents versus GIS calculations.

Aside from the areas listed in **Table 2-53**, the remainder of BLM-administered lands in the planning area is open to cross-country motorized travel.

Commercial, Competitive, and Organized Groups

The use of roads and trails by motorized groups to conduct OHV events has been a primary component of travel management within the planning area. Commercial, competitive, and organized motorized groups use roads and trails in both the urban and rural areas for local and regional recreational events. Motorized uses include events such as the annual Shasta Dam Grand Prix that has been authorized for the past 30 years. This event uses roughly 30 miles of county and BLM-maintained roads and trails for its designated racecourse. Other OHV events, such as the annual New Year's Day Poker Run, use

segments of roads and trails to form a circular course of 30 to 40 miles. Roads and trails within the planning area are also used by groups to access public lands for dispersed recreational activities throughout the year.

Nonmotorized events and activities that use the travel management system include equestrian endurance events, endurance runs, or bike rides. Hiking and biking trails are increasingly in demand in the urban interface areas, but also provide access to more remote recreation areas such as wilderness or WSAs.

Forecast/Anticipated Demand for Use

The increased development of private lands adjacent to public lands in the urban interface has, in turn, increased the extent and frequency of motorized and nonmotorized travel on BLM-administered lands, especially in the urban interface areas. This trend will necessitate proactive management of trail and road systems and will influence travel management decisions and direction.

The use and popularity of OHVs will likely continue to grow well into the future, increasing the demand for specialized trails and designated OHV areas. The urban interface within the Redding FO and dispersed areas throughout the planning area will likely continue to see an increase in OHV use. Additionally, there is sustained popularity of nonmotorized trails for community partnership events, such as the Bigfoot MTB Challenge (formerly known as the Mayor's Challenge).

Partnerships with local schools for team and individual sports and educational purposes are also considered to be a highly valued use of nonmotorized trails. In support of community service providers, nonmotorized trails are also made available for trainings for local search and rescue teams and firefighters. Growth in the use of public lands for these purposes is anticipated to increase with greater demand for recreation and outdoor experiences and the requisite need for services.

Technological advancements will continue to change the type of use and demands on travel management. For example, the advent of all-terrain vehicles in the 1990s has had a significant impact on single-track trails used by motorcycles. Today, the increasing popularity of utility-terrain vehicles, also known as side-by-sides, is having an impact on trails created by all-terrain vehicles due to their wider wheelbase. As faster and more powerful machines have become more common, it may be necessary to integrate more restrictions or safety measures. Additionally, the popularity of electric bikes is increasing access to BLM-administered trails and roads.

Areas rich in cultural resources and areas popular for dispersed motorized and nonmotorized recreational use will need increased OHV and travel management focus on designated roads and trails to maintain or protect the resources.

In some portions of the planning area backcountry, touring or scenic driving by private sport utility vehicles and commercial companies has increased, requiring the need for improved infrastructure for road signage and road/trail maps. Interest in commercial operations for backcountry travel using high-end race style vehicles, and the use of utility-terrain vehicles, has created a new niche.

Key Features/Areas of High Potential for Use

Major roads crossing public lands within the planning area include Highways 299, 101, and Interstate 5. An extensive network of state, county, city, utility ROW, and BLM-maintained roads provide access

throughout the planning area. Primitive routes and two-track and single-track trails provide access to remote areas, usually by means of four-wheel drive vehicles or OHVs. Nonmotorized routes of travel include equestrian, mountain bike, and pedestrian trail systems at Swasey Recreation Area, the Sacramento River Rail Trail System, Clear Creek Greenway, Mule Mountain, Cloverdale, Sacramento River Bend Area, Trinity Management Area, and Lacks Creek Management Area.

2.3.2 Livestock Grazing

Current Level/Location of Use

The planning area grazing land use allocations are determined by suitability and manageability criteria defined by two programmatic EISs completed in 1983: the Yokayo Grazing EIS (lands administered by Arcata FO; USDI BLM 1983a), and the Redding Livestock Grazing EIS (USDI BLM 1983b). Additional grazing use allocations by management area were subsequently authorized in the 1992 Arcata RMP (USDI BLM 1992a) and 1993 Redding RMP (USDI BLM 1993). Further, some acquired parcels in the Arcata FO were accepted with deed restrictions that prohibit livestock grazing.

Currently, 255,378 acres are administratively open to livestock grazing (66,477 acres administered by Arcata and 187,926 administered by Redding) provided suitability and manageability criteria are met and NEPA review is completed. Currently, 46,194 acres are being used as grazing allotments; 21,863 acres are in the Arcata FO and 24,331 acres are in the Redding FO. There are 130,668 acres closed to livestock grazing under existing RMP decisions and/or deed restrictions in the planning area: 66,776 acres closed for Arcata FO and 64,191 acres closed for Redding FO. **Table 2-54** lists areas closed to livestock grazing and what administrative mechanism exists.

Table 2-54. Areas Closed to Livestock Grazing under Existing Administrative Mechanisms

Areas Closed to Livestock Grazing	Acres	Land Use Decision
Lacks Creek parcels	3,150	Parcels transferred with deed restrictions from Save the Redwoods League- Arcata FO
Big Butte ACEC	2,500	1992 Arcata RMP
Samoa Peninsula	452	1992 Arcata RMP
Covelo Vicinity	50,800	Closed to new leases in 1992 RMP
Red Mountain Management Area ACEC's	9,775	1992 Arcata RMP
Shasta and Klamath River Canyon	95	1993 Redding RMP
Upper Klamath River	923	Wild and Scenic River/1993 Redding RMP
Dry Creek	162	1993 Redding RMP
Trinity River (Wild and Scenic River)	5,967	1993 Redding RMP
Grass Valley Creek Watershed	14,862	1993 Redding RMP
Interlakes Special Recreation Management Area	36,516	Closed to New leases in 1993 Redding RMP
Clear Creek/Sacramento Island ACEC	91	1993 Redding RMP
Cottonwood Creek and Sacramento River Parcels	97	1993 Redding RMP
Hawes corner ACEC	38	1993 Redding RMP
Shasta River (Wild and Scenic River)	1,081	1993 Redding RMP
Manton Road parcels	462	1993 Redding RMP
Deer Creek ACEC	567	1993 Redding RMP
Forks of Butte Creek ACEC	2,921	1993 Redding RMP
Baker Cypress ACEC	141	1993 Redding RMP

Source: USDI BLM 2016a

Although 255,378 acres are administratively open to livestock grazing in the planning area, roughly only 73,265 acres are characterized with potentially suitable vegetation to support seasonal livestock grazing. These acres consist of grasslands (21,581 acres) and woodlands such as Oregon white oak and black oak woodlands that contain a grassy or herbaceous understory (51,684 acres) (see **Table 2-33** and **Table 2-34**). Of the 73,265 acres that are mapped as suitable vegetation in the planning area, 46,194 acres are currently leased within existing grazing allotments.

Forage allocations are based on animal unit months (AUMs). An AUM is equal to the approximate amount of forage needed to sustain one cow and her calf, five sheep, or five goats for a period of 1 month. Current allocations of forage permitted for active leases are 4,931 AUMs, with 963 AUMs administered by the Arcata FO and 3,968 AUMs by the Redding FO. The planning area is primarily used by cows with 28 AUMs currently scheduled for horse use.

There are currently 27 active allotments with grazing leases recognized in the Rangeland Administration System (USDI BLM 2015) for the planning area: 20 in the Redding FO and 7 in the Arcata FO (**Map 2-34, Appendix A**). Active allotments are those that are available to grazing through an RMP ROD and are currently permitted or leased. All of the current leases are located outside of grazing districts and are administered under Section 15 of the Taylor Grazing Act. The active allotments vary in size from 5 acres to 9,100 acres, with grazing allocations ranging from 10 to 1,330 AUMs in each allotment.

Active allotments within the planning area are broken up into three selective management categories: Custodial (C), Maintain (M), and Improve (I). Categories are determined by assessment of the resource conditions within an allotment and are subject to change with conditions. Allotments in category C are managed only for protection of existing resource values. Category M allotments have moderate to high resource potential, are subject to regular land health evaluations, and present rangeland condition is satisfactory. Category I allotments require more intensive management to improve resource conditions and/or adequate management strategy where potential for positive economic return exists. As conditions and/or management objectives change, a categorical change may be required for allotments. Of the currently active 27 allotments, 9 are category C, 16 are M, and 3 are I (**Table 2-55**).

Table 2-55. Summary of Active Grazing Allotments by Acreage, AUMs, AMPs, and Management Category

Field Office	Allotment Name and Map Codes to Map 2-39	Total Acres	Permitted AUMs	Mgmt. Category	AMP (Y/N)
Redding FO	Salt Springs (6)	1,120	72	I	N
Redding FO	Black Mountain (4)	2,817	375	M	N
Redding FO	Sheep Rock (7)	320	40	M	N
Redding FO	Piney Mountain (5)	280	17	M	N
Redding FO	Iron Gate (1)	280	18	M	N
Redding FO	Duzel Creek (18)	1,768	51	M	N
Redding FO	Hornbrook (2)	225	20	M	N
Redding FO	Secret Spring (3)	2,360	197	M	N
Redding FO	Bear Creek (11)	355	29	C	N
Redding FO	Panwauket (10)	5	60	C	N
Redding FO	Little Cow Creek (27)	160	51	M	N
Redding FO	Old Clement Ranch (9)	2,162	164	M	N
Redding FO	North Fork (12)	160	27	C	N
Redding FO	Bald Knob (19)	455	46	M	N

Field Office	Allotment Name and Map Codes to Map 2-39	Total Acres	Permitted AUMs	Mgmt. Category	AMP (Y/N)
Redding FO	Digger Creek (20)	888	96	M	N
Redding FO	Hog Lake (26)	5,322	1,330	I	N
Redding FO	Table Mountain (14)	200	50	M	N
Redding FO	Jellys Ferry/Battle Creek (25)	4,560	1,280	I	N
Redding FO	Long Ranch (13)	194	24	M	N
Redding FO	Picard Road (8)	274	21	C	N
Arcata FO	Horse Pasture Ridge (21)	7,108	205	C	Y
Arcata FO	Travis Ranch (16)	4,607	120	M	Y
Arcata FO	Lightning Camp Ridge (17)	5,015	30	C	Y
Arcata FO	Jewett Creek (15)	440	89	C	N
Arcata FO	Willis Ridge (23)	4,080	212	C	N
Arcata FO	Pepper Gap (22)	451	19	C	N
Arcata FO	Centerville Bluffs (28)	162	288	M	Y

Source: USDI BLM GIS 2021

Rangeland health assessments indicate that range health standards as described in the Rangeland Health and Standards Guidelines for California and Northwestern Nevada (USDI BLM 1998b) are being met and that productivity and land health is stable and in good condition. Rangeland health assessments are scheduled to be completed at least once every 10 years for all grazing allotments. Ideally, range health assessments occur prior to grazing lease renewal to provide a current field evaluation useful for EAs required to meet NEPA requirements. Interdisciplinary rangeland health assessments are implemented to ensure that Soils, Species, Riparian, and Water Quality standards are being met.

All grazing leases include standard BLM terms and conditions. Additional general or allotment-specific terms and conditions are also included, such as requirements to comply with the Standards and Guidelines of Rangeland Health for California and Northwestern Nevada. Additionally, a grazing lease may include terms and conditions compliance with an Allotment Management plan (AMP). An AMP is a livestock grazing management plan dealing with a specific unit of rangeland and based on multiple-use resource management objectives. An AMP considers livestock grazing in relation to other uses of rangelands and in relation to renewable resources such as watersheds, vegetation, and wildlife. An AMP establishes the seasons of use, the number of livestock to be permitted on rangelands, and the rangeland improvements needed. Currently, four allotments have a completed AMP. In general, there are no year-round grazing leases in the planning area, although a given season of use could potentially occur at any time of year depending upon climate, productivity, plant phenology, elevation, or the area's role in an AMP.

There are 33 vacant allotments in the planning area: 32 in the Redding FO and 1 in the Arcata FO. Vacant allotments are those that are available to grazing through an RMP ROD and do not currently have a permit or lease associated with them. Several allotments have pending applications. Proponents of the Simpco Lands allotment are in the middle of an EA to determine the issuance of a permit/lease for this allotment. **Table 2-56** lists those vacant allotments, their FO, name, identification number (as corresponds to **Map 2-35, Appendix A**), and acreage and whether there is a current application pending for these allotments.

Table 2-56. Summary of Vacant Grazing Allotments by Acreage, AUMs, AMPs, and Management Category

Field Office	Allotment Name and Map Codes to Map 2-40	Allotment Acres*	Active Application
Redding FO	Adams (8)	720	No
Redding FO	Bald Hill (33)	1,410	Yes
Redding FO	Battle Creek (3)	505	No
Redding FO	Blodgett (9)	724	No
Redding FO	Boeger (10)	130	No
Redding FO	Clear Creek Pasture (2)	772	Yes
Redding FO	Dry Creek (7)	152	No
Redding FO	Dutch Gulch (1)	1,587	No
Redding FO	Farrell (11)	279	No
Redding FO	Fuglistaler (12)	394	Yes
Redding FO	Furtado (13)	79	No
Redding FO	Graves (14)	318	No
Redding FO	Hampton (15)	333	No
Redding FO	Haskins (17)	82	No
Redding FO	Hathaway (18)	224	No
Redding FO	Inks Creek (6)	1,248	No
Redding FO	Laubacher (19)	1,251	No
Redding FO	Lemos Ranch (20)	689	No
Redding FO	Lisky (22)	650	No
Redding FO	Lucas (23)	609	No
Redding FO	Magladry (24)	1,493	No
Redding FO	Maplesden (25)	808	No
Redding FO	Martin (26)	1,704	No
Redding FO	Nicholson (south parcel) (27)	42	No
Redding FO	Novy (28)	468	No
Redding FO	Partch (29)	160	No
Redding FO	Paynes Creek (4)	2,647	No
Redding FO	Pleasant Valley (16)	129	No
Redding FO	Rickert (30)	165	No
Redding FO	Simpco Lands (31)	1,195	Yes
Redding FO	Sylva Brothers/Willow Creek (32)	168	Yes
Redding FO	Tuscan (5)	660	No
Arcata FO	Lake Mountain (34)	335	No

Source: USDI BLM GIS 2021

Forecast/Anticipated Demand for Use

The human need for food and fiber, economic stimulation and livelihood, and the landscape-wide, ecological services livestock grazing can provide is likely to sustain demand for grazing use of public land well into the future.

More frequently and often annually for I and M allotments, grazing allotment monitoring is completed to ensure residual dry matter (RDM) guidelines for annual uplands (**Table 2-57**) are being met. RDM is used to indicate the combined effects of the previous season's forage production and its consumption in an effort to assess the level of grazing use. The amount of RDM remaining at the end of the grazing season will influence subsequent productivity as well as species composition, level of soil erosion, and

Table 2-57. Residual Dry Matter (RDM) Guidelines for Annual Uplands

Precipitation	Slope 0-25 Percent	Slope 26-45 Percent	Slope 46 Percent and Up
10 – 40 inches	500 pounds	600 pounds	800 pounds
40 – 60 inches	750 pounds	1,000 pounds	1,250 pounds
60 plus inches	1,000 pounds	1,500 pounds	2,000 pounds

Source: BLM 1998

Note: Definition is pounds per acre by slope and precipitation.

potential nutrient loss. Proper RDM management influences whether key standards such as soils and species are met during an interdisciplinary rangeland health assessment.

As of fall 2015, California had experienced unprecedented severe drought, which may continue as a trend into the future. Even with future episodic rain events, such as wet seasons associated with El Niño cycles, average temperatures are trending higher (NOAA 2016). Increased temperatures may lead to decreased soil moisture and a reduction in available forage for livestock grazing. If minimum RDM guidelines become exceeded under approved levels of grazing use, livestock adjustments become necessary. In general, an increased need to monitor reductions in forage productivity, increased fire return interval(s), vegetation type and life cycle changes, and shifts in available water sources are being anticipated.

There may be an increase in demand for fuels reduction projects to combat the recent and future potential in wildfire risks. Livestock grazing may be used to meet the fuels reduction objectives in grassland and oak woodland areas.

Of the 73,265 acres that are mapped as suitable vegetation (grasslands and oak woodlands) in the planning area, 46,194 acres are currently leased within existing grazing allotments. Therefore, there may remain some opportunity for new grazing leases that have not yet been identified after excluding any existing administrative grazing use closures.

Key Features/Areas of High Potential for Use

The planning area contains many small, isolated tracts of BLM-administered land that may or may not contain suitable vegetation for livestock grazing. These areas often present management challenges due to being adjacent to, or surrounded by, private land, or by special concerns related to designations such as Wilderness, WSR, or ACEC, for example. Unique issues are often associated with BLM grazing allotments adjacent to developed areas (urban-interface), such as livestock-dog interactions or vandalism.

Management challenges include balancing resource conflicts such as wildlife use of forage, wildlife compatible fences, ongoing coordination with private and public ranchers, the recreating public, and interested stakeholders. Other management challenges include the impact of invasive, nonnative weeds on forage production; developing livestock grazing management strategies that improve range health standards such as soil, species, riparian and water quality values; and addressing long-term monitoring needs. Water availability for livestock may be a limiting factor in the future with climate change or long-term drought.

Suitability and Manageability Criteria from the Yokayo Grazing Draft EIS and Redding Proposed Livestock Grazing Management EIS would be carried forward into the NCIP RMP. Applicable RODs/approval are cited in the 1992 Arcata RMP (USDI BLM 1992a) and 1993 Redding RMP (USDI BLM 1993).

Whether a proposed grazing lease is considered suitable and manageable depends on many factors. Some of these key factors are size of tract and location, number of suitable acres in tract, potential number of AUMs, operator dependency on the public land for livelihood, accessibility of the land as a function of BLM's ability to manage the land, special features of the land (such as critical habitat for threatened or endangered species, for example), including particular needs of the (proposed) grazing lessee, and consideration of the best use of the land.

2.3.3 Lands and Realty

The primary objectives of the ROW program are to issue ROWs that direct and control use in a manner that protects natural resources and prevents undue and unnecessary degradation, and promote the use of ROWs in common, in coordination with applicable law and regulation (43 CFR 2801.2).

Current Level/Location of Use for Use Authorizations

Most use authorizations issued after October 21, 1976, are issued under the authority of Title V of the FLPMA. The FLPMA provides authority for the issuance of use authorizations under various sections depending on the activity to be authorized (ROWs versus leases, easements, and permits) and who is applying (private entities and municipalities versus federal agencies).

Rights-of-Way

Currently, ROWs are typically issued under the authority of the FLPMA (Title V, Section 501) and grant the right to construct, operate, maintain, and terminate facilities on public lands. Exceptions to this can include authorization of gas transmission lines, which are issued under the authority of the Mineral Leasing Act of 1920, and certain highway uses (for those not covered under a FLPMA ROW), which may be authorized in the form of a letter of consent, pursuant to the interagency agreement between the BLM and the Federal Highway Administration (FHWA). In accordance with the interagency agreement (AA-851-IA2-40) between the BLM and the FHWA, federal lands may be appropriated for highways and highway material purposes.

In addition, the FOs currently administer ROWs that were granted prior to passage of the FLPMA in 1976 under repealed authorities. Although the FLPMA is the primary authority, there may be other authorities under which rights are held; some are repealed, some are partially repealed, and some are still valid authorities, unchanged by the passage of the FLPMA. **Table 2-58** summarizes the number of active ROWs administered by the FOs by use.

Table 2-58. Active ROWs Administered by the FOs within the NCIP Planning Area

Field Office	Roads	Power Line	Water Facility	Communication Lines	Communication Sites	Other*	Total
Arcata	114	16	9	9	12	19	179
Redding	465	165	127	84	19	94	923

Source: USDI BLM 2016a; 2021²

*Includes miscellaneous case types, such as highway material sites, oil and gas transmission, federal reservations, and irrigation projects.

The majority of the current ROWs administered by the BLM in the planning area allow road access and utility service to adjacent private parcels typically developed with a single-family residence. Common uses authorized on BLM-administered lands within the FOs are described, but not limited to, those listed below.

Roads/Access

Access ROWs exist under a variety of different authorities and are held by federal, state, local, and private entities. Together these ROWs form a road system that provides critical access needs to the public.

There are two federal highways and several state highways that serve the various communities within the planning area. Interstate 5 is the major north-south route within California. US Route 101 is also a north-south route that connects coastal communities in Humboldt, Mendocino, and Del Norte Counties. The major federal highways are connected to a system of state highways that traverse the seven counties covered by this plan. This highway system further connects to municipal and county-maintained road systems that provide access to the public lands described within this planning document.

These systems are subject to change over time, as new roads are constructed, segments are re-aligned, and existing roads are removed through a formal abandonment process. The presence or absence of these roads not only affects the ability of the general public to access public lands, but also affects the ability of holders and applicants of access road ROWs to legally connect to public road systems.

Tehama, Trinity, and Siskiyou Counties have asserted maintenance and use of roads under Revised Statute 2477 (R.S. 2477). The remaining counties covered by the NCIP have not asserted R.S. 2477 claims, and no claim asserted by any county is known to have been adjudicated by the courts. Caltrans has also not asserted R.S. 2477 claims for portions of State Route (SR) 299W, but portions of the highway were likely constructed under the authority of R.S. 2477. Under this authority many state and county highways were constructed over federal lands; for these types of ROW, there was no action required by the Secretary of the Interior in regard to the processing, and acceptance was normally demonstrated by continuous public use over a specified period of time. Caltrans continues to maintain portions that are not covered under an existing Federal Aid Highway grant (pursuant to Title 23 of the USC) or FLMPA grant.

² Personal communication between Katie Shaw, Bureau of Land Management, Redding Field Office and Jeremy Eyre in January 2021.

Historically, the Redding FO has worked with Caltrans in issuing FLPMA ROWs or letters of consent for areas needed for highway realignment projects, disposal areas, drainage improvement projects, or slope failure areas. An example of this would be a portion of SR 299W known as Buckhorn Grade, where Caltrans has completed significant highway realignment activities over the past 10 years, known as the Buckhorn Grade Improvement Project. This was a joint project between Caltrans and the FHWA to realign approximately 10 miles of highway, disturbing an area approximately 101 acres (Caltrans 2009). The purpose of the project was to improve interregional travel, improve safety and traffic along Buckhorn Grade, and provide improved access between Highway 101 and Interstate 5 for Surface Transportation Assistance Act trucks and the general public.

The Redding FO has been working toward issuing letters of consent in accordance with an interagency agreement (AA-851-1A2-40) between the BLM and the FHWA for portions of the ROW needed outside of an existing Caltrans ROW or for new previously unauthorized portions that involve federal funds. This is a larger planning issue; eventually the FHWA and Caltrans would need to work toward including applicable portions of SR 299 that cross BLM-administered land to be included under a Federal Aid Highway grant.

Under this statute, Congress offered to grant ROWs to construct highways over unreserved public lands. Enacted in 1866, the grant was Section 8 of a law entitled “An Act Granting Right of Way to Ditch and Canal Owners over the Public Lands, and For Other Purposes.” R.S. 2477 was repealed by FLPMA in 1976; however, thousands of miles of highway were established across public domain lands under this authority and continue to be used and maintained without any other form of authorization. In some cases, R.S. 2477 roads play an important role in both providing public access to private lands as well as public lands within management areas, such as Iron Mountain Road and the Interlakes SRMA. Since this authority predates FLPMA, roads constructed under this authority are maintained as they existed in 1976.

After passage of FLPMA, federal access rights on BLM-administered lands are typically established under what was termed a “federal reservation” under Section 507 of FLPMA. Access rights under Section 507 are technically ROWs that are noted to the records and may be preserved as a reservation in a future patent document. Prior to passage of FLPMA, federal access routes were noted in accordance with a letter of instruction found in Volume 44 Land Decisions, Page 513. As such, access roads established prior to FLPMA are sometimes referred to as Volume 44 Land Decisions, Page 513 roads. However, Volume 44 Land Decisions, Page 513 was primarily used to protect federal investments in facilities prior to FLPMA and was not usually associated with roads. Roads associated with Volume 44 Land Decisions; Page 513 should be converted into ROWs under Section 507 of FLPMA. It should be noted that highways are not typically granted under Section 507 of FLPMA. They are typically granted under 23 USC 101 et seq. and do not involve FLPMA. When FLPMA is involved in a highway grant, it is usually to a state entity, not a federal entity, and Section 501 of FLPMA applies.

The Arcata FO currently administers 52 federal access ROWs including 7 ROWs under FLPMA. The remaining 45 cases were established under Volume 44 Land Decisions, Page 513 guidance. The Redding FO administers 114 federal access ROWs, with 90 cases established under Volume 44 Land Decisions, Page 513.

These federal ROWs are maintained to provide administrative access to federal lands as well as vehicular access by the general public. These roads do not facilitate legal access by adjacent private

landowners; this can only be accomplished by public roads established by counties and municipalities. In many cases, the extent of federal reservations are limited due to the large areas of lands subject to patents (primarily in the form of railroad grants) prior to the formulation of policy or the recognition of a general need to reserve federal access.

Power Lines and Energy-Related Facilities Including Renewable Power Generation

The FOs currently administer 176 power lines and related facilities, such as substations. These facilities are typically aerially constructed pole lines and range from small capacity distribution lines (12 kilovolts) to larger transmission paths (500 kilovolt). FLPMA has been amended to include Section 512, “Vegetation Management, Facility Inspection, and Operations and Maintenance Relating to Electrical Transmission and Distribution of Facility Rights-of-Way.” This was added to enhance the reliability of the electric grid and to reduce the threat of wildfire damage by acknowledging it might be necessary to address conditions outside the ROW limits in an effort to prevent the incidence of wildfire.

The Redding FO received one solar application in 2018 for Butte County. The BLM later denied it for failure by the applicant to provide the BLM with additional information. Other than the 2018 application, the FOs have not received any ROW applications for renewable power generation facilities in the past, beyond facilities that are ancillary to hydropower as licensed by the Federal Energy Regulatory Commission (FERC). Renewable power generation is an ongoing focus area for federal policy, which is addressed in a separate section (**Section 2.3.10**).

Water Facilities

Water facilities within the planning area are typically small in scale and serve a single residence through issuance of a small-diameter pipeline (3 inches or less) ROW to transport water from a riparian source (such as the Trinity River, which is the predominant location for water developments within the planning area) or from springs on public land. Water storage tanks are also typically associated with these ROWs and range in size from tanks to serve a single-family residence (as small as 1,200 gallons or less) to tanks for small communities (Centerville Community Services District [685,000 gallons]). ROW holders are responsible for reporting their use and ensuring they have the proper permits through the California State Water Resources Control Board.

Communication Lines

The FOs currently administer 87 linear ROWs for communication use. Many are fiber-optic cables underhung on existing power lines. Several buried lines are also present.

In a recent effort to improve internet accessibility to the public living in rural communities in America, Executive Order 13821, Streamlining and Expediting Requests to Locate Broadband Facilities in Rural America, was signed on January 8, 2018. A presidential memorandum, Supporting Broadband Tower Facilities in Rural America on Federal Properties Managed by the Department of the Interior, was also issued to the Secretary of the Interior, directing the Secretary of the Interior to develop a plan to increase access to communication tower facilities and other infrastructure. The Department of the Interior later released a report, Connectivity in Rural America Leveraging Public Lands for Broadband Infrastructure, in response to the presidential memorandum for the Secretary of the Interior in July 2018.

The FOs have seen an increase in ROWs relating to broadband service and the associated infrastructure (e.g., communication sites) to bring high-speed internet to those living in rural communities that currently lack high-speed internet.

Reservations to other Federal Parties

Other federal agencies may apply for and receive a ROW under Section 507 of the FLPMA. These ROWs differ from other ROWs in the fact that they may not be terminated without the consent of the head of the holding agency.

Oil and Gas Related/Mineral Leasing Act–Gas Transmission Rights-of-Way

The planning area supports two major gas transmission projects. The first was originally termed the Pacific Gas Transmission/Pacific Gas & Electric project and delivered natural gas produced in the gas fields of Alberta and British Columbia. An existing system of PGT/PG&E pipelines began at the US Canadian border and terminated at Malin, Oregon. The main gas transmission line within the Redding FO planning area transports gas from the compression station in Malin, Oregon, to Panoche Station in Central California, where it is distributed to municipalities and ultimately to customers. The Applegate FO is currently the lead FO on administration of this transmission line.

The second is the Platina West line, which is for a 12-inch-diameter line that connects gas facilities in Corning to Eureka, California.

Communication Site Leases–Existing Communication Sites

Although administered under the ROW program, communication site uses are authorized under a “lease” document, typically for a 20-year term. The communication site lease was developed in conjunction with the Forest Service in an effort to have a unified process on federally administered sites, including rental calculation methods. Communication site leases can be issued for a variety of uses, including cellular communications, high and low power AM, FM, and television broadcasting, and commercial mobile radio service. Communication sites typically have their own activity level plan (Comm Site plan) for the orderly development and efficient use of space, preventing incompatible uses and establishing technical standards to minimize cross-site interference, and managing radio frequency hazards. Prior planning documents within the planning area did not formally designate communication sites, despite the existence of past communication site plans. The following sections describe the status of the primary sites with existing communication uses, which should be considered for formal designation.

South Fork Mountain (Shasta County)

South Fork Mountain primarily serves the Redding area and is located approximately 5 miles northwest of downtown Redding. The site consists of three separate areas with cellular providers, low-power radio broadcasting, and mobile radio providers. The Communication Site plan (Comm Site plan) was written and approved in 1986. The Comm Site plan should be revised and updated to reflect changing technologies, changes in local demographics/population, and the resolution of identified access issues.

Hoadley Peak (Trinity County)

Located on the boundary of Trinity and Shasta Counties and approximately 4 miles north of State Highway 299 W, the Hoadley Peak site supports cellular and commercial mobile radio service providers.

Hoadley Peak does not have an approved Comm Site plan; development of a Comm Site plan should be pursued.

Rattlesnake Point (Butte County)

Rattlesnake Point is located in Butte County, approximately 7 miles southeast of Oroville. Rattlesnake Point does not have a Comm Site plan; development of a Comm Site plan should be pursued. Rattlesnake Point is a site that was previously used only for a passive reflector site, which is a use that does not require land-based power or other communication infrastructure besides the reflector itself. In 2012, the BLM authorized an additional user—an internet service provider—at this site. Site access has been improved as a result; however, there are still no power or communication lines.

Cahto Peak (Mendocino County)

Cahto Peak is located in Mendocino County, approximately 5.5 miles east of Laytonville, California. The Cahto Peak site accommodates a mix of high-power and low-power communication users, including TV broadcasting, FM radio, cellular, paging, microwave, two-way radio and wireless internet service providers. Communication facilities operating from Cahto Peak primarily serve the following areas: Ukiah, 43 miles southeast; Laytonville, 5.5 miles east; Fort Bragg, 21 miles southeast; Willits, 23 miles southeast; and Laytonville Rancheria; 3 miles east. The Cahto Peak Comm Site plan was written and approved in 2018.

Paradise Ridge (Humboldt County)

Paradise Ridge is located in Humboldt County, approximately 3 miles northeast of Shelter Cove, California, and approximately 12 miles west of Garberville. The largest population zone served is Shelter Cove, with a population of less than 25,000. Paradise Ridge supports microwave service. Currently, there are two leases on this site. Paradise Ridge may be a location where future demand for communication site leasing is necessary. The Paradise Ridge Comm Site plan was written and approved in 2018.

Inks Ridge (Tehama County)

Inks Ridge is located approximately 13 miles northeast of Red Bluff. Inks Ridge is split by a property boundary between public and private lands. The site is capable of supporting further development and permanent power is available on-site. Future development demand is likely to be low as the zone is also served by Tuscan Buttes (private) approximately 7 miles to the south. There are currently two users on site: private mobile radio and an internet service provider. The Inks Ridge site does not have an approved Comm Site plan; development of a Comm Site plan should be pursued.

Rocky Gulch (Siskiyou County)

Rocky Gulch is located in Siskiyou County, approximately 2 miles southwest of Hornbrook, California, and approximately 11 miles northeast of Yreka, California. This communication site supports cellular and wireless internet service providers. Rocky Gulch does not have an approved Comm Site plan; development of a Comm Site plan should be pursued.

Recreation and Public Purposes Act Leases

The Recreation and Public Purposes (R&PP) Act leases are issued in accordance with Section 212 of FLPMA, guidance identified in BLM Handbook H-2740-1, and associated regulations found in Title 43

CFR 2740 and 2910. These types of leases allow the development of public lands for an identified recreation or public purpose, such as fire stations, libraries, and parks. For leases to be issued, these lands must first be classified under the R&PP Act. Once classified, the land can be leased to allow for applications for development in accordance with what was identified in the R&PP Act leases' plan of development and management, which is approved by the authorized officer.

After the lands are fully developed, the holder may apply to receive a patent to the lands, with a reversionary clause that states if the lands aren't being used for what they were intended for, as identified in the plan of development or management plan, then the lands can revert back to the United States. An exception to this would include landfills and other uses that may lead to storage or release of hazardous materials or other forms of contamination. These uses are patented prior to development. The sale price and annual rental for leases and patents issued under the R&PP Act are determined in accordance with 43 USC 869-1, and 43 CFR 2741.8 and 2912.1-1(d).

Land Use Authorizations

Land use authorizations are issued pursuant to Sections 302, 303, and 310 of the FLPMA (43 CFR 2920). They are generally used for short-term (not to exceed 3 years) uses not covered under other regulations (e.g., 43 CFR 2800) and those uses that cannot be authorized under Title V of the FLPMA. Uses are either granted under a lease, permit, or easement. Permits are revocable, and they are typically used to authorize the following activities:

Filming: In the Redding and Arcata FOs, this use is typically short term (1–2 days) and conducted by small crews (less than 10 persons); as such, it qualifies for a minimum impact permit, with minimal processing. The Arcata and Redding FOs process a small volume of these case types, typically two per year.

Apiaries: The Arcata and Redding FOs currently administer four active apiaries permits. These are minimum impact permits; they are usually for a term of 3 years and are seasonal, but they involve multiple sites. Apiary uses have the potential to conflict with high-density recreation uses; as such, they may necessitate planning to designate avoidance areas for apiary uses. The current plans do not address these potential conflict areas.

Geotechnical testing/other: Occasionally (less than once per year), the offices may receive a short-term permit application for soil sampling, depth to water testing, piezometers, or other forms of geotechnical research. This use qualifies for a minimum impact permit; it has not presented any known conflicts and is not addressed by the current plan.

Right-of-way Exclusion/Avoidance Zones

Previous planning documents did not identify any ROW exclusion or avoidance zones. In certain areas, it may be advisable to designate lands as ROW avoidance or exclusion areas, to protect sensitive resources. For example, the following are potential areas for consideration as ROW avoidance areas on a case-by-case basis: Critical Watersheds/Water Use Limitation Areas/Critical Habitat, Late Seral Reserves, ACEC, WSR Corridors, Grass Valley Creek Management Area, and designated wilderness areas.

Right-of-way Corridors

ROW corridors should be designated in accordance with Section 503 under Title V of FLPMA. In 1977, the Western Utility Group (WUG) was formed as an ad hoc organization, primarily to support federal land use planning efforts (International Right-of-Way Association 1991). It was recognized that the various land management agencies in the west had widely different approaches to planning for large-scale infrastructure development projects, such as gas and power transmission lines, communication lines, highways, and ditches/canals. In order to facilitate consistent planning, including ROW corridors that meet at jurisdictional boundaries, the WUG published a series of Western Regional Corridor Studies (WRCS).

Prior planning for the Arcata FO did not designate any ROW corridors, although the Arcata FO planning area had two occupied east/west corridors and one occupied north/south corridor (WUG 1986).

Regarding ROW corridors, the Redding RMP (USDI BLM 1993) stated, “designated corridors include all existing or occupied corridors delineated in the WRCS of 1986.” The WRCS recommended several corridors, including a main north/south route along Interstate 5 as an occupied corridor and one unoccupied corridor through the Sacramento River Bend ACEC. This WRCS recommended route was different than the path of the Western Area Power Administration transmission line that also travels through the Sacramento River Bend ACEC. As stated above, this route was not adopted by the Redding RMP.

Since additional WRCSs have been prepared since the 1986 study, any subsequent plan revision should review the current corridor needs identified in these documents. Additionally, Secretaries of federal land management agencies are also required to designate corridors under FLPMA.

Section 368 of the Energy Policy Act of 2005 directed the Secretaries of Agriculture, Commerce, Defense, Energy, and the Interior to designate energy corridors on federal lands within 11 Western States (Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming) for oil, gas, and hydrogen pipelines and electricity transmission and distribution infrastructure. Accordingly, the BLM considered whether to designate locations of utility corridors for the placement of rights-of-way (ROW) for energy transmission infrastructure during the land use planning process in a programmatic environmental impact statement. The BLM signed ROD in 2009, designating approximately 5,000 miles of Section 368 energy corridors on BLM lands (USDI BLM 2009b). In 2009, plaintiffs filed a lawsuit against the agencies, alleging the PEIS and RODs violated the Energy Policy Act, NEPA, ESA, FLPMA, and the ADA. The agencies entered into a settlement agreement on July 3, 2012, with the plaintiffs (Wilderness Soc’y, et al. v. U.S. Dep’t of Interior, No. 3:09-cv-03048 JW Joint Motion to Dismiss Case Pursuant to Fed. R. Civ. P. 41(a)(2) (2012)). The settlement agreement contains specific actions to resolve the challenges in the complaint. The four principal components of the settlement agreement require the agencies to: complete an interagency MOU addressing periodic corridor reviews; update agency guidance; update agency training; and complete a corridor study.

There are two corridors within the Redding FO’s jurisdiction and no segments of corridor within the Arcata FO’s jurisdiction. Portions of the 101-263 Eureka to Redding Corridor and the 261-262 Mount Shasta Corridor fall within the Redding FO’s jurisdiction. The 101-263 corridor has a width of 3,500 feet, and its designated use has been identified as multi-modal for electric transmission and pipelines.

The 261-262 corridor has a width of 2,000 feet, and the designated use would include electric only in the Redding FO. Within the 101-263 corridor there is an existing transmission line and a natural gas pipeline that is within and adjacent to the corridor. There are multiple electric transmission lines within and next to the corridor. Based on the last agency review of the Section 368 energy corridors in Regions 4, 5, and 6, which was completed in November of 2020, it resulted in the following proposed revision to the 101-263 corridor located within the RFO. A potential revision to the 101-263 corridor was identified to consider shifting the corridor south from MP 14 to MP 18, with existing transmission line as northern border of the corridor. The rationale for the revision is to minimize impacts on the Trinity, California National WSR while maintaining a preferred route for potential future energy development collated within existing infrastructure.

Forecast and Anticipated Demand for Use Authorizations

Use Authorizations

Linear Rights-of-Way: The Arcata and Redding FOs combined typically receive 30–40 new applications for linear ROWs each year. Of this total, approximately 20 are applications for new access ROWs (roads) per year. It is likely that improvements to major transportation infrastructure will be ongoing. This may include bridge replacements and fixing roads and highways. The number of new developments related to residential use that would precipitate small access ROWs is expected to remain static.

The largest factor to potentially change the demand for access would be related to changes in local and state statutes and ordinances that would change the capability/market conditions for cannabis production, thereby exacerbating the need for access and utilities. These changes could occur in any of the counties covered by the NCIP. Beyond this consideration, the past levels of demand for linear ROWs identified above are anticipated to continue throughout the life of the next plan.

Leases/ROWs to Resolve Survey Related Trespass: Trespass cases that involve linear features, such as roads or power lines, and temporary improvements that are non-linear, such as agricultural plantings, may be resolved by authorizing the activity through issuance of ROWs or leases. The need to use these forms of authorizations to resolve trespass cases will continue but will represent a relatively small percentage of the overall demand, one to two cases per year. As noted above, changes in local and state statutes and ordinances that would change the capability/market conditions for cannabis production may result in an increase in encroachment/trespass workload in any of the counties covered by the NCIP.

New Communication Sites: Applications for new communication sites will likely be located within existing communication sites, and it is BLM policy to encourage this collocation. Applications for uses outside of these established sites are not anticipated. Each site will likely receive one to three applications for new and separate uses during the life of the new plan. This demand is somewhat mitigated by the ability of current users to sublease and thereby host additional users within existing facilities. Several of the existing sites (South Fork Mountain, Hoadley Peak) are overdue for new communication site plans to evaluate the ability of the sites to host new and separate uses, as well as to address other potential development issues.

R&PP Leases: The overall demand for these leases is low, typically one to two cases per year for the two FOs. Depending upon the input received by entities that qualify for R&PP Act leases and patents

(State, Local and nonprofit organizations, etc.) the plan revision may need to address the classification of certain lands as suitable for R&PP Act lease and patent. Since these leases may lead to patents and changes in land status, the trend for future demand related to community Recreation and Public Purposes lease needs is also discussed in the land tenure section that follows.

Permits/Leases/Easements: The FOs will continue to receive a moderate demand for specialized or short-term authorizations for activities described in the permits section. This demand is anticipated to average approximately three to five cases per year.

Current Status of Land Tenure

In 1976, passage of the FLPMA fundamentally changed the BLM's mission concerning land tenure. Prior to passage, the primary land tenure goal of the BLM and before that, the General Land Office, was to dispose of lands to allow development. Sections 102 and 202 of FLPMA require the Secretary of the Interior to develop land use plans for all public lands under the administration of the BLM. After the passage of FLPMA, public land is to be retained in federal ownership unless disposal serves national interests. Past land use planning efforts, particularly for the lands under the Redding RMP, identified land tenure areas where BLM would acquire and retain lands to meet specific management goals and other areas where disposal would best meet the public interest. Since those plans were approved, the BLM has actively worked toward acquisition and disposal actions to consolidate landownership patterns.

Existing Land Tenure Patterns

A summary of landownership in the Redding and Arcata FOs is shown below (**Table 2-59**).

Since completion of the previous planning documents, the FOs have made significant changes to the pattern of public landownership by acquiring available lands from willing sellers, while also disposing of lands that are identified as suitable for disposal. Acquisitions and exchanges were focused on management areas designated by the plans, such as the Sacramento River Bend ACEC and Mill Creek area. The primary method achieving these changes during this period was through land exchanges, as discussed below.

Table 2-59. Surface Landownership—Redding and Arcata Field Offices

Land Status	Arcata FO (Acres)	Redding FO (Acres)	Total Acres
BLM	204,600	253,100	457,200
Forest Service	1,217,800	4,203,700	5,422,00
Bureau of Indian Affairs	204,600	4,100	208,700
NPS	95,400	113,400	208,800
Other Federal	200	12,500	12,700
Reclamation	0	10,100	10,100
State	150,500	122,800	273,300
Local Government	100	1,700	1,800
Private/Other	2,683,300	5,177,900	7,861,200
Total	4,558,500	9,900,000	14,393,100

Source: USDI BLM GIS 2021

Acquisition

All land acquisitions will be through exchange, purchase, or donation. Acquisitions through exchange, purchase, or donation make up an important component of the BLM's land management strategy. The BLM acquires land from willing sellers when it is in the public's interest and is consistent with land use plans. Acquisition through purchase is focused on those areas identified for acquisition in planning documents and where funding is available through federal (congressionally appropriated funds) programs or State grants. For this reason, the planning efforts should consider the federal designation (ACEC, SRMA, etc.) associated with each acquisition area and how it may affect future funding when making determinations of special designations. Various types of acquisition are described below. **Table 2-60** provides a summary of the acres of land acquired prior to 1993 and since 1993.

Table 2-60. Land Acquisitions Prior to 1993 and Since 1993—Redding and Arcata Field Offices

Land Status and Date	Arcata FO (Acres)	Redding FO (Acres)	Total Acres
Surface Lands			
Surface management area prior to 1993	7,372	14,714	22,086
Surface management area since 1993	12,877	23,173	36,050
Subtotal – Surface Lands	20,249	37,887	58,136
Split-estate			
Split-estate prior to 1993	153	32,971	33,124
Split-estate since 1993	13,802	3,297	17,099
Subtotal – Split-estate	13,955	36,268	50,223
Total Acquired Lands	34,204	74,155	108,359

Source: USDI BLM GIS 2021

Fee Simple Acquisition: Lands are typically acquired in “fee simple” ownership, which offers the highest level of control of the surface estate. This is typically the desired form of ownership for most acquisition goals; however, in some cases, other forms of ownership are more appropriate. Although owned in fee, some parcels may contain deed restrictions that limit the use of the lands in perpetuity. These deed restrictions are carefully considered and reviewed, with assistance from the Solicitor's Office, to ensure compliance is met with FLPMA and the Department of Justice title standards.

Access Easements: Several forms of legal access rights may be obtained through the acquisition process. These forms are discussed below.

Public Access—Exclusive Rights

In addition to access routes constructed on public domain lands, the United States has also acquired access rights from private parties. Acquisitions may either acquire full access rights, to include the right of public access, or be limited to access needed for administrative purposes. The rights acquired are dependent upon the needs of each particular situation and what the private party is willing to transfer.

The Redding FO may pursue relinquishment of the Tucker Hill Road easement. This is because the easement is no longer required for timber harvesting on adjacent BLM-administered lands, and the road has deteriorated beyond economic viability, due to poor soil conditions. Since the

BLM does not own the land and there is no longer any need for the BLM to administer the easement, the BLM may seek to relinquish it.

Public access to public lands can also exist as a public access maintained by the county or local municipality. The BLM has been working to acquire and maintain public access since the previous RMPs, and public access has improved as a result of acquisitions that consolidate the ownership pattern and are located in such a way as to connect with public access routes. Many parcels in the planning area lack legal public access in the decision area. Identifying ongoing access needs, including access to specific management areas, will be an important consideration of this planning document. The BLM will continue to evaluate areas where legal and geographic access is needed, pursuant to Secretarial Order 3374.

Administrative Access—Non-Exclusive Easements

Occasionally, sellers are not willing to provide exclusive access. This may be because they are concerned about the potential impacts on other private lands in the vicinity and changing the pattern of public use and the resulting loss of solitude and privacy as well as potential liability issues. The BLM has acquired administrative access only, in some cases, so that at a minimum, BLM staff, contractors, and other designated parties can access the lands and conduct government business.

Many of the lands BLM has acquired came with access easements to the property. While most of these easements are not “exclusive” easements, some can be interpreted to include public access. Generally, these easement interpretations are done in coordination with the Solicitor’s Office.

Conservation Easements: Another form of partial ownership acquired by the BLM is in the form of conservation easements. These properties often present their own unique management challenges, particularly relating to enforcement of provisions within the conservation easement.

The Arcata FO acquired one conservation easement over the South Spit of the Humboldt Bay in 2003. Redding FO acquired two conservation easements (one agricultural, one riparian) in the Upper Sacramento Bend Area ACEC.

Exchanges

Exchanges conducted by the Arcata FO focused on ecologically sensitive lands in the King Range and Mill Creek areas were initially facilitated by The Nature Conservancy and American Land Conservancy (**Table 2-61**). Conservation organizations such as these are able obtain purchase options or purchase properties outright to facilitate transactions. Facilitation by nonprofit conservation organizations provides a level of responsiveness to the market and available properties that the BLM alone is unable to provide.

Land exchanges are a viable option when the exchange proponent holds lands identified for acquisition and has an interest in acquiring BLM-administered lands identified for disposal with approximately equivalent market value. The exchange must be considered to be in the public interest and, as such, typically only involves significant acreage of nonfederal lands with recognized resource or public values.

Table 2-61. Arcata FO Land Exchanges Completed Since 1992*

Management Unit/Lands Acquired	Acres Acquired	Year Completed
Mill Creek	513	1997

Source: USDI BLM 2016a

*Additional exchanges were completed by the Arcata FO during this period acquiring lands within the King Range, but these are outside of the area of consideration for this document.

Several large land exchanges were completed after the 1993 Redding RMP was approved, which added significant acreage to the Sacramento River Bend ACEC, GVC, and to a lesser extent Clear Creek and the Interlakes SRMA, as shown in **Table 2-62**. Since completion of the 1993 Redding RMP, many of the most favorable exchange opportunities have been considered and, where appropriate, completed. As a result, the potential for significant exchanges has gradually been reduced by the past successes of the program. Exchanges have also become less viable than in the past due to high incidents of failure, increased costs, and an increase in other disposals, acquisition tools, and opportunities.

Table 2-62. Redding FO Land Exchanges Completed Since 1993

Management Unit/Lands Acquired	Acres Acquired	Year Completed*
Bend – Bald Hill	720**	1993
Trinity River - Lowden Fields	193	1994
Bend – Hog Lake Ranch	5,149	1995
Interlakes – Big Gulch	7,309	1995
Clear Creek - Mule Mtn	320	1995
Bend – Bald Hill	59	1996
Clear Creek - Cloverdale	882	1996
Clear Creek – Mule Mtn	150	1997
Butte Creek	141	1998
Klamath – Shasta River Canyon	240	1998
Clear Creek	1,047	1998
Bend – Oak Slough/South of Battle Creek	3,966**	1996/98
Grass Valley Creek	80	1998
Grass Valley Creek	744	1998
Interlakes	80	1998
Mill Creek	749	1998
Klamath - Shasta River Canyon	1,097	2000
Bend/Battle Creek	170	2000
Interlakes	120	2001
Clear Creek	42	2007
Grass Valley Creek	566	2007
Interlakes - Keswick	275	2010

Source: USDI BLM 2016a

*Completion is date of recordation

**Total for 2 phases

Disposals

Lands may be disposed of when they are identified for disposal through the land use planning process and meet criteria identified in Section 203 of the FLPMA. Disposals are authorized pursuant to Section 203 of the FLPMA, 43 CFR 2710, and BLM Sales Manual 2710. Sales of public lands will not be less than fair market value; they will require an appraisal to be completed that conforms to established appraisal

principles and standards in place at the time of sale. Lands may also be disposed of in the form of R&PP Act patents.

Historically, most of the lands within the planning area subject to disposal since the completion of the prior planning documents was through exchanges (FLPMA Section 206). As stated in the section on exchanges, sales were not contemplated in the previous plan for the Redding area. In 1996, the plan was amended to allow greater flexibility in the land tenure program, by identifying sales under FLPMA Section 203 as a land disposal tool. This amendment also considered the applicability of the Federal Land Transaction Facilitation Act (FLTFA), which allowed sale proceeds to be held in a special fund for future use in acquiring properties by the BLM, Forest Service, USFWS, and NPS.

Under previous planning guidance, disposals could occur anywhere outside of identified management areas, which are designated as “retain and acquire.” Specific identification of parcels or areas suitable for disposal is necessary to prevent a need for amendments to clearly identify parcels. Additionally, any lands previously patented under the R&PP Act with a reversionary clause in the patent should be made available for disposal under Section 203 of FLPMA, for the reversionary interest. When this interest is disposed of, it removes the agency’s long-term monitoring responsibilities for these parcels.

Withdrawals and Management of the Mineral Estate

Withdrawals are authorized in accordance with Section 204 of the FLPMA and 43 CFR 2300. Withdrawals within the planning area have been made under a number of different authorities for various reasons. Withdrawn areas are typically closed to settlement, sale, location, mineral entry, and other forms of entry, such as agricultural entry (some forms of agricultural entry, such as homesteading, have been repealed by the FLPMA). There are four major categories for withdrawals: administrative, presidential proclamations, congressional withdrawals, and Federal Power Act or Federal Energy Regulatory Commission withdrawals. New withdrawal actions are only for a 20-year period and then require renewal to continue.

Withdrawals are also a mechanism for transferring jurisdiction of federal lands from one department, bureau, or agency to another. Public land orders are also implemented by the Secretary of the Interior to make, modify, extend, or revoke land withdrawals under the FLPMA.

FLPMA/Recreation/Wilderness Act Withdrawals

- Clear Creek: A withdrawal covering 150 acres for the purposes of protecting the Clear Creek greenway was completed under FLPMA withdrawal in 1998. This withdrawal expired in January of 2018.
- Trinity River/Indian Creek: A withdrawal of 3,123 acres was completed in August of 2015 for the Trinity River and Indian Creek Townsite. A significant portion of the Trinity River corridor has been withdrawn over the years under various authorities, including Federal Power Site and Reclamation withdrawals.
- Forks of Butte: Approximately 2,070 acres were withdrawn, in perpetuity, under Public Land Order 5329. This withdrawal only covers a portion of the Forks of Butte ACEC subsequently created in the 1993 Redding RMP. The prior planning direction was to withdraw all acreage within Forks of Butte ACEC; however, a significant portion of the ACEC is still in private ownership.

- South Fork Eel River Wilderness: Under the Public Law 109-362, the Northern California Coastal Wild Heritage Wilderness Act, the South Fork Eel River Wilderness became a designated wilderness area in 2006. Approximately 12,868 acres were withdrawn at the time the legislation was passed.
- Elkhorn Wilderness: Elkhorn Wilderness became a designated wilderness area in 2011 under Public Law 109-362, the Northern California Coastal Wild Heritage Wilderness Act. This wilderness did not officially become a wilderness area until 5 years after the passage of Public Law 109-362b in order for watershed restoration activities to be completed. Approximately, 11,001 acres were withdrawn at the time legislation was passed.
- Yuki Wilderness: Yuki Wilderness became a designated wilderness area in 2006 under the Public Law 109-362, the Northern California Coastal Wild Heritage Wilderness Act. Approximately, 53,389 acres were withdrawn at the time legislation was passed.

Power Site Withdrawals

Power site withdrawals are made under the authority of the Federal Power Act (FPA) of June 10, 1920. These withdrawals are made when a qualified application for a power site development is made with the FERC and a FERC license is issued. These withdrawals are relatively small in acreage and are concentrated along the Trinity, Eel, Klamath, Battle Creek and Shasta River systems.

Other Withdrawals

The Newlands Reclamation Act of 1902 funded large irrigation projects throughout the western United States. The Act also directed the Secretary of the Interior to withdraw public lands that support reclamation projects from mineral entry. These withdrawals are termed “first form” withdrawals and, as such, they transfer the administrative jurisdiction of public lands from the BLM to Reclamation. These withdrawals typically do not expire.

Split Estate Lands

Split estate lands are scattered throughout the planning area and typically result from patents issued under authorities where the mineral estate is reserved to the United States to prevent valuable minerals from being transferred out of public ownership. For example, entries under the Stock-Raising Homestead Act were patented with a federal reservation of minerals. Patents issued under the authority of the R&PP Act also contain a reservation for minerals.

FLPMA Section 209 Mineral Conveyance

Mineral rights for split estate lands may be purchased by the owner of the surface estate pursuant to Section 209 of FLPMA. Prior to purchase, the value of the mineral estate must be determined, and administrative costs of the conveyance must be paid by the applicant.

Forecast for Land Tenure Adjustment Program

The land tenure program will continue to target the acquisition of lands with high resource values or public access and dispose of lands identified as being low in resource values and difficult or uneconomic to manage for public use. Acquisition areas have already been addressed in other sections of this document; however, the following considerations will affect primarily disposal areas.

Community Needs: The most significant community needs, such as fire stations operated by CalFire or volunteer fire departments, water supply facilities, transfer bin facilities, shooting ranges, and others,

have already been identified and in many cases developed through application of the R&PP Act. Under the R&PP Act, the Arcata FO has patented 1,312 acres through 16 separate transactions to address community needs. The Redding FO has patented 1,898 acres through 27 separate transactions. The need for further R&PP Act patents and leases should be greatly reduced as basic community needs are met. There is the potential for new applications for recreational target shooting areas/shooting ranges; however, new areas must be in accordance with criteria identified in Section 4104 of the Dingell Act (Public Law No. 116-13) or other applicable laws and guidance in effect at the receipt of a new application. The BLM will depend on local entities and public input to further identify areas where BLM-administered lands adjacent to these communities are needed for recreation, public purposes, or community expansion.

Sales to Resolve Survey Related Trespass: Trinity County has multiple locations of private development and occupancy (e.g., Salt Flat Road, Steel Bridge Road, Browns Mountain Road, Salt Flat Bridge Area) that are located adjacent to federal lands where dependent resurveys conducted primarily in the 1980s have identified prior survey issues leaving multiple parcels in occupancy trespass status. A need exists to identify strategies to allow adjustments to these parcel boundaries to resolve inadvertent trespass. This may be accomplished by allowing the sale of small parcels in areas that are otherwise identified as part of an acquisition or retention area, such as the Trinity River WSR Corridor.

Land tenure decisions will continue to focus on consolidating BLM administration of lands where public values such as conservation of significant resources, recreation and public access, and integration with the needs of local communities are most pronounced and often overlap. This trend will act to increase the complexity of land management decisions regarding which values should be primary in determining where to expend scarce resources.

2.3.4 Leasable Fluid Minerals—Geothermal Resources

Geothermal resources are typically underground reservoirs of hot water or steam beneath the surface of the earth. Geothermal steam and hot water naturally discharge at the earth's surface in the form of hot springs, geysers, mud pots, or steam vents. Geothermal resources also include subsurface areas of hot, dry rock. Geothermal energy is produced when this steam or heat is used to turn a turbine to create electrical energy. It can also be used for space heating and bathing purposes.

The *Final Programmatic EIS for Geothermal Leasing in the Western United States* evaluates various alternatives for allocating lands as being closed or available for geothermal leasing and analyzes stipulations to protect sensitive resources. The ROD for the *Geothermal Programmatic EIS* (USDI BLM 2008c) amended existing plans, including the 1993 Redding RMP, to facilitate geothermal leasing on federal mineral estate. No electrical production via geothermal resources was projected for any specific areas in the planning area.

Additional information on geothermal resources can be found in the Redding and Arcata FO Mineral Potential Reports (MPRs). Any proposals for geothermal development on BLM-administered lands would be processed under leasing regulations for geothermal resources, and stipulations, mitigation measures, and BMPs outlined in the ROD for the *Geothermal Programmatic EIS* would be applied as appropriate (USDI BLM 2008c).

The primary indicators of geothermal resources are the number of leases and exploration licenses within the planning area. Active leases and licenses are a quantitative measure that indicates current use. In association with geology of recent volcanic origin, occurrence of natural thermal features such as hot springs and drilled wells encountering thermal water can also be used to indicate development potential. The MPRs show areas of geothermal resource potential.

Current Level/Location of Use

The Legacy Rehost 2000 system (LR2000) is a database that tracks applications and authorizations under a number of authorities including ROWs and geothermal leases. LR2000 data show there are no leases or licenses for geothermal exploration or development on BLM-administered lands in the planning area, nor have any been applied for in the last 20+ years. There is no electricity production from any geothermal resource development anywhere within the planning area. Thermal springs on Forest Service and private lands within the planning area are either undeveloped or used for bathing purposes at private resorts or nonprofit facilities. Some exploratory wells have been drilled in the Redding FO area north of Shingletown and near Mineral. The results from the former were negative and the latter, confidential.

Despite the lack of past geothermal leasing activity most of the planning area is open to leasing. The existing Arcata RMP (USDI BLM 1992a) decision has precluded geothermal resource leasing and development in the Northern California Coast Range Preserve (NCCRP). The existing Redding RMP decisions have placed no surface occupancy restrictions on any geothermal resource leasing in the following areas: eligible WSR corridors, Grass Valley Watershed, Interlakes SRMA, 100-year floodplain of tributaries east of Sacramento River, Lower Clear Creek and Muletown 100-year floodplain, Sacramento Island, Cottonwood Creek and Sacramento River parcels, Bend Area, Battle Creek below Manton Road, Deer Creek, Upper Ridge Nature Preserve, Baker Cypress RNA/ACEC, and all lands withdrawn from locatable mineral entry.

Forecast/Anticipated Demand for Use

Despite the growing state and federal emphasis on renewable energy production, including geothermal resources, due to the lack of or minimal resource potential, it is unlikely that geothermal energy will be developed anywhere within the planning area on BLM-administered lands or mineral estate in the next 20 years.

Key Features/Areas of High Potential for Use

Active volcanos in the Cascade Range, Lassen Peak and Mount Shasta, and the dozens of thermal springs within the confines of the planning area indicate the presence of geothermal resources. The Lassen Known Geothermal Resource Area has been identified east of Mineral and south of Lassen Volcanic National Park. However, there are no known geothermal resource areas, hot springs, or geothermal water wells on or near any BLM-administered land and mineral estate.

2.3.5 Leasable Fluid Minerals—Oil and Gas

BLM's oil and gas resources are made available by the USDI through a discretionary leasing program. Leases are generally issued with stipulations (restrictions or limitations) attached to the lease to protect other resource values. Following issuance of a lease, surface activity on a lease may include drilling, permitted by an application for permit to drill. The application for permit to drill requires additional

analysis for NEPA compliance. A discovery of oil or gas could lead to the development of production facilities and this, too, requires additional NEPA compliance.

A petroleum system exists wherever certain essential geologic elements and processes occur together in time and place. The essential geologic elements of a petroleum system include the presence of a source rock, reservoir rock, seal rock, and overburden rock. Formation of the trap and the generation, migration, and entrapment of hydrocarbons are processes involved with a petroleum system. These essential geologic elements and processes must be correctly placed in time and space so that organic matter in a source rock can be converted into hydrocarbons, which then migrate and accumulate in a hydrocarbon trap (Magoon and Beaumont 1999) or accumulate in the hydrocarbon trap itself. The absence of any essential geologic element or process prevents the accumulation of hydrocarbons into a trap. Without the trapping mechanism, hydrocarbons would be allowed to escape, and no hydrocarbons would be trapped in the geological structures. Various petroleum systems have been categorized into models called “plays” and are defined as a group of geologically related known or undiscovered accumulations and (or) prospects having similar characteristics of hydrocarbon source, reservoir, trap, and geologic history (Powers 1993).

Current Level/Location of Use

There are effective petroleum systems present within the planning area, as evidenced by the presence of oil and gas fields. However, just the sheer presence of oil and gas fields does not necessarily make the prospects viable, productive areas. There is still a certain amount of risk that goes with the oil and gas business, and not every area containing oil and gas will produce oil and gas at commercial rates. Many factors affect the success of well(s) drilled in an area, which may include but are not limited to the following: geologic conditions, price of the product, infrastructure, operating environment, remoteness to other oil and gas centers (service companies/tool companies), and regulatory restraints.

Exploration for and production of oil and gas in the planning area has been focused on the coastal region of the Coast Ranges Province near Fortuna, Loleta, Humboldt Hill (Eel River Basin), Petolia, and the interior of the Great Valley Province centered around Red Bluff and Corning and to the west of Chico. Various non-producing wildcat wells have also been drilled in scattered areas of the Franciscan Formation in the Coast Ranges Province, Hornbrook Basin in the Cascade Range Province, and throughout the Great Valley province.

There are no active or idle BLM oil or gas wells in the oil and gas fields in the planning area to date. The following oil and gas fields occur in the Arcata FO planning area:

- Table Bluff Gas (abandoned) – northwest of Loleta
- Tompkins Hill Gas – east of Loleta
- Grizzly Bluff Gas – southwest of Fortuna
- Petrolia – north of Petrolia

The following gas fields occur in the Redding FO planning area:

- Red Bank Creek Gas (abandoned) – south of Red Bluff
- Corning Gas (abandoned) – north of Corning
- Corning South Gas – south of Corning

- Kirkwood Gas – south of Corning
- Rice Creek Gas – south of Corning
- Rice Creek East Gas – southeast of Corning
- Malton-Black Butte Gas – north of Orland
- Rancho Capay Gas – northeast of Orland
- Chico Gas (abandoned) – south of Chico
- Durham Gas – west of Durham
- Perkins Lake Gas – northeast of Glenn
- Llano Seco Gas (abandoned) – east of Glenn

Petroleum and natural gas play identification and descriptions, along with oil and gas fields and drilling locations are provided in the 2016 MPR (Silva 2016).

The California Geologic Energy Management Division (CalGEM) tracks all well drilling and development in the state (www.conservation.ca.gov/calgem). These data can be used to show development trends and currently producing wells and are available online and in GIS format (California Department of Conservation 2016).

The Existing Arcata RMP (USDI BLM 1992a) decision has precluded oil and gas leasing and development in the NCCRP. The existing Redding RMP decisions have placed no surface occupancy restrictions on any oil and gas leasing in the following areas: Eligible WSR corridors, Grass Valley Watershed, Interlakes SRMA, 100-year floodplain of tributaries east of Sacramento River, Lower Clear Creek and Muletown 100-yr floodplain, Sacramento Island, Cottonwood Creek and Sacramento River parcels, Bend Area, Battle Creek below Manton Road, Deer Creek, Upper Ridge Nature Preserve, Baker Cypress RNA/ACEC, and all lands withdrawn from locatable mineral entry. LR-2000 data shows there are no leases or applications for oil and gas leasing on BLM-administered land or mineral estate in the planning area, nor have any been applied for in the last 20+ years.

Forecast/Anticipated Demand for Use

With the continuation of current market projections indicating further growth and current market condition of elevated energy prices, the exploration, development, and extraction of leasable fluid minerals is expected to increase.

In projections created before the COVID-19 outbreak, the Energy Information Administration (US EIA 2020) estimated that over the next 2 decades under reference case estimates the following actions will transpire:

- US production of crude oil will increase slightly over the next 20 years from the current production of approximately 12.5 million barrels per day to approximately 14 million barrels per day.
- US production of natural gas will increase from the current levels of approximately 35 trillion cubic feet annually to approximately 42 trillion cubic feet annually.
- Energy efficiency of the economy will increase at an average annual rate of 0.11 percent per year.
- Future natural gas supply growth will depend on nonconventional domestic production, natural gas from Alaska, and liquefied natural gas imports.

The Energy Information Administration projections indicate that demand for natural gas will increase over the next 2 decades. Further demands versus supply will be met by imports of foreign natural gas, primarily from Canada. In addition, further portions of the increase in domestic supply are projected to be met by growth in production from the Rocky Mountain, East Coast, and Texas regions.

It is possible that more or fewer wells will be drilled in the future during the 20-year planning period than anticipated in the planning area if events occur that are unforeseen, unexpected, or impossible to predict at this time. Such unanticipated events may include new technological advancements, carbon taxes, large changes in oil and gas prices, large changes in global energy supply and demand patterns, and other global events such as war, oil embargos, and others.

Key Features/Areas of High Potential for Use

Within the planning area, USDI designated one known geologic structure (KGS), known as the Malton-Black Butte-Kirkwood KGS north of Orland. No BLM-administered land or mineral estate is within this KGS. Other features within the KGS include producing wells, established fields, and sedimentary basins capable of hosting petroleum plays. Together, these may result in moderate to high resource potential and are shown in the 2016 MPR.

2.3.6 Locatable Minerals

Locatable minerals are those that are open to mining claim location under the General Mining Law of 1872, as amended (30 USC 22-54 and 611-615). Because of the wide variety of potentially locatable minerals, there is no definitive list. Rather, minerals are considered locatable only if they constitute a valuable mineral under the definition of discovery, as outlined through case law interpreting the General Mining Law of 1872. Uncommon varieties of mineral materials (also known as salable minerals) such as pumice, rock, cinders, and sand are also regulated as locatable minerals. A determination that a variety is “uncommon” and subject to the General Mining Law is made by the BLM on a case-by-case basis according to established case law. Locatable minerals found and developed in the planning area include, but are not limited to, precious and base metals, chromite, manganese, gemstones, diatomite, iron, barite, asbestos, tungsten, nickel, cobalt, and chemical-grade limestone.

In the case of acquired lands where public land under federal ownership was obtained through purchase, condemnation, gift, or exchange prior to the passage of FLPMA, solid minerals that would usually be locatable on public domain lands are subject to leasing as described under **Section 2.3.8**.

The primary indicators of locatable mineral resource use are the number and distribution of lode and placer mining claim locations and 43 CFR 3809 notices of intent and plans of operations within the planning area. Mining claims, notices, and plans of operations are quantitative measures that indicate recent and current mineral development interest and use. In association with geologic occurrence, deposit modeling, and areas of past development activity both on and near public lands, this information can also be used to indicate mineral potential as is discussed further in the 2016 MPR.

Current Level/Location of Use

Most BLM-administered lands with mineral estate owned by the federal government, which are not withdrawn or segregated from mineral entry, are open to locatable mineral exploration, mining claim location, and mining.

Within the Arcata FO portion of the planning area, there has been no significant active exploration or mining (notices and plans of operations) of locatable minerals on BLM-administered lands for over 25 years. However, the Redding FO currently has three authorized plans of operations and two pending plans of operation. Over the last 25 years, there have been an additional 10 plans of operations and 151 notices to mine that have been abandoned and closed.

Certain lands have been segregated or withdrawn from locatable mineral entry, which precludes new mining claims and mining absent proof of a discovery of a valuable mineral deposit. Powersite withdrawals are subject to discretionary opening to mining by Public Law-359.

Mining claim location activity can also be considered as an indicator for potential development activity of locatable minerals. Within the Arcata FO portion of the planning area, there are 10 active mining claims of record, all within the Eden Valley WSA. Since the mining claim recordation requirements of FLPMA in 1976, there have been an additional 165 claims that have been recorded but are now closed.

Within the Redding FO portion of the planning area, there are currently 482 active mining claims. Most of these claims have little, if any, mineral development occurring on them, at the minimal level of termed “casual use” (43 CFR 3809). Since the mining claim recordation requirements of FLPMA in 1976, there have been an additional 6,555 claims that have been recorded and then closed. In addition to claim locations, favorable geologic environments for the occurrence of known mineral deposit models, historic mining, and adjacent private operations described in the following sections can be used as indicators for potential development.

Forecast/Anticipated Demand for Use

The types of locatable mineral deposits that have been most actively mined in the planning area and show the most promise for future mining are the gold-bearing, low-sulfide quartz veins in the Klamath Mountain and Sierra Nevada Provinces, as well as the associated gold placer deposits downslope and downstream of these vein deposits and extending into the alluvium of the Great Valley Province. The Klamath, Trinity, Sacramento, and Feather Rivers and many of their tributaries are historic producers of placer gold. Placer gold is much easier than “hardrock” gold to mine and extract, and small mining operations of one to two persons will dominate. No other locatable minerals have been commercially produced from public lands during the last 25 years in the planning area. Interest has been shown in the limestone in the Mountain Gate area.

Suction dredging has been used to produce both commercial and recreational quantities of placer gold with minor amounts of platinum group elements recovered from many of the rivers and streams in the Redding FO. The State of California currently does not allow suction dredging in the waters of the state, and due to ongoing litigation, it is unknown if and when it will be allowed to resume in some form.

Locatable mineral exploration and development is highly dependent on the metal commodity values. Shortages and increased demand leads to higher prices and increases in the funding of exploration and mining projects. As more easily developable mineral resources are depleted elsewhere, industry may turn to local resources such as gold, copper, chromite, and limestone, which generally occur at lower grade and less favorable conditions in the planning area. Likewise, breakthroughs in technology could make these resources in the planning area more economical to develop in the future.

Key Features/Areas of High Potential for Use

Active mines and significant historic mines and mining districts are the key features. Mineral development is most likely where public lands contain moderate to high potential for the occurrence of minerals, which are shown in the 2016 MPR.

2.3.7 Mineral Materials

Salable minerals, also referred to as “mineral materials,” include common variety minerals such as sand, gravel, clays, fill material, broken rock, and building stone. Mineral materials are sold or permitted under the Mineral Materials Sale Act of 1947.

The BLM is authorized to sell mineral materials to the public at fair market value, using both competitive and non-competitive sales. The BLM’s policy is to make these materials available for the public and local government agencies whenever possible and wherever environmentally acceptable.

Competitive sales have a maximum initial contract term of 10 years, but there is no limitation on the quantity, and the BLM may issue contracts that can be renewed for additional 10-year terms. Non-competitive sales have a maximum contract term of 5 years, a limit of 200,000 cubic yards per contract, and a maximum total quantity of 300,000 cubic yards for all contracts issued to any one entity in one state during a 12-month period.

The BLM offers mineral materials free of charge to state, county, or federal government entities for use in public projects. There is no limit on the quantity of such disposal to government entities, but the free use permit (FUP) has a maximum term of 10 years. Also, a limited number of mineral materials may be provided free to nonprofit groups. Materials obtained free of charge cannot be bartered or sold.

The public can collect small quantities of petrified wood (25 pounds per day plus one piece, up to a maximum of 250 pounds per year) for free without a permit. Quantities in excess of these amounts require purchase at fair market value under a sales contract or by a FUP.

The 1993 Redding RMP determined that 43 CFR 8365.1-5(b)(2) can be used by an individual to collect up to 1,000 pounds of mineral specimens or rock for personal and non-commercial use, by hand, per year unless otherwise prohibited.

The primary indicator of salable mineral resources is the number of sale contracts and FUPs within the planning area. Authorized sales and permits are quantitative measures that indicate current use and demand. In association with geologic occurrence, areas of past exploration, private mineral development nearby, sales, and permits can all be used to evaluate resource potential. The Arcata and Redding MPRs evaluate and show this potential.

Current Level/Location of Use

Existing Redding and Arcata RMP decisions have precluded salable mineral development in the following areas:

- Butte Creek RNA/ACEC, Red Mountain RNA/ACEC, and NCCRP (Arcata FO)
- Deer Creek ACEC (Redding FO)

Existing Redding RMP decisions have placed resource enhancement, benefit, or non-conflict restrictions on salable mineral development in the following areas: Trinity River WSR; Canyon, Indian, and Deadwood Creeks (Trinity County); Grass Valley Watershed; Interlakes SRMA 100-year floodplain of tributaries east of Sacramento River; Lower Clear Creek and Muletown 100-year floodplain; Sacramento Island, Cottonwood Creek, and Sacramento River parcels; Bend Area; Battle Creek below Manton Road; and Baker Cypress RNA/ACEC.

Within the Arcata FO portion of the planning area, over the last 20 years, the BLM has authorized FUPs at two sites for crushed and broken stone; one was issued repeatedly to Caltrans and one to the BLM Arcata FO. Only the BLM FUP is still authorized. There have been no sales in the Arcata FO area.

Within the Redding FO portion of the planning area over the last 20 years, the BLM has authorized 18 FUPs, seven of which are still authorized. Eight FUPs were for Reclamation fisheries restoration projects using sorted placer tailings, sand, and gravel along the Trinity River. The BLM has had 15 non-competitive sale contracts, none of which is still authorized; all have been closed. Other salable minerals disposed of include fractured quarry rock for road base, weathered granite for sand aggregate, pumicite, landscaping stone, placer tailings for riprap, and sand and gravel for aggregate. The Redding FO has also authorized two community mineral material pits.

The 20-year trend for salable mineral disposal has been an increase in the number and size of FUPs and a decreasing demand for sales contracts.

The location and details of these sales and FUPs are shown in the 2016 MPR.

Forecast/Anticipated Demand for Use

Mineral material development will be for sand and gravel sources needed as aggregate for concrete and construction purposes. Placer tailings and granite can sometimes be used for these purposes. Reclamation may continue to restore salmon-bearing waterways using native or enhanced alluvial material. Local resources will also be sought for road construction and maintenance. Pits are usually located within 20 miles of the particular project and generally require little access development. Continued growth along the Interstate 5 corridor is expected to continue, which will use aggregate resources along Clear Creek, Cottonwood Creek, and other existing sources. Other mineral material activity is related to specific construction jobs such as reservoirs, canals, or other types of development; riprap for irrigation or retention structures; aggregate for concrete mix; and building stone for general use. Virtually all this material is used in the planning area, and some decorative building or ornamental stone may be economic to transport greater distances, if at a high enough value.

Key Features/Areas of High Potential for Use

Sand and gravel, for use as construction and concrete aggregate, is an extremely important resource in industrial economies. The extraction of the resource is dependent on the quality of the resource, distance to the end use, and market demand from development projects such as road building and maintenance, public works projects, and urban construction. Recent alluvium along waterways is the primary source for sand and gravel. Placer tailings and certain types of granite and other crushed rock can sometimes be used as aggregate if the physical characteristics are suitable for the end use. Geologic mapping, GIS layers, and the 2016 MPR show where this resource occurs.

2.3.8 Water Resources

The BLM manages water resources both for resource values (e.g., watershed function, wildlife, fisheries, and riparian systems) and beneficial uses (e.g., municipal water supply, recreation) as defined by the California State Water Resources Control Board within a framework of applicable state and federal water laws and agency policies. The planning area encompasses a variety of water resources: large rivers with heavily regulated flow, unregulated free-flowing watercourses, constructed ponds, and seeps and springs. Impacts to water quality from land management activities are apparent throughout the planning area. Water supplies continue to decrease due to development, changes in vegetation regimes, and climate change.

Indicators

The general indicators used when addressing the conditions of water resources in the planning area are the quantity of water available for beneficial uses, water quality criteria describing suitability for beneficial uses (e.g., cold water fisheries resources, domestic water supply), and the type of waterbody, particularly artificial waterbodies that may provide specific functions such as stock water or irrigation. Water bodies can be classified as either flowing (lotic) or non-moving waters such as lakes and ponds (lentic). Many of the lentic waterbodies are listed in **Table 2-10** and **Table 2-11** of the Fish/Special Status Fish section (**Section 2.2.5**). The indicators below are intended to apply to both types of waterbodies.

Water Quantity

Water quantity, particularly during late summer, is a key limiting factor for many aquatic organisms. Several stressors contribute to low flows seen across the planning area, including vegetative changes, climate change (drought), withdrawals for various uses, and channel aggradation.

In addition to decreased summer streamflows across the plan area, many of the larger rivers are regulated for flood control or managed for hydropower. Water quantity in regulated rivers depends on a variety of regulatory mechanisms that guide the operation of hydropower facilities and associated flow releases.

Water Quality

The CWA of 1972, as amended, establishes the framework for regulating discharges of pollutants into waters of the US and regulating quality standards for surface waters (Copeland 2016). The objective is to restore and maintain the chemical, physical, and biological integrity of the nation's waters. Under the CWA, the EPA has implemented pollution control standards such as setting wastewater standards for industry. Water quality standards have also been set for most contaminants in surface waters (Copeland 2016).

Potential sources of water pollution can be categorized as either point or nonpoint source pollution. Point source pollutants originate from a direct source such as permitted industrial discharges or sewage plant discharges. Nonpoint source pollution comes from many diffuse sources such as mercury-laden mine materials, atmospheric lead deposition, suspended sediment and pesticides. The CWA prohibits discharge of any pollutant from a point source into navigable waters unless a permit is obtained (Copeland 2016). EPA's National Pollutant Discharge Elimination System permit program controls discharges.

The Safe Drinking Water Act is the principal federal law that protects the quality of drinking water in the US (EPA 2004). Under the Safe Water Drinking Act, the EPA sets standards for drinking water quality and oversees the states, localities, and water suppliers who implement those standards. The law requires many actions to protect drinking water and its sources: rivers, lakes, reservoirs, springs, and groundwater.

Water type

Springs

Springs and seeps are important water resources. They are often the source of stream flows, provide cold-water habitat for temperature-dependent species, and support unique vegetation communities.

Groundwater Resources

In many areas, groundwater resources are intricately linked with surface flows. These areas are commonly encountered in areas of extensive stream deposits (alluvium) and valleys. In areas dominated by volcanic geology, groundwater resources (and springs) may occupy fracture networks and empty magma conduits.

Current Conditions

Water Quantity

Late summer streamflows are impaired in many smaller stream systems as a result of development for residential, agricultural, and industrial purposes. In addition to diversions, changes in the vegetation composition have also changed the evapotranspiration characteristics across many watersheds, particularly where timber harvest has occurred, and re-grown stands are more densely stocked with younger, more vigorous vegetation. Additionally, wildfires have altered the evapotranspiration, surface water runoff, and groundwater recharge characteristics across many watersheds within the planning area.

Water Quality

Many waterbodies throughout the planning area are listed as impaired under the federal CWA. As part of this impaired designation, responsible agencies including the EPA and the State Regional Water Quality Control Boards are required to prepare total maximum daily loads (TMDLs) for regulating pollutant inputs and eventually achieving water quality standards developed during the TMDL process. Relevant waterbodies are listed in **Table 2-63**. Many of the waterbodies are listed as temperature impaired, with the primary impairment resulting from elevated summer water temperatures. The widespread occurrence of elevated water temperatures has triggered extensive regulatory actions for the management of riparian areas and their vegetation, which can moderate thermal stress on adjacent streams.

Table 2-63. TMDL-Listed Watersheds in the Planning Area Along with the Pollutants for which the Waterbody is Listed under the CWA

Waterbody	Pollutant/ Stressor	Potential Sources	Approval Date
Mattole River	Sediment, Temperature	<ul style="list-style-type: none"> • Flow Alteration/Regulation/Modification • Grazing-Related Sources • Logging Road Construction/Maintenance • Removal of Riparian Vegetation • Road Construction • Silviculture 	2003
Lower Eel River	Sediment, Temperature	<ul style="list-style-type: none"> • Erosion/Siltation • Flow Alteration/Regulation/Modification • Nonpoint Source • Range Grazing-Riparian and/or Upland • Removal of Riparian Vegetation • Silviculture 	2007, 2013
Middle Fork Eel River	Sediment, Temperature	<ul style="list-style-type: none"> • Flow Alteration/Regulation/Modification • Nonpoint Source • Removal of Riparian Vegetation 	2003
Middle Mainstem Eel River	Sediment, Temperature	<ul style="list-style-type: none"> • Erosion/Siltation • Flow Alteration/Regulation/Modification • Removal of Riparian Vegetation • Source Unknown 	2005
North Fork Eel River	Sediment, Temperature	<ul style="list-style-type: none"> • Erosion/Siltation • Flow Alteration/Regulation/Modification • Logging Road Construction/Maintenance • Nonpoint Source • Removal of Riparian Vegetation • Silviculture 	2002
South Fork Eel River	Sediment, Temperature	<ul style="list-style-type: none"> • Erosion/Siltation • Flow Alteration/Regulation/Modification • Hydromodification • Logging Road Construction/Maintenance • Nonpoint Source • Range Grazing-Riparian and/or Upland • Removal of Riparian Vegetation • Resource Extraction • Silviculture 	1999

Waterbody	Pollutant/ Stressor	Potential Sources	Approval Date
Upper Mainstem Eel River	Sediment, Temperature	<ul style="list-style-type: none"> • Agriculture-grazing • Construction/Land Development • Erosion/Siltation • Flow Alteration/Regulation/Modification • Harvesting, Restoration, Residue Management • Highway/Road/Bridge Construction • Logging Road Construction/Maintenance • Removal of Riparian Vegetation • Silvicultural Point Sources • Silviculture • Streambank Modification/Destabilization 	2004
Van Duzen River	Sediment	<ul style="list-style-type: none"> • Channel Erosion • Construction/Land Development • Erosion/Siltation • Flow Alteration/Regulation/Modification • Habitat Modification • Harvesting, Restoration, Residue Management • Logging Road Construction/Maintenance • Removal of Riparian Vegetation • Silvicultural Point Sources • Silviculture • Streambank Modification/Destabilization 	1999
Elk River	Sediment	<ul style="list-style-type: none"> • Flow Alteration/Regulation/Modification • Removal of Riparian Vegetation 	2014
Mad River	Sediment, Temperature, Turbidity	<ul style="list-style-type: none"> • Flow Alteration/Regulation/Modification • Removal of Riparian Vegetation • Nonpoint Source • Resource Extraction • Silviculture 	2007, 2025, 2007

Waterbody	Pollutant/ Stressor	Potential Sources	Approval Date
Redwood Creek	Sediment, Temperature	<ul style="list-style-type: none"> • Construction/Land Development • Disturbed Sites (Land Development) • Erosion/Siltation • Flow Alteration/Regulation/Modification • Harvesting, Restoration, Residue Management • Logging Road Construction/Maintenance • Range Grazing-Riparian • Removal of Riparian Vegetation • Silviculture • Streambank Modification/Destabilization 	1998, 2025
Scott River	Sediment, Temperature	<ul style="list-style-type: none"> • Erosion/Siltation • Flow Alteration/Regulation/Modification • Habitat Modification • Logging Road Construction/Maintenance • Other • Removal of Riparian Vegetation • Agricultural Return Flows • Agricultural Water Diversion • Domestic Use of Ground Water • Hydromodification • Streambank Modification/Destabilization • Water Diversions 	2006
Shasta River	Organic enrichment/Low dissolved oxygen, Temperature	<ul style="list-style-type: none"> • Agriculture-Irrigation Tailwater • Agriculture-Storm Runoff • Dairies • Dam Construction • Flow Alteration/Regulation/Modification • Habitat Modification • Hydromodification • Minor Municipal Point Source-Dry and/or Wet Weather Discharge • Removal of Riparian Vegetation 	2007
Trinity River (middle)	Sediment	<ul style="list-style-type: none"> • Channel Erosion • Dam Construction • Erosion/Siltation • Flow Alteration/Regulation/Modification • Harvesting, Restoration, Residue Management • Hydromodification • Logging Road Construction/Maintenance • Mine Tailings • Placer Mining • Removal of Riparian Vegetation • Resource Extraction • Silvicultural Point Sources • Silviculture • Streambank Modification/Destabilization • Upstream Impoundment 	2001

Waterbody	Pollutant/ Stressor	Potential Sources	Approval Date
Klamath River	Cyanobacteria, Nutrients, Sediment, Organic enrichment/Low dissolved oxygen, Temperature	<ul style="list-style-type: none"> • Agriculture • Drainage/Filling of Wetlands • Grazing-Related Sources • Irrigated Crop Production • Logging Road Construction/Maintenance • Road Construction • Silviculture • Nonpoint Source 	2010
Anderson Creek (Shasta County)	<i>E. coli</i>	<ul style="list-style-type: none"> • Source Unknown 	2021
Butte Creek (Butte County)	Mercury, pH	<ul style="list-style-type: none"> • Source Unknown 	2021
Clear Creek (below Whiskeytown Lake, Shasta County)	Mercury	<ul style="list-style-type: none"> • Source Unknown 	2021
Concow Creek (tributary to West Branch Feather River, Butte County)	Unknown toxicity	<ul style="list-style-type: none"> • Source Unknown 	2021
Elder Creek	Chlorpyrifos, Diazinon, Pyrethroids,	<ul style="list-style-type: none"> • Storm Sewers • Source Unknown 	2004, 2004, 2021
Feather River, West Branch (from Griffin Gulch to Lake Oroville)	Unknown toxicity	<ul style="list-style-type: none"> • Source Unknown 	2021
Kanaka Creek	Arsenic	<ul style="list-style-type: none"> • Source Unknown 	2020
Willow Creek (Shasta County, below Greenhorn Mine to Clear Creek)	Acid mine drainage, copper, zinc	<ul style="list-style-type: none"> • Source Unknown 	2019
Spring Creek, Lower (Iron Mountain Mine to Keswick Reservoir)	Acid mine drainage, cadmium, copper, zinc	<ul style="list-style-type: none"> • Source Unknown 	2020
Shasta Lake (area where West Squaw Creek enters)	Cadmium, copper, zinc	<ul style="list-style-type: none"> • Source Unknown 	1990

Source: USDI BLM 2016a

Water Types

Springs

No comprehensive mapping of springs across the planning area has occurred. Where diversions or consumptive uses exist, the California Water Resources Control Board requires registration and reporting of these sites. However, many springs exist that are not currently mapped, and springs may potentially be illegally tapped for marijuana growing operations and private residences. In many instances, springs provide vital cold water to aquatic habitats and may locally sustain perennially wetted conditions in otherwise dry settings. These springs and their occurrence vary with seasonal rainfall patterns.

Groundwater Resources

Groundwater extraction is regulated by the State of California. In recent years, the effects of groundwater pumping on adjacent waterways have been the subject of increased regulation to reduce effects to surface water networks (e.g., www.groundwater.ca.gov).

Trends

Water Quantity

Forecasting changes in various streamflow metrics is difficult and subject to large uncertainty. Summer low flows have decreased in Northern California coastal streams and this trend is expected to continue. Flow variability is expected to increase, and for California as a whole, higher winter flows are expected. Some models suggest a decrease in annual flows, but the portion due to changes in winter versus summer flows is unknown (EcoAdapt 2016; Madej 2011; Pagano and Garen 2005; Vicuna and Dracup 2007; Vicuna et al. 2007). Water demands continue to increase with population increase and climate change continues to exacerbate streamflow issues (i.e., decreasing summer low flows).

Water Quality

Increased water demands and a changing climate continue to compromise water quality across the planning area. Increases in water temperatures are expected as air temperatures increase. Increased sediment loading associated with wildfires is expected to contribute to degraded water quality across the planning area.

Water Type

Springs

Increased water demands are often focused on springs where water is diverted at the source and used for residential and/or agricultural purposes. This trend of increasing diversion is expected to continue as population pressures increase.

Groundwater Resources

Recent drought conditions have led to an increasing reliance on groundwater resources for agricultural and residential demands. These trends are expected to continue in light of increasing population pressures and a changing climate.

Forecast

Water Quantity

Water quantity is expected to respond to climate change but the confidence on any changes is low at best, owing to the uncertainty in precipitation patterns. Higher intensity winter storms are expected to result in higher winter flows. Warmer temperatures and changes in seasonal distribution of rain and snow are expected to result in low, late spring and summer streamflows. Overall, despite the low confidence in these changes, greater flow variability is anticipated (EcoAdapt 2016; Madej 2011; Pagano and Garen 2005; Vicuna and Dracup 2007; Vicuna et al. 2007).

The extent and seasonality of snowpack is expected to decrease in response to climate change. Snow depths are expected to decrease over the winter months and the period of accumulation is expected to shrink by 1 month (EcoAdapt 2016; Cayan et al. 2008; Snyder et al. 2004; Thorne et al. 2015). These changes in snow accumulation will affect the magnitude and duration of streamflows.

Drought frequency is expected to increase over the coming century. Over the next several decades, drought years are twice as likely to occur, with increased risk of multi-year droughts exacerbated by warming air temperatures (EcoAdapt 2016; Diffenbaugh et al. 2015; Griffin and Anchukaitis 2014).

Water Quality

Stream temperatures are expected to increase over the century. Since 1950, a general increase in stream temperatures has been noted, though this varies widely due to vegetation changes, past timber harvest, and vegetative regrowth from various past disturbances (e.g., the 1964 flood). Combined with expected decreases in summer flows, increases in air temperatures, and changes in snowmelt timing, the overall confidence in increased summer water temperatures is high (EcoAdapt 2016; Cloern et al. 2011; Kaushal et al. 2010; van Vliet et al. 2011).

The water quality impacts associated with recent large-scale forest fires are expected to be considerable. Wildfires can compromise water quality when they burn and for years to come. Increased erosion and sediment loading negatively affect the suitability of water resources used for drinking, agriculture, and ecological water supplies. Wildfire extent and intensity, watershed topography, local ecology, and post-fire precipitation all influence the degree to which fires affect water quality.

Water Type

Springs

Both the occurrence of springs and their flow characteristics are difficult to forecast. Most likely springs will respond similarly to other surface waters across the planning area (see “Water Quantity” and “Water Quality” discussions above). However, confidence is low in these forecasts.

Groundwater Resources

Groundwater resources will experience increased demands as availability of summer surface water shrinks. Since many of these groundwater sources are linked to adjacent surface waters, reductions in surface water availability will likely translate to reductions in groundwater availability.

Key Features

Key features in the planning area include seeps and springs, many of which are unmapped but provide an important source of cold water during warm summer months. Many of the watercourses in the planning area support listed fish species, most notably salmon and steelhead populations. Fish distribution is provided in the fisheries section (**Section 2.2.5**). Waterways listed as impaired under the CWA are listed previously in **Table 2-63**. Recently, in light of low stream flows and drought, the connection between groundwater pumping and stream flows has been recognized. Waterways bordered by alluvial valleys are most at risk of adverse effects of groundwater pumping.

2.3.9 Non-Energy Leasables

Non-energy solid leasable minerals are those minerals that are leased under the Mineral Leasing Act of 1920 and are not related to energy production. Non-energy leasable minerals include, but are not limited to, phosphate and chlorides, sulfates, carbonates, borates, silicates, or nitrates of potassium and sodium. None of these minerals is known, or expected, to occur on public lands within the planning area. What are referred to as “hardrock minerals” also fall under the category of nonenergy leasable minerals in certain instances. Hardrock minerals are the minerals or commodities that would usually

qualify as locatable on public domain lands but can only be obtained through 43 CFR 3500 mineral prospecting permits and leases on pre-FLPMA acquired lands and within the Shasta Unit of the Whiskeytown-Shasta-Trinity NRA. Hardrock mineral prospecting permits and leases may also be obtained within a small area of the Whiskeytown Unit, with the consent of the NPS, after a determination by the NPS Regional Director that the activity permitted under the lease or permit will not have significant adverse effects on the resources or administration of the park area.

The primary indicators of nonenergy leasable mineral resource use are the number of prospecting permits and leases within the planning area. Active permits and leases are quantitative measures that indicate current use. In association with geologic occurrence, areas of past permits and leases can also be used to indicate development potential.

Current Level/Location of Use

LR-2000 data show the BLM has not received any applications for prospecting permits or leases for nonenergy leasable minerals on BLM-administered lands within the planning area over the past 20 years; there are none currently authorized.

Forecast/Anticipated Demand for Use

Future demand for nonenergy leasable minerals will likely increase over time in parts of California and the West, but this is only anticipated to result in little, if any, activity in the planning area. Any interest in hardrock minerals in the planning area would likely be for gold or base metals and would be dependent on increases in metal prices and the regulatory restrictions placed on exploration and mining.

Key Features/Areas of High Potential for Use

The pre-FLPMA acquired lands and the Shasta Unit of the Whiskeytown-Shasta-Trinity NRA are the only lands where hardrock minerals could be developed. This development is most likely where these lands contain moderate to high potential for the occurrence of precious or base metals and is shown in the Redding GEM report.

2.3.10 Recreation and Visitor Services

Management of recreation is guided by BLM regulations and policies, federal and state laws, current and emerging trends in public demand for recreational activities and opportunities, and an area's physical, cultural, and natural surroundings. Current management direction is based on objectives in RMPs and RMP amendments, activity level plans, and recreation management guidance, including 43 CFR 8340, Subchapter H on recreation (Parts 8342 and 8364); H-1601-1, Land Use Planning Handbook (USDI BLM 2010b); BLM Handbook H-8320-1, Planning for Recreation and Visitor Services (USDI BLM 2014a); H-2930-1, BLM Recreation Permit and Fee Administration Handbook (USDI BLM 2014b); and BLM Recreation Strategy: Connecting with Communities 2014–2019 (USDI BLM 2019). The intent of the various laws, policies, and guidelines is to meet public demand for outdoor land-based recreational opportunities, while preventing or minimizing adverse impacts on the natural and cultural elements of public lands in California.

Recreational activities in the planning area include hiking, backpacking, mountain biking, horseback riding, rock climbing, riding OHVs, hunting, fishing, panning for gold, whitewater rafting, kayaking, rowing, surfing, hang-gliding, camping, sightseeing, photography, wildlife viewing, and historic site visitation. Current management strategies for the planning area focus on these activities. Recreation is managed in

established recreation management areas (RMAs) and through issuance of special recreation permits (SRPs) and recreation use permits (RUPs). Recreation use within the planning area is variable depending on location and seasonality.

In accordance with BLM Handbook H-8320-1, Planning for Recreation and Visitor Services (USDI BLM 2014a), to effectively manage recreation and visitor services (R&VS), the BLM designates special recreation management areas (SRMAs) and extensive recreation management areas (ERMAs).

Special Recreation Management Areas (SRMAs)

SRMAs are areas identified in land use plans to direct recreation funding and personnel to fulfill commitments made to provide specific “structured” recreation opportunities based on outcome-focused management (OFM). The BLM’s Priorities for Recreation and Visitor Services Workplan (Purple Book) (USDI BLM 2003) incorporates the OFM approach as the principal method to establish a relationship between benefits desired by recreationists and the activities and setting (physical, social, and managerial) characteristics that may facilitate realization of those benefits.

OFM is the application of recreation resources management that focuses on the positive or beneficial outcomes derived from engaging in recreational activities, rather than just on the recreational activities themselves. OFM provides the conceptual recreation framework to view, plan, and collaboratively deliver recreation services as a means to a larger end—outcomes that benefit individuals, communities, economies, and the environment. It is a framework for delivering benefits from public lands recreation to the American people and their communities.

A SRMA designation helps direct recreation program priorities toward areas with high resource values, elevated public concern, or significant amounts of recreational activity. Within a SRMA, R&VS management is recognized as the predominant land use planning focus. Investments in recreation facilities and visitor services are aimed at reducing resource damage and mitigating user conflicts. Depending on the recreation setting chosen and accompanying level of recreation management zones, the level of management objectives and administrative activities could vary from intense to low use for each SRMA. The BLM can develop implementation-level plans for SRMAs to further guide management actions and objectives.

The Samoa Peninsula SRMA in the Arcata FO and the Interlakes SRMA in the Redding FO are the only designated SRMAs.

Extensive Recreation Management Areas (ERMAs)

ERMAs are administrative units that require specific management consideration to address recreation use, demand, or R&VS program investments. The BLM manages ERMAs to support and sustain the principal recreational activities and the associated qualities and conditions of the ERMA. Management of ERMAs is commensurate with the management of other resources and resource uses. While generally unnecessary, ERMAs may be subdivided into recreation management zones to ensure R&VS are managed commensurate with the management of other resources and resource uses.

The Arcata and Redding RMPs designated all areas outside the Samoa Peninsula and Interlakes SRMAs as ERMAs.

Current Level/Location of Use

Recreation activity and use in the planning area is identified by the type of use and visitation numbers. For the past 20 years, recreation use has increased and types of use have changed. Recreation use on public lands around populated areas has increased dramatically, while use in more remote areas has remained constant or increased slightly.

The BLM expects that over time, trends of increasing recreational use and change in use patterns will continue. For example, as OHV use has continued to increase, new vehicle types have been introduced that have made it easier for a broader range of recreationists to participate. For example, in August 2019, Secretarial Order 3376 was issued for the purpose of increasing recreational opportunities through the use of e-bikes. The order specifically directed the BLM to revise its OHV regulations at 43 CFR 8340. The final e-bike rule, published in December 2020, amends 43 CFR 8340.0-5 to define e-bikes, which are limited to Class 1, 2, and 3 e-bikes. The new rule will ultimately provide BLM managers with the ability to exclude e-bikes that meet certain criteria from the definition of an OHV at 43 CFR 8340.0-5(a). This would thereby increase recreational access and opportunities for a more diverse and inclusive group of recreationists on more BLM trails.

It is difficult to predict what new sport, vehicle, or recreational endeavor will evolve in the years to come; because of this, planning and management for recreation will continue to require flexibility and adaptation in order to be responsive to public needs, desires, and environmental constraints. The tables below show recent visitor use data.

The BLM uses the Recreation Management Information System to track and report the types of recreation activities the public participates in and visitation numbers of the numerous recreation areas throughout the planning area. The system enables BLM employees to record estimates of recreation use for 65 types of recreation activities. Estimates are based on data collected BLM recreation sites and areas, including registrations, permit records, observations, and professional judgment. Visitation is estimated by number of participants as well as visitor days. Participants are defined as the actual number of people who take part in a recreational activity. A visitor day is a recreation unit of measure commonly used by federal agencies and represents an aggregate of 12 visitor hours at a site or area.

BLM employees periodically take vehicle counts of visitors at entrance locations and at specific recreation sites. Motorized traffic is counted per vehicle, but a single vehicle may carry more than one visitor (an average of 2.5 persons per vehicle is commonly used). ERMA's lack direct visitation monitoring facilities, such as traffic counters or visitor registers. Direct monitoring by BLM staff must focus on areas of greatest use or conflict, with the result that more remote locations within the planning area may not receive adequate monitoring. In addition, many popular trails and use areas are not designated, making it difficult to accurately determine the amount of recreational use these areas receive. Therefore, the numbers recorded for specific activities in specific areas may not accurately reflect the level of use, and the origin of changes in use patterns (such as a change in numbers or types of non-local users) are difficult to determine. Estimated recreation use from 2010–2020 is provided in **Table 2-64** and **Table 2-65**.

The BLM issues SRPs for commercial, competitive, vending, as well as organized group activities and events. Commercial SRPs are issued to outfitters, guides, vendors, recreation clubs, and commercial

Table 2-64. Estimated Visitor Use (Arcata FO)

Year	Visits	Visitor Days
2010	360,000	155,508
2011	395,000	162,150
2012	401,000	163,375
2013	379,761	130,906
2014	382,625	131,520
2015	397,685	137,382
2016	436,352	143,522
2017	437,463	151,453
2018	448,644	154,845
2019	488,168	165,454
2020	789,580	287,646

Source: USDI BLM 2016a

Table 2-65. Estimated Visitor Use (Redding FO)

Year	Visits	Visitor Days
2010	737,999	258,828
2011	863,616	313,746
2012	899,141	321,478
2013	891,449	324,697
2014	890,404	322,333
2015	888,392	323,497
2016	840,165	308,685
2017	809,749	291,234
2018	650,963	252,928
2019	621,748	252,117
2020	738,652	291,884

Source: USDI BLM 2016a and USDI BLM GIS 2021

competitive event organizers that provide recreational opportunities or services not using permanent facilities. SRPs for competitive and organized group events are also included in this category. SRPs may be issued for 10 years or less, with annual renewals. The permits are issued to manage visitor use, protect natural and cultural resources, and accommodate commercial recreational uses. Over the years, the Redding FO issued over 100 SRPs annually, and there was a high demand for more permits. Most new SRP requests in the Redding FO are for commercial fishing guide permits in the Trinity River Management Area and competitive events such as OHV races and mountain bike races. The Arcata FO issues most of its SRPs (nearly 30 each year) to backpackers hiking in the King Range NCA. The King Range area, however, is not part of this planning process and so the permit numbers and revenues generated for this area are not included in this report. Within the Arcata FO planning area, only a few SRPs are issued each year, and they vary from environmental education in the backcountry to OHV or mountain bike races.

Letters of agreement are used as an alternative to issuing SRPs when the proposed recreation use has no foreseeable impact on resources, and stipulations are not required. Agreements have been used to allow activities such as club events, educational events, disabled veteran events, and school athletic events (track and field).

RUPs are issued for short-term recreation use of specialized sites, facilities, equipment, or services furnished at federal expense. Most often, the BLM uses RUPs to authorize individual and group use of recreational facilities, also known as fee sites. The Redding FO has six RUP fee sites: the Douglas City Campground, the Steelbridge Campground, the Junction City Campground, the Shasta Campground, the Reading Island Group Campground, and the Forks of Butte Creek Recreation Area. RUPs are collected for recreational gold panning at the Forks of Butte Recreation Area. The fees collected go to support maintenance, security, visitor information, and facility improvements. The Arcata FO planning area does not have any fee sites or other areas/activities that require an RUP. **Table 2-66** and **Table 2-67**, below, provide a summary of total permits and revenue collected from each site.

Table 2-66. Redding Field Office Collected Fees—RUPs and SUPs

Year	Number of Permits	Total Revenue
2010	RUPs-1395/SRPs-116	\$15,752/\$28,213
2011	RUPs-1824/SRPs-110	\$24,227/\$32,430
2012	RUPs-1694/SRPs-115	\$22,536/\$31,557
2013	RUPs-2423/SRPs-118	\$31,858/\$33,747
2014	RUPs-1554/SRPs-120	\$20,614/\$32,190
2015	RUPs-2029/SRPs-121	\$27,368/ \$31,283
2016	RUPs1002/SRPs114	\$14,747/\$31,476
2017	RUPs1161/SRPs104	\$16,761/\$26,904
2018	RUPs1700/SRPs105	\$22,500/\$31,226
2019	RUPs2284/SRPs115	\$31,295/\$32,628
2020	RUPs1945/SRPs119	\$28,733/\$29,848

Source: USDI BLM 2021a

Table 2-67. Arcata Field Office Collected Fees—SRPs (no RUPs Issued)

Year	Number of Permits	Total Revenue
2010	3	\$211
2011	3	\$395
2012	3	\$513
2013	2	\$200
2014	3	\$332
2015	3	\$650
2016	3	\$3,220
2017	2	\$220
2018	3	\$3,220
2019	3	\$3,220
2020	0	\$0

Source: USDI BLM 2021a

Arcata FO Management Area Specific Information

Samoa Peninsula Special Recreation Management Area

This SRMA consists of two coastal areas—Samoa Dunes Recreation Area and Ma-le'i Dunes CMA. Recreation management is a high priority, particularly at Samoa Dunes where the high use within a relatively small area requires focused investments of time and funding to provide high-quality recreation experiences while protecting sensitive resource values. Recreation management objectives for Samoa Dunes are documented in the 1989 Arcata RMP (USDI BLM 1989), 1995 Arcata RMP Samoa Amendment (USDI BLM 1995c), and 1997 activity-level plan entitled Samoa Dunes Recreation Area

Final Visitor Services Plan (USDI BLM 1997). The primary recreation management focus is to provide continuing opportunities for OHV recreation and other compatible recreation uses such as hiking along the beach, sightseeing, picnicking, surfing, and fishing. The primary recreation management focus for Ma-le'l Dunes is documented in the 1989 Arcata RMP (USDI BLM 1989), Arcata RMP Samoa Amendment (USDI BLM 1995c), and the activity-level plan entitled Ma-le'l Dunes Cooperative Management Area Public Access Plan (USDI BLM 2010c) and includes providing opportunities for hiking, horseback riding, sightseeing, bird watching, picnicking, and interpretive education.

The management area's proximity to the cities of Arcata and Eureka, and other towns surrounding Humboldt Bay, make both areas highly attractive for short-term coastal-related recreation pursuits, particularly beach activities. Visitor use numbers at Samoa Dunes are very high (approximately 200,000 visits annually) considering the land encompasses only 300 acres. As public demand to recreate in this area has increased over the years, so has the BLM's attempt to meet this demand by developing visitor service facilities. Samoa Dunes now has four picnic areas with a variety of amenities including two restrooms, a scenic overlook on top of one of the nine historic World War II ammunition bunkers, a potable drinking water system, three information kiosks, interpretive displays, a hiking trail, and approximately 20 miles of maintained OHV riding trails.

The BLM receives funding each year from the California State Off-Highway Motor Vehicle Division to provide for and enhance OHV riding opportunities such as the developing 4x4 obstacle course, fencing, and signs and a law enforcement presence to prevent OHV use in designated closed areas and wildlife and vegetation monitoring sites. Samoa Dunes is only one of two coastal riding areas where OHVs are allowed in the dunes. In 2014, the roads leading to all the aforementioned amenities were paved, which improved the attraction for those "driving for pleasure." A volunteer caretaker lives on-site to assist the BLM in facility maintenance and to provide visitors with information. The area is currently closed to overnight camping, firearms use, and vegetative gathering. Most other recreation activities are allowed. The area is open 1 hour before sunrise and closed 1 hour after sunset. There are no fees charged to enter the site or use the facilities.

Ma-le'l Dunes is located just north of the community of Manila and is jointly managed by the BLM and Humboldt Bay National Wildlife Refuge. Visitor use is much lower in this area (approximately 20,000 visits annually), most likely because there are fewer recreation activity types allowed here, there are fewer facilities, and the relatively small parking area is about 0.25 miles from the main attraction—the beach. Similar to Samoa Dunes, the area is open for day use activities only, and the most popular activity is hiking or beachcombing along the waveslope while enjoying the beautiful viewshed along the coast. Numerous trails traverse through a spruce forest and then various sand dune formations. Horseback riding and off-leash dogs are allowed, while OHV use, firearms use, and vegetative gathering are not allowed. No fees are charged for parking or facility use.

Scattered Tracts Management Area

Additional coastal areas where recreation management is a high priority include: (1) Mike Thompson Wildlife Area and the South Spit Humboldt Bay (South Spit), (2) Lost Coast Headlands, and (3) Trinidad Lighthouse. These areas were included in the Scattered Tracts Management Area by default, as they do not fit geographically into any other management area. These areas are now part of the California Coastal National Monument outside of the NCIP decision space and are covered under that Resource Management Plan (USDI BLM 2005a).

Lacks Creek Management Area

Recent land acquisitions and resulting increased visitor use (now estimated at 6,500 visits annually) within this management area has dramatically changed recreation management objectives and actions. The 2008 Lacks Creek Management Plan (activity-level plan) specifies that BLM: (1) maintain and improve appropriate road and trail access, (2) ensure a quality visitor experience and enjoyment of natural and cultural resources through enhanced signing, interpretation, education, and information, (3) ensure the public health, safety, protection, and security of visitors by providing well maintained and accessible facilities and an enforcement presence, (4) minimize user conflicts through facility design and spatial separation of user types, and (5) ensure that natural and cultural resource values are protected from visitor impacts by establishing use regulations, educating visitors regarding resource values and proper use, and monitoring (USDI BLM 2008d).

Over the last several years while working cooperatively with Humboldt Trails Council, nearly 10 miles of mountain bike trails and 5 miles of shared-use trails have been constructed. A developed campground and several trailheads have also been developed. Visitor use has increased by roughly 50 percent over the last few years, accommodating a growing number of mountain bikers as well as hunters and hikers.

Butte Creek Management Area

Visitor use is estimated at less than 500 visits annually. There are no facilities other than the two main public access roads that were constructed many years ago to conduct timber harvest operations. The primary recreation use is hunting for deer and bear and occasional use by neighboring landowners.

Red Mountain Management Area

This management area receives roughly 20,000 visits annually via the public access Red Mountain Access Road, Bell Springs Road, Elkhorn Ridge Road, Little Dan Creek Access Road, and Cahto Peak Road. Activities include hiking, backpacking, whitewater rafting and kayaking, hunting, and nature and scientific study. The primary recreation management focus is to protect and enhance natural and recreational values along the South Fork Eel VSR. In 2006, the majority of BLM-administered lands within this management area were designated as wilderness (South Fork Eel River and Elkhorn Ridge). The demand for access into these two wilderness areas has increased as the public has become more knowledgeable of this designation.

Covelo Vicinity Management Area

This management area consists of roughly 75 parcels (653,600 acres) spread out among the private lands east of Highway 101 in Mendocino County. The largest contiguous land area was designated as the Yuki Wilderness in 2006. Other lands were added to the Yolla Bolly-Middle Eel Wilderness at that time. Other relatively large blocks of BLM-administered land include the Eden Valley area, Brushy Mountain, and Willis Ridge. There is river access to the Eden Valley area but no public access to the other two areas. Nearly all the other smaller parcels lack public access as well except for the Little Darby Nature Area, located several miles east of the town of Willits. The only facilities in the entire management area are located here and include a small parking area, information kiosk, a hiking trail, and interpretive displays.

Recreation management focuses on providing dispersed recreation and protection and enhancement of natural and recreational values along the federally designated Eel VSR (Main Stem, North Fork, and Middle Fork).

Redding FO Management Area Specific Information

Scott Valley Management Area

Public land in the Scott Valley Management Area consists of approximately 13,300 acres. The management area is located in the south-central corner of Siskiyou County. Recreation use throughout the management area is light and primarily of local origin. The management area contains only one inventoried recreation attraction on public land—a small warm-water pond known as Blue Pond located in the Quartz Hill area. Most of the public land recreational use is concentrated during the deer and bear hunting seasons.

Klamath Management Area

Located in north-central Siskiyou County, the 29,800-acre Klamath Management Area includes the Klamath and Shasta River Canyons, Iron Gate, Copco Reservoirs, and Quartz Hill.

Most recreational use on BLM-administered lands occurs along the Klamath River and consists primarily of fishing and whitewater boating. River access is available at the Riverview site (off Highway 96) and the Stateline Primitive Camping area. Because alternative river access is available above Copco Lake via Pacific Power and Light facilities, use of public land is light.

The Klamath River is a part of the National WSR System downstream from the Iron Gate Dam and is being studied for inclusion in the National WSR System upstream from Copco Lake. BLM-developed recreational facilities are available at Mallard Cove on Copco Lake and at the Stateline Access. Mallard Cove Campground is maintained by Pacific Power and Light, and the Stateline Primitive Campground is maintained by the BLM Klamath Falls FO. The Klamath River dam removal initiative could affect seasonal flows and associated recreation. The remainder of the area's public lands is accessible but seldom used due to a lack of recreational attractions. Some higher-elevation areas are used for hunting (big game and upland). OHV use, including driving for pleasure, occurs on the scattered public land; however, this use is usually incidental.

Trinity Management Area

Approximately 56,400 acres of public land make up the Trinity Management Area. Access to public land in this management area is better than in other management areas. More than 50 percent of the public land tracts can be accessed by the public. The Trinity River provides access to some parcels that would not otherwise be available to the public because they are landlocked by private lands. Recreational use in this area is 100,000 visitor days annually.

The Trinity River below Lewiston Lake receives heavy fishing pressure for Chinook salmon and steelhead. Fishing for brown trout and rainbow or juvenile steelhead also occurs but is less popular than salmon and steelhead fishing. There is some limited fishing in tributary streams. Nearly all public land within this management area is used for deer, bear, and small game hunting on a seasonal basis. Most recreational use is concentrated within the Trinity River corridor, with the most popular activities being relaxing, fishing, camping, and float boating.

The BLM manages three fee campgrounds, one primitive campground, and five developed river access sites. BLM facilities are normally at or above capacity during the summer visitation season (May through October). Recreation management direction for the Trinity River is defined by the Trinity River Recreation Area Management Plan completed by the BLM in 1983 (USDI BLM 1983c). Due to the

current permit workload, BLM only allows for 100 commercial fishing guides operating under BLM SRPs. Additionally, commercial whitewater boating is permitted cooperatively under an Intergovernmental Order with the Shasta-Trinity National Forest.

The Grass Valley area, which includes the Grass Valley Reservoir (also known as Buckhorn Reservoir [Reclamation owned and operated]) and the surrounding public land, was acquired shortly before the Redding FO's last RMP and ROD. Public access to the reservoir is by foot only, which limits the number of annual visitors, compared with other similar waterbodies that are accessible by motor vehicle. The area is popular for trout fishing and big game and upland bird hunting. The Grass Valley area shares a common border with the Whiskeytown NRA on its eastern side.

The WCF, designated a BLM Forestry Stewardship project in 2005 and retained due to its forest and recreational attributes, has become popular locally with hikers and mountain bikers. This area has received increased attention from local citizens that want the land to remain in public ownership for recreational and visual resource values. Recently, Trinity County imposed a camping closure on this area due to long-term and transitory camping problems.

Shasta Management Area

This management area is located entirely within Shasta County mainly west of Interstate 5 and southwest of Shasta Lake. There are a few parcels of public land east of Interstate 5, with most of the public land in this management area, approximately 67,700 acres, scattered around the outskirts of Redding, around the Keswick Reservoir and west of Shasta Lake.

Interlake Special Recreation Management Area

The area consists of 37,800 acres of public land, which includes the Chappie-Shasta Off-Highway Vehicle Area, the Sacramento River Rail-Trail (designated National Recreation Trail) Keswick Reservoir, and lands adjacent to Shasta Lake.

BLM also manages, through a cooperative agreement, about 4,800 acres of Reclamation land around Keswick Reservoir. This area includes the Sacramento River Rail-Trail, Keswick Boat Ramp, and numerous trailheads, hiking, mountain bike and equestrian trails.

Clear Creek Greenway

This area covers over 5,421 acres of public land running from the terminus of the Sacramento River to the boundary of the Whiskeytown NRA (managed by the NPS). The Cloverdale Recreation Area is included in this area. The area has six trailheads and river access points located along Clear Creek Road. The Swasey Recreation area connects to the Greenway near the NPS boundary and is currently one of the most heavily used hiking and mountain biking areas in Northern California.

Sacramento River Management Area

The Sacramento River Management Area lies along both sides of the Sacramento River in Shasta, Tehama, and Butte Counties. There is a concentration of public land above Red Bluff between Jellys Ferry and Iron Canyon. This concentration is known as the "Sacramento River Bend Area" and includes the mouths of both Paynes and Inks Creeks. The remaining public land consists of various islands and small parcels upriver and downriver from the Sacramento River area. Total public land acreage in this management area is approximately 19,000 acres.

This area is predominately used by equestrians, hikers, anglers, hunters, and mountain bikers. Jet boats and drift boats are used for fishing on the Sacramento River; canoeing and rafting are also popular activities.

The BLM, in collaboration with the CDFW, Reclamation, California Wildlife Conservation Board, and Ducks Unlimited, developed wetlands in the Paynes Creek area in an effort to enhance populations of migratory birds and other species. The BLM manages this wetland area to protect and enhance the existing riparian habitat and wildlife communities, as well as to provide for cultural and natural interpretation, educational opportunities, and recreational use (such as waterfowl hunting). The area also has numerous bass ponds, which provide for shoreline fishing. There is one group campground located at Reading Island and one developed boat ramp at Jellys Ferry.

Ishi Management Area

BLM manages approximately 32,700 acres within the Ishi Management Area. Tracts of public land are scattered from near Shingletown in Shasta County to the southern edge of Butte County. For the most part, public land is located between the agricultural land in the Sacramento Valley and the National Forest boundaries.

Recreational use of public land in the Ishi Management Area is light due to the small size of most parcels, lack of marked boundaries, and limited road access, with most use occurring during the hunting season. Only two small areas within this management area receive active recreation management. These are the Upper Ridge Nature Preserve (120 acres) near Magalia and the Forks of Butte Creek Recreation Area (2,254 acres) in Butte Creek Canyon.

The Forks of Butte Creek Recreation Area is a designated recreational mineral collection area that allows visitors to apply for a gold panning permit to be used at about 20 designated sites along Butte Creek. A small primitive campground is located near the forks of the South Fork and the main fork of Butte Creek.

The community of Paradise and the Upper Ridge Nature Preserve were heavily affected by the 2018 Camp Fire. Before the fire, the Upper Ridge Nature Preserve contained hiking trails and was co-managed by a memorandum of understanding (MOU) with the Upper Ridge Wilderness Association. The BLM is actively making the land safe through timber salvage and fuels reduction. Recreation will reestablish user trails when all fuels work is completed. A 220-acre parcel is designated as part of the Ishi Wilderness Area, which the BLM administers through an MOU with the Lassen National Forest.

Yolla Bolly Management Area

Public land in this 35,800-acre management area in southwestern Shasta and western Tehama Counties is a checkerboard pattern. Despite the number of roads, there is only legal public access to about 12 percent of the public land; the remainder is landlocked by private parcels.

Recreational use of public land in the management area includes hunting for big and upland game. One recreation attraction is Beegum Gorge, a nearly 5,000-acre parcel containing Beegum Creek. Most of the gorge is accessible only by foot, and there are no BLM facilities or trails. A 640-acre parcel of the Yolla Bolly WSA is in this management area. The WSA is adjacent to the designated Yolla Bolly Wilderness Area managed by the Shasta-Trinity National Forest.

Forecast/Anticipated Demand for Use

The demand for public lands for outdoor recreation uses continues to increase in both intensity and diversity throughout the Arcata and Redding FOs. In many places, public lands provide the only readily accessible opportunities to pursue wildland recreation opportunities. Many counties and communities rely upon public lands to fulfill the “open space” requirements of the recreation elements of their general plans, and these open space areas play a role in the economic and social health of Northern California residents.

Some recreational uses of the public lands compete or conflict directly with other recreational uses or non-recreational uses allowed under the public land laws. The challenge for BLM recreation management is to provide for desired recreation opportunities, while resolving conflicts among and between recreationists, other legitimate public land users, or resource values sensitive to certain types of recreational uses.

Over the past decade, mountain biking and hiking activities have increased significantly in the area around Redding. Continued development of trail systems and the linking of trails to the City of Redding’s recreation sites and trails will further increase use of BLM-administered lands within the urban interface. The BLM also expects visitation to increase on coastal tracts near Arcata and Eureka. Mountain biking use in the Lacks Creek area is expected to increase over the next several years; hiking and backpacking are also expected to increase in the Arcata FO designated wilderness areas. Recently acquired lands will be available to accommodate demand for public recreation. The BLM expects the demand for recreation use of BLM-administered lands in the planning area will increase.

The BLM expects there will be a continued demand for commercial fishing guide activity, necessitating continued development and administration of the SRP system in the Trinity River Management Area, Sacramento River, and Keswick Reservoir area. The removal of the Klamath River dam is anticipated to bring new SRP demand for commercial fishing guide activity on the Klamath River.

Other uses such as hunting, fishing, gold panning, swimming, and OHV use have remained steady with slight increases over time. The BLM expects visitor participation in these activities to increase slightly over time.

Technology plays an increasingly influential and important role in outdoor recreation. The last 10 years, in particular, have seen a significant increase of technological developments in outdoor recreation, ranging from clothes and protective gear, to equipment such as e-bikes and drones. E-bikes are currently the fastest growing segment of the US bike market, and the bike industry has been pushing hard, particularly at the federal and state level, for more off-pavement e-bike access. Allowing the use of e-bikes on BLM-administered trails will make public lands more accessible to all and make bicycle travel easier for those with physical limitations. E-bikes are also anticipated to provide greater ease of access for hunters and increase in volume on multi-use trails. As a result, multi-use trails will need to adhere to standards for all user groups. For example, equestrian needs for visibility and line of sight increase with greater rates of e-bikes’ speed.

Although drone technology has been around for decades, drones themselves have become a popular consumer product over recent years due to their portable size and cheaper price point. On BLM-administered lands in the Redding and Arcata FOs, drone use is very popular in many scenic areas, such

as sand dunes and coastal areas, and with mountain bikers. Although it can be hard to predict the next big technological advancement in the outdoor industry, changing preferences, demographics, and recreation opportunities will likely drive this demand.

Over the last 10 years, there has been an increasing trend in transient/homeless persons participating in long-term non-recreational camping on BLM-administered lands in the Redding and Arcata FOs. This issue has been exacerbated particularly throughout 2020, likely resulting from the COVID-19 pandemic, which has continued to drive people outdoors and displace those who historically have relied on local shelters for refuge. Long-lasting effects from the pandemic are still unknown; however, increased management and enforcement may be necessary in the future.

Visitor use data show an increase in overall visitation to the RMP areas over the last 10 years. There are other indications that the demand has shifted. Requests for trails adjacent to municipalities or areas close to major subdivisions outside of incorporated towns and along the coastline in the planning area are increasing. Recent wildfires throughout the planning area, such as the Carr Fire in 2018, has caused many closures and displaced recreation use in some areas, while recreation use in other areas has increased. With increased local visitation, SRP requests typically increase, as communities hope to see rising economic benefits.

More communication between the BLM, counties, and communities will be needed to identify recreational opportunities. Community partnerships will increase the need to provide additional management tools to protect resources and reduce conflict. The BLM will need to address negative impacts from overuse and conflicts from multiple user groups, such as hikers, equestrians, mountain bikers, hunters, and motorized users, as the area's capacity to accommodate increased use is stretched, especially in places with developed access. Areas that are managed for their recreational values would benefit by more input from the public to better define desired settings. Additionally, as visitation continues to increase, the BLM will need to provide more educational opportunities, through the use of interpretive signage, regarding cultural and natural resources on BLM-administered land.

Key Features/Areas of High Potential for Use

There are water-based recreational opportunities on the Trinity WSR, including swimming, fishing, and camping. The BLM-administered Steel-Bridge, Douglas City, and Junction City campgrounds are popular recreation destinations. Public access points along the river corridor provide entry points for class I and II rapids. Chinook salmon runs provide trophy fishing opportunities along the river corridor from May through November.

2.3.11 Renewable and Alternative Energy Development

This section addresses the potential for and management considerations of renewable energy development. Use authorizations for renewable must be considered separately because of the potential scale of these activities. Prior BLM planning documents that cover the planning area did not specifically address renewable energy. Areas that should be addressed are potential use or avoidance areas, general planning guidance for the various types of renewable energy authorizations, or specific actions related to biomass harvesting, including how biomass use on public lands might assist carbon planning objectives.

Current Level/Location of Use

Biomass

According to the National Renewable Energy Laboratory (NREL), the planning area has several counties with an ability to produce over 100 tons/per acre/per year of forest residues (NREL 2014). This estimate includes the portion of residue resulting from silvicultural operations or site conversion (65 percent logging removal and 50 percent removal of other material) while maintaining sufficient biomass to maintain ecological function. Despite this high level of production and a local market for the product at the Wheelabrator wood-fired power plant (58 megawatts [MW]) located near Anderson, California, there has been only minimal delivery of biomass for power production from public lands. There are also three idle biomass power plants located in Humboldt County (DG Fairhaven Power—Samoa, Blue Lake and Scotia Plants).

Typically, biomass would be supplied from public lands as a result of a forest health projects or similar activities, not through an authorization from the Lands and Realty program, although significant biomass could be produced as a result of large ROW maintenance projects, such as transmission lines, hazard tree removals, or the construction of new ROW projects. Future planning efforts should address and integrate, where possible, the California Forest Carbon Plan and Tree Mortality Task Force Strategy objectives.

Solar

In 2018, the Redding FO received an application for a small-scale solar project in Butte County, but the application was later denied for not providing additional information. Other than the 2018 application, the FOs received no other applications for solar-power facilities or related testing. Lands administered by the Redding FO are almost completely mapped as areas with the potential to provide 5.5 to 6.0 kilowatt hours per square meter for photovoltaics, according to the NREL (NREL 2011). Lands administered by the Arcata FO range from 4.5 to 5.5, depending upon topography and distance from the coast. The most likely location for utility-scale photovoltaic or concentrated solar power installations within the areas covered by the NCIP is the Sacramento Valley, due to solar radiation levels and existing infrastructure. Based on the Approved Resource Management Plan Amendments/Record of Decision for Solar Energy Development in Six Southwestern States, all lands within the Redding FO and Arcata FO (including the Headwaters Forest Reserve Plan and the King Range NCA Plan) are excluded with regard to variance areas; there are no lands identified as developable acreage areas in solar energy zones (USDI BLM 2012g).

Wind

The FOs received one application for multiple windpower testing locations from Padoma Wind Power LLC in 2010. The application was withdrawn later that year and no testing or development was authorized. Lands within the planning area of the NCIP have the potential for commercial windpower development according to mapping by NREL (US EIA 2020). These lands are primarily on upper elevations of north/south running ridgelines. The highest potential locations on BLM administered lands are in Siskiyou County west of Gazelle.

In 2005 the BLM, with assistance from the Department of Energy, completed the Final Programmatic Environmental Impact Statement on Wind Energy Development on BLM-Administered Lands in the Western United States (Wind PEIS) and the ROD, which identified BLM-administered lands in 11 western states, including California, to administer the development of wind energy resources and

evaluate associated land use plan amendments. In the analysis, it was identified that none of the land use plans in California were proposed for amendment under the Wind PEIS (USDI BLM 2005c). The lands within the Redding and Arcata FO have been classified as having a low wind resource level with some exclusion areas, according to the NREL-prepared maps at that time.

In 2016 the BLM, with assistance from Argonne National Laboratory, prepared the West-Wide Wind Mapping Project: Project Report, which further identified exclusion areas, lands with potentially developable wind resources, and low wind resources on BLM-administered lands. This revised mapping identified exclusion areas, lands classified as having low wind resources, and lands that could potentially be developable for wind resources within both FOs.

Hydropower/FERC Ancillary ROWs

The FERC issues licenses for nonfederal hydropower projects over 10 MW pursuant to the FPA. FERC also has an exemption process for projects under 10 MW and can license ancillary facilities, such as power lines, tunnels, and roads, on public lands. These ancillary facilities would typically be documented through a FPA withdrawal. Over the years, some ancillary facilities licensed by FERC have been converted to FLPMA ROWs where appropriate.

There are several areas where FERC-licensed activity has been located with a concentration of use in the Forks of Butte Area. The Arcata FO administers one FERC ancillary transmission line, and the Redding FO has six nonfederal hydropower facilities. **Table 2-68** is a summary of nonfederal hydropower authorizations (water system ROWs) within the planning area.

Table 2-68. Nonfederal Hydropower Authorizations within the NCIP Planning Area

Name/Location	Operator	County	Facilities	FERC License #	Capacity (kW)
El Dorado/ Montgomery Ck	Enel N.A.	Shasta	Complete – including powerhouse	3590	2400
Forks of Butte	Hypower Inc	Butte	Tunnel, road, diversion	6896	14500
South Fk Battle Ck	PG&E	Tehama	Ditches, tunnels, roads	1121	36100
TKO Bear Ck	Enel N.A.	Shasta	Road, penstock	5766	3050
Arbuckle/ Cottonwood Ck	Arbuckle Mountain Hydro	Shasta	Access road and transmission line	7178	400
Kekawaka Creek/Jewett Rock	STS Hydropower	Humboldt	Transmission line	7120	4950

Source: USDI BLM 2016a

Although hydropower has numerous benefits, such as power production with low greenhouse gas emissions, cost efficiency, and flexible power generation, adverse impacts on fish migration, changes in flow regime and water quality, loss of biological diversity and population displacement are associated with these developments (NREL 2012). For example, the hydropower project on South Fork Battle Creek is currently being decommissioned to increase fish migration and improve habitat as part of the larger Battle Creek Salmon and Steelhead Restoration Project. The project is restoring 42 miles of habitat on Battle Creek and an additional 6 miles on tributaries to Battle Creek. Reclamation is the lead

federal agency for the decommissioning project. Ancillary facilities, such as the tunnels and access roads will remain after decommissioning.

In addition to small nonfederal hydropower projects, there are large-scale projects constructed under a FERC license to the State of California (Oroville) or under federal authorities, such as the Newlands Reclamation Act of 1902, and operated by Reclamation. These large projects have a combination of ancillary facilities or inundation zones located on public lands. These activities are generally located in the vicinity of the Shasta/Keswick, Lewiston, and Oroville dams, although irrigation-related facilities may be located at some distance, such as the Clear Creek Tunnel. In addition to these facilities, Reclamation also maintains the Buckhorn Reservoir, which was constructed as a sediment collection dam to restrict sediment flows from the GVC watershed into the Trinity River. Hydropower projects on the Klamath River also include the Copco and Iron Gate dams.

The existing planning documents contain limited guidance on hydropower development despite the high potential and the level of development of hydropower within the region. The 1993 Redding RMP (page 17) states, "Potential water power storage reservoir sites under a land withdrawal will continue to be managed for water power values. Exceptions include withdrawals for water waterpower or storage on streams which become components of the National Wild and Scenic River System..." Future decisions may be needed to determine the degree to which sites identified for future development and withdrawn under power site withdrawals are still needed given the current energy production market. Most hydropower development on or adjacent (thereby affecting public lands through inundation or altered flow regimes) to public lands are authorized through a FERC license. FERC issues licenses for nonfederal hydropower projects over 10 MW pursuant to the FPA.

Wave Energy

No wave energy applications have been received within the Arcata FO Wave energy development potential is limited because the limited areas administered by the Arcata FO are subject to special management designations or other restrictions.

Forecast/Anticipated Demand for Use

The cost of development and operation of renewable power sources continues to fall, particularly for photovoltaics, but also for the other primary forms of new renewable energy production (concentrated solar and wind) 2016 - Frankfurt School/UNEP. Despite the cost reduction on a global and national scale, applications for new wind and solar development have not been received for lands within the planning area. This trend is anticipated to continue as California approaches satisfaction of renewable portfolio standards, and as more large-scale renewable energy projects come online in other parts of the state. Locally, hydropower is a well-established form of renewable energy production that moderates cost influences, while providing collateral irrigation and flood control benefits. Distributed generation in the form of rooftop solar is reaching cost parity with other forms of power generation. All of these factors will continue to diminish the potential for any significant changes in demand for use in the local power markets. The forecast is that the factors that contributed to the lack of applications for renewable energy authorizations will continue.

Key Features/Areas of High Potential for Use

The factors that determine the potential for use are the proximity of renewable power resources (sun, wind, water, wave action and geothermal, etc.) to transmission infrastructure or areas of concentrated

local demand, such as manufacturing. There are no known areas for high potential use; however, there are areas identified with at least moderate potential for use, such as the higher elevations of Siskiyou County near Interstate 5 (Wind) and the northern sections of the Central Valley (Solar).

2.4 SPECIAL DESIGNATIONS

2.4.1 Areas of Critical Environmental Concern

An ACEC is defined in Section 103(a) of FLPMA as an area within BLM-administered lands where management attention is required to protect and prevent irreparable damage to important cultural, historic, or scenic values; fish and wildlife resources or other natural systems or processes; or to protect life and safety from natural hazards. BLM regulations for implementing the ACEC provisions of FLPMA are found in 43 CFR 1610.7-2(b). An ACEC possesses significant cultural, historic, or scenic values; fish or wildlife resources (including habitat, communities, or species); natural processes or systems; or natural hazards. In addition, the significance of these values and resources must meet at least one of the following relevance criteria and one (or more) of the following importance criteria.

Relevance criteria are as follows:

- 1) Area is of significant cultural, historic, or scenic value (including but not limited to rare or sensitive archaeological resources and religious or cultural resources important to Native Americans).
- 2) Area is a fish or wildlife resource (including but not limited to habitat for endangered, sensitive, or threatened species, or habitat essential for maintaining species diversity).
- 3) Area has a natural process or system (including but not limited to endangered, sensitive, or threatened plant species; rare, endemic, or relict plants or plant communities that are terrestrial, aquatic, or riparian; or rare geological features).
- 4) Area has a natural hazard (including but not limited to areas susceptible to avalanche, dangerous flooding, landslides, unstable soils, seismic activity, or containing dangerous cliffs). A hazard caused by human action may meet the relevance criteria if the RMP process determines that it has become part of a natural process.

Importance criteria are as follows:

- 1) The area has more than locally significant qualities that give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource.
- 2) The area has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change.
- 3) The area has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA.
- 4) The area has qualities that warrant highlighting in order to satisfy public or management concerns about safety and public welfare.
- 5) The area poses a significant threat to human life and safety or property.

The planning area currently contains multiple RNAs and ONAs. The BLM Planning Handbook, H-1601-1 (USDI BLM 2010b), states that RNAs and ONAs are considered a type of ACEC, subject to the same criteria described above.

Existing Areas

The planning area currently contains 16 ACECs designated to protect a variety of resources and values (**Table 2-69**).

Baker Cypress

The Baker Cypress RNA/ACEC (190 acres in the planning area) was designated in the 1993 Redding RMP to protect and study the area's population of Baker cypress. This species is only found in 11 locations in Northern California and southern Oregon.

Currently, Baker cypress is in decline within this ACEC due to impacts of fire suppression and competition from other conifer species, specifically white fir and ponderosa pine. In 2015, the BLM entered into a stewardship agreement with HSU regarding management of this area. Under this agreement, the BLM will conduct rehabilitation-focused treatments to benefit Baker cypress, and HSU will study the effectiveness of these treatments.

Butte Creek

The Butte Creek RNA/ACEC (2,308 acres in the planning area) was designated in the 1992 Arcata RMP (USDI BLM 1992a) for the preservation of old-growth forest and associated wildlife habitat values. At the time of designation, this area contained four breeding pairs of NSOs and provided an island of habitat to allow owls to disperse and breed. This area was designated as a LSR under the NWFP, which was incorporated into BLM management in the 1995 Arcata RMP Forest Plan Amendment (USDI BLM 1995).

Current management precludes activities that threaten existing old-growth values. Current threats to these values include activities, primarily timber harvesting and marijuana cultivation, on adjacent private lands. Threats to the NSO now include the barred owl.

Deer Creek

The Deer Creek ACEC (4,409 acres of federal and nonfederal lands in the planning area) was designated in the 1993 Redding RMP to protect the area's biological resources, including the peregrine falcon, cultural resources, and recreational resources. The conservation status of the peregrine falcon has since been downgraded. The species was removed from the federal list of T&E species in 1999 and is no longer identified as a BLM sensitive species in the State of California. However, cliff habitat is important to many raptor species. Since the 1993 Redding RMP (USDI BLM 1993), Deer Creek has been identified as federally designated critical habitat under the ESA for spring-run Chinook salmon.

Current threats to this area's relevant and important values include impacts on cultural resources from recreation use and the threat to biological resources posed by high-severity wildland fire.

Table 2-69. Areas of Critical Environmental Concern (ACECs) within the NCIP Planning Area

ACEC Name	Source and Year of Designation	Acres (Planning Area)	Acres (Decision Area)	General Location	Relevant and Important values
Baker Cypress RNA/ACEC	Redding RMP (1993)	190	141	Shasta County, approximately 6 miles south of Burney, CA.	Rare plant type (Baker cypress)
Butte Creek RNA/ACEC	Arcata RMP (USDI BLM 1992a)	2,308	2,254 surface estate plus 7 split-estate acres	Humboldt County, approximately 3 miles southeast of Bridgeville, CA.	Rare vegetation type/wildlife habitat (Old-growth forest)
Deer Creek ACEC	Redding RMP (USDI BLM 1993)	4,409	567 surface estate plus 342 split-estate acres	Tehama County, approximately 8 miles east of Los Molinos, CA.	Wildlife (raptors), cultural resources, recreational/scenic values
Elder Creek RNA/ACEC	Red Mountain Management Framework Plan (1981c)	4,139	180 surface estate plus 462 split-estate acres	Mendocino County, approximately 5 miles northwest of Laytonville, CA.	Elder Creek and Fox Creek watersheds, old-growth forest
Forks of Butte Creek ACEC	Redding RMP (USDI BLM 1993)	9,546	2,921 surface estate plus 22 split-estate acres	Butte County, approximately 8 miles northeast of Chico, CA.	Scenic, recreation, and historic values
Gilham Butte RNA/ACEC	Arcata RMP (USDI BLM 1992a)	2,619	2,619	Humboldt County, approximately 9 miles west of Miranda, CA.	Rare vegetation type/wildlife habitat (Old-growth forest)
Hawes Corner RNA/ACEC	Redding RMP (USDI BLM 1993)	123	38	Shasta County, approximately 3 miles southeast of Redding, CA.	Rare plant (slender Orcutt grass)
Iaqua Buttes RNA/ACEC	Arcata RMP (USDI BLM 1992a)	1,111	1,111 surface estate plus 22 split-estate acres	Humboldt County, approximately 7 miles southeast of Kneeland, CA.	Rare vegetation type/wildlife habitat (Old-growth forest)
Lacks Creek RNA/ACEC	Arcata RMP (USDI BLM 1992a), expanded in Arcata RMP Forest Plan Amendment (USDI BLM 1995)	7,389	7,347	Humboldt County, approximately 12 miles northeast of Blue Lake, CA.	Rare vegetation type/wildlife habitat (old-growth forest)
Manila Dunes ONA/ACEC	Arcata RMP (USDI BLM 1992a)	149	149	Humboldt County, approximately 3 miles west of Arcata, CA.	Natural values (active and stabilized sand dunes, wetlands and sensitive plants)
Red Mountain RNA/ACEC	Red Mountain Management Framework Plan (1981c)	6,811	6,811	Mendocino County, approximately 1 mile east of Leggett, CA.	Unique botanical values associated with red, serpentine soils, anadromous fishery (Cedar Creek), rare vegetation type/wildlife habitat (old-growth forest)

2. Area Profile (Areas of Critical Environmental Concern)

ACEC Name	Source and Year of Designation	Acres (Planning Area)	Acres (Decision Area)	General Location	Relevant and Important values
Sacramento River Island RNA/ACEC	Redding RMP (USDI BLM 1993)	627	91	Shasta County, adjacent to Redding, CA.	Rare vegetation type (native riparian Great Valley–Valley Oak forest; Orcutt grass)
Sacramento River (Bend Area) Area ONA/ACEC	Redding RMP (USDI BLM 1993)	39,872	18,596 surface estate plus 338 split-estate acres	Shasta and Tehama Counties, approximately 5 miles east of Cottonwood, CA.	Natural riparian system, rare plants (slender Orcutt grass and Fremont’s western rosinweed), cultural resources, wildlife (raptors), wetland systems, anadromous fish spawning habitat
Shasta and Klamath River Canyon	Redding RMP (USDI BLM 1993)	1,930	1,207 surface estate plus 8 split-estate acres	Siskiyou County, approximately 3 miles north of Yreka, CA.	Fisheries habitat
South Fork Eel River Watershed ACEC	Arcata RMP Forest Plan Amendment (USDI BLM 1995)	7,152 (includes some nonfederal lands)	7,094 surface estate plus 5 split-estate acres	Mendocino County, approximately 4 miles southeast of Leggett, CA.	Anadromous fishery, rare vegetation type/wildlife habitat (old-growth forest)
Swasey Drive ACEC	Redding RMP (USDI BLM 1993)	473	468 surface estate plus 1 split-estate acre	Shasta County, approximately 3 miles west of Redding, CA.	Cultural resources

Source: USDI BLM 2020b, USDI BLM GIS 2021

Elder Creek

The Elder Creek RNA/ACEC (4,139 acres in the planning area) was designated in the 1981 Red Mountain Management Framework Plan (USDI BLM 1981a). The ACEC encompasses public lands in the Elder Creek and Fox Creek watersheds adjacent to the Angelo Coast Range Reserve and 913 acres of old-growth forest habitat. The Angelo Coast Range Reserve, managed as part of the University of California Natural Reserve System, is managed for university-level teaching and research and was first protected in the 1930s. Much of the public land in this area was designated as part of the South Fork Eel River Wilderness in 2006. Elder Creek and Fox Creek, which drain into the South Fork Eel River from BLM-administered lands and the Angelo Coast Ranger Reserve, represent two critically important baseline research watersheds due to their largely undisturbed condition.

Current threats to these values include marijuana cultivation on adjacent private lands, trespass marijuana cultivation on public lands, and impacts from wildland fire. These activities, when combined with the impacts of historic drought, threaten the health of the Elder and Fox Creek watersheds.

Forks of Butte Creek

The Butte Creek Canyon ONA/ACEC (9,546 acres in the planning area) was designated in the 1993 Redding RMP to protect the area's scenic values, and significant recreational and historic values. This area's proximity to the large population center of Chico, California, means this ACEC faces many WUI issues. Current threats to ACEC values include looting of cultural remains, trash dumping, homeless encampments, high-severity wildland fire, and fire suppression damage.

Gilham Butte

Gilham Butte (2,619 acres in the planning area) was designated as an RNA/ACEC in the 1992 Arcata RMP (USDI BLM 1992a) for the preservation of old-growth forest and associated wildlife habitat values. This area was designated as a late-seral reserve under the NWFP, which was incorporated into BLM management in the 1995 Arcata RMP Forest Plan Amendment (USDI BLM 1995).

Current threats to these values include activities, primarily timber harvesting and marijuana cultivation, on adjacent private lands. Trespass marijuana cultivation on public lands within this ACEC is also a threat to this area's values.

Hawes Corner

The Hawes Corner RNA/ACEC (123 acres in the planning area) was designated in the 1993 Redding RMP (USDI BLM 1993) to protect the area's slender Orcutt grass habitat. As slender Orcutt is a species endemic to vernal pools, the Hawes Corner ACEC also supports many other BLM sensitive species that are specific to vernal pool ecosystems. This species is currently listed as endangered by the State of California and threatened by the federal government. The slender Orcutt grass has now been found in areas outside of this location.

Current threats to this area's values include impacts from recreation use and wildland fire.

Iaqua Butte

Iaqua Butte (1,111 acres in the planning area) was designated as an RNA/ACEC in the 1992 Arcata RMP (USDI BLM 1992a) for the preservation of old-growth forest and associated wildlife habitat values. This area was designated as a late-seral reserve under the NWFP, which was incorporated into BLM management in the 1995 Arcata RMP Forest Plan Amendment (USDI BLM 1995).

Current threats to these values include activities, primarily timber harvesting and marijuana cultivation, on adjacent private lands.

Lacks Creek

The Lacks Creek Management Area contains two overlapping ACECs. The Lacks Creek old-growth RNA and ACEC were designated in the 1992 Arcata RMP (USDI BLM 1992a) to protect old-growth forest and associated wildlife habitat values within an 800-acre area. The 1995 Arcata RMP Forest Plan Amendment (USDI BLM 1995a) expanded this ACEC to 1,520 acres and designated 4,100 acres within this management area as LSR.

The 1995 Arcata RMP Forest Plan Amendment (USDI BLM 1995a) also designated a second ACEC, the Lacks Creek Watershed ACEC), to protect all BLM-administered lands within the Lacks Creek watershed and to prioritize acquisition of remaining private lands within this watershed. Since this time, acquisitions have expanded the acreage of public land within this ACEC to over 7,000 acres. Relevant values for this ACEC are anadromous fisheries, old-growth forest, and special status species (specifically the NSO), as well as the relevance of these lands in the watershed for Redwood National Park.

Current threats to these values include activities, primarily timber harvesting and marijuana cultivation, on adjacent private lands.

Manila Dunes

The Manila Dunes ONA/ACEC (149 acres in the planning area) was designated in the 1992 Arcata RMP (USDI BLM 1992a) to protect and interpret natural values, specifically active and stabilized sand dunes, wetlands, and sensitive plants. An activity-level plan for this area, *Environmental Assessment and Land Use Decision Amendment for the Samoa Peninsula Management Area*, was completed in 1995 (USDI BLM 1995c). This plan amendment closed this ACEC to OHVs in order to protect T&E plants and animals. It also called for actions to restore native dune plant habitat and fragile, natural dune formations and processes. Since this time, substantial progress has been made towards restoration goals for this ACEC.

Current threats to the relevant and important values of this ACEC include nonnative, invasive plants, specifically European beachgrass. Additional threats include impacts from recreational use.

Red Mountain

The Red Mountain RNA/ACEC (6,811 acres in the planning area) was designated by the BLM State Director in 1984 and was carried forward in the 1989 Arcata RMP (USDI BLM 1989). An activity-level plan was completed for this ACEC in 1989. The Red Mountain ACEC was designated to protect unique botanical values associated with red, serpentine soils, the anadromous fishery found in Cedar Creek and 788 acres of old-growth forest.

The serpentine soils of the central and northeastern part of this ACEC support a unique open-canopied forest with several rare plants including McDonald's rockcress, listed as endangered by the State of California and the federal government; Red Mountain buckwheat, listed as endangered by the State of California and a BLM sensitive species; and Red Mountain catchfly and Red Mountain stonecrop, both BLM sensitive species.

Cedar Creek, which drains most of this ACEC, is a major tributary to the South Fork Eel River and contributes critically important cool water for anadromous fish species through the dry summer months.

This area was designated as part of the South Fork Eel River Wilderness in 2006, conferring additional protections on the area's relevant and important values.

Current threats to these values include activities, primarily timber harvesting, on adjacent private lands. Marijuana cultivation on surrounding private lands and trespass cultivation on public lands are also current threats to ACEC values. Water removals for this cultivation, combined with historic drought, threaten the critically important fish habitat in Cedar Creek.

Sacramento River Island

The Sacramento Island RNA/ACEC (627 acres in the planning area) was designated in the 1993 Redding RMP. This area was identified in the 1993 RMP as containing the largest unaltered fragment of native Great Valley–Valley Oak riparian forest within Shasta County.

The ACEC is bordered by Interstate 5, residential/agricultural land and a sand and gravel plant; degraded land adjacent to these impacts allows for testing of effectiveness of restoration techniques, which contributes to future adaptive management.

Current threats to this area's values include trash dumping, homeless encampments, high-severity wildland fire, and fire suppression damage.

Sacramento River (Bend Area)

The Sacramento River (Bend Area) ONA/ACEC (39,872 acres in the planning area) was designated in the 1993 Redding RMP to protect the last remaining riparian system of any size on the Sacramento River between Sacramento and Shasta Dam. The area's unique resources include rare habitats, plants, wildlife, and cultural resources. Vernal pools support slender Orcutt grass and Fremont's western rosinweed. Important and rare cultural sites are located in the area. Nesting bald eagles and deer winter range habitat are found in this ACEC. Regionally significant wetlands support a diversity of waterfowl. The sections of the Sacramento River and tributaries within this ACEC are important spawning habitat for multiple special status anadromous fish and aquatic wildlife species.

The area also supports a wide array of recreational uses. Current threats to this area's values include overuse by visitors, trash dumping, homeless encampments, high-severity wildland fire, and fire suppression damage.

Shasta and Klamath Rivers Canyon

The Shasta and Klamath Rivers Canyon ACEC (1,930 acres in the planning area) was established in the 1993 Redding RMP. It was established to protect critical spawning habitat on the Shasta River for Chinook salmon within the Klamath Basin.

Current threats to this area's values include high-severity wildland fire and fire suppression damage.

South Fork Eel River Watershed

The South Fork Eel River Watershed ACEC (7,152 acres in the planning area) was designated in the 1995 Arcata RMP Forest Plan Amendment (USDI BLM 1995a) to protect anadromous fisheries and old-growth Douglas-fir. This ACEC overlaps with the Elder Creek RNA/ACEC, as well as the South Fork Eel River WSR corridor. This area was designated as part of the Elkhorn Ridge Wilderness in 2006.

Current threats to these values include timber harvesting on adjacent private lands. Marijuana cultivation on surrounding private lands and trespass cultivation on public lands are also current threats to ACEC

values. Water removals for this cultivation, combined with historic drought, threaten the critically important fish habitat in the South Fork Eel River.

Swasey Drive

The Swasey Drive ACEC (473 acres in the planning area) was designated in the 1993 Redding RMP (USDI BLM 1993) for the protection of the area's significant cultural resources. The area contains a number of prehistoric and historic sites, which require special protection given their proximity to the city of Redding.

Current threats to this area's values include the impacts of recreation use on cultural resources, high-severity wildland fire, and fire suppression damage.

Potential Areas

Potential new areas for ACEC designation are described in Chapter 4 of this document.

2.4.2 National Scenic and Historic Trails

Existing Trail Segments

In the Redding FO, there is an approximately 2-mile-long section of the federally designated Nobles Trail, which is part of the California National Historic Trail (NHT); possibly less than a 1-mile-long segment of the Beckwourth Trail of the California NHT; and one potential NHT segment, the Yreka Trail segment of the California NHT, which is currently under a feasibility study. There are no designated NHTs or NHT segments under a feasibility study in the Arcata FO (**Map 2-32, Appendix A**).

The National Trails System Act of 1968, as amended in 2009, established a national system of recreational, scenic, and historic trails "to provide for the ever-increasing outdoor recreation needs of an expanding population and in order to promote the preservation of public access to, travel within, and enjoyment and appreciation of the open-air, outdoor areas and historic resources of the Nation" (16 USC 1241 Sec. 2(a)). The National Trails System Act allowed Congress to designate National Recreation Trails, National Scenic Trails, and NHTs, depending on the proposed trail's national significance. NHT are "extended trails which follow as closely as possible and practicable the original trails or routes of travel of national historic significance" (16 USC 1242 (a)(3)).

The designation of a National Trail requires an act of Congress; the designation is based off a federally mandated feasibility study. If the feasibility study recommends the trail as suitable, Congress may designate the trail. Land use planning guidance requires special management for congressional designations (Handbook 1601-1, Appendix C, page 27). However, as the feasibility study and subsequent recommendation can take up to 15 years, the BLM Manual 6280 (Management of National Scenic and Historic Trails and Trails under Study or Recommended as Suitable for Congressional Designation) requires the BLM to manage the values, characteristics, and settings of any trail under a feasibility study in accordance with the FLPMA (USDI BLM 2012c).

As the Yreka Trail has not yet been officially designated but it is under a feasibility study, the segments on BLM-administered land need to be managed in accordance with FLPMA. Segments of the Nobles Trail, Lassen Trail, and Beckwourth Trail sections of the California NHT have been designated as NHTs that are administered by the NPS. These trails all cross the Redding FO boundary. The BLM manages

segments of the Nobles Trail for historic values according to the *1998 Comprehensive Management and Use Plan for the California National Historic Trail* (USDI NPS 1998).

The California NHT, including the sections of the Nobles Trail and Yreka Trail located on BLM-administered lands, follows the routes westward-bound immigrants traveled from Missouri to the California gold fields or Oregon Territory and has a current authorized length of 5,665 miles (covering multiple alternative routes). The California NHT commemorates the massive human migration that occurred to the western United States in the latter half of the nineteenth century, in addition to the economic development of the state of California in terms of gold mining, logging, agriculture, and the rise of cities and towns. The NPS is the National Trail administrator, responsible for trail-wide coordination, guidance, technical assistance, and consultation with the on-the-ground National Trail managers. The BLM is the trail manager for four segments of the California NHT, totaling approximately 140 miles of trail on BLM-administered land in the state of California; however, the majority of these trail lands are located outside the Redding and Arcata FOs.

The Nobles Trail is a segment of the California NHT that starts in Black Rock Springs in western Nevada and ends in the town of Shasta, California, approximately 10 miles west of Redding. During the early days of the Gold Rush and California statehood, Shasta was the county seat and an important location for accessing gold fields further west. The Yreka Trail is an approximately 73-mile-long segment of the California NHT connecting Lower Klamath Lake to Yreka and its associated gold fields. The Beckwourth Trail crosses the Sierra Nevada into the Gold Rush town of Oroville, California.

These trails were in use primarily between the 1850s and 1870s. Wagon trains, military excursions, and cattle drivers were the primary users of the trail. The Nobles Trail, Beckwourth Trail, and Yreka Trail are historically important to the economic development of California during the Gold Rush era. Of the original trails, approximately 2 miles of the Nobles Trail, less than a mile of the Beckwourth Trail, and 1.77 miles of the Yreka Trail are located on BLM-administered land in the Redding FO. The BLM is responsible for the management of these portions of the trail in association with the NPS as the National Trail administrator for the entire California NHT. Archaeological investigations in 2000 and 2001 of the portion of the Yreka Trail located on BLM-administered land conducted by the Redding FO yielded evidence of the historic use, including horseshoes, wagon parts, cobblestone roadbed, wagon ruts, glass bottles, and an assortment of other artifacts (Barnes et al. 2004; Sullivan et al. 2005).

As the Yreka Trail is currently under a feasibility study, the BLM will continue to manage the portions of the trail on BLM-administered land for the trail's values, characteristics, and settings in accordance with the FLPMA. If the trail is designated by Congress, the NPS, as the National Trail administrator, may add the Yreka Trail to the existing California NHT comprehensive management plan as a revision or addendum. The BLM will work with the NPS to implement said plan when and if it is developed. The BLM will continue to work with the NPS to manage the Nobles Trail in accordance with the comprehensive management plan for the California NHT.

Potential Trails and Existing Scenic Byways

There is a section of a newly discovered emigrant trail in Tehama County near Battle Creek and Spring Branch Road; it is unofficially designated the Forgotten Emigrant Trail that, with further study, could be added to the National Trail system. The Trinity Scenic Byway crosses small sections of BLM-administered land between the town of Shasta and Blue Lake, California.

2.4.3 Wild and Scenic Rivers

The WSR Act (October 2, 1968, Public Law 90-542) established the National WSR System, which is intended to preserve free-flowing rivers with outstandingly remarkable values (ORV) in their natural condition for the benefit of present and future generations, balancing the nation’s water resource development policies with river conservation and recreation goals.

The WSR Act states, “In all planning for the use and development of water and related land resources, consideration shall be given by all federal agencies involved to potential national wild, scenic and recreational river areas...” (Section 5(d) (1)). Federal agencies consider potential rivers by evaluating a river’s eligibility, tentative classification, and suitability for designation under the WSR Act. This study process is part of the resource management planning effort for the Redding and Arcata FOs.

Potential classifications are to be determined based on the Eligibility and Suitability studies during this RMP process. Eligibility and tentative classification are determined by an inventory of existing conditions. Eligibility involves an evaluation of whether a river or river segment is free-flowing and possesses one or more ORVs. If found eligible, a river is analyzed as to its current level of development (e.g., water resources projects, shoreline development, and accessibility), and segmented accordingly. Each river segment is given one of three tentative classifications— “wild,” “scenic,” or “recreational”— based on the degree of development. The final procedural step, suitability, provides the basis for determining whether to recommend a river as part of the National WSR System.

Eligibility

Eligibility Determination Considerations

For a river to be eligible for inclusion in the national system of rivers, the WSR Act specifies that certain criteria (discussed below) must be met. These criteria apply not only to each potentially eligible river but also to their immediate environment, which is defined as a river corridor extending, on average, a quarter mile from both sides of the high-water mark.

- **Free-Flowing Character:** To be considered a free-flowing river, it must be a flowing body of water or estuary, or section, portion, or tributary thereof, including rivers, streams, creeks, runs, kills, rills, and small lakes (Section 16 (a)). A river can be any size or length and does not have to be floatable or boatable. For purposes of eligibility determination, a river’s flow is sufficient as long as it sustains or complements the ORV for which the river is found to be eligible. The body of water must be existing or flowing in a natural condition without major modification of the waterway, such as channelization, impoundment, diversion, straightening, rip-rapping, or other modification. However, some minor modifications can be allowed, such as low dams, or diversion works, and minor structures (Section 16 (b)). The river can lie between two impoundments or major dams.
- **Outstandingly Remarkable Values:** The WSR Act specifies that rivers “with their immediate environment, must possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar value” (Section 1 (b)).

The term “outstandingly remarkable” is not clearly defined in the WSR Act; consequently, the determination of what constitutes “outstandingly remarkable” is left to the professional judgment of the managing agencies and their staffs. For purposes of this study, outstandingly remarkable means something that is more than ordinary when considered within a regional

(planning area-wide) context. In order for the river to be considered eligible in this study, the ORV(s) must occur on BLM-administered lands within a quarter mile of the river.

The description of river study corridors may include segments that have no present BLM-administered lands adjoining them. Segments or corridors deemed ineligible because of lack of ORVs on BLM-administered lands may have ORVs on non-BLM-administered lands. In both of these instances, BLM defers to other appropriate federal and state agencies to (re)evaluate these segments and corridors. The BLM would participate in any joint studies with the responsible agency(s), as appropriate.

Tentative Classification

Each river segment determined to be eligible is given a tentative classification. The WSR Act provides for three possible classifications: “wild,” “scenic,” or “recreational.” These classifications, when applied to eligible rivers, are based on the type and degree of human development associated with the river and adjacent lands present at the time of inventory. The classifications also prescribe what management activities would be allowed to occur along a river, as long as no ORV is compromised. The tentative classifications are based on the following:

- **Wild:** Rivers classified as “wild,” which is the most restrictive WSR classification, are rivers that are free of impoundments and those that are generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted.
- **Scenic:** Rivers classified as “scenic” are rivers that are generally free of impoundments, with shorelines or watersheds that are still largely primitive and shorelines that are largely undeveloped, but accessible in places by roads.
- **Recreational:** Rivers classified as “recreational” classification, which is the least restrictive WSR classification, are rivers that are readily accessible by road or railroad, that may have some development along their shorelines, and that may have substantial evidence of human activity.

Suitability

Suitability Determination Considerations

The purpose of the suitability step of the study process is to determine whether the river would be an appropriate addition to the national system by considering a variety of environmental, social, and economic factors (listed below). Suitability considerations also include an evaluation of river manageability if it were designated by Congress. The following factors are considered when determining suitability:

- Characteristics that do or do not make the area a worthy addition to the national system
- Current uses and landownership concerns
- Resources and uses that would be enhanced or curtailed by designation
- Federal agency that will administer the area should it be added to the national system
- Costs of acquiring necessary lands and interests in lands and of administering the area
- State or political subdivision participation
- Local zoning and other land use controls
- Federal, public, state, tribal, local, or other interests in designation or nondesignation

- Consistency of designation with other agency plans, programs, or policies, and meeting regional objectives
- Contribution to the river system or basin integrity
- Ability to manage or protect the river area other than wild and scenic designation

Existing Eligible and Suitable Rivers

In 1990, as directed by the Oregon Omnibus Rivers Act, the Redding FO completed an eligibility and suitability study of the upper Klamath River from the John C. Boyle Dam in Oregon and the slackwater of Copco Lake in California. As a result of the 1990 studies, the Klamath River segment between the California-Oregon border and the slackwater of Copco Lake (5.3 miles) was determined to be suitable for inclusion in the national system. Recreation, wildlife, fish, historic, and scenic ORVs were identified for this segment; it was classified as scenic.

Both the Redding Proposed RMP/Final EIS (USDI BLM 1992b) and the Arcata Proposed RMP/Final EIS (USDI BLM 1995a) included eligibility inventories of waterways in the WSR study area. Combined, the Redding RMP and Arcata RMP identified 43 eligible rivers in the study area. In 2018, the Redding and Arcata FOs initiated a review of all rivers on BLM-administered land for their eligibility. This included a review of rivers previously studied for eligibility in the Redding and Arcata RMPs for changed circumstances and new information. **Table 2-70**, below, provides information on river segments within the Arcata and Redding FOs that have been determined eligible for inclusion in the National Wild and Scenic River System through that effort. No suitability determinations have been made for these rivers.

Existing Designated Wild and Scenic Rivers

In 1972, several rivers within the planning area were designated as wild and scenic by the State of California. The state-designated rivers within the planning area include the Klamath, Trinity, North Fork Trinity, Van Duzen, and all forks of the Eel River system. The WSR Act states “It is the policy of the State of California that certain rivers which possess extraordinary scenic, recreational, fishery, or wildlife values shall be preserved in their free-flowing state, together with their immediate environments, for the benefit and enjoyment of the people of the state.” The term “river” is defined as “the water, bed, and shoreline of rivers, streams, channels, lakes, bays, estuaries, marshes, wetlands, and lagoons, up to the first line of permanently established riparian vegetation.” The term immediate environment is defined as “the land immediately adjacent to the segments of the rivers designated...”

In 1980, the Governor of California sought federal protection for the aforementioned rivers under Section 2(a) (ii) of the national WSR Act by petitioning the Secretary of the Interior to add the rivers to the National WSR System. The Heritage Conservation and Recreation Service, Pacific Southwest Region, in 1980, evaluated this request and completed a report entitled *Evaluation Report on the Eligibility of Five California Rivers for Inclusion in the National Wild & Scenic Rivers System* (Heritage Conservation and Recreation Service 1980). The report did not change the river’s classification or establish corridor boundaries. The one ORV identified in this document is the anadromous fishery for winter-run steelhead (page II-28). The other value (not identified as outstandingly remarkable) is whitewater boating.

The aforementioned WSRs (both state and national designated) are administered by the State of California except for affected (adjacent) federal lands. An exception to this is the provisions outlined in

Table 2-70. Eligible WSR Segments

Field Office	Management Area	River Name	Length on BLM-Administered Land (Miles)	ORVs	Tentative Classification
Arcata	Butte Creek	Butte Creek 2	1.3	Ecological, Scenic, Fish	Wild
Arcata	Butte Creek	Butte Creek 2 tributary 1	1.3	Ecological, Scenic	Wild
Arcata	Butte Creek	Butte Creek 2 tributary 2	0.1	Ecological, Scenic	Wild
Arcata	Covelo Vicinity	Bell Springs Creek	0.8	Fish	Wild
Arcata	Covelo Vicinity	Board Tree Canyon	0.3	Ecological, Scenic	Wild
Arcata	Covelo Vicinity	Eden Creek	3.3	Fish, Cultural	Wild
Arcata	Covelo Vicinity	Eden Creek tributary 1	1.2	Cultural	Wild
Arcata	Covelo Vicinity	Eden Creek tributary 2	1.2	Cultural	Wild
Arcata	Covelo Vicinity	Elk Creek	3.3	Fish, Cultural	Scenic
Arcata	Covelo Vicinity	Hayshed Creek	1.7	Fish	Wild
Arcata	Covelo Vicinity	Hulls Creek Segment A	4.9	Fish	Recreational
Arcata	Covelo Vicinity	Hulls Creek Segment B	2.0	Fish	Scenic
Arcata	Covelo Vicinity	Thatcher Creek	1.6	Fish	Wild
Arcata	Covelo Vicinity	Tomki Creek	2.5	Fish	Scenic
Arcata	Covelo Vicinity	White Rock Creek	2.5	Ecological, Scenic	Scenic
Arcata	Covelo Vicinity	White Rock Creek tributary 1	0.3	Ecological, Scenic	Scenic
Arcata	Covelo Vicinity	White Rock Creek tributary 2	0.9	Ecological, Scenic	Wild
Arcata	Covelo Vicinity	White Rock Creek tributary 3	1.9	Ecological, Scenic	Scenic
Arcata	Covelo Vicinity	White Rock Creek tributary 4	0.4	Ecological, Scenic	Wild
Arcata	King Range*	Ancestor Creek	0.3	Fish	Scenic
Arcata	King Range*	Fourmile Creek	2.6	Fish	Scenic
Arcata	King Range*/ Scattered Tracts	Mattole River Segment A	0.9	Fish	Wild
Arcata	King Range*/ Scattered Tracts	Mattole River Segment B	3.1	Fish	Scenic
Arcata	King Range*	Sholes Creek	1.9	Fish	Scenic
Arcata	Lacks Creek/ Scattered Tracts	Lacks Creek	4.9	Fish, Ecological, Scenic	Wild
Arcata	Lacks Creek	Lacks Creek tributaries	3.6	Ecological, Scenic	Wild
Arcata	Red Mountain	Bell Springs Creek tributary	0.4	Ecological, Scenic	Wild
Arcata	Red Mountain	Butler Creek	0.8	Fish	Wild
Arcata	Red Mountain	Cedar Creek Segment A	3.9	Ecological, Scenic	Wild
Arcata	Red Mountain	Cedar Creek Segment B	1.5	Geology	Wild
Arcata	Red Mountain	Cedar Creek tributary 1	0.5	Ecological, Scenic, Fish, Geology	Wild

Field Office	Management Area	River Name	Length on BLM-Administered Land (Miles)	ORVs	Tentative Classification
Arcata	Red Mountain	Cedar Creek tributary 2	0.4	Geology	Wild
Arcata	Red Mountain	Chamise Creek	0.5	Ecological, Scenic	Wild
Arcata	Red Mountain	Chamise Creek tributaries	0.6	Ecological, Scenic	Wild
Arcata	Red Mountain	Charlton Creek	1.9	Ecological, Scenic	Wild
Arcata	Red Mountain	Charlton Creek tributaries	2.5	Ecological, Scenic	Wild
Arcata	Red Mountain	East Branch South Fork Eel	1.0	Fish	Scenic
Arcata	Red Mountain	Elder Creek	1.7	Ecological, Scenic, Research (Other)	Wild
Arcata	Red Mountain	Elder Creek tributaries	2.2	Ecological, Scenic, Research	Wild
Arcata	Red Mountain	Misery Creek	0.2	Scenic, Ecological, Research	Wild
Arcata	Red Mountain	North Fork Cedar Creek	1.0	Geologic	Wild
Arcata	Red Mountain	Paralyze Canyon and tributaries	3.6	Ecological, Scenic, Research (Other)	Wild
Arcata	Red Mountain	Rattlesnake Creek	0.6	Fish	Recreational
Arcata	Red Mountain	School Section Creek	0.8	Botany	Scenic
Arcata	Red Mountain	School Section Creek tributary 1	1.0	Botany	Scenic
Arcata	Red Mountain	School Section Creek tributary 2	0.7	Botany	Scenic
Arcata	Red Mountain	Tenmile Creek	0.4	Fish	Wild
Arcata	Red Mountain	Tom Long Creek	0.3	Ecological, Scenic	Wild
Arcata	Red Mountain	Tom Long Creek tributaries	0.8	Ecological, Scenic	Wild
Arcata	Scattered Tracts	Baker Creek	0.3	Fish	Scenic
Arcata	Scattered Tracts	Grindstone Creek	1.5	Fish	Wild
Arcata	Scattered Tracts	Mad River	0.9	Fish	Scenic
Redding	Ishi	Bear Creek Segment A	1.8	Recreation	Scenic
Redding	Ishi	Bear Creek Segment B	1.9	Recreation	Wild
Redding	Ishi	Big Chico Creek Segment A	0.9	Recreation	Scenic
Redding	Ishi	Big Chico Creek Segment B	0.6	Recreation	Recreational
Redding	Ishi	Butte Creek I Segment A	0.4	Fish	Scenic
Redding	Ishi	Butte Creek I Segment B	4.5	Scenic, Recreation, Fish, Geology, Historical, Cultural	Scenic
Redding	Ishi	Mill Creek	0.2	Scenic, Geologic, Cultural	Wild
Redding	Ishi	North Fork Battle Creek	0.9	Fish	Wild
Redding	Ishi	South Fork Battle Creek	4.5	Scenic, Recreation, Fish, Cultural	Recreational
Redding	Ishi	West Branch Butte Creek I	0.8	Scenic, Recreation, Fish, Geology, Historical	Scenic

Field Office	Management Area	River Name	Length on BLM-Administered Land (Miles)	ORVs	Tentative Classification
Redding	Ishi/ Sacramento River	Battle Creek Segment C	3.0	Scenic, Recreation, Fish, Cultural	Scenic
Redding	Ishi/ Sacramento River	Paynes Creek	6.4	Scenic, Fish, Cultural	Scenic
Redding	Klamath	Shasta River Segment A	0.3	Fish, Scenic, Cultural	Scenic
Redding	Klamath	Shasta River Segment B	3.1	Fish, Scenic, Cultural	Recreational
Redding	Sacramento River	Battle Creek Segment A	1.9	Scenic, Recreation, Fish, Cultural	Scenic
Redding	Sacramento River	Battle Creek Segment B	0.9	Scenic, Recreation, Fish, Cultural	Recreational
Redding	Sacramento River	Inks Creek	1.0	Fish, Cultural, Ecological	Wild
Redding	Sacramento River	Inks Creek tributary	0.4	Fish, Cultural, Ecological	Wild
Redding	Sacramento River	Massacre Creek	1.8	Cultural, Ecological	Scenic
Redding	Sacramento River	Sacramento River Bend tributary I Segment A	0.7	Cultural, Ecological	Wild
Redding	Sacramento River	Sacramento River Bend tributary I Segment B	0.3	Ecological, Cultural	Scenic
Redding	Sacramento River	Sacramento River Bend tributary 2	2.1	Cultural, Ecological	Scenic
Redding	Sacramento River	Sacramento River Segment A	3.8	Scenic, Fish, Cultural, Ecological, Recreation	Recreational
Redding	Sacramento River	Sacramento River Segment B	7.1	Scenic, Recreation, Cultural, Ecological, Fish	Scenic
Redding	Sacramento River	Sacramento River Segment C	2.0	Scenic, Recreation, Cultural, Ecological, Fish	Recreational
Redding	Sacramento River	Sacramento River Segment D	1.9	Scenic, Recreation, Cultural, Ecological, Fish	Scenic
Redding	Sacramento River	Sacramento River Segment E	0.9	Scenic, Recreation, Cultural, Ecological, Fish	Wild
Redding	Sacramento River	Sacramento River Segment F	0.1	Scenic, Recreation, Cultural, Ecological, Fish	Scenic
Redding	Sacramento River	Sacramento River Segment G	0.1	Scenic, Recreation, Cultural, Ecological, Fish	Wild
Redding	Sacramento River	Seven mile Creek	0.4	Cultural, Ecological	Scenic
Redding	Sacramento River	Turtle Creek	4.3	Scenic, Recreational, Geologic, Fish, Cultural, Historic	Scenic
Redding	Scott Valley	Cedar Gulch	0.2	Cultural	Scenic
Redding	Scott Valley	McAdam Creek	0.3	Cultural	Scenic
Redding	Scott Valley	McAdam Creek tributary	0.5	Cultural	Scenic

Field Office	Management Area	River Name	Length on BLM-Administered Land (Miles)	ORVs	Tentative Classification
Redding	Shasta	Clear Creek Segment A	4.5	Recreation, Fish, Cultural	Scenic
Redding	Shasta	Clear Creek Segment B	1.1	Recreation, Fish	Scenic
Redding	Shasta	Clear Creek Segment C	3.0	Scenic, Recreation, Fish, Geology	Scenic
Redding	Shasta	North Fork Cottonwood Creek	2.1	Scenic, Recreation	Scenic
Redding	Shasta	Scorpion Gulch	0.7	Cultural	Scenic
Redding	Trinity	Canyon Creek	3.0	Scenic, Fish	Recreational
Redding	Trinity	Grub Gulch	0.5	Cultural	Scenic
Redding	Trinity	Indian Creek Segment A	0.8	Fish	Wild
Redding	Trinity	Indian Creek Segment B	2.9	Fish, Cultural	Scenic
Redding	Trinity	Indian Creek Segment C	1.7	Fish	Scenic
Redding	Trinity	West Weaver Creek	1.4	Cultural	Scenic
Redding	Trinity	West Weaver Creek tributary	0.1	Cultural	Scenic
Redding	Yolla Bolly	Beegum Creek	4.7	Scenic, Recreation, Fish	Wild
Redding	Yolla Bolly	Middle Fork Cottonwood Creek Segment A	1.2	Scenic, Recreation	Recreational
Redding	Yolla Bolly	Middle Fork Cottonwood Creek Segment B	3.4	Scenic, Recreation	Wild
Redding	Yolla Bolly	South Fork Cottonwood Creek Segment A	2.0	Scenic, Recreation, Geologic, Fish	Wild
Redding	Yolla Bolly	South Fork Cottonwood Creek Segment B	1.1	Scenic, Recreation, Geologic, Fish	Scenic

Source: USDI BLM 2018

* Ancestor Creek, Fourmile Creek, Mattole River, Mattole River, and Sholes Creek, while located outside the King Range boundary, are adjacent to the King Range.

Section 7 of the WSR Act, which is discussed below. Where federal lands are adjacent to these rivers, management falls on the respective jurisdictional agency, such as the BLM, Forest Service, or NPS. Pursuant to Section 10(a) of the WSR Act and the BLM Manual 6400 entitled Wild and Scenic Rivers - Policy and Program Direction for Identification, Evaluation, Planning, and Management, the BLM will administer their affected lands within the river corridor in such manner as to protect and enhance the values that caused it to be included in the national system. These values include, but are not limited to, (1) the river's free-flowing condition, (2) water quality, and (3) identified ORV. Within the planning area, the most commonly identified ORV is anadromous fisheries. The BLM must ensure activities on its federal lands meet the protection and enhancement standard set forth in the WSR Act. This may include actions outside the established river corridor that have the potential to affect the ORV(s). Specific guidelines for a variety of resource management programs and activities are identified in BLM Manual 6400.

Within the planning area, the actual mileage of nationally designated rivers under BLM jurisdiction is very small, as described in **Table 2-71** below.

Table 2-71. Rivers Designated in the National Wild and Scenic Rivers System

Name	Designated Miles on BLM-Administered Lands	Total Designated Miles in Planning Area	Percent Miles of BLM Miles in Planning Area
Eel River	4.9	155.0	3.2
Klamath River	4.3	192.5	2.2
Middle Fork Eel River	12.3	49.2	25.0
North Fork Eel River	4.6	35.5	12.9
North Fork Trinity River	0.8	16.1	5.0
South Fork Eel River	6.9	102.5	6.7
Trinity River	19.3	92.7	20.8
Van Duzen River	0.2	49.7	0.5

Source: USDI BLM 2020a

The Redding FO manages 24.4 miles, or 8 percent, out of the 302 total WSR miles within its FO boundary. The Arcata FO manages 30 miles, or 8 percent, out of the 459 total miles of WSR within its FO boundary. The vast majority of projects and activities adjacent to or within the bed or banks of these rivers occur on private property (**Map 2-33, Appendix A**). In order to protect and enhance WSR values, the US Congress included Section 7 of the WSR Act, which is a key provision that directs federal agencies to protect the values of designated WSRs, even when projects and activities or not on federal lands. Section 7(a) prohibits federal agencies from assisting in the construction of any water resources project that would have a direct and adverse effect on the values for which it was designated. Section 7(a) states "...no department or agency of the United States shall assist by loan, grant, and license or otherwise in the construction of any water resources project that would have a direct and adverse effect on the values for which such river was established, as determined by the Secretary charged with its administration." An interagency agreement between the NPS, Forest Service, and BLM was developed and is currently being implemented to ensure that all water resource projects (whether on public or private lands) affecting WSRs designated under Section 2(a)(ii) are coordinated properly and evaluated under Section 7(a).

Trends

The BLM continues to protect the ORVs of eligible and suitable streams since the 1993 Redding RMP (USDI BLM 1993) and 1995 Arcata RMP Amendment (USDI BLM 1995a) were signed. Human development on adjacent private lands will continue. In addition, the proposed Klamath River dam removal project would potentially improve water quality and habitat for endangered salmon and steelhead (FERC 2020). Under the project, the Klamath River Renewal Corporation would take ownership of the dam, remove it, and restore the formerly inundated lands.

Forecast

- The public is likely to become more involved with water issues and water-dependent values in the future due to the recent drought and increased competing demand for water.
- The public is likely to become more interested in what mechanisms are available to maintain or develop water-dependent values.
- Ongoing drought has stressed water-dependent values and has changed assumptions about how waterways should be managed.
- Conditions along many of the streams in the Redding FO have not changed significantly since the last planning effort. In the Arcata FO, water quality and quantity during the late summer has declined due to competing uses and drought conditions.
- The BLM will provide updated WSR eligibility and suitability determinations as part of its RMP revision.

2.4.4 Wilderness and Wilderness Study Areas

Under FLPMA, wilderness preservation is part of the BLM's multiple-use mandate and is recognized as part of a spectrum of resource values to be considered during land use planning. Section 201 of FLPMA requires the BLM to continually maintain an inventory of all public lands and their resources and other values, which includes wilderness characteristics. The BLM manages wilderness in accordance with BLM Manual 6340, Management of Designated Wilderness Areas (USDI BLM 2012e).

The Wilderness Act of 1964 declares federal lands must have certain characteristics to be considered wilderness, including the following:

- They must be in a generally natural condition.
- They must have outstanding opportunities for solitude or a primitive and unconfined recreation.
- They must be at least 5,000 acres or large enough to preserve and use as wilderness.
- They may contain ecological, geological, or other features of scientific, scenic, or historical value.
- They must be managed to preserve their wilderness character.

Under the wilderness review program, existing designated WSAs are managed in accordance with BLM Manual 6330, Management of Wilderness Study Areas (USDI BLM 2012d). The status of these WSAs within the planning area will not change as a result of the RMP revision.

Indicators

The BLM cannot take any action that would impair the wilderness character of designated wilderness or impair the opportunity for designation in WSAs.

Current Conditions

There are three existing WSAs and five designated wilderness areas within the planning area, as listed in **Table 2-72** and **Table 2-73**, respectively.

Table 2-72. WSAs within the NCIP Planning Area

Wilderness Study Area, (BLM Office)	Acres of WSAs in Planning Area	Acres of WSAs (BLM-Administered Surface Land)	Acres Recommended for Wilderness
Yolla Bolly Contiguous (Redding FO)	600	600	600
Eden Valley (Arcata FO)	6,500	6,100	6,100
Big Butte (Arcata FO)	1,600	1,600	1,600

Source: Forest Service GIS 2020

Table 2-73. Designated Wilderness within the NCIP Planning Area

Wilderness Area, Year Designated (BLM Office)	Acres of Wilderness Area in Planning Area	Acres of Wilderness Area (BLM-Administered Surface Land)
Elkhorn Ridge, 2011 (Arcata FO)	11,100	11,100
Yuki, 2006 (Arcata FO)	53,800	17,100
South Fork Eel River, 2006 (Arcata FO)	13,000	13,000
• Cahto Peak Unit	790	0.55
• Red Mountain Unit	320	1.3
Yolla Bolly – Middle Eel, 1964 (Arcata FO)	122,800	8,600
Ishi, 1984 (Redding FO)	41,900	200

Source: Forest Service GIS 2020

Trends

The WSAs have been managed in accordance with BLM Manual 6330 (USDI BLM 2012d). The WSAs and wilderness areas are trending toward improvement in their natural condition. The imprint of human activities is receding from these areas, with the exception of fire suppression impacts. These impacts include augmenting fire's ecological disturbance cycle and fire suppression damage, such as dozer lines, heavy fire retardant use, and large-diameter tree felling.

Forecast

The Arcata and Redding FOs will continue to manage all WSAs and wilderness in accordance with BLM Manuals 6330 and 6340. This management will continue until Congress either designates the WSAs as wilderness or releases the lands from further wilderness consideration. Wilderness management plans will be developed in accordance with BLM Manual 8561, Wilderness Management Plans (USDI BLM 1984). The RMP will guide management activities in wilderness areas until the preparation of wilderness management plans.

2.5 SOCIAL AND ECONOMIC CONDITIONS

2.5.1 Social, Economic, and Environmental Justice

The planning assessment describes the existing resource outputs and opportunities that result from the BLM's current management direction in recreation, minerals, range, fish and wildlife, timber, and other programs and activities. Existing management has direct and indirect financial effects on planning area

counties through these outputs, BLM employment and expenditures, and federal payments to counties. Many of the resources managed by the BLM are not bought or sold in markets, but also have value to planning area residents and broader populations.

The planning area for the revised RMP encompasses almost 15 million acres in eight counties in northwestern California. The decision area totals 382,200 surface acres and 689,100 federal mineral estate acres and includes all BLM-administered lands located within the Arcata and Redding FOs, excluding those lands managed under separate RMPs. The lands are located in Del Norte, Humboldt, Mendocino, Trinity, Siskiyou, Shasta, Tehama, and Butte Counties. BLM-administered lands are generally surrounded by private lands managed for industrial timber production, ranching, agriculture, and rural home development, although some lands are adjacent to National Forests.

This section begins by discussing planning area population, followed by land uses and economic conditions, including BLM contributions to the local and regional economy. It then addresses environmental justice populations and concerns. Additional information relevant to social and economic conditions is found throughout the Resource Uses section of this AMS.

Economic data presented in this discussion include annual averages for the most recent reporting periods. As such, they do not reflect the recent widespread economic effects of the recession brought about by the 2020 global COVID-19 pandemic or the record-breaking wildfires that resulted in severe and widespread effects on population and local economies across California in 2020. These events affected local and regional economies in the planning area through severe short-term reductions in employment and industrial output, the effects of which are still ongoing and not evenly distributed across industries. While it remains to be seen to what level economic effects will be fully incurred from the pandemic, service-oriented activity, such as retail and tourism, as well as energy development and ancillary support sectors have been most affected. Similarly, wildfires have resulted in housing shortages that have exacerbated pre-existing supply deficits and created large population displacement, with effects on local economies. Low-income and minority residents are disproportionately affected by these events (Davies et al. 2018).

Other notable indirect effects from wildfire include the illegal dumping of fire-related debris on BLM-administered lands. Reports of such activities have occurred in Butte County (Paradise Parks and Recreation District 2021). Subsequent and ongoing wildfire recovery efforts have also created benefits in affected communities from fuels reduction.

Given the disproportionate effects on these communities, enhanced efforts above and beyond normal public engagement may be required to reach these communities in order to involve them in future project scoping processes. These communities could include Southeast Asian, Hispanic, and homeless populations.

As part of the previous planning process, the BLM held a series of pre-scoping public envisioning meetings and public scoping meetings in Arcata, Redding, and Weaverville in 2016 and 2017. From these outreach efforts, the BLM received input from the public in relation to their values regarding public lands in the planning area as well as public scoping comments. Members of the public noted ways in which environmental justice populations should be considered, methods for assisting disadvantage populations, and highlighted the social and economic values of recreation and travel management decisions in relation to the planning area and specific counties (USDI BLM 2017). Through the envisioning process areas near

Shasta Lake, Trinity Lake and the town of Redding were specifically highlighted by the public as areas that provide various benefits to local economies through tourism and recreation (USDI BLM 2016i). More information on how input from prior scoping efforts will be incorporated is included in the Socioeconomic Report.

Population Characteristics

The population of the planning area is just around 776,549 people. The rural nature of the area is reflected by the counties' comprising 16.5 percent of California's acreage but only 1.98 percent of the population. The rural nature also shows up in population density, which ranges from about 4 people per square mile in Trinity up to 134 people per square mile in Butte, compared to the California average of 239 (US Census Bureau 2018; Headwaters Economic Profile System 2019).

As would be expected, the counties with the highest population density also contain the planning area's largest cities. The largest county population is Butte County, with over 227,075 people in 2018 (the largest city, Chico, contains just over a third of the county's population), followed by Shasta County, with about 179,085 (Redding contains just over half of the county's population). The smallest counties are Trinity County, with just 12,862 people, and Del Norte County, with 27,424. A large proportion of the population in each county lives in unincorporated places. Half of the counties experienced population growth from 2010 to 2018, with growth ranging from 1.2 percent in Shasta County to 3.9 percent in Butte County. Several counties experienced a population decrease, which ranged from 0.1 percent in Mendocino to 6.1 percent in Trinity County. Trinity experienced the most notable population decrease of all counties and possesses the smallest population within the planning area. All counties experienced population growth rates lower than the state average of 6.9 percent. While all of the counties had population increases from 2000 to 2010, there was a less rapid population increase in these areas from 2013 to 2018.

California population projections estimate that by 2060 the state's population will increase by 11.2 percent, an increase greater than that for any of the planning area counties, excluding Butte County, where the population is expected to increase by 25.1 percent from 2020 to 2060 (California Department of Finance 2021). Population is expected to increase in Tehama and Shasta Counties by 5.3 percent and 4.2 percent, respectively. In contrast, population in the other four counties is expected to decrease, with the largest decrease expected in Siskiyou County (California Department of Finance 2021). The projections show a decrease in white, not Hispanic/Latino populations in the state and all planning area counties, excluding Butte County, and increases in the minority populations, especially Asian and Hispanic/Latino populations. In 2060, the state's population is projected to be approximately 75 percent minority, while the planning area counties' minority populations range from approximately 30 percent of the population in Trinity County to 43 percent in Mendocino County (California Department of Finance 2021).

All counties in the planning area have similar percentages of the population that are under age 18, ranging from 17.3 percent in Trinity County to the low 20 percent range in the remaining counties, with the highest being Tehama County with 23.8 percent. California as a whole has 22.5 percent of the population under the age of 18; this suggests that populations in the planning area are slightly older than the California average. The counties show a little more variation in the percent of the population aged 65 and older, with about 18.5 percent in Del Norte and Humboldt Counties compared to over 26 percent in Trinity and Siskiyou Counties. The level of education also varies. The percent of people age

25 and over who hold a bachelor's degree or higher ranges from about 14.8 percent in Del Norte and Tehama Counties up to 30.4 percent in Humboldt (where HSU is located), and 27.2 percent in Butte County (where California State University at Chico is located). The rate is about 23 percent in Siskiyou County (where College of the Siskiyous is located).

Homeless populations exist throughout all of the planning area counties. These populations are sometimes assembled in “camps” in urban centers and otherwise dispersed in and next to communities and travel routes, and use public lands near communities and routes of travel. Other homeless populations are in part the result of individuals being displaced and unhoused as a result of wildfires. The US Department and Housing, Continuums of Care program collects data on homeless populations through periodic point-in-time counts. According to the US Department of Housing and Urban Development 2019 point-in-time data, the planning area counties with the highest number of homeless persons were Butte and Humboldt Counties. Both counties exceeded 1,500 individuals (HUD 2019). In contrast, Tehama County and Trinity County showed the lowest total homeless persons, with totals below 300. Planning area counties varied in their homeless population compositions with different proportions of those that were unsheltered or sheltered in either emergency housing or transitional housing (HUD 2019).

As shown in **Table 2-74, Population by Race/Ethnicity 2018**, the counties vary widely with regard to percentage of minority populations. The percent minority population of the planning area (26.4 percent) is substantially lower than the statewide proportion of 62.5 percent.³ Minority populations range from 17.5 percent in Trinity County to 37.4 percent in Del Norte County. The highest proportion of minority individuals is Hispanic/Latino, although several percent in each county reported being two or more races and not of Hispanic/Latino ethnicity. The planning area population is 2.5 percent Native American, much higher than the statewide percentage of 0.4 percent. Del Norte has the highest percentage of Native Americans (6.7 percent), followed by Trinity County (4.5 percent). These counties also contain the highest percentage of tribal lands: 5.7 percent of the acreage in Humboldt County; nearly 3 percent of Mendocino County; and just over 2.5 percent of Del Norte County. It should be noted that local-scale variability in ethnicity and poverty would not be accounted for in the analysis at the county level. For instance, minority communities that reside in specific towns or even in specific neighborhoods would not be distinguishable at this level of analysis. More detailed information about these communities of interest is included in the socioeconomic report (USD I BLM 2021b [in progress]).

Land Use and Development

About 42 percent of the lands in the planning area are federal, although this varies widely by county. The proportion of federal lands within counties ranges from 13.3 percent in Mendocino County to 75.8 percent in Trinity County. Most federal lands in the planning areas are managed by the Forest Service; the percentage of lands managed by the BLM ranges from zero percent in Del Norte County to nearly 6

³ The US Census Bureau measures race separately from ethnicity. Race is defined most basically as American Indian or Alaska Native, Asian, Native Hawaiian or other Pacific Islander, Black or African American, White, some other race (other than White), or a combination of two or more races. Ethnicity is defined as either being Hispanic/Latino or not, regardless of race. On the census, people self-identify both their race and ethnicity. A minority individual is one whose race is other than White, or who is Hispanic/Latino, or both. In other words, everyone other than a white, non-Hispanic/Latino is a minority.

Table 2-74. Population by Race/Ethnicity 2018

Population	Butte County	Del Norte County	Humboldt County	Mendocino County	Shasta County	Siskiyou County	Tehama County	Trinity County	Planning Area	California
Total Population	227,075	27,424	135,768	87,422	179,085	43,540	63,373	12,862	776,549	39,148,760
Hispanic or Latino ethnicity of any race	36,358 16.0%	5,340 19.5%	15,360 11.3%	21,679 24.8%	17,605 9.8%	5,336 12.3%	15,623 24.7%	930 7.2%	118,231 15.2%	15,221,577 38.8%
White alone	164,390 72.4%	17,172 62.6%	101,305 74.6%	57,314 65.6%	143,575 80.2%	33,390 76.7%	43,539 68.7%	10,607 82.5%	571,292 73.6%	14,695,836 37.5%
Black or African American alone	3,303 1.5%	758 2.8%	1,342 1.0%	511 0.6%	2,140 1.2%	619 1.4%	420 0.7%	87 0.7%	9,180 1.2%	2,164,519 5.5%
American Indian or Alaskan Native alone	1,738 0.8%	1,841 6.7%	5,919 4.4%	2,839 3.2%	4,014 2.2%	1,283 2.9%	1,013 1.6%	574 4.5%	19,221 2.5%	138,427 0.4%
Asian alone	9,900 4.4%	937 3.4%	4,049 3.0%	1,667 1.9%	5,326 3.0%	671 1.5%	964 1.5%	179 1.4%	23,693 3.1%	5,525,439 14.1%
Native Hawaiian and Other Pacific Islander alone	341 0.2%	17 0.1%	369 0.3%	170 0.2%	182 0.1%	120 0.3%	17 0.0%	158 1.2%	1,374 0.2%	138,911 0.4%
Some other race	406 0.2%	128 0.5%	258 0.2%	180 0.2%	151 0.1%	33 0.1%	24 0.0%	27 0.2%	1,207 0.2%	97,763 0.2%
Two or more races	10,639 4.7%	1,231 4.5%	7,166 5.3%	3,062 3.5%	6,092 3.4%	2,088 4.8%	1,773 2.8%	300 2.3%	32,351 4.1%	1,166,288 3.0%
Total Minority Population ¹	62,685 27.6%	10,252 37.4%	34,463 25.4%	30,108 34.4%	35,510 19.8%	10,150 23.3%	19,834 31.3%	2,255 17.5%	205,257 26.4%	24,452,924 62.5%

Source: Headwaters Economic Profile System (EPS) 2019.

percent in Shasta County, with an average of 3.4 percent across all eight counties. This is much lower than the 14.9 percent of California acreage that is public land managed by the BLM. The largest county in acreage by far, Siskiyou County, has one of the lowest percentages of BLM-administered lands, just 2 percent (Headwaters Economic Profile System 2019).

Percent change in residential development reflects the pace at which acreage in open space, agricultural lands, or other land uses are being converted to residential development. All the counties showed increases in residential development between 2000 and 2010, with rates from 1.1 percent in Humboldt County to nearly 50 percent in Trinity County. This trend can have different explanations by county; for example, counties with slow rates of conversion may have had higher rates in the past decade or two, leaving less developable acreage.

Counties having high rates of population increase would be expected to have high rates of increase in residential development, as is the case with counties including Butte and Humboldt. Siskiyou County, however, experienced a 20.3 percent increase in residential development between 2000 and 2010, with just a 0.5 percent population increase over roughly the same period. Another housing indicator is the percent of houses that are used only seasonally, recreationally, or occasionally. All of the planning area counties have a higher percent of houses used only seasonally or occasionally compared to the 2.5 percent statewide proportion. Trinity County has the highest percentage of “second” homes at 24 percent, followed by Siskiyou (10 percent) and Mendocino (8 percent) Counties.

A related characteristic is the percent of homes directly exposed to wildfire risk. This has implications for public lands management, as more houses are built in areas near public lands where wildfire likelihood (the probability of wildfire starting and spreading) and wildfire intensity (the energy released by a wildfire) are relatively high. In terms of the percentage of homes classified as having direct wildfire exposure risk, the counties varied from 39 percent in Butte County to 79 percent in Trinity County. All counties had higher direct wildfire exposure risk than the national average of 33 percent.

Economic Conditions

The population in the planning area counties has a lower per capita income (the aggregate income in the county divided by the total population) than the statewide average of \$35,021 except for Mendocino County, which has a per capita income of \$37,863 (see **Table 2-75**, 2019 Poverty and Median Household Income Estimates by County). The other counties have a per capita income in the mid-\$20,000s, with Del Norte being the lowest at \$22,832.

In 2019, the percent of the population living below the poverty level in California was 11.8 percent, which is a lower rate than in any of the planning area counties. Humboldt and Del Norte Counties had the highest poverty rates (19.1 percent and 17.9 percent, respectively).

As shown in **Table 2-76**, Planning Area Income Sources and Unemployment, all counties but three (Humboldt, Mendocino, and Shasta Counties) had higher percentages of households with cash public assistance income than the 3.4 percent statewide. The highest percentage of households receiving cash public assistance is in Trinity County (6.1 percent). The planning area has a notably higher percentage of households with social security income, with county averages ranging from 8.1 percent in Mendocino County to 14.2 percent in Del Norte County, compared to 6.2 percent statewide.

Table 2-75. 2019 Poverty and Median Household Income Estimates by County

Economic Information	Poverty Percent, All Ages	Poverty Percent, Age 0–17	Poverty Percent, Age 5–17 in Families	Median Household Income
Butte	16.1	16.1	15.1	58,394
Del Norte	17.9	25.8	23.8	48,979
Humboldt	19.1	20.5	20.8	51,134
Mendocino	14.0	20.4	17.9	52,309
Shasta	13.3	16.5	15.3	61,464
Siskiyou	17.4	25.5	25.4	45,954
Tehama	16.3	23.7	22.9	51,672
Trinity	16.5	25.3	25.6	43,881
Planning Area	16.3	21.7	20.9	51,723
California	11.8	15.6	15.2	80,423

Source: US Census Bureau 2020

Table 2-76. Planning Area Income Sources and Unemployment

Geographic Area	Per capita income 2018 (2018\$) ⁽²⁾	Percent households with Cash public assistance income ⁽¹⁾	Percent of households with SNAP (previously Food Stamps)	Percent of households with social security income ⁽¹⁾	Percent of total personal income due to non-labor ⁽¹⁾	Unemployment rate 2019 ⁽¹⁾
Butte	27,537	4.3	11.9	8.8	46.9	5.1
Del Norte	22,832	5.4	17.3	14.2	53.2	5.7
Humboldt	26,747	3.4	12.3	8.6	45.4	3.6
Mendocino	37,863	3.4	11.5	8.1	49.1	4.0
Shasta	30,778	3.4	10.9	8.5	49.0	4.7
Siskiyou	28,130	4.8	12.2	9.6	58.3	6.5
Tehama	24,880	4.4	14.0	10.8	49.4	5.5
Trinity	25,964	6.1	11.1	10.1	62.2	5.5
Planning Area	N/A	3.9	12.0	9.0	48.8	4.7
California	35,021	3.4	9.1	6.2	36.2	4.0

Source:

(1) Headwaters Economic Profile System (EPS) 2019

(2) US Census Bureau 2018

In recent years, the proportion of income that comes from non-labor⁴ has risen nationally. The planning area counties differ from the state on this variable; 48.8 percent of the planning area population's income comes from non-labor sources, compared to 36.2 percent statewide. The population of Trinity County has the highest percent of income from non-labor sources (62.2 percent), which is logical given that Trinity County also has the highest percent of households reporting retirement or social security income and the highest percentage of people aged 65 and older of any of the eight counties in the

⁴ Non-labor income includes dividends, interest, and rent (money earned from investments) and transfer payments (includes government retirement and disability insurance benefits, medical payments such as mainly Medicare and Medicaid, income maintenance benefits, unemployment insurance benefits, etc.).

planning area. Trinity County also has the highest percent increase in recent residential development and the highest percentage of houses that are vacant except for seasonal, recreational, or occasional use (Headwaters Economic Profile System 2019).

Unemployment rates in the planning area counties are equal to or higher than the statewide rate of 4.0 percent with the exception of Humboldt County, which has a rate of 3.6 percent. Unemployment is highest in Siskiyou County, which has a rate of 6.5 percent. Similar to lower per capita incomes and greater reliance on public assistance, unemployment rates are often higher in rural areas. Additionally, qualitative data gathered as part of the NCIP pre-notice of intent planning effort indicated changes in unemployment as a result of the COVID-19 pandemic. These data will be addressed and documented in the NCIP Final Socioeconomic Report.

For the labor-related portion of personal income, it is useful to know the jobs in which that income was earned. Our data source (Headwaters Economic Profile System 2019) categorizes industries and associated jobs into three groups: non-services related, including employment in industries such as farming, forestry, fishing, and agricultural services, mining, construction, and manufacturing; services related, including employment in industries such as retail trade, finance, insurance and real estate, and services; and government including federal, military, state and local government employment.

Table 2-77, 2018 Employment by Industry, shows that the largest services sector source of employment in most counties is travel and tourism. This sector, as presented here, is an aggregation of industries: retail trade; passenger transportation; arts, entertainment, and recreation; and accommodation and food. Although the proportion of these jobs attributable to expenditures by business or pleasure travelers is not known, this category includes occupations that provide goods and services to the local population as well as visitors to the local economy, hence the term “travel and tourism-related.” For all planning area counties, the percentage of jobs in travel and tourism was greater than that of California (20.7 percent compared to 16.9 percent). The percent of private employment jobs that are travel and tourism related ranges from 18.2 percent in Shasta County to 27.0 percent in Del Norte County.

Table 2-77. 2018 Employment by Industry

Geographic Area	Jobs in Tourism and Travel ¹	Jobs health care and social assistance ²	Jobs in government sector ²	Jobs that are in Farming ²	Jobs in forestry; fishing, and AG services ²	Jobs in mining (including fossil fuels) ²	Jobs in construction ²	Jobs in manufacturing ²	Total Jobs ²
Butte County	12,231 19.1%	21,487 18.4%	17,261 14.8%	3,487 3.0%	1,583 1.4%	191 0.2%	6,784 5.8%	5,203 4.5%	12,231 19.1%
Del Norte County	1,098 27.0%	1,565 14.1%	3,760 34.0%	304 2.7%	408 3.7%	44 0.4%	381 3.4%	210 1.9%	1,098 27.0%
Humboldt County	8,417 23.7%	10,520 14.2%	14,452 19.5%	1,358 1.8%	1,365 1.8%	116 0.2%	4,634 6.2%	3,017 4.1%	8,417 23.7%
Mendocino County	5,640 24.0%	6,659 13.3%	7,051 14.1%	1,650 3.3%	1,490 3.0%	108 0.2%	3,184 6.3%	3,032 6.0%	5,640 24.0%
Shasta County	9,200 18.2%	15,344 16.5%	13,418 14.4%	1,776 1.9%	1,037 1.1%	281 0.3%	5,169 5.6%	3,270 3.5%	9,200 18.2%
Siskiyou County	2,161 25.3%	2,538 11.8%	4,355 20.3%	1,222 5.7%	N/A N/A	N/A N/A	1,130 5.3%	1,112 5.2%	2,161 25.3%

Geographic Area	Jobs in Tourism and Travel ¹	Jobs health care and social assistance ²	Jobs in government sector ²	Jobs that are in Farming ²	Jobs in forestry; fishing, and AG services ²	Jobs in mining (including fossil fuels) ²	Jobs in construction ²	Jobs in manufacturing ²	Total Jobs ²
Tehama County	2,502	3,236	4,208	2,219	865	31	1,290	2,083	2,502
	20.0%	12.3%	16.0%	8.4%	3.3%	0.1%	4.9%	7.9%	20.0%
Trinity County	340	N/A	1,075	207	N/A	N/A	289	266	340
	22.1%	N/A	23.0%	4.4%	N/A	N/A	6.2%	5.7%	22.1%
Planning Area	41,589	61,349	65,580	12,223	6,748	771	22,861	18,193	41,589
	20.7%	15.4%	16.5%	3.1%	1.7%	0.2%	5.7%	4.6%	20.7%
California	2,573,361	2,720,560	2,804,262	236,500	258,427	48,883	1,205,915	1,434,262	2,573,361
	16.9%	11.2%	11.6%	1.0%	1.1%	0.2%	5.0%	5.9%	16.9%

¹ Source: US Department of Labor, Bureau of Labor Statistics 2020

² Source: "Socio Economic Trends," US Department of Commerce, Bureau of Economic Analysis 2019

As would be expected in rural counties, the percentage of jobs in the government sector is higher in all counties than the statewide percentage of 11.6. Jobs in the government made up 16.5 percent of total jobs in the planning area, exceeding the statewide average by almost 5 percent. Del Norte and Trinity Counties, the two counties with the smallest population size, have the highest percentages of government employment with 34 percent in Del Norte County and 23 percent in Trinity County.

Percent employment in non-service sectors indicates that the percent of jobs in farming is higher in the planning area (3.1 percent) than statewide (1.0 percent) ranging from over 8 percent in Tehama County to almost 2 percent in Humboldt County. For the planning area the percent of jobs in forestry; fishing and agricultural services (1.7 percent) and construction (5.7 percent) was slightly higher than the statewide percentage (1.1 percent and 5.0 percent, respectively). The percentage of mining jobs (including fossil fuels) in the planning area is low, and equivalent to the statewide percentage (0.2 percent). The percentage of jobs in manufacturing (4.6 percent) is slightly lower than the statewide percentage of 5.9 percent. There is less variation in construction, which ranges from 3.4 percent of the jobs in Del Norte to over 5 percent in almost all other counties, than in manufacturing, where the range is from 1.9 percent in Del Norte County to over 7.9 percent in Tehama County.

Another economic driver of the local economy is cannabis production, especially in the so-called Emerald Triangle of Mendocino, Humboldt, and Trinity Counties, which has been referred to the largest cannabis-producing region in the United States. People have been growing marijuana (i.e., *Cannabis* spp.) since at least the 1960s, but cultivation ramped up with the 1996 passage of California Proposition 215, which legalized use of cannabis for medicinal purposes in California. Many articles suggest that growing cannabis in the Emerald Triangle is considered a way of life and that many households and types of businesses are tied directly or indirectly to the marijuana business. California has an estimated 50,000 marijuana farms, "medical or otherwise" (Hecht 2015). One analysis estimated that at least \$415 million in marijuana money circulates through Humboldt County annually, roughly 26 percent of the county's economy (Greenon 2018). It is not clear how many of these jobs shows up in regularly collected data.

In addition to affecting the local and regional economy, cultivation also has the potential for environmental damage to public lands and waters, due to large-scale operations and cumulative impacts. For example, law enforcement operations targeting large marijuana farms in the Emerald Triangle have uncovered many types of actions leading to environmental damage, including tapping springs, damming

and rerouting creeks, allowing fertilizers and herbicides to wash into streams, and dumping soil (Anderson 2015a). The increase of marijuana production in this area has polluted water with fertilizers, fuels, and pesticides, and triggered erosion that buries the habitats where the native fish spawn (Levy 2020). Garbage and trash, including hazardous substances, is an associated problem (Turner 2014).

Several planning area counties have collaborated with adjacent counties on the possible impacts of potential state and federal marijuana policies on local economies, the environment and public safety. In September 2015, Mendocino, Del Norte, Lake, Humboldt, Sonoma, and Trinity Counties received the California Counties Collaboration Award from the California State Association of Counties for these efforts (Ukiah Daily Journal 2015).

BLM Contributions to the Local and Regional Economy

The other resource sections of this document describe the resource outputs from BLM-administered lands and opportunities that contribute to the local and regional economies. The BLM also makes a financial contribution through the existence of its FOs and associated employment and expenditures. These resource outputs and agency expenditures have direct and indirect effects on employment and income in the planning area counties. The BLM's management of resources also contributes to non-market resource values such as fish, wildlife, habitat, water quality, scenery, T&E species, and carbon sequestration. Although these resources are not bought and sold through market transactions, they nonetheless have economic value to society.

As part of the planning process, a range of alternatives to meet the project purpose and need will be developed and considered. If one or more of these alternatives has the potential to significantly affect resource outputs, BLM employment and expenditures, or non-market resource values, then it will be more important to quantify the existing types and levels of economic contributions and the resulting levels of change.

Given the low levels of BLM acres across the counties, it is not surprising that BLM payments to counties are less than 1 percent of the total federal payments in each county; Forest Service payments comprise the vast majority of payments in every county except Mendocino. The other main source of federal payment is Payments in Lieu of Taxes, comprising between 17.6 percent (Trinity County) and 73.3 percent (Mendocino County) of the total annual payments to each county.

Environmental Justice

On February 11, 1994, President Clinton signed Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations. This executive order requires that “. . . each Federal agency shall make achieving Environmental Justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations.”

The BLM considers environmental justice to be the fair treatment and meaningful involvement of all people regardless of race, ethnicity, color, national origin, or income with respect to the development, implementation, and enforcement of federal environmental laws, regulations, and policies, including climate policy:

- Fair treatment means that no specific group of people, including racial, ethnic, low-income, and tribal communities, should bear a disproportionate share of any negative environmental consequences resulting from BLM programs or policies.
- Meaningful involvement means that the BLM facilitates participation of potentially affected environmental justice populations in decision-making and implementation processes that could affect them.

BLM guidance tiers to the USDI's Environmental Justice Strategic Plan 2012–2017, which contains a vision statement: “To provide outstanding management of the natural and cultural resources entrusted to us in a manner that is sustainable, equitable, accessible, and inclusive of all populations.”

The current BLM Land Use Planning Handbook (USDI BLM H-1601-1—Land Use Planning Handbook, 2010, Appendix. D, Section IV) provides the following general guidance for consideration of environmental justice issues and concerns during BLM planning activities:

- 1) The BLM will determine if its proposed actions will adversely and disproportionately impact minority populations, low-income communities, and tribes (Executive Order 12898) and consider aggregate, cumulative, and synergistic effects, including results of actions taken by other parties. While environmental justice analysis is specifically concerned with disproportionate effects on the three populations, the social and economic analysis produced in accord with NEPA considers all potential social and economic effects, positive and negative, on any distinct group.
- 2) The BLM will promote and provide opportunities for full involvement of minority populations, low-income communities, and tribes in BLM decisions that affect their lives, livelihoods, and health.
- 3) The BLM will incorporate environmental justice considerations in land use planning alternatives to adequately respond to environmental justice issues and problems facing minority populations, low-income communities, and tribes living near public lands, working with, and/or using public land resources.
- 4) Where disproportionately high adverse impacts are anticipated, the BLM will work with local community groups/associations, governments, and tribal leaders to determine if land disposition and/or acquisition policies affect real estate values and real income of minority and low-income communities, and tribes.
- 5) The BLM State and FOs will continue to make environmental justice a mandatory critical element for consideration in all land use planning and NEPA documents.

Minority Populations

A minority population is present when 50 percent or more of the people in a defined geographic area are minorities, or when the minority population of a defined geographic area is “meaningfully greater” than that of the surrounding geographic area.

The previous sections contained a county-level description of the minority and tribal populations in the planning area. None of the counties contained minority populations that were 50 percent of the total population. The only environmental justice population that was meaningfully greater than that of the surrounding area (defined as the State of California) was Native Americans. Del Norte (6.7 percent)

Trinity (4.5 percent) and Humboldt (4.4 percent) Counties have the largest percentages of Native Americans, but all planning area counties all had at least twice as high a percentage of Native Americans compared to the State of California (0.4 percent). Therefore, all counties are considered environmental justice populations due to Native American population status.

Government-to-government consultation that takes place as part of the RMP process should incorporate environmental justice considerations and identify whether recognized Native American communities will be disproportionately and negatively affected by actions contained in the alternatives. It should be noted, however, that government-to-government consultation with federally recognized tribes might not fully address the concerns of unrecognized Native American groups and individuals residing in the planning area.

Low-income Populations

A low-income population is a readily identifiable group of people living in geographic proximity that are at or below the poverty thresholds or guidelines. To identify low-income populations, poverty threshold used is typically compared to that of a broader geographic reference area, in this case, the State of California.

As described in previous sections, the poverty levels in all eight counties, ranging from 13.3 percent in Shasta County to 19.1 percent in Humboldt County, are higher than the statewide level (11.8 percent). Therefore, each county is considered a low-income population for the purposes of environmental justice. The public involvement process should seek ways of reaching out to low-income populations, especially in areas where actions contained in the alternatives could disproportionately and negatively affect low-income groups.

Low-income populations are not always defined geographically (areas with concentrations of low-income people); they can be readily identifiable groups of people who are low-income and have a common stake or interest in BLM-administered lands and opportunities. Such groups have included low-income ranchers, recreational users engaging in particular activities, and people who harvest SFPs or other materials from BLM-administered lands. As public involvement and resource analysis continue, IDT members and FO resource staff can help to identify any such groups in the planning area that may merit special attention to assess whether they will be disproportionately and negatively affected by actions contained in the alternatives.

2.6 SUPPORT

2.6.1 Mitigation

Consistent with the FLPMA, NEPA, and other applicable federal laws, regulations, and policies, the BLM will mitigate for adverse project impacts on resource values, services, and functions to promote its sustained-yield mission. NEPA (40 CFR 1508.1(s)) defines mitigation as measures that avoid, minimize, or compensate for effects caused by a proposed action or alternatives as described in an environmental document or record of decision and that have a nexus to those effects, including: (1) avoiding the impact altogether by not taking a certain action or parts of an action; (2) minimizing impacts by limiting the degree or magnitude of the action and its implementation; (3) rectifying the impact by repairing, rehabilitating, or restoring the affected environment; (4) reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; and (5) compensating for the

impact by replacing or providing substitute resources or environments. Generally, mitigation measures are simplified to avoidance, minimization, or compensation.

Mitigation can be applied at different scales, from the project site and affected environment to the landscape/regional level. Mitigation actions must be tied to the resource values, services, or functions being adversely affected by a project. In general, the BLM endeavors to take a regional (i.e., landscape-level) approach to identifying mitigation opportunities (including sites and measures) to promote the sustained yield of resources on BLM-administered lands, thereby increasing the effectiveness and durability of said mitigation actions. The BLM may use this land use planning process to identify regional/landscape mitigation opportunities and develop a strategy for implementation.

Current Level/Location of Use

A regional/landscape mitigation strategy has not been developed for the planning area. Development of a strategy would include elements and data from the vegetation, forestry, wildlife, fisheries, and lands sections of this document. A comprehensive approach is fundamental in developing baseline conditions for a regional/landscape mitigation strategy and in establishing objectives for priorities dependent on resource values, services, and functions.

Forecast/Anticipated Demand for Use

Regional/landscape mitigation strategies are being developed and used with greater frequency throughout the BLM in response to the science supporting mitigation effectiveness, the need for mitigation opportunities for large-scale projects (transmission, infrastructure, etc.) on and off BLM-administered land, and the expectations and need for mitigation durability.

Key Features/Areas of High Potential for Use

Potential use of BLM-administered lands in a regional/landscape mitigation strategy varies among ecoregions. For example, in the Central California Valley ecoregion, key features of the lands adjacent to the Sacramento River may have desirable attributes that may play a role in future large-scale infrastructure projects in the Sacramento River basin. In the Klamath Mountains and Coast Range ecoregions, late-seral forests may have key features that could be used to mitigate potential east-west transmission corridors or transportation projects that may affect forest habitats. The potential for these key features to be part of a regional/landscape mitigation strategy plan is likely moderate to high.

2.6.2 Education and Interpretation

The Arcata and Redding FOs have acquired a high degree of visibility and are recognized for their unique natural and cultural resource values. Multiple recreational uses, special status species, special land designations, and wildland/urban interface for the majority of BLM-administered lands in the planning area increase the need for interpretive and education programs that can address the complex issues of the management area. Interpretive programs include a focus on high profile and multi-use recreational areas that are frequented by a variety of local and non-local user groups.

Visitors to the management area come from a variety of social and ethnic backgrounds and display a wide range of attitudes and human values. Interpretive programs are more complex due to the presence of multiple-use recreational programming, listed species, fragile and sensitive cultural resources, and sensitive environmental habitat. Programs are offered to the public in coordination with relevant interest groups, partners, agencies and community members.

Current Level/Location of Use

Interpretive Programming

The management area interpretation program connects visitors to public lands through interpretive programs, participation/outreach at local events, service learning, guided activities, wayside kiosks, exhibits, films, websites, and social media (**Table 2-78** and **Table 2-79**).

Interpretive services are designed to benefit all visitors to the management area including local residents, tourists, researchers, students, and other groups. Activities have immediate and direct benefit to recreation as well as natural and cultural resource management programs, and indirect benefits by helping to inform the general public about natural and cultural resources, modify future behavior of visitors, and tell the story of BLM and multiple-use management of public lands.

Table 2-78. Arcata FO Interpretation Signage

Arcata FO Interpretation	Informational Kiosks	Wayside Exhibits	Other Signage
Samoa Peninsula Management Area <i>Samoa Dunes Recreation Area</i> <i>Ma-le'i Dunes CMA</i>	9	4	Directional
Scattered Tracts Management Area <i>Mike Thompson Wildlife Area, South Spit Humboldt Bay</i>	4	2	Directional
Lacks Creek Management Area	3	1	Phenology and Directional
Little Darby	1	7	Directional
Butte Creek Management Area	0	0	Directional
King Range Vicinity Management Area	0	0	Directional
Red Mountain Management Area	0	0	Directional
Covelo Vicinity Management Area <i>Redwood Adventure Camp</i>	0	0	Directional
Total	16	14	

Source: USDI BLM 2016a

Table 2-79. Redding FO Interpretation Signage

Redding FO Interpretation	Informational Kiosks	Wayside Exhibits	Other Signage
Sacramento River Management Area	10	2	Directional
Shasta Management Area	22	10	Historical
Trinity River Management Area	13	3	Historical
Ishi Management Area	3	0	Directional
Klamath Management Area	1	0	Directional
Total	49	15	

Source: USDI BLM 2016a

Educational Programming

Arcata FO

The Arcata FO has one Hands on the Land (HOL) field classroom that connects students, teachers, families, and volunteers to public land at the Mike Thompson Wildlife Area, South Spit Humboldt Bay.

In collaboration with local partners, schools and environmental educators at each site include customized hands-on experiences using natural, historical, and archaeological settings to bring classroom learning to life. Programs include place-based learning that aligns with core learning standards, including science, technology, engineering, mathematics, service-learning, or career pathway opportunities.

In addition to HOL field classrooms, several field classrooms and learning sites exist throughout the resource management area (**Table 2-80**). Educational programs connect local schools with public land through pre-field trip classroom presentations, field trips, and service learning.

Table 2-80. Arcata FO Educational Programs

Arcata FO Management Area Education	Developed Educational Programs	Place-Based Curriculum	Hands on the Land Site
Samoa Peninsula Management Area <i>Samoa Dunes Recreation Area</i> <i>Ma-le'i Dunes CMA</i>	1	0	0
Scattered Tracts Management Area <i>Mike Thompson Wildlife Area, South Spit Humboldt Bay</i>	3	2	1
Little Darby	1	1	0
Lacks Creek Management Area	1	1	0
Butte Creek Management Area	0	0	0
King Range Vicinity Management Area	0	0	0
Red Mountain Management Area	0	0	0
Covelo Vicinity Management Area <i>Redwood Adventure Camp</i>	1	0	0
Total	7	4	1

Source: USDI BLM 2016a

Current education and interpretation partners in the Arcata FO are as follows:

- Friends of the Dunes
- Humboldt County Office of Education
- California State Parks
- Water Safety Coalition of Northwestern California
- Humboldt State University, Wildlife Department & Environmental Studies Department
- Eel River Recovery Project
- California Wilderness Coalition
- Northcoast Environmental Center
- Northcoast Regional Land Trust
- Trinidad Coastal Land Trust
- Humboldt State University Center for Community Based Learning
- California Conservation Corps Redwood Community Action Agency
- The Wildlands Conservancy

Redding FO

The Redding FO management area has two HOL field classrooms that connect students, teachers, families, and volunteers to public land: Clear Creek Greenway and the wild and scenic Trinity River. The Redding FO has one Junior Explorer Activity Book that engages youth and their adults about public land.

In addition to HOL field classrooms, several field classrooms and learning sites exist throughout the FO area (**Table 2-81**). Other environmental educational programs connect local schools with public land through pre-field trip classroom presentations, field trips, and service learning.

Table 2-81. Redding FO Educational Programs

Redding FO Management Area Education	Developed Educational Programs	Place Based Curriculum	Hands on the Land Site
<i>Ishi Management Area</i>	0	0	0
<i>Upper Ridge Nature Area</i>			
<i>Shasta Management Area</i>	2	2	2
<i>Clear Creek Greenway</i>			
<i>French Gulch School</i>			
<i>Trinity Management Area</i>	1	1	1
<i>Scott Valley Management Area</i>	0	0	0
<i>Yolla Bolly Management Area</i>	0	0	0
<i>Sacramento Management Area</i>	0	0	0
<i>Klamath Management Area</i>	0	0	0
Total	3	3	3

Source: USDI BLM 2016a

Forecast/Anticipated Demand for Use

Education and interpretation are important tools in mitigating negative impacts from overuse as well as conflicts from multiple user groups such as hikers, equestrians, mountain bikers, hunters, and motorized users.

Continuing to develop educational and interpretive programs can help the public understand its role in the ecosystem and facilitate connection, which can lead to lifetime stewardship and preservation of the public lands in their backyard. Development of bilingual, interpretive signage and education materials would increase education opportunities for diverse user groups. Education regarding the planning area's ongoing wildfire problems and new technologies, such as e-bikes and drones, presents new opportunities.

Interpretive and educational programs continue to be a high demand at local schools. Local partners will continue to aid BLM in the development and performance of these opportunities.

2.6.3 Research

Current Level/Location of Use

The BLM Arcata and Redding FOs routinely work with federal, county, state and other agencies; NGOs; universities; colleges; and museums on a wide variety of research projects. These projects support the use of public lands for scientific endeavors and social and recreation-based actions and provide critical information that can be used to improve and monitor the effectiveness of public land management. Key partners include HSU, Chico State University, University of California–Davis, and the USGS.

Additionally, there are numerous individual researchers or research teams from various other institutions and NGOs.

Several RNAs were designated in the 1992 Arcata RMP (USDI BLM 1992a) and 1993 Redding RMP (USDI BLM 1993). While the RNA designation is no longer used within the BLM, these areas continue to represent locations where demand for scientific and research uses is high. There are 10 designated RNAs within the planning area: Baker Cypress RNA/ACEC, Butte Creek RNA/ACEC, Elder Creek RNA/ACEC, Gilham Butte RNA/ACEC, Hawes Corner RNA/ACEC, Iaqua Butte RNA/ACEC, Lacks Creek RNA/ACEC, Red Mountain RNA/ACEC, Ma-le'i Dunes ACEC, and Sacramento River Island RNA/ACEC. More details regarding these locations can be found in the ACEC section of this document (**Section 2.4.1**).

Current science/research projects within the planning area include research on Baker cypress in the Baker Cypress RNA/ACEC, the National Phenology Network citizen science project at several sites in the Arcata FO, oak woodland restoration research in the WCF, and research on western snowy plovers. There continue to be archaeological and climate-environmental change studies conducted in the planning area, some tied to earlier assistance agreements. Furthermore, as part of the agencies' overall mission, individual employees conduct limited research on various topics, especially in the natural and cultural resource fields, but also in recreation.

Forecast/Anticipated Demand for Use

The BLM Arcata and Redding FOs have engaged in science and research projects in a variety of locations and with various partners in the past years, as detailed above. Though the individual projects may have changed, the trend of use for the Arcata and Redding FO lands for science and research purposes has remained relatively constant through the years. It is anticipated that science and research activities will continue to occur at the current level. However, the increasing need to understand climate change impacts and adaptation options may lead to an increased emphasis on climate-environmental change studies.

Key Features/Areas of High Potential for Use

As described above, the Arcata and Redding FOs have 11 designated RNAs that have been identified as important areas for research. However, due to the differing needs for the large variety of science and research projects possible, it is likely that areas outside of these designated RNAs could be used for research purposes. In particular, areas that contain resources that are deemed vulnerable to climate change impacts could be the focus of science and research projects in the future.

2.6.4 Public Health and Safety, Land Uses and Conditions, and Hazardous Materials

Public health and safety concerns in the planning area include illegal trespass; marijuana growing operations and unauthorized water diversions (Elkhorn Ridge Wilderness Area); hazardous substances generation (Red Mountain Wilderness Area); homeless camps and trash at long-term camping sites; trash and human waste at various locations (Kings Range, Steiner Flat Road, and Goat Rock); OHV use (Samoa Dunes); general misuse of BLM-administered lands; and the effects of recent wildfires, which include steep areas lacking protective vegetation cover, increased erosion and runoff potential, a greater likelihood of soil slumping and landslides, and increased sedimentation in surface waterbodies. Illegal trespass, marijuana growing operations, and homeless camps increase law enforcement needs.

In the Northwest California Integrated Resource Management Plan Scoping Report (USDI BLM 2017), the BLM identified public health and safety concerns about using firearms too close to private landowners (Forks of Butte Creek) and trails in the Sacramento River area and Clear Creek Greenway; bonfires and similar activities at gun ranges and other locations that may result in wildfires; public health and safety concerns that would be compounded by the lack of appropriate access roads and bridge replacements for access to, and escape from, at-risk foothill communities, such as Cohasset, Paradise, and Magalia; and the lack of access for firefighting equipment on the BLM Bridge across the West Branch of the Feather River.

As indicated from scoping comments for a Forest Service travel plan, wildfire public health and safety concerns could be partially ameliorated if improved motorized roads and trails were available for fire management activities, including how the road system affects the risk to firefighters and public safety.

No decisions regarding disposal, storage, or treatment of hazardous materials are made in any land use management alternative of the 1993 Redding RMP (USDI BLM 1993), and hazardous materials are not mentioned in the 1992 Arcata RMP (USDI BLM 1992a). Previous RMP decisions did not authorize the creation, storage, or disposal of hazardous materials. Present BLM involvement with hazardous materials in the Redding and Arcata FOs is limited to removal of hazardous materials inadvertently placed or illegally dumped on public lands without authorization or approval by the BLM.

Hazardous materials management includes cleaning up drug lab dumps, abandoned used oil, chemicals at abandoned mine sites, and various hazardous materials on occupancy trespass sites. These activities would occur under all land use management alternatives.

Hazardous materials management is carried out under the authorities contained in the Resource Conservation and Recovery Act of 1976 (as amended); the Federal Water Pollution Control Act, as amended by the CWA of 1977; and the Comprehensive Environmental Response, Conservation, and Liability Act of 1980, as amended by the Superfund Amendments and Re-Authorization Act of 1986.

The other public health and safety concerns identified above would be addressed under the Federal Water Pollution Control Act, as amended by the CWA of 1977; FLPMA; and the John D. Dingell, Jr. Conservation, Management, and Recreation Act of 2019. They also would be addressed under Executive Order 13855, Promoting Active Management of America's Forests, Rangelands, and Other Federal Lands To Improve Conditions and Reduce Wildfire Risk (December 21, 2018) and the Department of the Interior Secretarial Order 3374.

Chapter 3. Current Management Direction

3.1 INTRODUCTION

This section summarizes the current management objectives, decisions, and actions documented in existing planning documents for the Redding and Arcata FOs. The following plan language is from planning documents the BLM uses; however, the BLM also considers other management policy direction while managing public lands in the Redding and Arcata FOs.

3.2 RESOURCES

3.2.1 Climate Change

There are no current management objectives, decisions, or actions for climate change in any of the existing planning documents. The updated NCIP will follow guidance as outlined in Secretarial Order 3399, Approach to the Climate Crisis and Restoring Transparency and Integrity to the Decision-Making Process.

3.2.2 Air

Table 3-1 identifies existing land use plan decisions in the Redding and Arcata FOs for air resources.

Table 3-1. Current Management Objectives, Decisions, and Actions for Air Resources

Decision Source	Current Management Objectives and Management Decisions	Status
Arcata RMP 1992 (USDI BLM 1992a)	Management Decisions/Actions <ul style="list-style-type: none"> The BLM must secure permits from state and local agencies for projects affecting air quality. 	Ongoing
Arcata RMP Forest Plan Amendment 1995 (USDI BLM 1995a)	Management Objectives <ul style="list-style-type: none"> Comply with the California State Implementation Plan (SIP) for achievement of NAAQS for criteria pollutants, PSD goals for the protection of air quality and visibility in wilderness areas and national parks, and local Air Pollution Control Districts' rules and regulations. 	Ongoing
Arcata RMP Forest Plan Amendment 1995	Management Decisions/Actions <ul style="list-style-type: none"> The BLM must secure permits from responsible agencies for projects affecting air quality. Specific decisions will not be made in the selected plan amendment. Evaluate management actions potentially affecting air quality, to ensure conformance with the SIP, PSD goals, and local programs such as smoke management requirements. 	Ongoing
Redding RMP 1993 (USDI BLM 1993)	Management Objectives <ul style="list-style-type: none"> Minimize air quality degradation through strict compliance with federal, state, and local regulations and implementations plans. 	Ongoing
Redding RMP 1993	Management Decisions/Actions <ul style="list-style-type: none"> Perform additional management activities including monitoring, analysis, and impact mitigation on a project-specific basis, to assure compliance with applicable regulations and implementation plans. 	Ongoing

3.2.3 Cave and Karst Resources

There are no current management objectives, decisions, or actions for cave and karst resources in any of the existing planning documents.

3.2.4 Coastal Resources and Management

Table 3-2 identifies existing land use plan decisions in the Redding and Arcata FOs for coastal resources.

Table 3-2. Current Management Objectives, Decisions, and Actions for Coastal Resources

Decision Source	Current Management Objectives and Management Decisions	Status
Arcata RMP 1992 (USDI BLM 1992a)	Management Objectives <ul style="list-style-type: none"> Manila Dunes: Enhance natural values. 	Ongoing
Arcata RMP 1992	Management Decisions/Actions <ul style="list-style-type: none"> Manila Dunes: Facilitate research and educational uses of unique dune ecosystems. 	Ongoing

3.2.5 Cultural Resources

Table 3-3 identifies existing land use plan decisions in the Redding and Arcata FOs for cultural resources.

Table 3-3. Current Management Objectives, Decisions, and Actions for Cultural Resources

Decision Source	Current Management Objectives and Management Decisions	Status
Northwest Forest Plan 1994	Management Objectives <ul style="list-style-type: none"> Manage public lands in amendment management areas in a manner that will protect the quality of historical and archaeological values, according to FLMPA. Management Decisions/Actions <ul style="list-style-type: none"> Plan requires monitoring of resources, including cultural resources. 	Ongoing
Northwest Forest Plan Survey and Manage Amendment 2001	Management Objectives <ul style="list-style-type: none"> Facilitate occupancy and use of federal lands and resources traditionally used for cultural and spiritual purposes consistent with existing laws and regulations with all federally recognized tribes. 	Ongoing
Solar Energy Amendment 2012	All lands in Redding FO and Arcata FO are excluded.	N/A

Decision Source	Current Management Objectives and Management Decisions	Status
Geothermal Amendment 2008	<p>Management Objectives</p> <ul style="list-style-type: none"> • Manage public lands in amendment management areas in a manner that will protect the quality of historical and archaeological values, according to FLMPA. <p>Management Decisions/Actions</p> <ul style="list-style-type: none"> • Before any specific permits are issued under leases, <ul style="list-style-type: none"> ◦ Treatment of cultural resources will follow the procedures established by the Advisory Council on Historic Preservation for compliance with Section 106 of the NHPA. A pedestrian inventory will be undertaken of all portions that have not been previously surveyed or are identified by BLM as requiring inventory to identify properties that are eligible for the NRHP. Those sites not already evaluated for NRHP eligibility will be evaluated based on surface remains, subsurface testing, archival, and/or ethnographic sources. Subsurface testing will be kept to a minimum whenever possible if sufficient information is available to evaluate the site or if avoidance is an expected mitigation outcome. Recommendations regarding the eligibility of sites will be submitted to the BLM, and a treatment plan will be prepared to detail methods for avoidance of impacts or mitigation of effects. The BLM will make determinations of eligibility and effect and consult with the state historic preservation office (SHPO) as necessary based on each proposed lease application and project plans. ◦ The BLM may require modification to exploration or development proposals to protect such properties or disapprove any activity that is likely to result in adverse effects that cannot be successfully avoided, minimized, or mitigated. Avoidance of impacts through project design will be given priority over data recovery as the preferred mitigation measure. Avoidance measures include moving project elements away from site locations or to areas of previous impacts, restricting travel to existing roads, and maintaining barriers and signs in areas of cultural sensitivity. Any data recovery will be preceded by approval of a detailed research design, Native American Consultation, and other requirements for BLM issuance of a permit under the Archaeological Resources Protection Act (USDI BLM 2004). ◦ If cultural resources are present at the site, or if areas with a high potential to contain cultural material have been identified, a cultural resources management plan will be developed. This plan will address mitigation activities to be taken for cultural resources found at the site. Avoidance of the area is always the preferred mitigation option. Other mitigation options include archaeological survey and excavation (as warranted) and monitoring. If an area exhibits a high potential, but no artifacts were observed during an archaeological survey, monitoring by a qualified archaeologist could be required during all excavation and earthmoving in the high-potential area. A report will be prepared documenting these activities. The cultural resources management plan also will (1) establish a monitoring program, (2) identify measures to prevent potential looting/vandalism or erosion impacts, and (3) address the education of workers and the public to make them aware of the consequences of unauthorized collection of artifacts and destruction of property on public land (USDI BLM 2004). • Unexpected discovery of cultural or paleontological resources during construction will be brought to the attention of the responsible BLM authorized officer immediately. Work will be halted in the vicinity of the find to avoid further disturbance to the resources while they are being evaluated and appropriate mitigation measures are being developed. 	Ongoing

3. Current Management Direction (Cultural Resources)

Decision Source	Current Management Objectives and Management Decisions	Status
Arcata RMP 1992	<p>Management Objectives</p> <ul style="list-style-type: none"> Public lands will be managed in a manner that will protect the quality of scientific, scenic, historical..., and archaeological values that, where appropriate will preserve and protect certain public lands in their natural condition...and that will provide for outdoor recreation and human occupancy and use. 	Ongoing
Arcata RMP 1992	<p>Management Decisions/Actions</p> <ul style="list-style-type: none"> Assess cultural resource values on a site-specific basis, generally in response to other resource objectives. An appropriate level of inventory will be done for all actions with a potential to affect these resources. The BLM will make a reasonable and good faith effort to identify and consider contemporary Native American concerns where projects might affect socio-cultural and religious values. 	Ongoing
Arcata RMP 1992	<p><u>SAMOA PENINSULA MANAGEMENT AREA</u></p> <p>Management Decisions/Actions</p> <ul style="list-style-type: none"> Monitor cultural resources. 	Ongoing
Arcata RMP Forest Plan Amendment 1995	<p>Management Objectives</p> <ul style="list-style-type: none"> Manage public lands in amendment management areas in a manner that will protect the quality of historical and archaeological values, according to FLMPA. <p>Management Decisions/Actions</p> <ul style="list-style-type: none"> Ensure that clearances for cultural resources are conducted as a part of the environmental review process. The Mineral Leasing Act of 1920, Geothermal Steam Act of 1970, and 43 CFR 3100 to 3500 provide the regulatory framework for issuing mineral leases. Where required, stipulations will be attached to mineral leases to mitigate impacts on cultural areas, and other resources susceptible to impacts from leasing-related activities. Prior to disposal of public lands and interests, complete site-specific inventories and analyses for historic properties (cultural resources). 	Ongoing
Arcata RMP Samoa Amendment 1995	<p><u>SAMOA PENINSULA MANAGEMENT AREA</u></p> <p>Management Objectives</p> <ul style="list-style-type: none"> Comply with statutory requirements of the NHPA and the Archaeological Resource Protection Act to protect archaeological sites that exist on federal land. <p>Management Decisions/Actions</p> <ul style="list-style-type: none"> Monitor cultural resources. 	Ongoing
Redding RMP 1993	<p>Management Objectives</p> <ul style="list-style-type: none"> Comply with the NHPA. Identify and fully consider any historic or archaeological sites located within a project area or on lands identified to transfer to any nonfederal entity. 	Ongoing
Redding RMP 1993	<p>Management Objectives</p> <ul style="list-style-type: none"> Significant archaeological or historic sites will not be damaged by BLM-authorized undertakings or transferred from federal jurisdiction without appropriate impact mitigation measures. 	Ongoing

3. Current Management Direction (Cultural Resources)

Decision Source	Current Management Objectives and Management Decisions	Status
Redding RMP 1993	<p>Management Objectives</p> <ul style="list-style-type: none"> 43 CFR 3809 specifically provides for the protection of cultural properties by initially prohibiting mining operators from knowingly disturbing or damaging them. The need for a cultural resources field inventory in response to a notice should be determined on the basis of professional judgment and is left to the discretion of the Redding Area Manager. Indirect impacts on cultural resources resulting from improving road access into formerly remote areas are recognized as potentially adverse. Current research will determine if and where these impacts are occurring. Impacts to cultural resources values in the form of artifact breakage or destruction of structural features resulting from vehicle activity associated with prospecting could also occur. 	Ongoing
Redding RMP 1993	<p>Management Objectives</p> <ul style="list-style-type: none"> Public education, research, the excavation of archaeological resources, and involvement of interested parties (principally American Indians) must conform to the Archaeological Resources Protections Act. 	Ongoing
Redding RMP 1993	<p>Management Objectives</p> <ul style="list-style-type: none"> Conform to the American Indian Religious Freedom Act. 	Ongoing
Redding RMP 1993	<p>Management Decisions/Actions</p> <ul style="list-style-type: none"> Administrative and physical measures to protect sites, monitoring of known sites on lands in long-term BLM administration, surveillance by law enforcement personnel in problem areas, and use of qualified organizations or the public in cooperative study of cultural resources. 	Ongoing
Redding RMP 1993	<p>Management Decisions/Actions</p> <ul style="list-style-type: none"> Prior to authorizing any surface-disturbing action or approval of land uses, BLM solicits appropriate consideration of American Indian concerns including any potential impact to traditional beliefs and heritage values. Analysis of these specific concerns is deferred to preparation of activity plans, project plans, and associated environmental analysis. 	Ongoing
Redding RMP 1993	<p>Management Decisions/Actions</p> <ul style="list-style-type: none"> The BLM will design livestock grazing and range improvement program to avoid adverse effects on properties included in, or eligible for inclusion in, the NRHP, unless it is not prudent or feasible. The BLM will consult with the SHPO for purposes of developing a mutually acceptable mitigation plan when avoidance is not prudent or feasible. 	Ongoing
Redding RMP 1993	<p><u>SCOTT VALLEY MANAGEMENT AREA</u></p> <p>Management Objectives</p> <ul style="list-style-type: none"> Protect cultural resource values. 	Ongoing
Redding RMP 1993	<p>Management Decisions/Actions</p> <ul style="list-style-type: none"> Conduct resource inventories (archaeological, etc.) on lands available for exchange or administrative transfer. 	Ongoing
Redding RMP 1993	<p><u>KLAMATH MANAGEMENT AREA</u></p> <p>Management Objectives</p> <ul style="list-style-type: none"> Protect historic and prehistoric resources within the project area, protect the cultural resources of the river corridor, and enhance traditional Native American Indian use opportunities. 	Ongoing
Redding RMP 1993	<p><u>KLAMATH MANAGEMENT AREA</u></p> <p>Management Decisions/Actions</p> <ul style="list-style-type: none"> Conduct resource inventories (archaeological, etc.) on lands available for exchange or administrative transfer. 	Ongoing

3. Current Management Direction (Cultural Resources)

Decision Source	Current Management Objectives and Management Decisions	Status
Redding RMP 1993	<p><u>TRINITY MANAGEMENT AREA</u></p> <p>Management Objectives</p> <ul style="list-style-type: none"> Increase interpretation and protection of key cultural and natural resources for the public, including the Bagdad Townsite, Rush Creek, Montana Cabin, and Salt Flat. 	Ongoing
Redding RMP 1993	<p>Management Decisions/Actions</p> <ul style="list-style-type: none"> Conduct resource inventories (archaeological, etc.) on lands available for exchange or administrative transfer. 	Ongoing
Redding RMP 1993	<p><u>SHASTA MANAGEMENT AREA</u></p> <p>Management Objectives</p> <ul style="list-style-type: none"> Protect significant historic elements of the French Gulch and Deadwood mining districts. 	Ongoing
Redding RMP 1993	<p><u>SHASTA MANAGEMENT AREA</u></p> <p>Management Objectives</p> <ul style="list-style-type: none"> Conserve and interpret prehistoric and historic archaeological resources on public lands [in Swasey Drive ACEC]. 	Ongoing
Redding RMP 1993	<p><u>SHASTA MANAGEMENT AREA</u></p> <p>Management Objectives</p> <ul style="list-style-type: none"> Protect the historic values of the area. 	Ongoing
Redding RMP 1993	<p><u>SHASTA MANAGEMENT AREA</u></p> <p>Management Decisions/Actions</p> <ul style="list-style-type: none"> Develop an integrated resource activity plan for Clear Creek that identifies high priority land acquisition, details, habitat restoration needs for anadromous salmonids, delineates desired plant community (DPC) and restoration needs for riparian vegetation, describes protective management facilities, lists important cooperators and their responsibilities, identifies important cultural resources, and describes the recreational opportunities for the public. 	Ongoing
Redding RMP 1993	<p><u>SHASTA MANAGEMENT AREA</u></p> <ul style="list-style-type: none"> Conduct resource inventories (archaeological, etc.) on lands available for exchange or administrative transfer. 	Ongoing
Redding RMP 1993	<p><u>SACRAMENTO RIVER MANAGEMENT AREA</u></p> <p>Management Objectives</p> <ul style="list-style-type: none"> Conserve archaeological resources and provide research opportunities on selected threatened or damaged sites [in Bend Area]. 	Ongoing
Redding RMP 1993	<p><u>SACRAMENTO RIVER MANAGEMENT AREA</u></p> <p>Management Decisions/Actions</p> <ul style="list-style-type: none"> Acquire available unimproved lands that (in descending priority) contain high priority habitat along the Sacramento River as depicted in the 1988 Sacramento River Atlas, front the Sacramento River, provide physical access to public land, contain known/potential wetland or special status species habitat, contain important cultural resources, or facilitates overall public management within the area. 	Ongoing
Redding RMP 1993	<p><u>SACRAMENTO RIVER MANAGEMENT AREA</u></p> <p>Management Decisions/Actions</p> <ul style="list-style-type: none"> Conduct resource inventories (archaeological, etc.) on lands available for exchange or administrative transfer. 	Ongoing

Decision Source	Current Management Objectives and Management Decisions	Status
Redding RMP 1993	<p><u>ISHI MANAGEMENT AREA</u></p> <p>Management Objectives</p> <ul style="list-style-type: none"> Conserve the archaeological resources of the Deer Creek Canyon. Protect the historic values of the Forks of Butte Creek canyon. 	Ongoing
Redding RMP 1993	<p>Management Decisions/Actions</p> <ul style="list-style-type: none"> Conduct resource inventories (archaeological, etc.) on lands available for exchange or administrative transfer. 	Ongoing
Redding RMP 1993	<p><u>YOLLA BOLLY MANAGEMENT AREA</u></p> <p>Management Decisions/Actions</p> <ul style="list-style-type: none"> Conduct resource inventories (archaeological, etc.) on lands available for exchange or administrative transfer. 	Ongoing
Redding RMP Lands Amendment 2005	<p>Management Objectives</p> <ul style="list-style-type: none"> Ensure that the overall land tenure program is beneficial or neutral in terms of protecting cultural resources. 	Ongoing
Redding RMP Lands Amendment 2005	<p>Management Decisions/Actions</p> <ul style="list-style-type: none"> Conduct cultural resource inventories on lands available for purchase, sale, exchange or administrative transfer. 	Ongoing

3.2.6 Fish/Special Status Fish

Table 3-4 identifies existing land use plan decisions in the Redding and Arcata FOs for fish.

Table 3-4. Current Management Objectives, Decisions, and Actions for Fish

Decision Source	Current Management Objectives and Management Actions	Status
Northwest Forest Plan 1994	<p>Management Objectives</p> <p><i>Aquatic Conservation Strategy</i></p> <ul style="list-style-type: none"> Restore and maintain the ecological health of watersheds and aquatic ecosystems contained within them on public lands, including anadromous fish habitat. 	Ongoing
Northwest Forest Plan 1994	<p>Management Objectives</p> <p><i>Aquatic Conservation Strategy Objectives</i></p> <ul style="list-style-type: none"> Maintain and restore the distribution, diversity, and complexity of watershed and landscape-scale features to ensure protection of the aquatic systems. Maintain and restore connectivity within and between watersheds to provide routes to areas critical for fulfilling life history requirements of aquatic species. Maintain and restore the physical integrity of the aquatic systems. Maintain and restore water quality necessary to support healthy aquatic ecosystems. Maintain and restore the sediment regime under which aquatic ecosystems evolved. Maintain and restore in-stream flows sufficient to create and sustain aquatic habitats and to retain patterns of sediment, nutrient, and wood routing. Maintain and restore the timing, variability, and duration of floodplain inundation and water table elevation. 	Ongoing. All implementation actions within the NWFP must be consistent with the Aquatic Conservation Strategy (all of Arcata, portions of Redding FO).

Decision Source	Current Management Objectives and Management Actions	Status
Northwest Forest Plan 1994	<p>Management Objectives</p> <p><i>Fish and Wildlife Management</i></p> <ul style="list-style-type: none"> FW-1. Design and implement fish and wildlife habitat restoration and enhancement activities in a manner that contributes to attainment of Aquatic Conservation Strategy objectives. FW-2. Design, construct and operate fish and wildlife user-enhancement facilities in a manner that does not retard attainment of Aquatic Conservation Strategy objectives. 	Amended Arcata and Redding plans within the range of the NSO including land use allocations and standard and guidelines.
Northwest Forest Plan 1994	<p>Management Actions</p> <p><i>Aquatic Conservation Strategy for Watershed Analysis</i></p> <ul style="list-style-type: none"> Characterize watersheds and guide management and monitoring programs. A watershed analysis is required in key watersheds prior to resource management; recommended in all other watersheds. Watershed analysis is important in developing aquatic monitoring strategies to identifying areas of greatest benefit-to-cost relationships for restoration opportunities. <p><i>Aquatic Conservation Strategy for Watershed Restoration</i></p> <ul style="list-style-type: none"> In-stream structures are not considered mitigation for poor land and water management practices, and should only be used short term. Priority should be given to preserving existing high-quality aquatic habitats. <p><i>Fish and Wildlife Management</i></p> <ul style="list-style-type: none"> FW-3. Cooperate with management agencies to identify and eliminate wild ungulate impacts that are inconsistent with attainment of Aquatic Conservation Strategy objectives. FW-4. Cooperate with federal, tribal, and state fish management agencies to identify and eliminate impacts associated with habitat manipulation, fish stocking, harvest and poaching that threaten the continued existence and distribution of native fish stocks on federal lands. 	All ongoing and as it stands will be carried forward into new planning effort

Decision Source	Current Management Objectives and Management Actions	Status
Arcata Planning Area RMP Amendment 1995	<p><u>COVELO VICINITY MANAGEMENT AREA</u></p> <p>Management Objectives</p> <ul style="list-style-type: none"> • Emphasize anadromous fisheries and cooperative watershed management on Eel River, Middle Fork Eel River, and North Fork Eel River and major tributaries. • Re-establish the role of fire as a viable process for ecosystem management. Maintain and restore ecological functions and processes that operate in watersheds to create anadromous fish habitat in those watersheds with highest restoration potential (Thatcher Creek). • Protect and enhance natural and recreational values along the federally designated “wild” and “scenic” segments of the Middle Fork Eel River as outlined in the Middle Fork Eel River Management Plan. <p>Management Actions</p> <ul style="list-style-type: none"> • Establish Thatcher Creek and its tributaries as a Tier-I key watershed. For all permanent and intermittent tributaries to Thatcher Creek, establish the following interim horizontal stream buffers as interim riparian reserves: <ul style="list-style-type: none"> ◦ Fish-bearing streams - 300 feet either side of the channel ◦ Non-fish-bearing streams - 150 feet either side of the channel ◦ Intermittent streams and landslide prone areas - 100 feet either side of the stream channel or to the extent of landslide or landslide prone areas. Criteria for establishing actual buffering widths will be determined by watershed analysis. Riparian Reserves are subject to specific standards and guidelines to protect salmon and steelhead stocks. • Delineate permanent buffers (300, 150, 100 feet) on all other streams in the management area. No watershed analysis is necessary. • Develop cooperative management relationships with private landowners, state, and other federal agencies to effect coordinated management consistent with restoration of anadromous fisheries of the Eel River, Middle Fork Eel River, and North Fork Eel River. • Delineate 1/4 mile “wild” and “scenic” buffers to designated segments of the Eel River, Middle Fork Eel River, and North Fork Eel River as identified in the Middle Fork Eel River Management Plan and in interim management provisions of the WSR Act. • Develop a MOU with Mendocino National Forest for management of the Thatcher and Cedar Creek watershed and development of watershed analysis. • Prepare watershed analysis for Thatcher Creek that: <ul style="list-style-type: none"> ◦ Establishes criteria for establishing riparian reserve widths ◦ Refines management guidelines to fit specific landscape conditions and limitations ◦ Establishes forestry and watershed restoration goals and priorities ◦ Establishes monitoring programs to ensure riparian management objectives • Implement Middle Fork Eel River Management Plan. 	Ongoing

Decision Source	Current Management Objectives and Management Actions	Status
Arcata Planning Area RMP Amendment 1995	<p><u>SCATTERED TRACTS MANAGEMENT AREA</u></p> <p>Management Objectives</p> <ul style="list-style-type: none"> • Protect and enhance natural and recreational values along the federally designated portions of the Eel and Van Duzen Rivers' WSR corridors. <p>Management Actions</p> <ul style="list-style-type: none"> • Manage areas along all permanently flowing streams, lakes, wetlands, and intermittent streams Riparian Reserves. • Establish permanent buffers (300, 150, 100 feet) on all streams in the management area. No watershed analysis is necessary. • No fisheries or sensitive fishery management actions identified for this management area. 	Ongoing
Arcata Planning Area RMP Amendment 1995	<p><u>LACKS CREEK MANAGEMENT AREA</u></p> <p>Management Objectives</p> <ul style="list-style-type: none"> • Minimize sedimentation into the hydrographic basin of Redwood Creek by consolidating ownership and through coordinated management consistent with the Redwood National Park Expansion Act of 1978 (Public Law 95-250). • Provide core habitat for wildlife to recover federally listed species and to conserve special status species so that no BLM action contributes to the need for listing. 	Ongoing
Arcata Planning Area RMP Amendment 1995	<p><u>LACKS CREEK MANAGEMENT AREA</u></p> <p>Management Actions</p> <ul style="list-style-type: none"> • Designate 2,987 acres of public land within the Lacks Creek watershed as the Lacks Creek Watershed ACEC. Acquired lands within the watershed will be included in the watershed ACEC. 	Completed
Arcata Planning Area RMP Amendment 1995	<p><u>LACKS CREEK MANAGEMENT AREA</u></p> <p>Management Actions</p> <ul style="list-style-type: none"> • Complete a watershed analysis in coordination with Redwood National Park. 	Completed 1997
Redding RMP 1993	<p>Management Objectives</p> <ul style="list-style-type: none"> • Manage public lands to prevent deterioration of special status species' habitat thereby precluding the need for state or federal listing of those species. This includes the following objectives: <ul style="list-style-type: none"> ◦ Recognize certain special status species of plants and wildlife that merit attention in the management of the public lands. ◦ Minimize the decline of those species designated as special status through the mitigation of resource management impacts. ◦ Promote the enhancement of special status species through positive management of their habitats and populations. ◦ Public lands identified for disposal will be managed as follows: Protect or maintain the existing condition of the resources. <p>This RMP does not contain quantifiable RCOs for wildlife and fisheries resources due to the tremendous changes of public ownership recommended in the various land use management alternatives. RCOs with measurable goals will be specified in subsequent activity plans.</p> <p>Management Actions</p> <ul style="list-style-type: none"> • Conduct resource inventories (archaeological, sensitive species, hazardous materials, minerals, and timber) on lands available for exchange, sale, or administrative transfer. 	Ongoing

Decision Source	Current Management Objectives and Management Actions	Status
Redding RMP 1993	<p><u>KLAMATH MANAGEMENT AREA</u> Management Objectives <i>Shasta and Klamath Rivers Canyon:</i></p> <ul style="list-style-type: none"> • Improve Chinook salmon spawning in the lower Shasta River. • Restore riparian vegetation to Class II or better. 	Ongoing
Redding RMP 1993	<p><u>KLAMATH MANAGEMENT AREA</u> Management Objectives <i>Upper Klamath River:</i></p> <ul style="list-style-type: none"> • Improve the condition of riparian vegetation to Class II or better. 	Ongoing
Redding RMP 1993	<p><u>KLAMATH MANAGEMENT AREA</u> Management Objectives <i>Mid-Klamath River:</i></p> <ul style="list-style-type: none"> • Maintain existing public lands within the designated WSR corridor in present conditions. 	Ongoing
Redding RMP 1993	<p><u>KLAMATH MANAGEMENT AREA</u> Management Objectives <i>Dry Creek:</i></p> <ul style="list-style-type: none"> • Improve the steelhead spawning habitat in lower Dry Creek. 	Completed
Redding RMP 1993	<p><u>KLAMATH MANAGEMENT AREA</u> Management Objectives <i>Shasta Valley Wetlands:</i></p> <ul style="list-style-type: none"> • Provide long-term protection and enhancement of native wetlands. • Improve water quality in the Shasta River basin. • Enhance the native fisheries of Parks Creek, Big Springs Creek, and the Shasta River. 	Ongoing
Redding RMP 1993	<p><u>KLAMATH MANAGEMENT AREA</u> Management Objectives <i>Remainder of Management Area:</i></p> <ul style="list-style-type: none"> • Enhance the ability to acquire high value resource lands within the Redding Resource Area by disposal of scattered public land interests within the Klamath management area. 	Ongoing
Redding RMP 1993	<p><u>KLAMATH MANAGEMENT AREA</u> Management Objectives</p> <ul style="list-style-type: none"> • Consolidate and increase public landownership within the area by acquiring available unimproved lands that: adjoin the Trinity River Corridor, facilitate reforestation and other sustained yield forestry practices, protect anadromous fisheries, provide public access to public lands, protect sensitive species habitat, conserve regionally important cultural resources, provide access to identified Native American heritage resources, or enhance overall efficiency of public land administration. 	Ongoing

Decision Source	Current Management Objectives and Management Actions	Status
Redding RMP 1993	<p><u>KLAMATH MANAGEMENT AREA</u> Management Objectives <i>Shasta and Klamath Rivers Canyon:</i></p> <ul style="list-style-type: none"> • Designate all public land in the Shasta River Canyon below the Highway 263 bridge crossing below Yreka Creek to the confluence with the Klamath River and within a quarter mile of the normal high water mark as an ACEC. • Acquire available unimproved lands within the area with priority given (in descending order) to unimproved lands within the ACEC, Klamath River corridor, and lands between Interstate 5 and the ACEC. 	<ul style="list-style-type: none"> • Done • Ongoing
Redding RMP 1993	<p><u>KLAMATH MANAGEMENT AREA</u> Management Objectives <i>Upper Klamath River:</i></p> <ul style="list-style-type: none"> • This portion of the Klamath River is considered eligible and suitable for inclusion in the National WSR System. All public land in the corridor bounded by the northern canyon rim and within a quarter mile of normal high water along the southern bank will be managed in a manner that will not impair the outstanding remarkable values and consistent with a preliminary classification as “scenic.” • Acquire available unimproved lands within the area and/or develop cooperative management agreements with Pacific Power and Light or their successor(s). 	<ul style="list-style-type: none"> • Done • Ongoing
Redding RMP 1993	<p><u>KLAMATH MANAGEMENT AREA</u> Management Objectives <i>Shasta Valley Wetlands:</i></p> <ul style="list-style-type: none"> • Improve water quality in the Shasta River basin. 	Ongoing
Redding RMP 1993	<p><u>KLAMATH MANAGEMENT AREA</u> Management Actions</p> <ul style="list-style-type: none"> • Acquire available, unimproved private land that contains important anadromous salmonid habitat. 	Ongoing
Redding RMP 1993	<p><u>KLAMATH MANAGEMENT AREA</u> Management Actions <i>Shasta and Klamath Rivers Canyon:</i></p> <ul style="list-style-type: none"> • Withdraw all public lands within the 100-year flood zone of the Shasta River from mineral entry. • The area is closed to livestock grazing. • Develop an integrated resource activity plan for the Klamath River below River Mile (RM) 181 and the Shasta River Canyon that identifies high priority land acquisitions, designates appropriate roads and trails for recreational access, identifies management facility needs to protect the ACEC and riparian zone, and cooperative actions with adjacent landowners. 	Ongoing

Decision Source	Current Management Objectives and Management Actions	Status
Redding RMP 1993	<p><u>KLAMATH MANAGEMENT AREA</u> Management Actions <i>Upper Klamath River:</i></p> <ul style="list-style-type: none"> • The river corridor is closed to livestock grazing. • Offer public lands within the river corridor for mineral leasing with no surface occupancy. • Mineral material disposals are not allowed within the river corridor. • Amend the existing river management plan for the Klamath River above Copco to reflect the Final Eligibility and Suitability Report for the Upper Klamath WSR Study and the recommendations of the Klamath Falls RMP. 	Ongoing
Redding RMP 1993	<p><u>KLAMATH MANAGEMENT AREA</u> Management Actions <i>Shasta Valley Wetlands:</i></p> <ul style="list-style-type: none"> • Close the RNA/ACEC to livestock grazing. • Acquire available unimproved lands within the area. Priority is given to land containing existing or historic native wetlands. • Develop an integrated resource activity plan for the Shasta Valley Wetlands if BLM acquires available privately owned unimproved lands within the area. The plan will identify forage allocation and DPCs for domestic and native grazing, acquisition/cooperative management needs, a network of management facilities to protect the native wetlands, wildlife productivity targets, water quality base and target standards, and public access needs that do not adversely impact the native biota. • Mineral material disposals are permitted only if such actions enhance the long-term condition of riparian vegetation and the native fisheries habitat. • Offer for mineral leasing with no surface occupancy within 300 feet of wetland habitat. Offer all other lands for mineral leasing with no surface-disturbing actions permitted between November 15 and April 15. • Allow grazing as a management tool. 	Ongoing
Redding RMP 1993	<p><u>KLAMATH MANAGEMENT AREA</u> Management Actions <i>Mid-Klamath River:</i></p> <ul style="list-style-type: none"> • Establish a corridor for this segment of the Klamath River between Iron Gate Reservoir (RM 190) and the Klamath River Canyon (RM 181) that consists of the 100-year floodplain, within one-eighth mile of normal high water or the nearest paralleling road or railroad, whichever is least. • Permit no actions on public land that would impair the quality or condition of this “recreational” component of the National WSR System. 	Ongoing

Decision Source	Current Management Objectives and Management Actions	Status
Redding RMP 1993	<p><u>KLAMATH MANAGEMENT AREA</u> Management Actions <i>Dry Creek:</i></p> <ul style="list-style-type: none"> • Area is closed to motorized vehicles excepting the Siskiyou County maintained Copco Road. • Area is closed to livestock grazing. • Mineral material disposals are permitted only if such actions enhance the steelhead spawning potential within Dry Creek. • Continue annual monitoring of steelhead spawning success along lower Dry Creek. Maintain the existing management facilities (i.e., gabions and fences) as needed. 	Ongoing
Redding RMP 1993	<p><u>TRINITY MANAGEMENT AREA</u> Management Objectives <i>Trinity River:</i></p> <ul style="list-style-type: none"> • Protect and enhance the anadromous fisheries of the Trinity River. • Maintain the riparian habitat In Class I or Class II condition. 	Ongoing
Redding RMP 1993	<p><u>TRINITY MANAGEMENT AREA</u> Management Objectives <i>North of Trinity River/Deadwood/Indian Creek:</i></p> <ul style="list-style-type: none"> • Protect existing habitat for special status species including bald eagle and spotted owl. Manage the Eastman Gulch Owl Habitat Area in cooperation with the Trinity National Forest. • Maintain the riparian and fisheries habitat of anadromous fisheries streams including Canyon, Indian, and Deadwood Creeks. 	Ongoing
Redding RMP 1993	<p><u>TRINITY MANAGEMENT AREA</u> Management Objectives <i>Grass Valley Creek Watershed:</i></p> <ul style="list-style-type: none"> • Reduce the sediment load entering the Trinity River via GVC for the improvement of anadromous fisheries. 	Ongoing
Redding RMP 1993	<p><u>TRINITY MANAGEMENT AREA</u> Management Actions <i>Trinity River:</i></p> <ul style="list-style-type: none"> • Maintain existing withdrawals from mineral entry at Junction City and Douglas City campgrounds (58 acres and 140 acres, respectively). Withdraw other proposed and developed public facilities from mineral entry. Withdraw specific cultural resources from mineral entry including Helena, Rush Creek, Ohio Flat, Salt Flat, and Montana Cabin. Withdraw anadromous fisheries habitat improvements from mineral entry including Steiner Flat and Cemetery Hole. New acquisitions in this area would not be opened for locatable mineral entry. • Offer mineral material disposals only to enhance riparian vegetation or anadromous fisheries habitat or when not in conflict with the long-term protection of natural values. • Actively participate in the Trinity River Task Force for the purpose of implementing the Trinity River Basin Fish and Wildlife Restoration Act (now the Trinity River Restoration Program). 	Ongoing

Decision Source	Current Management Objectives and Management Actions	Status
Redding RMP 1993	<p><u>TRINITY MANAGEMENT AREA</u> Management Actions <i>Tunnel Ridge:</i></p> <ul style="list-style-type: none"> Mineral material disposals are not allowed within the 100-year floodplain of anadromous fishery streams (including Canyon, Indian and Deadwood Creeks) unless such actions enhance anadromous fisheries habitat. 	Ongoing
Redding RMP 1993	<p><u>SHASTA MANAGEMENT AREA</u> Management Objectives <i>Interlakes SRMA:</i></p> <ul style="list-style-type: none"> Maintain special status species habitat. 	Ongoing
Redding RMP 1993	<p><u>SHASTA MANAGEMENT AREA</u> Management Objectives <i>Lower Clear Creek and Mule Mountain:</i></p> <ul style="list-style-type: none"> Enhance anadromous salmonid habitat. 	Ongoing
Redding RMP 1993	<p><u>SHASTA MANAGEMENT AREA</u> Management Actions</p> <ul style="list-style-type: none"> Develop an integrated resource activity plan for Clear Creek that: ... details habitat restoration needs for anadromous salmonids, delineates DPC and restoration needs for riparian vegetation, describes protective management facilities, and lists important cooperators and their responsibilities. Conduct special status species inventories on lands available for exchange or administrative transfer. 	<ul style="list-style-type: none"> Done; Interlakes Plan Inventories are ongoing
Redding RMP 1993	<p><u>SACRAMENTO RIVER MANAGEMENT AREA</u> Management Objectives <i>Sacramento Island:</i></p> <ul style="list-style-type: none"> Improve anadromous salmonid habitat. 	Ongoing, not completed
Redding RMP 1993	<p><u>SACRAMENTO RIVER MANAGEMENT AREA</u> Management Objectives <i>Bend Area:</i></p> <ul style="list-style-type: none"> Enhance anadromous fisheries. Ensure long-term survival of special status species. 	Ongoing
Redding RMP 1993	<p><u>SACRAMENTO RIVER MANAGEMENT AREA</u> Management Actions <i>Area-Wide:</i></p> <ul style="list-style-type: none"> Conduct resource inventories for special status species on lands available for exchange, sale, or administrative transfer. 	Ongoing
Redding RMP 1993	<p><u>SACRAMENTO RIVER MANAGEMENT AREA</u> Management Actions <i>Sacramento Island:</i></p> <ul style="list-style-type: none"> Allow mineral material disposals only if such actions are intended to enhance the natural values, including anadromous salmonid and waterfowl habitat. Develop a RNA/ACEC management plan for Sacramento Island that anadromous salmonid habitat improvement actions. 	<ul style="list-style-type: none"> Ongoing Not completed

Decision Source	Current Management Objectives and Management Actions	Status
Redding RMP 1993	<p><u>SACRAMENTO RIVER MANAGEMENT AREA</u> Management Actions <i>Cottonwood Creek and Sacramento River parcels:</i></p> <ul style="list-style-type: none"> Mineral material disposals are not permitted unless such actions benefit the natural values, such as aquatic environments or fisheries. 	Ongoing
Redding RMP 1993	<p><u>SACRAMENTO RIVER MANAGEMENT AREA</u> Management Actions <i>Bend Area:</i></p> <ul style="list-style-type: none"> Acquire available unimproved lands that (in descending priority) contain high priority habitat along the Sacramento River as depicted in the 1988 Sacramento River Riparian Atlas, front the Sacramento River, provide physical access to public land, contain known/potential wetland or special status species habitat, contain important cultural resources, or facilitate overall public management within the area. 	Ongoing
Redding RMP 1993	<p><u>ISHI MANAGEMENT AREA</u> Management Objectives <i>Battle Creek (below Manton Road):</i></p> <ul style="list-style-type: none"> Enhance anadromous fisheries. 	Ongoing
Redding RMP 1993	<p><u>ISHI MANAGEMENT AREA</u> Management Objectives <i>Deer Creek:</i></p> <ul style="list-style-type: none"> Maintain and improve, if feasible, the fisheries habitat of Deer Creek. 	Ongoing
Redding RMP 1993	<p><u>ISHI MANAGEMENT AREA</u> Management Objectives <i>Forks of Butte Creek:</i></p> <ul style="list-style-type: none"> Maintain the fisheries habitat. 	Ongoing
Redding RMP 1993	<p><u>ISHI MANAGEMENT AREA</u> Management Actions <i>Area-Wide:</i></p> <ul style="list-style-type: none"> Conduct resource inventories for special status species on lands available for exchange or administrative transfer. 	Ongoing
Redding RMP 1993	<p><u>ISHI MANAGEMENT AREA</u> Management Actions <i>Battle Creek:</i></p> <ul style="list-style-type: none"> Mineral material disposals are not permitted unless such actions enhance the natural values, including fisheries habitat recovery. 	Ongoing
Redding RMP 1993	<p><u>YOLLA BOLLY MANAGEMENT AREA</u> Management Objectives</p> <ul style="list-style-type: none"> None <p>Management Actions</p> <ul style="list-style-type: none"> Conduct resource inventories for special status species on lands available for exchange. 	Ongoing
		Ongoing

3.2.7 Forestry

Table 3-5 identifies existing land use plan decisions in the Redding and Arcata FOs for forestry.

Table 3-5. Current Management Objectives, Decisions, and Actions for Forestry

Decision Source	Current Management Objectives and Management Decisions	Status
Arcata RMP 1992	<p><u>BUTTE CREEK</u> Management Objectives Enhance old-growth forest characteristics and related wildlife species—particularly the NSO.</p>	Ongoing
Arcata RMP 1992	<p><u>BUTTE CREEK</u> Land Use Allocations</p> <ul style="list-style-type: none"> Remove all suitable CFL from the timber production base. This is currently about 2,100 acres. Tree planting, brush and hardwood release, and some pre-commercial thinning will be allowed to improve, create or increase wildlife habitat and biodiversity, as well as to enhance old-growth forest characteristics (See Management Objectives) and protect the forest resource (insect, disease, fire). All forest stands are available for non-consumptive research and cone collecting. Fire, disease, and insects will be controlled to prevent spreading to other lands, and to protect the existing forest. 	Ongoing
Arcata RMP 1992	<p><u>BUTTE CREEK</u> Management Actions</p> <ul style="list-style-type: none"> Monitor spotted owls and other old-growth characteristics. Continue to inventory habitat conservation/critical habitat areas. 	Ongoing
Arcata RMP 1992	<p><u>KING RANGE AND VICINITY</u> Management Objectives</p> <ul style="list-style-type: none"> Use Forest Management to enhance the watershed condition and visual quality of coastal streams. Improve, create, or increase wildlife habitat and biodiversity and provide protection to the forest resources. 	Ongoing
Arcata RMP 1992	<p><u>KING RANGE AND VICINITY</u> Land Use Allocations</p> <ul style="list-style-type: none"> Remove 900 acres of suitable CFL west of Cooskie Ridge from the timber production base. Include all other suitable CFL in the management area, except for streamside buffers, in the CFL production base. No annual allowable cut is planned for the next 100 years. Forest management activities include tree planting, brush/hardwood release and pre-commercial thinning as part of the forest improvement program. 	Ongoing
Arcata RMP 1992	<p><u>KING RANGE AND VICINITY</u> Management Actions</p> <ul style="list-style-type: none"> Continue inventory of habitat conservation/critical habitat areas. 	Ongoing
Arcata RMP Forest Plan Amendment 1995	<p>Management Objectives Area-Wide:</p> <ul style="list-style-type: none"> Control fire, disease, and insects to prevent spreading to other lands and to protect the existing forest conditions. 	Ongoing

Decision Source	Current Management Objectives and Management Decisions	Status
Arcata RMP Forest Plan Amendment 1995	<p>Management Actions</p> <p><i>Area-Wide:</i></p> <p>Watershed Management Old Growth Retention:</p> <ul style="list-style-type: none"> • Manage 72,764 acres as LSRs, Manage 49,605 acres as Matrix, apply silvicultural prescriptions (timber stand improvement) on improvement) on previously entered forest stands to develop habitat for late-develop habitat for late-successional forest species and successional forest species. Designate approximately 36,000 acres as closed to vehicle use. • Acquisition of 18,669 acres of private land in the Lacks Creek, Red Mountain, and Scattered Tracts (Gilham Butte). Management areas would increase the total acreage of LSRs in the plan amendment area by 26 percent. Land acquisitions and cooperative partnerships would enhance the viability of the NWFP LSR network by providing greater potential ecological diversity, increased opportunity for maintenance of natural ecological processes and functions, and greater connectivity. Development of cooperative partnerships for management of late-successional habit on an additional 8,500 acres of private land would further enhance the viability of the LSRs. • Late-successional/old-growth fragments in the matrix would be managed in accordance with matrix standards and guidelines. • Known NSO activity centers within the matrix would be protected through management as “unmapped” LSRs. • Minor forest products would be made available as a by-product of forest improvement activities in LSRs and the matrix. • Any herbicide use will be consistent with procedures and limitations outlined in the California Vegetation Management ROD (USDI BLM 1988b). Herbicide use will also comply with the applicable management objectives and standards and guidelines of the NWFP. Those standards and guidelines providing the greater benefits to late-successional forest-related species will apply. • Forest resources, including timber and minor forest products, will be managed in accordance with NWFP land allocations, standards and guidelines, and Aquatic Conservation Strategy. • Incorporate the NWFP by reference adopting all wording. 	Ongoing
Arcata RMP Forest Plan Amendment 1995	<p><u>LACKS CREEK MANAGEMENT AREA</u></p> <p>Management Objectives</p> <p>Protect significant old-growth stands:</p> <ul style="list-style-type: none"> • From influences that could alter or disrupt the intrinsic values or ecological systems of these areas. • To preserve the full range of genetic and behavioral diversity for old-growth associated plants and animals and special status species. • To provide research and higher education opportunities for scientists and teachers. • To allow natural physical and biological processes to prevail. • To re-establish and accelerate development of mature forest structural characteristics on previously entered stands for long-term restoration of this element of biological diversity • To provide minor forest products to the public as they become available through facility/road maintenance and forest development as described in bullet above. 	Ongoing

Decision Source	Current Management Objectives and Management Decisions	Status
Arcata RMP Forest Plan Amendment 1995	<p><u>LACKS CREEK MANAGEMENT AREA</u></p> <p>Land Use Allocations</p> <ul style="list-style-type: none"> • Manage 4,100 acres as an LSR as part of a regional network of existing older forests providing a distribution, quantity, and quality of old-forest habitat and to provide habitat for viable, well distributed populations of species. These late successional forest areas are not subject to programmed timber harvest. Management standards and guidelines are designed to improve habitat in younger stands or to produce stand structure and components associated with late-successional conditions. • On previously entered forest stands (including acquired cutover lands), actively regenerate new stands and promote forest development in established young stands on approximately 550 acres that do not currently provide mature forest structure. Minor forest products such as poles, firewood, and seeds will be made available in conjunction with habitat improvement projects. • Manage 72,764 acres as LSRs to comply with the USFWS's recovery guidelines for the NSO and to allow critical habitat to perform the biological function for which it was designated. Acquire 12,389 acres to enhance the long-term ability of the Lacks Creek area to support the USFWS's draft final recovery plan numerical goals for pairs of NSO. 	Ongoing
Arcata RMP Forest Plan Amendment 1995	<p><u>LACKS CREEK MANAGEMENT AREA</u></p> <p>Management Actions</p> <p>Prepare a watershed activity plan that includes:</p> <ul style="list-style-type: none"> • Silvicultural activities in previously entered stands for developing suitable habitat for late-successional forest species where those conditions do not now exist (5-year LSR development/improvement plan. • Management actions, which could include silvicultural activities, for protecting or enhancing old-growth values within the RNA/ACEC. 	Completed Lacks Creek Plan
Arcata RMP Forest Plan Amendment 1995	<p><u>RED MOUNTAIN MANGEMENT AREA</u></p> <p>Management Objectives</p> <ul style="list-style-type: none"> • Protect existing old-growth stands from influences that could alter or disrupt the intrinsic values, stability, or ecological processes of these systems. • Re-establish and accelerate development of mature forest structural characteristics on previously entered stands and acquired cutover lands for long-term restoration of this element of biological diversity. • Establish the management area as a lowland Douglas-fir population center for the NSO, maintaining habitat for a minimum of twenty pair sites. • Restore ecological processes that maintain late successional forest ecosystems. • Provide minor forest products (firewood, seeds, and poles) to the market in accordance with NWFP objectives and standards and guidelines for LSR and matrix. 	Ongoing

Decision Source	Current Management Objectives and Management Decisions	Status
Arcata RMP Forest Plan Amendment 1995	<p><u>RED MOUNTAIN MANGEMENT AREA</u></p> <p>Land Use Allocations</p> <ul style="list-style-type: none"> • Manage 34,344 acres (approximately 97 percent) as LSR as part of a regional network of existing older forests providing a distribution, quantity, and quality of old-forest habitat and to provide habitat for viable, well distributed populations of species. These late-successional forest areas are not subject to programmed timber harvest. Management standards and guidelines are designed to improve habitat in younger stands or to produce stand structure and components associated with late-successional conditions. • Manage 1,320 acres as matrix. • Manage 22,000 acres key watersheds. • Employ a concept/strategy of ecosystem management that includes late-successional forest/NSO core habitat and other private lands that lie within a zone of influence of the existing pattern of public landownership. Participate with private landowners to provide habitat management options to meet both federal and state habitat conservation strategies and improve public land management. Through cooperative management planning, use acquisition/exchange, cooperative management agreements, conservation easements, direct financial incentives, mitigation banking, and so forth to meet habitat management objectives. These areas include: <ul style="list-style-type: none"> ◦ Approximately 8,500 acres of potential late successional forest/NSO core habitat in the McCoy Creek, East Branch South Fork Eel River, Tom Long Creek, Charlton Creek, Tenmile Creek, and South Fork Eel River watersheds. ◦ Approximately 2,500 acres of endangered plant habitat adjacent to the Red Mountain ACEC in the Cedar Creek and Red Mountain Creek watersheds. ◦ Approximately 50,000 acres of private lands, providing potential connectivity between late successional forest blocks on acquired lands and previously entered forest stands actively regenerate new stands and promote forest development in established young stands that do not currently provide mature forest structure. • Identify opportunities to re-create, to the extent possible, the structural and compositional features of late-successional forests in even-aged stands through silviculture. • Develop cooperative management partnerships to meet habitat improvement objectives and provide incidental forest products. These products may result from thinnings of overstocked conifer or hardwood stands, site preparation for small-scale conversion of young hardwood stands to increase the conifer component, road and other facility maintenance, or salvage following catastrophic events. 	Completed LSR Assessments
Arcata RMP Forest Plan Amendment 1995	<p><u>RED MOUNTAIN MANGEMENT AREA</u></p> <p>Management Actions</p> <ul style="list-style-type: none"> • Complete 5-year project planning schedule for late-successional forest development. • Establish cooperative management partnerships for sustainable forestry practices in South Fork Eel River watershed to promote habitat development projects and provide local supply of alternative forest products. 	Ongoing

Decision Source	Current Management Objectives and Management Decisions	Status
Arcata RMP Forest Plan Amendment 1995	<p><u>COVELO AND VICINITY</u></p> <p>Management Objectives</p> <ul style="list-style-type: none"> <li>• Protect existing old-growth stands from influences that could alter or disrupt the intrinsic values, stability, or ecological processes of these systems. <li>• Re-establish ecological processes such as fire to maintain terrestrial habitats emphasizing management of brushlands to maintain diversity and forest communities to manage fir encroachment and maintain pine component. <li>• Re-establish and accelerate development of mature forest structural characteristics on previously entered stands and acquired cutover lands for long-term restoration of this element of biological diversity. <li>• Restore ecological processes that maintain late-successional forest ecosystems. <li>• Identify opportunities to re-create, to the extent possible, the structural and compositional features of late-successional forests in even-aged stands through silviculture. 	Ongoing
Arcata RMP Forest Plan Amendment 1995	<p><u>COVELO AND VICINITY</u></p> <p>Land Use Allocations</p> <ul style="list-style-type: none"> <li>• Manage 24,000 acres as LSR as part of a regional network of existing older forests providing a distribution, quantity, and quality of old-forest habitat and to provide habitat for viable, well distributed populations of species. These late- successional forest areas are not subject to programmed timber harvest. Management standards and guidelines are designed to improve habitat in younger stands or to produce stand structure and components associated with late- successional conditions. These blocks of land include: <ul style="list-style-type: none"> <li>◦ Casoose Creek 2,700 acres <li>◦ White Rock Creek 2,400 acres <li>◦ Woodman Creek 1,800 acres <li>◦ Dingman 3,700 acres <li>◦ Willis Ridge 4,500 acres <li>◦ Brushy Mountain 7,000 acres <li>◦ Little Darby 1,100 acres <li>◦ Lake Mountain 900 acres <li>• Manage 3,152 acres as a key watershed. <li>• Manage 42,500 as matrix lands. <ul style="list-style-type: none"> <li>◦ On acquired lands and previously entered forest stands, actively regenerate new stands and promote forest development in established young stands that do not currently provide mature forest structure. <li>• Develop cooperative management partnerships to meet habitat improvement objectives and provide incidental forest products. These products may result from thinnings of overstocked conifer or hardwood stands, site preparation for small-scale conversion of young hardwood stands to increase the conifer component, road and other facility maintenance, or salvage following catastrophic events. 	Ongoing

Decision Source	Current Management Objectives and Management Decisions	Status
Arcata RMP Forest Plan Amendment 1995	<p><u>COVELO AND VICINITY</u></p> <p>Management Actions</p> <ul style="list-style-type: none"> Participate in watershed associations and private/public cooperative resource management planning to secure habitats for late successional forest species, implement regional forest ecosystem management, and consolidate management on large watersheds with multiple ownership. Complete 5-year project planning schedule for late-successional forest development. 	Ongoing
Arcata RMP Forest Plan Amendment 1995	<p><u>SCATTERED TRACTS</u></p> <p>Management Objectives</p> <ul style="list-style-type: none"> Maximize contribution of public lands to regional plans for managing biological diversity. 	Ongoing
Arcata RMP Forest Plan Amendment 1995	<p><u>SCATTERED TRACTS</u></p> <p>Land Use Allocations</p> <ul style="list-style-type: none"> Manage 10,320 acres as LSR as part of a regional network of existing older forests providing a distribution, quantity, and quality of older forest habitat and to provide habitat for viable, well-distributed populations of species. These late successional forest areas are not subject to programmed timber harvest. Management standards and guidelines are designed to improve habitat in younger stands or to produce stand structure and components associated with late- successional conditions. These blocks of land include: <ul style="list-style-type: none"> Gilham Butte - 2,550 acres Jaqua Butte - 1,080 acres Coleman Creek - 440 acres Cameron Creek - 40 acres Greenough Ridge/Montgomery Woods - 960 acres Impassable Rocks/Eagle Peak - 1,880 acres Pine Ridge - 3,370 acre Manage 5,785 as matrix lands. Provide minor forest products to the public as they become available through facility/road maintenance and forest development. 	Ongoing
Arcata RMP Forest Plan Amendment 1995	<p><u>SCATTERED TRACTS</u></p> <p>Management Actions</p> <ul style="list-style-type: none"> Prepare RNA/ACEC Activity Plans for Gilham and Jaqua Buttes to address site specific needs, access, and so forth. The Gilham Butte and Jaqua Butte RNA/ACECs are available for non-consumptive research and cone collecting. Control fire, disease, and insects to prevent spreading to other lands and to protect the existing forest conditions. 	Ongoing
Redding RMP 1993	<p>Management Objectives</p> <ul style="list-style-type: none"> The Redding Resource Area forest management program is operating under the “Timber Management Environmental Assessment for Sustained Yield 15” referred to as SYU-15. 	Ongoing, but also use HFI
Redding RMP 1993	<p>Management Actions</p> <ul style="list-style-type: none"> Lands classified under the Timber Production Capability Classification (TPCC). This system was used to determine the CFL base. 	No longer used, switched to Micro*Storms

Decision Source	Current Management Objectives and Management Decisions	Status
Redding RMP 1993	<p>Management Actions</p> <ul style="list-style-type: none"> Disposal lands are managed as restricted management. The restricted management actions on the disposal lands would not permit any long-term investment or commitments but would allow actions needed to protect or maintain current or potential value of resources. No green timber sales would be permitted. Allowed would be pre-commercial thinning, seedling protection and release, and salvage timber harvest. 	Not implemented, often disposal lands are actively managed (i.e., WCF)
Redding RMP 1993	<p>Management Actions</p> <ul style="list-style-type: none"> Woodlands are to be managed for limited harvest of minor wood forest products, and only when it does not conflict with management of other resources. Salvage logging may be instituted following catastrophic events such as fire, insect epidemics or landslides. Intensive managed areas should be set on a rotational age of 80-100 years for return entry. Restricted lands would have longer rotation periods as they would be subject to wide array of biological, visual, cultural, and social controls. These areas may not be optimal for the production of timber. Areas termed not available will have no timber harvest. When forest management is not directly mentioned in the alternative description, timber harvest may only occur for the enhancement of other resources, or if not in conflict with the management of natural or cultural resources. Large or extensive clear cuts are not planned; however, some may be clear-cut as a result of fire, insect or disease salvage, or silvicultural requirements. Herbicides are not planned for use in forest management, but are not precluded if the need arose. The NWFP is to be instituted FO-wide where it applies. Designations within the NWFP and management requirements for those designated areas will be applied to proper areas. The NWFP was written after the Redding RMP, and an amendment was not conducted to incorporate the language into the Redding RMP. As such, the NWFP is incorporated in full where applicable. Total acreage within the NWFP in the Redding FO is 89,643 acres. 	Ongoing
Redding RMP 1993	<p><u>KLAMATH MANAGEMENT AREA</u> Management Objectives</p> <ul style="list-style-type: none"> Within the Klamath Management Area, there are 49 acres of LSR, 137 acres of Riparian Reserves/Matrix, 173 acres of administratively withdrawn, and 329 of adaptive management areas, as designated in the NWFP. All acres with NWFP designations will be managed according to NWFP guidelines for each type of designation. 	Ongoing
Redding RMP 1993	<p><u>SCOTT VALLEY MANAGEMENT AREA</u></p> <ul style="list-style-type: none"> All available CFL will be managed as “restricted” until transferred from BLM administration. Within the Scott Valley Management Area there are, 9,468 acres of Riparian Reserves/Matrix, 106 acres of administratively withdrawn, as designated in the NWFP. All acres with NWFP designations will be managed according to NWFP guidelines for each type of designation. 	Ongoing

Decision Source	Current Management Objectives and Management Decisions	Status
Redding RMP 1993	<p><u>TRINITY MANAGEMENT AREA</u> Management Objectives</p> <ul style="list-style-type: none"> • Within the Trinity Management Area, there are 3,624 acres of LSR, 26,172 acres of Riparian Reserves/Matrix, 142 acres of administratively withdrawn, 79 acres of congressionally withdrawn, and 1,407 acres of adaptive management areas, as designated in the NWFP. All acres with NWFP designations will be managed according to NWFP guidelines for each type of designation. <p><i>Trinity River:</i></p> <ul style="list-style-type: none"> • Maintain a limited supply of forest products from available CFL, if not in conflict with the other resource values. <p><i>North of Trinity River/Deadwood/Indian Creek:</i></p> <ul style="list-style-type: none"> • Maintain or improve the long-term sustained yield of forest products from the available CFL. 	Ongoing; wildfire events have altered forest lands; hazard mitigation, restoration, and reforestation are a focus
Redding RMP 1993	<p><u>TRINITY MANAGEMENT AREA</u> Management Actions</p> <p><i>Area-Wide:</i></p> <ul style="list-style-type: none"> • Allow forest management practices consistent with VRM Class II guidelines and special status species protection. All available CFL would be managed for the enhancement of other resource values. <p><i>Tunnel Ridge</i></p> <ul style="list-style-type: none"> • The majority of the available CFL would be managed as restricted. 	Ongoing
Redding RMP 1993	<p><u>SHASTA MANAGEMENT AREA</u> Management Objectives</p> <ul style="list-style-type: none"> • Within the Shasta Management Area, there are 70 acres of Congressionally Withdrawn, 28,077 acres of Riparian Reserves/Matrix, 14,411 acres of administratively withdrawn, as designated in the NWFP. All acres with NWFP designations will be managed according to NWFP guidelines for each type of designation. <p><i>Area-Wide:</i></p> <ul style="list-style-type: none"> • Maintain or improve the long-term sustained yield of forest products from available CFL. <p><i>West of French Gulch:</i></p> <ul style="list-style-type: none"> • Maintain or improve the long-term sustained yield of forest products from the available CFL. 	Ongoing; wildfire events have altered forest lands; hazard mitigation, restoration, and reforestation are a focus
Redding RMP 1993	<p><u>SHASTA MANAGEMENT AREA</u> Management Actions</p> <ul style="list-style-type: none"> • None 	N/A
Redding RMP 1993	<p><u>ISHI MANAGEMENT AREA</u> Management Objectives</p> <ul style="list-style-type: none"> • Maintain the long-term sustained yield of forest products from the available CFL outside the Butte Creek canyon. 	Ongoing; wildfire events have altered forest lands; hazard mitigation, restoration, and reforestation are a focus
Redding RMP 1993	<p><u>ISHI MANAGEMENT AREA</u> Management Actions</p> <ul style="list-style-type: none"> • None 	N/A
Redding RMP 1993	<p><u>YOLLA BOLLY MANAGEMENT AREA</u> Management Objectives</p> <ul style="list-style-type: none"> • None 	N/A

Decision Source	Current Management Objectives and Management Decisions	Status
Redding RMP 1993	<u>YOLLA BOLLY MANAGEMENT AREA</u> Management Actions <ul style="list-style-type: none"> The majority of available CFL would be managed as restricted. 	Ongoing

3.2.8 Lands with Wilderness Characteristics

Table 3-6 identifies existing land use plan decisions in the Redding and Arcata FOs for lands with wilderness characteristics.

Table 3-6. Current Management Objectives, Decisions, and Actions for Wilderness Characteristics

Decision Source	Current Management Objectives and Management Decisions	Status
Redding RMP 1993	<u>TRINITY MANAGEMENT AREA</u> Resource Condition Objectives <i>Tunnel Ridge:</i> <ul style="list-style-type: none"> Protect the wilderness characteristics on 4,875 acres of public land adjoining the Trinity Alps Wilderness Area in cooperation with the Shasta-Trinity National Forests. 	Congressional transfer to Forest Service in 2010. No longer managed by the Redding FO.

3.2.9 Invasive, Nonnative Plants

Table 3-7 identifies existing land use plan decisions in the Redding and Arcata FOs for invasive, nonnative plants.

Table 3-7. Current Management Objectives, Decisions, and Actions for Invasive, Nonnative Plants

Decision Source	Current Management Objectives and Management Decisions	Status
Arcata RMP Samoa Amendment 1995	Management Objectives <i>Manila Dunes</i> <ul style="list-style-type: none"> Enhance natural values and dune ecosystem. Protect specific populations of Humboldt Bay wallflower and beach layia populations, and potential nesting sites for the western snowy plover. 	Ongoing
Arcata RMP Samoa Amendment 1995	Management Actions <i>Manila Dunes</i> <ul style="list-style-type: none"> Conduct dune restoration and exotic plant removal. 	Ongoing

3.2.10 Paleontology

There are no current management objectives, decisions, or actions for paleontological resources in any of the existing planning documents.

3.2.11 Soils

Table 3-8 identifies existing land use plan decisions in the Redding and Arcata FOs for soils.

Table 3-8. Current Management Objectives, Decisions, and Actions for Soils

Decision Source	Current Management Objectives and Management Decisions	Status
Arcata RMP 1992	<p>Management Objectives</p> <ul style="list-style-type: none"> Facilitate and encourage scientific research of the unique soils on Red Mountain. <p>Management Decisions</p> <ul style="list-style-type: none"> Decisions regarding soil and water objectives will not be made in this plan. BMPs such as the operating parameters for the SYU 13 and Yokayo Grazing Management Records of Decision and the NRCS Soil Survey Guidelines will determine general soil and water objectives. 	Ongoing
Arcata RMP Forest Plan Amendment 1995	<p>PLANNING AREA-WIDE</p> <ul style="list-style-type: none"> Designate approximately 86,000 acres in the plan amendment area and the Pine Ridge Road and maintained spur roads as LIMITED to provide protection against soil erosion, compaction, and water quality degradation that could result from cross-country vehicle use. 	Completed
Arcata RMP Forest Plan Amendment 1995	<p>RED MOUNTAIN MANAGEMENT AREA</p> <p>Land Use Allocations</p> <ul style="list-style-type: none"> Close a total of 18,882 acres to vehicle use [in the Red Mountain ACEC (6,895 acres), Elder Creek RNA/ACEC (3,775 acres), and South Fork Eel River WSR corridor (8,212 acres)] and limiting vehicle use to transportation facilities designed for highway vehicles having four or more wheels on 16,782 acres in the rest of the management area to provide protection against soil erosion and compaction that could result from cross-country vehicle use. 	Completed
Arcata RMP Forest Plan Amendment 1995	<p>COVELO VICINITY MANAGEMENT AREA</p> <ul style="list-style-type: none"> Close a total of 13,069 acres (7,009 acres in the BLM portion of the Yolla-Bolly/Middle Eel Wilderness and 6,060 acres in the Middle Fork Eel River corridor) to vehicle use and limit vehicle use to transportation facilities designed for highway vehicles having four or more wheels on 53,431 acres in the rest of the Covelo Vicinity Management Area to provide protection against soil erosion and compaction that could result from cross-country vehicle use. 	Completed
Arcata RMP Forest Plan Amendment 1995	<p>SCATTERED TRACTS MANAGEMENT AREA</p> <ul style="list-style-type: none"> Close isolated parcels (approximately 320 acres) in the Van Duzen, main stem Eel, and Klamath Rivers designated WSR corridors and limit vehicle use to transportation facilities designed for highway vehicles having four or more wheels on 15,785 acres in the rest of the Scattered Tracts Management Area to provide protection against soil erosion and compaction that could result from cross-country vehicle use. 	Completed

Decision Source	Current Management Objectives and Management Decisions	Status
Proposed Redding RMP 1992	<p><u>ISHI MANAGEMENT AREA</u> Management Objectives</p> <ul style="list-style-type: none"> The maintenance and improvement of soil cover and productivity would continue to be accomplished through preventive measures and land treatments under all land use management alternatives. Preventive measures would be brought forward in project planning and environmental analyses. Preventive measures typically include the avoidance of high erosion areas, restrictions on type and season of use and closure to certain uses such as forest management, vehicle use, grazing, or mineral development. Land treatments would be identified to heal earth-disturbing activities or applied to excessively eroded areas needing stabilization. Land treatments include seeding of grasses and forbs, plantings of cuttings and transplants, wattling and brush layering and matting, land shaping, application of mulches, and the construction of erosion control structures. <p>Acquired lands containing decomposed granitic soils will not be open for locatable mineral entry.</p>	Ongoing
Redding RMP 1993	<p><u>AREA-WIDE</u> Management Objectives</p> <ul style="list-style-type: none"> Prevent impairment of soil productivity due to accelerated soil loss or physical or chemical degradation of the soil resources and ensure that BLM management actions and objectives are consistent with soil resource capabilities. The authority to implement these objectives is based on an assortment of federal acts, executive orders, and MOU. Soils disturbed by range improvement construction will be reseeded with native and/or approved introduced species as soon as possible, unless it is determined to be unnecessary. The maintenance and improvement of soil cover and productivity would continue to be accomplished through preventive measures and land treatments under all land use management alternatives. Preventive measures would be brought forward in project planning and environmental analyses. Preventive measures typically include the avoidance of high erosion areas, restrictions on type and season of use, and closure to certain uses such as forest management, vehicle use, grazing, or mineral development. Land treatments would be identified to heal earth-disturbing activities or applied to excessively eroded areas needing stabilization. Land treatments include seeding of grasses and forbs, plantings of cuttings and transplants, wattling, brush layering and matting, land shaping, application of mulches, and the construction of erosion control structures. 	Ongoing
Redding RMP 1993	<p><u>TRINITY MANAGEMENT AREA</u> <i>Grass Valley Creek Watershed:</i> Management Objectives</p> <ul style="list-style-type: none"> Reduce the sediment load entering the Trinity River via GVC for the improvement of anadromous fisheries. 	Ongoing
Redding RMP 1993	<p><u>TRINITY MANAGEMENT AREA</u> <i>Grass Valley Creek Watershed:</i> Management Decisions</p> <ul style="list-style-type: none"> BLM roads and trails within the zone of decomposed granite-derived soils are closed to vehicle use during the rainy season and could be closed on a year-round basis at the discretion of the BLM to protect the resource values of these erosion sensitive areas. Also, soil-disturbing activities would be conducted only when no new, long-term increases to erosion would result. 	Ongoing

Decision Source	Current Management Objectives and Management Decisions	Status
Redding RMP 1993	<p><u>TRINITY MANAGEMENT AREA</u> <i>Grass Valley Creek Watershed:</i> Management Actions</p> <ul style="list-style-type: none"> Acquire GVC watershed in Trinity County and manage to reduce erosion. 	Completed
Redding RMP 1993	<p><u>ISHI MANAGEMENT AREA</u> Management Objective <i>Minnehaha Mine:</i></p> <ul style="list-style-type: none"> Stabilize the ongoing erosion due to past mining practices. 	Completed
Redding RMP 1993	<p><u>SWASEY DRIVE AREA</u> Management Decision</p> <ul style="list-style-type: none"> Follow the Swasey Drive Area Implementation Plan: The threshold for damage to soils or other resources is more than 20 off road vehicle intrusions per year off designated routes, noticeable damage to archaeological sites or features, or more than 1,000 square feet of surface disturbance per year. 	Ongoing
Redding RMP 1993	<p><u>SWASEY DRIVE AREA</u> Management Decision</p> <ul style="list-style-type: none"> The target shooting area will be reclaimed after closure (with the southeasterly one-half reclaimed earlier if funds are available) through lead removal, scarification, re-contouring to a natural setting, mulching, and planting of native species. 	Partially completed. Ongoing
Redding Proposed Livestock Grazing Management EIS 1983	<p><u>ISHI MANAGEMENT AREA</u> Management Objective Standard Implementation Procedures</p> <ul style="list-style-type: none"> Soil erosion would be monitored by using the Universal Soil Loss Equation as modified by the NRCS for rangeland application. 	Ongoing (inconsistent implementation)
Redding Proposed Livestock Grazing Management EIS 1983	<p><u>ISHI MANAGEMENT AREA</u> Management Objective Standard Implementation Procedures</p> <ul style="list-style-type: none"> Soil disturbed by construction will be reseeded with native and/or approved introduced species as soon as possible to replace ground cover on the sites, unless it is determined by the authorized officer to be unnecessary. 	Not occurring

3.2.12 Special Status Plants

Table 3-9 identifies existing land use plan decisions in the Redding and Arcata FOs for special status plants.

Table 3-9. Current Management Objectives, Decisions, and Actions for Special Status Plants

Decision Source	Current Management Objectives and Management Decisions	Status
Arcata RMP 1992	<p><u>SAMOA PENINSULA</u> Management Objectives <i>Samoa Dunes:</i></p> <ul style="list-style-type: none"> Protect specific populations of Menzies’ wallflower (<i>Erysimum menziesii</i>) and beach layia (<i>Layia carnosa</i>). <p><i>Manila Dunes:</i></p> <ul style="list-style-type: none"> Enhance natural values. Protect sensitive species according to the BLM sensitive species policies (Appendices 2-3 and 2-4 located in the 1992 Arcata RMP). T&E species management will follow Section 7 consultation procedures in accordance with the ESA. Species proposed for listing, such as the beach layia, will follow USFWS conferencing requirements concerning the conservation and recovery of proposed federally listed species. 	Ongoing
Arcata RMP 1992	<p><u>SAMOA PENINSULA</u> Land Use Allocations</p> <ul style="list-style-type: none"> Designate the entire 112 acres of the Manila Dunes as an ONA and ACEC for protection and interpretation of natural values. 	Completed
Arcata RMP 1992	<p><u>SAMOA PENINSULA</u> Management Actions</p> <ul style="list-style-type: none"> Monitor Menzies’ wallflower, and beach layia. Prepare an ACEC activity plan for Manila Dunes after completion of Humboldt County Beach and Dunes Management Plan. ACEC plan to be consistent with this plan. 	<ul style="list-style-type: none"> Ongoing Completed
Arcata RMP 1992	<p><u>RED MOUNTAIN MANAGEMENT AREA</u> Management Objectives</p> <ul style="list-style-type: none"> Enhance and facilitate protection of unique botanical values – particularly <i>Arabis macdonaldiana</i>. 	Ongoing
Arcata RMP 1992	<p><u>RED MOUNTAIN MANAGEMENT AREA</u> Management Actions</p> <ul style="list-style-type: none"> Implement <i>Arabis</i> Recovery Plan. 	Ongoing
Arcata RMP Forest Plan Amendment 1995	<p><u>RED MOUNTAIN MANAGEMENT AREA</u> Management Objectives</p> <ul style="list-style-type: none"> Manage habitats for endangered plants and animals within larger ecosystems. <p>Management Actions</p> <ul style="list-style-type: none"> Enhance and facilitate protection of unique botanical resources, particularly <i>Arabis macdonaldiana</i>. 	Ongoing
Arcata RMP Forest Plan Amendment 1995	<p><u>COVELO VICINITY MANAGEMENT AREA</u> Management Objectives</p> <p>Manage habitats for endangered plants and animals within larger ecosystems.</p>	Ongoing

Decision Source	Current Management Objectives and Management Decisions	Status
Arcata RMP Samoa Amendment 1995	<p>Management Objectives</p> <p><i>Samoa Peninsula:</i></p> <ul style="list-style-type: none"> Protect sensitive species according to the BLM sensitive species policies (USDI BLM Manual Section 6840). T&E species management will follow Section 7 consultation procedures in accordance with the ESA. <p><i>Samoa Dunes:</i></p> <ul style="list-style-type: none"> Protect specific populations of Humboldt Bay wallflower (<i>Erysimum menziesii</i> ssp. <i>eurekaense</i>), beach layia (<i>Layia carnosa</i>), coastal wetlands, and other natural values. <p><i>Manila Dunes:</i></p> <ul style="list-style-type: none"> Enhance natural values and dune ecosystem. Protect specific populations of Humboldt Bay wallflower (<i>Erysimum menziesii</i> ssp. <i>eurekaense</i>) and beach layia (<i>Layia carnosa</i>) populations, and potential nesting sites for the western snowy plover (<i>Charadrius alexandrinus</i> ssp. <i>nivosus</i>). 	Ongoing
Arcata RMP Samoa Amendment 1995	<p>Land Use Allocations</p> <p><i>Manila Dunes:</i></p> <ul style="list-style-type: none"> Maintain the entire 112 acres of the Manila Dunes as a RNA/ACEC for protection and interpretation of natural values. 	Ongoing
Arcata RMP Samoa Amendment 1995	<p>Management Actions</p> <p><i>Samoa Peninsula (Area-wide):</i></p> <ul style="list-style-type: none"> Prepare an ACEC plan for Manila Dunes. Monitor botanical resources. Conduct dune restoration and exotic plant removal. Continue to work with local governments in the management of the entire peninsula. 	<ul style="list-style-type: none"> Completed Ongoing Ongoing Ongoing
Redding RMP 1993	<p>PLANNING AREA-WIDE</p> <p>Land Use Allocations</p> <ul style="list-style-type: none"> The leasing of coal in the Redding Resource Area is not considered in the RMP due to the potential environmental impacts of surface mining, potential conflicts with other resources, lack of a positive monetary return to the US Government, incompatible adjoining land uses, apparent lack of public demand, and a lack of a known significant resource base. Any future decision to lease coal will require an RMP amendment. 	Ongoing
Redding RMP 1993	<p>PLANNING AREA-WIDE</p> <p>Management Actions</p> <ul style="list-style-type: none"> A processing delay notice for fluid minerals leases will be used to protect sensitive plant species and their habitat from the surface disturbing effects of fluid minerals development. The BLM's current knowledge of the location of these is due to a limited, but increasing, inventory base, and a constantly changing list of plant species that are considered sensitive species. This notice will be included in new mineral leases that occur on lands identified as having suitable habitat for these species. A fluid minerals lease notice for the protection of T&E species will be included on all leases where these species are thought to exist. Current inventory is not sufficient to define all these areas at the present time. When existing mineral leases expire, the affected lands will be subject to the requirements of this RMP for any new exploration, leasing, and development actions. 	Ongoing

Decision Source	Current Management Objectives and Management Decisions	Status
Redding RMP 1993	<p><u>SHASTA MANAGEMENT AREA</u></p> <p>Management Objectives</p> <p><i>Management Area-Wide:</i></p> <ul style="list-style-type: none"> • Recognize certain special status species of plants and wildlife that merit attention in the management of the public lands. Minimize the decline of those species designated as special status through the mitigation of resource management impacts. • Promote the enhancement of special status species through positive management of their habitats and populations. 	Ongoing
Redding RMP 1993	<p><u>SHASTA MANAGEMENT AREA</u></p> <p>Land Use Allocations</p> <p><i>Interlakes SRMA:</i></p> <ul style="list-style-type: none"> • Acquire available unimproved lands that provide legal public access to adjoining public lands, complete segments of recreational trails, enhance protection of sensitive resources, provide opportunities for public interpretation, enhance reforestation efforts (including habitat improvement for sensitive species), or enhance long-term administration of the area. <p><i>West of French Gulch:</i></p> <ul style="list-style-type: none"> • Acquire available unimproved lands that enhance long-term forestry management, possess critical habitat for wintering deer, contain significant cultural resources, enhance protection or restoration of special status species habitat, provide physical access to public lands, or enhance long-term administration of the area. 	Ongoing
Redding RMP 1993	<p><u>KLAMATH MANAGEMENT AREA</u></p> <p>Management Actions</p> <p><i>Shasta Valley Wetlands:</i></p> <ul style="list-style-type: none"> • Develop an integrated resource activity plan for the Shasta Valley Wetlands if BLM acquires available privately owned unimproved lands within the area. The activity plan will be developed in cooperation with CDFW, Caltrans, Siskiyou County, and interested organizations/individuals. The plan will identify forage allocation and DPCs for domestic and native grazing, acquisition/cooperative management needs, a network of management facilities to protect the native wetlands, wildlife productivity targets, water quality base and target standards, and public access needs that do not adversely impact the native biota. 	Ongoing
Redding RMP 1993	<p><u>SHASTA MANAGEMENT AREA</u></p> <p>Management Actions</p> <p><i>Interlakes SRMA:</i></p> <ul style="list-style-type: none"> • Maintain special status species habitat. 	Ongoing
Redding RMP 1993	<p><u>SACRAMENTO RIVER MANAGEMENT AREA</u></p> <p>Management Objectives</p> <p><i>Hawes Corner:</i></p> <ul style="list-style-type: none"> • Ensure the long-term survival of <i>Orcuttia tenuis</i>. <p><i>Bend Area:</i></p> <ul style="list-style-type: none"> • Ensure long-term survival of special status species. 	Ongoing

Decision Source	Current Management Objectives and Management Decisions	Status
Redding RMP 1993	<p>SACRAMENTO RIVER MANAGEMENT AREA</p> <p>Land Use Allocations</p> <p><i>Hawes Corner:</i></p> <ul style="list-style-type: none"> Acquire available, unimproved privately owned portion of <i>Orcuttia tenuis</i> habitat or develop cooperative management agreement to protect the habitat. 	Ongoing
Redding RMP 1993	<p>SACRAMENTO RIVER MANAGEMENT AREA</p> <p>Management Actions</p> <p><i>Hawes Corner:</i></p> <ul style="list-style-type: none"> Contact adjoining landowner(s) to help protect the <i>Orcuttia tenuis</i> habitat or to purchase the private interests. Secure an administrative easement to provide access for management and install necessary facilities to preclude vehicle or grazing usage of the habitat. Develop a RNA/ACEC management plan to identify protection and monitoring needs. 	Ongoing
Redding RMP 1993	<p>ISHI MANAGEMENT AREA</p> <p>Management Objectives</p> <ul style="list-style-type: none"> Protect the habitat and existing stands of Baker cypress Encourage research of this species in conjunction with genetic and habitat studies of other stands of Baker cypress. Area is closed to grazing. Vehicles are limited to designated roads and trails. Offer for mineral leasing with no surface occupancy. 	Ongoing

3.2.13 Tribal Consultation/Interests

Table 3-10 identifies existing land use plan decisions in the Redding and Arcata FOs for Tribal Interests.

Table 3-10. Current Management Objectives, Decisions, and Actions for Tribal Consultation

Decision Source	Current Management Objectives and Management Decisions	Status
Northwest Forest Plan Survey and Manage Amendment 2001	<p>Management Decisions</p> <ul style="list-style-type: none"> Included in this [federal government's] trust function are responsibilities with all federally recognized tribes to facilitate occupancy and use of federal lands and resources traditionally used for cultural and spiritual purposes consistent with existing laws and regulations. 	Ongoing
Arcata RMP 1992	<p>Management Decisions</p> <ul style="list-style-type: none"> No public lands in the planning area are suitable or available for Indian Allotment entry. Prior to authorizing any surface-disturbing action or approval of land uses, BLM solicits appropriate consideration of American Indian concerns including any potential impact to traditional beliefs and heritage values. Analysis of these specific concerns is deferred to preparation of activity plans, project plans, and associated environmental analyses 	Ongoing
Redding RMP 1993	<p>Management Actions</p> <ul style="list-style-type: none"> Transfer via R&PP Act sale or exchange to a qualified organization administrative responsibility of the Central Valley (Indian) Cemetery located on one parcel of public land (BLM or Reclamation oversight needs rectification). 	Ongoing

Decision Source	Current Management Objectives and Management Decisions	Status
Redding RMP 1993	<p>Management Decisions</p> <ul style="list-style-type: none"> Prior to authorizing any surface-disturbing action or approval of land uses, BLM solicits appropriate consideration of American Indian concerns including any potential impact to traditional beliefs and heritage values. Analysis of these specific concerns is deferred to preparation of activity plans, project plans, and associated environmental analyses. 	Ongoing
Redding RMP 1993	<p><u>SCOTT VALLEY MANAGEMENT AREA</u></p> <p>Land Use Allocation</p> <ul style="list-style-type: none"> Transfer via R&PP Act process or exchange to a qualified agency or group the administration of the Cedar Gulch Indian Cemetery. 	Ongoing
Redding RMP 1993	<p><u>KLAMATH MANAGEMENT AREA</u></p> <p>Management Objectives</p> <ul style="list-style-type: none"> Shasta and Klamath Rivers Canyon, and Upper Klamath River: Protect historic and prehistoric resources within the area and enhance access for traditional uses of the rivers by Native American Indians. <p>Remainder of Klamath Management Area:</p> <ul style="list-style-type: none"> A total of 1,025 acres near Hawkinsville are suitable for community development purposes as a reservation for federally recognized Indian tribe(s). If congressional sponsorship is unavailable, offer for exchange to any party after five years from the approval of the Final RMP. 	Ongoing
Redding RMP 1993	<p><u>TRINITY MANAGEMENT AREA</u></p> <p>Management Decisions</p> <ul style="list-style-type: none"> Consolidate and increase public landownership to conserve regionally important cultural resources and to provide access to identified Native American Indian heritage resources. 50 acres near the community of Hayfork are suitable for community development purposes as a reservation for federally recognized Indian tribe(s). If congressional sponsorship is unavailable or if an R&PP Act application is not perfected, offer for exchange to any party after five years from the approval of the Final RMP. For the Trinity Management Area, designate roads and trails for public-administrative and Native American Indian access. Two hundred acres of public land in Butte County near the Middle Fork of the Feather River are suitable for community development purposes as reservation for federally recognized Indian tribe(s). If congressional support is unavailable, offer for exchange to any party after five years from the approval of the Final RMP. <p><i>North Trinity River/Deadwood/Indian Creek Area:</i></p> <ul style="list-style-type: none"> Consolidate and increase public landownership to provide access to identified Native American heritage values 	Ongoing

3.2.14 Vegetation

Table 3-11 identifies existing land use plan decisions in the Redding and Arcata FOs for vegetation.

Table 3-11. Current Management Objectives, Decisions, and Actions for Vegetation

Decision Source	Current Management Objectives, Decisions, and Actions	Status
Arcata RMP 1992	<p><u>PLANNING AREA-WIDE Management Actions</u></p> <ul style="list-style-type: none"> Prepare an ACEC activity plan for Manila Dunes after completion of Humboldt County Beach and Dunes Management Plan. ACEC plan to be consistent with this plan. 	Completed Ma-le'i Dunes CMA Plan
Arcata RMP 1992	<p>Management Objectives <i>Butte Creek Management Area:</i></p> <ul style="list-style-type: none"> Enhance old-growth forest characteristics and related wildlife species, particularly the NSO. Enhance riparian condition in Butte Creek. 	Ongoing
Arcata RMP Forest Plan Amendment 1995	<p>Land Use Allocations</p> <ul style="list-style-type: none"> Approximately 45,000 acres of matrix lands are considered non-forested areas (brushfields, non-commercial species) that are technically unsuited for timber harvest. The remaining 5,000 acres of matrix lands are part of the original CFL base within the resource area. The mostly scattered, small parcels generally do not provide economical units for sustained, regulated timber harvest. Priority will be for exchange to acquire Key Watershed and LSR parcels. Timber harvest may be undertaken on the forested matrix lands if suitable opportunities are identified, consistent with NWFP guidelines. Timber harvest may also be undertaken following fire or to improve forest health conditions of previously entered stands. 	Ongoing
Arcata RMP Forest Plan Amendment 1995	<p>Management Action</p> <ul style="list-style-type: none"> Any herbicide use will be consistent with procedures and limitations outlined in the California Vegetation Management ROD (USDI BLM 1988b). Herbicide use will also comply with the applicable management objectives and standards and guidelines of the NWFP. Those standards and guidelines providing the greater benefits to late-successional forest-related species will apply. 	Ongoing
Arcata RMP Samoa Amendment 1995	<p>Management Objectives <i>Samoa Dunes:</i></p> <ul style="list-style-type: none"> Protect coastal wetlands and other natural values. <p><i>Manila Dune:</i></p> <ul style="list-style-type: none"> Enhance natural values and dune ecosystem. 	Ongoing
Arcata RMP Samoa Amendment 1995	<p>Management Actions <i>Samoa Peninsula (Area-wide):</i></p> <ul style="list-style-type: none"> Monitor botanical and cultural resources. Conduct dune restoration and exotic plant removal. Continue to work with local governments in the management of the entire peninsula. 	Ongoing
Redding RMP 1993	<p><u>Planning Area Wide</u></p> <ul style="list-style-type: none"> Vegetation management will occur as a secondary benefit or impact in many BLM activities such as grazing, timber harvest, wetland construction, firefighting, mining, and special status species management. The impacts or benefits to vegetation will either be insignificant or will be addressed in the site-specific EA for the parent action. A DPC has been developed for the Sacramento River Management Area. Other DPCs will be developed as specific activity plans are designed for the remainder of the Redding FO. 	Ongoing

Decision Source	Current Management Objectives, Decisions, and Actions	Status
Redding RMP 1993	<u>KLAMATH MANAGEMENT AREA</u> Management Objectives <i>Shasta and Klamath Rivers Canyon:</i> <ul style="list-style-type: none"> Restore riparian vegetation to Class II or better. 	Ongoing
Redding RMP 1993	<u>KLAMATH MANAGEMENT AREA</u> Management Objectives <i>Upper Klamath River:</i> <ul style="list-style-type: none"> Improve the condition of riparian vegetation to Class II or better. 	Ongoing
Redding RMP 1993	<u>KLAMATH MANAGEMENT AREA</u> Management Objectives <i>Shasta Valley Wetlands:</i> <ul style="list-style-type: none"> Provide long-term protection and enhancement of native wetlands. 	Not completed
Redding RMP 1993	<u>KLAMATH MANAGEMENT AREA</u> Management Actions <i>Shasta and Klamath River Canyon:</i> <ul style="list-style-type: none"> Develop an integrated resource activity plan for the Klamath River below RM 181 and the Shasta River Canyon that identifies high priority land acquisitions, designates appropriate roads and trails for recreational access, identifies management facility needs to protect the ACEC and riparian zone, and undertakes cooperative actions with adjacent landowners. 	Not completed
Redding RMP 1993	<u>KLAMATH MANAGEMENT AREA</u> Management Actions <i>Shasta Valley Wetlands:</i> <ul style="list-style-type: none"> Develop an integrated resource activity plan for the Shasta Valley Wetlands if BLM acquires available privately owned unimproved lands within the area. The activity plan will be developed in cooperation with CDFW, Caltrans, the Siskiyou County, and interested organizations/individuals. The plan will identify forage allocation and DPCs for domestic and native grazing, acquisition/cooperative management needs, a network of management facilities to protect the native wetlands, wildlife productivity targets, water quality base and target standards, and public access needs that do not adversely impact the native biota. 	Not completed
Redding RMP 1993	<u>TRINITY RIVER MANAGEMENT AREA</u> Management Objectives <i>Trinity River:</i> <ul style="list-style-type: none"> Maintain the riparian habitat in Class I or Class II condition. <i>North of Trinity River/Deadwood/Indian Creek:</i> <ul style="list-style-type: none"> Maintain the riparian and fisheries habitat of anadromous fisheries streams including Canyon, Indian, and Deadwood Creeks. 	Ongoing
Redding RMP 1993	<u>TRINITY RIVER MANAGEMENT AREA</u> Management Actions <ul style="list-style-type: none"> Develop an integrated resource activity plan(s) within the area north of the Trinity River and within the lower Indian Creek and Deadwood Creek areas. The plan will identify priority land acquisitions and detail the DPCs for upland/riparian ecological sites assess reforestation needs. 	Not completed
Redding RMP 1993	<u>SHASTA MANAGEMENT AREA</u> Management Objectives <i>Lower Clear Creek and Mule Mountain:</i> <ul style="list-style-type: none"> Restore the quality and quantity of riparian vegetation to Class I and Class II. Protect the native plant communities and associated fauna of the area. 	Ongoing

Decision Source	Current Management Objectives, Decisions, and Actions	Status
Redding RMP 1993	<p>SHASTA MANAGEMENT AREA Land Use Allocation <i>Lower Clear Creek and Mule Mountain:</i></p> <ul style="list-style-type: none"> Public land within the 100-year floodplain is withdrawn from mineral entry. This same area is open to recreational mineral collection. Mineral material disposals are not permitted within the 100-year floodplain unless such actions enhance salmonid spawning or the restoration of riparian vegetation. Public land within the 100-year floodplain is available for mineral leasing with no surface occupancy. 	Ongoing
Redding RMP 1993	<p>SACRAMENTO RIVER MANAGEMENT AREA Management Objectives <i>Management Area-Wide:</i></p> <ul style="list-style-type: none"> ADPC has been developed for the Sacramento River Management Area. <p><i>Sacramento Island:</i></p> <ul style="list-style-type: none"> Improve and increase the Great Valley - Valley Oak Riparian Forest. <p><i>Cottonwood Creek and Sacramento River parcels:</i></p> <ul style="list-style-type: none"> Protect the riparian values of these scattered public lands. <p><i>Bend Area:</i></p> <ul style="list-style-type: none"> Protect existing and improve degraded riparian vegetation to Class I and II. Enhance wetlands (native and human-made) and dependent species. 	Ongoing
Redding RMP 1993	<p>ISHI MANAGEMENT AREA Management Objectives <i>Battle Creek (below Manton Road):</i></p> <ul style="list-style-type: none"> Maintain and improve the quality and quantity of riparian vegetation. <p><i>Forks of Butte Creek:</i></p> <ul style="list-style-type: none"> Improve the quality and quantity of riparian vegetation to Class I. <p><i>Upper Ridge Nature Preserve:</i></p> <ul style="list-style-type: none"> Protect the mixed evergreen, riparian and oak woodland vegetation as well as the associated fauna. 	Ongoing

3.2.15 Visual Resources

Table 3-12 identifies existing land use plan decisions in the Redding and Arcata FOs for visual resources.

Table 3-12. Current Management Objectives, Decisions, and Actions for Visual Resources

Decision Source	Current Management Objectives and Management Decisions	Status
Arcata RMP 1992	<p>PLANNING AREA-WIDE Management Objectives</p> <ul style="list-style-type: none"> Enhance the natural values within the NCCRP. Enhance natural values and provide opportunities for environmental education. 	Ongoing
Arcata RMP 1992	<p>KING RANGE AND VICINITY Management Objectives</p> <ul style="list-style-type: none"> Enhance the watershed condition and visual quality of coastal streams. 	Ongoing

Decision Source	Current Management Objectives and Management Decisions	Status
Arcata RMP Forest Plan Amendment 1995	<p><u>RED MOUNTAIN MANAGEMENT AREA</u></p> <p>Management Objectives</p> <ul style="list-style-type: none"> Protect and enhance natural and recreational values along the federally designated portions of the South Fork Eel River WSR corridor. 	Ongoing
Arcata RMP Forest Plan Amendment 1995	<p><u>COVELO VICINITY MANAGEMENT AREA</u></p> <p>Management Objectives</p> <ul style="list-style-type: none"> Protect and enhance natural and recreational values along the federally designated “wild” and “scenic” segments of the Middle Fork Eel River as outlined in the Middle Fork Eel River Management Plan. 	Ongoing
Arcata RMP Samoa Amendment 1995	<p><u>SAMOA PENINSULA MANAGEMENT AREA</u></p> <p>Management Objectives</p> <p><i>Samoa Dunes:</i></p> <ul style="list-style-type: none"> Provide opportunities for other non-consumptive recreational uses (hiking, sightseeing, bird-watching, picnicking, surfing, and fishing) that do not directly conflict with OHV use. <p><i>Manila Dunes:</i></p> <ul style="list-style-type: none"> Enhance natural values and dune ecosystems Provide opportunities for other non-consumptive recreational uses (hiking, sightseeing, bird watching, picnicking). 	Ongoing
Redding RMP 1993	<p><u>PLANNING AREA-WIDE</u></p> <p>Management Actions</p> <ul style="list-style-type: none"> All BLM management actions must conform to the objectives of the assigned VRM Class. The BLM will ensure that BLM-approved or authorized actions meet these long-term objectives. VRM prescriptions, however, will be limited to only those areas assigned VRM Class I and Class II. Prescriptions will not be assigned to areas where lower VRM classes have been determined. VRM within designated wilderness and WSAs must conform to the protection of wilderness values, including scenic quality. 	Ongoing
Redding RMP 1993	<p><u>SCOTT VALLEY MANAGEMENT AREA</u></p> <p>Management Objectives</p> <p><i>Quartz Hill:</i></p> <ul style="list-style-type: none"> Maintain the existing scenic quality of BLM administered lands. <p><i>Remainder of Management Area:</i></p> <ul style="list-style-type: none"> No specific objective, land use allocations, or management decisions for visual resources. 	Ongoing
Redding RMP 1993	<p><u>KLAMATH MANAGEMENT AREA</u></p> <p>Management Actions</p> <p><i>Shasta and Klamath Rivers Canyon:</i></p> <ul style="list-style-type: none"> Manage future developments outside of public highway rights of way as VRM Class II. <p><i>Upper Klamath River:</i></p> <ul style="list-style-type: none"> Manage Area as VRM Class II. <p><i>Shasta Valley Wetlands:</i></p> <ul style="list-style-type: none"> Manage as VRM Class II. <p><i>Remainder of Management Area:</i></p> <ul style="list-style-type: none"> No specific objective, land use allocations, or management decisions for visual resources. 	Ongoing

Decision Source	Current Management Objectives and Management Decisions	Status
Redding RMP 1993	<p><u>TRINITY MANAGEMENT AREA</u></p> <p>Management Actions</p> <p><i>Trinity River:</i></p> <ul style="list-style-type: none"> Maintain the scenic quality along the river corridor. Manage all public lands as VRM Class II. <p><i>North of Trinity River/Deadwood/Indian Creek:</i></p> <ul style="list-style-type: none"> Maintain the existing scenic quality of BLM-administered lands. Maintain existing VRM classes. <p><i>Grass Valley Creek Watershed:</i></p> <ul style="list-style-type: none"> Manage as VRM Class II. <p><i>Remainder of Management Area:</i></p> <ul style="list-style-type: none"> No specific objective, land use allocations or management decisions for visual resources. 	Ongoing
Redding RMP 1993	<p><u>SHASTA MANAGEMENT AREA</u></p> <p>Management Actions</p> <p><i>Interlakes SRMA:</i></p> <ul style="list-style-type: none"> Maintain the existing scenic quality of the area. <p><i>Lower Clear Creek and Mule Mountain:</i></p> <ul style="list-style-type: none"> Maintain the scenic quality of the canyon above Clear Creek Road Bridge. Manage all public land upstream of Clear Creek Road Bridge as VRM Class II. <p><i>Remainder of Management Area:</i></p> <ul style="list-style-type: none"> No specific objective, land use allocations, or management decisions for visual resources. 	Ongoing
Redding RMP 1993	<p><u>SACRAMENTO RIVER MANAGEMENT AREA</u></p> <p>Management Actions</p> <p><i>Sacramento Island:</i></p> <ul style="list-style-type: none"> Manage as VRM Class II. <p><i>Cottonwood Creek and Sacramento River parcels:</i></p> <ul style="list-style-type: none"> Manage as VRM Class II. <p><i>Bend Area</i></p> <ul style="list-style-type: none"> Maintain and improve, if feasible, scenic quality. Manage as VRM Class II. <p><i>Remainder of Management Area:</i></p> <ul style="list-style-type: none"> No specific objective, land use allocations, or management decisions for visual resources. 	Ongoing
Redding RMP 1993	<p><u>ISHI MANAGEMENT AREA</u></p> <p>Management Actions</p> <p><i>Battle Creek (below Manton Road):</i></p> <ul style="list-style-type: none"> Maintain the scenic quality of the area. <p><i>Deer Creek:</i></p> <ul style="list-style-type: none"> Protect the scenic quality of the canyon. Manage as VRM Class I. <p><i>Forks of Butte Creek:</i></p> <ul style="list-style-type: none"> Protect and enhance the scenic quality of the canyon. Manage as VRM Class II. <p><i>Remainder of Management Area:</i></p> <ul style="list-style-type: none"> No specific objective, land use allocations, or management decisions for visual resources. 	Ongoing

Decision Source	Current Management Objectives and Management Decisions	Status
Redding RMP 1993	<p><u>YOLLA BOLLY MANAGEMENT AREA</u></p> <p>Management Objectives</p> <ul style="list-style-type: none"> No specific objective, land use allocations, or management decisions for visual resources. 	Ongoing

3.2.16 Water Resources

Table 3-13 identifies existing land use plan decisions in the Redding and Arcata FOs for water resources.

Table 3-13. Current Management Objectives, Decisions, and Actions for Water Resources

Decision Source	Current Management Objectives and Management Decisions	Status
Northwest Forest Plan Standards and Guidelines	<p>Management Decisions</p> <p>Tier I key watersheds:</p> <ul style="list-style-type: none"> For hydroelectric and other surface water development proposals, require in-stream flows and habitat conditions that maintain or restore riparian resources, favorable channel conditions, and fish passage. Coordinate this process with the appropriate state agencies. During relicensing of hydroelectric projects, provide written and timely license conditions to the FERC that require flows and habitat conditions that maintain or restore riparian resources and channel integrity. Coordinate relicensing projects with the appropriate state agencies. 	Ongoing
Northwest Forest Plan Survey and Manage Amendment 2001	<p>Management Objectives</p> <ul style="list-style-type: none"> Maintain and restore water quality necessary to support healthy riparian, aquatic, and wetland ecosystems. Water quality must remain within the range that maintains the biological, physical, and chemical integrity of the system and benefits survival, growth, reproduction, and migration of individuals composing aquatic and riparian communities. 	Ongoing
Northwest Forest Plan Survey and Manage Amendment 2001	<ul style="list-style-type: none"> Maintain and restore the timing, variability, and duration of floodplain inundation and water table elevation in meadows and wetlands. 	Ongoing
Northwest Forest Plan Survey and Manage Amendment 2001	<ul style="list-style-type: none"> In Riparian Reserves, water drafting sites should be located and managed to minimize adverse effects on riparian habitat and water quality, as consistent with Aquatic Conservation Strategy objectives. 	Ongoing.
Northwest Forest Plan Survey and Manage Amendment 2001	<p>All other watersheds:</p> <ul style="list-style-type: none"> For hydroelectric and other surface water development proposals, give priority emphasis to in-stream flows and habitat conditions that maintain or restore riparian resources, favorable channel conditions, and fish passage. Coordinate this process with the appropriate state agencies. During relicensing of hydroelectric projects, provide written and timely license conditions to FERC that emphasize in-stream flows and habitat conditions that maintain or restore riparian resources and channel integrity. Coordinate relicensing projects with the appropriate state agencies. 	Ongoing
Northwest Forest Plan Survey and Manage Amendment 2001	<p>Management Decisions</p> <p>Locate water drafting sites to minimize adverse effects on stream channel stability, sedimentation, and in-stream flows needed to maintain riparian resources, channel conditions, and fish habitat.</p>	Ongoing

Decision Source	Current Management Objectives and Management Decisions	Status
Arcata RMP 1992	<p>Management Decisions</p> <p>Decisions regarding soil and water objectives were not made in this plan. BMPs such as the operating parameters for the SYU 13 and Yokayo Grazing Management Records of Decision and the NRCS Soil Survey Guidelines will determine general soil and water objectives.</p>	Ongoing
Proposed Redding RMP 1992	<p>Management Decisions</p> <ul style="list-style-type: none"> Hydroelectric and water storage: Potential waterpower/storage reservoir sites under a land withdrawal will continue to be managed for waterpower values. Exceptions include withdrawals for waterpower or storage on streams that become components of the National WSR System or if public lands are transferred from federal jurisdiction. In these instances, any existing withdrawals will be recommended for revocation. Monitoring is conducted using the minimum monitoring standards established by the Ukiah District in the document Resource Monitoring in the Ukiah District 1988. It contains the criteria and guidelines for determining where monitoring should be emphasized and the methodology. 	Ongoing
Redding RMP Lands Amendment 2005	<p>Management Decisions</p> <ul style="list-style-type: none"> As stated in the RMP, before land can be disposed of by any method, the BLM must complete an evaluation for significant cultural resources, T&E plants and animals, mineral potential, floodplain/flood hazards, hazardous waste, and prime or unique farmland. 	Ongoing

3.2.17 Wildland Fire Management

Table 3-14 identifies existing land use plan decisions in the Redding and Arcata FOs for wildland fire management.

Table 3-14. Current Management Objectives, Decisions, and Actions for Wildland Fire

Decision Source	Current Management Objectives and Management Decisions	Status
Northwest Forest Plan 1994	<p>Management Objectives</p> <ul style="list-style-type: none"> In Riparian and Late-Successional Reserves, the goal of wildfire suppression is to limit the size of all fires. 	Partially occurring
Northwest Forest Plan 1994	<p>Management Objectives</p> <ul style="list-style-type: none"> Design prescribed burn projects and prescriptions to contribute to attainment of Aquatic Conservation Strategy objectives. 	Very, very limited occurrence
Northwest Forest Plan 1994	<p>Management Objectives</p> <ul style="list-style-type: none"> Design fuel treatment and fire suppression strategies, practices, and activities to meet Aquatic Conservation Strategy objectives, and to minimize disturbance of riparian ground cover and vegetation. Strategies should recognize the role of fire in ecosystem function and identify those instances where fire suppression or fuels management activities could be damaging to long-term ecosystem function. 	Very, very, very limited; scale does not meet objectives of the Aquatic Conservation Strategy

3. Current Management Direction (Wildland Fire Management)

Decision Source	Current Management Objectives and Management Decisions	Status
Northwest Forest Plan 1994	<p>Management Objectives</p> <ul style="list-style-type: none"> In Adaptive Management Areas, fire managers are encouraged to actively explore and support opportunities to research the role and effects of fire management on ecosystem functions. Cooperation across agency and ownership boundaries should be emphasized. The standards and guidelines in current plans and draft plan preferred alternatives for hazard reduction should be followed until approved Adaptive Management Area plans are established. Fire management experts will participate on the local Interdisciplinary Technical Advisory Panel on all Adaptive Management Areas. Management of Adaptive Management Areas is intended to be innovative and experimental. Wildfire suppression actions, however, should use accepted strategies and tactics, and conform to specific agency policy. 	Very, very limited occurrence
Northwest Forest Plan 1994	<p>Management Actions</p> <ul style="list-style-type: none"> Each LSR will be included in fire management planning as part of watershed analysis. Fire management in LSRs will use minimum impact suppression tactics (MIST) in accordance with guidelines for reducing risks of large-scale disturbances. Plans for wildfire suppression will emphasize maintaining late-successional habitat. During actual fire suppression activities, fire managers will consult with resource specialists (e.g., botanists, fisheries and wildlife biologists, hydrologists) familiar with the area, these standards and guidelines, and their objectives, to assure that habitat damage is minimized. Until a FMP is completed for LSRs, suppress wildfire to avoid loss of habitat in order to maintain future management options. 	Not occurring
Northwest Forest Plan 1994	<p>Management Actions</p> <ul style="list-style-type: none"> In LSRs, a specific FMP will be prepared prior to any habitat manipulation activities. This plan, prepared during watershed analysis or as an element of province-level planning or a LSR assessment, should specify how hazard reduction and other prescribed fire applications will meet the objectives of the LSR. Until the plan is approved, proposed activities will be subject to review by the Regional Ecosystem Office. The Regional Ecosystem Office may develop additional guidelines that would exempt some activities from review. In all LSRs, watershed analysis will provide information to determine the amount of coarse woody debris to be retained when applying prescribed fire. 	Not occurring
Northwest Forest Plan 1994	<p>Management Actions</p> <ul style="list-style-type: none"> When watershed analysis, province-level planning, or a LSR assessment is completed, some natural fires may be allowed to burn under prescribed conditions. Rapidly extinguishing smoldering coarse woody debris and duff should be considered to preserve these ecosystem elements. 	Not occurring
Northwest Forest Plan 1994	<p>Management Actions</p> <ul style="list-style-type: none"> Locate incident bases, camps, helibases, staging areas, helispots and other centers for incident activities outside Riparian Reserves. If the only suitable location for such activities is within the Riparian Reserve, an exemption may be granted following review and recommendation by a resource advisor. The advisor will prescribe the location, use conditions, and rehabilitation requirements. Use an IDT to predetermine suitable incident base and helibase locations. 	Ongoing, but not always attained for varied reasons

3. Current Management Direction (Wildland Fire Management)

Decision Source	Current Management Objectives and Management Decisions	Status
Northwest Forest Plan 1994	<p>Management Actions</p> <ul style="list-style-type: none"> For areas in the matrix that are located in the rural interface, fire management activities should be coordinated with local governments, agencies, and landowners during watershed analysis to identify additional factors that may affect hazard reduction goals. Hazard reduction may become more important in the rural interface and areas adjacent to structures, dwellings or other amenities. Fire suppression actions in the matrix will have no additional standards and guidelines. 	Ongoing, included in community wildlife protection plan (CWPP) process.
Northwest Forest Plan 1994	<p>Management Actions</p> <ul style="list-style-type: none"> Minimize delivery of chemical retardant, foam, or additives to surface waters. An exception may be warranted in situations where overriding immediate safety imperatives exist, or, following review and recommendation by a resource advisor, when an escape would cause more long-term damage. 	Ongoing
Northwest Forest Plan 1994	<p>Management Actions</p> <ul style="list-style-type: none"> Immediately establish an emergency team to develop a rehabilitation treatment plan needed to attain Aquatic Conservation Strategy objectives whenever Riparian Reserves are significantly damaged by wildfire or a prescribed fire burning outside prescribed parameters. 	Ongoing
Arcata RMP 1992	<p>Management Decisions</p> <ul style="list-style-type: none"> Due to the scattered nature, remoteness, and the relative inaccessibility of the public lands, the CDF is responsible for general fire suppression. Deviations from the CDF's fire policy will be made on a site-specific basis (wilderness and ACECs). Prescribed fire is generally allowed and will be addressed on a site-specific basis through the demands of resource objectives. 	Ongoing
Arcata RMP 1992	<p><u>BUTTE CREEK MANAGEMENT AREA</u></p> <p>Land Use Allocation</p> <ul style="list-style-type: none"> Fire, disease, and insects will be controlled to prevent spreading to other lands, and to protect the existing forest. 	Ongoing
Arcata RMP 1992	<p><u>LACKS CREEK MANAGEMENT AREA</u></p> <p>Management Actions</p> <ul style="list-style-type: none"> Prepare a watershed activity plan to reflect fire management, including suppression. 	Completed
Arcata RMP 1992	<p><u>LACKS CREEK AND RED MOUNTAIN MANAGEMENT AREAS</u></p> <p>Management Objectives</p> <ul style="list-style-type: none"> Carry out forest management activities that improve, create, or increase wildlife habitat and biodiversity and provide protection to the forest resource (insects, disease, and fire). 	Ongoing
Arcata RMP Forest Plan Amendment 1995	<p>Management Decisions</p> <ul style="list-style-type: none"> The CDF is responsible for fire suppression on BLM-administered lands within the plan amendment area. Deviations from the existing suppression policy will be made on a site-specific basis for wilderness, ACECs, and NWFP-designated areas. Fire management evaluation and planning are required components of watershed analyses and LSR management assessments; until these are completed, fire prescriptions and suppression activities will be guided by the management area RCOs, existing activity plans, and NWFP land allocation objectives and standards and guidelines. Prescribed fire is generally allowed if consistent with RCOs and NWFP standards and guidelines. The use of prescribed fire to achieve management objectives would be subject to development of a watershed analysis, prescribed fire plan, and NEPA review prior to initiating the action. Specific decisions regarding the use of prescribed fire will not be made in the selected plan amendment. 	Ongoing

Decision Source	Current Management Objectives and Management Decisions	Status
Arcata RMP Forest Plan Amendment 1995	<p>COVELO VICINITY MANAGEMENT AREA</p> <p>Management Objectives</p> <ul style="list-style-type: none"> Re-establish ecological processes such as fire to maintain terrestrial habitats emphasizing management of brushlands to maintain diversity and forest communities to manage fir encroachment and maintain pine component. 	Incomplete
Redding RMP 1993	<p>Management Decisions</p> <ul style="list-style-type: none"> Any fire occurring on public lands would be suppressed. ACECs, SRMAs, wilderness areas, WSAs, WSR corridors, and certain other public lands will require modified suppression techniques to protect the known values. 	Ongoing
Redding RMP 1993	<p>Management Decisions</p> <ul style="list-style-type: none"> Vegetation management will occur as a secondary benefit or impact in many BLM activities such as grazing, timber harvest, wetland construction, firefighting, mining and special status species management. The impacts or benefits to vegetation will either be insignificant or addressed in the site-specific EA for the parent action. 	Ongoing

3.2.18 Wildlife/Special Status Wildlife

Table 3-15 identifies existing land use plan decisions in the Redding and Arcata FOs for wildlife and special status wildlife.

Table 3-15. Current Management Objectives, Decisions, and Actions for Wildlife/Special Status Wildlife

Decision Source	Current Management Objectives	Status
Northwest Forest Plan 1994	<p>NCIP AREA WIDE</p> <p>Management Objectives</p> <p>Amended the Arcata and Redding plans within the range of the NSO, including land use allocations and standard and guidelines.</p> <ul style="list-style-type: none"> The ESA requires consultation with the USFWS for actions that may impact T & E species. The BLM must carry out management consistent with multiple use for the conservation of special status species and their habitats and must ensure that actions authorized, funded, or carried out do not contribute to the need to list any species as threatened or endangered. Any federally authorized, funded, or implemented actions that may affect federally listed or proposed species are reviewed in coordination with the USFWS. Pre-project protocol surveys for MAMU Protect 0.5-mile radius around existing and recruitment MAMU habitat. Manage NSO nest sites under the current management direction from US Fish and Wildlife Service. 	Ongoing

Decision Source	Current Management Objectives	Status
Northwest Forest Plan 1994	<p>Management Actions</p> <ul style="list-style-type: none"> • Designated most of the Arcata FO and two parcels in the Redding FO as LSRs. • Issued standards and guidelines for forest management and monitoring by amending the Arcata and Redding RMPs. • Established pre-project survey requirements for MAMUs and buffer zones around MAMU-occupied habitat and known NSO territories. • Established buffers and protection zones for great gray owls (<i>Strix nebulosa</i>). • Established guidance for management of Siskiyou Mountain Salamander and Del Norte Salamander. 	Ongoing
Northwest Forest Plan Survey and Manage Amendment 2001	<p>Management Actions</p> <p>Rare Relative Rarity</p> <ul style="list-style-type: none"> • Pre-Disturbance Surveys Practical: Category 1A – 57 Species <ul style="list-style-type: none"> ◦ Manage All Known Sites ◦ Pre-disturbance Surveys ◦ Strategic Surveys • Pre-Disturbance Surveys Not Practical: Category 1B – 222 Species² <ul style="list-style-type: none"> ◦ Manage All Known Sites ◦ N/A ◦ Strategic Surveys • Status Undetermined: Category 1E – 22 Species³ <ul style="list-style-type: none"> ◦ Manage All Known Sites ◦ N/A ◦ Strategic Surveys <p>Uncommon Rarity</p> <ul style="list-style-type: none"> • Pre-Disturbance Surveys Practical: Category 1C – 10 Species <ul style="list-style-type: none"> ◦ Manage High-Priority Sites ◦ Pre-disturbance Surveys ◦ Strategic Surveys • Pre-Disturbance Surveys Not Practical: Category 1D – 14 Species⁴ <ul style="list-style-type: none"> ◦ Manage High-Priority Sites ◦ N/A ◦ Strategic Surveys • Status Undetermined: Category 1F – 21 Species⁵ <ul style="list-style-type: none"> ◦ N/A ◦ N/A ◦ Strategic Surveys 	Limited occurrence in the Arcata FO. Ongoing implementation in the Redding FO.
Northwest Forest Plan Survey and Manage Amendment 2001	<p>Management Objectives</p> <ul style="list-style-type: none"> • Updated guidance for bat roosts and cavity nesting birds. • Instituted survey guidelines for species survey and manage species identified in the NWFP. 	Ongoing

Decision Source	Current Management Objectives	Status
Arcata RMP 1992	<p><u>PLANNING AREA WIDE</u> Contains planning decisions amended within for lands affected by the NWFP:</p> <ul style="list-style-type: none"> • Continue avoiding jeopardizing the existence of any federally listed or state listed or proposed species, and will actively promote species recovery and work to continue to improve the status of candidate and sensitive species. • The NSO is federally listed as threatened. Management actions will comply with the protective measures of the Final Draft Recovery for the NSO (USFWS 1992). A new recovery plan was published in 2011 (USFWS 2011b). • The American peregrine falcon was federally listed as endangered. Management actions will comply with the Pacific States Peregrine Falcon Recovery Plan protection measures (USFWS 1982). Peregrine falcons were delisted in 1999 (USFWS 1999). • The MAMU is federally listed as a threatened species. Management actions will comply with the recovery plan completed in 1997 (USFWS 1997). <p>The northern bald eagle was federally listed as endangered in California. Management actions will comply with the Pacific States Bald Eagle Recovery Plan (USFWS 1986). Bald eagles were delisted in 2007.</p>	Ongoing, Peregrine falcons were delisted in 1999, and bald eagles were delisted in 2007.
Arcata RMP Forest Plan Amendment 1995	<p>Land Use Allocations</p> <ul style="list-style-type: none"> • Management of 72,764 acres as LSRs would maintain and enhance habitat for late-successional and old-growth related species such as NSOs and MAMUs. • Acquisition of 12,389 acres would enhance the long-term ability of the Lacks Creek DCA to support the USFWS's draft final recovery plan numerical goals for pairs of NSOs. • Direct acquisition of 5,480 acres and development of cooperative management partnerships for 8,500 acres of nonfederal land would enhance the long-term ability of DCAs in the Red Mountain Management Area to support the USFWS's draft final recovery plan numerical goals for pairs of NSOs. • Known NSO activity centers within the matrix would be protected through management as "unmapped" LSRs. 	Ongoing
Arcata RMP Forest Plan Amendment 1995	<p>Land Use Allocations</p> <ul style="list-style-type: none"> • Habitat for the federally endangered peregrine falcon would be protected through compliance with the ESA and recovery plan. Acquisition of 1,720 acres in the Charlton Creek, Bell Springs, and Tenmile Creek watersheds (Red Mountain Management Area) would provide additional protection for peregrine falcon nesting and foraging sites. 	Peregrine falcons were delisted in 1999.
Arcata RMP Forest Plan Amendment 1995	<ul style="list-style-type: none"> • Habitat for the federally endangered northern bald eagle would be protected through compliance with the ESA and the Pacific Bald Eagle Recovery Plan. Improvements in riparian habitat and water quality (through implementation of Riparian Reserve standards and guidelines and management of Tier I Key Watersheds) would benefit bald eagle recovery by providing an increasing number of potential nest sites and an improved prey base. • Nesting habitat for the federally threatened MAMU would be protected through compliance with the ESA consultation requirements, future recovery plan, and NWFP land allocations and standards and guidelines. 	Bald eagles were delisted in 2007.

3. Current Management Direction (Wildlife/Special-Status Wildlife)

Decision Source	Current Management Objectives	Status
Arcata RMP Forest Plan Amendment 1995	<p><u>LACKS CREEK MANAGEMENT AREA</u> Management Objectives</p> <ul style="list-style-type: none"> • Provide core habitat for wildlife to recover federally listed species and to conserve special status species so that no BLM action contributes to the need for listing. 	Ongoing
Arcata RMP Forest Plan Amendment 1995	<p><u>RED MOUNTAIN RESOURCE AREA</u> Management Objectives</p> <ul style="list-style-type: none"> • Establish the management area as a lowland Douglas-fir population center for the NSO, maintaining habitat for a minimum of twenty pair sites. • Re-establish and accelerate mature forest characteristic to promote biodiversity. • Secure and enhance historic peregrine falcon nests by placing nest sites in public ownership. 	Ongoing
Arcata RMP Forest Plan Amendment 1995	<p><u>COVELO VICINITY</u> Management Objectives</p> <ul style="list-style-type: none"> • Manage habitats for endangered plants and animals. • Re-establish ecological processes such as fire to maintain terrestrial habitat. • Promote mature forest characteristics for restoration and biodiversity. 	Ongoing
Arcata RMP Forest Plan Amendment 1995	<p><u>SCATTERED TRACTS</u> Management Objectives</p> <ul style="list-style-type: none"> • Maximize contribution of public lands to regional plans for managing biodiversity. 	Ongoing
Arcata RMP Samoa Amendment 1995	<p>Management Objectives</p> <ul style="list-style-type: none"> • Protect sensitive species according to the BLM sensitive species policies (USDI BLM Manual Section 6840). T&E species management will follow Section 7 consultation procedures in accordance with the ESA. 	Ongoing
Swasey Drive Area Implementation Plan, Shasta County, CA	<p>Management Actions</p> <ul style="list-style-type: none"> • Ground-disturbing projects will maintain a 100-foot buffer from Olney Creek unless approved through project review. Federally protected anadromous species listed under the ESA and BLM sensitive species (foothill yellow-legged frog, terrestrial mollusk species, and bat species) will be evaluated for presence and potential impacts prior to project approval. Game species and other fish and wildlife species are managed under CDFW regulations and as mandated in BLM Manual 6840 (Special Status Species Management). 	Ongoing

Decision Source	Current Management Objectives	Status
Redding RMP 1993	<p><u>PLANNING AREA WIDE</u></p> <ul style="list-style-type: none"> • All public lands in the Redding FO are considered for enhancement and protection of the wildlife habitat resource • The goal is to manage the public lands to prevent deterioration of special status species' habitat, thereby precluding the need for state or federal listing of those species. <p>Management Objectives</p> <ul style="list-style-type: none"> • Recognize certain special status species of plants and wildlife that merit attention in the management of the public lands. • Minimize the decline of those species designated as special status through the mitigation of resource management impacts. • Promote the enhancement of special status species through positive management of their habitats and populations. • Protect 38,400 acres of winter deer habitat for the Weaverville and Whiskeytown deer herds. • Manage degradation of 4,079 acres of NSO habitat. • Acquire wetlands where feasible to benefit waterfowl. • Protect approximately 2007 acres of NSO habitat. • Manage public lands in a manner that is consistent with the State of California's Habitat Conservation Plan and the USFWS's Recovery Plan. • Releases and re-introduction of native wildlife species could be authorized by the BLM State Director, following proper compliance with the NEPA and coordination with the CDFW. • Remain an active participant in the Trinity River Task Force for the purpose of implementing the Trinity River Basin Fish and Wildlife Restoration Act. 	Ongoing
Redding RMP 1993	<p><u>SCOTT VALLEY</u></p> <p>Management Objectives</p> <ul style="list-style-type: none"> • Ensure the long-term protection of the deer winter range. • Protect raptors, including spotted owls, within the area. 	Ongoing
Redding RMP 1993	<p><u>KLAMATH MANAGEMENT AREA</u></p> <p>Management Objectives</p> <ul style="list-style-type: none"> • Improve the existing public administered deer winter range habitat and afford long-term protection for additional privately owned deer winter range habitat. • Enhance waterfowl production and terrestrial wildlife habitat in Shasta Valley Wetlands. 	Ongoing
Redding RMP 1993	<p><u>TRINITY MANAGEMENT AREA</u></p> <p>Management Objectives</p> <ul style="list-style-type: none"> • Maintain and enhance if feasible the quality of spotted owl habitat on Tunnel Ridge. • Maintain the quality of existing deer winter range habitat on Tunnel Ridge. • Protect existing habitat for special status species including bald eagle and spotted owl. Manage the Eastman Gulch Owl Habitat Area in cooperation with the Trinity National Forest. 	Ongoing

Decision Source	Current Management Objectives	Status
Redding RMP 1993	<p><u>SHASTA MANAGEMENT AREA</u> Management Objectives</p> <ul style="list-style-type: none"> • Improve the long-term condition and protection of deer winter range habitat in the Interlakes and West of French Gulch areas. • Maintain special status species habitat in the Interlakes area. • Protect the native plant communities and associated fauna in the Lower Clear Creek Area. 	Ongoing
Redding RMP 1993	<p><u>SACRAMENTO RIVER MANAGEMENT AREA</u> Management Objectives</p> <ul style="list-style-type: none"> • Enhance existing and develop additional waterfowl habitats on Sacramento Island. • Enhance wetlands (native and human made) and dependent species on the Bend Area. • Ensure long-term survival of special status species at the Bend Area. 	Ongoing
Redding RMP 1993	<p><u>ISHI MANAGEMENT AREA</u> Management Objectives</p> <ul style="list-style-type: none"> • Protect the wildlife habitat of the Battle Creek canyon. • Ensure long-term protection of raptors within the Deer Creek canyon. 	Ongoing

3.3 RESOURCE USES

3.3.1 Comprehensive Trail and Travel Management

Table 3-16 identifies existing land use plan decisions in the Redding and Arcata FOs for comprehensive trail and travel management.

Table 3-16. Current Management Objectives, Decisions, and Actions for Comprehensive Trail and Travel

Decision Source	Current Management Objectives and Management Decisions	Status
Arcata RMP 1992	<p><u>BUTTE CREEK MANAGEMENT AREA</u> Land Use Allocations/Management Decisions/Actions</p> <ul style="list-style-type: none"> • Off-Road Vehicle Designations pursuant to 43 CFR 8340: Public lands within the management area are designated CLOSED, except for Butte Creek and Larabee Butte access roads, No. 5107 and No. 5112, respectively. 	Ongoing
Arcata RMP 1992	<p><u>BUTTE CREEK MANAGEMENT AREA</u> Land Use Allocations/Management Decisions/Actions</p> <ul style="list-style-type: none"> • <i>Federal Register</i> notice for OHV designations. 	Not completed
Arcata RMP 1992	<p><u>BUTTE CREEK MANAGEMENT AREA</u> Land Use Allocations/Management Decisions/Actions</p> <ul style="list-style-type: none"> • Sign entrance to public lands regarding OHV designations. 	Complete
Arcata RMP 1992	<p><u>KING RANGE VICINITY</u> Land Use Allocations/Management Decisions/Actions</p> <ul style="list-style-type: none"> • Off-Road Vehicle Designations pursuant to 43 CFR 8340: Public lands west of Cooskie Ridge within the management area are designated CLOSED; Lands east of Cooskie Ridge: Vehicles are LIMITED to existing roads; roads are defined as transportation facilities designed for highway vehicles having four or more wheels. 	Ongoing

3. Current Management Direction (Comprehensive Trail and Travel Management)

Decision Source	Current Management Objectives and Management Decisions	Status
Arcata RMP 1992	<p><u>KING RANGE VICINITY</u> Land Use Allocations/Management Decisions/Actions</p> <ul style="list-style-type: none"> • <i>Federal Register</i> notices for OHV designations. • Sign entrance to public lands regarding OHV designations. 	Not completed
Arcata RMP 1992	<p><u>RED MOUNTAIN MANAGEMENT AREA</u> Management Actions</p> <ul style="list-style-type: none"> • Sign entrance to public lands regarding OHV designations. 	Complete
Arcata RMP Amendment 1995	<p><u>RED MOUNTAIN MANAGEMENT AREA</u> Land Use Allocations/Management Decisions/Actions</p> <ul style="list-style-type: none"> • Off-Highway Vehicle Designations (43 CFR 8340): Public lands within the WSR corridor, Elder Creek ACEC, and Red Mountain ACEC are designated as CLOSED. On all other public lands, vehicles are LIMITED to roads designed for highway vehicles having four or more wheels. 	Ongoing
Arcata RMP Amendment 1995	<p><u>RED MOUNTAIN MANAGEMENT AREA</u> Land Use Allocations/Management Decisions/Actions</p> <ul style="list-style-type: none"> • Complete <i>Federal Register</i> notices for amended OHV designations. 	Not completed
Arcata RMP Amendment 1995	<p><u>LACKS CREEK MANAGEMENT AREA</u></p> <ul style="list-style-type: none"> • Ownership and through coordinated management consistent with the Redwood National Forest. 	Ongoing
Arcata RMP Amendment 1995	<p><u>LACKS CREEK MANAGEMENT AREA</u> Land Use Allocations/Management Decisions/Actions</p> <ul style="list-style-type: none"> • Public lands within the management area are designated as closed, except for the Pine Ridge public access road No. 5111 and maintained spur roads from that road. 	Ongoing
Arcata RMP Amendment 1995	<p><u>LACKS CREEK MANAGEMENT AREA</u> Land Use Allocations/Management Decisions/Actions</p> <ul style="list-style-type: none"> • Public lands are available for dispersed recreation. 	Ongoing
Arcata RMP Amendment 1995	<p><u>LACKS CREEK MANAGEMENT AREA</u> Land Use Allocations/Management Decisions/Actions</p> <ul style="list-style-type: none"> • Complete <i>Federal Register</i> notices for amended OHV designations. 	Not completed
Arcata RMP Amendment 1995	<p><u>COVELO VICINITY MANAGEMENT AREA</u> Land Use Allocations/Management Decisions/Actions</p> <ul style="list-style-type: none"> • Off-Highway Vehicle Designations (43 CFR 8340): Public lands within the WSR corridor are designated as CLOSED. On all other public lands, vehicles are LIMITED to roads designed for highway vehicles having four or more wheels; • Public lands are available for dispersed recreation. 	Ongoing
Arcata RMP Amendment 1995	<p><u>COVELO VICINITY MANAGEMENT AREA</u> Land Use Allocations/Management Decisions/Actions</p> <ul style="list-style-type: none"> • Complete <i>Federal Register</i> notices for amended OHV designations. 	Not completed
Arcata RMP Amendment 1995	<p><u>SCATTERED TRACTS MANAGEMENT AREA</u> Land Use Allocations/Management Decisions/Actions</p> <ul style="list-style-type: none"> • Off-Highway Vehicle Designations (43 CFR 8340): Public lands within the management area are designated as LIMITED. Vehicles are restricted to roads designed for highway vehicles having four or more wheels. Public lands within WSR corridors are designated CLOSED. • Develop a connecting trail system through Humboldt Redwoods State Park, Gilham Butte, and King Range NCA. 	Ongoing

3. Current Management Direction (Comprehensive Trail and Travel Management)

Decision Source	Current Management Objectives and Management Decisions	Status
Arcata RMP Amendment 1995	<p><u>SCATTERED TRACTS MANAGEMENT AREA</u> Land Use Allocations/Management Decisions/Actions</p> <ul style="list-style-type: none"> Complete <i>Federal Register</i> notices for amended OHV designations. 	Not completed
Arcata RMP Samoa Amendment 1995	<p><u>SAMOA PENINSULA MANAGEMENT AREA</u> Management Objectives</p> <p><i>Samoa Dunes:</i></p> <ul style="list-style-type: none"> Provide opportunities for off-road vehicle recreation. Provide opportunities for other non-consumptive recreational uses (hiking, sightseeing, bird-watching, picnicking, surfing, and fishing) that do not directly conflict with OHV use. <p><i>Manila Dunes:</i></p> <ul style="list-style-type: none"> Provide opportunities for other non-consumptive recreational uses (hiking, sightseeing, bird watching, picnicking). 	Ongoing
Arcata RMP Samoa Amendment 1995	<p><u>SAMOA PENINSULA MANAGEMENT AREA</u> Land Use Allocations/Management Decision/Actions</p> <ul style="list-style-type: none"> Off-Road Vehicle Designations; Samoa Dunes: 125 acres – LIMITED/175 acres – CLOSED; Manila Dunes: 112 acres – CLOSED. 	Ongoing
Arcata RMP Samoa Amendment 1995	<p><u>SAMOA PENINSULA MANAGEMENT AREA</u> Land Use Allocations/Management Decision/Actions</p> <ul style="list-style-type: none"> Maintain and improve OHV park (Staging area, riding trails, etc.) at Samoa Dunes OG. 	Ongoing
Arcata RMP Samoa Amendment 1995	<p><u>SAMOA PENINSULA MANAGEMENT AREA</u> Land Use Allocations/Management Decision/Actions</p> <ul style="list-style-type: none"> <i>Federal Register</i> notices for OHV designations: Vehicles limited to daytime access, with nighttime gate closure one hour after sunset, and reopened daily one hour before sunrise. 	Completed
Arcata RMP Samoa Amendment 1995	<p><u>SAMOA PENINSULA MANAGEMENT AREA</u> Land Use Allocations/Management Decision/Actions</p> <ul style="list-style-type: none"> Continue to apply for “Green Sticker” funds for Samoa Dunes. 	Ongoing
Arcata RMP Samoa Amendment 1995	<p><u>SAMOA PENINSULA MANAGEMENT AREA</u> Land Use Allocations/Management Decision/Actions</p> <ul style="list-style-type: none"> Patrol for OHV trespass in Manila Dunes area. 	Ongoing
Redding RMP 1993	<p>Resource Area-Wide Management Decision</p> <ul style="list-style-type: none"> The transportation plan for the Redding Resource Area will be amended to reflect the decisions made by this RMP. Specific access routes and transportation developments cannot be reasonably identified until all activity level planning is completed subsequent to and consistent with the RMP. The transportation plan will be modified to remove unnecessary roads and trails and add access routes as detailed in the activity plans and, as necessary, project plans. Since access and transportation requirements are site specific in nature, assessments of environmental impacts will not be considered within this RMP. Similarly, the environmental impacts due to the access needs of other public agencies or the private sector cannot be reasonably addressed within this RMP. Consideration of environmental impacts for specific access and transportation developments are, therefore, deferred to future planning efforts by BLM or other agencies as appropriate. OHV use designations will be prescribed for all public lands covered under the plan that will remain under BLM administration. No designations are offered on public lands identified for exchange or administrative transfer. 	Ongoing

3. Current Management Direction (Comprehensive Trail and Travel Management)

Decision Source	Current Management Objectives and Management Decisions	Status
Redding RMP 1993	<p><u>KLAMATH MANAGEMENT AREA</u></p> <p>Management Objectives</p> <p><i>Shasta and Klamath Rivers Canyon:</i></p> <ul style="list-style-type: none"> • Enhance nonmotorized recreation opportunities. • Enhance access for traditional uses of the river by Native American Indians. <p><i>Upper Klamath River:</i></p> <ul style="list-style-type: none"> • Improve semiprimitive nonmotorized recreation opportunities. <p><i>Shasta Valley Wetlands:</i></p> <ul style="list-style-type: none"> • Provide semiprimitive nonmotorized recreation opportunities. <p>Land Use Allocations/Management Decisions/Actions</p> <p><i>Shasta and Klamath Rivers Canyon:</i></p> <ul style="list-style-type: none"> • Vehicle use is limited to designated roads and trails. <p><i>Upper Klamath River:</i></p> <ul style="list-style-type: none"> • Manage area as Semiprimitive Motorized. • Vehicle use is limited to designated roads and trails. <p><i>Dry Creek:</i></p> <ul style="list-style-type: none"> • Area is closed to motorized vehicles excepting the Siskiyou County-maintained Copco Road. <p><i>Shasta Valley Wetlands:</i></p> <ul style="list-style-type: none"> • Manage as Semiprimitive Motorized. • Vehicle use is limited to designated roads and trails. 	Ongoing

3. Current Management Direction (Comprehensive Trail and Travel Management)

Decision Source	Current Management Objectives and Management Decisions	Status
Redding RMP 1993	<p><u>TRINITY MANAGEMENT AREA</u></p> <p>Management Objectives</p> <p><i>North of Trinity River/Deadwood/Indian Creek:</i></p> <ul style="list-style-type: none"> • Provide enhanced access for semiprimitive motorized recreation opportunities and to Native American Indian heritage resources. <p>Land Use Allocations/Management Decisions/Actions</p> <p><i>Trinity River:</i></p> <ul style="list-style-type: none"> • Manage all public lands within the corridor as Roaded Natural or Semiprimitive Motorized. • Limit motorized use to designated roads and trails. <p><i>North of Trinity River/Deadwood/Indian Creek:</i></p> <ul style="list-style-type: none"> • Vehicles are limited to designated roads and trails that may be closed between November 15 and April 15 to protect the wintering deer herd. <p><i>Grass Valley Creek Watershed:</i></p> <ul style="list-style-type: none"> • Manage as semiprimitive motorized. • Limit vehicle use to designated roads and trails. <p><i>Remainder of Management Area:</i></p> <ul style="list-style-type: none"> • BLM roads and trails within the zone of decomposed granite-derived soils are closed to vehicle use during the rainy season and could be closed on a year-round basis at the discretion of the BLM. Soil-disturbing activities would be conducted only when no new, long-term increases to erosion would result. • Publish <i>Federal Register</i> notice(s) regarding designation of the Trinity River corridor, mineral withdrawals, interagency transfers, and road designations. • Develop an integrated resource activity plan(s) within the area north of the Trinity River, and within the lower Indian Creek and Deadwood Creek areas. The plan(s) will designate roads and trails for public administrative and Native American Indian access, among other things. 	Ongoing

Decision Source	Current Management Objectives and Management Decisions	Status
Redding RMP 1993	<p><u>SHASTA MANAGEMENT AREA</u></p> <p>Management Objectives</p> <p><i>Interlakes SRMA:</i></p> <ul style="list-style-type: none"> • Provide a regional opportunity for motorized recreation with a focus with the Gene Chappie-Shasta OHV Area. • Enhance nonmotorized recreation opportunities within the area via a greenway connecting Redding to Shasta Dam along the Sacramento River. <p><i>West of French Gulch:</i></p> <ul style="list-style-type: none"> • Enhance existing semiprimitive motorized recreation opportunities. <p><i>Lower Clear Creek and Mule Mountain:</i></p> <ul style="list-style-type: none"> • Enhance nonmotorized recreation opportunities by establishing a greenway from the Sacramento River to the Whiskeytown Unit of the NRA along Clear Creek. <p>Land Use Allocations/Management Decisions/Actions</p> <ul style="list-style-type: none"> • Publish <i>Federal Register</i> notice(s) regarding vehicle designations, ACEC designations, designation of the SRMA, and mineral withdrawals. <p><i>Interlakes SRMA:</i></p> <ul style="list-style-type: none"> • Motorized vehicle use is limited to designated roads and trails that may be closed between November 15 and April 15 to protect the wintering deer herd. • Area is managed as Semiprimitive, Nonmotorized, Semi-Urban, Semiprimitive Motorized, and Roded Natural. • Area is designated as a SRMA, incorporating the Gene Chappie-Shasta OHV Area. • Acquire available unimproved lands that provide legal public access to adjoining public lands, complete segments of recreation trails, enhance protection of sensitive resources, provide opportunities for public interpretation, enhance reforestation efforts (including habitat improvement for sensitive species), or enhance long-term administration of the area. • Develop an integrated resources activity plan for the Interlakes SRMA. <p><i>West of French Gulch:</i></p> <ul style="list-style-type: none"> • Manage as Roded Natural and Semiprimitive Motorized. • Vehicle use is limited to designated roads and trails. <p><i>Swasey Drive ACEC:</i></p> <ul style="list-style-type: none"> • Manage as Semiprimitive Motorized. • Vehicles are limited to designated roads and trails. <p><i>Lower Clear Creek and Mule Mountain:</i></p> <ul style="list-style-type: none"> • Vehicles are limited to designated roads and trails. • Area is managed as Roded Natural and Semiprimitive Motorized. • Develop an integrated resource activity plan for Clear Creek. <p><i>Remainder of Management Area:</i></p> <ul style="list-style-type: none"> • Vehicle use is limited to designated roads and trails. • Publish <i>Federal Register</i> notice(s) regarding vehicle designations, ACEC designation, designation of SRMA, and mineral withdrawals. 	Ongoing

3. Current Management Direction (Comprehensive Trail and Travel Management)

Decision Source	Current Management Objectives and Management Decisions	Status
Redding RMP 1993	<p><u>SACRAMENTO RIVER MANAGEMENT AREA</u></p> <p>Management Objectives</p> <p><i>Bend Area:</i></p> <ul style="list-style-type: none"> • Provide semiprimitive recreation opportunities. <p>Land Use Allocations/Management Decisions/Actions</p> <p><i>Sacramento Island:</i></p> <ul style="list-style-type: none"> • The area is closed to motorized vehicles. • Manage as Semiprimitive Motorized. <p><i>Cottonwood Creek and Sacramento River parcels:</i></p> <ul style="list-style-type: none"> • Parcels are closed to motorized vehicle use. • Manage as Semiprimitive Motorized (to allow boat access). <p><i>Hawes Corner:</i></p> <ul style="list-style-type: none"> • Area is closed to vehicles. <p><i>Bend Area:</i></p> <ul style="list-style-type: none"> • Manage as Semiprimitive Motorized and Roaded Natural. • Vehicle use is limited to designated roads and trails. <p><i>Remainder of Management Area:</i></p> <ul style="list-style-type: none"> • Publish <i>Federal Register</i> notices regarding designation of three ACECs, intention to conduct a suitability report for inclusion of Battle Creek and Paynes Creek into the National WSR System, and vehicle designations. 	Ongoing

Decision Source	Current Management Objectives and Management Decisions	Status
Redding RMP 1993	<p><u>ISHI MANAGEMENT AREA</u></p> <p>Management Objectives</p> <p><i>Battle Creek:</i></p> <ul style="list-style-type: none"> • Improve semiprimitive recreation opportunities. <p><i>Deer Creek:</i></p> <ul style="list-style-type: none"> • Maintain the primitive recreation opportunities within the canyon. <p><i>Forks of Butte Creek:</i></p> <ul style="list-style-type: none"> • Maintain semiprimitive recreation opportunities. <p><i>Upper Ridge Nature Preserve:</i></p> <ul style="list-style-type: none"> • Maintain existing semiprimitive recreation opportunities in cooperation with the Upper Ridge Wilderness Association. <p>Land Use Allocations/Management Decisions/Actions</p> <p><i>Battle Creek:</i></p> <ul style="list-style-type: none"> • Manage the areas Semiprimitive Motorized. • Vehicles are limited to designated roads and trails. <p><i>Deer Creek:</i></p> <ul style="list-style-type: none"> • Manage as Semiprimitive Nonmotorized. • The area is closed to vehicles. <p><i>Forks of Butte Creek:</i></p> <ul style="list-style-type: none"> • Manage as Semiprimitive Motorized. • Vehicle use is limited to designated roads and trails. <p><i>Upper Ridge Nature Preserve:</i></p> <ul style="list-style-type: none"> • Area is closed to motorized vehicles. <p><i>Baker Cypress:</i></p> <ul style="list-style-type: none"> • Vehicles are limited to designated roads and trails. <p><i>Remainder of Management Area:</i></p> <ul style="list-style-type: none"> • Publish Federal Register notices regarding vehicle designations, mineral withdrawals, ACEC designations, and intent to develop a report(s) addressing the suitability of Battle, Butte, Deer, Bear, and Big Chico Creeks for inclusions in the National WSR System. 	Ongoing

3.3.2 Livestock Grazing

Table 3-17 identifies existing land use plan decisions in the Redding and Arcata FOs for livestock grazing.

Table 3-17. Current Management Objectives, Decisions, and Actions for Livestock Grazing

Decision Source	Current Management Objectives and Management Decisions	Status
Arcata RMP 1992	<p>Land Use Allocations</p> <p>Unless specifically prohibited by a particular alternative, all “manageable” public land is available for livestock grazing. Manageability is defined by the Yokayo Grazing EIS ROD (USDI BLM 1983a), as outlined in the Arcata RMP FEIS (USDI BLM 1989). Grazing leases with a category of manageable or non-manageable do not necessarily have to meet all of the criteria to be placed in that category. The determinations are subjective but are based on the greatest amount of data obtainable. The manageability criteria are the following:</p> <ol style="list-style-type: none"> 1. Size of land tract and location 2. Number of suitable acres—The absence of suitable acres immediately places a grazing lease in the non-manageable category. Any suitable acreage above zero makes the decision discretionary. 3. Number of AUMs—Fewer than 20 AUMs most often places a grazing base in the non-manageable category; 21 to 100 AUMS are generally considered the gray area, where a manageability decision is discretionary and not weighted, if more than 100 AUMs a grazing base is considered manageable most of the time. 4. Operator dependency—No grazing lease is considered non-manageable if operators have demonstrated a dependency on the public land for their livelihood. 5. Tract accessibility—Accessible tracts are generally considered manageable, and inaccessible tracts are considered discretionary. 6. Special Features —This is strictly supplemental input to facilitate the classification of the grazing leases. <p><i>Samoa Peninsula Management Area:</i></p> <ul style="list-style-type: none"> • Public lands are not available for livestock permits or leases. <p><i>Covelo Vicinity Management Area:</i></p> <ul style="list-style-type: none"> • Public lands are not available for new livestock grazing leases. <p><i>Butte Creek Management Area:</i></p> <ul style="list-style-type: none"> • Public lands are not available for livestock permits or leases. <p><i>Red Mountain Management Area:</i></p> <ul style="list-style-type: none"> • The RNA/ACEC is not available for livestock grazing. <p>Management Actions</p> <ul style="list-style-type: none"> • The management of livestock will follow prescriptions of the Yokayo Grazing ROD (Appendix 1-2 regarding Manageability is located in the 1992 Arcata. 	Ongoing
Arcata RMP Forest Plan Amendment 1995	<p>Land Use Allocation(s)</p> <p><u>RED MOUNTAIN MANAGEMENT AREA</u></p> <ul style="list-style-type: none"> • RNA/ACECs are not available for livestock grazing. 	Ongoing
Arcata RMP Forest Plan Amendment 1995	<p><u>COVELO VICINITY MANAGEMENT AREA</u></p> <ul style="list-style-type: none"> ◦ Public lands are not available for new livestock grazing leases. 	Ongoing

Decision Source	Current Management Objectives and Management Decisions	Status
Redding RMP 1993	<p>Management Objectives</p> <p>This program operates under the authority of Section 15 of the Taylor Grazing Act, BLM policies and the Redding Livestock Grazing Management EIS. This document was approved in 1984 and subsequently implemented to improve or maintain ecological condition for perennial range and maintain or improve forage production on the annual range.</p> <p>Management Actions</p> <ul style="list-style-type: none"> • Future management of livestock will continue to follow the prescriptions established in this document. • Site-specific environmental analyses will be conducted prior to actual construction or treatment of proposed projects. • Projects will, whenever possible, be modified to avoid or minimize identified negative impacts. • An analysis of potential effects on rare, threatened, or endangered plants and animals will be required for each proposed project. • If required, consultation with the USFWS or CDFW will be initiated. Projects will be modified or abandoned to avoid impacts on officially listed rare, threatened, or endangered plants or animals. • Projects will also be deleted or modified if approval would result in the listing of any sensitive species as threatened or endangered. • The BLM will design livestock grazing and range improvement program to avoid adverse effects on properties included in, or eligible for inclusion in, the NRHP, unless it is not prudent or feasible. The BLM will consult with the SHPO for purposes of developing a mutually acceptable mitigation plan when avoidance is not prudent or feasible. • All actions will be in conformance with VRM objectives. • All fences will be constructed to meet BLM design specifications. • Soils disturbed by range improvement construction will be reseeded with native and/or approved introduced species as soon as possible, unless it is determined to be unnecessary. • Prescribed burning of portions of large areas will be initiated in different years and will be re-burned on a rotational basis in order to provide varied regrowth stages. Strips of vegetation will be left unburned. Burns will be conducted under conditions that provide desired fire intensity. • AMPs will include BMPs as called for in Section 208 of the CWA and as described in the 208 Water Quality Management Report. • Additional management guidance and decisions incorporated into this RMP include determinations on facilities maintenance, lease adjustments and manageability criteria for issuing grazing leases. • AMPs will be developed in cooperation with grazing leases. All interested parties will be given an opportunity to participate in the development of these plans. • Maintenance of structural improvements shall be provided by the user deriving the primary benefit from the improvement. • Livestock leases would be adjusted, if necessary, to reflect decreases in public land acreage available for livestock grazing use within an allotment as a result of land disposal. • In addition to existing guidance, this RMP establishes where domestic livestock grazing may or may not be permitted. No grazing will be authorized in areas closed to grazing under the land use allocations of the selected or preferred land use management alternative. Further reductions of available domestic livestock grazing may occur through development of subsequent activity plans. Moreover, grazing leases will be established and/or perpetuated under manageability criteria. 	Ongoing

Decision Source	Current Management Objectives and Management Decisions	Status
	<ul style="list-style-type: none"> • Manageability is a realistic appraisal of grazing lease applications submitted to the Redding FO. Since the BLM has a responsibility for sound management practices and must use fiscal resources wisely, grazing lease applications will be screened using the following criteria: <ul style="list-style-type: none"> ◦ Size of land tract and location—This is simply used as a guideline for preliminary assessment of management potential. ◦ Number of suitable acres—Absence of suitable acres (as defined in Appendix A of the Redding Livestock Grazing Management EIS of 1984) immediately places a grazing lease in the non-manageable category. Any acreage above zero makes the decision discretionary. ◦ Number of AUMs—Less than 20 AUMs most often places a grazing lease in the non-manageable category. Twenty to 100 AUMs are generally considered an indeterminate area, where the manageability decision is discretionary and not weighed. Greater than 100 AUMs are considered manageable the majority of the time. ◦ Other dependency—No grazing lease is considered non-manageable if the operator has demonstrated a dependency on the public land for his or her livelihood. ◦ Tract accessibility—Accessible tracts are generally considered manageable. Inaccessible tracts are discretionary. ◦ Land tenure adjustment—In areas where the BLM intends to exchange or transfer administration of public lands, new grazing preferences will not be established. 	

Decision Source	Current Management Objectives and Management Decisions	Status
Redding RMP 1993	<p><u>KLAMATH MANAGEMENT AREA</u></p> <p>Management Objectives</p> <p><i>Shasta Valley Wetlands:</i></p> <ul style="list-style-type: none"> • Provide long-term protection and enhancement of native wetlands. • Enhance waterfowl production. • Improve water quality in the Shasta River basin. • Enhance the native fisheries of Parks Creek, Big Springs Creek, and the Shasta River. • Enhance terrestrial wildlife habitat. • Provide for domestic livestock grazing. <p>Land Use Allocations</p> <p><i>Shasta Valley Wetlands:</i></p> <ul style="list-style-type: none"> • Provide for domestic livestock grazing as a management tool. <p><i>Shasta and Klamath River Canyon:</i></p> <ul style="list-style-type: none"> • The area is closed to grazing. <p><i>Upper Klamath River:</i></p> <ul style="list-style-type: none"> • The river corridor is closed to livestock grazing. <p><i>Dry Creek:</i></p> <ul style="list-style-type: none"> • The area is closed to livestock grazing. <p>Management Actions</p> <p><i>Shasta and Klamath Rivers Canyon:</i></p> <ul style="list-style-type: none"> • Restore riparian vegetation to Class II or better <p><i>Upper Klamath River:</i></p> <ul style="list-style-type: none"> • Improve the condition of riparian vegetation to Class II or better. <p><i>Shasta Valley Wetlands:</i></p> <ul style="list-style-type: none"> • Develop an integrated resource activity plan for the Shasta Valley Wetlands if BLM acquires available privately owned unimproved lands within the area. The activity plan will be developed in cooperation with the CDFW, Caltrans, Siskiyou County, and interested organizations/individuals. The plan will identify forage allocation and DPCs for domestic and native grazing, acquisition/cooperative management needs, a network of management facilities to protect the native wetlands, wildlife productivity targets, water quality base and target standards, and public access needs that do not adversely impact the native biota. 	Ongoing
Redding RMP 1993	<p><u>TRINITY MANAGEMENT AREA</u></p> <p>Land Use Allocations</p> <p><i>Trinity River:</i></p> <ul style="list-style-type: none"> • The area is closed to grazing. <p><i>Grass Valley Creek Watershed:</i></p> <ul style="list-style-type: none"> • Close public lands to livestock grazing. <p>Management Acton</p> <ul style="list-style-type: none"> • Maintain the riparian habitat in Class I or Class II condition. 	Ongoing
Redding RMP 1993	<p><u>SHASTA MANAGEMENT AREA</u></p> <p>Management Objective</p> <ul style="list-style-type: none"> • Improve the long-term condition and protection of deer winter range habitat. <p>Land Use Allocation</p> <p><i>Interlakes SRMA:</i></p> <ul style="list-style-type: none"> • The area is closed to new grazing leases. <p>Management Action</p> <ul style="list-style-type: none"> • Maintain the riparian habitat in Class I or Class II condition. 	Ongoing

Decision Source	Current Management Objectives and Management Decisions	Status
Redding RMP 1993	<p><u>SACRAMENTO RIVER MANAGEMENT AREA</u></p> <p>Management Objectives</p> <ul style="list-style-type: none"> • Protect existing Class I and II riparian vegetation. • Enhance wetlands (native and human-made) and dependent species. • Ensure long-term survival of special status species. <p>Land Use Allocations</p> <p><i>Sacramento Island:</i></p> <ul style="list-style-type: none"> • The area is closed to grazing. <p><i>Cottonwood Creek and Sacramento parcels:</i></p> <ul style="list-style-type: none"> • The lands are closed to grazing. <p><i>Hawes Corner:</i></p> <ul style="list-style-type: none"> • The area is closed to livestock grazing. <p><i>Bend Area:</i></p> <ul style="list-style-type: none"> • Allow grazing in the upland areas as a means to improve the DPC. • Close the riparian areas to grazing. <p>Management Action</p> <ul style="list-style-type: none"> • Improve degraded riparian vegetation to Class I and II condition. 	Ongoing
Redding RMP 1993	<p><u>ISHI MANAGEMENT AREA</u></p> <p>Management Objectives</p> <ul style="list-style-type: none"> • Maintain and improve the quality and quantity of riparian vegetation. Protect the wildlife habitat of the canyon. • Maintain and improve, if feasible, the fisheries habitat of Deer Creek. • Protect the habitat and existing stands of Baker cypress. <p>Land Use Allocations</p> <p><i>Battle Creek (below Manton Road):</i></p> <ul style="list-style-type: none"> • The corridor is closed to new livestock grazing permits. <p><i>Deer Creek:</i></p> <ul style="list-style-type: none"> • The area is closed to grazing. <p><i>Forks of Butte Creek:</i></p> <ul style="list-style-type: none"> • The area is closed to grazing. <p><i>Baker Cypress:</i></p> <ul style="list-style-type: none"> • The area is closed to grazing. <p>Management Action</p> <ul style="list-style-type: none"> • Improve the quality of riparian vegetation to Class I. 	Ongoing

3.3.3 Realty – Land Tenure

Table 3-18 identifies existing land use plan decisions in the Redding and Arcata FOs for realty - land tenure.

Table 3-18. Current Management Objectives, Decisions, and Actions for Realty–Land Tenure

Decision Source	Current Management Objectives and Management Decisions	Status
Arcata RMP 1992	<p><u>SAMOA PENINSULA MANAGEMENT AREA</u> Land Use Allocations</p> <ul style="list-style-type: none"> • Public lands not available for disposal • 40 acres on Samoa Dunes available for temporary use on a periodic basis by the US Army Corps of Engineers for jetty construction and maintenance 	Ongoing
Arcata RMP 1992	<p><u>BUTTE CREEK MANAGEMENT AREA</u> Land Use Allocation</p> <ul style="list-style-type: none"> • Retain 2,500 surface acres. 	Ongoing
Arcata RMP 1992	<p><u>BUTTE CREEK MANAGEMENT AREA</u> Land Use Allocation</p> <ul style="list-style-type: none"> • Acquire 900 acres. <ul style="list-style-type: none"> ◦ Pursue acquisition of 900 acres of land in the Butte Creek watershed to enhance old-growth-dependent wildlife species and riparian condition. 	Ongoing, no acquisitions completed
Arcata RMP 1992	<p><u>BUTTE CREEK MANAGEMENT AREA</u> Land Use Allocation</p> <ul style="list-style-type: none"> • Dispose of 0 acres. <ul style="list-style-type: none"> ◦ Public lands in the management area are not available for disposal. 	Ongoing
Arcata RMP 1992	<p><u>BUTTE CREEK MANAGEMENT AREA</u> Management Actions</p> <ul style="list-style-type: none"> • Contact surrounding landowners about acquisitions. • Prepare land reports to address specific acquisition methods and site-specific inventories and requirements. 	Ongoing
Arcata RMP 1992	<p><u>BUTTE CREEK MANAGEMENT AREA</u> Management Action</p> <ul style="list-style-type: none"> • Prepare land reports to address specific acquisition methods and site-specific inventories and requirements. 	Ongoing
Arcata RMP 1992	<p><u>KING RANGE VICINITY MANAGEMENT AREA</u> Land Use Allocations</p> <ul style="list-style-type: none"> • Retain <ul style="list-style-type: none"> ◦ Retain all public lands between the King Range NCA and the Mattole River, except 120 acres of public land within the boundary of the Sinkyone Wilderness State Park, which will be available for acquisition by the California Department of Parks and Recreation to enhance management of the state park. ◦ Retain 40 acres at the confluence of Eubanks Creek and the Mattole River for its fisheries and riparian values. 	Not completed
Arcata RMP 1992	<p><u>KING RANGE VICINITY MANAGEMENT AREA</u> Land Use Allocations</p> <ul style="list-style-type: none"> • Acquire <ul style="list-style-type: none"> ◦ Pursue acquisition of 1,000 acres of forest land next to Zone 6 in the King Range NCA (Jewett Ridge and Bear Creek) for long-term forest and wildlife habitat management. ◦ Pursue acquisition of 1,200 acres of land along Four Mile Creek and Cooskie Creek to enhance the riparian values and visual resources. 	Not completed

Decision Source	Current Management Objectives and Management Decisions	Status
Arcata RMP 1992	<p><u>KING RANGE VICINITY MANAGEMENT AREA</u> Land Use Allocation</p> <ul style="list-style-type: none"> Dispose of 120 acres of public land within the boundary of the Sinkyone Wilderness State Park, which will be available for acquisition by the California Department of Parks and Recreation to enhance management of the state park. 	Not completed; no land disposal program; no land disposal completed.
Arcata RMP 1992	<p>Summary of Issues Analyzed in the Plan</p> <ul style="list-style-type: none"> Improve the efficiency and quality of management of the public lands, and to enhance the public's use of that land. Small, isolated parcels of public land scattered throughout the resource area are difficult to manage, and lack of legal access limits or precludes public use of many of these parcels. Through exchange or disposal of isolated parcels, the BLM would have opportunities to accommodate public works projects and to meet the need for recreation and for residential, commercial, industrial and agricultural land. Such actions could eliminate or reduce management burdens and costs and enhance resource values and landownership patterns. 	Ongoing
Arcata RMP Forest Plan Amendment 1995	<p><u>LACKS CREEK MANAGEMENT AREA</u> Land Use Allocation</p> <ul style="list-style-type: none"> Retain all lands in public ownership. 	Ongoing
Arcata RMP Forest Plan Amendment 1995	<p><u>LACKS CREEK MANAGEMENT AREA</u> Land Use Allocation</p> <ul style="list-style-type: none"> Identify a Lack Creek acquisition project boundary that includes the entire Lacks creek watershed. Pursue opportunities for acquisition over an area of approximately 12,389 acres in the Lacks Creek watershed to enhance old-growth and watershed rehabilitation opportunities and improve the effectiveness of federal and state conservation strategies. 	Mostly done
Arcata RMP Forest Plan Amendment 1995	<p><u>LACKS CREEK MANAGEMENT AREA</u> Management Action</p> <ul style="list-style-type: none"> Prepare land reports and easement justification reports to address specific acquisition needs and site-specific requirements and problems. 	Completed
Arcata RMP Forest Plan Amendment 1995	<p><u>RED MOUNTAIN MANAGEMENT AREA</u> Land Use Allocations</p> <ul style="list-style-type: none"> Retain 34,484 acres surface and 14,000 acres subsurface. Retain all lands in public ownership except for approximately 1,180 acres lying in nine parcels outside of identified LSR and Key Watersheds. These parcels of public land are identified as matrix lands in the NWFP. 	Ongoing
Arcata RMP Forest Plan Amendment 1995	<p><u>RED MOUNTAIN MANAGEMENT AREA</u> Land Use Allocations</p> <ul style="list-style-type: none"> Acquire 5,680 acres. <ul style="list-style-type: none"> Actively pursue direct acquisition of high-priority habitats for anadromous fisheries habitat restoration, Key Watershed management, VSR Corridor management, and other specific endangered species habitat. These include up to 1,240 acres of land in the Charlton Creek and Bell Springs Creek watershed and 480 acres in the Tenmile Creek watershed to protect peregrine falcon nesting sites and foraging areas; 3,960 acres of land along in the South Fork Eel River watershed between and including Low Gap Creek and Elder Creek (acreage includes 2,480 acres within the watershed ACEC boundary). 	Acquired 600 acres adjacent to Red Mountain

Decision Source	Current Management Objectives and Management Decisions	Status
Arcata RMP Forest Plan Amendment 1995	<p><u>RED MOUNTAIN MANAGEMENT AREA</u> Land Use Allocation</p> <ul style="list-style-type: none"> • Dispose of 1,180 acres lying in nine parcels outside of identified LSR and key watersheds. 	Disposed of 40 acres
Arcata RMP Forest Plan Amendment 1995	<p><u>RED MOUNTAIN MANAGEMENT AREA</u> Management Action</p> <ul style="list-style-type: none"> • Contact owners of lands identified for direct acquisition. Develop funding proposals and acquisition/exchange alternatives. 	Ongoing
Arcata RMP Forest Plan Amendment 1995	<p><u>RED MOUNTAIN MANAGEMENT AREA</u> Management Actions</p> <ul style="list-style-type: none"> • Pursue a general goal of obtaining public access to all public lands when feasible. Specific access on existing roads for public and/or administrative purposes will be pursued as follows: <ul style="list-style-type: none"> ◦ North Jewett parcel ◦ South Jewett parcel ◦ Island Mountain parcel ◦ Red Mountain (trail access) ◦ South Fork Eel River 	No access acquisition has occurred due to lack of funding
Arcata RMP Forest Plan Amendment 1995	<p><u>RED MOUNTAIN MANAGEMENT AREA</u> Management Action</p> <ul style="list-style-type: none"> • Prepare land reports and easement justification reports to address specific acquisition needs and site-specific requirements and problems. 	Ongoing
Arcata RMP Forest Plan Amendment 1995	<p><u>COVELO VICINITY MANAGEMENT AREA</u> Resource Condition Objective</p> <ul style="list-style-type: none"> • Improve management efficiency on the public lands and between agencies through administrative transfer and disposal of scattered lands considered nonessential in regional strategies for ecosystem management. 	Ongoing
Arcata RMP Forest Plan Amendment 1995	<p><u>COVELO VICINITY MANAGEMENT AREA</u> Land Use Allocations</p> <ul style="list-style-type: none"> • Retain 56,670 acres surface and 30,000 subsurface. • Retain and manage the area known as Little Darby. 	Ongoing
Arcata RMP Forest Plan Amendment 1995	<p><u>COVELO VICINITY MANAGEMENT AREA</u> Land Use Allocation</p> <ul style="list-style-type: none"> • Acquire 0 acres 	Acquired 80 acres Yolla Bolly Middle Eel Wilderness Area
Arcata RMP Forest Plan Amendment 1995	<p><u>COVELO VICINITY MANAGEMENT AREA</u> Land Use Allocations</p> <ul style="list-style-type: none"> • Dispose of 9,830 acres. <ul style="list-style-type: none"> ◦ Land acquisition and disposal—Retain lands in public ownership with the following exceptions: <ul style="list-style-type: none"> ◦ Transfer administration of 9,400 acres in the Big Butte Wilderness and adjacent Section 202 WSA parcels to the Mendocino National Forest to improve management efficiency. ◦ Offer 11 parcels of public land for disposal, totalling approximately 430 acres. 	Big Butte still under BLM ownership and joint management with the Forest Service.

Decision Source	Current Management Objectives and Management Decisions	Status
Arcata RMP Forest Plan Amendment 1995	<p><u>COVELO VICINITY MANAGEMENT AREA</u> Land Use Allocations</p> <ul style="list-style-type: none"> • Pursue public access to all public lands when feasible. Specific access on existing roads for public and/or administrative purposes is intended to major blocks of public land as follows: Brushy Mountain Block (T.20N., R13W., Sec. 2), Willis Ridge Block (T.20N., R.13W., Sec. 17), Eden Valley Black (T.20N., R12W., Sec. 10), Travis Ranch Block (T.5S., R.8E., Sec. 27). 	Completed
Arcata RMP Forest Plan Amendment 1995	<p><u>COVELO VICINITY MANAGEMENT AREA</u> Management Action</p> <ul style="list-style-type: none"> • Prepare land reports and easement justification reports to address specific needs and site-specific requirements and problems. 	Ongoing
Arcata RMP Forest Plan Amendment 1995	<p><u>SCATTERED TRACTS MANAGEMENT AREA</u> Resource Condition Objective</p> <ul style="list-style-type: none"> • Improve cost effectiveness of public land management by consolidating federal ownership. 	Ongoing
Arcata RMP Forest Plan Amendment 1995	<p><u>SCATTERED TRACTS MANAGEMENT AREA</u> Land Use Allocation</p> <ul style="list-style-type: none"> • Retain 14,055 surface acres and 82,800 subsurface acres. 	Ongoing
Arcata RMP Forest Plan Amendment 1995	<p><u>SCATTERED TRACTS MANAGEMENT AREA</u> Land Use Allocation</p> <ul style="list-style-type: none"> • Acquire 800 acres. <ul style="list-style-type: none"> ◦ Acquire 800 acres around Gilham Butte for recreational uses. 	Acquired 6,500 acres in Gilham Butte Area
Arcata RMP Forest Plan Amendment 1995	<p><u>SCATTERED TRACTS MANAGEMENT AREA</u> Land Use Allocations</p> <ul style="list-style-type: none"> • Dispose of 2,050 acres. 	Not completed
Arcata RMP Forest Plan Amendment 1995	<p><u>SCATTERED TRACTS MANAGEMENT AREA</u> Management Action</p> <ul style="list-style-type: none"> • Develop schedule for completing resource clearances for identified disposal parcels. 	Completed
Arcata RMP Forest Plan Amendment 1995	<p><u>SCATTERED TRACTS MANAGEMENT AREA</u> Management Action</p> <ul style="list-style-type: none"> • Prepare land reports to address specific acquisition needs at Gilham Butte. 	Completed
Arcata RMP Forest Plan Amendment 1995	<p><u>SCATTERED TRACTS MANAGEMENT AREA</u> Management Action</p> <ul style="list-style-type: none"> • Acquire public access into Gilham Butte, the Cedars, and Eagle Peak. 	Completed
Arcata RMP Forest Plan Amendment 1995	<p>Management Objectives</p> <p>It is BLM policy to make public land and its resources available for use and development to meet national, regional, and local needs, consistent with national objectives. FLPMA provides authority for landownership adjustments by sale, exchange, withdrawal, and other means. The Act further requires that adjustments conform to existing land use plans. The Arcata RMP provides the following area wide decisions and guidance for the lands program.</p> <ul style="list-style-type: none"> • Manageability of Public Lands will consider: <ul style="list-style-type: none"> ◦ safety of the public and BLM personnel with regard to road maintenance, illegal land uses, and other considerations; ◦ relative cost-effectiveness of managing individual tracts; ◦ fiscal ability of BLM to effectively manage lands and interests (including 	Ongoing

Decision Source	Current Management Objectives and Management Decisions	Status
	<p>easements) in the long term;</p> <ul style="list-style-type: none"> ◦ alternative management scenarios, such as creative partnership with other agencies and organizations; and ◦ willingness of other organizations and agencies to implement their land use plan decisions. <ul style="list-style-type: none"> • Site-specific inventories and analyses for T&E species, historic properties (cultural resources), and mineral values will be completed prior to disposal of public lands and interests. • The BLM will not dispose of lands with resources of high national interest, including WSAs, RNAs, and ACECs, to non-federal agencies. Disposal of the habitat of endangered, threatened, or sensitive species to non-federal agencies or nonprofit organizations (e.g., county and state agencies or The Nature Conservancy) may be considered only if the protection and conservation that would be afforded the habitat following transfer of title equals or exceeds the level afforded by federal ownership. Such determination would be made by the state director. Disposal of the habitat of officially listed endangered or threatened species would occur only after consultation with the USFWS pursuant to Section 7 of the ESA. • Land exchanges involving LSRs will be considered if they provide benefits equal to or better than current conditions. Land exchanges will be considered to improve area, distribution, and quality (e.g., connectivity, shape, contribution to biodiversity) of LSRs, especially where public and private lands are intermingled. Such exchanges would require an LSR assessment for conformance with NWFP standards and guidelines. • Disposal refers to surface rights only. Every effort will be made to avoid creating split-estate when selling or exchanging lands. A policy of simultaneous disposal of subsurface rights will be followed with exceptions. Subsurface rights will be evaluated and appraised in each exchange proposal. These rights will be retained where known significant resources are present or exchanged with consideration in the appraisal price. • The acquisition areas identified under the alternatives in this plan amendment are high priority areas that give the BLM direction for land and resource consolidation in order to improve manageability and cost-effectiveness. These proposed acquisitions are not intended to be an exhaustive list of every acquisition target. Acquisition depends on willingness for sale or exchange. Opportunities that arise and meet the RCOs will be considered. • In instances where the legal descriptions for Special Designations are down to section only, the intent is to automatically include under the designation lands that may be acquired in those sections. • No public lands in the planning area are suitable or available for agricultural entry, including Indian Allotments (43 CFR 2530) because of the rugged topography, small tract size, unsuitable soils, and lack of access. No public lands are desert in character (43 CFR 2520); therefore, no public lands are available for disposal under the desert lands laws. • BLM's general goal is to obtain access to all public lands when feasible. Where specific access routes have not been identified in the plan amendment alternatives, access that is necessary to meet the RCOs and fully implement the land use allocations will be acquired. 	
Redding RMP 1993	<p>Management Objective</p> <ul style="list-style-type: none"> • The goal of the lands program is to transform the scattered land base of the Redding Resource Area into consolidated resource management units to meet the needs of the public land users. This goal will be pursued through exchange, sale, and acquisition, followed by some R&PP leases and patents in support of the objectives of the RMP. 	Ongoing

Decision Source	Current Management Objectives and Management Decisions	Status
Redding RMP 1993	<p>Management Decisions/Actions</p> <ul style="list-style-type: none"> • All lands identified for transfer to another agency or qualified organization, are for long-term stewardship by the receiving entity. These lands are not available for disposal by the receiving entity. The lands will return to BLM for disposal if not administered for long-term stewardship. • All lands acquisitions will be through exchange, purchase, or donation. Acquisitions will be from willing sellers for available, unimproved property. Available unimproved property is defined for the purposes of this plan as lands that are willingly offered to the BLM for acquisition and that contain improvements that represent less than 20 percent of the total value of the land. Acquisition of real property, other than easements, by exercising the power of eminent domain (condemnation) will not be used. • If only a part of a property is identified for acquisition and the remaining part would leave the owner with an uneconomic remnant, then the BLM will acquire the entire property as required by the Uniform Relocation Assistance and Land Acquisition Policies Act of 1970 (PL 91-646, 84 Stat. 1904 Sec 301(9)). • Currently it is BLM policy not to dispose of public land encumbered with properly recorded mining claims. However, disposal actions under Sections 203 and 206 of FLPMA and the R&PP of June 14, 1926, as amended, may occur if: (1) the mining claims are determined void due to failure by the claimant to comply with Section 314 of FLPMA, 43 USC 1744 (1982) and 43 CFR 3833.2-1; (2) the mining claim is contested and found to be invalid; or (3) a change in current policy allows for the disposal of public land encumbered with mining claims. • Any land identified for disposal through sale or exchange will be evaluated for significant cultural resources, T&E plants and animals, mineral potential, floodplain/flood hazards, hazardous waste, and prime or unique farmland, before actual transfer of the land can be considered and acted upon in compliance with the NEPA. The BLM will not dispose of withdrawn land until the withdrawal designation has been lifted. • Patent restrictions or conservation easements may be used in certain cases to protect special status species, significant cultural resources or other public interests associated with parcels of land subject to disposal. In cases where protection of these values is doubtful, BLM may abandon the disposal action. 	Ongoing
Redding RMP 1993	<p><u>SCOTT VALLEY MANAGEMENT AREA</u> Land Use Allocation <i>Quartz Hill:</i></p> <ul style="list-style-type: none"> • Allow management, for the stated objectives, by a qualified conservation organization under a cooperative management agreement. Quartz Hill would be available for disposal, via exchange, if no acceptable agreement is in effect within 5 years. 	Completed

Decision Source	Current Management Objectives and Management Decisions	Status
Redding RMP 1993	<p><u>SCOTT VALLEY MANAGEMENT AREA</u> Land Use Allocations <i>Remainder of Management Area:</i></p> <ul style="list-style-type: none"> • Transfer jurisdiction of public land within T. 45 N., R. 8 W., Section 26 and T.42N., R.7W., Section 35 (for management of the NSO) to the Klamath National Forest. • Transfer via the R&PP Act or exchange to the California Department of Corrections the parcel of public land east of McAdam Creek adjacent to the Deadwood Conservation Camp within T. 44 N., R. 9 W., Section 12. • Transfer via R&PP Act or exchange to a qualified agency or group the administration of the Cedar Gulch Cemetery within T. 43 N., R. 7 W., Section 18, NE1/4. • Transfer via R&PP Act or exchange to Siskiyou County the Callahan refuse transfer site in T. 40 N., R. 8 W., Sections 7 and 17. • All public land interests not noted above are available for exchange. 	Not completed, ongoing
Redding RMP 1993	<p><u>KLAMATH MANAGEMENT AREA</u> Land Use Allocation <i>Shasta and Klamath Rivers Canyon:</i></p> <ul style="list-style-type: none"> • Acquire available unimproved lands within the area with priority given (in descending order) to unimproved lands within the ACEC, the Klamath River corridor, and lands between Interstate 5 and the ACEC. 	Ongoing. 1,337 acres acquired
Redding RMP 1993	<p><u>KLAMATH MANAGEMENT AREA</u> Land Use Allocation <i>Upper Klamath River:</i></p> <ul style="list-style-type: none"> • Acquire available unimproved lands within the area and/or develop cooperative management agreements with Pacific Power and Light or their successor(s). 	Not completed
Redding RMP 1993	<p><u>KLAMATH MANAGEMENT AREA</u> Land Use Allocation <i>Shasta Valley Wetlands:</i></p> <ul style="list-style-type: none"> • Acquire available unimproved lands within the area. Priority is given to land containing existing or historic native wetlands. 	Not completed

Decision Source	Current Management Objectives and Management Decisions	Status
Redding RMP 1993	<p><u>KLAMATH MANAGEMENT AREA</u> Land Use Allocations <i>Remainder of Management Area:</i></p> <ul style="list-style-type: none"> • Transfer jurisdiction of nineteen parcels of public land encompassing approximately 3,650 acres to the Shasta and Klamath National Forests. These parcels include: agricultural inspection station (T. 39 N., R. 1W., NW1/4 of NW1/4, Section 4), Dry Lake (T. 44 N., R. 1 W., SE1/4 of SE1/4, Section 31), Goosenest (T. 45 N., R. 4 W., Section 36), Willow Creek to include in spotted owl habitat conservation area (T. 46 N., R. 4 W., NE1/4, Section 36), Pluto Cave to enhance recreation and protect natural/cultural values (T.43 N., R. 4 W., Section 22), Iron Dyke Mine Owl Habitat Area (T. 48 N., R. 8 W., S1/2 of SE1/4, Section 22), McGavin Peak (T. 47 N., R. 2 W., Sections 4, 6, 8, 18, 20 and T. 48 N., R. 2 W., Section 32), and Butte Valley Land Use Project (T. 47 N., R. 1W., Sections 14 and 22). • Transfer via exchange, the R&PP Act or cooperative agreement administrative responsibility of 80 acres within the Butte Valley Wildlife Area (T. 47 N., R. 2 W., Section 28) to the CDFW. • Transfer via exchange, R&PP Act, or sale to Siskiyou County the Hornbrook refuse transfer site (T. 47 N., R. 6 W., Section 29, N1/2 of SE1/4 of NE1/4). • Transfer via R&PP Act or exchange to the City of Yreka, Siskiyou County, or other qualified local agency the Humbug Gulch parcel encompassing approximately 140 acres (T. 45 N., R. 7 W., Section 21). Offer for exchange to any party after two years from the approval of the Final RMP. • All public land interests not noted above are available for exchange. 	Not completed
Redding RMP 1993	<p><u>KLAMATH MANAGEMENT AREA</u> Land Use Allocation <i>Remainder of Management Area:</i></p> <ul style="list-style-type: none"> • 1,025 acres near Hawkinsville (T. 45 N., R. 7 W., Sections 2, 3, 10 and 11) are suitable for community development purposes as a reservation for federally recognized Indian tribe(s). If congressional sponsorship is unavailable, offer for exchange to any party after five years from the approval of the Final RMP. 	Ongoing
Redding RMP 1993	<p><u>TRINITY MANAGEMENT AREA</u> Resource Condition Objective</p> <ul style="list-style-type: none"> • Consolidate and increase, as feasible, public ownership in areas of low intensity or undeveloped land uses, which constitute the designated river corridor. Acquire available unimproved lands within the corridor. 	Ongoing
Redding RMP 1993	<p><u>TRINITY MANAGEMENT AREA</u> Land Use Allocation</p> <ul style="list-style-type: none"> • Acquire available unimproved lands within the corridor. 	Ongoing
Redding RMP 1993	<p><u>TRINITY MANAGEMENT AREA</u> Land Use Allocation</p> <ul style="list-style-type: none"> • Seek administrative transfer of three parcels from the Trinity National Forest—N1/2 Section 4, N1/2 Section 5, T. 32 N., R. 10 W., W 1/2 Section 29, all of Section 30, all except W 1/2 of SW 1/4 Section 31, and W 1/2 Section 32, T. 33 N., R. 10 W—totalling approximately 1,450 acres. 	Not completed
Redding RMP 1993	<p><u>TRINITY MANAGEMENT AREA</u> Land Use Allocation <i>North of Trinity/Deadwood/Indian Creek:</i></p> <ul style="list-style-type: none"> • Acquire title to State of California lands within Section 16, T. 34 N., R. 11 W. between Fox and Brock Gulches. 	Not completed

Decision Source	Current Management Objectives and Management Decisions	Status
Redding RMP 1993	<p><u>TRINITY MANAGEMENT AREA</u> Land Use Allocation <i>North of Trinity/Deadwood/Indian Creek:</i></p> <ul style="list-style-type: none"> Consolidate and increase public landownership within the area by acquiring available unimproved lands that adjoin the Trinity River Corridor, facilitate reforestation and other sustained yield forestry practices, protect anadromous fisheries, provide public access to public lands, protect sensitive species habitat, conserve regionally important cultural resources, provide access to identified Native American heritage resources, or enhance overall efficiency of public land administration. 	Ongoing
Redding RMP 1993	<p><u>TRINITY MANAGEMENT AREA</u> Land Use Allocation <i>North of Trinity/Deadwood/Indian Creek:</i></p> <ul style="list-style-type: none"> Transfer via R&PP Act, sale, or exchange to a qualified organization one parcel of public land near Lewiston to increase the size of the community cemetery. 	Not completed
Redding RMP 1993	<p><u>TRINITY MANAGEMENT AREA</u> Land Use Allocation <i>Grass Valley Creek Watershed:</i></p> <ul style="list-style-type: none"> Acquire available unimproved lands within the watershed via appropriated funding, exchange, or donation contingent that funds also be included to manage these lands consistent with I.D.1. and I.D. 1-8. 	Ongoing
Redding RMP 1993	<p><u>TRINITY MANAGEMENT AREA</u> Land Use Allocations <i>Remainder of Management Area:</i></p> <ul style="list-style-type: none"> Transfer to Trinity County via the R&PP Act Airport Grant or exchange three parcels of public land encompassing approximately 80 acres near Weaverville Airport. Transfer to the Trinity National Forest two parcels of public land encompassing approximately 60 acres near McKinney Gulch and Mill Creek. 50 acres near Hayfork (W 1/2, Section 13, T. 31 N., R. 12 W.) are suitable for community development as a reservation for federally recognized Indian tribes or for community purposes through the R&PP Act. If congressional sponsorship is unavailable or if an R&PP Act application is not perfected, offer for exchange to any party after 5 years from the approval of the final AMP. All public land interests not noted above are available for exchange. 	<ul style="list-style-type: none"> Completed Not completed Not completed Ongoing
Redding RMP 1993	<p><u>TRINITY MANAGEMENT AREA</u> Resource Condition Objectives <i>Remainder of Management Area:</i></p> <ul style="list-style-type: none"> Enhance the ability to acquire high value resource lands within the Redding Resource Area by disposal of public land interests within the Trinity Management Area. Enhance resource management efficiency and the public service mission of local, state, and federal agencies via transfer of jurisdiction of specific public lands from BLM. Afford opportunities to meet community development needs for federally recognized Indian tribes. 	<ul style="list-style-type: none"> Ongoing; approximately 160 acres disposed Not completed Not completed
Redding RMP 1993	<p><u>TRINITY MANAGEMENT AREA</u> Management Action</p> <ul style="list-style-type: none"> Terminate BLM classification at Steel Bridge campground and Limekiln Gulch. 	Completed

Decision Source	Current Management Objectives and Management Decisions	Status
Redding RMP 1993	<p><u>SHASTA MANAGEMENT AREA</u> Resource Condition Objectives <i>Remainder of Management Area:</i></p> <ul style="list-style-type: none"> Enhance the ability to acquire high value resource lands in the Redding Resource Area by disposing of public land interests in the Shasta Management Area. Enhance resource management efficiency and the public service mission of local, state, and federal agencies via transfer of jurisdiction of specific public lands from the BLM. 	Ongoing
Redding RMP 1993	<p><u>SHASTA MANAGEMENT AREA</u> Land Use Allocation <i>Interlakes SRMA:</i></p> <ul style="list-style-type: none"> Acquire available unimproved lands that provide legal public access to adjoining public lands, complete segments of recreational trails, enhance protection of sensitive resources, provide opportunities for public interpretation, enhance reforestation efforts (including habitat improvement for sensitive species), or enhance long-term administration of the area. 	Ongoing
Redding RMP 1993	<p><u>SHASTA MANAGEMENT AREA</u> Land Use Allocation <i>West of French Gulch:</i></p> <ul style="list-style-type: none"> Acquire available unimproved lands that enhance long-term forestry management, possess critical habitat for wintering deer, contain significant cultural resources, enhance protection or restoration of special status species habitat, provide physical access to public lands, or enhance long-term administration of the area. 	Not completed
Redding RMP 1993	<p><u>SHASTA MANAGEMENT AREA</u> Land Use Allocation <i>Lower Clear Creek and Mule Mountain:</i></p> <ul style="list-style-type: none"> Acquire available, unimproved private land that contain important anadromous salmonid habitat, lay within the 100-year floodplain, possess significant historic or socio-cultural resources, provide public access to public lands within the area, contain important scenic qualities within the creek viewshed above Clear Creek Road bridge, or facilitate long-term resource protection of the area. 	Ongoing
Redding RMP 1993	<p><u>SHASTA MANAGEMENT AREA</u> Land Use Allocation <i>Clear Creek Uplands:</i></p> <ul style="list-style-type: none"> Transfer, via the R&PP Act, four parcels of public land encompassing approximately 280 acres to any qualified organization or agency for the purposes expressed by the Horse town/Clear Creek Preserve Coalition. If an acceptable R&PP Act application is not perfected within 2 years of the ROD for this RMP, the parcels will be offered for exchange. 	Not completed

Decision Source	Current Management Objectives and Management Decisions	Status
Redding RMP 1993	<p><u>SHASTA MANAGEMENT AREA</u> Land Use Allocations <i>Remainder of Management Area:</i></p> <ul style="list-style-type: none"> • Transfer via the R&PP Act or exchange to Shasta State Historic Park two parcels of public land encompassing approximately 160 acres (Section 25, T. 32 N., R. 6 W. and Section 30, T. 32 N., R. 5W.) to maintain the scenic integrity of the historic town setting. • Transfer via R&PP Act, sale, or exchange to a qualified organization administrative responsibility of the Central Valley Cemetery located on one parcel of public land at SE 1/4 of NW 1/4 of Section 30, T. 33 N., R. 5 W. • Transfer to County of Shasta via R&PP Act, exchange, or sale, the French Gulch and Shasta refuse transfer sites encompassing approximately 6 acres of public land. • Transfer via R&PP Act, sale, or exchange, to the Independent Order of Odd Fellows, one parcel of public land in French Gulch to resolve an inadvertent trespass by the community cemetery. • Transfer via R&PP Act, or exchange, to the State of California, County of Shasta, City of Redding, community service districts, or any other qualified organization administrative responsibility of any portion of 6,000 acres of public land to meet local community service needs. Within 2 years from approval of the Final RMP, the organizations mentioned above will be given an opportunity to submit R&PP Act applications for specific parcels prior to the land being offered for exchange. Offer for exchange to any party after 2 years from approval of the final RMP. 	<ul style="list-style-type: none"> • Not completed • Not completed • Shasta site completed; French Gulch pending • Not completed • Completed
Redding RMP 1993	<p><u>SACRAMENTO RIVER MANAGEMENT AREA</u> Resource Condition Objective <i>Remainder of Management Area:</i></p> <ul style="list-style-type: none"> • Enhance the ability to acquire high value resource lands in the Redding Resource Area by disposing of scattered public land interests in the Sacramento River Management Area. 	Ongoing
Redding RMP 1993	<p><u>SACRAMENTO RIVER MANAGEMENT AREA</u> Land Use Allocation <i>Sacramento Island:</i></p> <ul style="list-style-type: none"> • Acquire adjacent available unimproved lands to enhance manageability. 	Not completed
Redding RMP 1993	<p><u>SACRAMENTO RIVER MANAGEMENT AREA</u> Land Use Allocation <i>Cottonwood Creek and Sacramento River Parcels:</i></p> <ul style="list-style-type: none"> • Transfer jurisdiction of parcels of public lands on Cottonwood Creek and the Sacramento River above Balls Ferry and below Red Bluff to qualified public agencies or conservation organizations to afford long-term protection of the riparian values. 	Not completed
Redding RMP 1993	<p><u>SACRAMENTO RIVER MANAGEMENT AREA</u> Land Use Allocation <i>Hawes Corner:</i></p> <ul style="list-style-type: none"> • Acquire available, unimproved privately owned portion of <i>Orcuttia tenuis</i> habitat or develop cooperative management agreement to protect the habitat. 	Not completed

Decision Source	Current Management Objectives and Management Decisions	Status
Redding RMP 1993	<p><u>SACRAMENTO RIVER MANAGEMENT AREA</u> Land Use Allocation <i>Bend Area:</i></p> <ul style="list-style-type: none"> Acquire available unimproved lands that (in descending priority): contain high priority habitat along the Sacramento River as depicted in the 1988 Sacramento River Riparian Atlas, front the Sacramento River, provide physical access to public land, contain known/potential wetland or special status species habitat, contain important cultural resources, or facilitate overall public management within the area. 	Ongoing
Redding RMP 1993	<p><u>ISHI MANAGEMENT AREA</u> Resource Condition Objectives <i>Remainder of Management Area:</i></p> <ul style="list-style-type: none"> Enhance the resource management efficiency and the public service mission of local, state, and federal agencies via transfer of specific public lands from the BLM. Enhance the ability to acquire high value resource lands in the Redding Resource Area by disposing of scattered public land interests in the Ishi management area. 	Ongoing
Redding RMP 1993	<p><u>ISHI MANAGEMENT AREA</u> Land Use Allocation <i>Battle Creek:</i></p> <ul style="list-style-type: none"> Acquire available unimproved lands within the corridor. 	Ongoing
Redding RMP 1993	<p><u>ISHI MANAGEMENT AREA</u> Land Use Allocation <i>Deer Creek:</i></p> <ul style="list-style-type: none"> Acquire available unimproved lands within the canyon. 	Not completed
Redding RMP 1993	<p><u>ISHI MANAGEMENT AREA</u> Land Use Allocation <i>Forks of Butte Creek:</i></p> <ul style="list-style-type: none"> Acquire available, unimproved lands to protect scenic quality and enhance the recreational experience. 	Ongoing
Redding RMP 1993	<p><u>ISHI MANAGEMENT AREA</u> Land Use Allocation <i>Minnehaha Mine:</i></p> <ul style="list-style-type: none"> Public land is available for transfer to the State of California or local government via the R&PP Act or exchange. 	Not completed

Decision Source	Current Management Objectives and Management Decisions	Status
Redding RMP 1993	<p><u>ISHI MANAGEMENT AREA</u></p> <p>Land Use Allocations</p> <p><i>Remainder of Management Area:</i></p> <ul style="list-style-type: none"> <li>• Transfer via exchange, the R&PP Act, or cooperative agreement the administrative responsibility of forty acres within the Tehama Wildlife Management Area (Section 6, T. 27 N., R. 1 W.). <li>• Transfer via exchange or R&PP Act to the City of Chico, the County of Butte, or other qualified organization title to seven parcels of public land in Big Chico Creek canyon (between Highway 32 and Musty Buck Ridge) encompassing approximately 520 acres. Within 2 years from approval of the Final RMP, the government entities or organizations mentioned above will be given an opportunity to submit R&PP Act applications for specific parcels prior to the land being offered for exchange. Offer for exchange to any party after 2 years from approval of the final RMP. If Big Chico Creek is not designated as a component of the National WSR System, an additional five parcels and 520 acres would be available for exchange or R&PP Act under the above conditions. <li>• Transfer to Shasta County via Airport Grant or exchange 15 acres of public land at Shingletown Airport in Section 24, T. 31 N., R. 1 E. <li>• Transfer via R&PP Act or exchange to a qualified state/local agency or nonprofit organization administrative responsibility of six parcels of public land encompassing approximately 800 acres in the West Branch Feather River (between Magalia Reservoir and Lake Oroville). Offer for exchange to any party after 2 years from approval of the Final RMP. <li>• Transfer via exchange or R&PP Act to a qualified organization administrative responsibility of 35 acres of public land in lower Butte Creek (near Honey Run Bridge) within the NE 1/4 of Section 36, T. 22 N., R. 2 E. Offer for exchange to any party after 2 years from approval of the Final RMP. <li>• Transfer via exchange or R&PP Act to the State of California all surface and submerged public lands encompassing approximately 6,400 acres within and adjacent to the Lake Oroville State Recreation Area. All lands identified by California or BLM as excess to park needs will be offered for exchange to any party after 2 years from approval of the Final RMP. <li>• 200 acres of public land near the Middle Fork Feather River W1/2 of Section 4, T. 20 N., R. 6 E.) are suitable for community development purposes as a reservation for federally recognized Indian tribe(s). If congressional support is unavailable, offer for exchange to any party after 5 years from the approval of the Final RMP. <li>• Transfer via R&PP Act or exchange to Butte County or other qualified organization administration of the Forbestown Cemetery encompassing approximately 2.5 acres of public land in the NE 1/4 of Section 10, T. 19 N., R. 6 E. <li>• All public land interests not noted above are available for exchange. 	Not completed

Decision Source	Current Management Objectives and Management Decisions	Status
Redding RMP 1993	<p><u>ISHI MANAGEMENT AREA</u> Land Use Allocation <i>Remainder of Management Area:</i></p> <ul style="list-style-type: none"> Transfer jurisdiction of twelve parcels of public land encompassing approximately 1,050 acres to the Shasta, Lassen, and Plumas National Forests. These parcels include: Pit River (NE 1/4 of NW 1/4 and NW 1/4 of NE 1/4 Section 34, T. 35 N., R. 1 W.), Dan Hunt Mountain portion of a California Spotted Owl Habitat Area (400 acres in Sections 3, 7, & 8, T. 33 N., R. 2 E.), Deadhorse Falls (Section 6, T. 28 N., R. 3 E.), Devils Kitchen (NE 1/4, Section 12, T. 25 N., R. 2 E.), Middle Fork Feather River (E 1/2, Section T. 20 N., R. 6 E.) Forbestown (N 1/2, Section 10, T. 19 N., R. 6 E.), and Lumpkin Ridge (SE 1/4 of SW 1/4 Section 36, T. 21 N., R. 7 E.). Terminate all lapsed R&PP Act lease and small tract classifications. Revoke all unused waterpower withdrawals. 	Completed. Not completed for Tunnel Ridge Wilderness (Trinity) transferred to FS
Redding RMP 1993	<p><u>YOLLA BOLLY MANAGEMENT AREA</u> Resource Condition Objectives</p> <ul style="list-style-type: none"> Enhance the ability to acquire high value resource lands in the Redding Resource Area by disposing of BLM-administered interests in the management area. Enhance resource management efficiency and the public service mission of federal agencies by transferring the jurisdiction of specific public lands from the BLM. 	
Redding RMP 1993	<p><u>YOLLA BOLLY MANAGEMENT AREA</u> Land Use Allocation</p> <ul style="list-style-type: none"> Transfer jurisdiction of twelve parcels of public land encompassing approximately 8,000 acres and an additional 1,800 of federal mineral estate to the Trinity National Forest. These parcels include Bluford Trail (E1/2, Section 20, T. 30 N., R. 9 W.) Beegum Gorge, Beegum Peak Eyrie (S 1/2 Section 19, Sections 20-22, W 1/2 Section 26, Sections 27-34, T. 29 N., R. 9 W. and Section 4, T. 28 N., R. 9 W.), Tedoc Mountain botanical area (NW 1/4, Section 28, T. 28 N., R. 9 W.), Wells Creek Special Interest Area (SW 1/4 Section 33, T. 28 N., R. 9 W.), Brushy Ridge (N 1/2, Section 24, T 27 N., R. 9 W.), Pettyjohn Road access (S 1/4, Section 20, S 1/2 of NW 1/4 and S 1/2 Section 27 and SW 1/4 Section 26, T. 27 N., R. 8 W.), Maple Creek (Sections 34 & 35, T. 27 N., R. 8 W.) and South Fork Cottonwood Creek (N 1/2 Section 10 and Section 18, T. 26 N., R. 8 W.) All public land interests not noted above are available for exchange. 	Not completed
Redding RMP 1993	<p>Management Actions (Withdrawals and Classification)</p> <ul style="list-style-type: none"> BLM will review existing or proposed withdrawals and classifications in light of RMP decisions. No lands were identified or found suitable for agricultural entry. 	Ongoing
Redding RMP 1993	<p>Management Actions (Withdrawals and Classification)</p> <ul style="list-style-type: none"> All significant non-linear BLM facilities and developed sites (e.g., campgrounds, fish-rearing facilities, day use areas) will be withdrawn from locatable mineral entry to protect capital investments from the adverse effects of mining and loss of federal ownership in the case of patenting. 	Ongoing
Redding RMP 1993	<p>Management Actions (Withdrawals and Classification)</p> <ul style="list-style-type: none"> Revoke the withdrawals for the Gazelle Mountain Administrative Site (T. 41 N., R. 7 W., Sec. 8, NESE) and the privately owned Oro Fino Townsite. 	Completed
Redding RMP 1993	<p>Management Actions (Withdrawals and Classification)</p> <ul style="list-style-type: none"> Withdraw all public lands within the 100-year floodplain of the Shasta River from mineral entry. 	Completed

Decision Source	Current Management Objectives and Management Decisions	Status
Redding RMP 1993	Management Actions (Withdrawals and Classification) <ul style="list-style-type: none"> • Withdraw the Osburger Historic Site (5 acres) from mineral entry. • Revoke existing withdrawals and terminate classifications at Carson Gulch, Osburger Gulch, Lennox Rock, and Hawkinsville. 	Not completed
Redding RMP 1993	Management Actions (Withdrawals and Classification) <ul style="list-style-type: none"> • Maintain existing withdrawals from mineral entry at Junction City and Douglas City campgrounds (58 acres and 140 acres respectively). Withdraw other proposed and developed public facilities from mineral entry. Withdraw specific cultural resources from mineral entry including Helena, Rush Creek, Ohio Flat, Salt Flat, and Montana Cabin. Withdraw anadromous fisheries habitat improvements from mineral entry including Steiner Flat and Cemetery Hole. New acquisitions in this area would not be opened for locatable mineral entry. 	Completed
Redding RMP 1993	Management Actions (Withdrawals and Classification) <ul style="list-style-type: none"> • Withdraw all public land within a quarter mile of the Jennings Gulch bald eagle nesting site from mineral entry. Withdraw the Indian Creek townsite from mineral entry. 	Indian Ck Townsite is withdrawn
Redding RMP 1993	Management Actions (Withdrawals and Classification) <ul style="list-style-type: none"> • Maintain withdrawal from mineral entry on all public land within a quarter mile of normal high water of the Sacramento River, the spillway elevation of Keswick Reservoir, and the 800-foot elevation within Spring Creek. 	Completed
Redding RMP 1993	Management Actions (Withdrawals and Classification) <i>Lower Clear Creek and Mule Mountain:</i> <ul style="list-style-type: none"> • Public land within the 100-year floodplain is withdrawn from mineral entry. This same area is open to recreational mineral collection. 	Completed
Redding RMP 1993	Management Actions (Withdrawals and Classification) <i>Sacramento Island:</i> <ul style="list-style-type: none"> • Withdraw from mineral entry. 	Completed
Redding RMP 1993	Management Actions (Withdrawals and Classification) <i>Cottonwood Creek and Sacramento River Parcels:</i> <ul style="list-style-type: none"> • Withdraw from mineral entry 	Not completed
Redding RMP 1993	Management Actions (Withdrawals and Classification) <i>Fork of Butte Creek ACEC:</i> <ul style="list-style-type: none"> • Withdraw public lands from mineral entry. 	Completed
Redding RMP 1993	Management Actions (Withdrawals and Classification) <i>Minnehaha Mine:</i> <ul style="list-style-type: none"> • Withdraw from mineral entry. 	Not completed
Redding RMP 1993	Management Actions (Withdrawals and Classification) <i>Upper Ridge Nature Preserve:</i> <ul style="list-style-type: none"> • Withdraw from mineral entry. 	Not completed
Redding RMP 1993	Management Actions (Withdrawals and Classification) <i>Remainder of Management Area:</i> <ul style="list-style-type: none"> • Terminate all lapsed R&PP Act lease and small tract classifications. Revoke all unused waterpower withdrawals. 	Not completed

3.3.4 Realty – Use Authorizations

Table 3-19 identifies existing land use plan decisions in the Redding and Arcata FOs for realty - use authorizations.

Table 3-19. Current Management Objectives, Decisions, and Actions for Realty-Use Authorizations

Decision Source	Current Management Objectives and Management Decisions	Status
Arcata RMP 1992 (USDI BLM 1992a)	<p>Management Decisions/Actions</p> <ul style="list-style-type: none"> ROW proposals will be evaluated on a case-by-case basis. ROW determinations cannot be made at this planning level with any degree of credibility. Federal tracts do not control ROWs such as highways or utility corridors. Proposals will be addressed on a site-specific basis. 	Ongoing
Redding RMP 1993	<p>Management Decisions/Actions</p> <ul style="list-style-type: none"> Land use authorizations (ROWs, lease, permits) will continue to be issued on a case-by-case basis and in accordance with decisions established in this RMP. Applications for land use authorizations that reduce the marketability of an exchange parcel will not be authorized. ROWs will be issued to promote the maximum utilization of existing ROW routes, including joint use whenever possible. 	Ongoing
Redding RMP 1993	<p>Management Decisions/Actions</p> <ul style="list-style-type: none"> Communication site applications will continue to be considered on land suitable for disposal until an exchange agreement is signed. On public lands retained or acquired, communication site plans will be developed. 	Ongoing
Redding RMP 1993	<p>Management Decisions/Actions</p> <ul style="list-style-type: none"> Designated corridors include all existing or occupied corridors delineated in the WRCS of 1986 with the following exceptions: <ul style="list-style-type: none"> Avoidance Areas Exclusion Areas 	Ongoing
Redding RMP 1993	<p>Management Decisions/Actions</p> <ul style="list-style-type: none"> Avoidance areas include Butte Creek and portions of the Sacramento River Management Area. The WRCS of 1986 displays an “un-occupied corridor,” which would impact public lands in the Sacramento River Management Area. Impacts on the area can be avoided by shifting the corridor slightly to the east of the management area. No additional corridors will be permitted in the Sacramento River Management Area (except a 2-acre aerial communications site on Inks Ridge); the Trinity River, Klamath River, and Shasta River viewsheds (except perpendicular crossings of the rivers); and Gene Chappie-Shasta OHV Area, outside of the Western Regional Corridor routes. 	Ongoing
Redding RMP 1993	<p>Management Decisions/Actions</p> <ul style="list-style-type: none"> Two exclusion areas consist of BLM wilderness areas: Ishi and Tunnel Ridge. The Yolla Bolly WSA and all eligible study corridors for the National WSRs System with a preliminary classification as scenic or wild are considered exclusion areas, pending the conclusive action of Congress. 	Ongoing

3.3.5 Minerals (includes Locatable, Leasable, and Saleable Minerals)

Table 3-20 identifies existing land use plan decisions in the Redding and Arcata FOs for minerals.

Table 3-20. Current Management Objectives, Decisions, and Actions for Minerals

Decision Source	Current Management Objectives and Management Decisions	Status
Arcata RMP 1992 (USDI BLM 1992a)	<p>Management Objectives</p> <ul style="list-style-type: none"> Minerals Management. Due to the scattered nature of public land, low economic mineral potential, and lack of interest in mineral development within the NCIP area, restrictions and stipulations for mineral development will be determined on a case-by-case basis and consistent with the RCOs prescribed for each management area. The process for reviewing hardrock mineral development proposals will include considerations of California’s Surface Mining and Reclamation Act (SMARA), and associated coordination with “lead agencies” as defined by SMARA. 	Ongoing
Arcata RMP 1992	<p>Land Use Allocations</p> <ul style="list-style-type: none"> Public lands (including mineral reserve lands) are available for mineral leasing and mineral material sales and are open to entry under the Mining Law of 1872. All mineral actions must be consistent with Management Area RCOs. 	Ongoing
Arcata RMP Forest Plan Amendment 1995	<p>Management Objectives</p> <ul style="list-style-type: none"> Public lands will be managed in a manner that recognizes the nation’s need for domestic sources of minerals, food, timber, and fiber from the public lands including implementation of the Mining and Minerals Policy Act of 1970, as it pertains to the public lands (Section 202(c)(3)). Mineral exploration and development are encouraged on public land in keeping with the BLM’s multiple resource use concept. Overall guidance on the management of mineral resources appears in the General Mining Law of 1872; Mining and Minerals Policy Act of 1970; Section 102(a)(12) of FLPMA, as amended; National Materials and Minerals Policy, Research and Development Act of 1980; and the BLM’s Mineral Resources Policy of May 29, 1984. 	Ongoing
Arcata RMP Forest Plan Amendment 1995	<p>Land Use Allocation</p> <ul style="list-style-type: none"> The standards and guidelines designate initial reserve widths for protected riparian areas, as well as specific requirements for timber management, road construction and maintenance, grazing, recreation, minerals management, fire/fuels management, research, and restoration activities. The Mineral Leasing Act of 1920, Geothermal Steam Act of 1970, and 43 CFR 3100 to 3500 provide the regulatory framework for issuing mineral leases. These regulations apply where public interest exists for the development of oil, gas, sodium, potassium, and geothermal energy. Where required, stipulations will be attached to leases to mitigate impacts on sensitive species, cultural areas, and other resources susceptible to impacts from leasing-related activities. The Red Mountain RNA/ACEC management plan (USDI BLM 1989) withdrew the ACEC from entry for mineral materials sales. The 1992 Arcata RMP (USDI BLM 1992a) withdrew the Elder Creek RNA/ACEC from entry for mineral materials sales. The RMP also directed that the Elder Creek RNA/ACEC be withdrawn from entry for locatable minerals under the 1872 Mining Law; the petition for withdrawal has been submitted to the director of the BLM for approval. The development of mineral resources may be limited by the NWFP land allocations and standards and guidelines. 	Ongoing

3. Current Management Direction (Minerals (includes Locatable, Leasable, and Saleable Minerals))

Decision Source	Current Management Objectives and Management Decisions	Status
Arcata RMP Forest Plan Amendment 1995	<p>Management Actions</p> <ul style="list-style-type: none"> • The 43 CFR 3802 and 3809 regulations provide for mineral exploration and development in conjunction with other resource development. The BLM will work with mine operators to achieve plan approval. Where an operator does not have the technical resources to develop reclamation measures and measures to prevent unnecessary degradation, the BLM will provide technical assistance. Mining within the Arcata Resource Area will be administered on a case-by-case basis. • Development work, extraction, and patenting for locatable minerals will be allowed in designated wilderness areas only on valid claims existing before designation. • Before the BLM can approve mining plans of operation submitted for work in a designated wilderness area, a BLM mineral examiner must verify that a valid claim exists. The mineral examination and mineral report must confirm that minerals have been found and the evidence is of such character that a person of ordinary prudence would be justified in the further expenditure of his labor and means, with a reasonable prospect of success in developing a valuable mine. • Saleable Minerals: The Material Sale Act of 1947 and 43 CFR 3600 provide for the disposal and regulation of mineral materials. Sales of mineral materials to the public will be administered on a case-by-case basis. Saleable minerals are sold at market prices. FUPs will continue to be issued to state and federal agencies, local communities, and nonprofit organizations as the need arises. • The 1992 Arcata RMP (USDI BLM 1992a) allows all public lands (including split-estate lands) in the four MAs addressed in this plan amendment to remain available for mineral leasing and mineral material sales, and open to entry under the Mining Law of 1872, except where specifically restricted or withdrawn. Because of the scattered nature of public land, low economic mineral potential, and lack of interest in mineral development within the resource area, restrictions and stipulations for mineral development will be determined on a case-by-case basis. The process for reviewing hardrock mineral development proposals will include considerations of California's SMARA, and coordination with lead agencies as defined by SMARA. All approvals of mineral actions must be consistent with management area RCOs. 	Ongoing

3. Current Management Direction (Minerals (includes Locatable, Leasable, and Saleable Minerals))

Decision Source	Current Management Objectives and Management Decisions	Status
Redding RMP 1993	<p>Land Use Allocations</p> <ul style="list-style-type: none"> 43 CFR 3809 specifically provides for the protection of cultural properties by initially prohibiting mining operators from knowingly disturbing or damaging them. The need for a cultural resource field inventory in response to a notice should be determined on the basis of professional judgment and is left to the discretion of the Redding Area Manager. <p><i>Shasta and Klamath Rivers Canyon:</i></p> <ul style="list-style-type: none"> Withdraw all public lands within the 100-year flood zone of the Shasta River from mineral entry. Withdraw the Osburger Historic Site (5 acres) from mineral entry. <p><i>Upper Klamath River:</i></p> <ul style="list-style-type: none"> Offer public lands within the river corridor for mineral leasing with no surface occupancy. Mineral material disposals are not allowed within the river corridor. <p><i>Dry Creek:</i></p> <ul style="list-style-type: none"> Mineral material disposals are permitted only if such actions enhance the steelhead spawning potential within Dry Creek. <p><i>Shasta Valley Wetlands:</i></p> <ul style="list-style-type: none"> Mineral material disposals are permitted only if such actions enhance the long-term condition of riparian vegetation and the native fisheries habitat. Offer for mineral leasing with no surface occupancy within 300 feet of wetland habitat. Offer all other lands for mineral leasing with no surface disturbing actions permitted between November 15 and April 15. 	Ongoing
Redding RMP 1993	<p><u>TRINITY MANAGEMENT AREA</u></p> <p>Management Objectives</p> <p><i>Trinity River:</i></p> <ul style="list-style-type: none"> Maintain opportunities for the exploration and production of locatable mineral values outside the protected areas. <p><i>North of Trinity River/Deadwood/Indian Creek:</i></p> <ul style="list-style-type: none"> Provide opportunities for mineral development. 	Ongoing
Redding RMP 1993	<p>Management Objectives</p> <p><i>Interlakes SRMA:</i></p> <ul style="list-style-type: none"> Maintain opportunities to explore and develop freely available minerals on public lands. <p><i>West of French Gulch:</i></p> <ul style="list-style-type: none"> Maintain opportunities to explore and develop freely available minerals on public lands. 	Ongoing

3.3.6 Recreation and Visitor Services

Table 3-21 identifies existing land use plan decisions in the Redding and Arcata FOs for recreation and visitor services.

Table 3-21. Current Management Objectives, Decisions, and Actions for Recreation and Visitor Services

Decision Source	Current Management Objectives and Management Decisions	Status
Arcata RMP 1992 (USDI BLM 1992a)	<p><u>BUTTE CREEK MANAGEMENT AREA</u> Management Actions</p> <ul style="list-style-type: none"> • Federal Register notice for OHV designations. • Sign entrance to public lands regarding OHV designations. • Post boundaries. 	Not completed
Arcata RMP 1992	<p><u>KING RANGE VICINITY</u> Land Use Allocations</p> <ul style="list-style-type: none"> • Public lands are available for dispersed recreation. 	Ongoing
Arcata RMP 1992	<p>Management Actions</p> <ul style="list-style-type: none"> • Federal Register notices for OHV designations. • Sign entrance to public lands regarding OHV designations. • Post boundaries. 	Not completed
Arcata RMP 1992	<p><u>RED MOUNTAIN MANAGEMENT AREA</u> Resource Condition Objectives</p> <ul style="list-style-type: none"> • Enhance the natural values within the NCCRP. 	Ongoing
Arcata RMP 1992	<p>Management Actions</p> <ul style="list-style-type: none"> • Sign entrance to public lands regarding OHV designations. • Post boundaries. 	Not completed
Arcata RMP 1992	<p><u>COVELO VICINITY MANAGEMENT AREA</u> Resource Condition Objectives</p> <ul style="list-style-type: none"> • Protect and enhance natural and recreational values along the federally designated portions of the main stem, North and Middle forks of the Wild and Scenic Eel River Corridor. Outstanding and remarkable attributes include anadromous fisheries, scenic quality and recreational values. 	Ongoing
Arcata RMP 1992	<p>Management Actions</p> <ul style="list-style-type: none"> • Complete management plans for the main stem and North and Middle Forks of the Eel River utilizing an interagency cooperative management planning approach. Provide interim management protection to these river corridors until plans are completed. 	Not completed
Arcata RMP 1992	<p><u>SCATTERED TRACTS MANAGEMENT AREA</u> Resource Condition Objectives</p> <ul style="list-style-type: none"> • Enhance natural values and provide opportunities for environmental education. 	Ongoing
Arcata RMP 1992	<p>Land Use Allocations</p> <ul style="list-style-type: none"> • Acquire 800 acres around Gilham Butte for recreational uses. 	Completed
Arcata RMP 1992	<p>Management Actions</p> <ul style="list-style-type: none"> • Complete management plans for the Eel and Van Duzen Rivers utilizing an interagency cooperative management planning approach. Provide interim management protection to these river corridors until plans are completed. 	Not completed

3. Current Management Direction (Recreation and Visitor Services)

Decision Source	Current Management Objectives and Management Decisions	Status
Arcata RMP Forest Plan Amendment 1995 (USDI BLM 1995a)	<p><u>LACKS CREEK MANAGEMENT AREA</u> Management Decisions/Actions</p> <ul style="list-style-type: none"> Public lands are available for dispersed recreation. 	Ongoing
Arcata RMP Forest Plan Amendment 1995	<p>Management Decisions/Actions</p> <ul style="list-style-type: none"> Sign entrance to public lands regarding OHV designations. 	Completed
Arcata RMP Forest Plan Amendment 1995	<p>Management Decisions/Actions</p> <ul style="list-style-type: none"> Complete <i>Federal Register</i> notices for amended OHV designations. Post boundaries of public lands. 	Not completed
Arcata RMP Forest Plan Amendment 1995	<p><u>RED MOUNTAIN MANAGEMENT AREA</u> Resource Condition Objectives</p> <ul style="list-style-type: none"> Protect and enhance natural and recreational values along the federally designated portions of the South Fork Eel River WSR corridor. Public lands are available for dispersed recreation. (There are some restrictions on recreational uses within the Elder Creek ACEC.) 	Ongoing
Arcata RMP Forest Plan Amendment 1995	<p><u>RED MOUNTAIN MANAGEMENT AREA</u> Management Actions</p> <ul style="list-style-type: none"> Complete <i>Federal Register</i> notices for amended OHV designations. Complete a South Fork Eel River Management Plan. 	Not completed
Arcata RMP Forest Plan Amendment 1995	<p><u>COVELO VICINITY MANAGEMENT AREA</u> Resource Condition Objectives</p> <ul style="list-style-type: none"> Protect and enhance natural and recreational values along the federally designated wild and scenic segments of the Middle Fork Eel River as outlined in the Middle Fork Eel River Management Plan. Provide recreational opportunities along federally designated portions of WSR corridors as outlined in the Middle Fork Eel River Management Plan. Elsewhere provide dispersed recreation opportunities consistent with habitat management objectives. <p>Land Use Allocations</p> <ul style="list-style-type: none"> Public lands are available for dispersed recreation. <p>Management Actions</p> <ul style="list-style-type: none"> Implement the Middle Fork Eel River Management Plan. 	Ongoing
Arcata RMP Forest Plan Amendment 1995	<p><u>COVELO VICINITY MANAGEMENT AREA</u> Management Actions</p> <ul style="list-style-type: none"> Complete <i>Federal Register</i> notices for amended OHV designations. 	Not completed
Arcata RMP Forest Plan Amendment 1995	<p><u>SCATTERED TRACTS MANAGEMENT AREA</u> Resource Condition Objectives</p> <ul style="list-style-type: none"> Improve recreational opportunities between Humboldt Redwoods State Park and King Range NCA. Protect and enhance natural and recreational values along the federally designated portions of the Eel and Van Duzen Rivers' WSR corridors. <p>Land Use Allocations</p> <ul style="list-style-type: none"> Public lands are available for dispersed recreation. Develop a connecting trail system through Humboldt Redwoods State Park, Gilham Butte, and King Range NCA. 	Ongoing
Arcata RMP Forest Plan Amendment 1995	<p>Management Actions</p> <ul style="list-style-type: none"> Complete <i>Federal Register</i> notices for amended OHV designations. 	Not completed

3. Current Management Direction (Recreation and Visitor Services)

Decision Source	Current Management Objectives and Management Decisions	Status
Arcata RMP Samoa Amendment 1995	<p><u>SAMOA PENINSULA MANAGEMENT AREA</u> Management Objectives <i>Samoa Dunes:</i></p> <ul style="list-style-type: none"> • Provide opportunities for off-road vehicle recreation. <p>Provide opportunities for other non-consumptive recreational uses (hiking, sightseeing, bird-watching, picnicking, surfing, and fishing) that do not directly conflict with OHV use.</p>	Samoa Dunes: Ongoing
Arcata RMP Samoa Amendment 1995	<p><i>Manila Dunes:</i></p> <ul style="list-style-type: none"> • Enhance natural values and dune ecosystem. • Facilitate research and educational uses of unique dune ecosystems. • Provide opportunities for other non-consumptive recreational uses (hiking, sightseeing, birdwatching, and picnicking). 	Manila Dunes: Ongoing Manila Dunes Cooperative Management Plan is being developed in consultation with the USFWS
Arcata RMP Samoa Amendment 1995	<p>Land Use Allocations</p> <ul style="list-style-type: none"> • Maintain and improve OHV park (Staging area, riding trails, etc.) at Samoa Dunes. • Entire management area is closed to firearm and crossbow/bow shooting. 	Ongoing
Arcata RMP Samoa Amendment 1995	<p>Management Decisions/Actions</p> <ul style="list-style-type: none"> • <i>Federal Register</i> notices for OHV designations: Vehicles limited to daytime access, with nighttime gate closure one hour after sunset, and reopened daily one hour before sunrise. • Prepare a Samoa Dunes Recreation Area Management Plan. • Post boundaries/fencing, where appropriate. 	Completed
Arcata RMP Samoa Amendment 1995	<p>Management Decisions/Actions</p> <ul style="list-style-type: none"> • Continue to apply for “Green Sticker” funds for Samoa Dunes. • Continue to work with local governments in the management of the entire peninsula. • Patrol for OHV trespass in Manila Dunes area. 	Ongoing
Redding RMP 1993 (USDI BLM 1993)	<p><u>SCOTT VALLEY MANAGEMENT AREA</u> Resource Condition Objectives <i>Quartz Hill (under cooperative management):</i></p> <ul style="list-style-type: none"> • Provide semiprimitive recreation opportunities. Recreation Opportunity Spectrum (ROS) 	Ongoing

Decision Source	Current Management Objectives and Management Decisions	Status
Redding RMP 1993	<p><u>KLAMATH MANAGEMENT AREA</u> Resource Condition Objectives <i>Shasta and Klamath River Canyons:</i></p> <ul style="list-style-type: none"> • Enhance nonmotorized recreation opportunities. <p><i>Upper Klamath River:</i></p> <ul style="list-style-type: none"> • Improve semiprimitive nonmotorized recreation opportunities. <p><i>Shasta Valley Wetlands:</i></p> <ul style="list-style-type: none"> • Provide semiprimitive nonmotorized recreation opportunities. (ROS) <p>Land Use Allocations/Management Decisions/Actions <i>Shasta and Klamath River Canyons:</i></p> <ul style="list-style-type: none"> • Manage the area as Roaded Natural. (ROS) <p><i>Upper Klamath River:</i></p> <ul style="list-style-type: none"> • Manage area as Semiprimitive Motorized. (ROS) <p><i>Shasta Valley Wetlands:</i></p> <ul style="list-style-type: none"> • Manage as Semiprimitive Motorized. (ROS) <p><i>Remainder of Management Area:</i></p> <ul style="list-style-type: none"> • Develop an integrated resource activity plan for the Klamath River below RM 181 and the Shasta River Canyon that designates appropriate roads and trails for recreational access, among other things. 	Ongoing for all Objectives and Allocations
Redding RMP 1993	<p><u>TRINITY MANAGEMENT AREA</u> Resource Condition Objectives <i>Trinity River:</i></p> <ul style="list-style-type: none"> • Enhance recreation opportunities related to use of the Trinity River including mineral collection. • Interpret and protect key cultural and natural resources for the public including the Helena Townsite, Rush Creek, Montana Cabin and Salt Flat. <p><i>North of Trinity River/Deadwood/Indian Creek:</i></p> <ul style="list-style-type: none"> • Provide enhanced access for semiprimitive motorized recreation opportunities and to Native American Indian heritage resources. (ROS) <p>Land Use Allocations/Management Decisions/Actions <i>Trinity River:</i></p> <ul style="list-style-type: none"> • Manage all public lands within the corridor as Roaded Natural or Semiprimitive Motorized. (ROS) • Modify the existing Trinity River Recreation Area Management Plan to reflect the designated corridor of the Trinity River (i.e., a recreational component of the National WSR System). Continue implementing recreational developments and monitoring prescribed in the existing management plan. <p><i>North of Trinity River/Deadwood/Indian Creek:</i></p> <ul style="list-style-type: none"> • Maintain existing Recreation Opportunity Spectrum classes. (ROS) <p><i>Grass Valley Creek Watershed:</i></p> <ul style="list-style-type: none"> • Manage as semiprimitive motorized. (ROS) 	Ongoing for all Objectives and Allocations

Decision Source	Current Management Objectives and Management Decisions	Status
Redding RMP 1993	<p>SHASTA MANAGEMENT AREA Resource Condition Objectives <i>Interlakes SRMA:</i></p> <ul style="list-style-type: none"> • Provide a regional opportunity for motorized recreation with a focus within the Gene Chappie-Shasta OHV Area. • Enhance nonmotorized recreation opportunities within the area via a greenway connecting Redding to Shasta Dam along the Sacramento River. <p><i>West of French Gulch:</i></p> <ul style="list-style-type: none"> • Enhance existing semiprimitive motorized recreation opportunities. (ROS). <p><i>Lower Clear Creek and Mule Mountain:</i></p> <ul style="list-style-type: none"> • Enhance nonmotorized recreation opportunities by establishing a greenway from the Sacramento River to the Whiskeytown Unit of the NRA along Clear Creek. <p>Land Use Allocations/Management Decisions/Actions <i>Interlakes SRMA:</i></p> <ul style="list-style-type: none"> • Area is managed as Semiprimitive, Nonmotorized, Semi-Urban, Semiprimitive Motorized, and Roded Natural. (ROS) • Area is designated a SRMA incorporating the Gene Chappie-Shasta OHV Area. • Acquire available unimproved lands that provide legal public access to adjoining public lands, complete segments of recreational trails, enhance protection of sensitive resources, provide opportunities for public interpretation, enhance reforestation efforts (including habitat improvement for sensitive species), or enhance long-term administration of the area. <p><i>West of French Gulch:</i></p> <ul style="list-style-type: none"> • Manage as Roded Natural and Semiprimitive Motorized (ROS). <p><i>Swasey Drive ACEC:</i></p> <ul style="list-style-type: none"> • Manage as Semiprimitive Motorized. <p><i>Lower Clear Creek and Mule Mountain:</i></p> <ul style="list-style-type: none"> • Area is managed as Roded Natural and Semiprimitive Motorized. • Develop an integrated resource activity plan for Clear Creek, which describes the recreational opportunities to the public among other things. <p><i>Remainder of Management Area:</i></p> <ul style="list-style-type: none"> • Publish <i>Federal Register</i> notices for the designation of the SRMA, among other things. 	Ongoing for all Objectives and Allocations
Redding RMP 1993	<p>SHASTA MANAGEMENT AREA Management Decisions/Actions <i>Interlakes SRMA:</i></p> <ul style="list-style-type: none"> • Develop an integrated resources activity plan for the Interlakes SRMA that: identifies priority land acquisition needs, identifies sensitive resource protection locations, details the trail and management facilities development/maintenance needs, identifies potential site(s) for a regional firing range as proposed by a requesting agency(s), delineates VRM Class areas, identifies important public interpretive needs, describes needed visitor services, details resource monitoring conditions and evaluates possible designation as a NRA. 	Completed

Decision Source	Current Management Objectives and Management Decisions	Status
Redding RMP 1993	<p>SACRAMENTO RIVER MANAGEMENT AREA Resource Condition Objectives <i>Bend Area:</i></p> <ul style="list-style-type: none"> • Provide semiprimitive recreation opportunities. (ROS) <p>Land Use Allocations <i>Sacramento Island:</i></p> <ul style="list-style-type: none"> • Manage as Semiprimitive Motorized. (ROS) <p><i>Cottonwood Creek and Sacramento River parcels:</i></p> <ul style="list-style-type: none"> • Manage as Semiprimitive Motorized (to allow boat access). <p><i>Bend Area:</i></p> <ul style="list-style-type: none"> • Manage as Semiprimitive Motorized and Roded Natural. 	Ongoing for all Objectives and Allocations
Redding RMP 1993	<p>ISHI MANAGEMENT AREA Resource Condition Objectives <i>Battle Creek (below Manton Road):</i></p> <ul style="list-style-type: none"> • Improve semiprimitive recreation opportunities. (ROS) <p><i>Deer Creek:</i></p> <ul style="list-style-type: none"> • Maintain the primitive recreation opportunities within the canyon. (ROS) <p><i>Forks of Butte Creek:</i></p> <ul style="list-style-type: none"> • Maintain semiprimitive recreation opportunities. (ROS) <p><i>Minnehaha Mine:</i></p> <ul style="list-style-type: none"> • Enhance the safety of human users in this area. <p><i>Upper Ridge Nature Preserve:</i></p> <ul style="list-style-type: none"> • Maintain existing semiprimitive recreation opportunities in cooperation with the Upper Ridge Wilderness Association. <p>Land Use Allocations <i>Battle Creek (below Manton Road):</i></p> <ul style="list-style-type: none"> • Manage the area as Semiprimitive Motorized. (ROS) <p><i>Deer Creek:</i></p> <ul style="list-style-type: none"> • Manage as Semiprimitive Nonmotorized. (ROS) <p><i>Forks of Butte Creek:</i></p> <ul style="list-style-type: none"> • Manage as Semiprimitive Motorized. (ROS) • Recreational mineral collection is permitted within the canyon. • Acquire available, unimproved lands to protect scenic quality and enhance the recreational experience. <p><i>Upper Ridge Nature Preserve:</i></p> <ul style="list-style-type: none"> • Area is closed to motorized vehicles. 	Ongoing for all Objectives and Allocations

3.3.7 Renewable and Alternative Energy Development

Table 3-22 identifies existing land use plan decisions in the Redding and Arcata FOs for renewable and alternative energy development.

Table 3-22. Current Management Objectives, Decisions, and Actions for Renewable and Alternative Energy Development

Decision Source	Current Management Objectives and Management Decisions	Status
Redding RMP 1993 (USDI BLM 1993)	Potential waterpower/storage reservoir sites under a land withdrawal will continue to be managed for waterpower values. Exceptions include withdrawal for waterpower or storage on streams that become components of the National WSRs System or if public lands are transferred from federal jurisdiction. In these instances any existing withdrawals will be recommended for revocation.	Ongoing
Record of Decision, Western Solar Plan, 2012 (USDI BLM 2012g)	All public lands within the Redding and Arcata FOs are excluded from utility-scale solar energy development.	Ongoing

3.4 SPECIAL DESIGNATIONS

3.4.1 Areas of Critical Environmental Concern

Table 3-23 identifies existing land use plan decisions in the Redding and Arcata FOs for areas of critical environmental concern.

Table 3-23. Current Management Objectives, Decisions, and Actions for Areas of Critical Environmental Concern

Decision Source	Current Management Objectives and Management Decisions	Status
Arcata RMP 1992 (USDI BLM 1992a)	<u>BUTTE CREEK MANAGEMENT AREA</u> Land Use Allocation <ul style="list-style-type: none"> Public lands within the RNA/ACEC (including mineral reserve lands) are not available for material sales. 	Ongoing
Arcata RMP 1992	<u>BUTTE CREEK MANAGEMENT AREA</u> Management Action <ul style="list-style-type: none"> Prepare an RNA/ACEC Activity Plan. 	An activity plan for Butte Creek has not been completed.
Arcata RMP 1992	<u>LACKS CREEK MANAGEMENT AREA</u> Management Objective <ul style="list-style-type: none"> Protect old-growth values within the 800-acre RNA/ACEC 	Ongoing
Arcata RMP 1992	<u>RED MOUNTAIN MANAGEMENT AREA</u> Management Objective <ul style="list-style-type: none"> Special designations for Red Mountain RNA/ACEC and the NCCRP ACEC and their management thrusts are not reanalyzed. 	Ongoing (part of current management)

3. Current Management Direction (Areas of Critical Environmental Concern)

Decision Source	Current Management Objectives and Management Decisions	Status
Arcata RMP 1992	<p><u>RED MOUNTAIN MANAGEMENT AREA</u></p> <p>Land Use Allocation</p> <ul style="list-style-type: none"> • Add about 80 acres in Staten Opening to the Elder Creek RNA/ACEC. • Off-Road Vehicle Designations pursuant to 43 CFR 8340: Public lands within the WSR River Corridor and the Elder Creek RNA/ACEC and Red Mountain ACECs are designated CLOSED. • The Red Mountain RNA/ACEC is not available for mineral material sales. The Elder Creek RNA/ACEC is to be withdrawn from entry under the 1872 Mining Law and is not available for mineral leasing or material sales. • The RNA/ACECs are not available for livestock grazing. 	Ongoing
Arcata RMP 1992	<p>Management Action</p> <ul style="list-style-type: none"> • Fully implement ACEC plans for Red Mountain and the Elder Creek RNA/ACEC . 	The Red Mountain ACEC plan was completed in 1989. Its implementation is ongoing.
Arcata RMP 1992	<p><u>SCATTERED TRACTS MANAGEMENT AREA</u></p> <p>Land Use Allocation</p> <ul style="list-style-type: none"> • The Gilham Butte and laqua Butte RNA/ACEs are available for non-consumptive research and cone collecting. Control fire, disease, and insects to prevent spreading to other lands and to protect the existing forest conditions. 	Ongoing
Arcata RMP 1992	<p><u>SCATTERED TRACTS MANAGEMENT AREA</u></p> <p>Management Action</p> <ul style="list-style-type: none"> • Prepare ACEC Activity Plans to address site-specific needs, access, research proposals and priorities. 	Not all of these activity plans have been completed.
Arcata RMP 1992	<p><u>SAMOA PENINSULA MANAGEMENT AREA</u></p> <p>Land Use Allocation</p> <ul style="list-style-type: none"> • Prepare an ACEC activity plan for Manila Dunes after completion of Humboldt County Beach and Dunes Management Plan. ACEC plan to be consistent with this plan. 	Samoa Dunes RMP Amendment completed in 1995
Arcata RMP Forest Plan Amendment 1995 (USDI BLM 1995a)	<p><u>SCATTERED TRACTS MANAGEMENT AREA</u></p> <ul style="list-style-type: none"> • Prepare RNA/ACEC Activity Plans for Gilham and laqua Buttes to address site-specific needs, access, and so forth. 	Not completed
Arcata RMP Forest Plan Amendment 1995	<p><u>RED MOUNTAIN MANAGEMENT AREA</u></p> <ul style="list-style-type: none"> • Public lands within the WSR corridor, Elder Creek RNA/ACEC, and Red Mountain ACEC are designated as CLOSED. On all other public lands vehicles are LIMITED to roads designed for highway vehicles having four or more wheels. 	Ongoing

3. Current Management Direction (Areas of Critical Environmental Concern)

Decision Source	Current Management Objectives and Management Decisions	Status
Arcata RMP Samoa Amendment 1995 (USDI BLM 1995a)	<p>Land Use Allocation</p> <ul style="list-style-type: none"> Manila Dunes parcel, RNA/ACEC, will be closed to OHV use in order to protect several T&E plants and animals, restore native dune plant habitat and fragile, natural dune formations and processes, and protect prehistoric and historic cultural sites. Closure of the Manila Dunes parcel is consistent with the goals of the Humboldt County Beach and Dunes Management Plan. Dune restoration work will occur on both parcels. Restoration of valuable and fragile dune ecosystems for the benefit of endangered plants and animals, native plants, and the long-term well-being of the nation is the goal of the ESA, California Coastal Act, and the FLPMA. 	Ongoing
Redding RMP 1993	<p>SACRAMENTO RIVER MANAGEMENT AREA</p> <p>Land Use Allocation</p> <p><i>Bend Area:</i></p> <ul style="list-style-type: none"> Designate Bend Area as an ONA/ACEC. 	Ongoing
Redding RMP 1993	<p>Management Action</p> <ul style="list-style-type: none"> Develop a RNA/ACEC management plan for Sacramento Island that identifies specific land acquisition and cooperative agreement needs for adjoining private lands, establishes a DPC for the river and adjacent ecological sites, identifies waterfowl and anadromous salmonid habitat improvement actions, and depicts necessary management facilities to disallow vehicle use while promoting pedestrian use. Develop a RNA/ACEC management plan for Hawes Corner to identify protection and monitoring needs. 	An ACEC management plan for this area has not been completed.
Redding RMP 1993	<p>SHASTA MANAGEMENT AREA</p> <p>Management Objective</p> <ul style="list-style-type: none"> Conserve and interpret prehistoric and historic archaeological resources on public lands in the Swasey Drive ACEC 	Ongoing
Redding RMP 1993	<p>SHASTA MANAGEMENT AREA</p> <p>Management Action</p> <ul style="list-style-type: none"> Develop a management plan for the long-term protection of the Swasey Drive cultural resources ACEC 	Swasey Plan completed in 2004.
Redding RMP 1993	<p>TRINITY MANAGEMENT AREA</p> <p>Management Action</p> <ul style="list-style-type: none"> If significant acreage is acquired in the GVC watershed, consider the area for an ACEC. 	Significant acreage has been acquired in Grass Valley, but this area has not been made an ACEC
Redding RMP 1993	<p>Management Action</p> <ul style="list-style-type: none"> Develop ACEC management plans for Deer Creek and Forks of Butte Creek and, an integrated resource activity plan for Battle Creek, which identifies specific land acquisition needs, required access, cooperative management opportunities, management facility locations, ACEC boundaries, permissible actions, and necessary monitoring. The results of reports addressing the suitability for inclusion in the National WSR System will be included as appropriate. 	ACEC management plans for Deer Creek and Forks of Butte Creek have not been completed.

Decision Source	Current Management Objectives and Management Decisions	Status
Redding RMP 1993	<p><u>KLAMATH MANAGEMENT AREA</u> Management Action</p> <ul style="list-style-type: none"> Develop an integrated resource activity plan for the Klamath River below RM 181 and the Shasta River Canyon that identifies high priority land acquisitions, designates appropriate roads and trails for recreational access, identifies management facility needs to protect the ACEC and riparian zone, and cooperative actions with adjacent landowners. 	An activity plan for this area has not been completed.

3.4.2 National Scenic and Historic Trails

Table 3-24 identifies existing land use plan decisions in the Redding and Arcata FOs for national scenic and historic trails.

Table 3-24. Current Management Objectives, Decisions, and Actions for National Scenic and Historic Trails

Decision Source	Current Management Objectives and Management Decisions	Status
Redding RMP 1993 (USDI BLM 1993)	Neither the California Trail nor the Yreka Trail had been designated as a National Historic Trail or nominated for inclusion as a National Historic Trail when the RMP was finalized in 1993 and was not included in any planning decisions.	N/A

3.4.3 Wild and Scenic Rivers

Table 3-25 identifies existing land use plan decisions in the Redding and Arcata FOs for wild and scenic rivers.

Table 3-25. Current Management Objectives, Decisions, and Actions for Wild and Scenic Rivers

Decision Source	Current Management Objectives and Management Decisions	Status
Arcata RMP 1992	<p><u>COVELO VICINITY MANAGEMENT AREA</u> Resource Condition Objectives</p> <ul style="list-style-type: none"> Protect and enhance natural and recreational values along the federally designated portions of the main stem, North and Middle forks of the Wild and Scenic Eel River Corridor. Outstanding and remarkable attributes include anadromous fisheries, scenic quality and recreational values. Manage the main stem and North and Middle Forks of the Eel River WSR Corridor (measured horizontally, ¼ mile from normal high water line on either side of the river) in accordance with the Department of Interior’s WSR Guidelines, Appendix 2-5 of the RMP-FEIS (Federal Register, Volume 47, No. 173, pg. 39454, Section III). 	Ongoing
Arcata RMP 1992	<p><u>COVELO VICINITY MANAGEMENT AREA</u> Management Actions</p> <ul style="list-style-type: none"> Complete management plans for the main stem and North and Middle Forks of the Eel River utilizing an interagency cooperative management planning approach. Provide interim management protection to these river corridors until plans are completed. 	Not completed

Decision Source	Current Management Objectives and Management Decisions	Status
Arcata RMP 1992	<p><u>SCATTERED TRACTS MANAGEMENT AREA</u> Land Use Allocations</p> <ul style="list-style-type: none"> Manage the Eel River and Van Duzen River WSR Corridor (measured horizontally, ¼ mile from normal high water line on either side of the river) in accordance with the Department of Interior's WSR Guidelines, Appendix 2-5 of the RMP-FEIS (<i>Federal Register</i>, Volume 47, No. 173, pg. 39454, Section III). 	Ongoing
Arcata RMP 1992	<p>Management Actions</p> <ul style="list-style-type: none"> Complete management plans for the Eel and Van Duzen Rivers using an interagency cooperative management planning approach. Provide interim management protection to these river corridors until plans are completed. 	Not completed
Arcata RMP Forest Plan Amendment 1995	<p><u>RED MOUNTAIN MANAGEMENT AREA</u> Resource Condition Objectives</p> <ul style="list-style-type: none"> Protect and enhance natural and recreational values along the federally designated portions of the South Fork Eel River WSR corridor. <p><u>Land Use Allocations</u></p> <ul style="list-style-type: none"> Manage the South Fork Eel River WSR corridor in accordance with the WSR Guidelines until a management plan is completed. 	Ongoing
Arcata RMP Forest Plan Amendment 1995	<p><u>RED MOUNTAIN MANAGEMENT AREA</u> Management Actions</p> <ul style="list-style-type: none"> Complete a South Fork Eel River Management Plan. 	Not completed
Arcata RMP Forest Plan Amendment 1995	<p><u>COVELO VICINITY MANAGEMENT AREA</u> Resource Condition Objectives</p> <ul style="list-style-type: none"> Protect and enhance natural and recreational values along the federally designated wild and scenic segments of the Middle Fork Eel River as outlined in the Middle Fork Eel River Management Plan. Provide recreational opportunities along federally designated portions of WSR corridors as outlined in the Middle Fork Eel River Management Plan. Elsewhere provide dispersed recreation opportunities consistent with habitat management objectives. <p>Management Actions</p> <ul style="list-style-type: none"> Implement Middle Fork Eel River Management Plan. 	Ongoing
Arcata RMP Forest Plan Amendment 1995	<p><u>COVELO VICINITY MANAGEMENT AREA</u> Land Use Allocations</p> <ul style="list-style-type: none"> Delineate ¼ mile wild and scenic buffers to designated segments of the Eel River, Middle Fork Eel River, and North Fork Eel River as identified in the Middle Fork Eel River Management Plan and in interim management provisions of the Wild and Scenic River Act. 	Completed
Arcata RMP Forest Plan Amendment 1995	<p><u>SCATTERED TRACTS MANAGEMENT AREA</u> Resource Condition Objectives</p> <ul style="list-style-type: none"> Protect and enhance natural and recreational values along the federally designated portions of the Eel River and Van Duzen Rivers WSR corridors. 	Ongoing
Redding RMP 1993	<p><u>KLAMATH MANAGEMENT AREA</u> Resource Conditions Objectives</p> <ul style="list-style-type: none"> <i>Mid-Klamath River:</i> Maintain existing public lands within the designated WSR corridor in present conditions. 	Ongoing

Decision Source	Current Management Objectives and Management Decisions	Status
Redding RMP 1993	<p>Land Use Allocations</p> <p><i>Shasta and Klamath River Canyons:</i></p> <ul style="list-style-type: none"> Establish a corridor for the segment of the Klamath River between RM 181 and the Klamath National Forest boundary (approximately 400 feet downstream of the mouth of Ash Creek) that does not exceed one-quarter mile above the normal high water mark of this recreational component of the National WSR System. <p><i>Upper Klamath River:</i></p> <ul style="list-style-type: none"> This portion of the Klamath River is considered eligible and suitable for inclusion in the National WSR System. All public land in the corridor bounded by the northern canyon rim and within one-quarter mile of normal high water along the southern bank will be managed in a manner that will not impair the outstanding remarkable values and consistent with a preliminary classification as scenic. <p><i>Mid Klamath River:</i></p> <ul style="list-style-type: none"> Establish a corridor for this segment of the Klamath River between Iron Gate Reservoir (RM 190) and the Klamath River Canyon (RM 181), which consists of the 100-year flood plain within one-eighth mile of normal high water or the nearest paralleling road/railroad, whichever is least. Permit no actions on public land which would impair the quality or condition of this recreational component of the National WSR System. <p><i>Rationale for the Klamath Proposed Action:</i> The upper Klamath River (above Copco) has been determined suitable for inclusion in the National WSR System. The California segment of this corridor possesses characteristics considered appropriate for a classification as scenic. If the Oregon segments of the study corridor are included within the National WSR System through the conclusive action of the US Congress, then the relatively short California segment of this same river will be recommended for inclusion. This action will enhance protection of the overall corridor and provide resource management continuity by the BLM in both states.</p> <p>The lower Shasta River is an existing ACEC to protect the regionally significant Chinook salmon spawning habitat. Since this same segment of the river was determined eligible for inclusion in the National WSR System, a management boundary is established to meet both purposes. Moreover, the preliminary classification for this segment is identical to the existing recreational classification for the Klamath River above and below its confluence with the Shasta River. Withdrawal of the floodplain from mineral entry within Calibri (Body) the Shasta River canyon is deemed necessary to protect habitat improvements, public investments, spawning habitat, and recreational opportunities.</p>	Completed

Decision Source	Current Management Objectives and Management Decisions	Status
Redding RMP 1993	<p><u>TRINITY MANAGEMENT AREA</u> Land Use Allocations <i>Trinity River:</i></p> <ul style="list-style-type: none"> • Designate the area shown on Map 2 (in packet) as the corridor for this recreational component of the National WSR System. This variable width corridor excludes existing and approved developed land uses. Within developed areas, the corridor is limited to the riparian zone and, if appropriate, the undeveloped viewshed behind the developed area. Outermost boundaries of the corridors were established using the following criteria (in descending priority): definable topographic features, roads, surveyed ownership lines, line-of-sight, and one-quarter mile from normal high water. Due to scale, a very few, small, developed areas excluded from the corridor are not shown on Map 2. This information is available for review at the Redding Area office. 	Completed
Redding RMP 1993	<p><u>TRINITY MANAGEMENT AREA</u> Management Actions</p> <ul style="list-style-type: none"> • Modify the existing TRRAMP to reflect the designated corridor of the Trinity River (i.e., a recreational component of the National WSR System. Continue implementation of recreational developments and monitoring prescribed in the existing management plan (refer to NO ACTION ALTERNATIVE in the Proposed RMP). • Develop an integrated resource activity plan(s) within the area north of the Trinity River, and within the lower Indian Creek and Deadwood Creek areas. The plan(s) will: identify priority land acquisitions, identify priorities for resolving inadvertent survey-related trespass cases, designate roads and trails for public-administrative and Native American Indian access locate sensitive resource locations, detail the DPCs for upland/riparian ecological sites assess reforestation needs, determine annual allowable forest products yield, and prescribe actions needed to enhance deer, special status species, and fishery habitats. Cooperate with the US Forest Service in studies to determine the suitability of Canyon Creek to be included as a recreational component in the National WSR System. <p><i>Rationale for The Trinity Proposed Action:</i> The federal government has a significant commitment to manage the Trinity River. The river is an existing recreational component of the National WSR System and the focus of an interagency fisheries Improvement task force. The Trinity has significant recreational values and is highly accessible and attractive to the public. To provide adequate protection of these regionally significant values, a withdrawal from mineral entry of developed sites and significant cultural values is deemed necessary. The lesser restrictions of the 43 CFR 3809 regulations were deemed inadequate to protect natural and cultural values. In response to public input demonstrating the limited activity on existing mining claims and the regulatory requirements of the State of California, the BLM has determined that a total withdrawal from mineral location of existing public lands is not necessary along the Trinity River. Restrictions on the development of mineral materials (principally sand and gravel) will segregate incompatible uses while minimizing adverse damage to sensitive resource values.</p>	Not completed

Decision Source	Current Management Objectives and Management Decisions	Status
Redding RMP 1993	<p><u>SACRAMENTO RIVER MANAGEMENT AREA</u> Management Actions <i>Bend Area:</i></p> <ul style="list-style-type: none"> Amend or replace the existing Sacramento River Area Management Plan to incorporate the increased geographic focus and specific RCOs of this management alternative. Determine the suitability of Battle Creek and Paynes Creek for inclusion in the National WSR System. Incorporate the results of this determination and attendant management practices into the above area management plan. Offer the BLM assistance to the State of California and the counties of Shasta and Tehama to cooperatively develop a report to determine the suitability of the Sacramento River between Anderson and Red Bluff for inclusion in the National WSR System. 	Not completed
Redding RMP 1993	<p><u>ISHI MANAGEMENT AREA</u> Management Actions</p> <ul style="list-style-type: none"> Develop suitability reports for the final classification and potential inclusion of Battle, Butte, and Deer Creeks in the National WSR System. Contact the State of California and County of Tehama regarding development of report(s) addressing the suitability of Mill Creek for inclusion in the National WSR System. Similarly contact Shasta and Butte counties, respectively, regarding development of reports addressing the suitability of Bear and Big Chico Creeks. Offer the BLM assistance as feasible in development of these reports. 	Not completed

Decision Source	Current Management Objectives and Management Decisions	Status
Redding RMP 1993	<p><u>ISHI MANAGEMENT AREA</u> Management Actions</p> <ul style="list-style-type: none"> Publish <i>Federal Register</i> notices regarding vehicle designations, mineral withdrawals, ACEC designations, and intent to develop a report(s) addressing the suitability of Battle, Butte, Deer, Bear and Big Chico Creeks for inclusion in the National WSR System. <p><i>Rationale for the Ishi Proposed Action:</i> Butte Creek has regionally significant recreational and cultural values, coupled with local mineral and hydroelectric importance. Consolidation of public land within this area will benefit the public for a very long time. The stream is considered eligible for inclusion in the National WSR System.</p> <p>Battle Creek has regional recreational, fisheries, and biological values. The most important segment of this creek corridor is below Manton Road (on South Fork). This segment contains the majority of Chinook salmon spawning habitat, generally adequate water flows for recreational pursuits, and nesting raptors including Bald Eagle. The Coleman National Fish Hatchery is also found along this segment. Public land consolidation along this important stretch of stream is warranted due to the aggregate of important values. Active management of this area complements BLM proposed management of the Sacramento River (bend area) and the direction of the CDFW. Continued BLM administration of public lands above Manton Road hinges on a conclusive determination if this portion of South Fork Battle Creek is suitable for inclusion in the National WSR System. Until that determination is made. The BLM should manage these lands in a manner that does not impair any ORVs.</p> <p>Based on public input, the BLM reassessed a segment of Big Chico Creek and determined that it contains values warranting eligibility for inclusion in the National WSR System. Similarly, BLM determined Bear Creek in Shasta County to be eligible for inclusion.</p> <p>The BLM will manage the public land in these corridors to protect their values until subsequent suitability studies are completed. If these streams are determined unsuitable, public lands in Big Chico Creek will be available for transfer to other agencies for a two year period. Public lands along Bear Creek would be available for exchange for higher public values elsewhere.</p>	Some completed
Redding RMP 1993	<p><u>YOLLA BOLLY MANAGEMENT AREA</u> Management Actions</p> <ul style="list-style-type: none"> Contact the State of California and the counties of Shasta and Tehama regarding development of reports addressing the suitability of Middle Fork Cottonwood Creek and South Fork Cottonwood Creek for inclusion in the National WSR System. Assist these agencies as feasible in development of these reports. <p><i>Rationale for the Yolla Bolly Proposed Action:</i> Until the BLM or other agencies address the suitability for including portions of South Fork and Middle Fork Cottonwood Creeks in the National WSR System, public lands within the study corridor must be maintained in public ownership and managed during the interim period to protect any ORVs associated with the corridors. If the BLM determines that these corridors are unsuitable for inclusion, public land interests should be disposed via exchange in conformance with the philosophy of the proposed action.</p>	Not completed

3.4.4 Wilderness and Wilderness Study Areas

Table 3-26 identifies existing land use plan decisions in the Redding and Arcata FOs for wilderness and wilderness study areas.

Table 3-26. Current Management Objectives, Decisions, and Actions for Wilderness and Wilderness Study Areas

Decision Source	Current Management Objectives and Management Decisions	Status
Arcata RMP 1992	Transfer the Big Butte Wilderness and WSA (9,400 acres) to the Mendocino National Forest Service to improve wilderness management.	Not completed
Arcata RMP 1992	The BLM will not dispose of WSAs.	Ongoing
Arcata RMP 1992	The Yolla Bolly/Big Butte Wilderness Area (California Wilderness Bill 1986) will be managed jointly until its transfer with the Forest Service is completed.	Ongoing
Arcata RMP Forest Plan Amendment 1995	Transfer administration of 9,400 acres in the Big Butte Wilderness and adjacent Section 202 WSA parcels to the Mendocino National Forest to improve management efficiency.	Big Butte still under BLM administration and joint management with Forest Service.
Redding RMP 1993	ISHI MANAGEMENT AREA Resource Condition Objectives <ul style="list-style-type: none"> 200 acres in Section 14, T. 25 N., R. 1 E. are designated as wilderness 	Wilderness management ongoing
Redding RMP 1993	Land Use Allocations <i>Resource Area Wide Decisions – WSAs:</i> <ul style="list-style-type: none"> Yolla Bolly WSA 640 acres – manage area to protect any wilderness-related values pending final action by the Congress of the United States. 	Ongoing
Redding RMP 1993	ISHI MANAGEMENT AREA Resource Condition Objectives <i>Ishi Wilderness:</i> <ul style="list-style-type: none"> Maintain existing MOU between the BLM and Forest Service covering the Ishi Wilderness Area until this portion of the Ishi Wilderness Area can be transferred to the Forest Service. 	Ongoing, MOU needs to be renewed.

3.5 SOCIAL AND ECONOMIC CONDITIONS

3.5.1 Social, Economic, Environmental Justice

Current planning documents do not contain decisions specifically addressing social, economic, or environmental justice components.

3.6 SUPPORT

3.6.1 Mitigation

No management decisions specific to the planning area exist for mitigation.

3.6.2 Interpretation and Environmental Education

No management decisions specific to the Redding and Arcata planning areas exist for interpretation and environmental education.

3.6.3 Research

Table 3-27 identifies existing land use plan decisions in the Redding and Arcata FOs for research.

Table 3-27. Current Management Objectives, Decisions, and Actions for Research

Decision Source	Current Management Objectives and Management Decisions	Status
Northwest Forest Plan 1994	<p>Management Decisions</p> <p><i>Late Successional Reserves:</i></p> <ul style="list-style-type: none"> Research activities must be assessed to determine if they are consistent with LSR objectives. Some activities (including those within experimental forests) not otherwise consistent with the objectives may be appropriate, particularly if the activities will test critical assumptions of these standards and guidelines, will produce results important for habitat development, or if the activities represent continuation of long-term research. These activities should only be considered if there are no equivalent opportunities outside LSRs. 	Ongoing
Northwest Forest Plan 1994	<p>Management Decisions</p> <p><i>Riparian Reserves:</i></p> <ul style="list-style-type: none"> Research activities must be assessed to determine if they are consistent with the objectives of Riparian Reserves. Some activities (including those within experimental forests) not otherwise consistent with the objectives may be appropriate, particularly if the activities will test critical assumptions of these standards and guidelines, will produce results important for habitat development, or if the activities represent continuation of long-term research. These activities should only be considered if there are no equivalent opportunities outside of Riparian Reserves. 	Ongoing
Arcata RMP 1992	<p><u>SAMOA PENINSULA (MANILA DUNES) MANAGEMENT AREA</u></p> <p>Management Objective</p> <ul style="list-style-type: none"> Facilitate research and educational uses of unique dune ecosystems. <p>Management Action</p> <ul style="list-style-type: none"> Contact universities, local schools, and The Nature Conservancy for expression of interest in research and cooperative management of the Manila Dunes (Cooperative management plan developed in 1990 for portion of Manila Dunes area and the Mad River Slough and Dunes CMA). 	Ongoing
Arcata RMP 1992	<p><u>BUTTE CREEK MANAGEMENT AREA</u></p> <p>Land Use Allocation</p> <ul style="list-style-type: none"> All forest stands are available for non-consumptive research and cone collecting. Fire, disease, and insects will be controlled to prevent spreading to other lands, and to protect the existing forest. <p>Management Action</p> <ul style="list-style-type: none"> Contact universities/research institutions for expressions of interest in conducting research. 	Ongoing
Arcata RMP 1992	<p><u>RED MOUNTAIN MANAGEMENT AREA</u></p> <p>Objectives</p> <ul style="list-style-type: none"> Facilitate and encourage scientific research of the unique soils on Red Mountain. <p>Management Action</p> <ul style="list-style-type: none"> Contact universities and other research institutions for expressions of interest in conducting research. 	Ongoing

Decision Source	Current Management Objectives and Management Decisions	Status
Arcata RMP 1992	<p><u>SCATTERED TRACTS MANAGEMENT AREA</u></p> <p>Land Use Allocations</p> <ul style="list-style-type: none"> The Gilham Butte and laqua Butte RNA/ACECs are available for non-consumptive research and cone collecting. <p>Management Action</p> <ul style="list-style-type: none"> Prepare ACEC Activity Plans to address site-specific needs, access, research proposals and priorities. 	Ongoing
Arcata RMP Forest Plan Amendment 1995	<p><u>LACKS CREEK MANAGEMENT AREA</u></p> <p>Management Objective</p> <ul style="list-style-type: none"> Protect significant old-growth stands to provide research and higher education opportunities for scientists and teachers. <p>Management Action</p> <ul style="list-style-type: none"> Prepare a watershed activity plan that includes management of the RNA/ACEC to enhance recreational, educational, research, and aesthetic values. 	Ongoing
Redding RMP 1993	<p><u>SACRAMENTO RIVER MANAGEMENT AREA</u></p> <p>Management Objective</p> <ul style="list-style-type: none"> Conserve archaeological resources and provide research opportunities within the Bend Area on selected threatened or damaged sites. 	Ongoing
Redding RMP 1993	<p><u>ISHI MANAGEMENT AREA</u></p> <p>Management Objective</p> <ul style="list-style-type: none"> Encourage research of this the Baker cypress in conjunction with genetic and habitat studies of other stands of Baker cypress. 	Ongoing

3.6.4 Public Health and Safety, Land Uses and Conditions, and Hazardous Materials

Table 3-28 identifies existing land use plan decisions in the Redding and Arcata FOs for public health and safety, land uses and conditions, and hazardous materials.

Table 3-28. Current Management Objectives, Decisions, and Actions for Public Health and Safety, Land Uses and Conditions, and Hazardous Materials

Decision Source	Current Management Objectives and Management Decisions	Status
Arcata RMP 1992	No Management objectives or actions with respect to land use, conditions, and hazardous materials.	N/A
Proposed Redding RMP 1992	<p>Management Objectives</p> <ul style="list-style-type: none"> No decisions regarding disposal, storage, or treatment of hazardous materials are made in any land use management alternative of this RMP. Additionally, decisions in this RMP do not authorize the creation, storage, or disposal of hazardous materials. Present BLM involvement with hazardous materials in the Redding FO is limited to removal of hazardous materials inadvertently placed or illegally dumped on public lands (i.e., without authorization or approval by the BLM). <p>Management Actions</p> <ul style="list-style-type: none"> Prior to the approval or authorization of a proposed project, the BLM will determine if the project will create a hazardous material and assess appropriate storage and disposal needs. 	Ongoing

3. Current Management Direction (Public Health and Safety, Land Uses and Conditions, and Hazardous Materials)

Decision Source	Current Management Objectives and Management Decisions	Status
Redding RMP 1993	<p>Management Objectives</p> <ul style="list-style-type: none"> <li>• The Redding planning area’s primary hazardous materials workload consists of cleaning up drug lab dumps, abandoned used oil, chemicals at abandoned mine sites, and various hazardous materials on occupancy trespass sites. These activities will occur in all land use management alternatives. Public land consolidation should diminish present levels of all types of trespass including hazardous materials dumping on public lands under BLM administration. <p>Management Actions</p> <ul style="list-style-type: none"> <li>• Contingency plans prepared by the BLM State Office and BLM District Office provide updated guidance for handling hazardous materials incidents. <li>• Public land consolidation should diminish present levels of all types of trespass including hazardous materials dumping on public lands under BLM administration. <li>• Any land identified for disposal through sale or exchange will be evaluated for significant cultural resources, T&E plants and animals, mineral potential, floodplain/flood hazards, hazardous waste, and prime or unique farmland, before actual transfer of the land can be considered and acted upon in compliance with the NEPA. <li>• Management actions for specific areas (e.g., Yolla Bolly): Any land identified for disposal through sale or exchange will be evaluated for significant cultural resources, T&E plants and animals, mineral potential, floodplain/flood hazards, hazardous waste, and prime or unique farmland, before actual transfer of the land can be considered and acted upon in compliance with the NEPA. 	Ongoing

Chapter 4. Management Opportunities

4.1 INTRODUCTION

This chapter analyzes the ability of current management direction to achieve desired conditions and address resources and demands for use of the resources. It describes resource management activities that may or may not, under current management, be meeting the goals specified in the current RMPs. This chapter serves as a starting point for alternative formulation by identifying management opportunities for consideration during the alternative development process.

4.2 RESOURCES

4.2.1 Climate Change

Current Management Direction

Table 4-1 identifies existing land use plan decisions and opportunities in the Redding and Arcata FOs to achieve desired conditions for climate change.

Table 4-1. Ability of Current Management to Achieve Desired Future Conditions for Climate Change

Decision Source	Current Management Objectives and Management Decisions	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Redding Proposed Livestock Grazing Management EIS 1983	Management Decisions/Actions <ul style="list-style-type: none"> Continue to collect weather data from existing sources. 	Partially	Provides a localized monitoring point. Timeframe of monitoring may be insufficient to track larger climactic trends.	
Redding Proposed Livestock Grazing Management EIS 1983	Management Decisions/Actions <ul style="list-style-type: none"> Install new rain gauges where data would be useful to predict production on Mediterranean annuals and to correlate with monitoring data on perennial range. 	Partially	Provides a localized monitoring point. Timeframe of monitoring may be insufficient to track larger climactic trends.	

Potential New Decisions for the RMP revision

- Acquire land in areas projected to be impacted by sea level rise within the next 50 years, principally Humboldt Bay vicinity. This would include expansion of tidal wetland areas, areas of dune migration and tracts behind at-risk levees.
- Assess the geographic patterns of species migrations and develop a framework for land acquisitions to facilitate species migrations in response to climate change.
- Allow for experimental treatments to promote the adaptive capacity of ecosystems through increased resilience and diversity.

- Manage ecosystems for resilience and resistance to impacts from climate change. Promote treatments such as prescribed fire to enhance forest health or increasing cover of streams to buffer temperature increases.
- Include coordination with other resources to develop management to consider ongoing ecological changes. This would include consideration of adaptive management.

Areas of Relative Ecological Importance to Guide Land Uses and Management

Coastal dunes, particularly those surrounding the Humboldt Bay area, provide a buffer to rising sea levels. Similarly, coastal lowlands, such as those surrounding Humboldt Bay and the lower Eel River, may undergo changes in vegetation and hydrology as sea water influence increases in these areas. High-elevation areas in the planning area may become increasingly important refuge areas for species displaced from lower, warmer habitats.

4.2.2 Air

Current Management Direction

Table 4-2 identifies existing land use plan decisions and opportunities in the Redding and Arcata FOs to achieve desired conditions for air resources.

Table 4-2. Ability of Current Management to Achieve Desired Future Conditions for Air Resources

Decision Source	Current Management Objectives, Decisions, and Actions	Response to Current Issues?	Remarks (Rationale)	Opportunities for Change
Arcata RMP 1992	<p>Management Objectives</p> <ul style="list-style-type: none"> • The Clean Air Act, as amended in 1990, requires federal agencies to comply with all federal, state and local air pollution requirements (Section 118). 	—	—	Carry forward by combining and standardizing language for all areas and activities that reflect compliance to all applicable federal, state, and local air quality management plans, rules, and regulations.
Arcata RMP 1992	<p>Management Decisions/Actions</p> <ul style="list-style-type: none"> • The BLM must secure permits from state and local agencies for projects affecting air quality. 	Yes	—	Carry forward by combining and standardizing language for all areas and activities that reflect compliance to all applicable federal, state, and local air quality management plans, rules, and regulations.

Decision Source	Current Management Objectives, Decisions, and Actions	Response to Current Issues?	Remarks (Rationale)	Opportunities for Change
Arcata RMP Forest Plan Amendment 1995	<p>Management Objectives</p> <ul style="list-style-type: none"> Comply with the SIP for achievement of NAAQS for criteria pollutants, PSD goals for the protection of air quality and visibility in wilderness areas and national parks, and local Air Pollution Control Districts' rules and regulations. <p>Management Decisions/Actions</p> <ul style="list-style-type: none"> The BLM must secure permits from responsible agencies for projects impacting air quality. Specific decisions will not be made in the selected plan amendment. Evaluate management actions potentially affecting air quality, to ensure conformance with the SIP, PSD goals, and local programs such as smoke management requirements. 	Yes	—	Carry forward by combining and standardizing language for all areas and activities that reflect compliance to all applicable federal, state, and local air quality management plans, rules, and regulations.
Redding RMP 1993	<p>Management Objectives</p> <ul style="list-style-type: none"> Minimize air quality degradation through strict compliance with federal, state, and local regulations and implementations plans. <p>Management Decisions/Actions</p> <ul style="list-style-type: none"> Perform additional management activities including monitoring, analysis, and impact mitigation on a project-specific basis, to assure compliance with applicable regulations and implementation plans. 	Yes	—	Carry forward by combining and standardizing language for all areas and activities that reflect compliance to all applicable federal, state, and local air quality management plans, rules, and regulations.

Potential New Decisions for the RMP Revision

Develop air quality management objectives, including coordinating with fire management, to consider fire severity and frequency in planning prescribed fire and other fuels treatments.

Areas of Relative Ecological Importance to Guide Land Uses and Management

None identified.

4.2.3 Cave and Karst Resources

Current Management Direction

There are no current management objectives, decisions, or actions for cave and karst resources in any of the existing planning documents.

Potential New Decisions for the RMP Revision

- Incorporate cave management objectives into the NCIP. Identified caves should be reviewed for potential ACECs.
- Emphasize cave and abandoned mine surveys to identify new locations and map the interior.
- Increase cave inventories for biological and cultural resources for potential ACECs.
- Per Instruction Memorandum 2010-181, perform the following tasks, where appropriate
 - Identify caves and abandoned mines with important bat resources.
 - Consider restricting access to caves and abandoned mines, with a targeted approach that prioritizes locations where significant bat populations are found.
 - Recommend locations to test for WNS as a subset of sites where important bat resources are located.

Areas of Relative Ecological Importance to Guide Land Uses and Management

Areas of relative ecological importance include Sheep Rock caves and shelters (Siskiyou County), Sacramento River Bend ACEC shelters and caves, Deer Creek ACEC caves (Ishi country), Battle Creek shelters, karst caves in Interlakes, Barnum Cave, Pluto Cave, and Scott Mountain.

4.2.4 Coastal Resources and Management

Current Management Direction

Table 4-3 identifies existing land use plan decisions and opportunities in the Redding and Arcata FOs to achieve desired conditions for coastal resources.

Table 4-3. Ability of Current Management to Achieve Desired Future Conditions for Coastal Resources and Management

Decision Source	Current Management Objectives and Management Decisions	Responsive to Current Issues?	Remarks (Rationale)	Opportunities for Change
Arcata RMP 1992	<p>Management Objectives</p> <ul style="list-style-type: none"> • Manila Dunes: Enhance natural values. <p>Management Decisions/Actions</p> <ul style="list-style-type: none"> • Manila Dunes: Facilitate research and educational uses of unique dune ecosystems. 	Yes	Decision provides means to manage dunes for natural processes/ecosystems and provides for research and education.	Monitor physical and biological responses of dunes systems to sea level rise and climate change to better understand natural values.

Potential New Decisions for the RMP revision

Facilitate research on role of dunes with sea level rise and coastal resiliency.

Areas of Relative Ecological Importance to Guide Land Uses and Management

Coastal dune systems are an ecologically important area, hosting unique vegetation communities, supporting high visitor use, and providing a buffer between inland areas and rising sea levels.

River mouths and estuaries provide key habitats for many species and are subject to ongoing changes in form and function due to periodic natural disturbances.

4.2.5 Cultural Resources

Current Management Direction

Cultural resources are managed according to the FLPMA (43 USC 1701); NHPA of 1966 (54 USC 300101 et seq., as amended), including Sections 106 and 110, and implementing regulations (36 CFR 800, as amended); and the BLM 8100 Manuals series. Specifically, the Redding and Arcata FOs operate under the 2019 State Protocol Agreement among the California State Director of the Bureau of Land Management and the California State Historic Preservation Officer and the Nevada State Historic Preservation Officer Regarding the Manner in which the Bureau of Land Management Will Meet Its Responsibilities under the National Historic Preservation Act and the National Programmatic Agreement among the BLM, the Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers (hereafter referred to as the Protocol).

The Protocol provides detailed guidance for how the BLM implements the process and procedures of Sections 106 and 110 of the NHPA, while meeting its broader management goals and objectives. The Protocol also provides a framework for fulfilling all published cultural resources management objectives. Additional activities such as archaeological survey and investigation are permitted through the Organic Act (16 USC 1), Archaeological Resource Protection Act (16 USC 470aa–mm, as amended), and the Antiquities Act (16 USC 431–433).

The current management direction for cultural resources (**Table 4-4**) is generally the protection (or impact mitigation) of significant cultural resources and outreach for scientific study and public interpretation. In several cases, this requires the regular monitoring of known cultural resources. Monitoring in management terms refers to a cyclical condition assessment rather than project-specific construction monitoring for damage to resources.

Table 4-4. Ability of Current Management to Achieve Desired Future Conditions for Cultural Resources

Decision Source	Current Management Objectives and Management Decisions	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Northwest Forest Plan 1994	<p>Management Objectives</p> <ul style="list-style-type: none"> Manage public lands in amendment management areas in a manner that will protect the quality of historical and archaeological values, according to FLMPA. <p>Management Decisions/Actions</p> <ul style="list-style-type: none"> Plan requires monitoring of resources, including, cultural resources. 	Yes	Complies with BLM policy and Protocol for protecting cultural resources.	Improve monitoring processes based on Protocol where necessary.
Northwest Forest Plan Survey and Manage Amendment 2001	<p>Management Objectives</p> <ul style="list-style-type: none"> Facilitate occupancy and use of federal lands and resources traditionally used for cultural and spiritual purposes consistent with existing laws and regulations with all federally recognized tribes. 	Yes	Complies with BLM policy and Protocol for protecting cultural resources.	Improve facilitation based on Protocol, where necessary.
Solar Energy Amendment 2012	<ul style="list-style-type: none"> All lands in Redding FO and Arcata FO are excluded. 	N/A	N/A	N/A
Geothermal Amendment 2008	<p>Management Objectives</p> <ul style="list-style-type: none"> Manage public lands in amendment management areas in a manner that will protect the quality of historical and archaeological values, according to FLMPA. Management Decisions/Actions <ul style="list-style-type: none"> Before any specific permits are issued under leases, treatment of cultural resources will follow the procedures established by the Advisory Council on Historic Preservation for compliance with Section 106 of the NHPA. A pedestrian inventory will be undertaken of all portions that have not been previously surveyed or are identified by the BLM as requiring inventory to identify properties that are eligible for the NRHP. Those sites not already evaluated for NRHP 	Yes	Complies with BLM policy and Protocol for protecting cultural resources.	Improve processes based on Protocol, where necessary.

Decision Source	Current Management Objectives and Management Decisions	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
	<p>eligibility will be evaluated based on surface remains, subsurface testing, archival, and/or ethnographic sources. Subsurface testing will be kept to a minimum whenever possible if sufficient information is available to evaluate the site or if avoidance is an expected mitigation outcome. Recommendations regarding the eligibility of sites will be submitted to the BLM, and a treatment plan will be prepared to detail methods for avoidance of impacts or mitigation of effects. The BLM will make determinations of eligibility and effect and consult with SHPO as necessary based on each proposed lease application and project plans.</p> <ul style="list-style-type: none"> ○ The BLM may require modification to exploration or development proposals to protect such properties, or disapprove any activity that is likely to result in adverse effects that cannot be successfully avoided, minimized or mitigated. Avoidance of impacts through project design will be given priority over data recovery as the preferred mitigation measure. Avoidance measures include moving project elements away from site locations or to areas of previous impacts, restricting travel to existing roads, and maintaining barriers and signs in areas of cultural sensitivity. Any data recovery will be preceded by approval of a detailed research design, Native American Consultation, and other requirements for BLM issuance of a permit under the Archaeological Resources Protection Act (USDI BLM 			

Decision Source	Current Management Objectives and Management Decisions	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
	<p>2004).</p> <ul style="list-style-type: none"> ○ If cultural resources are present at the site, or if areas with a high potential to contain cultural material have been identified, a CRMP will be developed. This plan will address mitigation activities to be taken for cultural resources found at the site. Avoidance of the area is always the preferred mitigation option. Other mitigation options include archaeological survey and excavation (as warranted) and monitoring. If an area exhibits a high potential, but no artifacts were observed during an archaeological survey, monitoring by a qualified archaeologist could be required during all excavation and earthmoving in the high-potential area. A report will be prepared documenting these activities. The CRMP will (1) establish a monitoring program, (2) identify measures to prevent potential looting/vandalism or erosion impacts, and (3) address the education of workers and the public to make them aware of the consequences of unauthorized collection of artifacts and destruction of property on public land (USDI BLM 2005). ○ Unexpected discovery of cultural or paleontological resources during construction will be brought to the attention of the responsible BLM authorized officer immediately. Work will be halted in the vicinity of the find to avoid further disturbance to the resources while they are being evaluated and appropriate mitigation measures are being developed. 			

Decision Source	Current Management Objectives and Management Decisions	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Arcata RMP 1992	<p>Management Objectives</p> <ul style="list-style-type: none"> Public lands will be managed in a manner that will protect the quality of scientific, scenic, historical, ..., and archaeological values that, where appropriate will preserve and protect certain public lands in their natural condition...and that will provide for outdoor recreation and human occupancy and use. 	Yes	Follows FLPMA, other federal laws; Complies with BLM policy and Protocol for protecting cultural resources.	Update language to reflect current laws and policies, Class I Overview, and Protocol, where necessary
Arcata RMP 1992	<p>Management Decisions/Actions</p> <ul style="list-style-type: none"> Assess cultural resource values on a site-specific basis, generally in response to other resource objectives. An appropriate level of inventory will be done for all actions with a potential to affect these resources. 	Yes	Complies with BLM policy and Protocol for protecting cultural resources.	Update to reflect Class I Overview and Protocol, where necessary. Periodically monitor significant cultural resources. In addition to archaeological sites and landscapes, consider traditional and contemporary Native American values and landscapes.
Arcata RMP 1992	<ul style="list-style-type: none"> The BLM will make a reasonable and good faith effort to identify and consider contemporary Native American concerns where projects might affect socio-cultural and religious values. 	Yes	Prescribed by law, executive order, and White House memorandum; complies with BLM policy and Protocol for protecting cultural resources.	Update to reflect Protocol, where necessary.
Arcata RMP 1992	<p><u>SAMOA PENINSULA MANAGEMENT AREA</u> Management Decisions/Actions</p> <ul style="list-style-type: none"> Monitor cultural resources. 	Yes	Complies with BLM policy and Protocol for protecting cultural resources.	Update to reflect Class I Overview and Protocol, where necessary. In addition to archaeological sites and landscapes, consider traditional and contemporary Native American values and landscapes.

Decision Source	Current Management Objectives and Management Decisions	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Arcata RMP Forest Plan Amendment 1995	<p>Management Objectives</p> <ul style="list-style-type: none"> Manage public lands in amendment management areas in a manner that will protect the quality of historical and archaeological values, according to FLMPA. <p>Management Decisions/Actions</p> <ul style="list-style-type: none"> Ensure that clearances for cultural resources are conducted as a part of the environmental review process. The Mineral Leasing Act of 1920, Geothermal Steam Act of 1970, and 43 CFR 3100 to 3500 provide the regulatory framework for issuing mineral leases. Where required, stipulations will be attached to mineral leases to mitigate impacts on cultural areas and other resources susceptible to impacts from leasing-related activities. Prior to disposal of public lands and interests, complete site-specific inventories and analyses for historic properties (cultural resources). 	Yes	<p>Complies with BLM policy and Protocol for protecting cultural resources.</p> <p>43 CFR 3809 specifically provides for the protection of cultural properties by initially prohibiting mining operators from knowingly disturbing or damaging them. The need for a cultural resources field inventory in response to a notice should be determined on the basis of professional judgment and is left to the discretion of the Arcata Area Manager. Indirect impacts on cultural resources resulting from improving road access into formerly remote areas are recognized as potentially adverse. Current research will determine if and where these impacts are occurring. Impacts on cultural resources values in the form of artifact breakage or destruction of structural features resulting from vehicle activity associated with prospecting could also occur.</p>	<p>Update language to reflect current laws and policies, Class I Overview and Protocol, where necessary.</p> <p>In addition to archaeological sites and landscapes, consider traditional and contemporary Native American values and landscapes.</p>
South Spit Interim Management Plan 2003	<p>Management Decisions/Actions</p> <ul style="list-style-type: none"> conduct inventory and monitor sites to protect cultural resources 	Yes	Refer to MOU with the Wiyot Tribe.	<p>Periodically monitor significant cultural resources.</p> <p>Consider traditional and contemporary Native American values and environmental justice in undertakings, in addition to archaeological sites and landscapes.</p>

Decision Source	Current Management Objectives and Management Decisions	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Arcata RMP Samoa Amendment 1995	<p><u>SAMOA PENINSULA MANAGEMENT AREA</u> Management Objectives</p> <ul style="list-style-type: none"> Comply with statutory requirements of the NHPA and the Archaeological Resource Protection Act to protect archaeological sites that exist on federal land. <p>Management Decisions/Actions</p> <ul style="list-style-type: none"> Monitor cultural resources. 	Yes	Complies with BLM policy and Protocol for protecting cultural resources.	<p>Update to reflect Class I Overview and Protocol, where necessary.</p> <p>Periodically monitor significant cultural resources.</p> <p>In addition to archaeological sites and landscapes, consider traditional and contemporary Native American values and landscapes.</p> <p>Reference NAGPRA agreement with tribes for Samoa Dunes.</p>
Redding RMP 1993	<p>Management Objectives</p> <ul style="list-style-type: none"> Comply with the NHPA. Identify and fully consider any historic or archaeological sites located within a project area or on lands identified to transfer to any nonfederal entity. 	Yes	Complies with BLM policy and Protocol for protecting cultural resources.	<p>Update to reflect Class I Overview and Protocol, where necessary.</p> <p>In addition to archaeological sites and landscapes, consider traditional and contemporary Native American values and environmental justice in undertakings.</p>
Redding RMP 1993	<p>Management Objectives</p> <ul style="list-style-type: none"> An agreement with the State Lands Commission provides a mechanism for minimizing damages to cultural resources in the conveyance of public lands to the Commission. 	Yes	Complies with BLM policy and Protocol for protecting cultural resources.	<p>Update to reflect Class I Overview and Protocol, where necessary.</p> <p>In addition to archaeological sites and landscapes, consider traditional and contemporary Native American values and landscapes.</p>
Redding RMP 1993	<p>Management Objectives</p> <ul style="list-style-type: none"> Significant archaeological or historic sites will not be damaged by BLM-authorized undertakings or transferred from federal jurisdiction without appropriate impact mitigation measures. 	Yes	Complies with BLM policy and Protocol for protecting cultural resources.	<p>Update to reflect Class I Overview and Protocol, where necessary</p> <p>In addition to archaeological sites and landscapes, consider traditional and contemporary Native American values and landscapes.</p>

Decision Source	Current Management Objectives and Management Decisions	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Redding RMP 1993	<p>Management Objectives</p> <ul style="list-style-type: none"> 43 CFR 3809 specifically provides for the protection of cultural properties by initially prohibiting mining operators from knowingly disturbing or damaging them. The need for a cultural resources field inventory in response to a notice should be determined on the basis of professional judgment and is left to the discretion of the Redding Area Manager. Indirect impacts on cultural resources resulting from improving road access into formerly remote areas are recognized as potentially adverse. Current research will determine if and where these impacts are occurring. Impacts on cultural resources values in the form of artifact breakage or destruction of structural features resulting from vehicle activity associated with prospecting could also occur. 	Yes	Complies with BLM policy and Protocol for protecting cultural resources.	<p>Geologist/Mining Engineer and claimant need to be kept abreast of actions and decisions. Update to reflect Class I Overview and Protocol, where necessary.</p> <p>In addition to archaeological sites and landscapes, consider traditional and contemporary Native American values and landscapes.</p> <p>Make this management objective consistent with the same objective for the Arcata FO (currently described in the Arcata RMP Forest Plan Amendment 1995 using different language for the objective but the same language for the justification).</p>
Redding RMP 1993	<p>Management Objectives</p> <ul style="list-style-type: none"> Public education, research, the excavation of archaeological resources, and involvement of interested parties (principally American Indians) must conform to the Archaeological Resources Protections Act. 	Yes	Complies with BLM policy and Protocol for protecting cultural resources.	<p>This guidance should remain in effect with conformance with the Protocol that lays out all applicable laws and regulations. Update to reflect Class I Overview and Protocol, where necessary.</p> <p>In addition to archaeological sites and landscapes, consider traditional and contemporary Native American values and landscapes.</p> <p>Provide more specifics in planning documents, including the updated RMP and existing activity plans.</p>
Redding RMP 1993	<p>Management Objectives</p> <ul style="list-style-type: none"> Conform to the American Indian Religious Freedom Act 	Yes	Complies with BLM policy and Protocol for protecting cultural resources.	Update to reflect Class I Overview and Protocol, where necessary.

Decision Source	Current Management Objectives and Management Decisions	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Redding RMP 1993	<p>Management Decisions/Actions</p> <ul style="list-style-type: none"> Administrative and physical measures to protect sites, monitoring of known sites on lands in long-term BLM administration, surveillance by law enforcement personnel in problem areas, and use of qualified organizations or the public in cooperative study of cultural resources. 	Yes	Complies with BLM policy and Protocol for protecting cultural resources.	<p>Update to reflect Class I Overview and Protocol, where necessary.</p> <p>In addition to archaeological sites and landscapes, consider traditional and contemporary Native American values and landscapes.</p> <p>Provide more specifics in planning documents, including the updated RMP and existing activity plans.</p>
Redding RMP 1993	<p>Management Decisions/Actions</p> <ul style="list-style-type: none"> Prior to authorizing any surface-disturbing action or approval of land uses, the BLM solicits appropriate consideration of American Indian concerns including any potential impacts on traditional beliefs and heritage values. Analysis of these specific concerns is deferred to preparation of activity plans, project plans, and associated environmental analysis. 	Yes	<p>TCPs and sensitive Native American Indian locations have been made known to the BLM since previous planning efforts, and others will likely be made known to the BLM during this Redding-Arcata planning work. In this manner, not all consideration will need to await specific activity and project plan work and associated environmental analyses. The BLM follows its Protocol, including Executive Order No. 13007: Indian Sacred Sites, Executive Order 13175 (Consultation and Coordination with Indian Tribal Government), and The White House Memorandum for the Heads of Executive Departments and Agencies regarding Tribal Consultation with respect to Native American Indian discussions.</p>	<p>Update to reflect Class I Overview and Protocol, where necessary.</p> <p>Update to reflect previous consultations and information sharing and revise procedures, as appropriate.</p> <p>In addition to archaeological sites and landscapes, consider traditional and contemporary Native American values and landscapes. Solicit information as part of this planning effort through meetings, correspondence, phone calls, emails, and other communicative means. Follow Protocol guidance.</p>

Decision Source	Current Management Objectives and Management Decisions	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Redding RMP 1993	<p>Management Decisions/Actions</p> <ul style="list-style-type: none"> The BLM will design livestock grazing and range improvement program to avoid adverse effects on properties included in, or eligible for inclusion in, the NRHP, unless it is not prudent or feasible. The BLM will consult with the SHPO for purposes of developing a mutually acceptable mitigation plan when avoidance is not prudent or feasible. 	Partially	<p>Decision not consistent with the 2004 <i>BLM Livestock Grazing Permit/Lease Renewals, a Cultural Resources Amendment to The State Protocol Agreement Between California Bureau of Land Management and The California State Historic Preservation Officer</i>. This document has been incorporated into the Protocol as Appendix C.</p> <p>The basic tenet of protecting sites remains the same. Prudent or feasible approaches are not subsumed under the supplemental procedures.</p>	<p>Revise decision to be consistent with BLM Protocol Appendix C: <i>Supplemental Procedures for Livestock Grazing Permit/Lease Renewals, a Cultural Resources Amendment to The State Protocol Agreement Between California Bureau of Land Management and The California State Historic Preservation Officer</i>.</p>
Redding RMP 1993	<p><u>SCOTT VALLEY MANAGEMENT AREA</u> Management Objectives</p> <ul style="list-style-type: none"> Protect cultural resource values. 	Yes	<p>Complies with BLM policy and Protocol for protecting cultural resources.</p>	<p>Update to reflect Class I Overview and Protocol, where necessary.</p> <p>In addition to archaeological sites and landscapes, consider traditional and contemporary Native American values and landscapes.</p>
Redding RMP 1993	<p><u>SCOTT VALLEY MANAGEMENT AREA</u> Management Decisions/Actions</p> <ul style="list-style-type: none"> Conduct resource inventories on lands available for exchange or administrative transfer. 	Yes	<p>Complies with BLM policy and Protocol for protecting cultural resources.</p>	<p>Qualify the statement, since there are no specific plans to inventory at this time.</p> <p>Update to reflect Class I Overview and Protocol, where necessary.</p> <p>In addition to archaeological sites and landscapes, consider traditional and contemporary Native American values and landscapes.</p>

Decision Source	Current Management Objectives and Management Decisions	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Redding RMP 1993	<p><u>KLAMATH MANAGEMENT AREA</u> Management Objectives</p> <ul style="list-style-type: none"> Protect historic and prehistoric resources within the project area. Protect the cultural resources of the river corridor. Enhance traditional Native American Indian use opportunities. 	Yes	<p>Complies with BLM policy and Protocol for protecting cultural resources.</p> <p>Minimal outreach to tribes has been undertaken with regard to traditional uses with the exception of the FERC relicensing consultation regarding proposed Klamath River dam removal.</p> <p>Note that dam removal and subsequent heritage resource issues are beyond the scope of this planning process.</p>	<p>Update to reflect Class I Overview and Protocol, where necessary.</p> <p>In addition to archaeological sites and landscapes, consider traditional and contemporary Native American values and landscapes. Increased outreach to tribes should be undertaken regarding traditional use possibilities.</p> <p>Clarify management objectives that are outside the scope of the RMP, such as those associated with Klamath Dam removal.</p>
Redding RMP 1993	<p><u>KLAMATH MANAGEMENT AREA</u> Management Decisions/Actions</p> <ul style="list-style-type: none"> Conduct resource inventories on lands available for exchange or administrative transfer. 	Yes	<p>Complies with BLM policy and Protocol for protecting cultural resources.</p> <p>Exchanges have occurred since the 1993 RMP, and portions of the management area have been designated part of the Cascade-Siskiyou National Monument. Inventories have been completed on some of the national monument and exchange areas.</p> <p>Future planners should consider Klamath Dam removal. Note that dam removal and subsequent heritage resource issues are beyond the scope of this planning process.</p>	<p>Identify exchanges/transfers and associated cultural resource activities completed since the last RMP.</p> <p>Address and clarify management decisions associated with Klamath Dam removal that are in or out of the scope of the RMP.</p> <p>Qualify the statement, since there are no specific plans to inventory at this time.</p> <p>Update to reflect Class I Overview and Protocol, where necessary.</p> <p>In addition to archaeological sites and landscapes, consider traditional and contemporary Native American values and landscapes.</p>

Decision Source	Current Management Objectives and Management Decisions	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Redding RMP 1993	<p><u>TRINITY MANAGEMENT AREA</u> Management Objectives</p> <ul style="list-style-type: none"> Interpret and protect key cultural and natural resources for the public including the Helena Townsite, Rush Creek, Montana Cabin, and Salt Flat. Protect the historic resources of the Deadwood area and Indian Creek townsite. 	Yes	<p>Complies with BLM policy and Protocol for protecting cultural resources.</p> <p>There are NRHP-eligible districts and individual properties within this area. Lack of management could result in damage or destruction of resources.</p> <p>The Helena Townsite was subject to a patent correction application that removed it from BLM jurisdiction; however, the site also encompasses portions of historic Bagdad across the river that is under BLM jurisdiction and includes a currently used historic cemetery (with Trinity County oversight unofficially). An agreement for management might be suitable. There is a large prehistoric site here that is of NRHP quality. Protective signs should be installed, and site conditions monitored. Some sites such as Salt Flat and Indian Creek Townsite still need mineral withdrawals to help protect sites.</p>	<p>Install protective signs and monitor site conditions in the Bagdad Townsite.</p> <p>Expedite mineral withdrawals to help protect sites (e.g., Salt Creek and Indian Creek).</p> <p>Update to reflect Class I Overview and Protocol, where necessary.</p> <p>In addition to archaeological sites and landscapes, consider traditional and contemporary Native American values and landscapes.</p>
Redding RMP 1993	<p><u>TRINITY MANAGEMENT AREA</u> Management Decisions/Actions</p> <ul style="list-style-type: none"> Conduct resource inventories on lands available for exchange or administrative transfer. 	Yes	<p>Complies with BLM policy and Protocol for protecting cultural resources.</p> <p>Minor, if any, inventories have been conducted, mostly related to fuels/fire activities. Inventories for land exchange are not a priority for this area.</p>	<p>Qualify the statement, since there are no specific plans to inventory at this time.</p> <p>Update to reflect Class I Overview and Protocol, where necessary.</p> <p>In addition to archaeological sites and landscapes, consider traditional and contemporary Native American values and landscapes.</p>

Decision Source	Current Management Objectives and Management Decisions	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Redding RMP 1993	<p><u>SHASTA MANAGEMENT AREA</u> Management Objectives</p> <ul style="list-style-type: none"> Protect significant historic elements of the French Gulch and Deadwood mining districts. 	Yes	Complies with BLM policy and Protocol for protecting cultural resources.	<p>Update to reflect Class I Overview and Protocol, where necessary.</p> <p>Develop a plan for protecting the site and for monitoring site conditions.</p> <p>In addition to archaeological sites and landscapes, consider traditional and contemporary Native American values and landscapes.</p>
Redding RMP 1993	<p><u>SHASTA MANAGEMENT AREA</u> Management Objectives</p> <ul style="list-style-type: none"> Conserve and interpret prehistoric and historic archaeological resources on public lands [in Swasey Drive ACEC]. 	Yes	<p>Complies with BLM policy and Protocol for protecting cultural resources.</p> <p>Some actions have been completed under the Swasey Activity Plan.</p>	<p>Update to reflect Class I Overview and Protocol, where necessary.</p> <p>Update to reflect Swasey Activity Plan.</p> <p>In addition to archaeological sites and landscapes, consider traditional and contemporary Native American values and landscapes.</p>
Redding RMP 1993	<p><u>SHASTA MANAGEMENT AREA</u> Management Objectives</p> <ul style="list-style-type: none"> Protect the historic values of the area. 	Yes	Complies with BLM policy and Protocol for protecting cultural resources.	<p>Update to reflect Class I Overview and Protocol, where necessary.</p> <p>In addition to archaeological sites and landscapes, consider traditional and contemporary Native American values and landscapes.</p>
Redding RMP 1993	<p><u>SHASTA MANAGEMENT AREA</u> Management Decisions/Actions</p> <ul style="list-style-type: none"> Develop an integrated resource activity plan that identifies high priority land acquisition, details habitat restoration needs for anadromous salmonids, delineates DPC and restoration needs for riparian vegetation, describes protective management facilities, lists important cooperators and their responsibilities, identifies important cultural resources, and describes the recreational opportunities for the public. 	Yes	<p>Swasey Activity Plan has been developed and is being implemented.</p> <p>The area was burned in recent fires; a lot of restoration has taken place.</p>	<p>Update to reflect Class I Overview and Protocol, where necessary.</p> <p>Update to reflect implementation of Swasey Activity Plan and post-fire activities in the area.</p> <p>In addition to archaeological sites and landscapes, consider traditional and contemporary Native American values and landscapes.</p> <p>No need to update Swasey Activity Plan.</p>

Decision Source	Current Management Objectives and Management Decisions	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Redding RMP 1993	<p><u>SHASTA MANAGEMENT AREA</u> Management Decisions/Actions</p> <ul style="list-style-type: none"> Conduct resource inventories on lands available for exchange or administrative transfer. 	Yes	Complies with BLM policy and Protocol for protecting cultural resources.	<p>Qualify the statement, since there are no specific plans to inventory at this time. Update to reflect Class I Overview and Protocol, where necessary.</p> <p>In addition to archaeological sites and landscapes, consider traditional and contemporary Native American values and landscapes.</p>
Redding RMP 1993	<p><u>SACRAMENTO RIVER MANAGEMENT AREA</u> Management Objectives</p> <ul style="list-style-type: none"> Conserve archaeological resources and provide research opportunities on selected threatened or damaged sites [in Bend Area]. 	Yes	<p>Complies with BLM policy and Protocol for protecting cultural resources.</p> <p>There are NRHP eligible districts present by watershed (Turtle Creek, Paynes Creek, Battle Creek, Inks Creek, etc.) if not most of the area. Lack of management could result in damage or destruction of resources.</p>	<p>Prioritize funding to complete archaeological reports associated with the considerable archaeological and historical research completed in the Bend area and/or provide staffing to undertake such projects.</p>
Redding RMP 1993	<p><u>SACRAMENTO RIVER MANAGEMENT AREA</u> Management Decisions/Actions</p> <ul style="list-style-type: none"> Acquire available unimproved lands that (in descending priority) contain high priority habitat along the Sacramento River as depicted in the 1988 Sacramento River Atlas, front the Sacramento River, provide physical access to public land, contain known/potential wetland or special status species habitat, contain important cultural resources, or facilitates overall public management within the area. 	Yes	Complies with BLM policy and Protocol for protecting cultural resources.	<p>Allocate resources to purchase important cultural resources such as Spring Branch, Battle Creek, and upper Paynes Creek to improve contiguous protection of resources.</p>

Decision Source	Current Management Objectives and Management Decisions	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Redding RMP 1993	<p><u>SACRAMENTO RIVER MANAGEMENT AREA</u></p> <p>Management Decisions/Actions</p> <ul style="list-style-type: none"> Conduct resource inventories on lands available for exchange or administrative transfer. 	Yes	<p>Complies with BLM policy and Protocol for protecting cultural resources.</p> <p>Considerable archaeological and historical research has been completed in the Bend area.</p>	<p>Prioritize funding to complete archaeological reports associated with the considerable archaeological and historical research completed in the Bend area, and provide staffing to undertake such projects.</p> <p>Use information to interpret sites and educate public regarding protection.</p> <p>Update to reflect Class I Overview and Protocol, where necessary.</p> <p>In addition to archaeological sites and landscapes, consider traditional and contemporary Native American values and landscapes.</p>
Redding RMP 1993	<p><u>ISHI MANAGEMENT AREA</u></p> <p>Management Objectives</p> <ul style="list-style-type: none"> Conserve the archaeological resources of the (Deer Creek) canyon. Protect the historic values of the (Forks of Butte Creek) canyon. 	Yes	<p>Complies with BLM policy and Protocol for protecting cultural resources.</p> <p>There are NRHP-eligible properties within this area. Lack of management could result in damage or destruction of resources.</p>	<p>Acquisitions of land in both areas should become a priority.</p> <p>Update to reflect Class I Overview and Protocol, where necessary.</p> <p>In addition to archaeological sites and landscapes, consider traditional and contemporary Native American values and landscapes.</p>
Redding RMP 1993	<p><u>ISHI MANAGEMENT AREA</u></p> <p>Management Decisions/Actions</p> <ul style="list-style-type: none"> Conduct resource inventories on lands available for exchange or administrative transfer. 	Yes	<p>Complies with BLM policy and Protocol for protecting cultural resources.</p>	<p>Acquisitions of land in both areas should become a priority.</p> <p>Update to reflect Class I Overview and Protocol, where necessary.</p> <p>In addition to archaeological sites and landscapes, consider traditional and contemporary Native American values and landscapes.</p>
Redding RMP 1993	<p><u>YOLLA BOLLY MANAGEMENT AREA</u></p> <p>Management Decisions/Actions</p> <ul style="list-style-type: none"> Conduct resource inventories on lands available for exchange or administrative transfer. 	Yes	<p>Complies with BLM policy and Protocol for protecting cultural resources.</p> <p>Area burned in August Complex Fire; not a high priority for inventory, except in relation to fire prevention/restoration activities.</p>	<p>Update to reflect Class I Overview and Protocol, where necessary.</p> <p>In addition to archaeological sites and landscapes, consider traditional and contemporary Native American values and landscapes.</p>

Decision Source	Current Management Objectives and Management Decisions	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Redding RMP Lands Amendment 2005	Management Objectives <ul style="list-style-type: none"> Ensure that the overall land tenure program is beneficial or neutral in terms of protecting cultural resources. 	Partially	Complies with BLM policy and Protocol for protecting cultural resources. The land sale program has become less intense over time and estimates should be lower.	The new plan will supersede this amendment. Update to reflect latest land tenure program policies and direction. Update to reflect Class I Overview and Protocol, where necessary. In addition to archaeological sites and landscapes, consider traditional and contemporary Native American values and landscapes.
Redding RMP Lands Amendment 2005	Management Decisions/Actions <ul style="list-style-type: none"> Screen potential disposal lands for cultural resources. 	Yes	Complies with BLM policy and Protocol for protecting cultural resources.	Update to reflect Class I Overview and Protocol, where necessary. In addition to archaeological sites and landscapes, consider traditional and contemporary Native American values and landscapes.

Potential New Decisions for the RMP Revision

- Proposals for new ACECs of cultural relevance should be provided to the ACEC lead, including Sheep Rock, Stateline Archaeological District, Black Mountain, and South Spit.
- Tighter prescriptions on disposal areas so that significant sites are retained in public ownership.
- Limit or direct activities such as metal detecting that are otherwise allowed, but that result in the damage and looting of historic properties. Increase education and dialogue with stakeholders.
- Establish procedures for how to co-manage historic properties that are located partially on public or private lands to ensure protection of resources on public lands.
- Establish a site condition monitoring program based on site sensitivity, level of vulnerability and decline, and access, and use individuals trained under a site stewardship or similar program as watchguards. Such a program should involve tribes as key stakeholders, where appropriate.
- Establish a monitoring program for sites where protection or stabilization has been, or could be, an issue. This program should be rigorous and tied to the cultural database files. At least 25 sites per year should be monitored.
- Integrate law enforcement into Archaeological Resources Protection Act activities and focus on public exposure of successful cases. Agency, county, and local law enforcement should be involved.
- When culturally appropriate and feasible, evaluate sites in the context of indigenous and historic landscapes and townsites such as Trinity River, French Gulch/Deadwood, West Weaver Creek, Clear Creek, and Butte Creek mining landscapes, the Upper Klamath River Canyon Native American Indian landscape, the Helena/Bagdad and Deadwood/McAdams Creek (Siskiyou County) townsites, Humboldt Bay north and south spit parcels, Middle Fork Eel River, and Eden Valley.
- Develop a cultural resource information strategy that includes:
 - Procedures to remain current with technological advances that improve collection, organization, and curation of cultural resource data.
 - Migration procedures and schedule for curated data.
 - Geospatial and digital information database procedures that emphasize accuracy, completeness and ease of use.
- Either as an integrated component of the existing USDI inter-agency, university-based Cooperative Ecosystem Study Unit Program or using other avenues, the BLM should seek to establish a network of university and college partners and to partner with private companies and NGOs and tribal partners, to assist in cultural resource inventory, research, documentation, public interpretation, and education.
- Develop heritage management partnerships or agreements with local tribes and other ethnic communities to assist the agency in its management and research of cultural resources. Facilitate working groups or caucuses to help guide the planning process. Such arrangements can help the agency in investigations, site monitoring, documentation, interpretation, and conservation and further the tribal/ethnic heritage-related concerns.
- Use the RMP process to develop a proactive cultural resource management framework that incorporates changes in BLM policy and law and archaeological theory and method.

- Promote the values in cultural resource management and research to new managers, BLM personnel, heritage-oriented academicians, tribal members and the general public.

Areas of Relative Ecological Importance to Guide Land Uses and Management

Cultural resources document past human activities, including alteration and use of natural environments. When cultural properties are examined on a broader, landscape-level scale, these cultural systems can provide information about past land uses that might inform us about best land uses and management. These properties provide historic context when we look at current land uses and management practices and can help managers with planning future goals.

To that end, there are several NRHP-listed properties or localities with cultural resource complexity and high site density that qualify as areas of relative ecological importance. These localities include Sheep Rock, Swasey, Weaverville vicinity, lower Clear Creek, Bend, Lake Oroville, upper Klamath River, Shasta River, Deer Creek, Butte Creek, Battle Creek, French Gulch/Deadwood, Middle Fork Eel River/Eden Valley, and Humboldt Bay. In addition, the BLM will seek opportunities to work with tribes to gather traditional ecological knowledge in relation to localities within the planning boundaries, as this information can provide a long-term perspective in land use and management.

4.2.6 Fish/Special Status Fish

Current Management Direction

The current management direction is listed below (Table 4-5) according to the current RMPs for both the Redding and Arcata FOs, including the 1995 Amendment to the Arcata RMP, as applicable.

Table 4-5. Ability of Current Management to Achieve Desired Future Conditions for Fish and Special Status Fish

Decision Source	Current Management Objectives and Management Decisions	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Northwest Forest Plan 1994	<p>Management Objectives</p> <p><i>Aquatic Conservation Strategy (B-9):</i></p> <ul style="list-style-type: none"> Restore and maintain the ecological health of watersheds and aquatic ecosystems contained within them on public lands, including anadromous fish habitat. <p><i>Aquatic Conservation Strategy Objectives (B-11):</i></p> <ul style="list-style-type: none"> Maintain and restore the distribution, diversity, and complexity of watershed and landscape-scale features to ensure protection of the aquatic systems. Maintain and restore connectivity within and between watersheds to provide routes to areas critical for fulfilling life history requirements of aquatic species. Maintain and restore the physical integrity of the aquatic systems. Maintain and restore water quality necessary to support healthy aquatic ecosystems. Maintain and restore the sediment regime under which aquatic ecosystems evolved. Maintain and restore in-stream flows sufficient to create and sustain aquatic habitats and to retain patterns of sediment, nutrient, and wood routing. Maintain and restore the timing, variability, and duration of floodplain inundation and water table elevation. 	Yes	<p>Aquatic Conservation Strategy goals and objectives apply throughout the planning area covered by the NWFP. Portions of the planning area are not incorporated by the NWFP Aquatic Conservation Strategy however much of these areas are encompassed by PACFISH. The remainder of the riparian areas within the planning area is subject to BMPs.</p> <p>Developing watershed assessments under the Aquatic Conservation Strategy is not always feasible. Management opportunities for restoring ecological health are not achievable for some areas.</p>	<p>Consider options for applying objectives of the Aquatic Conservation Strategy to the entire NCIP to provide for consistent management of riparian areas.</p>

Decision Source	Current Management Objectives and Management Decisions	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
	<p><i>Fish and Wildlife Management (C-37):</i></p> <ul style="list-style-type: none"> FW-1. Design and implement fish and wildlife habitat restoration and enhancement activities in a manner that contributes to attainment of Aquatic Conservation Strategy objectives. FW-2. Design, construct, and operate fish and wildlife user-enhancement facilities in a manner that does not retard attainment of Aquatic Conservation Strategy objectives. <p>Management Decisions/Actions</p> <p><i>Aquatic Conservation Strategy for Watershed Analysis (B-20):</i></p> <ul style="list-style-type: none"> Characterize watersheds and guide management and monitoring programs. Required in Key Watersheds prior to resource management; recommended in all other watersheds. Watershed analysis is important in developing aquatic monitoring strategies to identifying areas of greatest benefit-to-cost relationships for restoration opportunities. Required in Key Watersheds prior to resource management; recommended in all other watersheds. <p><i>Aquatic Conservation Strategy for Watershed Restoration (B-30):</i></p> <ul style="list-style-type: none"> In-stream structures are not considered mitigation for poor land and water management practices and should only be used short term. Priority should be given to preserving existing high-quality aquatic habitats. <p><i>Fish and Wildlife Management (C-37):</i></p> <ul style="list-style-type: none"> FW-3. Cooperate with management agencies to identify and eliminate wild ungulate impacts that are inconsistent with 			

Decision Source	Current Management Objectives and Management Decisions	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
	<p>attainment of Aquatic Conservation Strategy objectives.</p> <ul style="list-style-type: none"> FW-4. Cooperate with federal, tribal, and state fish management agencies to identify and eliminate impacts associated with habitat manipulation, fish stocking, harvest and poaching that threaten the continued existence and distribution of native fish stocks on federal lands. 			
Arcata RMP 1992	<p>Management Decisions/Actions</p> <ul style="list-style-type: none"> Retain 40 acres at the confluence of Eubanks Creek and the Mattole River for its fisheries and riparian values. 	Yes	<p>The parcel has been retained and visited infrequently. Riparian vegetation planted along a large portion of this parcel has grown to provide significant shade.</p>	<p>Consider acquisition of adjacent lands along Eubanks Creek from willing landowners in order to improve condition of aquatic habitat.</p>
Arcata RMP 1992	<p>Management Decisions/Actions</p> <ul style="list-style-type: none"> Continue inventory of habitat conservation/critical habitat areas. 	No	<p>This action has not been implemented. The Arcata FO should consider a comprehensive prioritized inventory and assessment of aquatic habitat.</p>	<p>This action should be part of a larger, comprehensive assessment and inventory of aquatic habitat.</p>

Decision Source	Current Management Objectives and Management Decisions	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Arcata RMP 1992	<p>Management Decisions/Actions</p> <ul style="list-style-type: none"> • Manage the South Fork Eel River and its tributaries from/including Low Gap Creek to Elder Creek as Key Watersheds. For all permanent and intermittent tributaries to the South Fork Eel that lie outside of the “wild” river designation, establish the following interim horizontal stream buffers as interim riparian reserves: <ul style="list-style-type: none"> ◦ Fish-bearing streams—300 feet on either side of the channel ◦ Non-fish-bearing streams—150 feet on either side of the channel ▪ Intermittent streams and landslide prone areas—100 feet on either side of the stream channel or to the extent of landslide or landslide-prone areas ▪ Buffering applies to the South Fork Eel River and tributaries from/including Low Gap Creek to/including Elder Creek. Actual buffering widths will be determined by watershed analysis. Riparian Reserves are subject to specific standards and guidelines to protect salmon and steelhead stocks. 	Yes		<p>Consider thinning in overly dense forests in order to reduce transpiration and improve summer streamflow.</p> <p>Consider prescribed fire and management of fire for multiple resource benefits</p>
Arcata RMP 1992	<p>Management Decisions/Actions</p> <ul style="list-style-type: none"> • Manage Cedar Creek as a Key Watershed with interim riparian buffering as above. 	Ongoing		
Arcata RMP 1992	<p>Management Decisions/Actions</p> <ul style="list-style-type: none"> • Actively pursue direct acquisition of high-priority habitats for anadromous fisheries habitat restoration, Key Watershed management, WSR corridor management, and other specific endangered species habitats. 	Ongoing		

Decision Source	Current Management Objectives and Management Decisions	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Arcata RMP 1992	<p>Management Decisions/Actions</p> <ul style="list-style-type: none"> • Recognize permanent riparian buffers (300, 150, 100 feet) on all other streams in the management area. No watershed analysis is necessary. 			
Arcata RMP 1992	<p>Management Decisions/Actions</p> <ul style="list-style-type: none"> • Prepare watershed analyses for South Fork Eel River and Cedar Creek that: <ul style="list-style-type: none"> ◦ Establish criteria for determining riparian reserve widths. ◦ Identify transportation needs and restoration priorities. ◦ Refine management guidelines to fit specific landscape conditions and limitations. ◦ Establish forestry and watershed restoration goals and priorities. 		Watershed analyses for entire South Fork Eel River (including Cedar Creek) complete.	
Arcata RMP 1992	<p>Management Decisions/Actions</p> <ul style="list-style-type: none"> • Establish monitoring programs to ensure riparian management objectives are met. 			
Arcata RMP 1992	<p>Management Decisions/Actions</p> <ul style="list-style-type: none"> • Complete a South Fork Eel River Management Plan. 			

Decision Source	Current Management Objectives and Management Decisions	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Arcata RMP Forest Plan Amendment 1995	<i>General Comment</i> regarding the emphasis of anadromous fisheries, aquatic system restoration, and protection and riparian class.	Yes	<p>Given the recent publication of 2015 Fish Species of Special Concern in California (Moyle et al. 2015); emphasis on the restoration and protection of anadromous fisheries, riparian, and aquatic systems; and the carrying forward of the land use allocations, standards and guidelines, Aquatic Conservation Strategy, and other guidelines in the NWFP, decision notice/decision record, FONSI, EA, and appendices for the implementation of interim strategies for managing anadromous fish-producing watersheds in eastern Oregon and Washington, Idaho, and portions of California (PACFISH) and past decisions, aquatic habitats, including riparian areas and native fisheries resources, should be designated as priority habitat types and species assemblages. These should be made common to all management decisions, objectives, and decisions for the FOs rather than having multiple sections that repeat the same information.</p> <p>There are many management decisions that were made to protect aquatic fisheries habitats such as Wild and Scenic (VSR) designations, maintaining and restoring ecological function, livestock removal, and the establishment and maintaining of mineral withdrawals.</p>	Identify aquatic and riparian habitats as priority habitat types and develop RCOs planning area-wide.
Arcata RMP Forest Plan Amendment 1995	<p><u>COVELO VICINITY MANAGEMENT AREA Management Objectives</u></p> <ul style="list-style-type: none"> Emphasize anadromous fisheries and cooperative watershed management on Eel River, Middle Fork Eel River, and North Fork Eel River and major tributaries. 	Yes	These areas are important for anadromous fisheries and numerous actions have been identified in recovery plans.	Develop plan to implement proactive watershed management activities that benefit anadromous fish.

Decision Source	Current Management Objectives and Management Decisions	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Arcata RMP Forest Plan Amendment 1995	<p>Management Objectives</p> <ul style="list-style-type: none"> Re-establish the role of fire as a viable process for ecosystem management. Maintain and restore ecological functions and processes that operate in watersheds to create anadromous fish habitat in those watersheds with highest restoration potential (Thatcher Creek). 	Yes	<p>Re-establishment of fire in this area would contribute to the long-term health of watershed processes.</p> <p>Given constraints, this has been difficult to implement. Thatcher Creek is a Key Watershed, although mostly managed by the Mendocino National Forest.</p>	Work with fuels specialists to determine feasibility of fuels management.
Arcata RMP Forest Plan Amendment 1995	<p>Management Objectives</p> <ul style="list-style-type: none"> Protect and enhance natural and recreational values along the federally designated wild and scenic segments of the Middle Fork Eel River as outlined in the Middle Fork Eel River Management Plan. 	Yes	The plan could potentially be revised, but protection of river-related values benefits fisheries.	
Arcata RMP Forest Plan Amendment 1995	<p>Management Decisions/Actions</p> <ul style="list-style-type: none"> Establish Thatcher Creek and its tributaries as a Tier-I Key Watershed. For all permanent and intermittent tributaries to Thatcher Creek, establish the following interim horizontal stream buffers as interim Riparian Reserves: <ul style="list-style-type: none"> Fish-bearing streams - 300 feet either side of the channel. Non-fish-bearing streams - 150 feet either side of the channel. Intermittent streams and landslide prone areas—100 feet on either side of the stream channel or to the extent of landslide or landslide prone areas. Criteria for establishing actual buffering widths will be determined by watershed analysis. Riparian Reserves are subject to specific standards and guidelines to protect salmon and steelhead stocks. 	Yes	This is a NWFP decision.	Consider thinning in overly dense forests in order to reduce transpiration and improve summer streamflow.

Decision Source	Current Management Objectives and Management Decisions	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Arcata RMP Forest Plan Amendment 1995	Management Decisions/Actions <ul style="list-style-type: none"> • Delineate permanent buffers (300, 150, 100 feet) on all other streams in the management area. No watershed analysis is necessary. 	Yes	This is a NWFP decision.	Retain.
Arcata RMP Forest Plan Amendment 1995	Management Decisions/Actions <ul style="list-style-type: none"> • Develop cooperative management relationships with private landowners, state, and other federal agencies to effect coordinated management consistent with restoration of anadromous fisheries of the Eel River, Middle Fork Eel River, and North Fork Eel River. 	Partially	Over the life of this decision, partnerships with other federal agencies, tribes, and nonprofit watershed groups have occurred but not always maintained.	Prioritize the watersheds in order to focus restoration efforts.
Arcata RMP Forest Plan Amendment 1995	Management Decisions/Actions <ul style="list-style-type: none"> • Delineate quarter-mile wild and scenic buffers to designated segments of the Eel River, Middle Fork Eel River, and North Fork Eel River as identified in the Middle Fork Eel River Management Plan and in interim management provisions of the WSR Act. 	Yes		
Arcata RMP Forest Plan Amendment 1995	Management Decisions/Actions <ul style="list-style-type: none"> • Develop MOU with Mendocino National Forest for management of the Thatcher and Cedar Creek watershed and development of watershed analysis. 	No	An Interagency Agreement was in place to develop the Watershed Analysis documents for Thatcher and Cedar Creeks.	

Decision Source	Current Management Objectives and Management Decisions	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Arcata RMP Forest Plan Amendment 1995	<p>Management Decisions/Actions</p> <ul style="list-style-type: none"> • Prepare watershed analysis for Thatcher Creek that: <ul style="list-style-type: none"> ◦ Establishes criteria for establishing riparian reserve widths. ◦ Refines management guidelines to fit specific landscape conditions and limitations. ◦ Establishes forestry and watershed restoration goals and priorities. • Establishes monitoring programs to ensure riparian management objectives. 	Yes	Those documents have been completed.	Make revisions or updates to the Watershed Analysis documents based on any new information.
Arcata RMP Forest Plan Amendment 1995	<p>Management Decisions/Actions</p> <ul style="list-style-type: none"> • Implement Middle Fork Eel River Management Plan. 			
Arcata RMP Forest Plan Amendment 1995	<p><u>SCATTERED TRACTS MANAGEMENT AREA</u></p> <p>Management Decisions/Actions</p> <p>Management Objectives</p> <ul style="list-style-type: none"> • Protect and enhance natural and recreational values along the federally designated portions of the Eel and Van Duzen Rivers' WSR corridors. 	Yes	This is consistent with the designated WSR direction and benefits fisheries	Acquire adjacent parcels from willing landowners to consolidate ownership and management objectives.
Arcata RMP Forest Plan Amendment 1995	<p>Management Decisions/Actions</p> <ul style="list-style-type: none"> • Manage areas along all permanently flowing streams, lakes, wetlands, and intermittent streams Riparian Reserves. 	Yes	These are essentially NWFP decisions.	Identify tracts that occur in watersheds important to fish recovery and acquire adjacent parcels from willing landowners to consolidate ownership and management objectives.
Arcata RMP Forest Plan Amendment 1995	<p>Management Decisions/Actions</p> <ul style="list-style-type: none"> • Establish permanent buffers (300, 150, 100 feet) on all streams in the management area. No watershed analysis is necessary. 	Yes	These are essentially NWFP decisions.	Retain.

Decision Source	Current Management Objectives and Management Decisions	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Arcata RMP Forest Plan Amendment 1995	<p>Management Decisions/Actions</p> <ul style="list-style-type: none"> No fisheries or sensitive fishery management actions identified for this management area. 			
Arcata RMP Forest Plan Amendment 1995	<p>LACK'S CREEK MANAGEMENT AREA Management Objectives</p> <ul style="list-style-type: none"> Minimize sedimentation into the hydrographic basin of Redwood Creek by consolidating ownership and through coordinated management consistent with the Redwood National Park Expansion Act of 1978 (Public Law 95-250). 	Partially	Much of the parcels have been acquired. Ongoing sediment reduction. Much of the sediment reduction work completed.	Continue to acquire lands in the Lacks Creek watershed from willing landowners to consolidate ownership and management objectives.
Arcata RMP Forest Plan Amendment 1995	<p>Management Decisions/Actions</p> <ul style="list-style-type: none"> Designate 2,987 acres of public land within the Lacks Creek watershed as the Lacks Creek Watershed ACEC. Acquired lands within the watershed will be included in the watershed ACEC. 		See ACEC section.	Consider adding Lacks Creek as a Key Watershed.
Arcata RMP Forest Plan Amendment 1995	<p>Management Decisions/Actions</p> <ul style="list-style-type: none"> Complete a watershed analysis in coordination with Redwood National Park. 	Partially	Watershed Analysis completed in 1997.	Look at opportunities for revision or update.

Decision Source	Current Management Objectives and Management Decisions	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Redding RMP 1993	<p>Management Objectives</p> <ul style="list-style-type: none"> • Manage public lands to prevent deterioration of special status species' habitat thereby precluding the need for state or federal listing of those species. This includes the following objectives: <ul style="list-style-type: none"> ◦ Recognize certain special status species of plants and wildlife that merit attention in the management of the public lands. ◦ Minimize the decline of those species designated as special status through the mitigation of resource management impacts. ◦ Promote the enhancement of special status species through positive management of their habitats and populations. 	Yes.	Consistent with current BLM Special Status Species (6840) policy	Identify aquatic and riparian habitats as priority habitat types and develop RCOs planning area wide.
Redding RMP 1993	<p>Management Decisions/Actions</p> <ul style="list-style-type: none"> • This RMP does not contain quantifiable RCOs for wildlife and fisheries resources due to the tremendous changes of public ownership recommended in the various land use management alternatives. RCOs with measurable goals will be specified in subsequent activity plans 	Yes	If major land tenure adjustments are still anticipated, perhaps the language should be carried forward.	<p>Carry forward and update. For example, where land tenure adjustments are not anticipated, consider establishing a refined geographic focus area and resource condition goals and objectives.</p> <p>We can provide or identify specific examples for reintroduction or population augmentation efforts.</p> <p>Update Trinity River Restoration Program and BLM efforts.</p>

Decision Source	Current Management Objectives and Management Decisions	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Redding RMP 1993	<p>Management Decisions/Actions</p> <ul style="list-style-type: none"> Public lands identified for disposal will be managed as follows: protected or maintain the existing condition of the resources. 	Partially	Protecting or maintaining existing conditions ensures resource will not degrade.	<p>Disposal lands may provide important fisheries habitat or linkages. Case-by-case review identified. Review disposal lands using habitat connectivity models and Trout Unlimited (TU) California Freshwater CSI tool to determine importance at watershed scale.</p> <p>Identify aquatic and riparian habitats as priority habitat types and develop RCOs planning area wide.</p>
Redding RMP 1993	<p>Management Decisions/Actions</p> <ul style="list-style-type: none"> Conduct resource inventories (archaeological, sensitive species, hazardous materials, minerals, and timber) on lands available for exchange, sale, or administrative transfer. 			Identify aquatic and riparian habitats as priority habitat types and develop RCOs planning area wide
Redding RMP 1993	<p>SCOTT VALLEY MANAGEMENT AREA</p> <p>Management Objectives None</p> <p>Management Decisions/Actions None</p>	No	The management area occurs in NWFP so although no specific fishery or aquatic management objectives, decisions, and/or actions are identified for this management area, the management area and associated decisions are constrained by NWFP standards and guidelines and Aquatic Conservation Strategy.	Opportunities for change are to be determined. Use TU CSI tool and habitat connectivity maps to determine if management objectives, decisions, and/or actions are warranted.

Decision Source	Current Management Objectives and Management Decisions	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Redding RMP 1993	<p><u>KLAMATH MANAGEMENT AREA Management Objectives</u></p> <p><i>Shasta and Klamath Rivers Canyon:</i></p> <ul style="list-style-type: none"> • Improve Chinook salmon spawning in the lower Shasta River. Restore riparian vegetation to Class II or better. <p><i>Upper Klamath River:</i></p> <ul style="list-style-type: none"> • Improve the condition of riparian vegetation to Class II or better. <p><i>Mid-Klamath River:</i></p> <ul style="list-style-type: none"> • Maintain existing public lands within the designated WSR corridor in present conditions. <p><i>Dry Creek:</i></p> <ul style="list-style-type: none"> • Improve the steelhead spawning habitat in lower Dry Creek. <p><i>Shasta Valley Wetlands:</i></p> <ul style="list-style-type: none"> • Provide long-term protection and enhancement of native wetlands. • Improve water quality in the Shasta River basin. • Enhance the native fisheries of Parks Creek, Big Springs Creek, and the Shasta River. 	Partially	<p>In reference to Riparian zone, replace Class I and Class II definitions, as PFC translates better to inherent reflect site conditions.</p> <p>Where acquisition and/or retention has been identified rather than focusing on specific species, we should identify it as “BLM Priority and/or Sensitive Fish Species.”</p>	<p>Carry forward; however, update as identified.</p> <p>Replace Class I and Class II definitions, as PFC translates better to inherent reflect site conditions.</p> <p>Identify aquatic and riparian habitats as priority habitat types and develop RCOs planning area-wide</p> <p>If feasible, consider the acquisition of Shasta Wetlands to provide for the protection and enhancement of wetlands and fisheries habitat.</p> <p>For the remainder of management area, carry forward and update. For example, where land tenure adjustments are not anticipated, consider establishing a refined geographic focus area and resource condition goals and objectives.</p>

Decision Source	Current Management Objectives and Management Decisions	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Redding RMP 1993	<p>KLAMATH MANAGEMENT AREA Management Objectives</p> <ul style="list-style-type: none"> Consolidate and increase public landownership within the area by acquiring available unimproved lands that adjoin the Trinity River Corridor, facilitate reforestation and other sustained yield forestry practices, protect anadromous fisheries, provide public access to public lands, protect sensitive species habitat, conserve regionally important cultural resources, provide access to identified Native American heritage resources, or enhance overall efficiency of public land administration. <p><i>Shasta and Klamath Rivers Canyon:</i></p> <ul style="list-style-type: none"> Designate all public land in the Shasta River Canyon below the Highway 263 bridge crossing below Yreka Creek to the confluence with the Klamath River and within a quarter mile of the normal high water mark as an ACEC. Acquire available unimproved lands within the area with priority given (in descending order) to unimproved lands within the ACEC, Klamath River corridor, and lands between Interstate 5 and the ACEC. <p><i>Upper Klamath River:</i></p> <ul style="list-style-type: none"> This portion of the Klamath River is considered eligible and suitable for inclusion in the National WSR System. All public land in the corridor bounded by the northern canyon rim and within a quarter mile of normal high water along the southern bank will be managed in a manner that will not impair the outstanding remarkable values and consistent with a preliminary classification as scenic. 	Partially	<p>Shasta and Klamath River Canyon ACEC designated, withdrawn, and designated WSR.</p> <p>Occurs in NWFP so although no specific fishery or aquatic management objectives, decisions, and/or actions are identified for remainder of management area, it is still constrained by NWFP. General FO language covers.</p>	<p>Identify aquatic and riparian habitats as priority habitat types and develop RCOs planning area-wide</p> <p>Consider further acquisitions and subsequent ACEC designation for fish and aquatics in Klamath Management Unit. Use TU tool to identify areas.</p> <p>Carry forward Big Springs/Shasta Wetland complex as an important area, currently owned by The Nature Conservancy.</p> <p>Continue to pursue acquisition of Big Springs/Shasta Wetlands, as it is important aquatic habitat and should be carried forward.</p> <p>If Iron Gate and Copco Reservoir dams are removed, consider acquisitions within the Klamath River corridor to establish a link to the public lands between Shasta and Klamath Rivers Canyon ACEC, Mid-Klamath River lands, and Upper Klamath River and to protect salmonid habitat. If lands are acquired, consider designation as an ACEC to protect critical spawning habitat for anadromous fisheries resources and the expansion of the WSR designation.</p>

Decision Source	Current Management Objectives and Management Decisions	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Redding RMP 1993	<ul style="list-style-type: none"> Acquire available unimproved lands within the area and/or develop cooperative management agreements with Pacific Power and Light or their successor(s). <p><i>Shasta Valley Wetlands:</i></p> <ul style="list-style-type: none"> Improve water quality in the Shasta River basin. 	Yes	No integrated or ACEC plan developed.	For the remainder of management area, carry forward and update RCOs. For example, where land tenure adjustments are not anticipated, consider establishing a refined geographic focus area and resource condition goals and objectives.
Redding RMP 1993	<p>Management Decisions/Actions</p> <p><i>Shasta Valley Wetlands:</i></p> <ul style="list-style-type: none"> Acquire available, unimproved private land that contains important anadromous salmonid habitat. <p>Management Decisions/Actions</p> <p><i>Shasta and Klamath Rivers Canyon:</i></p> <ul style="list-style-type: none"> Withdraw all public lands within the 100-year flood zone of the Shasta River from mineral entry. The area is closed to livestock grazing. Develop an integrated resource activity plan for the Klamath River below RM 181 and the Shasta River Canyon that identifies high priority land acquisitions, designates appropriate roads and trails for recreational access, identifies management facility needs to protect the ACEC and riparian zone, and encourages cooperative actions with adjacent landowners. 	Yes	No integrated or ACEC plan developed.	Carry forward the development of an ACEC plan.

Decision Source	Current Management Objectives and Management Decisions	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Redding RMP 1993	<p>Management Decisions/Actions</p> <p><i>Upper Klamath River:</i></p> <ul style="list-style-type: none"> The river corridor is closed to livestock grazing. Offer public lands within the river corridor for mineral leasing with no surface occupancy. Mineral material disposals are not allowed within the river corridor. Amend the existing river management plan for the Klamath River above Copco to reflect the Final Eligibility and Suitability Report for the Upper Klamath WSR Study and the recommendations of the Klamath Falls RMP. 	Unknown	WSR was designated; however, it is unclear if amendments to the river management plan were completed, or if it needs to be carried forward. It is also unclear if the recommendations of the Klamath Falls RMP as still viable or pertinent.	
	<p>Management Decisions/Actions</p> <p><i>Shasta Valley Wetlands:</i></p> <ul style="list-style-type: none"> Close the RNA/ACEC to livestock grazing. 			
Redding RMP 1993	<p>Management Decisions/Actions</p> <p><i>Mid-Klamath River:</i></p> <ul style="list-style-type: none"> Establish a corridor for this segment of the Klamath River between Iron Gate Reservoir (RM 190) and the Klamath River Canyon (RM 181), which consists of the 100-year floodplain, within one-eighth mile of normal high water or the nearest paralleling road or railroad, whichever is least. Permit no actions on public land that would impair the quality or condition of this recreational component of the National WSR System. 			

Decision Source	Current Management Objectives and Management Decisions	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Redding RMP 1993	<p>Management Decisions/Actions</p> <p><i>Dry Creek:</i></p> <ul style="list-style-type: none"> • Area is closed to motorized vehicles excepting the Siskiyou County-maintained Copco Road. • Area is closed to livestock grazing. • Mineral material disposals are permitted only if such actions enhance the steelhead spawning potential within Dry Creek. • Continue annual monitoring of steelhead spawning success along lower Dry Creek. Maintain the existing management facilities, such as gabions and fences, as needed. 	No		See Row one in this table regarding overarching fisheries emphasis in Arcata/Redding FOs.

Decision Source	Current Management Objectives and Management Decisions	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Redding RMP 1993	<p>Management Decisions/Actions</p> <p><i>Shasta Valley Wetlands:</i></p> <ul style="list-style-type: none"> Acquire available unimproved lands within the area. Priority is given to land containing existing or historic native wetlands. Develop an integrated resource activity plan for the Shasta Valley Wetlands if the BLM acquires available privately owned unimproved lands within the area. The plan will identify forage allocation and DPCs for domestic and native grazing, acquisition/cooperative management needs, a network of management facilities to protect the native wetlands, wildlife productivity targets, water quality base and target standards, and public access needs that do not adversely impact the native biota. Mineral material disposals are permitted only if such actions enhance the long-term condition of riparian vegetation and the native fisheries habitat. Offer for mineral leasing with no surface occupancy within 300 feet of wetland habitat. Offer all other lands for mineral leasing with no surface disturbing actions permitted between November 15 and April 15. Allow grazing as a management tool. 		<p>Shasta Valley Wetlands and the Big Springs Complex are the headwaters of the Shasta River. As the headwaters of the Shasta River, any changes to land and water use within the Shasta Valley Wetlands and Big Springs Complex has the potential to affect fishery and riparian resources and conditions within the Shasta River ACEC.</p>	<p>Carry forward. Consider establishing a coordinated watershed scale effort to improve water quality and quantity in Shasta River by working with partners along its length confluence with the Klamath River to the headwaters.</p>
Redding RMP 1993	<p>TRINITY MANAGEMENT AREA</p> <p>Management Objectives</p> <p><i>Trinity River:</i></p> <ul style="list-style-type: none"> Protect and enhance the anadromous fisheries of the Trinity River. Maintain the riparian habitat in Class I or Class II condition. 			<p>Add Indian Creek Townsite.</p>

Decision Source	Current Management Objectives and Management Decisions	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Redding RMP 1993	<p>Management Objectives</p> <p><i>Tunnel Ridge:</i></p> <ul style="list-style-type: none"> No RCOs relating to aquatics. 		Tunnel Ridge transferred to Forest Service.	Remove reference to Tunnel Ridge.
Redding RMP 1993	<p>Management Objectives</p> <p><i>North of Trinity River/Deadwood/Indian Creek:</i></p> <ul style="list-style-type: none"> Protect existing habitat for special status species including bald eagle and spotted owl. Manage the Eastman Gulch Owl Habitat Area in cooperation with the Trinity National Forest. Maintain the riparian and fisheries habitat of anadromous fisheries streams including Canyon, Indian, and Deadwood Creeks. 			<p>Given NWFP and T&E species protection including critical habitat designations, the language “protection of existing habitat for special status species including bald eagle and spotted owl. Manage the Eastman Gulch Owl Habitat Area in cooperation with the Trinity National Forest” and “Maintain the riparian and fisheries habitat of anadromous fisheries streams including Canyon, Indian, and Deadwood Creeks” can be removed.</p> <p>Implement post-fire restoration of the Deadwood Creek watershed to reduce sediment flowing into the Trinity River.</p>
Redding RMP 1993	<p>Management Objectives</p> <p><i>Grass Valley Creek Watershed:</i></p> <ul style="list-style-type: none"> Reduce the sediment load entering the Trinity River via GVC for the improvement of anadromous fisheries. 			

Decision Source	Current Management Objectives and Management Decisions	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Redding RMP 1993	<p>Management Decisions/Actions</p> <p><i>Trinity River:</i></p> <ul style="list-style-type: none"> Maintain existing withdrawals from mineral entry at Junction City and Douglas City campgrounds (58 acres and 140 acres respectively). Withdraw other proposed and developed public facilities from mineral entry. Withdraw specific cultural resources from mineral entry including Helena, Rush Creek, Ohio Flat, Salt Flat, and Montana Cabin. Withdraw anadromous fisheries habitat improvements from mineral entry including Steiner Flat and Cemetery Hole. New acquisitions in this area would not be opened for locatable mineral entry. 	Yes	Language needs to be updated to reflect withdraw of cultural resources from mineral entry including Helena, Rush Creek, Ohio Flat, Salt Flat, and Montana Cabin and anadromous fisheries habitat improvements from mineral entry including Steiner Flat and Cemetery Hole.	Carry forward, update.
Redding RMP 1993	<p>Management Decisions/Actions</p> <ul style="list-style-type: none"> Offer mineral material disposals only to enhance riparian vegetation, anadromous fisheries habitat, or when not in conflict with the long-term protection of natural values. 			
Redding RMP 1993	<p>Management Decisions/Actions</p> <ul style="list-style-type: none"> Actively participate in the Trinity River Task Force for implementing the Trinity River Basin Fish and Wildlife Restoration Act. 	Yes	The Trinity River Restoration Program (TRRP) has replaced the Trinity River Task Force for implementing the Trinity River Basin Fish and Wildlife Restoration Act	Update with new information, including the Trinity River Restoration Program efforts and new plan.
Redding RMP 1993	<p>Management Decisions/Actions</p> <p><i>Tunnel Ridge:</i></p> <ul style="list-style-type: none"> Mineral material disposals are not allowed within the 100-year floodplain of anadromous fishery streams (including Canyon, Indian and Deadwood Creeks) unless such actions enhance anadromous fisheries habitat. 			

Decision Source	Current Management Objectives and Management Decisions	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Redding RMP 1993	<p><u>SHASTA MANAGEMENT AREA</u> Management Objectives <i>Interlakes SRMA:</i></p> <ul style="list-style-type: none"> Maintain special status species habitat. 	Yes	Special status and anadromous habitat maintenance and enhancement language.	Identify aquatic and riparian habitats as priority habitat types and develop RCOs planning area wide.
Redding RMP 1993	<p><u>SHASTA MANAGEMENT AREA</u> Management Objectives <i>Lower Clear Creek and Mule Mountain:</i></p> <ul style="list-style-type: none"> Enhance anadromous salmonid habitat. 	Yes		
Redding RMP 1993	<p><u>SHASTA MANAGEMENT AREA</u> Management Decisions/Actions</p> <ul style="list-style-type: none"> Develop an integrated resource activity plan for Clear Creek that details habitat restoration needs for anadromous salmonids, delineates DPC and restoration needs for riparian vegetation, describes protective management facilities, and lists important cooperators and their responsibilities. 	Yes		Designate Lower Clear Creek as an ACEC and develop a management plan.
Redding RMP 1993	<p><u>SHASTA MANAGEMENT AREA</u> Management Decisions/Actions</p> <ul style="list-style-type: none"> Conduct special status species inventories on lands available for exchange or administrative transfer. 	Yes		
Redding RMP 1993	<p><u>SACRAMENTO RIVER MANAGEMENT AREA</u> Management Objectives <i>Sacramento Island:</i></p> <ul style="list-style-type: none"> Improve anadromous salmonid habitat. 	Yes		Identify aquatic and riparian habitats as priority habitat types and develop RCOs planning area wide.
Redding RMP 1993	<p>Management Objectives <i>Bend Area:</i></p> <ul style="list-style-type: none"> Enhance anadromous fisheries. Ensure long-term survival of special status species. 	Yes		Identify aquatic and riparian habitats as priority habitat types and develop RCOs planning area wide. Protect and manage Corning Vernal Pool complex.

Decision Source	Current Management Objectives and Management Decisions	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Redding RMP 1993	<p>Management Decisions/Actions</p> <p><i>Area-Wide:</i></p> <ul style="list-style-type: none"> Conduct resource inventories for special status species on lands available for exchange, sale, or administrative transfer. 	Partial	This statement can be a common to all outside of retention and acquisition areas.	Update to apply to all areas outside of retention and acquisition areas.
Redding RMP 1993	<p>Management Decisions/Actions</p> <p><i>Sacramento Island:</i></p> <ul style="list-style-type: none"> Allow mineral material disposals only if such actions are intended to enhance the natural values, including anadromous salmonid and waterfowl habitat. Develop a RNA/ACEC management plan for Sacramento Island that identifies and establishes acquisition and cooperative agreement needs for adjoining private lands, DPC, waterfowl and anadromous salmonid habitat improvement actions and necessary management facilities. 	Yes	<p>No plan developed.</p> <p>Mineral material disposals include developing and issuing FUPs for the development of gravels for salmonid enhancement or gravel augmentation projects.</p>	Carry forward previous decision. Consider the acquisition of lands adjacent to the Sacramento Island ACEC to expand upon and provide for the protection and enhancement of riparian and aquatic habitats
Redding RMP 1993	<p>Management Decisions/Actions</p> <p><i>Cottonwood Creek and Sacramento River parcels:</i></p> <ul style="list-style-type: none"> Mineral material disposals are not permitted unless such actions benefit the natural values, such as aquatic environments or fisheries. <p><i>Bend Area:</i></p> <ul style="list-style-type: none"> Acquire available unimproved lands that (in descending priority) contain high priority habitat along the Sacramento River as depicted in the 1988 Sacramento River Riparian Atlas, front the Sacramento River, provide physical access to public land, contain known/potential wetland or special status species habitat, contain important cultural resources, or facilitate overall public management within the area. 			

Decision Source	Current Management Objectives and Management Decisions	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Redding RMP 1993	<p><u>ISHI MANAGEMENT AREA</u> Management Objectives</p> <p><i>Battle Creek (below Manton Road):</i></p> <ul style="list-style-type: none"> Enhance anadromous fisheries. <p><i>Deer Creek:</i></p> <ul style="list-style-type: none"> Maintain and improve, if feasible, the fisheries habitat of Deer Creek. <p><i>Forks of Butte Creek:</i></p> <ul style="list-style-type: none"> Maintain the fisheries habitat. <p>Management Decisions/Actions</p> <p><i>Area-Wide:</i></p> <ul style="list-style-type: none"> Conduct resource inventories for special status species on lands available for exchange or administrative transfer. <p><i>Battle Creek:</i></p> <ul style="list-style-type: none"> Mineral material disposals are not permitted unless such actions enhance the natural values, including fisheries habitat recovery. 	Yes		Identify aquatic and riparian habitats as priority habitat types and develop RCOs planning area wide.
Redding RMP 1993	<p><u>YOLLA BOLLY MANAGEMENT AREA</u> Management Objectives</p> <ul style="list-style-type: none"> None 	No	Partially occurs in NWFP so although no specific fishery or aquatic management objectives, decisions, and/or actions are identified for this management area, it is still constrained by NWFP. Develop general FO language.	Opportunity for Change to be determined: use TU tool and habitat connectivity maps to determine if management objectives, decisions, and/or actions are warranted.
Redding RMP 1993	<p><u>YOLLA BOLLY MANAGEMENT AREA</u> Management Decisions/Actions</p> <ul style="list-style-type: none"> Conduct resource inventories for special status species on lands available for exchange. 			

Potential New Decisions for the RMP Revision

The recent publication of the 2015 Fish Species of Special Concern in California (Moyle et al. 2015) provides background, trend and a forecast regarding the conservation status and needs of California's native fishery resources. Although the current RMPs and land use planning documents (NWFP, PACFISH) placed emphasis on the restoration and protection of anadromous fisheries, riparian, and aquatic systems, there is no one standard that provides for consistency across the NCIP. Carrying forward the land use allocations and the goals and objectives of the Standard and Guidelines and Aquatic Conservation Strategy and applying them to the entire NCIP will provide for consistency in application throughout BLM-administered lands in the NCIP.

Due to the increased stresses on aquatic systems from the pressures of an expanding human population, associated infrastructure, and climate variability including associated drought cycles, consider designating aquatic habitats (wetlands, riparian areas, and native fisheries resources) as a priority habitat type and species assemblage for conservation.

The enhancement of reservoir fisheries habitat with native lentic species has the potential to provide for unconnected refugia, which can provide for population augmentation or repatriation efforts of native species within the NCIP. Consider the use of a guiding tool for the identification of priority lands. The BLM's TU CSI tool was developed with a focus on aquatic systems and provides focus for management activities based upon ownership patterns and is subject to revision as these patterns change. Considering the aquatic emphasis in RMPs an aquatic tool such as this may be the most appropriate tool to use and guide land acquisition, retention, and disposal efforts.

There are many management decisions that were made to protect aquatic fisheries habitats such as VWSR designations, maintaining and restoring ecological function, livestock removal, and the establishment and maintaining of mineral withdrawals. Consider carrying these forward and giving further consideration to aquatic resources in light of aquatic invasive species, drought, and climate change scenarios.

The purpose of the integrated resource activity plan for the Klamath River, below RM 181 and the Shasta River Canyon, is to accomplish creek and river restoration projects.

For the Trinity Management Area (North of Trinity River/Deadwood/Indian Creek), include the following management action: Conduct post-fire restoration of the Deadwood Creek watershed to reduce sediment load flowing into the Trinity River.

For the Sacramento River Management Area (Bend Area), include the following management objective: Protect/manage the Corning Vernal Pool Complex.

Areas of Relative Ecological Importance to Guide Land Uses and Management

In light of potential temperature increases modeled for water resources and human demand, cold-water springs play a disproportionately important role in maintaining habitat conditions for cold-water fishery resources within the NCIP. However, given aquatic species population trend data and modeled species extinction rates, current aquatic species status and habitat conditions across the multiple basins in the NCIP, all native aquatic habitat, species and functional groups within the NCIP plays an important ecological role and warrant increased conservation efforts.

4.2.7 Forestry

Current Management Direction

Table 4-6 summarizes the current management direction provided in RMPs for both the Arcata and Redding FOs. While SYU-15 is listed as the primary forest management direction, this prescription has been replaced by the HFI. This change is not specifically addressed in the current RMPs, as no amendment was prepared to indicate this change. In addition, some areas that were previously identified for disposal (particularly in the Redding FO) have instead become long-term Stewardship Areas. This change is also not reflected in the current RMPs.

Table 4-6. Ability of Current Management to Achieve Desired Future Conditions for Forestry Resources

Decision Source	Current Planning Decision	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Arcata RMP 1992	<p>BUTTE CREEK Management Objectives</p> <ul style="list-style-type: none"> Enhance old-growth forest characteristics and related wildlife species, particularly the NSO. 	Yes		Change “old growth” to proper forestry term, such as “late-successional forest.”
Arcata RMP 1992	<p>Land Use Allocations</p> <ul style="list-style-type: none"> Remove all suitable CFL from the timber production base. This is currently about 2,100 acres. Tree planting, brush and hardwood release, and some pre-commercial thinning will be allowed to improve, create or increase wildlife habitat and biodiversity, as well as to enhance old-growth forest characteristics (Objective #1) and protect the forest resource (insect, disease, fire). All forest stands are available for non-consumptive research and cone collecting. Fire, disease, and insects will be controlled to prevent spreading to other lands, and to protect the existing forest. 	Yes	Commercial harvest can still be considered in some areas as forest health treatments that promote the development of LSR.	<p>Look at alternatives being considered in other, successful, more recent RMPs.</p> <p>Focus on forest health concerns.</p> <p>Change “old growth” to proper forestry term, such as “late-successional forest.”</p>
Arcata RMP 1992	<p>Management Actions</p> <ul style="list-style-type: none"> Monitor spotted owls and other old-growth characteristics. Continue to inventory habitat conservation/critical habitat areas. 	Yes		Change “old growth” to proper forestry term, such as “late-successional forest.”

Decision Source	Current Planning Decision	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Arcata RMP 1992	<p>KING RANGE AND VICINITY Management Objectives</p> <ul style="list-style-type: none"> Enhance the watershed condition and visual quality of coastal streams. Improve, create, or increase wildlife habitat and biodiversity and provide protection to the forest resources. 	Yes		Carry forward.
Arcata RMP 1992	<p>Land Use Allocations</p> <ul style="list-style-type: none"> Remove 900 acres of suitable CFL west of Cooskie Ridge from the timber production base. Include all other suitable CFL in the management area, except for streamside buffers, in the CFL production base. No annual allowable cut is planned for the next 100 years. Forest management activities include tree planting, brush/hardwood release and pre-commercial thinning as part of the forest improvement program. 	Yes	This area has marginal value given its remoteness and relative site quality.	Asses based upon forest inventory conditions.
Arcata RMP 1992	<p>Management Actions</p> <ul style="list-style-type: none"> Continue inventory of habitat conservation/critical habitat areas. 	Yes		Carry forward.
Arcata RMP Forest Plan Amendment 1995	<p>Management Decisions/Actions</p> <p><i>Area-Wide:</i></p> <ul style="list-style-type: none"> Watershed Management Old Growth Retention: Manage 72,764 acres as LSRs, manage 49,605 acres as Matrix, apply silvicultural prescriptions (timber stand improvement) on improvement) on previously entered forest stands to develop habitat for late-successional forest species and successional forest species. Designate approximately 36,000 acres as closed to vehicle use. 	Yes	Need to look at designations and best available science to determine if this is still the way these areas should be managed.	<p>Identify ways to improve designations to increase their usability to the NSO.</p> <p>Identify whether new areas have grown to the point that they might now exhibit LSR characteristics.</p>

Decision Source	Current Planning Decision	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Arcata RMP Forest Plan Amendment 1995	<ul style="list-style-type: none"> Acquisition of 18,669 acres of private land in the Lacks Creek, Red Mountain, and Scattered Tracts (Gilham Butte) Management Areas would increase the total acreage of LSRs in the plan amendment area by 26 percent. Land acquisitions and cooperative partnerships would enhance the viability of the NWFP LSR network by providing greater potential ecological diversity, increased opportunity for maintenance of natural ecological processes and functions, and greater connectivity. Development of cooperative partnerships for management of late-successional habit on an additional 8,500 acres of private land would further enhance the viability of the LSRs. 	Partially	<p>Need to look at designations and best available science to determine if this is still the way these areas should be managed.</p> <p>Consider how other plans are incorporating NWFP, such as the Western Oregon Plan Revision.</p>	Identify ways to improve designations to increase their usability to the NSO.
Arcata RMP Forest Plan Amendment 1995	<ul style="list-style-type: none"> Late-successional/old-growth fragments in the matrix would be managed in accordance with matrix standards and guidelines. 	No	Some matrix areas 20 years ago might be better as LSE.	Consider managing mature forests as LSR.
Arcata RMP Forest Plan Amendment 1995	<ul style="list-style-type: none"> Known NSO activity centers within the matrix would be protected through management as unmapped LSRs. 	Partially	Need to look into designating these areas as known NSO activity centers and plot them as such.	Management may be able to occur in these areas, mainly to improve the habitat. NSO activity centers should be mapped and buffered. Work between Forestry and Wildlife can occur to determine if active forest management can occur in the area without negatively affecting the NSO.
Arcata RMP Forest Plan Amendment 1995	<ul style="list-style-type: none"> Minor forest products would be made available as a by-product of forest improvement activities in LSRs and the matrix. 	Yes	Minor forest products are being extracted, with the emphasis being placed on improving LSRs and Matrix lands.	Clarify that major forest products can be removed provided characteristics and health of the LSR and Matrix lands are improved.

Decision Source	Current Planning Decision	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Arcata RMP Forest Plan Amendment 1995	<ul style="list-style-type: none"> Any herbicide use will be consistent with procedures and limitations outlined in the California Vegetation Management ROD (USDI BLM 1988b). Herbicide use will also comply with the applicable management objectives and standards and guidelines of the NWFP. Those standards and guidelines providing the greater benefits to late-successional forest-related species will apply. 	Partially	Chemical treatments may be effective in mitigating the effects of SOD.	Replace outdated document with NEW documents: Vegetation Treatments Using Herbicides on Bureau of Land Management Lands in 17 Western States PEIS (USDI BLM 2007a); Vegetation Treatments Using Herbicides on Bureau of Land Management Lands in 17 Western States ROD (USDI BLM 2007b); and Vegetation Treatments using Aminopyralid, Fluroxypyr, and Rimsulfuron on Bureau of Land Management Lands in 17 Western States Final Programmatic Environmental Impact Statement (USDI BLM 2016b).
Arcata RMP Forest Plan Amendment 1995	<ul style="list-style-type: none"> Forest resources, including timber and minor forest products, will be managed in accordance with NWFP land allocations, standards and guidelines, and Aquatic Conservation Strategy. 	No	Look at options as they are set forth in other successful recently updated RMPs. May not carry forward all restrictions and management scenarios as set forth in NWFP.	Carry forward.
Arcata RMP Forest Plan Amendment 1995	<ul style="list-style-type: none"> Incorporate the NWFP by reference adopting all wording. 	No	Look at options that have been set forth in other successful, recently updated RMPs. May not carry forward all restrictions and management scenarios as set forth in NWFP.	

Decision Source	Current Planning Decision	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Arcata RMP Forest Plan Amendment 1995	<p>LACKS CREEK MANAGEMENT AREA Management Objectives</p> <ul style="list-style-type: none"> • Protect significant old-growth stands: <ul style="list-style-type: none"> ◦ From influences that could alter or disrupt the intrinsic values or ecological systems of these areas. ◦ To preserve the full range of genetic and behavioral diversity for old-growth associated plants, animals and special status species. ◦ To provide research and higher education opportunities for scientists and teachers. ◦ To allow natural physical and biological processes to prevail. 	Partially	Include language to emphasize treatments around unique ACECs and old growth to protect from fire in cases of high SOD mortality (management actions).	Change “old growth” to proper forestry term, such as “late-successional forest.”
Arcata RMP Forest Plan Amendment 1995	<ul style="list-style-type: none"> • Re-establish and accelerate development of mature forest structural characteristics on previously entered stands for long-term restoration of this element of biological diversity 	Yes		Change “mature forest” to proper forestry term, such as “late-successional forest.”
Arcata RMP Forest Plan Amendment 1995	<ul style="list-style-type: none"> • Provide minor forest products to the public as they become available through facility/road maintenance and forest development as described in bullet above. 	Partially	Limited access on west side limits public access for the predominant use, which is firewood removal.	
Arcata RMP Forest Plan Amendment 1995	<p>Land Use Allocations</p> <ul style="list-style-type: none"> • Manage 4,100 acres as an LSR as part of a regional network of existing older forests providing a distribution, quantity, and quality of old-forest habitat and to provide habitat for viable, well-distributed populations of species. These late-successional forest areas are not subject to programmed timber harvest. Management standards and guidelines are designed to improve habitat in younger stands or to produce stand structure and components associated with late-successional conditions. 	Yes	LUAs may be altered after conducting updated landscape level analysis of vegetation on BLM-administered and adjacent lands.	Look at alternatives being considered in other successful, more recent RMPs.

Decision Source	Current Planning Decision	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Arcata RMP Forest Plan Amendment 1995	<ul style="list-style-type: none"> Manage 72,764 acres as LSRs to comply with USFWS's recovery guidelines for the NSO and to allow critical habitat to perform the biological function for which it was designated. Acquire 12,389 acres to enhance the long-term ability of the Lacks Creek DCA to support USFWS' draft final recovery plan numerical goals for pairs of NSOs. 	Partially	Does not address the new issue of SOD and the management that may need to occur to stop its spread.	Look at how others incorporate the NWFP.
Arcata RMP Forest Plan Amendment 1995	<ul style="list-style-type: none"> On previously entered forest stands (including acquired cutover lands), actively regenerate new stands and promote forest development in established young stands on approximately 550 acres that do not currently provide mature forest structure. Minor forest products such as poles, firewood, and seeds will be made available in conjunction with habitat improvement projects. 	Partially	Does not address SOD.	
Arcata RMP Forest Plan Amendment 1995	<p>Management Actions</p> <ul style="list-style-type: none"> Prepare a watershed activity plan that includes: <ul style="list-style-type: none"> Silvicultural activities in previously entered stands for developing suitable habitat for late-successional forest species where those conditions do not now exist (5-year late-successional forest development/improvement plan 	Partially	Lacks Creek Management Plan is still good but could be updated to address SOD.	
Arcata RMP Forest Plan Amendment 1995	<ul style="list-style-type: none"> Management actions, which could include silvicultural activities, for protecting or enhancing old-growth values within the RNA/ACEC. 	Partially	Does not address SOD.	Increased emphasis on protection of late successional forest and RNA/ACECs from SOD and associated effects like fire.
Arcata RMP Forest Plan Amendment 1995	<p>RED MOUNTAIN MANAGEMENT AREA Management Objectives</p> <ul style="list-style-type: none"> Protect existing old-growth stands from influences that could alter or disrupt the intrinsic values, stability, or ecological processes of these systems. 	Yes		Change "old growth" to proper Forestry term, such as "late-successional forest."

Decision Source	Current Planning Decision	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Arcata RMP Forest Plan Amendment 1995	<p>RED MOUNTAIN MANAGEMENT AREA Management Objectives</p> <ul style="list-style-type: none"> Re-establish and accelerate development of mature forest structural characteristics on previously entered stands and acquired cutover lands for long-term restoration of this element of biological diversity. 	Yes		Change “mature forest” to proper forestry term, such as “late-successional forest.”
Arcata RMP Forest Plan Amendment 1995	<p>RED MOUNTAIN MANAGEMENT AREA Management Objectives</p> <ul style="list-style-type: none"> Establish the management area as a lowland Douglas-fir population center for the NSO, maintaining habitat for a minimum of 20 pair sites. Restore ecological processes that maintain late successional forest ecosystems. Provide minor forest products (firewood, seeds, poles) to the market in accordance with NWFP objectives and standards and guidelines for LSR and matrix. 	Yes		Carry forward.
Arcata RMP Forest Plan Amendment 1995	<p>RED MOUNTAIN MANAGEMENT AREA Land Use Allocations</p> <ul style="list-style-type: none"> Manage 34,344 acres (approximately 97 percent) as LSR as part of a regional network of existing older forests providing a distribution, quantity, and quality of old-forest habitat and to provide habitat for viable, well-distributed populations of species. These late-successional forest areas are not subject to programmed timber harvest. Management standards and guidelines are designed to improve habitat in younger stands or to produce stand structure and components associated with late-successional conditions. 	Partially	Look at changes to land status including wilderness designation. Perhaps should designate all 100 percent the same versus leaving out 3 percent.	Look at alternatives being considered in other, successful, more recent RMPs.

Decision Source	Current Planning Decision	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Arcata RMP Forest Plan Amendment 1995	RED MOUNTAIN MANAGEMENT AREA Land Use Allocations	Probably		Re-evaluate forest structure with forest inventory data to identify habitat.
	<ul style="list-style-type: none"> • Manage 1,320 acres as matrix. • Manage 22,000 acres Key Watersheds. 			

Decision Source	Current Planning Decision	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Arcata RMP Forest Plan Amendment 1995	<p>RED MOUNTAIN MANAGEMENT AREA Land Use Allocations</p> <ul style="list-style-type: none"> • Employ a concept/strategy of ecosystem management that includes late-successional forest/NSO core habitat and other private lands that lie within a zone of influence of the existing pattern of public landownership. Participate with private landowners to provide habitat management options to meet both federal and state habitat conservation strategies and improve public land management. Through cooperative management planning, use acquisition/exchange, cooperative management agreements, conservation easements, direct financial incentives, mitigation banking, and so forth to meet habitat management objectives. These areas include: <ul style="list-style-type: none"> ◦ Approximately 8,500 acres of potential late successional forest/NSO core habitat in the McCoy Creek, East Branch South Fork Eel River, Tom Long Creek, Charlton Creek, Tenmile Creek, and South Fork Eel River watersheds. ◦ Approximately 2,500 acres of endangered plant habitat adjacent to the Red Mountain ACEC in the Cedar Creek and Red Mountain Creek watersheds. ◦ Approximately 50,000 acres of private lands providing potential connectivity between late successional forest blocks. 	Yes		Carry forward.

Decision Source	Current Planning Decision	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Arcata RMP Forest Plan Amendment 1995	<p>RED MOUNTAIN MANAGEMENT AREA Land Use Allocations</p> <ul style="list-style-type: none"> On acquired lands and previously entered forest stands, actively regenerate new stands and promote forest development in established young stands that do not currently provide mature forest structure. Identify opportunities to re-create, to the extent possible, the structural and compositional features of late-successional forests in even-aged stands through silviculture. Develop cooperative management partnerships to meet habitat improvement objectives and provide incidental forest products. These products may result from thinning overstocked conifer or hardwood stands, site preparation for small-scale conversion of young hardwood stands to increase the conifer component, road and other facility maintenance, or salvage following catastrophic events. 	Yes		Carry forward.
Arcata RMP Forest Plan Amendment 1995	<p>Management Actions</p> <ul style="list-style-type: none"> Complete 5-year project planning schedule for late-successional forest development. 	Yes	LSR assessment completed.	
Arcata RMP Forest Plan Amendment 1995	<p>Management Actions</p> <ul style="list-style-type: none"> Establish cooperative management partnerships for sustainable forestry practices in South Fork Eel River watershed to promote habitat development projects and provide local supply of alternative forest products. 	Yes	Existing partnerships exist. Possibilities for additional partnerships, particularly with tribes expressing interest, can be identified.	Carry forward.

Decision Source	Current Planning Decision	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Arcata RMP Forest Plan Amendment 1995	<p><u>COVELO AND VICINITY</u> Management Objectives</p> <ul style="list-style-type: none"> • Protect existing old-growth stands from influences that could alter or disrupt the intrinsic values, stability, or ecological processes of these systems. • Re-establish and accelerate development of mature forest structural characteristics on previously entered stands and acquired cutover lands for long-term restoration of this element of biological diversity. • Restore ecological processes that maintain late-successional forest ecosystems. • Identify opportunities to re-create, to the extent possible, the structural and compositional features of late-successional forests in even-aged stands through silviculture. 	Yes		Change “old growth and mature forest” to proper forestry term, such as “late-successional forest.”
Arcata RMP Forest Plan Amendment 1995	<ul style="list-style-type: none"> • Re-establish ecological processes such as fire to maintain terrestrial habitats emphasizing management of brushlands to maintain diversity and forest communities to manage fir encroachment and maintain pine component. 	No		Extend inclusion of fire into area as much as possible. Look at possible use of fire managed for multiple resource benefit.

Decision Source	Current Planning Decision	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Arcata RMP Forest Plan Amendment 1995	<p>Land Use Allocations</p> <ul style="list-style-type: none"> • Manage 24,000 acres as LSR as part of a regional network of existing older forests providing a distribution, quantity, and quality of old-forest habitat and to provide habitat for viable, well distributed populations of species. These late-successional forest areas are not subject to programmed timber harvest. Management standards and guidelines are designed to improve habitat in younger stands or to produce stand structure and components associated with late- successional conditions. These blocks of land include: <ul style="list-style-type: none"> ◦ Casoose Creek (2,700 acres) ◦ White Rock Creek (2,400 acres) ◦ Woodman Creek (1,800 acres) ◦ Dingman (3,700 acres) ◦ Willis Ridge (4,500 acres) ◦ Brushy Mountain (7,000 acres) ◦ Little Darby (1,100 acres) ◦ Lake Mountain (900 acres) • Manage 3,152 acres as Key Watershed. • Manage 42,500 as Matrix lands. • On acquired lands and previously entered forest stands actively regenerate new stands and promote forest development in established young stands that do not currently provide mature forest structure. • Develop cooperative management partnerships to meet habitat improvement objectives and provide incidental forest products. These products may result from thinning overstocked conifer or hardwood stands, site preparation for small-scale conversion of young hardwood stands to increase the conifer component, road and other facility maintenance, or salvage following catastrophic events. 	Yes		Carry forward.

Decision Source	Current Planning Decision	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Arcata RMP Forest Plan Amendment 1995	Management Actions <ul style="list-style-type: none"> Participate in watershed associations and private/public cooperative resource management planning to secure habitats for late-successional forest species, implement regional forest ecosystem management, and consolidate management on large watersheds with multiple ownership. 	Yes		Carry forward.
Arcata RMP Forest Plan Amendment 1995	<ul style="list-style-type: none"> Complete 5-year project planning schedule for late-successional forest development. 	Yes	LSR assessment completed.	

Decision Source	Current Planning Decision	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Arcata RMP Forest Plan Amendment 1995	<p>SCATTERED TRACTS Management Objectives</p> <ul style="list-style-type: none"> • Maximize contribution of public lands to regional plans for managing biological diversity. <p>Land Use Allocations</p> <ul style="list-style-type: none"> • Manage 10,320 acres as LSR as part of a regional network of existing older forests providing a distribution, quantity, and quality of older forest habitat and to provide habitat for viable, well-distributed populations of species. These late successional forest areas are not subject to programmed timber harvest. Management standards and guidelines are designed to improve habitat in younger stands or to produce stand structure and components associated with late- successional conditions. These blocks of land include: <ul style="list-style-type: none"> ◦ Gilham Butte (2,550 acres) ◦ Jaqua Butte (1,080 acres) ◦ Coleman Creek (440 acres) ◦ Cameron Creek (40 acres) ◦ Greenough Ridge/Montgomery Woods (960 acres) ◦ Impassable Rocks/Eagle Peak (1,880 acres) ◦ Pine Ridge (3,370 acres) • Manage 5,785 as matrix lands. • Provide minor forest products to the public as they become available through facility/road maintenance and forest development. 	Yes		Carry forward. Need to reconsider scattered tracts that have limited or no access, in terms of their viability for management for timber production. Also, after inventory is completed, natural growth could mean lands not included as LSR could be better candidates in terms of habitat value.

Decision Source	Current Planning Decision	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Arcata RMP Forest Plan Amendment 1995	<ul style="list-style-type: none"> The Gilham Butte and Jaqua Butte RNA/ACECs are available for non-consumptive research and cone collecting. Control fire, disease, and insects to prevent spreading to other lands and to protect the existing forest conditions. 	Partially	May want to look at including language that more clearly allows the use of active forest management to improve the ecosystem health and function. Also, “protect existing forest conditions” seems like a forest is a static entity. Since this is not the case, we should look at continuing to improve forest health and ecosystem function as the goals.	Active forest management, particularly HFI management, should be considered in these areas.
Arcata RMP Forest Plan Amendment 1995	<p>Management Actions</p> <ul style="list-style-type: none"> Prepare RNA/ACEC Activity Plans for Gilham and Jaqua Buttes to address site-specific needs, access, and so forth. 	Partially		Carry forward.
Redding RMP 1993	<p>Management Objectives</p> <ul style="list-style-type: none"> The Redding Resource Area forest management program is operating under the SYU-15. 	Partially	SYU-15 continues to be used by the BLM, but the large focus of the HFI now guides most active forest management.	Add the HFI to the NCIP and discuss the change in focus from simply sustainable harvest to a more ecologically focused healthy forest.
Redding RMP 1993	<p>Management Decisions/Actions</p> <ul style="list-style-type: none"> Lands classified under the Timber Production Capability Classification. This system was used to determine the CFL base. 	No	This inventory system is no longer used. The BLM has switched to FORVIS and will be again switching to EcoSurvey in 2016. The allowable sale quantity still needs to be developed, but will be developed from the newer inventory systems of FORVIS and EcoSurvey.	Change plan to reflect new inventory systems, particularly the switch to Micro*Storms, as that will be the new system going forward.
Redding RMP 1993	<ul style="list-style-type: none"> Woodlands are to be managed for limited harvest of minor wood forest products, and only when it does not conflict with management of other resources. 	Partially	Little active management has been done in these types of areas due to a diminished market for the type of forest products they generate. To state it should only occur when it does not conflict seems unwise as sometimes forest management, and maintaining the health of these forest types, needs to involve active management even if it conflicts with another resource.	Focus should be put on using these lands, actively managing these forests not only for the generation of forest products for the public, but also for the health of these systems, as fire has been excluded for long periods of time.
Redding RMP 1993	<ul style="list-style-type: none"> Salvage logging may be instituted following catastrophic events such as fire, insect epidemics or landslides. 	Yes	Continues to play a crucial role in maintaining the health of the forests and the continued supply of forest products to the public.	Continue forward. Consider options for salvage logging in response to other disturbance events.

Decision Source	Current Planning Decision	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Redding RMP 1993	<ul style="list-style-type: none"> Disposal lands are managed as restricted management. The restricted management actions on the disposal lands would not permit any long-term investment or commitments, but would allow actions needed to protect or maintain current or potential value of resources. No green timber sales would be permitted. Allowed would be pre-commercial thinning, seedling protection and release, and salvage timber harvest. 	No	Disposal parcels have been managed as any other parcel in the past. Timber Harvest, Commercial Thinning, and Stewardship Agreements have been instituted on these lands.	Limit the areas designated for disposal and allow for active forest management on these parcels, as they may be retained for long periods (see Section 4.2.4.3, below).
Redding RMP 1993	<ul style="list-style-type: none"> Intensive managed areas should be set on a rotational age of 80-100 years for return entry. 	Yes	<p>This continues to be part of the forestry program of work.</p> <p>Thought needs to be given to rotation age in the discussion of 80+ year old forests and what that means to working with guidelines set forth in the NWFP. If actual rotation age of BLM forests is greater than 80 years, how does BLM work with the NWFP guidance to continue to manage the forests for health?</p>	Consider a range of management actions on forest lands that are over 80 years old.
Redding RMP 1993	<ul style="list-style-type: none"> Restricted lands would have longer rotation periods, as they would be subject to wide array of biological, visual, cultural, and social controls. These areas may not be optimal for the production of timber. 	Partially	Need to look closely at how to determine which lands are considered restricted. Some may need to be changed.	Analyze areas classified as restricted to determine if this designation is still appropriate.
Redding RMP 1993	<ul style="list-style-type: none"> Areas termed not available will have no timber harvest. 	Partially	Need to look closely at how we determine which lands are considered not available. Some may need to be changed.	Analyze areas classified as not available to determine if this designation is still appropriate.
Redding RMP 1993	<ul style="list-style-type: none"> When forest management is not directly mentioned in the alternative description, timber harvest may only occur for the enhancement of other resources, or if not in conflict with the management of natural or cultural resources. 	Partially	Look at the wording of this section. Forestry is management of a natural resource. Also, some conflicts may occur with other resources and this should not preclude the use of forestry practices within an area, but instead should initiate discussion and analysis of the situation by the IDT.	Consider rewording of this section. Also, look at forestry as a resource and a tool for natural resource management, not something that works against it as is implied in this designation.

Decision Source	Current Planning Decision	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Redding RMP 1993	<ul style="list-style-type: none"> Large or extensive clear cuts are not planned; however, some may be clear-cut as a result of fire, insect, or disease salvage, or silvicultural requirements. 	Yes	This is not currently a major tool in the forestry toolbox but is a valid silvicultural tool that should be kept available to foresters when needed.	Continue.
Redding RMP 1993	<ul style="list-style-type: none"> Herbicides are not planned for use in forest management, but are not precluded if the need arises. 	Partially	Herbicides can and have been used in the control of forest pests, in particular at landing sites.	Change language to address the use of chemical treatments.
Redding RMP 1993	<p><u>KLAMATH MANAGEMENT AREA</u> Management Decisions/Actions <i>Remainder of Management Area:</i></p> <ul style="list-style-type: none"> Remainder of the majority of the available CFL would be managed as restricted. 	Partially	Need to look closely at how to determine which lands are considered restricted. Some may need to be changed.	Analyze areas with the restricted nomenclature and determine if this designation should be continued.
Redding RMP 1993	<p><u>SCOTT VALLEY MANAGEMENT AREA</u></p> <ul style="list-style-type: none"> All available CFL will be managed as restricted until transferred from BLM administration. 	No	Many of these areas are slated for active management and should be retained by the BLM.	If CFL are available, they should be evaluated for management to maintain healthy forests
Redding RMP 1993	<p><u>TRINITY MANAGEMENT AREA</u> Management Objectives <i>Trinity River:</i></p> <ul style="list-style-type: none"> Maintain a limited supply of forest products from available CFL, if not in conflict with the above goals. 	Yes	Works well within the confines of the regulations regarding the Trinity River areas.	Continue to allow the management of forests, while maintaining the characteristics desired for the Trinity River corridor.
Redding RMP 1993	<p><u>TRINITY MANAGEMENT AREA</u> Management Objectives <i>North of Trinity River/Deadwood/Indian Creek:</i></p> <ul style="list-style-type: none"> Maintain or improve the long-term sustained yield of forest products from the available CFL. 	Yes		Carry forward.
Redding RMP 1993	<p><u>TRINITY MANAGEMENT AREA</u> Management Decisions/Actions <i>Area-Wide:</i></p> <ul style="list-style-type: none"> Allow forest management practices consistent with VRM Class II guidelines and special status species protection. All available CFL would be managed for the enhancement of other resource values. 	Partially	Area could also be managed for the improvement of forest health and the creation of forest products for the public. If CFL are available, they should be managed to maintain forest health.	Consider active treatments to maintain long-term forest health.

Decision Source	Current Planning Decision	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Redding RMP 1993	<u>TRINITY MANAGEMENT AREA</u> Management Decisions/Actions <i>Tunnel Ridge:</i> <ul style="list-style-type: none"> The majority of the available CFL would be managed as restricted. 	Ongoing	Need to look closely at how to determine which lands are considered restricted. Some may need to be changed.	Analyze areas classified as not available to determine if this designation is still appropriate.
Redding RMP 1993	<u>SHASTA MANAGEMENT AREA</u> Management Objectives <i>Area-Wide:</i> <ul style="list-style-type: none"> Maintain or improve the long-term sustained yield of forest products from available CFL. 	Partially		Add in language regarding HFI.
Redding RMP 1993	<u>SHASTA MANAGEMENT AREA</u> Management Objectives <i>West of French Gulch:</i> <ul style="list-style-type: none"> Maintain or improve the long-term sustained yield of forest products from the available CFL. 	Partially		Add in language regarding HFI.
Redding RMP 1993	<u>SHASTA MANAGEMENT AREA</u> Management Objectives <i>Baker Cypress:</i> <ul style="list-style-type: none"> Protect the habitat and existing stands of Baker cypress. 	Partially	May want to look at adding this area as an acquisition area in order to manage the neighboring areas for increased Baker cypress. Also, the dry lake that is neighboring the Baker Cypress would be a key acquisition area as well and could eventually be incorporated into the Baker Cypress ACEC (if land can be acquired attaching the two areas).	Look at acquisitions within the area to enhance Baker Cypress and neighboring dry lake.
Redding RMP 1993	Management Decisions/Actions <ul style="list-style-type: none"> None 			
Redding RMP 1993	<u>ISHI MANAGEMENT AREA</u> Management Objectives <ul style="list-style-type: none"> Maintain the long-term sustained yield of forest products from the available CFL outside the Butte Creek canyon. 	Partially	Some forest products have been removed from the Butte Creek Canyon Area (Butte Thin). May want to consider allowing some, perhaps not within the scenic corridor. Discuss elimination of timber removal from the canyon completely. If eliminated, include a map showing removal boundary to assist in future management.	Evaluate some areas where management activities could be allowed.

Decision Source	Current Planning Decision	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Redding RMP 1993	<p><u>YOLLA BOLLY MANAGEMENT AREA</u> Management Decisions</p> <ul style="list-style-type: none"> • Most available CFL would be managed as restricted 	Partially	Need to look closely at how to determine which lands are considered restricted. Some may need to be changed.	Analyze areas with the not available nomenclature and determine if designation should continue.
Redding RMP 1993	<p>Management Objectives</p> <p><i>Area-Wide:</i></p> <ul style="list-style-type: none"> • Control fire, disease, and insects to prevent spreading to other lands and to protect the existing forest. 			

Potential New Decisions for the RMP Revision

There are multiple new decisions that need to be made in the NCIP. One is the inclusion of HFI language. This language will play a large role in how forested landscapes are managed into the future and should influence how active forest management is defined in areas that were previously restricted for harvest. These areas were restricted because the focus of forestry at the time was SYU-15. Now that HFI is the main driving force, management within those areas should be considered an option.

The NWFP needs to be evaluated regarding how it will be carried forward within the NCIP. Other areas that have revised their plans, such as the RMP for Western Oregon, did not include all management from the document; instead, they have included applicable actions separately in their documents. Consider the opportunities regarding this issue and what they would mean to the management of the lands in the planning area.

Such categories as restricted and open need to be analyzed for the management areas, as many categories do not fit the goals of healthy forests or functioning forest ecosystems as currently designated.

Land disposal and acquisition areas need to be closely evaluated. Areas that are designated for disposal in the past RMPs and have not been disposed of in over 20 years have instead been managed, some rather intensively, such as the Weaverville Community Forest. Look at areas to acquire lands, and for those lands that have been designated as disposal, allow management of those lands for ecosystem health and function, which may mean the need to actively manage the forest.

Eliminate the use of such terms as old-growth and mature forest and instead use proper forestry terms, such as late-successional forest.

Opportunities for native tree species manual seed collection may also be evaluated.

Areas of Relative Ecological Importance to Guide Land Uses and Management

Below is a list of important areas to the forests of the planning area. These are designed to be a guide for management to help look at primary areas of interest and/or concern for the Forestry section of the NCIP. Some of the areas listed below are currently in the existing RMPs listed as land disposal areas. Following the list of key areas, a second list describes additional issues of strong interest to forestry that may be associated with other resources and decisions that are being made in alternatives formulation.

Roads: Roads are necessary to the continuation of an active forestry program. Roads may be open to the public, or only to administrative use, but the ability to access the forest is a must in order to continue to pursue active management of the forested landscape within the planning area. Care should be taken to ensure that if roads are closed, future forest management and wildfire suppression efforts would not be inhibited. In addition, if roads are to be closed, alternative forms of closure could be used, including closure to vehicular traffic, installation of water bars, and even planting. These alternative closure options would enable those roads to revert to a more natural state, reduce erosion concerns, and limit access to areas if that is a concern, but would also make the roads relatively simple to re-open, should they be needed for forest management activities or fire suppression.

Land Disposal/Acquisition: The current RMPs designate a large number of isolated parcels for disposal. Many of these parcels are forested and contain opportunities for active forest management. For example, the

Campbellville II Timber Sale Area (Redding FO) is currently a disposal area. This location has been an area of continued sustainable forest product harvest since the 1960s and continues to be an active site.

The WCF is another disposal area, which, since the establishment of the Stewardship Agreement, has become a focal area of the community for the Redding FO. A final example would be the dispersed lands in the northwestern area of Siskiyou County. These lands contain significant forest resources, are on very desirable growing lands, and have relatively good access, though they are currently listed as disposal sites in the current RMP for the Redding FO. These sites would make great acquisition areas, as most of the surrounding land is under private timber landownership.

Acquisition of some of these lands could provide necessary wildlife habitat connectivity and future active management opportunities. These are a few examples of issues with land acquisition and disposal within the current RMPs. These examples are designed to emphasize the importance of analysis of alternatives as it relates to forests within the planning area.

Other Areas: Additional areas of importance are Grass Valley Creek Watershed, Weaverville Community Forest, Interlakes, Baker Cypress ACEC, Sacramento River Bend ACEC, Lacks Creek, Coastal Forest Lands, Butte Creek, and Larabee Butte. These are described in detail in **Section 2.2.6**.

4.2.8 Lands with Wilderness Characteristics

Current Management Direction

Table 4-7 identifies existing land use plan decisions and opportunities in the Redding and Arcata FOs to achieve desired conditions for lands with wilderness characteristics.

Table 4-7. Ability of Current Management to Achieve Desired Future Conditions for Lands with Wilderness Characteristics

Relevant Plan/Source	Current Planning Decision	Responsive to Current Issues?	Remarks (Rationale)	Opportunities for Change
Redding RMP 1993	Protect the wilderness characteristics on 4,875 acres of public land adjoining the Trinity Alps Wilderness Area in cooperation with the Shasta-Trinity National Forests	Yes	Congressional transfer to the Forest Service in 2010; no longer managed by the Redding FO	Use wilderness inventory for other lands to identify management of inventoried lands

Potential New Decisions for the RMP Revision

The BLM will use the land use planning process to determine how to manage lands with wilderness characteristics as part of its multiple-use mandate. BLM Manual 6320 establishes BLM policy on considering lands with wilderness characteristics in land use plans and land in use plan amendments or revisions (USDI BLM 2012b).

The BLM will consider a full range of alternatives for these lands when conducting land use planning that could result in a number of outcomes, such as 1) emphasizing other multiple uses over protecting wilderness characteristics, 2) emphasizing other multiple uses while applying management restrictions (conditions of use or mitigation measures) to reduce impacts on wilderness characteristics, or 3) protecting wilderness characteristics over other multiple uses. Areas of relative ecological importance

to guide land uses and management will also be determined based on the wilderness characteristics inventory.

4.2.9 Invasive, Nonnative Plants

Current Management Direction

The BLM participates in the control of large invasive plant infestations; however, the agency's primary focus is providing adequate capability to detect and treat smaller weed infestations in high-risk areas before they have a chance to spread. In most cases, the BLM works with county governments, local community governments, and private landowners to detect and treat weed infestations. To leverage funding and share expertise, the BLM partners with CWMA partners that include state, federal, county, nonprofit and private land managers (**Table 4-8**). While both FOs in the planning area regularly apply invasive, nonnative plant management actions, specific invasive, nonnative plant management objectives were not included in the 1983 Redding RMP.

Table 4-8. Ability of Current Management to Achieve Desired Future Conditions for Invasive, Nonnative Plants

Decision Source	Current Management Objectives and Management Decisions	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Arcata RMP Samoa Amendment 1995	<p>Management Objectives</p> <p><i>Manila Dunes:</i></p> <ul style="list-style-type: none"> Enhance natural values and dune ecosystem. 	Yes	Remains applicable.	Carry forward.
Arcata RMP Samoa Amendment 1995	<p><i>Manila and Samoa Dunes:</i></p> <ul style="list-style-type: none"> Protect specific populations of Humboldt Bay wallflower and beach layia populations, and potential nesting sites for the western snowy plover. 	Yes	Remains applicable.	Carry forward.
Arcata RMP Samoa Amendment 1995	<p>Management Actions</p> <ul style="list-style-type: none"> Conduct dune restoration and exotic plant removal. 	Yes	Perhaps modify language to be more explicit. Invasive, nonnative plant species are a known threat to the existence, resilience, and recovery of native and endangered coastal dune plant species. Management action would focus on eradication and/or abatement, where feasible.	Carry forward for the BLM-administered coastal dune properties around Humboldt Bay (Samoa Peninsula and Mike Thompson Wildlife Area, South Spit Humboldt Bay). Opportunity to revise action language, such as: Support restoration and maintenance of native plant vegetation and associated dune processes through invasive, nonnative plant management that is consistent with endangered species recovery recommendations and best available science relative to coastal resilience related to sea level rise.

Potential New Decisions for the RMP Revision

Comply with Executive Order 13112, which states that the BLM will not authorize, fund, or carry out actions that it believes are likely to cause or promote the introduction or spread of invasive, nonnative plant species in the planning area, unless, pursuant to guidelines that it has prescribed, the agency has determined and made public its determination that the benefits of such actions clearly outweigh the potential harm caused by invasive species, and that all feasible and prudent measures to minimize risk of harm will be taken in conjunction with the actions.

Incorporate preventative measures, stipulations, and/or BMPs into project design or conditions of approval for any surface-disturbing activity. Incorporate invasive, nonnative weed measures into emergency stabilization and rehabilitation measures post-fire.

Invasive, nonnative plant program management would focus on prevention, early detection, and eradication through cooperation with local agencies, public education and awareness, inventory, and effectiveness monitoring. Invasive, nonnative plant program objectives include the prevention of inadvertent introductions through weed-contaminated seed, feed, hay, mulch, gravel or fill, or movement of animals, people, or machinery; minimization of disturbance; and proper planning.

Action items that support early detection and eradication are as follows:

- internal and external weed identification and training sessions
- weed survey and mapping
- determination of high priority weed-free areas, such as ACECs
- use of cooperative partnerships for regular on-the-ground early detection and rapid response

Action items that support education and awareness are as follows:

- Weed tours.
- Employee meetings.
- Volunteer work parties.
- Outreach to recreational user groups.
- Outreach programs such as fair booths, classroom curricula, theater ads, and others.

Inventory should be cooperative and cross-jurisdictional. Always include invasive, nonnative plant inventory as part of any public land assessment, and periodically re-inventory high priority areas.

Encourage and maintain existing CWMAs; develop them where appropriate. Develop strategic and coordinated approaches to prevention, early detection and rapid response, abatement, or eradication of invasive, nonnative species in prioritized areas.

Areas of Relative Ecological Importance to Guide Land Uses and Management

All planning area ACECs (particularly grassland and wetland types and coastal dunes, which are particularly susceptible) should be a priority for inventory and early detection and rapid response for invasive, nonnative plants. Management of invasive species in designated recreation areas should be recognized as a priority in those areas.

4.2.10 Paleontology

Current Management Direction

The existing RMPs for the Arcata and the Redding FOs do not have any decisions regarding paleontological resources. In the inventory report completed for the RMP, Shapiro (2017) identifies where there are geologic units known to contain fossil resources. Shapiro classes all geologic units according to the BLM's PFYC system and identifies key areas in need of protection. Opportunities for change include the following:

- Develop a management strategy for implementing the GIS data developed in the inventory report to inform where the need for paleontological research or the preservation of paleontological resources is highest.
- Allocate resources to increase paleontological surveys and scientific recovery.
- Increase public outreach to educate about the importance of protection and study of paleontological resources on BLM-administered lands in the planning area.
- Facilitate the development of cooperative agreements with various location institutions to promote the scientific study of paleontological resources.

Potential New Decisions for the RMP Revision

Ensure compliance with applicable law, regulation, and policy. Either as an integrated component of the existing USDI interagency, university-based Cooperative Ecosystem Study Unit Program or separately, the BLM should seek to establish a network of university and college partners (and even partner with private companies and NGOs) to assist in paleontological resource inventory, survey, research, public interpretation, and data recordation.

Identify zones of invertebrate fossils with public access to provide fossil materials for public domain collections. In the inventory report Shapiro (2017) proposes where suitable areas for informal public collection might be found in the Paleozoic marine units in the Klamath Mountains, in particular in the Gazelle, Kennett, or Bragdon Formations. Other proposed areas are along the western Sacramento Valley in the Great Valley group localities and in northernmost California, in the Montgomery and Weaverville Formations.

Ensure that significant paleontological resources are collected professionally, stored in qualified repositories, and made available for research and education.

Before surface-disturbing activities begin, the need for paleontological mitigation should be assessed. This would be done by determining what geologic units are to be affected by the work and their PFYC rankings, as presented in the inventory report GIS products (Shapiro 2017). The BLM guidelines (2016c) for conducting these assessments make clear the recommendations for when paleontological surveys or monitoring, conducted by qualified paleontologists should occur. These recommendations should be followed.

Areas of Relative Ecological Importance to Guide Land Uses and Management

In the Arcata and Redding FOs, nine geologic units have moderate (PFYC 3) paleontological potential: Bragdon Formation, Chico Formation, Gazelle Formation, Great Valley sequence, Hornbrook Formation, Kennett Formation, Modesto Formation, Montgomery Creek Formation, and the Weaverville Formation; three units have high (PFYC 4) paleontological sensitivity: Patrick's Pt. Terrace, Riverbank Formation, and the Tehama Formation.

4.2.11 Soils

Current Management Direction

Table 4-9 identifies existing land use plan decisions and opportunities in the Redding and Arcata FOs to achieve desired conditions for soil resources.

Table 4-9. Ability of Current Management to Achieve Desired Future Conditions for Soil Resources

Decision Source	Current Management Objectives and Management Decisions	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Arcata RMP 1992	<p>Management Objectives</p> <ul style="list-style-type: none"> Facilitate and encourage scientific research of the unique soils on Red Mountain. 	Yes	Not actively promoting research, but past research has occurred here.	Improve access to Red Mountain ultramafic rock type areas.
Arcata RMP 1992	<p>Management Decisions</p> <ul style="list-style-type: none"> Decisions regarding soil and water objectives will not be made in this plan. BMPs such as the operating parameters for the SYU 13 and Yokayo Grazing Management RODs and the NRCS Soil Survey Guidelines will determine general soil and water objectives. 	No	Outdated. New regulations for sedimentation, erosion, and water quality have been put in place since 1992.	NWFP objectives, CWA regulations, and other regulatory and recovery guidance provide more effective protections.
Arcata RMP Forest Plan Amendment 1995	<p>PLANNING AREA-WIDE</p> <ul style="list-style-type: none"> Designate approximately 86,000 acres in the plan amendment area and the Pine Ridge Road and maintained spur roads as LIMITED to provide protection against soil erosion, compaction, and water quality degradation that could result from cross-country vehicle use. 	Yes	Vehicle use has remained largely on designated routes. Few new or reopened routes or ROWs are expected.	Ensure adequate road maintenance resources are available.
Arcata RMP Forest Plan Amendment 1995	<p>RED MOUNTAIN MANAGEMENT AREA Land Use Allocations</p> <ul style="list-style-type: none"> Close a total of 18,882 acres to vehicle use [in the Red Mountain ACEC (6,895 acres), Elder Creek RNA/ACEC (3,775 acres), and South Fork Eel River WSR corridor (8,212 acres)] and limiting vehicle use to transportation facilities designed for highway vehicles having four or more wheels on 16,782 acres in the rest of the South Fork Eel River Management Area to provide protection against soil erosion and compaction that could result from cross-country vehicle use. 	Yes	Vehicle use has remained largely on designated routes. Few new or reopened routes or ROWs are expected. Much of Red Mountain and South Fork Eel River parcels have been designated as wilderness.	Update to reflect wilderness designations. Ensure adequate road maintenance resources are available.

Decision Source	Current Management Objectives and Management Decisions	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Arcata RMP Forest Plan Amendment 1995	<p><u>COVELO VICINITY MANAGEMENT AREA</u></p> <ul style="list-style-type: none"> Close a total of 13,069 acres (7,009 acres in the BLM portion of the Yolla-Bolly/Middle Eel Wilderness and 6,060 acres in the Middle Fork Eel River corridor) to vehicle use and limit vehicle use to transportation facilities designed for highway vehicles having four or more wheels on 53,431 acres in the rest of the Covelo Vicinity Management Area to provide protection against soil erosion and compaction that could result from cross-country vehicle use. 	Yes	Vehicle use has remained largely on designated routes. Few new or reopened routes or ROWs are expected. Much of Eel River parcels have been designated as wilderness. Vehicle trespass remains an issue in these remote areas.	Update to reflect wilderness designations. Ensure adequate road maintenance resources are available.
Arcata RMP Forest Plan Amendment 1995	<p><u>SCATTERED TRACTS MANAGEMENT AREA</u></p> <ul style="list-style-type: none"> Close isolated parcels (approximately 320 acres) in the Van Duzen, main stem Eel, and Klamath Rivers designated WSR corridors and limit vehicle use to transportation facilities designed for highway vehicles having four or more wheels on 15,785 acres in the rest of the Scattered Tracts Management Area to provide protection against soil erosion and compaction that could result from cross-country vehicle use. 	Yes	Limited access to these areas makes monitoring of vehicle use difficult.	
Redding RMP 1993	<p><u>AREA-WIDE Management Objectives</u></p> <ul style="list-style-type: none"> Prevent impairment of soil productivity due to accelerated soil loss or physical or chemical degradation of the soil resources and ensure that BLM management actions and objectives are consistent with soil resource capabilities. The authority to implement these objectives is based on an assortment of federal acts, executive orders, and MOU. 	Partially	Problems in ROWs are common. Unauthorized vehicle access is ongoing.	Tighten ROW permits and require mitigation and restoration.
Redding RMP 1993	<ul style="list-style-type: none"> Soils disturbed by range improvement construction will be reseeded with native and/or approved introduced species as soon as possible, unless it is determined to be unnecessary. 	No	Need has not been clearly articulated in a consistent manner. No big range construction has occurred, and very little establishment of new rangeland or improvements to existing rangeland are expected.	Focus on maintaining rangeland.

Decision Source	Current Management Objectives and Management Decisions	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Redding RMP 1993	<ul style="list-style-type: none"> The maintenance and improvement of soil cover and productivity would continue to be accomplished through preventive measures and land treatments under all land use management alternatives. Preventive measures would be brought forward in project planning and environmental analyses. Preventive measures typically include the avoidance of high erosion areas, restrictions on type and season of use, and closure to certain uses such as forest management, vehicle use, grazing, or mineral development. Land treatments would be identified to heal earth-disturbing activities or applied to excessively eroded areas needing stabilization. Land treatments include seeding of grasses and forbs, plantings of cuttings and transplants, wattling and brush layering and matting, land shaping, application of mulches, and the construction of erosion control structures. 	Yes		
Redding RMP 1993	<p>TRINITY MANAGEMENT AREA</p> <p>Management Objectives</p> <p><i>Grass Valley Creek Watershed:</i></p> <ul style="list-style-type: none"> Reduce the sediment load entering the Trinity River via GVC for the improvement of anadromous fisheries. 	Partially	<p>Reduction in sediment loads observed. Future erosion potential remains with catastrophic wildfire an ongoing threat.</p> <p>Highway construction work has altered soil conditions – Caltrans mitigation funded projects could bring in significant funds for soils remediation work.</p>	Restoring low intensity, frequent fire would go furthest to replicate historic conditions.
Redding RMP 1993	<p>Management Decisions</p> <ul style="list-style-type: none"> BLM-administered roads and trails within the zone of decomposed granite-derived soils are closed to vehicle use during the rainy season and could be closed on a year-round basis at the discretion of the BLM to protect the resource values of these erosion sensitive areas. Also, soil-disturbing activities would be conducted only when no new, long-term increases to erosion would result. 	Partially	<p>Highway construction work has altered soil conditions – Caltrans mitigation funded projects could bring in significant funds for soils remediation work.</p>	

Decision Source	Current Management Objectives and Management Decisions	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Redding RMP 1993	<p>Management Actions</p> <ul style="list-style-type: none"> Acquire GVC watershed in Trinity County and manage to reduce erosion. 	Partially		Purchase or otherwise influence management of inholdings and adjacent land management within the watershed.
Redding RMP 1993	<p><u>ISHI MANAGEMENT AREA</u> Management Objective <i>Minnehaha Mine:</i></p> <ul style="list-style-type: none"> Stabilize the ongoing erosion due to past mining practices. 	Yes	Per communication with retired geologist, this site has been stabilized and no further work is needed.	
Redding RMP 1993	<ul style="list-style-type: none"> Acquired lands containing decomposed granitic soils will not be open for locatable mineral entry. 	Yes		
Redding RMP 1993	<p><u>SWASEY DRIVE AREA</u> Management Decision</p> <ul style="list-style-type: none"> Follow the Swasey Drive Area Implementation Plan. <ul style="list-style-type: none"> The threshold for damage to soils or other resources is more than 20 off road vehicle intrusions per year off designated routes, noticeable damage to archaeological sites or features, or more than 1,000 square feet of surface disturbance per year. 			
Redding RMP 1993	<ul style="list-style-type: none"> The target shooting area will be reclaimed after closure (with the southeasterly one-half reclaimed earlier if funds are available) through lead removal, scarification, re-contouring to a natural setting, mulching, and planting of native species. 	Partially	Part of former target shooting area has been planted.	Complete reclamation and restoration of former target shooting area.

Potential New Decisions for the RMP Revision

New decisions pertaining to transportation management and ROWs should address some ongoing soil erosion issues and unauthorized vehicle uses. Forest management decision-makers should consider wildland fire hazards and soil erosion and sedimentation risks. Land management decision-makers should consider the nonpoint source pollution permitting program under the State Water Resources Control Board, as well as nonpoint source pollution prevention BMPs. It may be pertinent to encourage shared stewardship of roads and ROWs through the formation of roadway associations with local residents.

Areas of Relative Ecological Importance to Guide Land Uses and Management

Streams that were habitat for anadromous fisheries could be important watersheds for acquisition or other focal areas of work. Areas with significant past disturbance could be designated for restoration, in particular areas damaged by mining-related activities. Decomposed granite, ultramafic soils, or rare soil types should be identified and managed to protect and maintain their unique status where feasible. Burned areas, steep slopes, and areas with high erosion potential ratings should be prioritized for soil stabilization and erosion control.

4.2.12 Special Status Plants

Current Management Direction

Table 4-10 identifies existing land use plan decisions and opportunities in the Redding and Arcata FOs to achieve desired conditions for special status plants.

Table 4-10. Ability of Current Management to Achieve Desired Future Conditions for Special Status Plants

Decision Source	Current Management Objectives and Management Decisions	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Arcata RMP 1992 (USDI BLM 1992a)	<p>SAMOA PENINSULA Management Objectives</p> <p><i>Samoa Dunes:</i></p> <ul style="list-style-type: none"> Protect specific populations of Menzies' wallflower and beach layia. <p><i>Manila Dunes:</i></p> <ul style="list-style-type: none"> Enhance natural values. Protect sensitive species according to the BLM Sensitive Species Policies (Appendices 2-3 and 2-4 in Arcata RMP 1992). T&E species management will follow Section 7 consultation procedures in accordance with the ESA. Species proposed for listing, such as the beach layia, will follow USFWS conferencing requirements concerning the conservation and recovery of proposed federally listed species. <p>Land Use Allocations</p> <ul style="list-style-type: none"> Designate the entire 112 acres of the Manila Dunes as an ONA/ACEC for protection and interpretation of natural values. <p>Management Actions</p> <ul style="list-style-type: none"> Monitor Menzies' wallflower and beach layia. Prepare an ACEC activity plan for Manila Dunes after completion of Humboldt County Beach and Dunes Management Plan. ACEC plan to be consistent with this plan. 	Yes	Remains applicable and required by recovery plan. The Manila Dunes (now named Ma-le'l Dunes) is designated an ACEC and is now 152 acres.	<p>Carry forward enhancement and protection management objectives.</p> <p>Designate the 40-acre addition within the 152 BLM Ma-le'l South area as part of the ACEC if it has not already been included through existing policy.</p>

Decision Source	Current Management Objectives and Management Decisions	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Arcata RMP 1992	<p>RED MOUNTAIN MANAGEMENT AREA Management Objectives</p> <ul style="list-style-type: none"> Enhance and facilitate protection of unique botanical values – particularly <i>Arabis macdonaldiana</i>. 	Partially	<p>There are BLM sensitive and candidate plants on Red Mountain, besides the federally endangered <i>Arabis macdonaldiana</i>.</p> <p>The area now has wilderness designation, which adds another layer of protection for BLM sensitive plants.</p>	Maintain protection of unique botanical values, particularly for species and habitats of T&E, candidate, and BLM sensitive species.
	<p>Management Actions</p> <ul style="list-style-type: none"> Implement <i>Arabis</i> Recovery Plan. 	Yes	Remains applicable.	Carry forward.
Arcata RMP Forest Plan Amendment 1995 (USDI BLM 1995a)	<p>RED MOUNTAIN MANAGEMENT AREA Management Objectives</p> <ul style="list-style-type: none"> Manage habitats for endangered plants and animals within larger ecosystems. 	Yes	Remains applicable.	Carry forward.
Arcata RMP Forest Plan Amendment 1995	<p>RED MOUNTAIN MANAGEMENT AREA Management Actions</p> <ul style="list-style-type: none"> Enhance and facilitate protection of unique botanical resources, particularly <i>Arabis macdonaldiana</i>. 	Yes	Remains applicable.	Carry forward.
Arcata RMP Forest Plan Amendment 1995	<p>COVELO VICINITY MANAGEMENT AREA Management Objectives</p> <ul style="list-style-type: none"> Manage habitats for endangered plants and animals within larger ecosystems. 	Yes	Remains applicable.	Carry forward.

Decision Source	Current Management Objectives and Management Decisions	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Arcata RMP Samoa Amendment 1995 (USDI BLM 1995a)	<p>Management Objectives</p> <p><i>Samoa Peninsula:</i></p> <ul style="list-style-type: none"> Protect sensitive species according to the BLM Sensitive Species Policies (USDI BLM Manual Section 6840). T&E species management will follow Section 7 consultation procedures in accordance with the ESA. <p>Management Actions</p> <p><i>Samoa Peninsula (area-wide):</i></p> <ul style="list-style-type: none"> Prepare an ACEC plan for Manila Dunes. Monitor botanical resources. Conduct dune restoration and exotic plant removal. Continue to work with local governments in the management of the entire peninsula. 	Yes	Carry all forward, except ACEC plan for Manila, which is complete.	Carry forward.
Arcata RMP Samoa Amendment 1995	<p><i>Samoa Dunes:</i></p> <ul style="list-style-type: none"> Protect specific populations of Humboldt Bay wallflower, beach layia, coastal wetlands, and other natural values. 	Yes	Both remain federally listed.	Carry forward.
Arcata RMP Samoa Amendment 1995	<p><i>Manila Dunes:</i></p> <p>Management Objectives</p> <ul style="list-style-type: none"> Enhance natural values and dune ecosystems. Protect specific populations of Humboldt Bay wallflower and beach layia populations. <p>Land Use Allocations</p> <p><i>Manila Dunes:</i></p> <ul style="list-style-type: none"> Maintain the entire 112 acres of the Manila Dunes as a RNA/ACEC for protection and interpretation of natural values. 	Yes	Both plants remain federally listed.	<p>Update plan language to indicate new name: Ma-le'i Dunes CMA.</p> <p>Address the 40-acre addition to Ma-le'i South and include formally in RNA and ACEC designation if it is not already by policy.</p>

Decision Source	Current Management Objectives and Management Decisions	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Redding RMP 1993 (USDI BLM 1993)	<p>PLANNING AREA-WIDE</p> <p>Land Use Allocations</p> <ul style="list-style-type: none"> The leasing of coal in the Redding Resource Area is not considered in the RMP due to the potential environmental impacts of surface mining, potential conflicts with other resources, lack of a positive monetary return to the US government, incompatible adjoining land uses, apparent lack of public demand, and a lack of a known significant resource base. Any future decision to lease coal will require an RMP amendment. <p>Management Actions</p> <ul style="list-style-type: none"> A processing delay notice for fluid minerals leases will be used to protect sensitive plant species and their habitat from the surface disturbing effects of fluid minerals development. The BLM's current knowledge of the location of these is due to a limited, but increasing, inventory base and a constantly changing list of plant species that are considered sensitive species. This notice will be included in new mineral leases that occur on lands identified as having suitable habitat for these species. 	Yes	Remains applicable.	Carry forward but replace "sensitive plant species" with "BLM sensitive plant species."
Redding RMP 1993	<ul style="list-style-type: none"> A fluid minerals lease notice for the protection of T&E species will be included on all leases where these species are thought to exist. Current inventory is not sufficient to define all these areas at the present time. A generic copy of this notice is shown as follows. 	Yes	Remains applicable.	Carry forward but replace "sensitive plant species" with "BLM sensitive plant species."
Redding RMP 1993	<ul style="list-style-type: none"> When existing mineral leases expire, the affected lands will be subject to the requirements of this RMP for any new exploration, leasing, and development actions. 	Yes	Remains applicable.	Carry forward.

Decision Source	Current Management Objectives and Management Decisions	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Redding RMP 1993	<p><u>SHASTA MANAGEMENT AREA</u> Management Objectives <i>Area-Wide:</i></p> <ul style="list-style-type: none"> Recognize certain special status species of plants and wildlife that merit attention in the management of the public lands. 		Goals/Objectives have been updated to read as follows: To conserve and/or recover ESA-listed species and the ecosystems on which they depend so that ESA protections are no longer needed for these species.	
Redding RMP 1993	<ul style="list-style-type: none"> Minimize the decline of those species designated as special status through the mitigation of resource management impacts. 		Goals/Objectives have been updated to read as follows: To initiate proactive conservation measures that reduce or eliminate threats to Bureau sensitive species to minimize the likelihood of and need for listing of these species under the ESA.	
Redding RMP 1993	<ul style="list-style-type: none"> Promote the enhancement of special status species through positive management of their habitats and populations. 	Yes	Remains applicable.	Carry forward.
Redding RMP 1993	<p><u>KLAMATH MANAGEMENT AREA</u> Land Use Allocations <i>Interlakes SRMA:</i></p> <ul style="list-style-type: none"> Acquire available unimproved lands that provide legal public access to adjoining public lands, complete segments of recreational trails, enhance protection of sensitive resources, provide opportunities for public interpretation, enhance reforestation efforts (including habitat improvement for sensitive species), or enhance long-term administration of the area. 	Partially	Partially Implemented (some acquisitions in Interlakes). Management ongoing.	Carry forward.

Decision Source	Current Management Objectives and Management Decisions	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Redding RMP 1993	<p><i>West of French Gulch:</i></p> <ul style="list-style-type: none"> Acquire available unimproved lands that enhance long-term forestry management, possess critical habitat for wintering deer, contain significant cultural resources, enhance protection or restoration of special status species habitat, provide physical access to public lands, or enhance long-term administration of the area. 	No	No new acquisition west of French Gulch. Open to acquisition, however.	Carry forward.
Redding RMP 1993	<p>Management Actions</p> <p><i>Shasta Valley Wetlands:</i></p> <ul style="list-style-type: none"> Develop an integrated resource activity plan for the Shasta Valley Wetlands if the BLM acquires available privately owned unimproved lands within the area. The activity plan will be developed in cooperation with CDFW, Caltrans, Siskiyou County, and interested organizations/individuals. The plan will identify forage allocation and DPCs for domestic and native grazing, acquisition/cooperative management needs, a network of management facilities to protect the native wetlands, wildlife productivity targets, water quality base and target standards, and public access needs that do not adversely impact the native biota. 	Partially	Remains applicable.	Carry forward.
Redding RMP 1993	<p><i>Interlakes SRMA:</i></p> <ul style="list-style-type: none"> Maintain special status species habitat. 	Yes	Remains applicable.	Carry forward.
Redding RMP 1993	<p>SACRAMENTO RIVER MANAGEMENT AREA Management Objectives</p> <p><i>Hawes Corner:</i></p> <ul style="list-style-type: none"> Ensure the long-term survival of <i>Orcuttia tenuis</i>. 	Partially	No new lands acquired yet for Hawes Corner. Redding FO is open to acquisition. No management agreement developed currently.	Carry forward.

Decision Source	Current Management Objectives and Management Decisions	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
	<p><i>Bend Area:</i></p> <ul style="list-style-type: none"> Ensure long-term survival of special status species 	Yes	Remains applicable.	Carry forward.
Redding RMP 1993	<p>Land Use Allocations</p> <p><i>Hawes Corner:</i></p> <ul style="list-style-type: none"> Acquire available, unimproved privately owned portion of <i>Orcuttia tenuis</i> habitat or develop cooperative management agreement to protect the habitat. 	Yes	Remains applicable.	Carry forward.
Redding RMP	<p>Management Actions</p> <p><i>Hawes Corner:</i></p> <ul style="list-style-type: none"> Contact adjoining landowner(s) to help protect the <i>Orcuttia tenuis</i> habitat or to purchase the private interests. Secure an administrative easement to provide access for management and install necessary facilities to preclude vehicle or grazing usage of the habitat. Develop a RNA/ACEC management plan to identify protection and monitoring needs. 	Partially	Adjacent landowner has been contacted; does have a vernal pool mitigation site. There could be new landowners in the future that are willing sellers.	Carry forward
Redding RMP 1993	<p><u>ISHI MANAGEMENT AREA</u> Management Objectives</p> <ul style="list-style-type: none"> Protect the habitat and existing stands of Baker cypress Encourage research of this species in conjunction with genetic and habitat studies of other stands of Baker cypress. 	Partially	Remains applicable.	Carry forward.

Decision Source	Current Management Objectives and Management Decisions	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Redding RMP 1993	<p><u>ISHI MANAGEMENT AREA</u> Land Use Allocations</p> <p><i>Baker Cypress:</i></p> <ul style="list-style-type: none"> • Designate as a RNA/ACEC. • Mineral material sales are permitted only if such actions enhance Baker cypress habitat. • Area is closed to grazing. • Vehicles are limited to designated roads and trails. • Offer for mineral leasing with no surface occupancy. 	Partially	ACEC is established.	Propose expansion of ACEC to include mid-elevation vernal pool with surrounding Baker Cypress ACEC.

Potential New Decisions for the RMP Revision

- In general, the future of special-status plant distribution, management, resilience, and recovery from landscape disturbances within the planning area depends on the degree to which threats under management control can be eliminated or ameliorated and populations and their habitat can be restored and protected. Manage special status species in compliance with revised BLM Manual 6840 (USDI BLM 2008a) with an emphasis on protecting reproductive habitats and enhancing habitats.
- Integrate conservation measures from conservation assessments and recovery plans into project design features on all lands with a federal interest for all threatened, endangered, and proposed species, as they are developed or updated.
- Integrate conservation measures from species assessments and conservation plans into project design features on all lands with a federal interest for all BLM sensitive species, as they are developed or updated.
- For special status plants for which there are no recovery or conservation plans in place, incorporate conservation measures from species assessments and conservation plans into project design features on all lands with a federal interest in a manner that follows best available science.
- Develop buffer distances to protect sensitive plant populations, following best available science, conservation plans, and USFWS recommendations to maintain plant species viability.
- For special status plants and their context in the native landscape, develop generic conservation measures to address preventing small- and large-scale habitat fragmentation in order to support pollination, reproduction, gene flow, adaptation, and healthy population sizes in order to support, to the greatest extent practicable, maintenance of ecological function and resilience to disturbance.
- Incorporate protection measures for rare habitats into fire response agreements.
- Consider prioritizing active management needs for BLM sensitive species that are adapted to disturbance, such as naturally occurring fire.

Areas of Relative Ecological Importance to Guide Land Uses and Management

Areas of ecological importance related to special status plants include historic, occupied and suitable habitats, core populations, and landscape connectivity features to encourage physical migration and genetic adaptation to changing climatic conditions. Key habitats include the ACECs with BLM sensitive plants, serpentine areas, coastal dunes, perennial streams, riparian and wetland vegetation, and other rare, unique, or diverse habitats (see also Sections 2.2.4, 2.2.6, and 2.4.1):

- Baker Cypress RNA/ACEC (rare vegetation type)
- Butte Creek RNA/ACEC (rare vegetation type)
- Elder Creek RNA/ACEC (rare vegetation type)
- Gilham Butte RNA/ACEC (rare vegetation type)
- Hawes Corner RNA/ACEC (BLM sensitive vernal pool species)
- Laqua Buttes RNA/ACEC (rare vegetation type)
- Lacks Creek RNA/ACEC (rare vegetation type)
- Manila Dunes ONA/ACEC (rare vegetation types and BLM sensitive species)

- Red Mountain RNA/ACEC (rare vegetation types and BLM sensitive species)
- Sacramento River Island RNA/ACEC (rare vegetation type)
- Sacramento River (Bend Area) Area ONA/ACEC (rare vegetation types and BLM sensitive species)
- South Fork Eel River Watershed ACEC (rare vegetation type)

4.2.13 Tribal Consultation/Interests

Current Management Direction

The BLM will continue to follow relevant heritage resource-centered laws, regulations, and memoranda as well as the California BLM-SHPO Protocol guidelines to provide federally recognized tribes the opportunity to participate and comment on land use planning and decisions. The BLM will support tribes if they wish to exclude the public from discussions of sensitive tribal-specific issues. There may also be times when the BLM will consult with other tribal groups that do not have federal recognition. The BLM supports traditional tribal uses and harvest of tribal trust resources. The BLM shall provide access to areas for resource management to support proper functioning conditions that will, in turn, support resources such as native fish or plants that the tribal entities may harvest. **Table 4-11** identifies existing land use plan decisions and opportunities in the Redding and Arcata FOs to achieve desired conditions for tribal interests.

Table 4-11. Ability of Current Management to Achieve Desired Future Conditions for Tribal Interests

Decision Source	Current Management Objectives and Management Decisions	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Northwest Forest Plan Survey and Manage Amendment 2001	Management Decisions <ul style="list-style-type: none"> Included in this [Federal Government's] trust function are responsibilities with all federally recognized tribes to facilitate occupancy and use of federal lands and resources traditionally used for cultural and spiritual purposes consistent with existing laws and regulations (ROD 56). 	Yes	Follows laws and regulations; complies with BLM policy and Protocol for protecting cultural resources.	Update to reflect Class I Overview and Protocol, where necessary. In addition to archaeological sites and landscapes, consider traditional and contemporary Native American values and environmental justice.
Arcata RMP 1992	Management Decisions <ul style="list-style-type: none"> No public lands in the planning area are suitable or available for Indian Allotment entry. 	N/A	N/A	N/A
	Management Decisions <ul style="list-style-type: none"> Prior to authorizing any surface-disturbing action or approval of land uses, the BLM solicits appropriate consideration of American Indian concerns including any potential impacts on traditional beliefs and heritage values. Analysis of these specific concerns is deferred to preparation of activity plans, project plans, and associated environmental analyses. 	Partially	<p>TCPs and sensitive Native American Indian locations have been made known to the BLM since previous planning efforts and others will likely be made known to the BLM during this Redding-Arcata planning work.</p> <p>In this manner, not all consideration will need to await specific activity and project plan work and associated environmental analyses. The BLM follows its protocol, including Executive Order No. 13007: Indian Sacred Sites, Executive Order 13175 (Consultation and Coordination with Indian Tribal Government), and The White House Memorandum for the Heads of Executive Departments and Agencies regarding Tribal Consultation with respect to Native American Indian discussions.</p>	<p>Update to reflect Class I Overview and Protocol where necessary.</p> <p>Update to reflect previous consultations and information sharing and revise procedures as appropriate.</p> <p>Solicit information of American Indian concerns, including any potential impacts on traditional beliefs and heritage values, as part of this planning effort through meetings, correspondence, phone calls, emails, and other communicative means. Follow Protocol guidance.</p> <p>In addition to archaeological sites and landscapes, consider traditional and contemporary Native American values and environmental justice.</p>

Decision Source	Current Management Objectives and Management Decisions	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Redding RMP 1993	<p>Management Actions</p> <ul style="list-style-type: none"> Transfer via R&PP Act sale or exchange to a qualified organization administrative responsibility of the Central Valley (Indian) Cemetery located on one parcel of public land. 	Yes	There is some debate regarding who actually administers the cemetery (Reclamation or BLM)	Resolve administrative issue prior to any action.
Redding RMP 1993	<p>Management Decisions</p> <ul style="list-style-type: none"> Prior to authorizing any surface disturbing action or approval of land uses, BLM solicits appropriate consideration of American Indian concerns including any potential impacts on traditional beliefs and heritage values. Analysis of these specific concerns is deferred to preparation of activity plans, project plans, and associated environmental analyses. 	Partially	TCPs and sensitive Native American Indian locations have been made known to BLM since previous planning efforts and others will likely be made known to BLM during this Redding-Arcata planning work. In this manner, not all consideration will need to await specific activity and project plan work and associated environmental analyses. The BLM follows its protocol, including Executive Order No. 13007: Indian Sacred Sites, Executive Order 13175 (Consultation and Coordination with Indian Tribal Government), and The White House Memorandum for the Heads of Executive Departments and Agencies regarding Tribal Consultation with respect to Native American Indian discussions.	<p>Update to reflect Class I Overview and Protocol where necessary.</p> <p>Update to reflect previous consultations and information sharing and revise procedures, as appropriate.</p> <p>Solicit information, including any potential impact on traditional beliefs and heritage values, as part of this planning effort through meetings, correspondence, phone calls, emails, and other communicative means. Follow Protocol guidance.</p> <p>In addition to archaeological sites and landscapes, consider traditional and contemporary Native American values and environmental justice.</p>
Redding RMP 1993	<p><u>SCOTT VALLEY MANAGEMENT AREA</u> Land Use Allocation</p> <ul style="list-style-type: none"> Transfer via R&PP Act process or exchange to a qualified agency or group the administration of the Cedar Gulch Indian Cemetery. 	Partially	No action taken to date; no interest in acquisition by a federally recognized tribe expressed.	Intensify outreach to qualified agency or group.

Decision Source	Current Management Objectives and Management Decisions	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Redding RMP 1993	<p><u>KLAMATH MANAGEMENT AREA Management Objectives</u></p> <p><i>Shasta and Klamath Rivers Canyons, and Upper Klamath River:</i></p> <ul style="list-style-type: none"> Protect historic and prehistoric resources within the area and enhance access for traditional uses of the rivers by Native American Indians. 	Partially	<p>Complies with BLM policy and Protocol for protecting cultural resources.</p> <p>Minimal outreach to tribes has been undertaken with regard to traditional uses, with the exception of the FERC relicensing consultation regarding the proposed Klamath River dam removal. (Note that dam removal and subsequent heritage resource issues are beyond the scope of this planning process.)</p>	<p>Update to reflect Class I Overview and Protocol where necessary.</p> <p>In addition to archaeological sites and landscapes, consider traditional and contemporary Native American values and environmental justice.</p> <p>Increased outreach to tribes should be undertaken regarding traditional use possibilities.</p> <p>Clarify management objectives that are outside the scope of the RMP; that is, those associated with Klamath Dam removal.</p>
Redding RMP 1993	<p><i>Remainder of Klamath Management Area:</i></p> <ul style="list-style-type: none"> 1,025 acres near Hawkinsville are suitable for community development purposes as a reservation for federally recognized Indian tribe(s). If congressional sponsorship is unavailable, offer for exchange to any party after 5 years from the approval of the Final RMP. 	Partially	<p>Letters of interest sent by tribes but no transfer occurred. The Shasta tribe is most likely to be interested but it still awaits federal recognition.</p>	<p>Renew option for transfer to eligible party with time limits.</p>

Decision Source	Current Management Objectives and Management Decisions	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Redding RMP 1993	<p>TRINITY MANAGEMENT AREA Management Decisions</p> <ul style="list-style-type: none"> Consolidate and increase public landownership to conserve regionally important cultural resources and to provide access to identified Native American Indian heritage resources. 50 acres near the community of Hayfork are suitable for community development purposes as a reservation for federally recognized Indian tribe(s). If congressional sponsorship is unavailable or if an R&PP Act application is not perfected, offer for exchange to any party after five years from the approval of the Final RMP. For the Trinity Management Area designate roads and trails for public-administrative and Native American Indian access. North Trinity River/Deadwood/Indian Creek area: Consolidate and increase public landownership to provide access to identified Native American heritage values 	Yes	<p>Some areas along the Trinity River in the Redding FO area have been acquired primarily in support of salmonid restoration advocated by downriver tribes (Hoopa, Yurok) and the local Nor-El-Muk Tribe. These parcels also include cultural resources.</p> <p>Both FOs share tribal interests with the listed groups and government-to-government relationships with the Yurok and Hoopa.</p>	<p>Update to reflect acquisitions to date.</p> <p>If possible, acquire additional contiguous land along the Trinity River.</p> <p>Increase outreach to tribes to engage in restoration.</p> <p>Increase outreach to tribes regarding traditional use possibilities.</p>
Redding RMP 1993	<p>Management Decisions</p> <ul style="list-style-type: none"> 50 acres near the town of Hayfork are suitable for community development purposes as a reservation for federally recognized Indian tribe(s). If congressional sponsorship is unavailable or if an R&PP Act application is not perfected, offer for exchange to any party after five years from the approval of the Final RMP. 	No	<p>No local groups have as yet received federal recognition although the interest in the land is still there.</p>	<p>Carry forward.</p> <p>Increase outreach to tribes.</p>
Redding RMP 1993	<p>Management Decisions</p> <ul style="list-style-type: none"> For the Trinity Management Area, designate roads and trails for public-administrative and Native American Indian access. 	Yes	<p>No work completed in this regard.</p>	<p>Carry forward.</p> <p>Increase outreach to tribes.</p>
Redding RMP 1993	<p>Management Decisions</p> <p><i>North Trinity River/Deadwood/Indian Creek area:</i></p> <ul style="list-style-type: none"> Consolidate and increase public landownership to provide access to identified Native American heritage values 	No	<p>Little consolidation efforts undertaken in this regard.</p>	<p>Carry forward.</p> <p>Increase outreach to tribes.</p>

Potential New Decisions for the RMP Revision

The Angle/Martin Indian cemetery on the Craig Divide above Lake Oroville in Butte County (CA-BUT-20) is still used by the Maidu Indians and also incorporates a prehistoric midden and features as well as a Native American “Cry” site. Future plans should allow for the transfer of the cemetery with the understanding that the Enterprise Rancheria may want to acquire it; otherwise, it will continue to be managed as a protected cultural resource.

Designate Black Mountain as a TCP and possible multi-resource ACEC, such as flora, wildlife, and landscape. Acquire administrative access and/or adjoining lands for management and access. Explore designating a broad TCP that incorporates the Craig Divide area in Butte County.

Areas of Relative Ecological Importance to Guide Land Uses and Management

Work toward establishing Stewardship Agreements for various properties, including Salt Flat, Craig Divide, Black Mountain, Swasey ACEC, Covelo vicinity, Stringtown Mountain, and others, in both FOs. Set goals and explore various mechanisms for the agreements, such as MOUs, contracts, and other planning documents. Stewardship agreements should be consistent with other tribal agreements covering planning areas outside of this NCIP.

Continue cooperation with the Wiyot Tribe and the Blue Lake and Bear River Rancherias regarding North Spit and South Spit use.

Continue existing agreement with Hoopa on forestry issues at Lacks Creek.

Improve communication and contracting processes to increase tribal contracting/construction firms in work projects, such as recreational trail construction, river restoration, and fire management, in NCIP management areas.

Continue consultation with Native American tribes in resource areas to help redevelop ties to the landscape and identify and protect sacred and traditional use areas.

Incorporate data and knowledge from studies, such as Ecodapt climate change vulnerability studies, with tribal communities into the planning process.

4.2.14 Vegetation

Current Management Direction

Table 4-12 identifies existing land use plan decisions and opportunities in the Redding and Arcata FOs to achieve desired conditions for vegetation resources.

Table 4-12. Ability of Current Management to Achieve Desired Future Conditions for Vegetation Resources

Relevant Plan/Source	Current Planning Decision	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Arcata RMP 1992	<p><u>PLANNING AREA-WIDE Management Actions</u></p> <ul style="list-style-type: none"> Prepare an ACEC activity plan for Manila Dunes after completion of Humboldt County Beach and Dunes Management Plan. ACEC plan to be consistent with this plan. 	Partially	<p>The Humboldt County Beach and Dunes Plan was completed. The BLM entered into a CMA agreement with the USFWS Humboldt Bay Refuge to collaboratively manage the Manila Dunes, renamed Ma-le'l Dunes. The Ma-le'l Dunes Public Access Plan was completed in 2008, which serves as the activity plan. The area is now the Ma-le'l Dunes CMA.</p> <p>Area-wide vegetation management recommendations are not adequately served. Additional management recommendations are needed to address the National Native Seed Strategy, National Strategy to Promote the Health of Honeybee and Other Pollinators, and address issues of landscape connectivity/habitat fragmentation, vulnerable vegetation communities, structural vegetative cover, resilience, and diversity.</p> <p>See Potential New Management Decision at the conclusion of this table.</p>	

Relevant Plan/Source	Current Planning Decision	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Arcata RMP 1992	<p>Management Objectives</p> <p><i>Butte Creek Management Area:</i></p> <ul style="list-style-type: none"> Enhance old-growth forest characteristics and related wildlife species-particularly the NSO. Enhance riparian condition in Butte Creek. 	Yes	Remains relevant.	Carry forward.
Arcata RMP Forest Plan Amendment 1995	<p>Management Action</p> <p>Any herbicide use will be consistent with procedures and limitations outlined in the California Vegetation Management ROD (USDI BLM 1988b). Herbicide use will also comply with the applicable management objectives and standards and guidelines of the NWFP. Those standards and guidelines providing the greater benefits to late-successional forest-related species will apply.</p>	Partially	This document is obsolete. There is an updated document.	Carry forward but replace outdated document with NEW documents: Vegetation Treatments on Bureau of Land Management Lands in 17 Western States ROD (2007a); Vegetation Treatments Using Herbicides on Bureau of Land Management Lands in 17 Western States ROD (2007b); and Vegetation Treatments using Aminopyralid, Fluroxypyr, and Rimsulfuron on Bureau of Land Management Lands in 17 Western States Final Programmatic Environmental Impact Statement (2016b)
Arcata RMP Samoa Amendment 1995	<p>Management Objectives</p> <p><i>Samoa Dunes:</i></p> <ul style="list-style-type: none"> Protect coastal wetlands, and other natural values. 	Yes	Remains relevant.	Carry forward.
Arcata RMP Samoa Amendment 1995	<p>Management Objectives</p> <p><i>Manila Dunes:</i></p> <ul style="list-style-type: none"> Enhance natural values and dune ecosystem 	Yes	Remains relevant.	Carry forward but elaborate. Suggested language: Enhance natural values and dune processes, to support native plant diversity and functional resilience of the dune ecosystem.
Arcata RMP Samoa Amendment 1995	<p>Management Actions</p> <p><i>Samoa Peninsula (Area-wide):</i></p> <ul style="list-style-type: none"> Monitor botanical and cultural resources. 	Yes	Remains relevant.	Carry forward but divide action between vegetation and cultural sections.

Relevant Plan/Source	Current Planning Decision	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Arcata RMP Samoa Amendment 1995	Management Actions <i>Samoa Peninsula (Area-wide):</i> <ul style="list-style-type: none"> Conduct dune restoration and exotic plant removal. 	Yes	Remains relevant.	Revise: Support restoration and maintenance of native plant vegetation and associated dune processes through invasive, nonnative plant management that is consistent with endangered species recovery recommendations and best available science relative to coastal resilience related to sea level rise.
Arcata RMP Samoa Amendment 1995	Management Actions <i>Samoa Peninsula (Area-wide):</i> <ul style="list-style-type: none"> Continue to work with local governments in the management of the entire peninsula. 	Yes	Remains relevant.	Carry forward; include "...local governments and nonprofit land trust(s)..."
Redding RMP 1993	PLANNING AREA WIDE <ul style="list-style-type: none"> Vegetation management will occur as a secondary benefit or impact in many BLM activities such as grazing, timber harvest, wetland construction, firefighting, mining and special status species management. The impacts or benefits to vegetation will either be insignificant or will be addressed in the site-specific EA for the parent action. A DPC has been developed for the Sacramento River Management Area. Other DPCs will be developed as specific activity plans are designed for the remainder of the Redding Resource Area. 	Yes	Vegetation management often occurs as a secondary benefit or impact resulting from many BLM activities such as livestock grazing, forest health prescriptions, fuel reduction projects, timber harvest, wetland enhancement or construction, fire suppression, mining, or special status species management. Any effects on vegetation would be addressed in the site-specific EA for the primary action.	Although a DPC has been developed for the Sacramento River Management Area, there may be new contemporary ways of characterizing vegetation community objectives within activity plans. Propose to abandon DPC terminology and leave plant community objectives to the specific activity plan characterization.
Redding RMP 1993	KLAMATH MANAGEMENT AREA Management Objectives <i>Shasta and Klamath Rivers Canyon:</i> <ul style="list-style-type: none"> Restore riparian vegetation to Class II or better. 	Partially	Replace Class I and Class II definitions, as PFC translates better to inherently reflect site conditions.	Allow long-term natural restoration of riparian zones to meet PFC.

Relevant Plan/Source	Current Planning Decision	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Redding RMP 1993	<p><u>KLAMATH MANAGEMENT AREA</u> Management Objectives <i>Upper Klamath River:</i></p> <ul style="list-style-type: none"> Improve the condition of riparian vegetation to Class II or better. 	Partially	Replace Class I and Class II definitions, as PFC translates better to inherently reflect site conditions.	Promote PFC conditions.
Redding RMP 1993	<p><u>KLAMATH MANAGEMENT AREA</u> Management Objectives <i>Shasta Valley Wetlands:</i></p> <ul style="list-style-type: none"> Provide long-term protection and enhancement of native wetlands. 	Yes	Remains relevant.	Carry forward.
Redding RMP 1993	<p><u>KLAMATH MANAGEMENT AREA</u> Management Actions <i>Shasta and Klamath River Canyon:</i></p> <ul style="list-style-type: none"> Develop an integrated resource activity plan for the Klamath River below RM 181 and the Shasta River Canyon that identifies high priority land acquisitions, designates appropriate roads and trails for recreational access, identifies management facility needs to protect the ACEC and riparian zone, and encourages cooperative actions with adjacent landowners. 	Partially	Not implemented to date.	Carry forward.

Relevant Plan/Source	Current Planning Decision	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Redding RMP 1993	<p><u>KLAMATH MANAGEMENT AREA</u> Management Actions <i>Shasta Valley Wetlands:</i></p> <ul style="list-style-type: none"> Develop an integrated resource activity plan for the Shasta Valley Wetlands if BLM acquires available privately owned unimproved lands within the area. The activity plan will be developed in cooperation with CDFW, Caltrans, Siskiyou County, and interested organizations/individuals. The plan will identify forage allocation and DPCs for domestic and native grazing, acquisition/cooperative management needs, a network of management facilities to protect the native wetlands, wildlife productivity targets, water quality base and target standards, and public access needs that do not adversely impact the native biota. 	Partially	See above. Lands not acquired; no plan developed.	Carry forward.
Redding RMP 1993	<p><u>TRINITY MANAGEMENT AREA</u> Management Objectives <i>Trinity River:</i></p> <ul style="list-style-type: none"> Maintain the riparian habitat in Class I or Class II condition. 	Partially	Remains relevant.	Promote and maintain PFC conditions.
Redding RMP 1993	<p><u>TRINITY MANAGEMENT AREA</u> Management Objectives <i>North of Trinity River/Deadwood/Indian Creek:</i></p> <ul style="list-style-type: none"> Maintain the riparian and fisheries habitat of anadromous fisheries streams including Canyon, Indian, and Deadwood Creeks 	Yes	Maintained	Carry forward.

Relevant Plan/Source	Current Planning Decision	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Redding RMP 1993	<p><u>TRINITY MANAGEMENT AREA</u></p> <p>Management Actions</p> <ul style="list-style-type: none"> Develop an integrated resource activity plan(s) within the area north of the Trinity River, and within the lower Indian Creek and Deadwood Creek areas. The plan will identify priority land acquisitions and will detail the DPCs for upland/riparian ecological sites reforestation needs. 	Partially	Not developed.	Carry forward.
Redding RMP 1993	<p><u>SHASTA MANAGEMENT AREA</u></p> <p>Management Objectives</p> <p>Lower Clear Creek and Mule Mountain:</p> <ul style="list-style-type: none"> Restore the quality and quantity of riparian vegetation to Class I and Class II. 	Partially	Remains relevant.	Restore quality and quantity of riparian vegetation to meet PFC.
Redding RMP 1993	<p><u>SHASTA MANAGEMENT AREA</u></p> <p>Land Use Land Use Allocation</p> <p>Lower Clear Creek and Mule Mountain:</p> <ul style="list-style-type: none"> Public land within the 100-year floodplain is withdrawn from mineral entry. This same area is open to recreational mineral collection. Mineral material disposals are not permitted within the 100-year floodplain unless such actions enhance salmonid spawning or the restoration of riparian vegetation. Public land within the 100-year floodplain is available for mineral leasing with no surface occupancy. 	Yes	Remains relevant.	Carry forward.
Redding RMP 1993	<p><u>SHASTA MANAGEMENT AREA</u></p> <p>Land Use Land Use Allocation</p> <ul style="list-style-type: none"> Protect the native plant communities and associated fauna of the area. 	Yes	Ongoing	Carry forward.

Relevant Plan/Source	Current Planning Decision	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Redding RMP 1993	<p><u>SACRAMENTO RIVER MANAGEMENT AREA</u></p> <p>Management Objectives</p> <p><i>Management Area-wide:</i></p> <ul style="list-style-type: none"> A DPC has been developed for the Sacramento River Management Area. <p><i>Sacramento Island:</i></p> <ul style="list-style-type: none"> Improve and increase the Great Valley - Valley Oak Riparian Forest. 	Partially	No on-the-ground action completed on Sacramento Island yet.	Carry forward.
Redding RMP 1993	<p><u>SACRAMENTO RIVER MANAGEMENT AREA</u></p> <p>Management Objectives</p> <p><i>Cottonwood Creek and Sacramento River parcels:</i></p> <ul style="list-style-type: none"> Protect the riparian values of these scattered public lands. 	Yes	Ongoing	Carry forward.
Redding RMP 1993	<p><u>SACRAMENTO RIVER MANAGEMENT AREA</u></p> <p>Management Objectives</p> <p><i>Bend Area:</i></p> <ul style="list-style-type: none"> Protect existing and improve degraded riparian vegetation to Class I and II. 	Partially	Ongoing	Restore Functioning At Risk riparian vegetation to PFC conditions. Maintain PFC riparian vegetation.
Redding RMP 1993	<p><u>SACRAMENTO RIVER MANAGEMENT AREA</u></p> <p>Management Objectives</p> <ul style="list-style-type: none"> Enhance wetlands (native and human made) and dependent species. 	Partially	Ongoing	Carry forward
Redding RMP 1993	<p><u>ISHI MANAGEMENT AREA</u></p> <p>Management Objectives</p> <p><i>Battle Creek (below Manton Road):</i></p> <ul style="list-style-type: none"> Maintain and improve the quality and quantity of riparian vegetation. 	Partially	Ongoing	Carry forward.

Relevant Plan/Source	Current Planning Decision	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Redding RMP 1993	<p><u>ISHI MANAGEMENT AREA</u> Management Objectives <i>Forks of Butte Creek:</i></p> <ul style="list-style-type: none"> • Improve the quality and quantity of riparian vegetation to Class I. 	Partially	Ongoing	Restore quality and quantity of riparian vegetation to meet PFC.
Redding RMP 1993	<p><u>ISHI MANAGEMENT AREA</u> Management Objectives <i>Upper Ridge Nature Preserve:</i></p> <ul style="list-style-type: none"> • Protect the mixed evergreen, riparian, and oak woodland vegetation as well as the associated fauna. 	Yes	An urban park.	Carry forward

Potential New Decisions for the RMP Revision

Prevent small and large-scale vegetation habitat fragmentation in order to maintain native landscapes that provide connectivity, ecological function, and resilience to disturbance, as well to support vegetation health, pollination, reproduction, gene flow, adaptation, and healthy population sizes.

Comply with the National Seed Strategy for Rehabilitation and Restoration 2015-2020 (USDI 2015).

Comply with the National Strategy to Promote the Health of Honeybee and Other Pollinators (White House 2015).

To the extent practicable, management emphasis should work to provide landscape connectivity for plant communities to expand into potential suitable habitat as informed by climate trajectories and scientific and relevant modeling results.

Management practices that may enhance ecosystem resilience and sustainability by removing or reducing other, non-climate stressors should be considered and applied wherever possible. Where possible, consider vegetation management actions that reduce the likelihood of catastrophic wildfire that could drastically alter the type or trajectory of vegetation assemblages; examples might be reductions of stem densities of smaller fire-intolerant trees and increased use of wildland fire to improve forest stand health.

Identify areas of conservation emphasis where intact natural habitat areas correspond with essential corridors of connectivity in support of species migration, resilience, and diversity. Prevent further fragmentation and support natural landscape connectivity.

Identify broad structural vegetative cover objectives in support of vegetation community resilience, diversity, and their role in carbon sequestration.

Identify pristine, un-fragmented, or intact vegetation communities. Once identified, work to reduce non-climate related stressors where possible such that they do not become the vulnerable or critically imperiled plant communities of the future.

Prioritize critically imperiled vegetation communities, such as valley oak riparian forests, for conservation and preservation. Coordinate with various landowners and stakeholders to improve the connectivity and resilience of these ecosystems.

Comply with the ROD for Vegetation Treatments Using Herbicides on Bureau of Land Management Lands in 17 Western States PEIS (USDI BLM 2007b).

Comply with the Final Programmatic Environmental Impact Statement for Vegetation Treatments using Aminopyralid, Fluroxypyr, and Rimsulfuron on Bureau of Land Management Lands in 17 Western States (USDI BLM 2016b). This will allow BLM FOs to use these active ingredients in their vegetation as also approved for use by the State of California.

Areas of Relative Ecological Importance to Guide Land Uses and Management

The factors below should be considered when making management decisions that affect vegetation such as ROWs, grazing allocations, land disposals, timber harvest, or the development of new recreation areas.

Regional and Global Biodiversity

Areas of vegetation that contribute to biodiversity on a regional or global scale should be managed to maintain and/or enhance those high-quality conditions. Riparian areas and serpentine soils are widely recognized for their important contributions to biodiversity in the arid West.

The Klamath Mountains and Sierra Nevada ecoregions are the most plant biodiverse areas in the planning area; special consideration should be made to ensure habitat connectivity and prevention of fragmentation to support health ecological conditions and gene flow.

Pristine Vegetative Communities

Areas that support pristine or intact, un-fragmented vegetation should be managed to maintain these qualities. Areas considered as high-quality examples of common vegetation communities should be conserved to prevent them from becoming vulnerable to critically imperiled communities of the future.

Species Migration Corridors

Corridors that allow for upward, downward, or trans-regional migration of species should be maintained or re-established where possible and managed for high levels of vegetation health. Fragmentation of bio-diverse, pristine, or otherwise unique vegetation species migration corridors should be discouraged.

4.2.15 Visual Resources

Current Management Direction

Neither the 1993 Redding RMP nor the 1992 Arcata RMP and 1995 Arcata RMP Amendment identify visual resource values from a comprehensive inventory process. These planning documents also do not establish VRM management classes, which are needed to set the standards for how the inventoried visual values will be managed. Instead, both FOs evaluated visual resources as part of resource management activity and project planning. **Table 4-13** identifies existing land use plan decisions and opportunities in the Redding and Arcata FOs to achieve desired conditions for visual resources.

Table 4-13. Ability of Current Management to Achieve Desired Future Conditions for Visual Resources

Relevant Plan/Source	Current Planning Decision	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Arcata RMP 1992	None	No	VRM Management Classes have never been established for the public lands within the Arcata FO. BLM policy states that designated wilderness, WSAs, and wild sections of designated WSRs are VRM Class I. The VRI for both Arcata and Redding has been completed.	Establish VRM classes to provide visual management standards for BLM-administered lands within the planning area. Maintain, on a continuing basis, an inventory of visual values on all public lands and protect visual values on public lands.
Redding RMP 1993	Management Actions <ul style="list-style-type: none"> VRM prescriptions will be limited to only those areas assigned VRM Class I and Class II. Prescriptions will not be assigned to areas where lower VRM classes have been determined. 	Partially	<p>There was no comprehensive VRI or establishment of VRM classes in the 1993 RMP. VRM prescriptions were limited to Class I and Class II.</p> <p>A comprehensive VRI (recently completed) and subsequent establishment of VRM classes in the RMP will allow for more efficient management of visual resources at the landscape and project levels.</p>	Establish VRM classes to provide visual management standards for BLM-administered lands within the planning area. Maintain, on a continuing basis, an inventory of visual values on all public lands and protect visual values on public lands.

Potential New Decisions for the RMP Revision

A VRI of the planning area was recently completed in June 2015 under a contract by Otak, Inc (2015a, 2015b). The inventory methodology and approach followed BLM Handbook H-8410-1. All BLM-administered lands, including subsurface minerals and split estate, were inventoried. This inventory, along with considerations of other resources, will be the basis for establishing VRM management classes in the upcoming RMP.

For the planning area, establish VRM Classes for all BLM public lands within the planning area.

Areas of Relative Ecological Importance to Guide Land Uses and Management

Special areas such as Wilderness, WSAs, and wild sections of WSRs, are generally given a VRM Class I, with the objective to preserve the existing character of the landscape.

Public land users place high value on the visual scenery of areas such as recreational sections of WSRs, scenic highways and byways, popular recreation areas, historic trails, and certain urban interface areas. These areas typically have high scenic quality and high visual sensitivity and will need to be considered thoroughly in establishing VRM classes.

For the planning area, visual resources inventoried as either Class I or II should be given more intense evaluation regarding their VRM Class and in establishing land use decisions in these areas.

4.2.16 Water Resources

Current Management Direction

Table 4-14 identifies existing land use plan decisions and opportunities in the Redding and Arcata FOs to achieve desired conditions for water resources.

Table 4-14. Ability of Current Management to Achieve Desired Future Conditions for Water Resources

Relevant Plan/Source	Current Planning Decision	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Northwest Forest Plan 1994	<p>Management Objectives</p> <ul style="list-style-type: none"> Maintain and restore water quality necessary to support healthy riparian, aquatic, and wetland ecosystems. Water quality must remain within the range that maintains the biological, physical, and chemical integrity of the system and benefits survival, growth, reproduction, and migration of individuals composing aquatic and riparian communities. Maintain and restore the timing, variability, and duration of floodplain inundation and water table elevation in meadows and wetlands. 	Yes		
Northwest Forest Plan 1994	<p>Management Objectives</p> <ul style="list-style-type: none"> In Riparian Reserves, water drafting sites should be located and managed to minimize adverse effects on riparian habitat and water quality, as consistent with Aquatic Conservation Strategy objectives. 	Yes	NMFS water drafting standards more specific with regards to screening and flow requirements.	

Relevant Plan/Source	Current Planning Decision	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Northwest Forest Plan 1994	<p>Management Objectives</p> <ul style="list-style-type: none"> • Tier I Key Watersheds: For hydroelectric and other surface water development proposals, require in-stream flows and habitat conditions that maintain or restore riparian resources, favorable channel conditions, and fish passage. Coordinate this process with the appropriate state agencies. During relicensing of hydroelectric projects, provide written and timely license conditions to the FERC that require flows and habitat conditions that maintain or restore riparian resources and channel integrity. Coordinate relicensing projects with the appropriate state agencies. • For all other watersheds: For hydroelectric and other surface water development proposals, give priority emphasis to in-stream flows and habitat conditions that maintain or restore riparian resources, favorable channel conditions, and fish passage. Coordinate this process with the appropriate state agencies. During relicensing of hydroelectric projects, provide written and timely license conditions to FERC that emphasize in-stream flows and habitat conditions that maintain or restore riparian resources and channel integrity. Coordinate relicensing projects with the appropriate state agencies. 	Yes	Consider more specific requirements for watersheds where information is available.	
Northwest Forest Plan 1994	<p>Management Objectives</p> <ul style="list-style-type: none"> • Locate water drafting sites to minimize adverse effects on stream channel stability, sedimentation, and in-stream flows needed to maintain riparian resources, channel conditions, and fish habitat. 	Yes	NMFS water drafting standards more specific with regards to screening and flow requirements.	
Arcata RMP 1992	<p>Management Objectives</p> <ul style="list-style-type: none"> • Decisions regarding soil and water objectives will not be made in this plan. BMPs such as the operating parameters for the SYU 13 and Yokayo Grazing Management Records of Decision and the NRCS Soil Survey Guidelines will determine general soil and water objectives. 	Partially	Many soil and water objectives are subject to regulation under the CWA and other regulatory and recovery guidance. See soils section for similar measures.	Need to identify more specific water objectives, particularly in light of recent and projected future drought.

Relevant Plan/Source	Current Planning Decision	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Proposed Redding RMP 1992	Management Objectives <ul style="list-style-type: none"> Hydroelectric and water storage: Potential waterpower/storage reservoir sites under a land withdrawal will continue to be managed for waterpower values. Exceptions include withdrawals for waterpower or storage on streams that become components of the National WSR System or if public lands are transferred from federal jurisdiction. In these instances, any existing withdrawals will be recommended for revocation. 			
Proposed Redding RMP 1992	Management Objectives <ul style="list-style-type: none"> Monitoring is conducted using the minimum monitoring standards established by the Ukiah District in the document Resource Monitoring in the Ukiah District 1988. It contains the criteria and guidelines for determining where monitoring should be emphasized and the methodology. 			
Redding RMP 1993	Management Objectives <ul style="list-style-type: none"> Potential waterpower/storage reservoir sites under a land withdrawal will continue to be managed for water power values. Exceptions include withdrawals for waterpower or storage on streams that become components of the National WSR System or if public lands are transferred from federal jurisdiction. In these instances, any existing withdrawals will be recommended for revocation. 	Yes		Need to identify specific locations
Redding RMP 1993	Management Objectives <ul style="list-style-type: none"> AMPs will include BMPs as called for in Section 208 of the CWA and as described in the 208 Water Quality Management Report. 	Partially		Identify new BMP's

Relevant Plan/Source	Current Planning Decision	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Redding RMP 1993	<p>Management Objectives</p> <ul style="list-style-type: none"> The BLM objective for water quality is to ensure that all waters on public land meet or exceed federal and state water quality standards. Generally, BLM deals with nonpoint sources of pollution, which are addressed in Section 208 of the Federal Water Pollution Control Act Amendments of 1972 (PL-92-500) as amended by the Water Quality Act of 1987 (PL 100-4). The California State Water Resources Control Board has regulatory responsibility for water quality through its Regional Boards (Central Valley and North Coast within the Redding Resource Area). Additionally, the state may develop agreements with agencies like BLM for administration of water quality issues on the lands they administer. The BLM coordinates with the Regional Boards to address water quality issues. Monitoring is conducted using the minimum monitoring standards established by the Ukiah District In the document Resource Monitoring in the Ukiah District 1988. It contains the criteria and guidelines for determining where monitoring should be emphasized and the methodology. Impacts on water quality are prevented or reduced through the application of specific mitigation measures identified in project planning and environmental review. Where feasible, watershed improvement projects would be implemented to increase ground cover and ultimately reduce erosion, sediment yield and other water quality contaminants from public land. 	Yes		
Redding RMP 1993	<p><u>KLAMATH MANAGEMENT AREA</u> Management Objectives</p> <p><i>Shasta Valley Wetlands:</i></p> <ul style="list-style-type: none"> Acquire available unimproved lands within the area. Priority is given to land containing existing or historic native wetlands. 	Yes		Continue identifying lands for acquisition.
Redding RMP 1993	<p><u>SHASTA RIVER MANAGEMENT AREA</u> Management Objectives</p> <ul style="list-style-type: none"> Improve water quality in the Shasta River basin. 	Yes		
Redding RMP 1993	<p>Management Objectives</p> <p><i>Bend Area:</i></p> <ul style="list-style-type: none"> Enhance wetlands (native and human made) and dependent species. 	Yes		
Redding RMP 1993	<p>Management Objectives</p> <ul style="list-style-type: none"> Enhance water quality of Big Chico Creek. 	Yes		

Relevant Plan/Source	Current Planning Decision	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Redding RMP Lands Amendment 2005	<p>Management Objectives</p> <ul style="list-style-type: none"> As stated in the RMP, before land can be disposed of by any method, BLM must complete an evaluation for significant cultural resources, T&E plants and animals, mineral potential, floodplain/flood hazards, hazardous waste, and prime or unique farmland. 			

Potential New Decisions for the RMP Revision

- Acquire water rights.
- Develop guidance for new water ROWs.
- Ensure land management decisions consider stream flows in project design and implementation.
- Develop opportunities for improving stream flows, particularly summer low flows, through project implementation, collaboration and education.
- Develop management alternatives that promote hydrologic resilience and adaptive capacity in the face of climate change.
- Ensure vegetation treatments comply with the pending statewide water quality order for vegetation treatments from the State Water Resources Control Board (Vegetation Treatment General Order) to incorporate BMPs and protection measures. This would be done to avoid impacts on water quality from fuels management, post-fire salvage, and prescribed burns. The increased pace and scale of vegetation treatments pursuant to California State Executive Order B-52-18 could affect water quality. The State Water Resources Control Board is developing a water quality order to ensure vegetation treatments are conducted in a way that protects water quality.
- Ensure land management decision-makers consider the nonpoint source pollution permitting program under the State Water Resources Control Board, as well as the BLM's pending BMP document to address nonpoint source pollution. Develop management opportunities to reduce sediment loading associated with fires.
- Determine areas where coordination with the local groundwater sustainability agencies may be necessary to determine if groundwater withdrawal decision-makers consider local groundwater sustainability plans, pursuant to the Sustainable Groundwater Management Act (SGMA) of 2014.
- Consider the Klamath dam removal project and associated impacts on water quality and quantity.

Areas of Relative Ecological Importance to Guide Land Uses and Management

Identify watersheds where summer low flows are critical issue for fish:

- Mattole River
- Eel River
- Cottonwood Creek

4.2.17 Wildland Fire Management

Current Management Direction

Table 4-15 identifies existing land use plan decisions and opportunities in the Redding and Arcata FOs to achieve desired conditions for wildland fire management.

Table 4-15. Ability of Current Management to Achieve Desired Future Conditions for Wildland Fire Management

Relevant Plan/Source	Current Planning Decision	Responsive to Current Issues?	Remarks (Rationale)	Opportunities for Change
Arcata RMP 1992	<ul style="list-style-type: none"> Due to the scattered nature, remoteness, and the relative inaccessibility of the public lands, the CDF is responsible for general fire suppression. Deviations from CDF's fire policy will be made on a site-specific basis (Wilderness, ACECs). Prescribed fire is generally allowed and will be addressed on a site-specific basis through the demands of resource objectives. 	Partially	<p>CAL FIRE and BLM's suppression policies in sensitive areas have evolved since the development of this document. Approval for heavy equipment use in wilderness areas is at the discretion of the BLM State Director or delegated proxy. Approval for heavy equipment use in ACECs is at the discretion of the Field Manager or delegated proxy.</p> <p>Beneficial unplanned fire is rare since most cooler ignitions are easily suppressed limiting understory cool burns on the landscape, while most hotter ignitions are difficult to suppress and occur with much greater frequency and proportion of the landscape. The latter also have much greater adverse suppression impacts. Planned prescribed fires are used but the scale is not sufficient to maintain desirable landscape conditions.</p>	<p>Apply cooperative decision-making for suppression tactics between CAL FIRE and the BLM in all ACECs and pre-determined sensitive areas. Ensure BLM is consulted on heavy equipment use and gives authorization for cross-country dozer use prior to engagement.</p> <p>Programmatic NEPA to cover WUI or other high priority fuels treatment areas.</p> <p>Consider the use of prescribed fire as a tool to meet resource management objectives in all areas, unless otherwise restricted within this RMP.</p>

Relevant Plan/Source	Current Planning Decision	Responsive to Current Issues?	Remarks (Rationale)	Opportunities for Change
Arcata RMP 1992	<p><u>BUTTE CREEK MANAGEMENT AREA</u></p> <ul style="list-style-type: none"> Fire, disease, and insects will be controlled to prevent spreading to other lands, and to protect the existing forest. 	Partially	Catastrophic fire is still a potential. Impacts on the resource and adjacent private property will remain under extreme event scenarios. Funding is limited for fuels management.	<p>Programmatic NEPA to cover WUI or other high priority fuels treatment areas; consider allowing unplanned fires in suitable areas to attain resource benefits.</p> <p>Allow the use of prescribed fire as a tool to meet resource management objectives in all areas, unless otherwise restricted within this RMP.</p>
Arcata RMP 1992	<p><u>LACKS CREEK MANAGEMENT AREA</u></p> <ul style="list-style-type: none"> Prepare a watershed activity plan to reflect fire management, including suppression. 	Yes	Completed.	
Arcata RMP 1992	<p><u>LACKS CREEK AND RED MOUNTAIN MANAGEMENT AREAS</u></p> <ul style="list-style-type: none"> Carry out forest management activities that improve, create or increase wildlife habitat and biodiversity, and provide protection to the forest resource (insects, disease, and fire). 	Partially	Catastrophic fire is still a potential. Impacts on the resource and adjacent private property will remain under extreme event scenarios. Funding is limited for fuels management.	<p>Programmatic NEPA to cover WUI or other high priority fuels treatment areas; consider allowing unplanned fires in suitable areas to attain resource benefits.</p> <p>Allow the use of prescribed fire as a tool to meet resource management objectives in all areas, unless otherwise restricted within this RMP.</p>

Relevant Plan/Source	Current Planning Decision	Responsive to Current Issues?	Remarks (Rationale)	Opportunities for Change
Arcata RMP Forest Plan Amendment 1995	<ul style="list-style-type: none"> The CDF is responsible for fire suppression on BLM-administered lands within the plan amendment area. Deviations from the existing suppression policy will be made on a site-specific basis for wilderness, ACECs, and NWFP-designated areas. Fire management evaluation and planning are required components of watershed analyses and LSR management assessments; until these are completed, fire prescriptions and suppression activities will be guided by the management area RCOs, existing activity plans, and NWFP land allocation objectives and standards and guidelines. Prescribed fire is generally allowed if consistent with RCOs and NWFP standards and guidelines. The use of prescribed fire to achieve management objectives would be subject to development of a watershed analysis, prescribed fire plan, and NEPA review prior to initiating the action. Specific decisions regarding the use of prescribed fire will not be made in the selected plan amendment. 	Partially	Beneficial unplanned fire is rare since most cooler ignitions are easily suppressed limiting understory cool burns on the landscape, while most hotter ignitions are difficult to suppress and occur with much greater frequency and proportion of the landscape. The latter also have much greater adverse suppression impacts. Planned prescribed fires are used but the scale is not sufficient to maintain desirable landscape conditions.	<p>Apply cooperative decision-making for suppression tactics between CAL FIRE and the BLM in all ACECs and pre-determined sensitive areas. Ensure BLM is consulted on heavy equipment use and gives authorization for cross-country dozer use prior to engagement.</p> <p>Programmatic NEPA to cover WUI or other high priority fuels treatment areas.</p> <p>Allow the use of prescribed fire as a tool to meet resource management objectives in all areas, unless otherwise restricted within this RMP.</p>
Arcata RMP Forest Plan Amendment 1995	<p>COVELO VICINITY MANAGEMENT AREA</p> <ul style="list-style-type: none"> Re-establish ecological processes such as fire to maintain terrestrial habitats emphasizing management of brushlands to maintain diversity and forest communities to manage fir encroachment and maintain pine component. 	Partially	Catastrophic fire is still a potential. Impacts on the resource and adjacent private property will remain under extreme event scenarios. Funding is limited for fuels management.	<p>Programmatic NEPA to cover WUI or other high priority fuels treatment areas, consider allowing unplanned fires in suitable areas to attain resource benefits.</p> <p>Allow the use of prescribed fire as a tool to meet resource management objectives in all areas, unless otherwise restricted within this RMP.</p>

Relevant Plan/Source	Current Planning Decision	Responsive to Current Issues?	Remarks (Rationale)	Opportunities for Change
Redding RMP 1993	<p>AREA-WIDE</p> <ul style="list-style-type: none"> Any fire occurring on public lands would be suppressed. ACECs, special RMAs, Wilderness Areas, WSAs, WSR corridors, and certain other public lands will require modified suppression techniques to protect the known values. Vegetation management will occur as a secondary benefit or impact in many BLM activities such as grazing, timber harvest, wetland construction, firefighting, mining and special status species management. The impacts or benefits to vegetation will either be insignificant or addressed in the site-specific EA for the parent action. 	Partially	Beneficial unplanned fire is rare since most cooler ignitions are easily suppressed limiting understory cool burns on the landscape, while most hotter ignitions are difficult to suppress and occur with much greater frequency and proportion of the landscape. The latter also have much greater adverse suppression impacts. Planned prescribed fires are used but the scale is not sufficient to maintain desirable landscape conditions. CAL FIRE policy prohibits managing wildland fire for resource benefit.	<p>Develop programmatic NEPA to cover WUI or other high priority fuels treatment areas.</p> <p>Develop areas where unplanned fires in suitable areas are managed to attain resource benefits.</p> <p>Allow the use of prescribed fire as a tool to meet resource management objectives in all areas, unless otherwise restricted within this RMP.</p>

Potential New Decisions for the RMP Revision

Areas of increasing visitor use and increasing population into the WUI will increase potential wildfire ignitions and potential values at risk. Increased visitation also will require greater attention to wildfire prevention, mitigation, and education, wildfire suppression response, hazardous fuels management, and community fire safe planning.

The following section outlines potential new goals, objectives, and management decisions that could be incorporated in the planning process.

Common to All Areas:

General

The RMP should show the management objectives alignment with national policy, including how each relates to the National Strategy goals and the Western Region Action Plan.

Improve Fire Data collection and reporting

The BLM has an opportunity to move away from using fire severity mapping as the only way to determine where to locate infrastructure and consider using overlapping fire perimeters to guide the location of future infrastructure. This would be based on the concept of avoiding areas that are subject to frequent fire ignitions.

Vegetation Management and Fuels Reduction

Catastrophic fire remains a key issue for BLM planning. Impacts on the resource and adjacent private property will remain, with the potential for continued extreme wildfire scenarios. RMP planning should continue to establish hazardous fuel treatments to curtail catastrophic fires and to conduct limited prescribed fire during fall after the initial rains. These limited prescribed fires would mitigate potential uncharacteristically severe wildfire behavior. They also would return some areas to conditions similar to those likely present during the mid-nineteenth century, before grazing, fire restrictions, and infestations of noxious weeds.

- Increase fuels management on federal lands:
 - Planning level management direction is needed that prioritizes vegetation management and hazardous fuel reduction to mimic historical fire return intervals and historical vegetation structure and composition. This information can serve as a basis for planning annual vegetation and fuels management and for determining required funding. In the planning process the BLM should identify target vegetation communities and develop adaptive management for those communities, based on changing conditions, including climate change.
 - Additional specific fuels and vegetation management direction is needed to address fire risk and hazard in areas with special management, including special designations, such as WSAs, ACECs, and Wilderness.
 - In the RMP the BLM should also include fire management, in coordination with other resource disciplines. This would provide fuels and vegetation treatments, not only for catastrophic wildfire mitigation but also for improving habitat and implementing species-specific protections, such as for spotted owl; addressing SOD; and minimizing air quality impacts from wildland fire over the long term.

- In the RMP the BLM should identify use of the National Fire Plan Operations and Reporting System (NFPORS).
- In the RMP the BLM should prioritize development of a programmatic EA to facilitate and address hazardous fuel reduction needs. This would be done to aid in protecting adjacent communities and managing risk in WUIs or other high priority fuels treatment areas.
- ROW Management
 - In the planning process, the BLM should also address wildfire-utility concerns and should coordinate with utility providers by requiring ROW clearance, vegetation management practices, and operations and maintenance and inspection protocols.
- Assist Communities at Risk/Increase Fuels Management on Private Land
 - In the RMP the BLM should include management direction to promote community and homeowner engagement in wildfire mitigation and involvement in planning. It also should include implementing actions to mitigate the risk posed by wildfire to communities and homes built within the WUI.
 - In the RMP the BLM should emphasize proactive wildfire risk mitigation actions, such as CWPPs, hazard mitigation planning, and other methods of comprehensive community planning where new development and expansion into wildland fuels is occurring.
 - In the RMP the BLM should bolster language on partnerships and agreements with other response agencies, such as CAL FIRE, in alignment with the CAL FIRE Strategic Plan (CAL FIRE 2019).

Fire Management and Response

- In the RMP the BLM should allow the use of prescribed fire as a tool to meet resource management objectives in all areas, unless otherwise restricted.
- In the RMP the BLM should identify areas where unplanned fires in suitable areas are managed to attain resource benefits. Under appropriate conditions, the management of fire to meet resource management objectives allows the BLM to reintroduce wildfire where it can provide natural benefit to resources and align the BLM fire management program with the National Cohesive Wildland Fire Management Strategy goal to restore and maintain landscapes.
- In the RMP the BLM should identify specific fire management and response direction for areas with special management, such as WSAs, ACECs, and Wilderness (see also area-specific management, below). This would include reacting to unplanned fires in those areas, including planned coordination with CAL FIRE.
- In the RMP the BLM should address coordination needs with utility providers regarding infrastructure protection and post-fire stabilization.
- In the RMP the BLM should incorporate new spatial fire planning platforms and decision support tools that drive fire management planning. This would include the Wildland Fire Decision Support System (WFDSS) and the Interagency Fuels Treatment Decision Support System (IFTDSS). This could also include other new fire management and suppression approaches, such as using decision support tools for large fires and acknowledging the renewed emphasis on pre-fire planning, like the use of Potential Operational Delineations (PODs).

- The RMP planning process also offers an opportunity to identify and prioritize processes or tools that could be used to increase situational awareness ahead of and during fire seasons. These could include using camera systems or integrating other tools into the existing programs.
- Post-fire Planning
 - In the RMP the BLM should consider post-fire impacts on resources, including erosion, infrastructure, and water supply; prioritize pre-fire planning for post-fire response; and identify and prioritize areas that have heightened vulnerability to post-fire flooding, debris flow, sediment transport, and related impacts on critical infrastructure. Consideration of post-fire impacts should include those from climate change.

Area-specific Management

ACECs: Apply cooperative decision-making for suppression tactics between CAL FIRE and the BLM in all ACECs and predetermined sensitive areas. Ensure that the BLM is consulted on heavy equipment use and that it pre-authorizes cross-country dozer use.

Grass Valley Watershed: Potential for unplanned fire to be managed/allowed to burn and achieve management objectives in Direct Protection Area that is under NPS. Otherwise, all wildfires will be suppressed, regardless of cause, while employing suppression techniques that result in the least amount of resource damage to the underlying granitic soils. The use of heavy mechanical equipment (dozers) is restricted to existing roads to ensure passage for suppression equipment and crews unless otherwise authorized by the Redding BLM or acting representative. Cross-country dozer operations are permitted only with prior BLM authorization.

Swasey Recreation Area: The BLM recognizes that extreme fire conditions exist within the Swasey ACEC. The incident commander will use appropriate suppression action required to mitigate the threat to life or private property. When possible, use MIST within the Swasey ACEC (NWCG Incident Response Pocket Guide - PMS #461) to protect sensitive cultural resources.

Bend Recreation Area: Whenever possible, use MIST. The use of heavy mechanical equipment (dozers) is restricted to existing roads for suppression operations and to ensure passage for suppression equipment and crews unless otherwise authorized by the Redding BLM Office Manager or Acting. Under extreme conditions, the incident commander, at his or her discretion, has the authority to use appropriate suppression action required to mitigate the threat to life or private property. Otherwise, cross-country dozer operations are permitted only with BLM authorization.

Planning level management should be developed for BLM-administered lands near King Range NCA/wilderness, including use of wildfire for resource benefit. This would include consideration of “confine and contain” as an option to “total suppression at all costs.” The BLM could consider federal-first protection in and near King Range to allow for more options for fire management, including wildfire for resource benefit. **Wilderness and WSAs:**

Wilderness and WSAs are managed for wildland fire in accordance with applicable laws and regulations. Specifically, when fighting wildfires in wilderness and WSAs:

- The use of bulldozers for wildland fire suppression requires BLM State Director authorization, either directly or through delegation to another authorized official. The Agency Administrator

Representative will work through the local Agency Administrator to contact the State Director for authorization if heavy equipment is required for fire suppression in wilderness.

- Aircraft, motorboats, motorized vehicles, and mechanized equipment may only be used in special or emergency cases involving public welfare of wilderness visitors, protection of wilderness values, or situations that threaten life, property, and public welfare. Approval from the Agency Administrator Representative is required for use of aircraft, motorboats, motorized vehicles, chain saws and other mechanized equipment.
- Suppression actions must be executed to minimize surface disturbance and alterations of the natural landscape. Methods and equipment that least alter the landscape or disturb the land surface are considered the best.
- Suppression structures and improvements must be located outside the wilderness, except those that are the minimum necessary to protect life, property, public welfare, and wilderness objectives.
- Use MIST, as described in Incident Response Pocket Guide (pg. 91; 2014 version).
- All equipment used for fire suppression activities must be removed upon completion of use and all sites must be rehabilitated to as natural a state as possible.
- Helibases, helispots, and camps requiring motorized access should be located outside of the wilderness area unless authorized by the Agency Administrator Representative. Where possible, avoid establishing spike or coyote camps in wilderness and WSAs.
- Refer to FMPs for additional special considerations, including specific MIST guidelines for the area under consideration.

Agencies should avoid aerial application of retardant or foam within 300 feet of waterways and any ground application of wildland fire chemicals into waterways. A waterway is defined as any body of water—including lakes, rivers, streams and ponds—whether or not it contains aquatic life. This policy does not require the helicopter or air tanker pilot-in-command to fly in such a way as to endanger his or her aircraft, other aircraft, or structures or compromise ground personnel safety.

If any fire chemicals are aerially applied within 300 feet of a waterway, or ground applied or spilled with the potential to enter a waterway, incident management and the Agency Administrator will then complete and process the *Wildland Fire Chemical Reporting Form* (NIFC Form #9210-18) and report the occurrence to Wildland Fire Chemicals Systems in Missoula, Montana, 406-329-3900, or to the individuals listed on the Wildland Fire Chemicals Systems website: www.fs.fed.us/rm/fire.

4.2.18 Wildlife/Special Status Wildlife

Current Management Direction

Emphasis areas include NSO habitat, MAMU habitat, wetland habitat, and big game habitat. Old-growth and mature forest characteristics in the NWFP area are an umbrella way of protecting habitat for multiple key species that are found in that habitat. BLM sensitive species are principally managed according to BLM Handbook 6840. Applicable land use plans with management for sensitive species are listed in **Table 4-16**, below.

Table 4-16. Ability of Current Management to Achieve Desired Future Conditions for Wildlife and Special Status Wildlife

Relevant Plan/Source	Current Planning Decision	Responsive to Current Status?	Remarks or Rationale	Opportunities for Change
Northwest Forest Plan 1994	<p>NCIP AREA WIDE</p> <ul style="list-style-type: none"> • Amended the Arcata and Redding plans within the range of the NSO including land use allocations and standard and guidelines. <ul style="list-style-type: none"> ◦ ESA requires consultation with USFWS for actions that may impact T&E species. ◦ BLM must carry out management consistent with multiple use for conservation of special status species and their habitats and must ensure that actions authorized, funded, or carried out do not contribute to the need to list any species as threatened or endangered. Any federally authorized, funded, or implemented actions that may affect federally listed or proposed species are reviewed in coordination with USFWS. ◦ Pre-project protocol surveys for MAMU. ◦ Protect 0.5-mile radius around existing and recruitment MAMU habitat. ◦ Retain 100 acres of the habitat around NSO nest sites in matrix and adaptive management areas. Timber management within the retained areas should comply with LSR guidelines. 	Yes	N/A	N/A
Northwest Forest Plan 1994	<ul style="list-style-type: none"> • Designated most of the Arcata FO and two parcels in the Redding FO as LSRs. • Issued standards and guidelines for forest management and monitoring by amending the Arcata and Redding RMPs. • Established pre-project survey requirements for MAMUs and buffer zones around MAMU occupied habitat and known NSO territories. • Established buffers and protection zones for great gray owls (<i>Strix nebulosa</i>). <ul style="list-style-type: none"> ◦ Established guidance for management of Siskiyou Mountain salamander and Del Norte salamander. 	Yes	N/A	N/A

Relevant Plan/Source	Current Planning Decision	Responsive to Current Status?	Remarks or Rationale	Opportunities for Change
Northwest Forest Plan Survey and Manage Amendment 2001	<p>Rare Relative Rarity</p> <ul style="list-style-type: none"> • Pre-Disturbance Surveys Practical: Category 1A – 57 Species <ul style="list-style-type: none"> ◦ Manage All Known Sites ◦ Pre-Disturbance Surveys ◦ Strategic Surveys • Pre-Disturbance Surveys Not Practical: Category 1B – 222 Species <ul style="list-style-type: none"> ◦ Manage All Known Sites ◦ N/A ◦ Strategic Surveys • Status Undetermined: Category 1E – 22 Species <ul style="list-style-type: none"> ◦ Manage All Known Sites ◦ N/A ◦ Strategic Surveys <p>Uncommon Rarity</p> <ul style="list-style-type: none"> • Pre-Disturbance Surveys Practical: Category 1C – 10 Species <ul style="list-style-type: none"> ◦ Manage High-Priority Sites ◦ Pre-disturbance Surveys ◦ Strategic Surveys • Pre-Disturbance Surveys Not Practical: Category 1D – 14 Species⁴ <ul style="list-style-type: none"> ◦ Manage High-Priority Sites ◦ N/A ◦ Strategic Surveys • Status Undetermined: Category 1F – 21 Species⁵ <ul style="list-style-type: none"> ◦ N/A ◦ N/A ◦ Strategic Surveys 	Yes	Limited occurrence in the Arcata FO. Ongoing implementation in the Redding FO.	N/A
Northwest Forest Plan Survey and Manage Amendment 2001	<ul style="list-style-type: none"> • Updated guidance for bat roosts and cavity nesting birds. <ul style="list-style-type: none"> • Instituted survey guidelines for species survey and manage species identified in the NWFP. 	Yes	N/A	N/A

Relevant Plan/Source	Current Planning Decision	Responsive to Current Status?	Remarks or Rationale	Opportunities for Change
Arcata RMP 1992	<p>PLANNING AREA WIDE</p> <ul style="list-style-type: none"> • Contains planning decisions amended for lands affected by the NWFP: <ul style="list-style-type: none"> ◦ Continue avoiding jeopardizing the existence of any federally listed or state listed or proposed species, actively promote species recovery, and work to continue to improve the status of candidate and sensitive species. ◦ The NSO is federally listed as threatened. Management actions will comply with the protective measures of the Final Draft Recovery for the NSO (USFWS 1992). A new recovery plan was published in 2011 (USFWS 2011b). ◦ The American peregrine falcon is federally listed as endangered. Management actions will comply with the Pacific States Peregrine Falcon Recovery Plan protection measures (USFWS 1982). Peregrine falcons were delisted in 1999 (USFWS 1999). ◦ The MAMU is federally listed as a threatened species. Management actions will comply with the recovery plan completed in 1997 (USFWS 1997). • The northern bald eagle is federally listed as endangered in California. Management actions will comply with the Pacific States Bald Eagle Recovery Plan (USFWS 1986). Bald eagles were delisted in 2007. 	Partially	Peregrine falcons were delisted in 1999, and bald eagles were delisted in 2007.	N/A
Arcata RMP Forest Plan Amendment 1995	<ul style="list-style-type: none"> • Management of 72,764 acres as LSRs would maintain and enhance habitat for late-successional and old-growth related species such as NSOs and MAMUs. • Acquisition of 12,389 acres would enhance the long-term ability of the Lacks Creek DCA to support USFWS' draft final recovery plan numerical goals for pairs of NSOs. • Direct acquisition of 5,480 acres and development of cooperative management partnerships for 8,500 acres of nonfederal land would enhance the long-term ability of DCAs in the Red Mountain Management Area to support USFWS' draft final recovery plan numerical goals for pairs of NSOs. • Known NSO activity centers within the matrix would be protected through management as unmapped LSRs. • Nesting habitat for the federally threatened MAMU would be protected through compliance with the ESA consultation requirements, future recovery plan, and NWFP land allocations and standards and guidelines. 	Yes	N/A	N/A
Arcata RMP 1995	<ul style="list-style-type: none"> • Habitat for the federally endangered peregrine falcon would be protected through compliance with the ESA and recovery plan. Acquisition of 1,720 acres in the Charlton Creek, Bell Springs, and Tenmile Creek watersheds (Red Mountain Management Area) would provide additional protection for peregrine falcon nesting and foraging sites. 	N/A	Peregrine falcons were delisted in 1999.	N/A

4. Management Opportunities (Wildlife/Special-Status Wildlife)

Relevant Plan/Source	Current Planning Decision	Responsive to Current Status?	Remarks or Rationale	Opportunities for Change
Arcata RMP Forest Plan Amendment 1995	<ul style="list-style-type: none"> Habitat for the federally endangered northern bald eagle would be protected through compliance with the ESA and the Pacific Bald Eagle Recovery Plan. Improvements in riparian habitat and water quality (through implementation of Riparian Reserve standards and guidelines and management of Tier I Key Watersheds) would benefit bald eagle recovery by providing an increasing number of potential nest sites and an improved prey base. 	N/A	Bald eagles were delisted in 2007.	N/A
Arcata RMP Forest Plan Amendment 1995	<p><i>Lacks Creek Management Area:</i></p> <ul style="list-style-type: none"> Provide core habitat for wildlife to recover federally listed species and to conserve special status species so that no BLM action contributes to the need for listing. 	Yes	N/A	N/A
Arcata RMP Forest Plan Amendment 1995	<p><i>Red Mountain Resource Area:</i></p> <ul style="list-style-type: none"> Establish the management area as a lowland Douglas-fir population center for the NSO, maintaining habitat for a minimum of twenty pair sites. Re-establish and accelerate mature forest characteristic to promote biodiversity. Secure and enhance historic peregrine falcon nests by placing nest sites in public ownership. 	Yes	N/A	N/A
Arcata RMP Forest Plan Amendment 1995	<p><i>Covelo Vicinity:</i></p> <ul style="list-style-type: none"> Manage habitats for endangered plants and animals. Re-establish ecological processes such as fire to maintain terrestrial habitat. Promote mature forest characteristics for restoration and biodiversity. 	Yes	N/A	N/A
Arcata RMP Forest Plan Amendment 1995	<p><i>Scattered Tracts:</i></p> <ul style="list-style-type: none"> Maximize contribution of public lands to regional plans for managing biodiversity. 	Yes	N/A	N/A
Arcata RMP Samoa Amendment 1995	<ul style="list-style-type: none"> Protect sensitive species according to the BLM Sensitive Species Policies (USDI BLM Manual Section 6840). T&E species management will follow Section 7 consultation procedures in accordance with the ESA. 	Yes	N/A	N/A
Redding Grazing EIS 1983	<ul style="list-style-type: none"> Sample vegetation and residual mulch for wildlife quality. Allocates forage for wildlife and livestock. 	Yes	N/A	N/A

Relevant Plan/Source	Current Planning Decision	Responsive to Current Status?	Remarks or Rationale	Opportunities for Change
Redding RMP 1993	<p>PLANNING AREA WIDE</p> <ul style="list-style-type: none"> All public lands in the Redding Resource Area are considered for enhancement and protection of the wildlife habitat resource... The goal is to manage the public lands so as to prevent deterioration of special status species' habitat thereby precluding the need for state or federal listing of those species. <p>Management Objectives</p> <ul style="list-style-type: none"> Recognize certain special status species of plants and wildlife that merit attention in the management of the public lands. Minimize the decline of those species designated as special status through the mitigation of resource management impacts. Promote the enhancement of special status species through positive management of their habitats and populations. Seven significant topics include deer winter range, NSO, and wetlands and waterfowl. Protect 38,400 acres of winter deer habitat for the Weaverville and Whiskeytown deer herds. Manage degradation of 4,079 acres of NSO habitat. Acquire wetlands where feasible to benefit waterfowl. Protect approximately 2007 acres of NSO habitat. BLM will manage public lands in a manner that is consistent with the State of California's HCP and the USFWS's Recovery Plan. Releases and re-introduction of native wildlife species could be authorized by the BLM State Director, following proper compliance with the NEPA and coordination with the CDFW. The BLM is an active participant in the Trinity River Task Force for the purpose of implementing the Trinity River Basin Fish and Wildlife Restoration Act. 	Yes		<p>Realty actions, species status, population and habitat trends have provided the necessity for the re-evaluation of Management Objectives as they relate to Wildlife Management.</p>
Redding RMP 1993	<p><i>Scott Valley:</i></p> <ul style="list-style-type: none"> Ensure the long-term protection of the deer winter range. Protect raptors, including spotted owls, within the area. 	Yes	N/A	N/A
Redding RMP 1993	<p><i>Klamath Management Area:</i></p> <ul style="list-style-type: none"> Improve the existing public administered deer winter range habitat and afford long-term protection for additional privately owned deer winter range habitat. Enhance waterfowl production and terrestrial wildlife habitat in Shasta Valley Wetlands. 	Yes	N/A	N/A

Relevant Plan/Source	Current Planning Decision	Responsive to Current Status?	Remarks or Rationale	Opportunities for Change
Redding RMP 1993	<p><i>Trinity Management Area:</i></p> <ul style="list-style-type: none"> Maintain and enhance if feasible the quality of spotted owl habitat on Tunnel Ridge. Maintain the quality of existing deer winter range habitat on Tunnel Ridge. Protect existing habitat for special status species including bald eagle and spotted owl. Manage the Eastman Gulch Owl Habitat Area in cooperation with the Trinity National Forest. 	Partially	Tunnel Ridge has been transferred to the US FS	Remove reference to maintaining the quality of existing deer winter range habitat on Tunnel Ridge.
Redding RMP 1993	<p><i>Shasta Management Area:</i></p> <ul style="list-style-type: none"> Improve the long-term condition and protection of deer winter range habitat in the Interlakes and West of French Gulch areas. Maintain special status species habitat in the Interlakes area. Protect the native plant communities and associated fauna in the Lower Clear Creek Area. 	Yes	N/A	N/A
Redding RMP 1993	<p><i>Sacramento River Management Area:</i></p> <ul style="list-style-type: none"> Enhance existing and develop additional waterfowl habitats on Sacramento Island. Enhance wetlands (native and human made) and dependent species on the Bend Area. Ensure long-term survival of special status species at the Bend Area. 	Yes	N/A	N/A
Redding RMP 1993	<p><i>Ishl Management Area:</i></p> <ul style="list-style-type: none"> Protect the wildlife habitat of the Battle Creek canyon. Ensure long-term protection of raptors within the Deer Creek canyon. 	Yes	N/A	N/A

Potential New Decisions for the RMP Revision

- New visitor management strategy for Mike Thompson Wildlife Area, South Spit Humboldt Bay
- Re-introduction of native species (California condor [Arcata FO], pronghorn antelope [Redding FO], and others possible)
- Newly listed species are likely to occur during the life of the RMP
- Consideration of monarch butterfly conservation (newly added sensitive species)
- Coastal properties management
- Wetland restoration at South Spit
- Evaluation of region-wide barred owl management in an effort led by the USFWS
- Revision of management for the snowy plover at South Spit and Samoa Recreation Area, including implementing predator management, changing vehicle management at South Spit, and creating additional breeding habitat
- Opportunity to restore farmed land to valley oak and sycamore, primarily for wildlife habitat
- Desired management actions for Payne's Creek Wetland Complex
 - Installing a well pump to increase wetland productivity and availability
 - Installing water catchment/retention structures to promote climate resiliency
 - Implementing seasonal closures/restrictions to protect breeding waterfowl
 - Implementing restrictions to increase the quality of waterfowl hunting, such as limiting hunt days to Wednesday, Saturday, and Sunday
 - Implementing a disturbance regime to include prescribed fire, disking, and controlled flooding schedule
 - Entering into agreements with recreational and educational interest groups

Areas of Relative Ecological Importance to Guide Land Uses and Management

- Forest health projects to benefit NSO, MAMU, and Pacific fisher
- Reclamation, restoration, and maintenance of big game habitat
- Securing and improving waterfowl habitat
- Land acquisition to consolidate and create larger protected blocks of habitat
- Land acquisition to create and/or protect wildlife corridors
- Acquisition of administrative access to land-locked parcels for monitoring purposes
- Promotion of healthy riparian habitat throughout the planning area to restore habitat, where feasible

4.3 RESOURCE USES

4.3.1 Comprehensive Trail and Travel Management

Current Management Direction

Table 4-17 identifies existing land use plan decisions and opportunities in the Redding and Arcata FOs to achieve desired conditions for trail and travel management.

Table 4-17. Ability of Current Management to Achieve Desired Future Conditions for Comprehensive Trail and Travel Management

Relevant Plan/Source	Current Planning Decision	Responsive to Current Issues? (Y/N)	Remarks (rationale)	Options for Change
Arcata RMP 1992	<p><i>Butte Creek:</i></p> <ul style="list-style-type: none"> Public lands within management area are designated CLOSED, except for Butte Creek and Larabee Butte access roads, No. 5107 and No. 5112, respectively. <i>Federal Register</i> notice for OHV designations. Sign entrance to public lands regarding OHV designations. 	Yes	Existing management decisions are significantly noncontroversial.	There is no need to change current management.
Arcata RMP 1992	<ul style="list-style-type: none"> <i>Federal Register</i> notices for OHV designations. Sign entrance to public lands regarding OHV designations. <p><i>King Range vicinity:</i></p> <ul style="list-style-type: none"> Public lands west of Cooskie Ridge within the management area are designated CLOSED. <p><i>Lands east of Cooskie Ridge:</i></p> <ul style="list-style-type: none"> Vehicles are LIMITED to existing roads; roads are defined as transportation facilities designed for highway vehicles having four or more wheels. 	Yes	Existing management decisions are significantly noncontroversial.	There is no need to change current management.

4. Management Opportunities (Comprehensive Trail and Travel Management)

Relevant Plan/Source	Current Planning Decision	Responsive to Current Issues? (Y/N)	Remarks (rationale)	Options for Change
Arcata RMP 1992	<p><i>Red Mountain Management Area:</i></p> <ul style="list-style-type: none"> • Sign entrance to public lands regarding OHV designations. 	Yes	Existing management decisions are significantly noncontroversial.	Some entrances still need to be signed.
Arcata RMP Forest Plan Amendment 1995	<p><i>Lacks Creek:</i></p> <ul style="list-style-type: none"> • Public lands within management area are designated as closed, except for the Pine Ridge public access road No. 5111 and maintained spur roads from that road. • Public lands are available for dispersed recreation. • Complete <i>Federal Register</i> notices for amended OHV designations. 	Yes	Existing management decisions are significantly noncontroversial. Mountain biking is increasing.	Develop specific management for mountain biking.
Arcata RMP Forest Plan Amendment 1995	<p><i>Red Mountain Management Area:</i></p> <ul style="list-style-type: none"> • Public lands within Red Mountain WSR corridor, Elder Creek ACEC, and Red Mountain ACEC are designated as CLOSED. On all other public lands, vehicles are LIMITED to roads designed for highway vehicles having four or more wheels. 	Yes	Existing management decisions are significantly noncontroversial.	There is no need to change current management.
Arcata RMP Forest Plan Amendment 1995	<p><i>Covelo Vicinity Management Area:</i></p> <ul style="list-style-type: none"> • Public lands Covelo Vicinity Management Area WSR corridor are designated as CLOSED. On all other public lands, vehicles are LIMITED to roads designed for highway vehicles having four or more wheels. • Public lands are available for dispersed recreation. • Complete <i>Federal Register</i> notices for amended OHV designations. 	Yes	Existing management decisions are significantly noncontroversial.	There is no need to change current management.

Relevant Plan/Source	Current Planning Decision	Responsive to Current Issues? (Y/N)	Remarks (rationale)	Options for Change
Arcata RMP Forest Plan Amendment 1995	<p><i>Scattered Tracts:</i></p> <ul style="list-style-type: none"> Public lands within management area are designated as LIMITED. Vehicles are restricted to roads designed for highway vehicles having four or more wheels. Public lands within WSR corridors are designated CLOSED. Develop a connecting trail system through Humboldt Redwoods State Park, Gilham Butte, and King Range NCA. Complete <i>Federal Register</i> notices for amended OHV designations. 	Yes	Existing management decisions are significantly noncontroversial.	There is no need to change current management.
Arcata RMP Samoa Amendment 1995	<p>Management Actions</p> <ul style="list-style-type: none"> Complete <i>Federal Register</i> notices for OHV designations: Vehicles limited to daytime access, with nighttime gate closure one hour after sunset, and reopened daily one hour before sunrise. <p><i>Samoa Dunes:</i></p> <ul style="list-style-type: none"> 125 acres – LIMITED/175 acres – CLOSED. Maintain and improve OHV park (staging area, riding trails, etc.). Continue to apply for “Green Sticker” funds. <p><i>Manila Dunes:</i></p> <ul style="list-style-type: none"> 112 acres – CLOSED. Patrol for OHV trespass. 	Yes	Existing management decisions are significantly noncontroversial.	There is no need to change current management.

4. Management Opportunities (Comprehensive Trail and Travel Management)

Relevant Plan/Source	Current Planning Decision	Responsive to Current Issues? (Y/N)	Remarks (rationale)	Options for Change
Redding RMP 1993	<ul style="list-style-type: none"> The transportation plan for the Redding Resource Area will be amended to reflect the decisions made by this RMP. Specific access routes and transportation developments cannot be reasonably identified until all activity level planning is completed subsequent to and consistent with the AMP. The transportation plan will be modified to remove unnecessary roads and trails and add access routes as detailed in the activity plans and, as necessary, project plans. Since access and transportation requirements are site specific in nature, assessments of environmental impacts will not be considered within this AMP. Similarly, the environmental impacts due to the access needs of other public agencies or the private sector cannot be reasonably addressed within this AMP. Consideration of environmental impacts for specific access and transportation developments are, therefore, deferred to future planning efforts by BLM or other agencies as appropriate. 	No	<p>The OHV area designations in the 1993 RMP do not respond to the BLM's current resource and resource use management needs. Only some areas have been designated as closed or limited to OHVs. Allowing cross-country motorized travel in OHV open areas leads to unauthorized route proliferation and resource impacts. The BLM is not planning on completing specific route designations within the RMP or concurrent with the RMP. The BLM will be completing a travel management plan after the completion of the RMP.</p>	<p>Through the RMP revision process, evaluate the need to designate areas as OHV limited or closed and update those designations accordingly. Complete route designations within those TMAs at a later date.</p>
Redding RMP 1993	<ul style="list-style-type: none"> OHV use designations will be prescribed for all public lands covered under the plan that will remain under BLM administration. No designations are offered on public lands identified for exchange or administrative transfer. 	No	<p>The OHV area designations in the 1993 RMP do not respond to the BLM's current resource and resource use management needs. Only some areas have been designated as OHV closed or limited areas. Allowing cross-country motorized travel in OHV open areas leads to unauthorized route proliferation and resource impacts.</p>	<p>Through the RMP revision process, evaluate the need to designate areas as OHV limited or closed and update those designations accordingly.</p>

4. Management Opportunities (Comprehensive Trail and Travel Management)

Relevant Plan/Source	Current Planning Decision	Responsive to Current Issues? (Y/N)	Remarks (rationale)	Options for Change
Redding RMP 1993	<ul style="list-style-type: none"> Develop an integrated resource activity plan for the Klamath River below RM 181 and the Shasta River Canyon that identifies high priority land acquisitions designates appropriate roads and trails for recreational access. 	No	A plan has never been completed for the Klamath River below RM 181 or for the Shasta Valley Wetlands.	Carry the decision forward to develop integrated activity level plans for the Klamath River below RM 181 and for the Shasta Valley Wetlands with modifications to include any current changes or needs.
Redding RMP 1993	<ul style="list-style-type: none"> Develop an integrated resource activity plan for the Shasta Valley Wetlands if BLM acquires available privately owned unimproved lands within the area. The activity plan will be developed in cooperation with CDFW, Caltrans, Siskiyou County, and interested organizations/individuals. The plan will identify forage allocation and DPCs for domestic and native grazing, acquisition/cooperative management needs, a network of management facilities to protect the native wetlands, wildlife productivity targets, water quality base and target standards, and public access needs that do not adversely impact the native biota. 	No	An integrated resource activity plan has not been developed.	In coordination with relevant stakeholders, develop integrated resource activity plan.

4. Management Opportunities (Comprehensive Trail and Travel Management)

Relevant Plan/Source	Current Planning Decision	Responsive to Current Issues? (Y/N)	Remarks (rationale)	Options for Change
Redding RMP 1993	<p><u>TRINITY MANAGEMENT AREA</u> <i>Grass Valley Creek Watershed:</i></p> <ul style="list-style-type: none"> • BLM roads and trails within the zone of decomposed granite-derived soils are closed to vehicle use during the rainy season and could be closed on a year-round basis at the discretion of the BLM to protect the resource values of these erosion sensitive areas. Also, soil-disturbing activities would be conducted only when no new, long-term increases to erosion would result. • Publish <i>Federal Register</i> notice(s) regarding designation of the Trinity River corridor, mineral withdrawals, Interagency transfers, and road designations. 	Partially	This decision was implemented with a <i>Federal Register</i> notice documenting the closure of the road system within the GVC watershed. The closure could be re-evaluated to determine if it is still meeting resource needs.	Re-evaluate the closure to determine if it is still meeting resource needs and adjust accordingly.
Redding RMP 1993	<p><u>TRINITY MANAGEMENT AREA</u> <i>Grass Valley Creek Watershed:</i></p> <ul style="list-style-type: none"> • Develop an integrated resource activity plan(s) within the area north of the Trinity River, and within the lower Indian Creek and Deadwood Creek areas. The plan(s) will identify priority land acquisitions, identify priorities for resolving inadvertent survey-related trespass cases, designate roads and trails for public, administrative and Native American Indian access. 	Partially	A <i>Federal Register</i> was completed to designate the WSR corridor but not to designate roads within the area. No comprehensive route designations have been completed. There have been some specific routes designated through small site-specific NEPA actions.	Through the RMP revision or a subsequent travel management process, assign route designations to routes in the WSR corridor.
Redding RMP 1993	<p><u>SHASTA MANAGEMENT AREA</u></p> <ul style="list-style-type: none"> • Develop an integrated resources activity plan for the Interlakes SRMA that: identifies priority land acquisition needs, identifies sensitive resource protection locations, and details the trail and management facilities development/maintenance needs. 	Partially	An activity level plan was completed for the Interlakes SRMA; however, some of the plan's management objectives are outdated or no longer apply.	Maintain the SRMA designation and evaluate the need for modifying SRMA management and an activity plan to include any current changes or needs.

4. Management Opportunities (Comprehensive Trail and Travel Management)

Relevant Plan/Source	Current Planning Decision	Responsive to Current Issues? (Y/N)	Remarks (rationale)	Options for Change
Redding RMP 1993	<p><u>SHASTA MANAGEMENT AREA</u></p> <ul style="list-style-type: none"> Publish <i>Federal Register</i> notice(s) regarding vehicle designations. 	No	Comprehensive route designations have not been done within the area.	Carry the decision forward to complete route designations in a comprehensive travel management plan for this area or include this area in a future office wide travel management plan.
Redding RMP 1993	<p><u>SACRAMENTO RIVER MANAGEMENT AREA</u></p> <p><i>Sacramento Island:</i></p> <ul style="list-style-type: none"> Develop a RNA/ACEC management plan for Sacramento Island that identifies specific land acquisition and cooperative agreement needs for adjoining private lands, establishes a DPC for the river and adjacent ecological sites, identifies waterfowl and anadromous salmonid habitat improvement actions, and depicts necessary management facilities to disallow vehicle use while promoting pedestrian use. <p><i>Hawes Corner:</i></p> <ul style="list-style-type: none"> Contact adjoining landowner(s) to help protect the <i>Orcuttia tenuis</i> habitat or to purchase the private interests. Secure an administrative easement to provide access for management and install necessary facilities to preclude vehicle or grazing usage of the habitat. 	No	The RNA/ACEC management plan was never completed; however, there is no legal public vehicular access to the area and OHV use has not been an issue.	Determine whether the RMP needs to include direction to complete a plan for this area and whether it should include direction for vehicular access.
Redding RMP 1993	<p><u>ISHI MANAGEMENT AREA</u></p> <p><i>Upper Ridge Nature Preserve:</i></p> <ul style="list-style-type: none"> Area is closed to motorized vehicles. 	Yes	The area closure is responsive to current management needs.	Carry forward in the RMP.

4. Management Opportunities (Comprehensive Trail and Travel Management)

Relevant Plan/Source	Current Planning Decision	Responsive to Current Issues? (Y/N)	Remarks (rationale)	Options for Change
Redding RMP 1993	<p><u>ISHI MANAGEMENT AREA</u> <i>Upper Ridge Nature Preserve:</i></p> <ul style="list-style-type: none"> Publish <i>Federal Register</i> notices regarding vehicle designations, mineral withdrawals, ACEC designations, and intent to develop a report(s) addressing the suitability of Battle, Butte, Deer, Bear and Big Chico Creeks for inclusion in the National WSRs System. 	Partially	Some <i>Federal Register</i> notices for specific closures were done, but not to the extent of what is stated in the existing RMP.	Carry forward in the RMP with modifications to include any current changes or needs.

Potential New Decisions for the RMP Revision

OHV area designations (open, limited, closed) must be done for all lands covered in the RMP, including those lands identified for disposal. After the RMP revision process, the BLM will designate individual routes as open, limited, or closed to specific motorized, nonmotorized, and mechanized uses. The RMP could include route-specific designations for routes in designated areas, such as WSR corridors or SRMAs.

Areas of Relative Ecological Importance to Guide Land Uses and Management

The Chappie-Shasta OHV Area and the Samoa Dunes Recreation Area are two regionally significant areas that are managed by the BLM for OHV use. Chappie-Shasta is one of the larger managed OHV areas in Northern California covering 52,000 acres and offering over 200 miles of roads and trails. The Samoa Dunes offer a unique OHV opportunity in the form of sand dunes adjacent to the Pacific Ocean. Additionally, in the current RMPs, as amended, the BLM designated OHV closed areas where there is the potential for OHV use to impact resource values. The RMP revision will evaluate these closure areas to ensure the OHV designations are meeting current resource management needs. The BLM will also evaluate other areas outside of OHV closure areas to determine the need for OHV closed or limited area designations.

4.3.2 Livestock Grazing

Current Management Direction

All livestock grazing use must meet the standards set forth in Rangeland Health Standards and Guidelines for California and Northwestern Nevada Final EIS (USDI BLM 1998b). Livestock grazing is generally an available public land use in areas with suitable habitat and forage availability. Livestock grazing use on public lands provides a valuable contribution to society in the form of food, fiber, and local economic stimulation. If well managed, it also provides a passive tool to sustain grassland vigor, species diversity, and open space. As with any use, there is a need to have balance, such that valued resources such as water quality, soil health, native plants and wildlife, and landscape aesthetics are maintained, while providing raw materials, food, and economic support to local communities. **Table 4-18** below lists the tools management has to achieve both, while being responsive to other stresses upon the landscape.

Table 4-18. Ability of Current Management to Achieve Desired Future Conditions for Livestock Grazing

Relevant Plan/Source	Current Planning Decision	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Arcata RMP 1992	<p>Management Actions</p> <ul style="list-style-type: none"> The Management of livestock will follow prescriptions of the Yokayo Grazing ROD (Appendix I-2 in the 1989 Arcata RMP FEIS). <p>Land Use Allocations</p> <ul style="list-style-type: none"> Unless specifically prohibited by a particular alternative, all “manageable” public land is available for livestock grazing. 	Yes		Carry forward (redundant to 1995 Arcata RMP Forest Plan Amendment language, which may be preferable).
Arcata RMP 1992	<p><u>SAMOA PENINSULA MANAGEMENT AREA</u></p> <ul style="list-style-type: none"> Public lands are not available for livestock permits or leases. 	Yes	Coastal Dunes are not suitable for livestock grazing.	Carry forward.
Arcata RMP 1992	<p><u>COVELO VICINITY MANAGEMENT AREA</u></p> <ul style="list-style-type: none"> Public lands are not available for new livestock grazing leases. 	Partially	There remains potential habitat in this management area that is suitable for livestock grazing. Rationale for precluding new grazing leases in this management area has not been located. It may be that lands in the Covelo Vicinity had been planned for disposal, in which case, the following criterion would have applied “Land Tenure Adjustment. In areas where BLM intends to exchange or transfer administration of public lands, new grazing preferences will not be established.”	Consider lifting closure to new grazing leases in the Covelo Vicinity Management Area.
Arcata RMP 1992	<p><u>BUTTE CREEK MANAGEMENT AREA</u></p> <ul style="list-style-type: none"> Public lands are not available for livestock permits or leases. 	Yes	Butte Creek Management Area lands are late successional forest reserve.	Carry forward.
Arcata RMP 1992	<p><u>RED MOUNTAIN MANAGEMENT AREA</u></p> <ul style="list-style-type: none"> The RNA/ACECs are not available for livestock grazing. 	Yes	Red Mountain Management Area lands within ACEC are not suitable grazing lands and are home to endangered and rare plants.	Carry forward.

Relevant Plan/Source	Current Planning Decision	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Arcata RMP Forest Plan Amendment 1995	<p>Management Objectives</p> <ul style="list-style-type: none"> Arcata's grazing program is managed under provisions of the Taylor Grazing Act of 1934, FLPMA, and the Public Rangelands Improvement Act of 1978. These acts authorize the issuing of grazing leases, unauthorized use detection and abatement, use supervision, livestock grazing management, range improvement facilities and treatments, and other actions. 	Partially	The portion of the guidance that discusses LSRs, Aquatic Conservation Strategy, and watershed analysis might be able to be reflected in a simpler fashion, through a reference to compliance with the NWFP.	Only carry forward the top two paragraphs, and instead of paragraph three, delete and include reference to compliance with the Rangeland Health Standards and Guidelines for California and Northwestern Nevada Final EIS (USDI BLM 1998b).
Arcata RMP Forest Plan Amendment 1995	<p>Management Objectives</p> <ul style="list-style-type: none"> The management of livestock grazing will follow prescriptions of the Yokayo Grazing ROD (USDI BLM 1983a) that is incorporated by reference and AMPs that specify grazing systems, management facilities, and land treatments. 	Partially	No AMPs were altered as a result of any watershed analyses, LSR designations, or the Aquatic Conservation Strategy in Arcata. Redding has no AMPs in place.	Only carry forward the top two paragraphs, and instead of paragraph three, delete and include reference to compliance with the Rangeland Health Standards and Guidelines for California and Northwestern Nevada Final EIS (USDI BLM 1998b).
Arcata RMP Forest Plan Amendment 1995	<p>Management Objectives</p> <ul style="list-style-type: none"> Livestock grazing will also be managed to ensure consistency with management objectives for LSRs and the Aquatic Conservation Strategy. Evaluation of existing and proposed livestock grazing will be included in watershed analyses for Key Watersheds and management assessments for LSRs. AMPs will be revised or developed to reflect any needed changes as determined through monitoring studies and allotment evaluation. 	Partially	It's possible that if the grazing leases were meeting the standards and guidelines of rangeland health (USDI BLM 1998b) (that includes water quality, upland health, species, and soils standards and guidelines) that they would also be meeting the Aquatic Conservation Strategy objectives included in the NWFP. Relative to grazing use, the standards and guidelines of rangeland health may potentially have more across the board relevance.	Consider not carrying forward the section beginning with "Livestock grazing will also be management to ensure consistence with management objectives for LSR's."
Arcata RMP Forest Plan Amendment 1995	<p>Land Use Allocation(s) <u>RED MOUNTAIN MANAGEMENT AREA</u></p> <ul style="list-style-type: none"> RNA/ACECs are not available for livestock grazing. 	Partially	Question whether Covelo Vicinity should remain not available for new livestock grazing leases.	Consider allowing new grazing leases in the Covelo Vicinity.
Arcata RMP Forest Plan Amendment 1995	<p><u>COVELO VICINITY MANAGEMENT AREA</u></p> <ul style="list-style-type: none"> Public lands are not available for new livestock grazing leases. 	Partially	Covelo was also included in the 1992 Arcata RMP as closed to new leases. It is unknown why.	Consider allowing new grazing leases in the Covelo Vicinity.

Relevant Plan/Source	Current Planning Decision	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Redding RMP 1993	Management Objectives <ul style="list-style-type: none"> This program operates under the authority of Section 15 of the Taylor Grazing Act, BLM policies and the Redding Livestock Grazing Management EIS. This document was approved in 1984 and subsequently implemented to improve or maintain ecological condition for perennial range and maintain or improve forage production on the annual range. 	Yes		Carry forward.
Redding RMP 1993	Management Actions <ul style="list-style-type: none"> Future management of livestock will continue to follow the prescriptions established in this document. 	Yes		Carry forward.
Redding RMP 1993	Management Actions <ul style="list-style-type: none"> Site-specific environmental analyses will be conducted prior to actual construction or treatment of proposed projects. Projects will, whenever possible, be modified to avoid or minimize identified negative impacts. An analysis of potential effects on rare, threatened or endangered plants and animals will be required for each proposed project. If required, consultation with USFWS or CDFW will be initiated. Projects will be modified or abandoned to avoid impacts on officially listed rare, threatened, or endangered plants or animals. Projects will also be deleted or modified if approval would result in the listing of any sensitive species as threatened or endangered. 	Yes	All new proposed projects must undergo required environmental review and consultation with appropriate resource regulatory agencies.	Reword to contemporary language.
Redding RMP 1993	<ul style="list-style-type: none"> BLM will design livestock grazing and range improvement program to avoid adverse effects on properties included in, or eligible for inclusion in, the NRHP, unless it is not prudent or feasible. The BLM will consult with the SHPO for purposes of developing a mutually acceptable mitigation plan when avoidance is not prudent or feasible. 	Yes		Carry forward.

Relevant Plan/Source	Current Planning Decision	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Redding RMP 1993	<ul style="list-style-type: none"> All actions will be in conformance with VRM objectives. 	Yes		Carry forward.
Redding RMP 1993	<ul style="list-style-type: none"> All fences will be constructed to meet BLM design specifications. 	Yes		Carry forward.
Redding RMP 1993	<ul style="list-style-type: none"> Soils disturbed by range improvement construction will be reseeded with native and/or approved introduced species as soon as possible, unless it is determined to be unnecessary. 	Partially	The use of introduced species in rehabilitation of disturbed sites has become the last choice of plant material. The use of native and locally sourced species should be primary, followed by commercially produced native species from as similar a zone as possible.	Acknowledge compliance with the National Seed Strategy for Rehabilitation and Restoration 2015-2020; and BLM California Manual Supplement 1745 for Native Plant Materials Management in California (2001) and handbook H-1745-1 Use of Native Plant Materials in California.
Redding RMP 1993	<ul style="list-style-type: none"> Prescribed burning of portions of large areas will be initiated in different years and will be re-burned on a rotational basis in order to provide varied regrowth stages. Strips of vegetation will be left unburned. Burns will be conducted under conditions that provide desired fire intensity. 	Partially	Prescribed burn plans must tier to a site-specific EA. Burn plans are independent documents that would follow an EA that included a proposed action for prescribed fire, or a long-term prescribed fire program. Prescribed fire is a tool that can be adequately described in an AMP, but the AMP must have a completed EA associated with it before a complementary burn plan could be implemented. Currently, Redding FO has no AMPs; and Arcata has none that incorporates the use of prescribed fire. There may be other prescribed fire EAs associated with grazing allotments.	<p>Acknowledge that prescribed fire is a useful tool for maintenance of desired landscapes and forage conditions and that the BLM may consider including prescribed fire within AMPs as a tool for range improvement.</p> <p>Prescribed burn plans must tier to a current EA that analyzes effects of prescribed burning for a given site-specific allotment.</p>
Redding RMP 1993	<ul style="list-style-type: none"> AMPs will include BMPs as called for in Section 208 of the CWA and as described in "208 Water Quality Management Report." 	No	Many grazing leases lack AMPs. These BMPs under Section 208 of the CWA have never been finalized or adopted. The best current guidance is Appendix 10: Proposed Grazing Management Practices for Water Quality in California, in the Rangeland Health Standards and Guidelines for California and Northwestern Nevada Final EIS 1998.	Include language such as: All grazing leases shall comply with the Rangeland Health Standards and Guidelines for California and Northwestern Nevada Final EIS (USDI BLM 1998b), which includes Proposed Grazing Management Practices for Water Quality in California.

Relevant Plan/Source	Current Planning Decision	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Redding RMP 1993	<ul style="list-style-type: none"> AMPs will be developed in cooperation with grazing leases. All interested parties will be given an opportunity to participate in the development of these plans. 	No	Not all grazing leases need an AMP. AMPs are required to permit after-the-fact, actual use billing. For advance use billing, AMPs are not required. All Redding grazing leases are advance use billed and lack AMPs. Small allotments are often limited in size and use and lack the complexity that warrants an AMP.	AMPs may be developed in cooperation with grazing lessees in accordance with CFR 4120.2.
Redding RMP 1993	<ul style="list-style-type: none"> Maintenance of structural improvements shall be provided by the user deriving the primary benefit from the improvement. 	Partially	Cooperative range improvement agreements allow some shared responsibility for improvements such that a transfer of range improvements to a new lessee would not involve assessing value and pay out by the government to the transferor.	Maintenance of structural improvements shall in general be provided by the user deriving the primary benefit from the improvement. Range improvement shall comply with section CFR 4120.3. Cooperative range improvement agreements may be developed, as appropriate.
Redding RMP 1993	<ul style="list-style-type: none"> Livestock leases would be adjusted, if necessary, to reflect decreases in public land acreage available for livestock grazing use within an allotment as a result of land disposal. 	Yes	Self-explanatory	Carry forward.
Redding RMP 1993	<ul style="list-style-type: none"> In addition to existing guidance, this RMP establishes where domestic livestock grazing may or may not be permitted. No grazing will be authorized in areas closed to grazing under the land use allocations of the selected or preferred land use management alternative. Further reductions of available domestic livestock grazing may occur through development of subsequent activity plans. Moreover, grazing leases will be established and/or perpetuated under manageability criteria. 	Yes	Self-explanatory	Carry forward.
Redding RMP 1993	<ul style="list-style-type: none"> Manageability is a realistic appraisal of grazing lease applications submitted to the Redding FO. Since BLM has a responsibility for sound management practices and must use fiscal resources wisely, grazing lease applications will be 	Yes	Manageability criteria apply to both FOs, as both the Redding Livestock Grazing EIS and the Yokayo EIS rely on the same grazing criteria. The Redding RMP simply took the time to concisely spell it out,	Carry forward.

Relevant Plan/Source	Current Planning Decision	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
	<p>screened using the following criteria:</p> <ul style="list-style-type: none"> ◦ Size of Land Tract and Location: This is simply used as a guideline for preliminary assessment of management potential. ◦ Number of Suitable Acres: Absence of suitable acres (as defined in Appendix A of the Redding Grazing Management EIS of 1984) immediately places a grazing lease in the non-manageable category. Any acreage above zero makes the decision discretionary. ◦ Number of AUMs: Less than 20 AUMs most often places a grazing lease in the non-manageable category. Twenty to 100 AUMs are generally considered an indeterminate area where the manageability decision is discretionary and not weighed. Greater than 100 AUMs are considered manageable the majority of the time. ◦ Other Dependency: No grazing lease is considered non-manageable if the operator has demonstrated a dependency on the public land for his or her livelihood. ◦ Tract accessibility: Accessible tracts are generally considered manageable. Inaccessible tracts are discretionary. ◦ Land Tenure Adjustment: In areas where BLM intends to exchange or transfer administration of public lands, new grazing preferences will not be established. 		<p>while the Arcata RMP just referred to the Yokayo EIS.</p>	

Relevant Plan/Source	Current Planning Decision	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Redding RMP 1993	<p>KLAMATH MANAGEMENT AREA Management Objectives</p> <p><i>Shasta Valley Wetlands:</i></p> <ul style="list-style-type: none"> • Provide long-term protection and enhancement of native wetlands. • Enhance waterfowl production. • Improve water quality in the Shasta River basin. • Enhance the native fisheries of Parks Creek, Big Springs Creek, and the Shasta River. • Enhance terrestrial wildlife habitat. • Provide for domestic livestock grazing. <p>Land Use Allocations</p> <p><i>Shasta Valley Wetlands:</i></p> <ul style="list-style-type: none"> • Provide for domestic livestock grazing as a management tool. <p><i>Shasta and Klamath River Canyon:</i></p> <ul style="list-style-type: none"> • Area is closed to grazing. <p><i>Upper Klamath River:</i></p> <ul style="list-style-type: none"> • River corridor is closed to livestock grazing. <p>Management Actions</p> <p><i>Shasta and Klamath Rivers Canyon:</i></p> <ul style="list-style-type: none"> • Restore riparian vegetation to Class II or better. <p><i>Upper Klamath River:</i></p> <ul style="list-style-type: none"> • Improve the condition of riparian vegetation to Class II or better. <p><i>Shasta Valley Wetlands:</i></p> <ul style="list-style-type: none"> • Develop an integrated resource activity plan for the Shasta Valley Wetlands if BLM acquires available privately owned unimproved lands within the area. The activity plan will be developed in cooperation with CDFW, Caltrans, Siskiyou County, and interested organizations/individuals. The plan will identify forage allocation and DPCs for domestic and native grazing, acquisition/cooperative 	Yes	Meets resource objective defined in Chapter 3.	Carry forward.

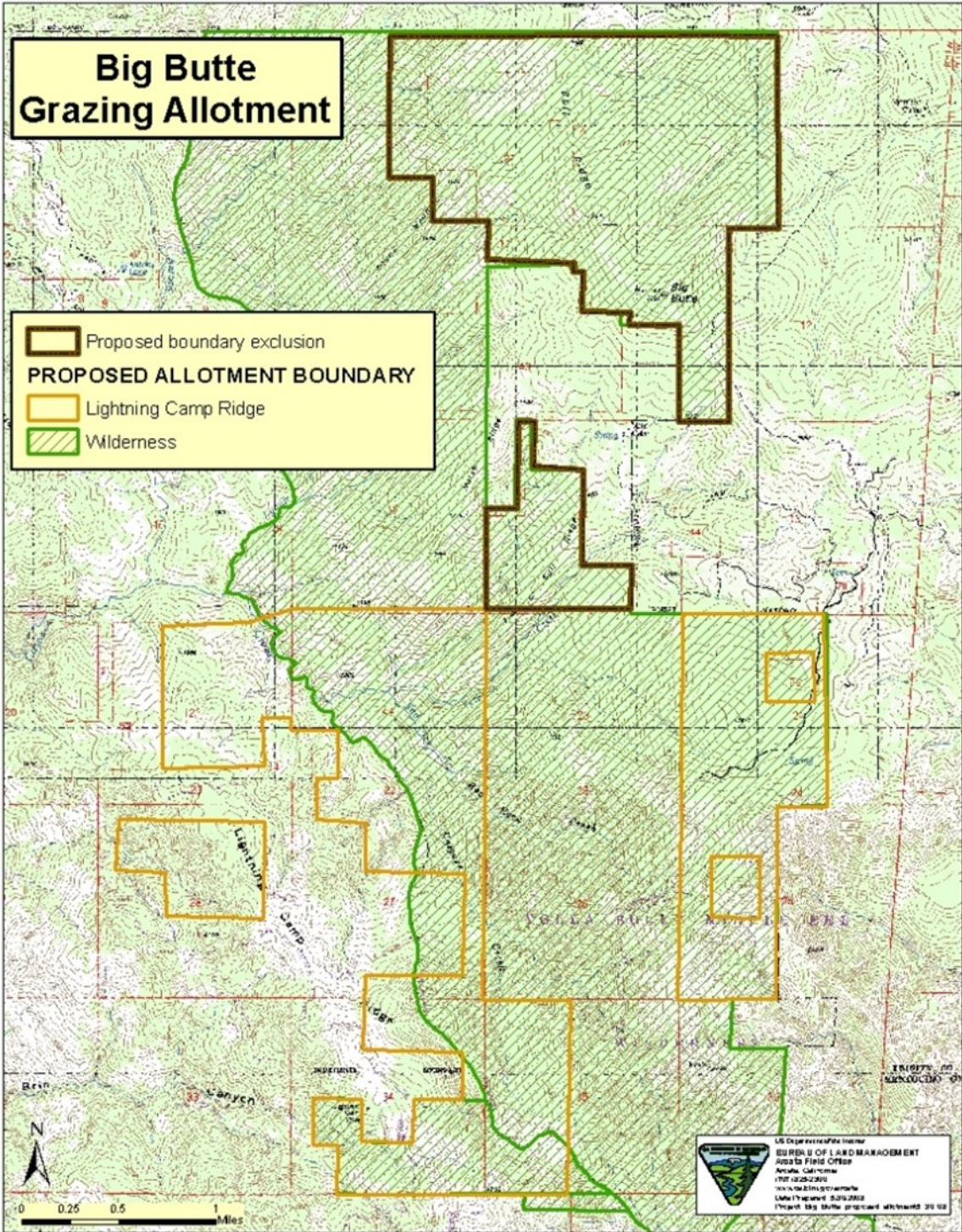
Relevant Plan/Source	Current Planning Decision	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
	management needs, a network of management facilities to protect the native wetlands, wildlife productivity targets, water quality base and target standards, and public access needs that do not adversely impact the native biota.			
Redding RMP 1993	<p>TRINITY MANAGEMENT AREA Land Use Allocation(s) <i>Trinity River:</i></p> <ul style="list-style-type: none"> • The area is closed to grazing. <p><i>Grass Valley Creek Watershed</i></p> <ul style="list-style-type: none"> • Close public lands to livestock grazing. <p>Management Action</p> <ul style="list-style-type: none"> • Maintain the riparian habitat in Class I or Class II condition. 	Yes	Meets resource objective defined in Chapter 3.	Carry forward.
	<p>SHASTA MANAGEMENT AREA</p> <p>Management Objective(s)</p> <ul style="list-style-type: none"> • Improve the long-term condition and protection of deer winter range habitat. <p>Land Use Allocation <i>Interlakes SRMA:</i></p> <ul style="list-style-type: none"> • The area is closed to new grazing leases. <p>Management Action</p> <ul style="list-style-type: none"> • Maintain the riparian habitat in Class I or Class II condition. 	Yes	Meets resource objective defined in Chapter 3.	Carry forward.

Relevant Plan/Source	Current Planning Decision	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
<p><u>SACRAMENTO RIVER MANAGEMENT AREA</u></p> <p>Management Objective(s)</p> <ul style="list-style-type: none"> • Protect existing Class I and II riparian vegetation. • Enhance wetlands (native and human-made) and dependent species. • Ensure long-term survival of special status species. <p>Land Use Allocations</p> <p><i>Sacramento Island:</i></p> <ul style="list-style-type: none"> • The area is closed to grazing. <p><i>Cottonwood Creek and Sacramento parcels:</i></p> <ul style="list-style-type: none"> • The lands are closed to grazing. <p><i>Hawes Corner:</i></p> <ul style="list-style-type: none"> • The area is closed to livestock grazing. <p><i>Bend Area:</i></p> <ul style="list-style-type: none"> • Allow grazing in the upland areas as a means to improve the DPC. • Close the riparian areas to grazing. <p>Management Action</p> <ul style="list-style-type: none"> • Improve degraded riparian vegetation to Class I and II condition. 	Yes	Meets resource objective defined in Chapter 3.	Carry forward.	

Relevant Plan/Source	Current Planning Decision	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Redding RMP 1993	<p>ISHI MANAGEMENT AREA Management Objective(s)</p> <ul style="list-style-type: none"> • Maintain and improve the quality and quantity of riparian vegetation. Protect the wildlife habitat of the canyon. • Maintain and improve, if feasible, the fisheries habitat of Deer Creek. • Protect the habitat and existing stands of Baker cypress. <p>Land Use Allocations</p> <p><i>Battle Creek (below Manton Road):</i></p> <ul style="list-style-type: none"> • The corridor is closed to new livestock grazing permits. <p><i>Deer Creek:</i></p> <ul style="list-style-type: none"> • The area is closed to grazing. <p><i>Forks of Butte Creek:</i></p> <ul style="list-style-type: none"> • The area is closed to grazing. <p><i>Baker Cypress:</i></p> <ul style="list-style-type: none"> • The area is closed to grazing. <p>Management Action</p> <ul style="list-style-type: none"> • Improve the quality of riparian vegetation to Class I. 	Yes	Meets resource objective defined in Chapter 3.	Carry forward.

Potential New Decisions for the RMP Revision

- Acquired lands are designated as open to livestock grazing use if they meet grazing suitability criteria. An EA must be prepared prior to issuance of a new grazing lease.
- Allocate lands as open to new grazing leases in the Arcata FO Covelo Vicinity if proposed lands meet grazing suitability criteria.
- Adjust lands available for livestock grazing in the Arcata FO Lightning Camp Ridge allotment #5513 to exclude 1,860 acres of the 5,015-acre allotment (see **Map 4-1**)
 - This proposed decision was already analyzed in the Big Butte Grazing Allotment Renewal EA #AR-08-09. The only active lands in the allotment are on Lightning Camp Ridge, encompassing an area of about 200 acres. The following lands in T. 25 N., R. 12 W., M.D.M., California, would be excluded:
 - Sec. 1, Lots 9, 10, S 1/2 NW 1/4, SW 1/4
 - Sec. 2, Lots 5 to 13, S 1/2 NE 1/4, SE 1/4
 - Sec. 3, Lots 5, 6, 9, 10, 11, 12
 - Sec. 10, Lot 1
 - Sec. 11, Lots 1, 2, 4, NW 1/4 NE 1/4, E 1/2 NE 1/4
 - Sec. 12, W 1/2 W 1/2
 - Sec. 14, Lots 1, 2, SE 1/4 NW 1/4, SW 1/4 SE 1/4, SW 1/4
 - Total: Approximately 1860 acres.
- Make the lands associated with the Arcata FO Lake Mountain grazing allotment #5511 unavailable to livestock grazing and permanently close the Lake Mountain allotment. These subject lands were previously allocated following historical logging prior to 1972 and have since returned to a forested condition and do not offer suitable forage for domestic livestock. These 335 acres were intermingled with private lands and were originally authorized for 11 AUMs. The most current lessee relinquished the lease in 2002.
- During the RMP alternatives development, the BLM will evaluate the opportunity to close any allotments that do not meet manageability criteria.
- Adaptive management is defined as a process where land managers implement management practices that are designed to achieve an acceptable resource condition in a timely manner. In addition, practices could be implemented when unforeseen circumstances occur such as drought and/or fire or climate change. All adaptive actions will be within the scope of effects in this document, or a supplemental NEPA document (DNA determination of NEPA adequacy) will be prepared. The following potential adaptive management actions can be applied as necessary:
 - Change season of use – do not exceed permitted AUMs.
 - Change animal numbers – do not exceed permitted AUMs.
 - Change animal class from cattle to yearlings or vice versa – do not exceed permitted AUMs.
 - Adjust permitted AUMs based on the 3-year average obtained through appropriate monitoring or suitable habitat increases.
 - Defer livestock turn-on/off date.
 - Rest from livestock grazing for one or more seasons.



**Map 4-1
Proposed New Boundary for Lightning Camp Ridge Grazing
Allotment (previously referred to as Big Butte Grazing Allotment)**

- Construct permanent fencing to control livestock distribution patterns, or exclude livestock from areas of concern (riparian, wetlands, springs).
- Construct temporary electrical fencing to control livestock distribution patterns.
- Remove permanent fencing and temporary fencing.
- Construct livestock water developments (springs, infiltrators, pipelines, tanks, windmill, sediment traps, wells, stock dams, submersible pumps, solar).
- Remove existing water developments (springs, infiltrators, pipelines, tanks, windmill, sediment traps, wells, stock dams, submersible pumps, solar).
- Authorize trailing of livestock across the allotment.
- Use will be addressed through allotment-specific planning documents.
- Conflicts between grazing and other uses such as recreation will be alleviated through interpretive signage to inform the public about other uses in the area.

Areas of Relative Ecological Importance to Guide Land Uses and Management

- Coast range suitable livestock grazing habitats (grassland types) are experiencing denser canopies of Douglas-fir encroachment upon coastal prairies and oak-woodlands with a greater or lesser open grassland understory over the past 60 years because of rapid-fire response and suppression. Woody vegetation encroachment also includes native shrubs, such as coyote brush. This sustained encroachment leads to smaller and smaller areas of suitable forage, and in time, leads to reductions in forage allocation. This shrinking grassland habitat also leads to decreased quantity and quality of forage and other resources available for upland game and other grassland dependent wildlife. Active management is needed to regain and retain coastal grasslands to sustain a mosaic of habitats necessary to support the widest variety of wildlife, support watershed function, and suitable forage areas for livestock grazing.
- Cooperative vegetation treatment efforts between public agencies, nonprofits, and private landowners should be encouraged with the following objectives:
 - Promote native, herbaceous plant diversity to support water infiltration and protect soil health.
 - Promote grassland conservation on public lands for both wildlife and authorized domestic livestock use, where appropriate.

4.3.3 Realty–Land Tenure

Land disposal and acquisition within the planning unit has significantly changed the patterns of ownership and public use since completion of the previous planning documents. Changes in public use patterns along with changing community development needs will require a review of the overall land tenure program. While the larger regional objectives related to land tenure are not likely to change significantly, specific determinations related to land use allocations affecting the size and scope of disposal areas will need to be evaluated. The opportunities to update specific land use allocations, as shown in **Table 4-19** below, are not intended to be all inclusive, but are changes that attempt to address known conflicts.

Current Management Direction**Table 4-19. Ability of Current Management to Achieve Desired Future Conditions for Land Tenure**

Relevant Plan/Source	Current Planning Decision	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Arcata RMP 1992	<p><u>SAMOA PENINSULA MANAGEMENT AREA</u></p> <ul style="list-style-type: none"> Public lands not available for disposal. Public lands not available for mineral material sales. 40 acres on Samoa Dunes available for temporary use on a periodic basis by the US Army Corps of Engineers for jetty construction and maintenance 	Partially	These lands should not be disposed of but there should be criteria for acquisition.	Add objective to acquire lands that help with ecosystem connectivity and landscape management.
Arcata RMP 1992	<p><u>BUTTE CREEK MANAGEMENT AREA</u></p> <ul style="list-style-type: none"> Retain 2,500 acres surface. Acquire 900 acres. Actively pursue acquisition of 900 acres of land in the Butte Creek watershed to enhance old-growth dependent wildlife species and riparian condition. Dispose of 0 acres. Public lands within the management area are not available for disposal. 	Partially	<p>Defining acres to be acquired is problematic; funding requirements change, public support for acquisitions can change, and areas available for acquisition can change. Given all these variables, it is a better alternative to consider potential acquisitions on a case-by-case basis.</p> <p>Do not dispose.</p>	<p>Remove language that defines acres to be acquired.</p> <p>Add objective to acquire lands that help with ecosystem connectivity and landscape management.</p> <p>Add objective to work with neighboring landowners to create contiguous habitat corridors for ecosystem health.</p>
Arcata RMP 1992	<p><u>KING RANGE VICINITY</u></p> <ul style="list-style-type: none"> Retain 3,780 acres surface, 3,200 acres subsurface. 	Yes	Retain the surface and subsurface acres.	
Arcata RMP 1992	<p><u>KING RANGE VICINITY</u></p> <ul style="list-style-type: none"> Retain all public lands between the King Range NCA and the Mattole River, except 120 acres of public land within the boundary of the Sinkyone Wilderness State Park, which will be available for acquisition by the California Department of Parks and Recreation to enhance management of the state park. 	No	Remove the restriction to transfer only to Sinkyone Wilderness State Park as the land should be available to either state parks or other entities. Currently, state parks have a moratorium on acquiring lands.	

Relevant Plan/Source	Current Planning Decision	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Arcata RMP 1992	<p><u>KING RANGE VICINITY</u></p> <ul style="list-style-type: none"> Actively pursue acquisition of 1,200 acres of land along Four Mile Creek and Cooskie Creek to enhance the riparian values and visual resources. Actively pursue acquisition of 1,000 acres of forest land adjacent to Zone 6 in the King Range NCA (Jewett Ridge and Bear Creek) for long-term forest and wildlife habitat management. 	No	Defining acres to be acquired is problematic: funding requirements change, public support for acquisitions can change, and areas available for acquisition can change. Given all these variables, it is a better alternative to consider potential acquisitions on a case-by-case basis. Instead of calling out areas, call out resources to be protected/enhanced through acquisition.	
Arcata RMP 1992	<p><u>KING RANGE VICINITY</u></p> <ul style="list-style-type: none"> Dispose of 120 acres of public land within the boundary of the Sinkyone Wilderness State Park, which will be available for acquisition by the California Department of Parks and Recreation to enhance management of the State Park. 	Yes	Dispose of the 120 acres within the Sinkyone Wilderness State Park.	
Arcata RMP 1992	<p><u>AREA-WIDE MANAGEMENT</u></p> <ul style="list-style-type: none"> There is a need to improve the efficiency and quality of management of the public lands, and to enhance the public's use of that land. Small, isolated parcels of public land scattered throughout the resource area are difficult to manage, and lack of legal access limits or precludes public use of many of these parcels. Through exchange or disposal of isolated parcels, the BLM would have opportunities to accommodate public works projects and to meet the need for recreation and for residential, commercial, industrial and agricultural land. Such actions could eliminate or reduce management burdens and costs and enhance resource values and landownership patterns. 	Yes		

Relevant Plan/Source	Current Planning Decision	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Arcata RMP Forest Plan Amendment 1995	RED MOUNTAIN MANAGEMENT AREA			
	<ul style="list-style-type: none"> • Retain 34,484 acres surface and 14,000 acres subsurface. • Retain all lands in public ownership except for approximately 1,180 acres lying in nine parcels outside of identified LSRs and Key Watersheds. These parcels of public land are identified as matrix lands in the NWFP. • Acquire 5,680 acres. • Actively pursue direct acquisition of high-priority habitats for anadromous fisheries habitat restoration, Key Watershed management, WSR Corridor management, and other specific endangered species habitat. These include up to 1,240 acres of land in the Charlton Creek and Bell Springs Creek watershed and 480 acres in the Tenmile Creek watershed to protect peregrine falcon nesting sites and foraging areas; 3,960 acres of land along in the South Fork Eel River watershed between and including Low Gap Creek and Elder Creek (acreage includes 2,480 acres within the watershed ACEC boundary) • Dispose of 1,180 acres. • Pursue a general goal of obtaining public access to all public lands when feasible. Specific access on existing roads for public and/or administrative purposes will be pursued as follows: <ul style="list-style-type: none"> ◦ North Jewett parcel ◦ South Jewett parcel ◦ Island Mountain parcel ◦ Red Mountain (trail access) ◦ South Fork Eel River 			
	Management Actions			
	<ul style="list-style-type: none"> • Prepare land reports and easement justification reports to address specific acquisition needs and site-specific requirements and problems. 			

Relevant Plan/Source	Current Planning Decision	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Arcata RMP Forest Plan Amendment 1995	<p><u>LACKS CREEK MANAGEMENT AREA</u></p> <ul style="list-style-type: none"> Retain all lands in public ownership. Identify a Lack Creek acquisition project boundary that includes the entire Lacks creek watershed. 	Partially	<p>BLM should retain the lands.</p> <p>The ACEC boundary is too restrictive.</p> <p>Language that specifically calls out the numbers of acres to be acquired is too difficult to obtain or manage.</p>	<p>The acquisition boundary (i.e., the ACEC boundary) needs to include the entire Park Protection Zone and possibly some of the Pine Creek Watershed.</p> <p>Remove language that define acres to be acquired</p>
Arcata RMP Forest Plan Amendment 1995	<p><u>COVELO VICINITY</u></p> <ul style="list-style-type: none"> Retain 56,670 acres surface, 30,000 subsurface. Retain and manage the area known as Little Darby Acquire zero acres. Dispose of 9,830 acres. Transfer administration of 9,400 acres in the Big Butte Wilderness and adjacent Section 202 WSA parcels to the Mendocino National Forest to improve management efficiency. 	<p>Yes</p> <p>Yes</p> <p>No</p>	<p>Language that specifically calls out the numbers of acres to be acquired is too difficult to obtain or manage.</p>	<p>Add criteria language for land acquisition.</p> <p>Transfer Big Butte to the Forest Service.</p> <p>Language for transferring lands adjacent to Forest Service to Forest Service.</p> <p>Remove language that defines acres to be acquired.</p>
Arcata RMP Forest Plan Amendment 1995	<p><u>SCATTERED TRACTS</u></p> <ul style="list-style-type: none"> Retain 14,055 acres surface and 82,800 subsurface. Improve cost effectiveness of public land management by consolidation of federal ownership. 	Yes	Retain surface and subsurface acreage.	Remove language that defines acres to be acquired.
Arcata RMP Forest Plan Amendment 1995	<p><u>SCATTERED TRACTS</u></p> <ul style="list-style-type: none"> Acquire 800 acres. Dispose of 2,050 acres 	No	Language that specifically calls out the numbers of acres to be acquired is too difficult to obtain or manage. Remove.	Remove language that defines acres to be acquired.

Relevant Plan/Source	Current Planning Decision	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Arcata RMP Forest Plan Amendment 1995	<p>It is BLM policy to make public land and its resources available for use and development to meet national, regional, and local needs, consistent with national objectives. FLPMA provides authority for landownership adjustments by sale, exchange, withdrawal and other means. The act further requires that adjustments conform to existing land use plans. The Arcata RMP provides the following area-wide decisions and guidance for the lands program:</p> <ul style="list-style-type: none"> • Manageability of public lands will consider safety of the public and BLM personnel with regard to road maintenance, illegal land uses, and other considerations; relative cost-effectiveness of managing individual tracts; and fiscal ability of BLM to effectively manage lands and interests(including easements) in the long term. 	Partially	<p>Defining acres is problematic; funding requirements change, public support for acquisitions can change, and areas available for acquisition can change. Given all these variables, it is a better alternative to consider potential acquisitions on a case-by-case basis.</p>	<p>Remove language that defines acres to be acquired.</p> <p>Add objective to acquire lands that help with ecosystem connectivity and landscape management.</p> <p>Add objective to acquire public access.</p>
Redding RMP 1993	<p>Land Use Allocation <i>Trinity River:</i></p> <ul style="list-style-type: none"> • Seek administrative transfer of three parcels (N1/2 Section 4, N1/2 Section 5, T. 32 N., R. 10 W., W 1/2 Section 29, All Section 30, All except W 1/2 of SW 1/4 Section 31, and W 1/2 Section 32, T. 33 N., R. 10 W.) totaling approximately 1,450 acres from the Trinity National Forest. 	No	<p>The practicality of seeking transfer of lands within the Forest Boundary and adjacent to other Forest Service-managed lands should be re-evaluated.</p>	Removal of objective.
Redding RMP 1993	<p>SHASTA MANAGEMENT AREA Land Use Allocation <i>Interlakes SRMA:</i></p> <ul style="list-style-type: none"> • Maintain withdrawal from mineral entry on all public lands within a quarter mile of normal high water of the Sacramento River, the spillway elevation of Keswick Reservoir, and the 800-foot elevation within Spring Creek. 	No	<p>The larger pattern of withdrawn lands for Reclamation project purposes, including those beyond the limitations described should be evaluated for the lands between Shasta Dam and the City of Redding to find management efficiencies.</p>	<p>Identify Reclamation withdrawn areas suitable for revocation and permanent transfer of administrative responsibility.</p>

Relevant Plan/Source	Current Planning Decision	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Redding RMP 1993	<p>Land Use Allocation</p> <p><i>Clear Creek Uplands:</i></p> <ul style="list-style-type: none"> Transfer via the R&PP Act, four parcels of land encompassing approximately 280 acres to any qualified organization or agency for the purposes expressed by the Horsetown/Clear Creek Preserve Coalition. If an acceptable R&PP Act application is not perfected within two years of the ROD for this RMP the parcels will be offered for exchange via the R&PP Act, four parcels of land. 	No	Identified lands should be considered for retention based upon an evaluation of potential impacts on Clear Creek water quality, management efficiencies, and other factors	Identify for retention.
Redding RMP 1993	<p><u>SACRAMENTO RIVER MANAGEMENT AREA</u></p> <p>Land Use Allocations</p> <p><i>Bend Area:</i></p> <ul style="list-style-type: none"> Acquire available unimproved lands that (in descending order of priority): contain high priority habitat along the Sacramento River as depicted in the 1988 Sacramento River Riparian Atlas, front the Sacramento River, provide physical access to public land, contain known/potential wetland or special status species habitat, contain important cultural resources or facilitate management within the area. 	Yes	Acquisition of an easement to provide public access to the Bald Hill portion of the management unit should be specifically addressed.	Carry forward and add objective to acquire public access.
Redding RMP 1993	<p>Land Use Allocation</p> <p><i>Remainder of Management Area:</i></p> <ul style="list-style-type: none"> Enhance the ability to acquire high value resource lands within the Redding Resource Area by disposal of scattered land interests within the Ishi Management Area. 	No	Disposal lands in the Sugarloaf Mountain/Cohasset area should be evaluated to determine if retention is warranted to support conservation efforts by the Northern California Regional Land Trust (acquisition of lands/conservation easements).	Identify for retention.

Relevant Plan/Source	Current Planning Decision	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Redding RMP 1993	<p><u>ISHI MANAGEMENT AREA</u> Land Use Allocation <i>Remainder of Management Area:</i></p> <ul style="list-style-type: none"> Transfer via exchange or R&PP Act to the State of California all surface and submerged lands within and adjacent to the Lake Oroville State Recreation Area. All lands identified by California or BLM as excess to park needs will be offered for exchange to any party after 2 years from approval of the final RMP. 	No	R&PP Act transfers should be limited to smaller tracts of land that are proposed for intensively developed recreation (or other public purpose) sites (e.g., boat ramps, restrooms, day use areas, parking, etc.). The remaining public lands should be retained and managed in a manner consistent with surrounding State Park lands and the potential for eventual transfer to the State of California.	Identify for retention.
Redding RMP 1993 and Redding RMP Lands Amendment 2005	<p><u>KLAMATH MANAGEMENT AREA</u> Land Use Allocation <i>Remainder of Management Area:</i></p> <ul style="list-style-type: none"> All public land interests not noted in land use allocation are available for exchange (and sale - after amendment to allow land sales) 	No	Public use patterns and demand have led to development and maintenance of facilities (campgrounds and restrooms) on parcels identified for disposal parcels in the Copco Lake area (specifically disposal parcels SIS-165 and SIS-167—Mallard Cove and Stateline Campgrounds).	Identify for retention; evaluate additional opportunities for disposal lands in the area depending on changes in use and ownership patterns after dam retirements.
Redding RMP 1993 and Redding RMP Lands Amendment 2005	<p>Land Use Allocation <i>Remainder of Management Area:</i></p> <ul style="list-style-type: none"> All public land interest not noted in Land Use Allocation are available for exchange or sale. 	No	Boundary should be changed, or a new area established to remove the WCF from the “Remainder of Management Area” status and manage as Retention/Acquisition	Identify for retention.
Redding RMP 1993 and Redding RMP Lands Amendment 2005	<p><u>TRINITY MANAGEMENT AREA</u> Land Use Allocation <i>North of Trinity River/Deadwood/Indian Creek:</i></p> <ul style="list-style-type: none"> Transfer via R&PP Act, sale, or exchange to a qualified organization. 	No	Too Limited – only one identified R&PP Act site within large management area with multiple communities. Did not acknowledge the existing Junction City Firing Range or the Lewiston Sewer Ponds, which should be identified for disposal and patented to limit liability and in conformance with existing policy.	Expand to include the Junction City Range and Lewiston sewer ponds R&PP Act leases as suitable for R&PP Act patent/disposal areas.

Relevant Plan/Source	Current Planning Decision	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Redding RMP 1993 and Redding RMP Lands Amendment 2005	Land Use Allocation <i>Remainder of Management Area:</i> <ul style="list-style-type: none"> <i>All public land interest not noted in Land Use Allocation are available for exchange or sale.</i> 	No	Land use allocations should be revised to include certain parcels in west Redding as retention areas based upon recreational development and parcel acquisition by the BLM, City of Redding, Shasta State Historic Monument, etc.	Identify for retention.

Potential New Land Tenure Decisions for the RMP Revision

- All potential land acquisitions will be evaluated on a case-by-case basis. The BLM will work to acquire lands that:
 - Enhance plant and animal connections and corridors within suitable habitat and climate refugia.
 - Enhance and create un-fragmented natural landscapes that are adjacent, or in proximity to, BLM or other protected land.
 - Have high recreational value and cultural/heritage resources and values.
 - Create new access to existing public lands.
 - Preserve functional ecosystems.
 - Increase/reduce/realign existing acquisition and disposal areas.
 - Create new acquisition areas or new categories, such as “custodial” areas where minimal management is employed, while focusing staff and funds on acquisition and disposal actions in other areas.
- Designating new withdrawal areas or allowing past withdrawals in certain areas to lapse.
- Evaluate whether to further encourage community development on public lands through the R&PP Act process or to limit classification of new areas as suitable for future R&PP Act development to disposal lands.
- Evaluate whether identifying disposal parcels adjacent to Forest Service lands for transfer to Forest Service administration is still warranted.

Areas of Relative Ecological Importance to Guide Land Uses and Management

- Lands with high value for plants and wildlife, such as riparian areas, wetlands, vernal pools, and serpentine soils, will be an acquisition priority.
- River corridors will be the primary areas to be considered for additional withdrawals to manage impacts to fish habitat and river function related to placer mining operation. Urban interface and river corridors will continue to be the focus of demand for land tenure adjustments. Properties with high restoration potential for impaired watersheds will be an acquisition priority.
- Scattered tracks may be retained when the land serves as an undeveloped biological island/refuge for plants and animals.
- Coastal properties will be considered a high priority for acquisition due to the on-land potential and the opportunity for interpretation and viewing opportunities.

4.3.4 Realty—Use Authorizations

Current Management Direction

Table 4-20 identifies existing land use plan decisions and opportunities in the Redding and Arcata FOs to achieve desired conditions for land use authorizations.

Table 4-20. Ability of Current Management to Achieve Desired Future Conditions for Land Use Authorizations

Relevant Plan/Source	Current Planning Decision	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Arcata RMP Forest Plan Amendment 1995	<ul style="list-style-type: none"> ROW determinations cannot be made at this planning level with any degree of credibility. Federal tracts do not control ROWs such as highways or utility corridors. Proposals will be addressed on a site-specific basis. 	Partially	<ul style="list-style-type: none"> Determine if there are any areas in Arcata FO suitable to be designated as ROW avoidance or exclusion areas. There should be guidance/language about when and where there could be new communication sites. Designate communication sites as appropriate. Specific guidance pertaining to water development ROWs is needed. 	<ul style="list-style-type: none"> Provide an area in the document that provides the public and the staff with guidance on ROW avoidance and exclusion areas. For example, consider limiting road ROWs in riparian corridors, geologically unstable areas, pathogen protection areas (SOD), coastal areas, viewshed VRM considerations, tribal considerations, and WSRs. Add language that to exclude new communication sites in unsuitable areas. Develop guidance to encourage colocation at existing sites. Develop language to address new technological advances regarding communication sites and communication needs. Develop guidance for new water ROWs based upon applicable findings of the draft Instruction Memorandum.
Redding RMP 1993	<ul style="list-style-type: none"> Land use authorizations (ROWs, leases, permits) will continue to be issued on a case-by-case basis and in accordance with decisions established in this RMP. 	Partially	<p>More specific guidance for certain types of authorizations should be provided. For example, applications for water conveyance ROWs, which originate from non-riparian (spring/well) water sources located on public lands to serve new domestic/small agriculture water use proposals will not be authorized.</p>	<p>Provide more detailed guidance on certain uses as appropriate. Develop standardized stipulations and BMPs for selected actions, such as apiary permits, single family residential access roads, etc.</p>

Relevant Plan/Source	Current Planning Decision	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Redding RMP 1993	<ul style="list-style-type: none"> Applications for land use authorizations that reduce the marketability of an exchange parcel will not be authorized. 	Partially	<p>Since marketability can be a somewhat subjective term, this decision element should be reworded to provide more specific management guidance, while also allowing flexibility and not unnecessarily limiting the discretion of the authorized officer. Possible alternative wording is, “Applications for long-term non-access authorizations that potentially interfere with the intended future use of parcels that are identified in an existing land exchange agreement will not be authorized.”</p>	Reword to provide more specific guidance for when uses will be rejected.
Redding RMP 1993	<ul style="list-style-type: none"> Communication site applications will continue to be considered on lands suitable for disposal until such time as an exchange agreement is signed. On public lands retained or acquired, communication site plans will be developed. 	Partially	<p>Communication sites should be designated, and plans written for designated sites, as appropriate, regardless of past land tenure determinations (acquisition/retention/disposal).</p>	Formally designate communication sites and identify planning issues such as access, trespass, use compatibility, and need for updated communication site plans.

Potential New Decisions for the RMP Revision

- Establish ROW exclusion and avoidance areas to protect sensitive species habitat and other resource values as appropriate.
- Areas designated for disposal will be potentially available for Recreation and Public Purpose Act applications and patents. Applications for Recreation and Public Purpose Act patents on land not designated for disposal will require a land use plan amendment.
- Areas not available for disposal could be considered for Recreation and Public Purpose Act application and leases without going to patent if they meet management goals and objectives.
- Designate communication sites and establish priority for site-specific communication site management plans.
- Establish criteria for water-related ROWs, with emphasis on spring developments with water sources located on BLM based upon available approved and draft policy guidance.
- Evaluate the existing ROW corridors as delineated in the 1989 WRCS or subsequent designations under the Energy Policy Act for applicability given existing infrastructure demands and resources uses.
- Evaluate ROW corridors in compliance with the 2012 west-wide corridor settlement agreement (Wilderness Soc’y, et al. v. U.S. Dep’t of Interior, No. 3:09-cv-03048 JW Joint Motion to Dismiss Case Pursuant to Fed. R. Civ. P. 41(a)(2) (2012)).
- Determine areas where water ROWs will not be issued because of water quality and quantity issues in imperiled or priority watersheds or if there is a long-term drought impacting surface and groundwater that would otherwise be available for the benefit of the natural landscape.

Areas of Relative Ecological Importance to Guide Land Uses and Management

- Areas with highly erodible, decomposed granite soils (suitable for timber-related road ROW avoidance) or other highly erodible geologic formations
- Areas that are known essential connectivity corridors of high biological value will be avoided if reasonable alternatives are possible.
- Areas with a high concentration of vernal ponds and other sensitive habitat (suitable for transmission/distribution line and access road avoidance)
- Riparian zones, particularly perennial spring sources in important habitat areas, such as deer winter range or potential elk habitat (suitable for water-related ROW avoidance areas)

4.3.5 Minerals (includes Locatable, Leasable, and Salable Minerals)

Current Management Direction

Table 4-21 identifies existing land use plan decisions and opportunities in the Redding and Arcata FOs to achieve desired conditions for minerals.

Table 4-21. Ability of Current Management to Achieve Desired Future Conditions for Minerals

Decision Source	Current Management Objectives and Management Decisions	Responsive to Current Issues? (Y/N)	Remarks (rationale)	Options for Change
Arcata RMP 1992	<p>Management Objectives</p> <ul style="list-style-type: none"> Minerals Management. Due to the scattered nature of public land, low economic mineral potential, and lack of interest in mineral development within the Resource Area, restrictions and stipulations for mineral development will be determined on a case-by-case basis and consistent with the RCOs prescribed for each management area. The process for reviewing hardrock mineral development proposals will include considerations of California's SMARA and associated coordination with "lead agencies" as defined by SMARA. 	Yes		Remove language "Due to the scattered nature of public land, low economic mineral potential, lack of interest" and "restrictions and stipulations."
Arcata RMP 1992	<p>Land Use Allocations</p> <ul style="list-style-type: none"> Public lands (including mineral reserve lands) are available for mineral leasing and mineral material sales, and are open to entry under the Mining Law of 1872. All mineral actions must be consistent with Management Area RCOs. 	Yes	Ongoing	
Arcata RMP 1992	<p>Management Objectives</p> <ul style="list-style-type: none"> Public lands will be managed in a manner that recognizes the nation's need for domestic sources of minerals, food, timber, and fiber from the public lands including implementation of the Mining and Minerals Policy Act of 1970, as it pertains to the public lands (Section 202(c)(3)). Mineral exploration and development is encouraged on public land in keeping with the BLM's multiple resource use concept. Overall guidance on the management of mineral resources appears in the General Mining Law of 1872; Mining and Minerals Policy Act of 1970; Section 102(a)(12) of FLPMA, as amended; National Materials and Minerals Policy, Research and Development Act of 1980; and BLM's Mineral Resources Policy of May 29, 1984. 	Yes		

4. Management Opportunities (Minerals (includes Locatable, Leaseable, and Salable Minerals))

Decision Source	Current Management Objectives and Management Decisions	Responsive to Current Issues? (Y/N)	Remarks (rationale)	Options for Change
Arcata RMP 1992	<p>Management Decisions</p> <ul style="list-style-type: none"> The 43 CFR 3802 and 3809 regulations provide for mineral exploration and development in conjunction with other resource development. BLM will work with mine operators to achieve plan approval. Where an operator does not have the technical resources to develop reclamation measures and measures to prevent unnecessary degradation, BLM will provide technical assistance. Mining within Arcata Resource Area will be administered on a case-by-case basis. 	Yes	3802 refer to WSAs.	Separate 3802 and 3809 regulations into two separate sections.
Arcata RMP 1992	<p>Management Decisions</p> <ul style="list-style-type: none"> Development work, extraction, and patenting for locatable minerals will be allowed in designated wilderness areas only on valid claims existing before designation. 	Yes		
Arcata RMP 1992	<p>Management Decisions</p> <ul style="list-style-type: none"> Before BLM can approve mining plans of operation submitted for work in a designated wilderness area, a BLM mineral examiner must verify that a valid claim exists. The mineral examination and mineral report must confirm that minerals have been found and the evidence is of such character that a person of ordinary prudence would be justified in the further expenditure of his labor and means, with a reasonable prospect of success in developing a valuable mine. 	Yes	Patenting for locatable minerals is on hold at the moment.	
Arcata RMP 1992	<p>Management Decisions</p> <ul style="list-style-type: none"> Saleable Minerals: The Material Sale Act of 1947 and 43 CFR 3600 provide for the disposal and regulation of mineral materials. Sales of mineral materials to the public will be administered on a case-by-case basis. Saleable minerals are sold at market prices. FUPs will continue to be issued to state and federal agencies, local communities, and nonprofit organizations as the need arises. 	Yes		

4. Management Opportunities (Minerals (includes Locatable, Leaseable, and Salable Minerals))

Decision Source	Current Management Objectives and Management Decisions	Responsive to Current Issues? (Y/N)	Remarks (rationale)	Options for Change
Arcata RMP 1992	<p>Management Decisions</p> <ul style="list-style-type: none"> The 1992 Arcata RMP allows all public lands (including split estate lands) in the four MAs addressed in this plan amendment to remain available for mineral leasing and mineral material sales, and open to entry under the Mining Law of 1872 except where specifically restricted or withdrawn. Because of the scattered nature of public land, low economic mineral potential, and lack of interest in mineral development within the resource area, restrictions and stipulations for mineral development will be determined on a case-by-case basis. The process for reviewing hardrock mineral development proposals will include considerations of SMARA, and coordination with lead agencies as defined by SMARA. All approvals of mineral actions must be consistent with management area RCOs. 	Yes		Update language by removing low economic value and lack of interest should be removed.
Arcata RMP Forest Plan Amendment 1995	<p>Land Use Allocation</p> <ul style="list-style-type: none"> The standards and guidelines designate initial reserve widths for protected riparian areas, as well as specific requirements for timber management, road construction and maintenance, grazing, recreation, minerals management, fire/fuels management, research, and restoration activities. The Mineral Leasing Act of 1920, Geothermal Steam Act of 1970, and 43 CFR 3100 to 3500 provide the regulatory framework for issuing mineral leases. These regulations apply where public interest exists for the development of oil, gas, sodium, potassium, and geothermal energy. Where required, stipulations will be attached to leases to mitigate impacts on sensitive species, cultural areas, and other resources susceptible to impacts from leasing-related activities. The Red Mountain RNA/ACEC management plan (USDI BLM 1989) withdrew the ACEC from entry for mineral materials sales. 	Yes		
Arcata RMP Forest Plan Amendment 1995	<p>Land Use Allocation</p> <ul style="list-style-type: none"> The 1992 Arcata RMP withdrew the Elder Creek RNA/ACEC from entry for mineral materials sales. The RMP also directed that the Elder Creek RNA/ACEC be withdrawn from entry for locatable minerals under the 1872 Mining Law; the petition for withdrawal has been submitted to the director of the BLM for approval. 	Unknown	It is unclear whether the petition for withdrawal was approved.	

4. Management Opportunities (Minerals (includes Locatable, Leaseable, and Salable Minerals))

Decision Source	Current Management Objectives and Management Decisions	Responsive to Current Issues? (Y/N)	Remarks (rationale)	Options for Change
Arcata RMP Forest Plan Amendment 1995	<p>Land Use Allocation</p> <ul style="list-style-type: none"> The development of mineral resources may be limited by the NWFP land allocations and standards and guidelines. 	Yes		Complete withdrawal
Redding RMP 1993	<p>Land Use Allocations</p> <ul style="list-style-type: none"> 43 CFR 3809 specifically provides for the protection of cultural properties by initially prohibiting mining operators from knowingly disturbing or damaging them. The need for a cultural resource field inventory in response to a notice should be determined on the basis of professional judgment and is left to the discretion of the Redding Area Manager. <p><i>Shasta and Klamath Rivers Canyon:</i></p> <ul style="list-style-type: none"> Withdraw all public lands within the 100-year flood zone of the Shasta River from mineral entry. Withdraw the Osburger Historic Site (5 acres) from mineral entry. <p><i>Upper Klamath River:</i></p> <ul style="list-style-type: none"> Offer public lands within the river corridor for mineral leasing with no surface occupancy. Mineral material disposals are not allowed within the river corridor. <p><i>Dry Creek:</i></p> <ul style="list-style-type: none"> Mineral material disposals are permitted only if such actions enhance the steelhead spawning potential within Dry Creek. <p><i>Shasta Valley Wetlands:</i></p> <ul style="list-style-type: none"> Mineral material disposals are permitted only if such actions enhance the long-term condition of riparian vegetation and the native fisheries habitat. Offer for mineral leasing with no surface occupancy within 300 feet of wetland habitat. Offer all other lands for mineral leasing with no surface disturbing actions permitted between November 15 and April 15. 	Yes	Withdrawals must be approved through the Secretary of Interior. An RMP can only propose to withdraw.	Renew withdrawals
Redding RMP 1993	<p><u>TRINITY MANAGEMENT AREA</u> Management Objectives</p> <p><i>Trinity River:</i></p> <ul style="list-style-type: none"> Maintain opportunities for the exploration and production of locatable mineral values outside the protected areas. 	Yes		

4. Management Opportunities (Minerals (includes Locatable, Leaseable, and Salable Minerals))

Decision Source	Current Management Objectives and Management Decisions	Responsive to Current Issues? (Y/N)	Remarks (rationale)	Options for Change
Redding RMP 1993	<i>North of Trinity River/Deadwood/Indian Creek:</i> <ul style="list-style-type: none"> • Provide opportunities for mineral development. 	Yes		
Redding RMP 1993	<i>Interlakes SRMA:</i> <ul style="list-style-type: none"> • Maintain opportunities to explore and develop freely available minerals on public lands. 	Yes		
Redding RMP 1993	<i>West of French Gulch:</i> <ul style="list-style-type: none"> • Maintain opportunities to explore and develop freely available minerals on public lands. 	Yes		

Potential New Decisions for the RMP Revision

Withdrawals – Several areas that have been previously withdrawn from mineral entry may need to be renewed. A determination on the extent of these withdrawal renewals and any new withdrawals will need to be evaluated. Withdrawals are covered in more detail in the Realty – Land Tenure section.

Areas of Relative Ecological Importance to Guide Land Uses and Management

The minerals program does not separately identify areas of ecological importance but relies on other resource programs to complete this function. These areas are typically withdrawn from mineral entry, for example, such as the Trinity River corridor and Clear Creek areas.

4.3.6 Recreation and Visitor Services

Current Management Direction

Table 4-22 identifies existing land use plan decisions and opportunities in the Redding and Arcata FOs to achieve desired conditions for recreation and visitor services.

Table 4-22. Ability of Current Management to Achieve Desired Future Conditions for Recreation and Visitor Services

Relevant Plan/Source	Current Planning Decision	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Arcata RMP 1992 and Supplementary Rules	<p><i>South Spit:</i></p> <ul style="list-style-type: none"> Public lands are available for dispersed recreation. Area is open for day use only 1 hour before sunrise to 1 hour after sunset). During brant season, gate opens at 4:00 am. No camping; No OHVs allowed except on vehicle access corridors and wave slope. No vehicles on wave slope within plover restoration area during plover season. Dogs must be leashed on west side of Jetty Road during plover season. No public use in plover restoration area during plover season. Kites, model airplanes, and campfires not 	Partially	The rules are working well and supported for the most part by the public. Conflicts with vehicles and plovers at the north end just south of the jetty are occurring.	<p>Incorporate by reference the supplementary rules and the South Spit Management Plan.</p> <p>Consider allowing horseback riding on the east side of Jetty Road outside the waterfowl hunting season.</p> <p>Consider extending the vehicle closure on the wave slope farther north toward the jetty during plover season.</p> <p>Consider moving the entrance gate back to the first road intersection where PGE service exists. Re-design the new gate similar to Lost Coast Headlands.</p>

Relevant Plan/Source	Current Planning Decision	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
	<p>allowed within 300 feet of temporary or permanent plover protection areas.</p> <ul style="list-style-type: none"> • Lands on west side of Jetty Road open to equestrian use; all other lands closed to equestrian use. • Firewood cutting or collecting is allowed by permit from Sept. 16 – Feb. 28. Casual collecting is allowed year-round. • Firearm use is allowed only for hunting of waterfowl during State season. Target shooting is not allowed. • Fireworks are not allowed. 			

Relevant Plan/Source	Current Planning Decision	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Arcata RMP Forest Plan Amendment 1995	<p><u>LACKS CREEK MANAGEMENT AREA</u></p> <ul style="list-style-type: none"> Public lands are available for dispersed recreation. 	Partially	An activity plan outlines a variety of recreation management actions that are being implemented	<p>Incorporate by reference the Lacks Creek Management Plan. The proposed trail from Midslope Road to Round Prairie could be developed not only for hikers but for bicycle use as well. There is strong support from the local bicycling community to allow mountain bikes on this proposed trail.</p> <p>Consider allowing dispersed camping throughout the management area.</p> <p>Acquire the 40-acre parcel on Pine Ridge Road near the quarry so the trail does not have to be routed way down the hill; otherwise, seek to acquire a trail easement so the trail can be located closer to the road.</p> <p>Add another 5 miles of mountain bike trails that can be developed. The current plan only allows “up to 10 miles.”</p> <p>Work to extend the trail network to Redwood National Park and to Forest Service-administered lands.</p> <p>Acquire other lands to provide public vehicle access on the west side of Lacks Creek.</p> <p>Supplementary rules need to be printed in the <i>Federal Register</i>.</p>

Relevant Plan/Source	Current Planning Decision	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Arcata RMP Forest Plan Amendment 1995	<p><u>RED MOUNTAIN MANAGEMENT AREA</u></p> <ul style="list-style-type: none"> Protect and enhance natural and recreational values along the federally designated portions of the South Fork Eel River WSR corridor. 	No	Not much monitoring has occurred in the area, so it is difficult to determine whether resource values are being protected.	<p>Develop a WSR management plan in coordination with a wilderness management plan. Determine whether the public has a right to use Hermitage Road. Acquire permanent exclusive easement if necessary. Develop trailhead in vicinity of Rattlesnake Creek and Hermitage Road. Acquire land (if necessary) for proper trailhead design. Upgrade trail on east side of river and Camp St. Michael.</p>

Relevant Plan/Source	Current Planning Decision	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Arcata RMP Forest Plan Amendment 1995	<p><u>RED MOUNTAIN MANAGEMENT AREA</u></p> <ul style="list-style-type: none"> Public lands are available for dispersed recreation. 	Partially	Not much has been done to encourage public recreation use in the management area.	<p>Re-open Black Oak Mountain. Trail. Post signs.</p> <p>Develop a north-south trail along Elkhorn Ridge.</p> <p>Upgrade gate on Cahto Peak Road to prevent illegal vehicle use past gate.</p> <p>Develop loop trails near end of Little Dan Creek Access Road.</p> <p>Work with CDFW to identify trail from end of Little Dan Creek Road, through Little Red Mountain across Cedar Creek, and to top of Red Mountain.</p> <p>Acquire lands and trail easements as necessary to promote trail access onto Red Mountain.</p> <p>Explore opportunity for developing a designated OHV area off Red Mountain Access Road.</p> <p>Acquire permanent exclusive easements (public vehicle access) along road from Bell Springs Road to east edge of Red Mountain.</p>

4. Management Opportunities (Recreation and Visitor Services)

Relevant Plan/Source	Current Planning Decision	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Arcata RMP Forest Plan Amendment 1995	<p><u>COVELO MANAGEMENT AREA</u></p> <ul style="list-style-type: none"> Provide dispersed recreation opportunities consistent with habitat management objectives. 	Partially	Not much has been done to encourage public recreation use in the management area except for the Little Darby Nature Area.	<p>Maintain trails and interpretive displays along the Little Darby Nature Trail. This should be done by the Ukiah FO because of their proximity to the area.</p> <p>Develop a hiking and horseback riding trail from wilderness boundary along Horse Pasture Ridge (Yuki Wilderness) along the southwest trending ridge line (not along Horse Pasture Ridge but the next ridge to the south) to connect in with Elk Creek.</p> <p>Acquire lands along Elk Creek to connect the Yuki Wilderness to the Eden Valley area.</p>
Arcata RMP Forest Plan Amendment 1995	<p><u>SCATTERED TRACTS MANAGEMENT AREA</u></p> <ul style="list-style-type: none"> Acquire 800 acres around Gilham Butte for recreational uses. 	Yes	The BLM has acquired some important land in the area and should take advantage of lands for sale.	<p>Continue to acquire lands and/or trail easements to connect to Wilder Ridge Road.</p> <p>Upgrade the old hiking trail from the State Park boundary into Gilham Butte.</p>
Arcata RMP Samoa Amendment 1995	<p><i>Samoa Dunes:</i></p> <ul style="list-style-type: none"> Provide opportunities for OHV recreation by maintaining and improving OHV facilities and trails. Continue to apply for "Green Sticker" funding. 	Yes	OHV opportunities are enhanced and maintained each year through funding from the State Off Highway Motor Vehicle Recreation Division. OHV clubs are active in supporting the program.	<p>Potentially carry forward.</p> <p>Opportunities for change are very limited as the beaches and dunes in the vicinity are either open to wave slope only or closed to OHV use.</p>

Relevant Plan/Source	Current Planning Decision	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Arcata RMP Samoa Amendment 1995	<p><i>Samoa Dunes:</i></p> <ul style="list-style-type: none"> Provide opportunities for hiking, sightseeing, bird watching, picnicking, surfing, fishing that do not directly conflict with OHV use. 	Yes	These opportunities are provided at Samoa Dunes.	Additional interpretive displays should be located along the Wetlands Trail, Jetty parking area, and Cypress Grove Picnic Area.
Arcata RMP Samoa Amendment 1995	<p><i>Ma-le'i Dunes:</i></p> <ul style="list-style-type: none"> Provide opportunities for hiking, sightseeing, bird watching, picnicking. 	Partially	Numerous hiking trails exist, but there is demand for additional horse trails. The cooperative management plan for the area is effective and being implemented.	<p>Additional horse trails could be provided, but there may be conflicts with having recreation use in sensitive habitat areas. Carry forward decisions in the activity-based cooperative management plan.</p> <p>Opportunity exists to acquire land at Ma-le'i Dunes entrance (Young Lane)—the trailer park area. A caretaker site with interpretive facilities could be developed here.</p> <p>Ensure fence and signs surrounding gun club are intact and maintained.</p>

Relevant Plan/Source	Current Planning Decision	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Redding RMP 1993	<p><u>KLAMATH MANAGEMENT AREA</u></p> <ul style="list-style-type: none"> Develop an integrated resource activity plan for the Klamath River below RM 181 and the Shasta River Canyon that identifies high priority land acquisitions, designates appropriate roads and trails for recreational access, identifies management facility needs to protect the ACEC and riparian zone, and cooperative actions with adjacent landowners. 	No	Little interest has been exhibited by community for activity level plan and few acquisitions have taken place over the years to increase federal landownership in the area.	Opportunities for land acquisition may exist in this area and could be pursued. If an integrated resource activity plan is developed, the removal of the Iron Gate and Copco Dams must be considered.
Redding RMP 1993	<p><u>TRINITY MANAGEMENT AREA</u></p> <ul style="list-style-type: none"> Modify the existing TRRAMP to reflect the designated corridor of the Trinity River (i.e., a recreational component of the National WSR System.) Continue implementation of recreational developments and monitoring prescribed in the existing management plan. 	Yes	<p>A <i>Federal Register</i> was completed for the designated W&SR corridor. Implementation of the TRRAMP has been completed.</p> <p>The implementation of the Trinity River Restoration Program with Reclamation and other agencies will allow BLM to continue to take advantage of developing recreation opportunities along the river corridor but with an emphasis on more efficient, smaller footprint facilities and roads.</p>	Continue acquisition of the W&SR corridor to protect recreational fishing, boating, swimming, and rafting opportunities. Develop nonmotorized trails.

Relevant Plan/Source	Current Planning Decision	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Redding RMP 1993	<p><u>SHASTA MANAGEMENT AREA</u></p> <ul style="list-style-type: none"> Develop an integrated resources activity plan for the Interlakes SRMA that identifies priority land acquisition needs, identifies sensitive resource protection locations, details the trail and management facilities development/maintenance needs, identifies potential site(s) for a regional firing range as proposed by a requesting agency(s), delineates VRM Class areas, identifies important public interpretive needs, describes needed visitor services, details resource monitoring conditions and evaluates possible designation as a NRA. 	Yes	<p>The ISRMP was completed in 1998. In 2010, Congress transferred 12,000 acres of Forest Service land was to BLM for management. Due to this action, the ISRMP has become outdated and will not be a guiding document. There has not been any interest from any agency to develop a firing range as proposed. The abandon railroad grade along the Keswick Reservoir corridor has been designated a National Recreation Trail.</p>	<p>Develop a travel management plan. Develop additional facility development including fee campgrounds. Implement camping closures for areas around the OHV staging area should be implemented with camping and vehicle closures for the Sacramento River Rail-Trail. Target shooting should be address in the RMP along with overnight camping opportunities along Keswick Reservoir. Coordinate with Reclamation, which must be part of the decision process due to the agencies landownership around Keswick Reservoir.</p>

Relevant Plan/Source	Current Planning Decision	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Redding RMP 1993	<ul style="list-style-type: none"> Develop an integrated resource activity plan for Clear Creek that identifies high priority land acquisition, details habitat restoration needs for anadromous salmonids, delineates DPC and restoration needs for riparian vegetation, describes protective management facilities, lists important cooperators and their responsibilities, identifies important cultural resources, and describes the recreational opportunities for the public. 	Yes/No	The Clear Creek Greenway Management Plan (CCGW) was completed in 2008. The plan dealt only with the development of recreation facilities and management of recreational uses.	Designate the area as a RMA. Additional activity level planning may be necessary.

Potential New Decisions for the RMP Revision

- Designate additional RMAs such as Sacramento River Bend ACEC and/or RMA, Clear Creek Greenway/Swasey Recreation Area to RMA, Trinity River Management Area (Trinity River corridor to RMA), Forks or Butte Creek Recreation Area ACEC and/or RMA, Rock Creek/Middle Creek Recreation Area to RMA.
- Address commercial fishing SRP capacity on the Trinity River.
- In the Interlakes SRMA (to include additional lands and existing Whiskeytown-Shasta Trinity NRA), exchange or accept by donation City of Redding lands to augment BLM recreation lands in the Clear Creek Greenway and in the Interlakes SRMA.
- Establish BMPs for road, trail construction, and maintenance.
- Identify lands currently up for disposal and retain for recreational use and open space in and around Redding.
- Develop management plans for all RMAs as needed.
- Establish foundation for supplementary rules for recreation areas.
- Consider establishing regulations and restrictions for OHV use, shooting, and camping limits on Reclamation lands around Keswick Reservoir (Interlakes SRMA) that are managed by the BLM through existing agreements.
- Consider identifying target shooting areas for public use, and close existing sites that pose a health and safety risk.
- Develop target-shooting restrictions for target shooting materials, camping limits, and nighttime access.
- Address potential fee sites and fee increases at existing campgrounds and consider implementing fees at trailheads.
- Establish drone use regulations for campgrounds and near developed areas of the WUI to protect visitor privacy.
- Develop and install proper signs for e-bike use and regulations at various trailheads.
- Address transient/homeless issues, especially along the Clear Creek Greenway and the Trinity Management Area.

Areas of Relative Ecological Importance to Guide Land Uses and Management

Important areas include coastal tracts, as they receive the most public use and pose the most potential for conflicts in resource management. Address species augmentation, such as pheasant, bobwhite, and others for special hunts in recreation areas.

4.3.7 Renewable and Alternative Energy Development

Current Management Direction

The 1993 Redding and 1992 Arcata RMPs provided only limited guidance for renewable and alternative energy development (**Table 4-23**). The Redding RMP addressed hydroelectric power and water storage only. The Arcata RMP provided no specific renewable energy planning direction. Although hydropower will continue to be a dominant factor in regional power generation, changes in technology as well as changes in law and policy will require a broader scope of consideration for renewable power generation and storage.

Table 4-23. Ability of Current Management to Achieve Desired Future Conditions for Renewable and Alternative Energy Development

Relevant Plan/Source	Current Planning Decision	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Arcata RMP 1992	<ul style="list-style-type: none"> None 	No		Tidal power generation, biomass, geothermal, etc.
Redding RMP 1993	<ul style="list-style-type: none"> Potential waterpower/storage reservoir sites under a land withdrawal will continue to be managed for waterpower values. Exceptions include withdrawal for waterpower or storage on streams that become components of the National WSR System or if public lands are transferred from federal jurisdiction. In these instances, any existing withdrawals will be recommended for revocation. 	No	Undeveloped power site withdrawals should be screened for potential revocation. Hydropower development should be included as a part of the spectrum of potential development including biomass, solar, wind power, geothermal, other power sources as well as pumped storage/battery storage facilities, and other renewable power sources. The incorporation of a third land tenure category should be considered. In addition to the typical designations of acquisition/retention and disposal, a third category could be a subset of lands that are considered for disposal but retained in the interim and managed as “custodial” lands. Custodial lands would be the lowest priority for disposal and would ideally be lands that do not require significant resources (law enforcement, facilities maintenance, etc.) while also being well suited for renewable power development, power storage, or other similar uses that would serve the public interest.	Recognize the potential for future renewable energy development on public lands in light of State renewable portfolio standards and consistent with the 2005 Energy Policy Act and subsequent policy direction.

Potential New Decisions for the RMP Revision

Specific tracts of disposal lands along utility corridors or other areas that may be suitable for solar or wind power development should be evaluated to determine the degree to which public interest favors community-based or utility scale renewable energy proposals being considered on these parcels. The feasibility of such development may preclude disposal in the short term (10-20 years) or change these lands to a more custodial management status. Lands with the highest potential for solar development will be located within the lower elevations of the Central Valley. According to data available from the NREL, there are only limited areas with significant wind power potential on public lands (such as Sheep Rock–T. 43 N., R. 3 W.) while also being within reasonable proximity to power transmission corridors. Retention lands will, in most cases, be identified as unsuitable for renewable energy development; however, specific exceptions may be identified through the planning process.

Areas of Relative Ecological Importance to Guide Land Uses and Management

Important lands include lands near existing or planned power corridors where potential for solar or wind energy is high and the potential to affect species or habitats of concern is low.

4.4 SPECIAL DESIGNATIONS

4.4.1 Areas of Critical Environmental Concern

Current Management Direction

Under existing management direction, the planning area contains 18 ACECs designated to protect a variety of resources and values. **Table 4-24** below summarizes direction from current planning documents pertaining to these ACECs. It also provides a brief description of their current responsiveness to current issues and/or opportunities for change.

Table 4-24. Ability of Current Management to Achieve Desired Future Conditions for Areas of Critical Environmental Concern

Relevant Plan/Source	Current Planning Decision	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Arcata RMP 1992	<u>SAMOA PENINSULA MANAGEMENT AREA</u> <ul style="list-style-type: none"> Designated the entire 112 acres of the Manila Dunes as an ONA/ACEC for protection and interpretation of natural values. Allow for limited, controlled OHV use. 	Yes/No	This ACEC continues to confer protection on rare biological resources. However, the current boundary of the ACEC does not conform to current BLM boundaries due to land acquisition.	Consider adjusting the boundary of this ACEC to encompass all BLM-administered lands in this area.
Arcata RMP 1992	<u>SCATTERED TRACTS MANAGEMENT AREA</u> <ul style="list-style-type: none"> Designated Gilham Butte and laqua Butte (about 3,630 acres) as RNA/ACEC for the preservation of old-growth values. 	Partially	The Gilham Butte ACEC continues to offer protection for old-growth values and consistency with the NWFP. However, additional land has been acquired in this area since it was designated as an ACEC. The laqua Butte ACEC continues to offer protection for old-growth values and consistency with the NWFP.	Consider adjusting the Gilham Butte ACEC to include acquired lands and connect isolated blocks of ACEC.
Arcata RMP 1992	<u>BUTTE CREEK MANAGEMENT AREA</u> <ul style="list-style-type: none"> Public lands within the RNA/ACEC (including mineral reserve lands) are not available for material sales. Designated all public lands in the management area as an RNA/ACEC for the preservation of old-growth and wildlife habitat values. 	Partially	This ACEC was designated to protect the area's scenic value and cultural resources, including a National Register of Historic Places district. This ACEC continues to offer protection for old-growth values and consistency with the NWFP. The area retains its scenic values and cultural resources. Current issues include illegal uses, such as dumping, long-term camping, and abandoned vehicles, and lack of management presence.	Consider bringing forward the ACEC designation with a commitment to improve the area's infrastructure (toilets, gates, camp host, trails) to promote different uses and users. Develop partnerships with local groups to help improve the management. Alternatively, consider disposal to group or agency that can provide management of the area for public use.
Arcata RMP 1992	<u>LACKS CREEK MANAGEMENT AREA</u> <ul style="list-style-type: none"> Designated an 800-acre old-growth reserve as a RNA/ACEC for the preservation of old-growth values. 	No	This ACEC overlaps with the Lacks Creek Watershed ACEC.	Consider not carrying this designation forward due to overlapping designations.

4. Management Opportunities (Areas of Critical Environmental Concern)

Relevant Plan/Source	Current Planning Decision	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Arcata RMP 1992	<u>RED MOUNTAIN MANAGEMENT AREA</u> <ul style="list-style-type: none"> Carried forward designation of Red Mountain RNA/ACEC (6,895 acres) 	No	This entire ACEC falls within the South Fork Eel River Wilderness, which confers a greater level of protection than ACEC designation.	Consider not carrying this designation forward due to substantial overlap with designated wilderness.
Arcata RMP Forest Plan Amendment 1995	<u>RED MOUNTAIN MANAGEMENT AREA</u> <ul style="list-style-type: none"> Designated approximately 10,784 acres within the South Fork Eel River as a watershed ACEC. The watershed ACEC includes 3,775 acres of the Elder Creek RNA/ACEC. 	No	This ACEC falls within the South Fork Eel River Wilderness, which confers a greater level of protection than ACEC designation.	Consider not carrying this designation forward due to substantial overlap with designated wilderness.
Arcata RMP Forest Plan Amendment 1995	<u>LACKS CREEK MANAGEMENT AREA</u> <ul style="list-style-type: none"> Designated 2,987 acres of public land within the Lacks Creek watershed as the Lacks Creek Watershed ACEC. Acquired lands within the watershed will be included in the watershed ACEC. 	Yes	This ACEC continues to provide protection for a sensitive watershed and provides consistency with the NWFP.	N/A
Red Mountain Management Framework Plan 1981	<u>RED MOUNTAIN MANAGEMENT AREA</u> <ul style="list-style-type: none"> Designated the Elder Creek RNA/ACEC. 	No	Much of this ACEC falls within the South Fork Eel River Wilderness, which confers a greater level of protection than ACEC designation.	Adjust boundary of this ACEC to encompass only those lands that fall outside of designated wilderness. Do not carry this designation forward due to substantial overlap with designated wilderness.
Redding RMP 1993	<u>ISHI MANAGEMENT AREA</u> <ul style="list-style-type: none"> Designated Deer Creek as an ACEC. 	Yes/No	Part of the designation criteria for this ACEC was for protection of the peregrine falcon. However, this species is no longer a BLM sensitive species. This area is adjacent to a wilderness area and has nationally important cultural values.	Consider adjusting the relevant and important values for this ACEC. Alternatively, protect this area's relevant and important values through WSR suitability.

4. Management Opportunities (Areas of Critical Environmental Concern)

Relevant Plan/Source	Current Planning Decision	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Redding RMP 1993	<ul style="list-style-type: none"> Designated Butte Creek Canyon from above the Forks of Butte Creek to Helltown as an ONA/ACEC. 	No	This ACEC was designated to protect the area's scenic values. The area could be more effectively managed with enhanced facility investment, toilets, trails, gates to protect roads and increased law enforcement.	Consider not carrying this designation forward or identify additional relevant and important values for this area.
Redding RMP 1993	<ul style="list-style-type: none"> Designated Baker Cypress as an RNA/ACEC. 	Yes	Baker Cypress is only found in 11 locations in Northern California and southern Oregon.	Add BLM-administered land at Dry Lake to this ACEC.
Redding RMP 1993	<p><u>KLAMATH MANAGEMENT AREA</u></p> <ul style="list-style-type: none"> Designated all public land in the Shasta River Canyon below the Highway 263 bridge crossing below Yreka Creek to the confluence with the Klamath River and within a quarter mile of the normal high water mark as an ACEC. 	Partially	This ACEC was designated to protect the area's native fisheries.	<p>Consider protection of this creek's fisheries and cultural values through WSR suitability.</p> <p>Consider further acquisitions and subsequent ACEC designation for fish and aquatics.</p>
Redding RMP 1993	<p><u>SACRAMENTO RIVER MANAGEMENT AREA</u></p> <ul style="list-style-type: none"> Designated Sacramento Island as an RNA/ACEC. 	Yes	This ACEC continues to provide protection for a wide range of biological resources.	N/A
Redding RMP 1993	<ul style="list-style-type: none"> Designated Hawes Corner as an RNA/ACEC. 	Yes	This ACEC continues to offer protection for rare vernal pool habitat that supports the slender Orcutt grass.	Pursue a nonexclusive easement for long-term management purposes.
Redding RMP 1993	<ul style="list-style-type: none"> Designated Bend Area as an ONA/ACEC 	Yes/No	This ACEC continues to provide protection for a wide range of biological resources and high cultural values.	Consider adjusting the boundary of this ACEC to incorporate Battle Creek and updated land status.
Redding RMP 1993	<p><u>SHASTA MANAGEMENT AREA</u></p> <ul style="list-style-type: none"> Swasey Drive Area is designated as an ACEC. 	Yes	This ACEC continues to offer protection for cultural sites in close proximity to the City of Redding.	The ACEC boundary could be adjusted to include additional lands adjacent to the Whiskeytown NRA, which is managed by the NPS.
Redding RMP 1993	<p><u>TRINITY MANAGEMENT AREA</u></p> <ul style="list-style-type: none"> If significant acreage is acquired in the GVC watershed, consider the area for an ACEC. 	Yes	Significant acreage has been acquired in Grass Valley, but this area has not been made an ACEC	N/A

Potential New Decisions for the RMP Revision

The BLM anticipates receiving recommendations from the public, cooperating agencies, and BLM staff members for additional ACEC designations and/or adjustments to existing ACEC boundaries (Map 2-30 and Map 2-31, Appendix A). Below is a list of some potential new ACECs identified initially by BLM staff:

Clear Creek Greenway

The Clear Creek Greenway area is located a short drive from Redding and is a popular recreation area. Potential relevant and important values include the area's fisheries habitat and scenic values.

Corning Vernal Complex The Corning Vernal Complex is located approximately 10 miles southwest of Corning in Tehama County. The site is approximately 160 acres in size and has a high density of vernal pools and connecting sloughs. The pools at this site have a high density of the federally listed vernal pool fairy shrimp as well as six sensitive plant species. There is high potential for acquisition of adjacent vernal pool habitat and protection of the existing vernal pool watershed.

Grass Valley Creek

The GVC area was acquired around the time of the 1993 Redding RMP. This area has potential relevant and important values as a fragile, natural hazard area. It is also an important upstream area for watershed/fisheries restoration.

North Table Mountain

The North Table Mountain area is located at the south end of North Table Mountain near Oroville in Butte County. The nearby North Table Mountain Ecological Reserve is managed by California Department of Fish and Wildlife. The area is approximately 180 acres. The site has high native plant diversity including large populations of several sensitive plant species, including Butte County golden clover (*Trifolium jokerstii*). Adjacent lands could be added to this ACEC, which would ultimately link it to the ecological reserve to the north.

Weaverville Community Forest

The WCF is a partnership between the BLM, Forest Service, and the Trinity County RCD to manage 13,000 acres of federal land as a community forest adjacent to the City of Weaverville. This area is currently identified for disposal under the current RMP decision. Due to community support for the BLM to keep the land, the property has been retained. Active forestry and recreation management in this area continues.

Upper Burney

The Upper Burney area has been identified as a potential ACEC due to the presence of rare vernal pool habitat.

Sheep Rock

This property in Siskiyou County contains significant cultural, wildlife, visual, and historic resources.

Black Mountain

This property in Siskiyou County contains significant cultural, old-growth, wildlife, and geologic values.

Eden Valley

The Eden Valley area has unusual geological conditions, many rare plants, and rare plant communities.

Areas of Relative Ecological Importance to Guide Land Uses and Management

Not applicable; summarized above.

4.4.2 National Scenic and Historic Trails

Current Management Direction

Table 4-25 identifies existing land use plan decisions and opportunities in the Redding and Arcata FOs to achieve desired conditions for national scenic and historic trails.

Table 4-25. Ability of Current Management to Achieve Desired Future Conditions for National Scenic and Historic Trails

Relevant Plan/Source	Current Planning Decision	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Existing legislation	None	Follow National Historic Trail guidance.	Neither the Nobles Trail nor the Yreka Trail had been designated as a National Historic Trail or nominated for inclusion as a National Historic Trail when the RMP was finalized in 1993 and were not included in any planning decisions. Now these trails either meet the criteria for listing (Yreka) or are listed (Nobles).	Incorporate into new planning document; work with NPS trails office.

Potential New Decisions for the RMP Revision

The Beckwourth Trail is designated as a National Historic Trail. Explore whether the Beckwourth Trail crosses any BLM administered lands and if so, include in current management.

Consider the Yreka Trail corridor where it passes beneath Sheep Rock as a potential contributor to a National Historic Landmark, ACEC, or other special designation.

Areas of Relative Ecological Importance to Guide Land Uses and Management

Areas of relative ecological importance related to National Scenic and Historic Trails are discussed in other sections of this AMS, such as Cultural Resources.

4.4.3 Wild and Scenic Rivers

Current Management Direction

Table 4-26 identifies existing land use plan decisions and opportunities in the Redding and Arcata FOs to achieve desired conditions for wild and scenic rivers.

Table 4-26. Ability of Current Management to Achieve Desired Future Conditions for Wild and Scenic Rivers

Relevant Plan/Source	Current Planning Decision	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Arcata RMP Forest Plan Amendment 1995	<u>RED MOUNTAIN MANAGEMENT AREA</u> <ul style="list-style-type: none"> Protect and enhance natural and recreational values along the federally designated portions of the South Fork Eel River WSR corridor. 	Partially	Not much has been done as very little on-the-ground inventory and monitoring has occurred.	Complete an inventory and monitoring effort and a wild and scenic management plan, combined with the Elkhorn Ridge Wilderness Management Plan.
Arcata RMP Forest Plan Amendment 1995	<u>COVELO VICINITY MANAGEMENT AREA</u> <ul style="list-style-type: none"> Protect and enhance natural and recreational values along the federally designated Middle Fork Eel River. 	Partially	Not much has been done as very little on-the-ground inventory and monitoring has occurred.	Complete an inventory and monitoring effort and update wild and scenic management plan.
Redding RMP 1993	<i>Trinity, North Fork Trinity Rivers:</i> <ul style="list-style-type: none"> Write specific comprehensive river management plans for the Trinity, North Fork Trinity, and the lower Klamath Rivers. 	Partially	There is an existing management plan for the main stem of the Trinity River (1983). The BLM is not required to write management plans for rivers designated under Section 2(a)(ii) of the WSR Act (i.e., State designated).	The current Trinity River Restoration Program includes modifications and changes to the current guidance in the TRRAMP.
Redding RMP 1993	<i>Lower Klamath River:</i> <ul style="list-style-type: none"> Write specific comprehensive river management plans. 	No	BLM is not required to write management plans for rivers designated under Section 2(a)(ii) of the WSR Act (i.e., State designated). Due to limited land base along the river, this decision could be modified. Some land acquisition has occurred within WSR corridor.	Additional acquisition of lands within the WSR corridor would allow for the protection of the rivers with outstanding remarkable values. In addition, economic-dependent business would benefit from additional river access for recreation, affecting management in the future.

Potential New Decisions for the RMP Revision

Provide updated eligibility and suitability determinations for all free-flowing streams in planning area.

Areas of Relative Ecological Importance to Guide Land Uses and Management

- Complete travel management plan to address river access, restoration, and development.
- Continue to acquire lands in the wild and scenic corridor from willing sellers.
- Development planning to address Reclamation Trinity River Restoration Program restoration work within the WSR corridor.

Engage public regarding eligibility and suitability of streams in order to understand how values may have changed in the planning area since the last WSR effort. This is important because water management issues are in the spotlight due to ongoing drought conditions.

4.4.4 Wilderness and Wilderness Study Areas

Current Management Direction

Table 4-27 identifies existing land use plan decisions and opportunities in the Redding and Arcata FOs to achieve desired conditions for wilderness and wilderness study areas.

Table 4-27. Ability of Current Management to Achieve Desired Future Conditions for Wilderness and Wilderness Study Areas

Relevant Plan/Source	Current Planning Decision	Responsive to Current Issues?	Remarks (rationale)	Opportunities for Change
Arcata RMP 1992	Transfer the Big Butte Wilderness and WSA to Forest Service	Yes	An MOU was developed for the Forest Service to assume management.	Update the MOU or transfer to the Forest Service.
Redding RMP 1993	Transfer the Ishi Wilderness to Forest Service	Yes	Renew MOU with Forest Service for the management of Ishi Wilderness office.	Update the MOU or transfer to the Forest Service.
Redding RMP 1993	Transfer Yolla Bolly WSA to Forest Service	Yes	Yolla Bolly WSA is next to Yolla Bolly Middle Eel Wilderness managed by the Forest Service.	Continue current monitoring and management.

Potential New Decisions for the RMP Revision

- Continue to complete annual Wilderness Character Monitoring Reports.
- Develop management goals and objectives for Lands with Wilderness Characteristics for protecting these lands during the interim period of management.
- Complete wilderness management plans.
- Post wilderness boundary signs (Arcata FO).
- Inventory and monitor resource values more frequently.
- Identify methods for increasing management opportunities, as the Eden Valley WSA is surrounded by private property and the BLM has no access.
- Identify methods for increasing management opportunities. The Yolla Bolly Wilderness is difficult to access because it is surrounded by private property and lands managed by the Forest Service.
- Update and renew agreements. For the Yuki and Yolla Bolly wildernesses, the BLM has agreements with the Forest Service for partial management responsibility.

- Develop trailheads or access to wildernesses and WSAs.

Areas of Relative Ecological Importance to Guide Land Uses and Management

All the wilderness areas on the Arcata Field Office are in watersheds that support federally listed salmon and steelhead. All these wilderness areas are in the Eel River watershed and so provide valuable refugia habitat. In addition, the Red Mountain Unit of the South Fork Eel River Wilderness is underlain by a large body of ultramafic rock; it yields abundant water in the summer when aquatic systems are stressed with low and warm flows. During these times, a disproportionately large amount of water in the mainstem Eel River is derived from Cedar Creek, which is one of the principal drainages in the Red Mountain area.⁵ Given this hydrologic value, the Cedar Creek watershed has been nominated for listing as an Outstanding Natural Resource for Water. The ultramafic rocks in the Red Mountain Wilderness area also host a suite of rare and unique plant species.

The importance of the Ishi Wilderness is related to the adjoining, larger Forest Service portion of wilderness area. The remote and rugged area is relevant because it was the last hiding place for the remnant Yahi band and Ishi, its last survivor. In addition to cultural values, wild stream (Deer Creek), fisheries, wildlife, and undeveloped volcanic terrain are also important.

Arcata FO Wilderness Areas currently are as follows:

- Elkhorn Ridge (BLM-administered lands only)—11,100 acres
- Yuki (BLM-administered lands only)—17,100 acres
- South Fork Eel River (BLM-administered lands only)—13,000 acres
 - Cahto Peak Unit
 - Red Mountain Unit
- Yolla Bolly-Middle Eel (BLM-administered lands only)—8,600 acres

Arcata FO WSAs currently are the following:

- Eden Valley (BLM-administered lands only)—6,100 acres
- Big Butte (BLM-administered lands only)—1,600 acres

Redding FO Wilderness Areas currently are the following:

- Ishi (BLM-administered lands only)—200 acres

Redding FO WSA is currently as follows:

- Yolla Bolly (BLM-administered lands only)—600 acres

⁵ Email correspondence between Bryan McFadin and Valerie Zimmer of the California State Water Resources Control Board and Sam Flanagan of the BLM Arcata Field Office. Unpublished data quantifying flows in Cedar Creek relative to Eel River gauging stations. February 11, 2021.

4.5 SOCIAL AND ECONOMIC CONDITIONS

4.5.1 Social, Economic, and Environmental Justice

Current Management Direction

Current planning documents do not contain decisions specifically addressing social, economic, or environmental justice components. However, many of the decisions that target resource and recreation management influence these components.

Potential New Decisions for the RMP Revision

The RMP should consider the potential of allowing suitable public lands to be used by homeless and/or transient individuals. The RMP should establish criteria for tracts that could be allowed for such uses.

Environmental justice is defined as the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies (See BLM Manual H-1601, Glossary of Terms and Acronyms). During the planning process, the Redding and Arcata FOs will work toward identifying any affected environmental justice populations and examine the relevance of proposed actions to these populations. With the cooperation of any affected populations, the FOs will adopt and implement creative measures to eliminate, minimize, and/or correct identified Environmental Justice impacts. The BLM and its partners will monitor environmental justice effects as the RMP is implemented.

4.6 SUPPORT

4.6.1 Mitigation

Current Management Direction

Current management direction to mitigate for adverse impacts on resource values, services, and functions on BLM-administered lands comes from the FLPMA and other federal statutes and regulations, and from policies found in the BLM manuals and handbooks, including the Land Use Planning Manual (MS-1601), Land Use Planning Handbook (H-1601-1), and the National Environmental Policy Act Handbook (H-1790-1). In general, the BLM endeavors to take a regional (i.e., landscape-level) approach to identifying mitigation opportunities to promote a science-based sustained yield of resources on BLM-administered lands, thereby increasing the effectiveness and durability of said mitigation actions. Mitigation can be applied at different scales, from the project site and affected environment to the landscape/regional level; it is most effective when tied to a regional/landscape strategy regardless of the implementation scale.

The current RMPs, as amended, do not address regional/landscape mitigation. New planning approaches in the form of regional/landscape mitigation strategies, and new planning decisions are needed to deliver the most effective and durable mitigation.

Potential New Decisions for the RMP Revision

The plan should contain regional/landscape approach(s) to mitigation or the foundational elements for design of regional/landscape mitigation strategy. At a minimum, the plan should contain the geographic area(s), land allocation(s), and criteria for mitigation actions. Regional/landscape strategies are best developed with input from other federal and state resource and land management agencies, tribal governments, and stakeholders.

The plan should contain approaches for securing durability of mitigation actions undertaken on BLM-administered lands.

The plan should contain specific criteria for when mitigation actions for differing values, services, or functions can be nested together.

The plan should identify the geographic area, land allocation, and criteria for lands to be considered for acquisition as part of a regional/landscape strategy to mitigate for project impacts and/or to address the effects of climate change.

The plan should identify restoration actions and criteria on BLM-administered lands within certain habitat types that could be used to mitigate project impacts and/or to address the effects of climate change.

The plan should identify opportunities and criteria for enhancement of specific habitat types (e.g., wetlands, riparian forests, and grasslands) on BLM-administered lands that could be used as mitigation for projects impacts and/or to address the effects of climate change.

The plan should establish details or criteria for monitoring and measuring the effectiveness and durability of mitigation actions.

The plan should establish criteria for adaptive management for mitigation approaches and actions to ensure any necessary changes can be implemented in order to achieve mitigation goals and requirements.

Areas of Relative Ecological Importance to Guide Land Uses and Management

Although mitigation may involve a wide variety of lands and habitats, it is likely that rare and unique habitat, habitat that has potential for restoration, or habitat that is resilient to the effects of climate change would be important for landscape mitigation efforts. These habitats include beaches and dunes, coastal prairies, oak woodlands, great valley riparian forests, late-seral coniferous forests, vernal pools, serpentine soil plants and forests, and any habitat for listed species.

4.6.2 Interpretation and Environmental Education

Current Management Direction

Little guidance exists for interpretation and environmental education in the 1993 Redding RMP. The only areas identified for interpretation in the 1993 Redding RMP are in the Trinity Management Area, Resources Condition Objectives section, which states “Interpret and protect key cultural and natural resources for the public including the Helena Townsite, Rush Creek, Montana Cabin and Salt Flat.”

Currently in the Redding FO area, interpretation emphasis areas are the Sacramento River Bend, Clear Creek Greenway, Trinity River, the Interlakes SRMA, and the Baker Cypress area.

Currently in the Arcata FO area, interpretation emphasis areas are the Samoa Peninsula Management Area, Scattered Tracts Management Area, and the Mike Thompson Wildlife Area, South Spit Humboldt Bay. The FO also collaborates with local partners, schools, and environmental educators to develop customized hands-on learning experiences, using natural, historic, and archaeological settings. Programs

include place-based learning that aligns with core learning standards, such as science/technology/engineering/math (STEM), service learning, or career pathway opportunities.

Potential New Decisions for the RMP Revision

The RMP could include recommendations for developing a comprehensive interpretive plan for the entire planning area, including the Arcata and Redding FOs. The interpretive plan would define the BLM's overall interpretation and education vision, goals, themes, strategies, and opportunities. The plan would include a long-range implementation strategy that includes partnership development, staffing needs, and program costs. This planning area-wide interpretive plan would create a broad connection with public land users and enhance their appreciation for the natural and cultural heritage conservation and study, respectful recreation, and a shared vision for the future of public lands.

There is an ongoing need to educate public land users and affected communities on the role of wildland fire in ecosystems, its risk to public health and safety, and the safe use of fire in the recreational environment.

There is the likelihood of new ACEC designations with educational and interpretive potential.

Areas of Relative Ecological Importance to Guide Land Uses and Management

The Redding FO continues to be active in interpretation projects throughout the area, including Clear Creek Greenway, the Sacramento River Bend ACEC, Swasey Recreation Area, Trinity River, and the Interlakes SRMA.

Environmental education programs have been developed in the Upper Ridge Nature Area and within the Clear Creek Greenway.

4.6.3 Research

Current Management Direction

The current guidance for research within the planning area emphasizes research in specific areas. Within the Arcata FO, these areas include Manila Dunes, Butte Creek, Red Mountain, Gilham Butte, Iaqua Butte, Swasey Recreation Area, and Lacks Creek. Within the Redding FO, emphasis areas include the Sacramento River Bend and Baker Cypress areas. Since the completion of the 1992 Arcata RMP and 1993 Redding RMP, land designations (e.g., wilderness) and land tenure adjustments have dramatically changed the landscape, as has demand for science and research within the planning area.

Potential New Decisions for the RMP Revision

The BLM could identify new science emphasis areas within the planning area. In these areas, the BLM could emphasize maintaining the scientific integrity of the area's resources and information potential.

Areas of Relative Ecological Importance to Guide Land Uses and Management

Not applicable.

Areas of Relative Ecological Importance to Guide Land Uses and Management

Not applicable.

4.6.4 Public Health and Safety, Land Use and Conditions, and Hazardous Materials

Current Management Direction

Generally, few decisions are made in any land use management plan regarding public health and safety associated with land use and conditions and hazardous materials disposal, storage, or treatment. Existing plans do not adequately address these concerns, except that they do not authorize the creation, storage, or disposal of hazardous materials.

Present BLM hazardous materials management includes removing hazardous materials that were inadvertently placed or illegally dumped on public lands without authorization or approval by the BLM. Current BLM activities to address public health and safety concerns with identified land uses and conditions include closures of abandoned mine lands, toxic mine runoff treatments, erratic law enforcement, and sporadic volunteer cleanup. **Table 4-28** identifies existing land use plan decisions and opportunities in the Redding and Arcata FOs to achieve desired conditions for public health and safety, land uses and conditions, and hazardous materials.

Table 4-28. Ability of Current Management to Achieve Desired Future Conditions for Public Health and Safety, Land Uses and Conditions, and Hazardous Materials

Relevant Plan/Source	Current Planning Decision	Responsive to Current Issues? (Y/N)	Remarks (rationale)	Options for Change
Arcata RMP 1993 and Arcata RMP Forest Plan Amendment 1995	<ul style="list-style-type: none"> No mention of hazardous materials. Public health and safety concerns with respect to land uses and conditions are not mentioned. 	Partially No	<p>The Arcata and Redding FOs do not have much decision space with respect to hazardous materials.</p> <p>Public health and safety concerns with respect to identified land uses and conditions (Final Scoping Report 2017), other than hazardous materials, are not addressed.</p>	<p>Some decisions, like consolidating lands or restricting access, could have a positive correlation to hazardous materials problems.</p> <p>Develop management objectives and management actions to address identified land uses and conditions (Final Scoping Report 2017).</p>

4. Management Opportunities (Public Health and Safety, Land Use and Conditions, and Hazardous Materials)

Relevant Plan/Source	Current Planning Decision	Responsive to Current Issues? (Y/N)	Remarks (rationale)	Options for Change
Proposed Redding RMP and FEIS 1992	<ul style="list-style-type: none"> No decisions regarding disposal, storage, or treatment of hazardous materials are made in any land use management alternative of this RMP. Additionally, decisions in this RMP do not authorize the creation, storage, or disposal of hazardous materials. Present BLM involvement with hazardous materials in the Redding Resource Area is limited to removal of hazardous materials inadvertently placed or illegally dumped on public lands (i.e., without authorization or approval by the BLM). 	Partially	The Arcata and Redding FOs do not have much decision space with respect to hazardous materials.	Some decisions, like consolidating lands or restricting access, could have a positive correlation to hazardous materials problems.
	<ul style="list-style-type: none"> Public health and safety concerns with respect to land uses and conditions are not mentioned. 	No	Public health and safety concerns with respect to identified land uses and conditions (Final Scoping Report 2017), other than hazardous materials, are not addressed.	Develop management objectives and management actions to address identified land uses and conditions (Final Scoping Report 2017).
Redding RMP 1993	<ul style="list-style-type: none"> The Redding Resource Area's primary hazardous materials workload consists of cleaning up drug lab dumps, abandoned used oil, chemicals at abandoned mine sites, and various hazardous materials on occupancy trespass sites. These activities will occur in all land use management alternatives. Public land consolidation should diminish present levels of all types of trespass including hazardous materials dumping on public lands under BLM administration. 	Partially	The Arcata and Redding FOs do not have much decision space with respect to hazardous materials.	Some decisions, like consolidating lands or restricting access, could have a positive correlation to hazardous materials problems.

Relevant Plan/Source	Current Planning Decision	Responsive to Current Issues? (Y/N)	Remarks (rationale)	Options for Change
	<ul style="list-style-type: none"> Public health and safety concerns with respect to land uses and conditions are not mentioned. 	No	Public health and safety concerns with respect to identified land uses and conditions (Final Scoping Report 2017), other than hazardous materials, are not addressed.	Develop management objectives and management actions to address identified land uses and conditions (Final Scoping Report 2017).

Potential New Decisions for the RMP Revision

The BLM should include the following activities to address the identified concerns:

- Develop and implement reclamation plan areas ravaged by recent wildfires to help stabilize denuded slopes, reduce erosion and sedimentation, and remove remaining dry fuel in those areas
- Increase law enforcement activities and enter into an MOU with local law enforcement to provide for more regular patrols of problem areas
- Institute campground fees to discourage long-term camping and to support regular trash cleanup and maintenance at identified camping areas
- Monitor and address illegal marijuana operations and unauthorized water diversions
- Enhance public safety at gun firing ranges by installing rock-free, earthen back berms to reduce the potential for ricochets, to provide for easier collection of spent ammunition shells/casings, to remove vegetation and dry fuel to create fire breaks and provide for fire protection, and to install restroom facilities to reduce unmanaged accumulation of human waste
- Improve roads to facilitate access to and escape from foothill communities, modify the BLM-administered bridge across the West Branch of the Feather River to allow fire trucks and heavy equipment to pass, and consider opportunities to work with local governments or organizations to increase the pace and scale of this work, as needed
- Expand truck and horse trailer parking areas at selected locations
- Prohibit firearms shooting in the Sacramento Island area and in proximity to all other developed trail areas
- Provide for separate hunting use areas and times to enhance public safety
- Develop a fenced training area at the Manila Dunes to provide a safe place for motorcycles, to reduce OHV collisions, and to provide a safe training area for children

The RMP should consider ways to minimize or mitigate hazardous materials issues. For example, limiting access to problematic areas might help control some illegal dumping. Another example from previous planning is the assertion that the goal of consolidating BLM holdings might also limit hazardous materials cleanups from illegal dumping or occupancy. Generally, the RMP revision might reassert the BLM’s limited decision space with respect to this issue in the Arcata and Redding FOs; that is, hazardous materials are generally something the BLM is forced to respond to but has little ability to plan for.

Areas of Relative Ecological Importance to Guide Land Uses and Management

Public health and safety concerns were identified in the Final Scoping Report for the NCIP (USDI BLM 2017). Management objectives and action plans will incorporate ecological factors into some of those objectives and plans. This is especially true when the BLM is developing and implementing reclamation plans for the large areas of wildfire-affected lands in the planning area.

Anecdotally, some areas are more likely to experience hazardous materials issues. Generally, the Arcata and Redding FOs know where hazardous material issues have been experienced in the past and may expect to in the future, though reliable data does not exist to support planning decisions.

Chapter 5. Consistency/Coordination with Other Plans

According to guidance found in 43 CFR 1610, the BLM's RMPs and amendments must be consistent, to the extent practical, with officially approved or adopted resource-related plans of State and local governments, other federal agencies, and tribal governments, so long as the guidance and RMPs are also consistent.

The BLM's RMPs must also be consistent with the purposes, policies, and programs of FLPMA and other federal laws and regulations applicable to public lands, including federal and state pollution control laws (see 43 CFR 1610.3-2 (a)).

If these other entities do not have officially approved or adopted resource-related plans, then BLM RMPs must, to the extent practical, be consistent with their officially approved and adopted resource-related policies and programs. This consistency will be achieved so long as BLM RMPs incorporate the policies, programs, and provisions of public land laws and regulations and federal and state pollution control laws (see 43 CFR 1610.3-2 (b)).

Before the BLM approves the proposed RMP decisions, the Governor of California has 60 days in which to identify inconsistencies between the proposed plan and state plans and programs and to provide written comments to the BLM State Director.

County, town, and state agency plans, and other federal agency plans for neighboring areas or cross-jurisdictional purposes are further discussed in the following sections. Plans listed or discussed in the following sections should be consulted as applicable during development of the RMP.

5.1 COUNTY AND CITY PLANS

The BLM will consider the following county and city plans during the RMP development process for the purpose of consistency.

5.1.1 General Plans

- Butte County General Plan 2030 (2010)
- Del Norte County General Plan (2003)
- Humboldt County General Plan (2017)
- Humboldt County Beach and Dunes Management Plan (1993)
- Humboldt Bay Area Plan of the Humboldt County Local Coastal Program (2014)
- Humboldt County Association of Governments (2008)
- Humboldt County Regional Transportation Plan (2017)
- Humboldt Bay Harbor, Recreation, and Conservation District Economic Development Committee Summary (2010)
- Mendocino County General Plan (2009)
- Shasta County General Plan (2004)

- Siskiyou County General Plan (1980)
- Tehama County General Plan (2009)
- Trinity County General Plan (1988)
- City of Anderson General Plan (2007)
- City of Arcata General Plan (2000)
- City of Chico General Plan (2011, amended March 2017)
- City of Crescent City General Plan (2001)
- City of Eureka General Plan (2018)
- City of Ferndale General Plan (1986–Land Use Element)
- City of Fortuna General Plan (Revised Land Use–2014)
- City of Oroville General Plan (2015)
- City of Redding General Plan (2000)
- City of Redding Parks, Trails, and Open Space Master Plan (2018)
- City of Red Bluff Design Review Guidelines (1980)
- City of Shasta Lake (1999)
- City of Willits General Plan (1992)
- City of Yreka General Plan (2003)
- Town of Paradise General Plan (1994)
- City of Trinidad Local Coastal Program and General Plan (1978)

5.1.2 Community Wildlife Protection Plans (CWPP)

- Butte County CWPP (2015)
- Siskiyou County:
 - Siskiyou County CWPP (2019)
 - Yreka Area Fire Safe Council CWPP (2019)
 - Juniper Flat CWPP (2014)
 - Quartz Hill CWPP (2009)
- Trinity County CWPP (2015)
- Tehama County:
 - Tehama East CWPP (2017)
 - Tehama West CWPP (2017)
- Shasta County:
 - Keswick Basin CWPP (2009)
 - Shingletown CWPP (2011)
- Shasta/Trinity Unit Fire Management Plan/Shasta County CWPP (2008)
- Humboldt County:
 - Humboldt County CWPP (2019)
 - Lower Mattole CWPP (2016)

- Southern Humboldt CWPP (2013, included in 2019 update)
- Mad-Van Duzen Watershed CWPP (2019)
- Mendocino County Community Wildfire Protection Plan (2015)

5.2 STATE AGENCY PLANS AND PROGRAMS

- State Wildlife Action Plan (2015)
- California’s Statewide Historic Preservation Plan 2013-2017
- California Aquatic Invasive Species Management Plan (2008)
- California Forest Practices Act (1973)
- Water Quality Control Plan for the North Coast Region (2018)
- Water Quality Control Plan for the Sacramento River and San Joaquin River Basins (2018)
- California State Park General Plans (as applicable)
- Recovery Strategy for California Coho Salmon (2004–2012)
- California Coastal Management Program (1978)
- Ecosystem Restoration Program Conservation Strategy for Restoration of the Sacramento-San Joaquin Delta, Sacramento Valley and San Joaquin Valley Regions (2014)⁶
- Statewide Integrated Water Management, California Water Plan (2018)
- California Coastal National Monument Resource Management Plan (2005)
- California Air Resources Board
 - Butte District Attainment Plan (Fine Particulate Matter [PM_{2.5}]) (2009) Community Air Protection Program 20
 - San Joaquin Valley Unified Air Pollution Control District PM_{2.5} State Implementation Plan (2018)
 - Attainment Plan for the 1-Hour Ozone Standard (2013)
 - PM₁₀ Maintenance Plan (2007)
 - Wildfire Smoke, A Guide for Public Health Officials (Revised 2019)
 - Coordination and Communication Protocol for Naturally Ignited Fires (2011)
 - California Code of Regulations Title 17, Smoke Management Guidelines for Agricultural and Prescribed Burning (2001)
- Oroville Lake State Recreation Area General Plan (2004)
- California Department of Water Resources – State Water Project
- Strategic Fire Plan for California (2019)
 - CAL FIRE Butte Unit Fire Management Plan
 - CAL FIRE Shasta-Trinity Unit Fire Management Plan
 - CAL FIRE Siskiyou Unit Fire Management Plan
 - CAL FIRE Tehama-Glenn Unit Fire Management Plan

⁶ Also a federal plan; plan is a collaboration between CDFW, USFWS, and NOAA Fisheries.

- CAL FIRE Mendocino Unit Fire Management Plan
- CAL FIRE Humboldt-Del Norte Unit Fire Management Plan

5.3 FEDERAL AGENCY PLANS

The BLM will consider plans from other federal agencies including but not necessarily limited to those listed below.

5.3.1 Forest Service

- Northwest Forest Plan (1994)
- Record of Decision and Standards and Guidelines for Amendments to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines (2001)
- Interim Strategy for Managing Anadromous Fish-producing Watersheds on Lands Administered by the Forest Service and Bureau of Land Management in Eastern Oregon and Washington, Idaho, and Portions of California (1995)
- Shasta-Trinity National Forest Land and Resource Management Plan (1995)
- Klamath National Forest Land and Resource Management Plan (1995, amended 2010)
- Lassen National Forest Land and Resource Management Plan (1992)
- Mendocino National Forest Land and Resource Management Plan (1995, amended 2007)
- Plumas National Forest Land and Resource Management Plan (1988)
- Six Rivers National Forest Land and Resource Management Plan (1998, amended 2008)

5.3.2 US Fish and Wildlife Service

Species and Habitat Recovery Plans

- Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon (2005)
- Revised Recovery Plan for the Northern Spotted Owl (2011b)
- Recovery Plan for the Pacific Coast Population of the Western Snowy Plover (2007b)
- Recovery Plan for the Marbled Murrelet (1997)
- Valley Elderberry Longhorn Beetle Recovery Plan (1984)
- McDonald's Rock-creep Recovery Plan (1984)
- Recovery Plan for Seven Coastal Plants and the Myrtle's Silverspot Butterfly (1998)
- Recovery Plan for Sacramento River Winter-Run Chinook Salmon, Central Valley Spring-Run Chinook Salmon, and California Central Valley Steelhead (2014)
- Revised Draft Recovery Plan for the Coterminous United States Population of Bull Trout (*Salvelinus confluentus*) (2014)
- Draft Recovery Plan for the Giant Garter Snake (*Thamnopsis gigas*) (2017)
- Recovery Plan for the California Red-legged Frog (*Rana aurora draytonii*) (2002)
- Revised Recovery Plan for the Lost River Sucker and Shortnose Sucker (*Deltistes luxatus* and *Chasmistes brevirostris*) (2013)

Conservation Plans and Agreements

- Humboldt Bay National Wildlife Refuge Complex Comprehensive Conservation Plan (2005)
- Rangeland Conservation Agreement for the Conservation and Management of Interior Redband Trout (2014)
- Conservation Assessment and Strategy for the Humboldt Marten in California and Oregon (2019)
- The Pacific Lamprey Conservation Agreement (2012)
- Habitat Management Guidelines for Amphibians and Reptiles of Northwestern United States and Western Canada (2008)
- Conservation of Fishers (*Martes pennanti*) in South-Central British Columbia, Western Washington, Western Oregon, and California
 - Volume I: Conservation Assessment (2010)
 - Volume II: Key Findings From Fisher Habitat Studies in British Columbia, Montana, Idaho, Oregon, and California (2011)
- Conservation of Fishers (*Martes pennanti*) in South-Central British Columbia, Western Washington, Western Oregon, and California—Volume III: Threat Assessment (2012)
- Sacramento National Wildlife Refuges (2009)

Other Management Plans and Guidelines

- Habitat Management Guidelines for Amphibians and Reptiles of Southwestern United States (2016)
- Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for Four Vernal Pool Crustaceans and Eleven Vernal Pool Plants (2006)
- Memorandum of Understanding between the US Department of the Interior Bureau of Land Management and the U. S. Fish and Wildlife Service To Promote the Conservation of Migratory Birds (2010)
- Birds of Conservation Concern (2008)

5.3.3 National Park Service

- Redwood National and State Parks General Management Plan (2000)
- Whiskeytown Unit: Whiskeytown-Shasta-Trinity National Recreation Area General Management Plan (2000)
- Lassen Volcanic National Park General Management Plan (2003)
- Comprehensive Management and Use Plan and Final Environmental Impact Statement for the California National Historic Trail and Pony Express National Historic Trail (1998)
- Final Environmental Impact Statement, Proposed Designation of Five California Rivers in the National Wild and Scenic Rivers System, Volume I, Appendices, Volume II Parts I & II (1980)

5.3.4 National Oceanic and Atmospheric Administration—National Marine Fisheries Service

- Central California Coast Coho Salmon Recovery Plan (2012)
- Southern Oregon/Northern California Coast Coho Salmon Recovery Plan (2014)

- California Central Valley Salmon and Steelhead Recovery Plan (2014)
- Coastal Multispecies Public Draft Recovery Plan: California Coastal Chinook Salmon ESU, Northern California Steelhead DPS and Central California Coast Steelhead DPS (2015 Public Draft In Review)

5.3.5 Environmental Protection Agency (EPA)

- Eel River (Lower) Sediment and Temperature TMDLs (2007)
- Eel River (North Fork) Sediment and Temperature TMDLs (2002)
- Eel River (Middle Fork) Sediment and Temperature TMDLs (2003)
- Eel River (South Fork) Sediment and Temperature TMDLs (1999)
- Eel River (Middle Main) Sediment and Temperature TMDLs (2005)
- Eel River (Upper Main) Sediment and Temperature TMDLs (2004)
- Mad River Sediment and Turbidity TMDLs (2007)
- Mattole River Sediment TMDL (2002)
- Redwood Creek Sediment TMDL (1998)
- Ten Mile River Sediment TMDL (2000)
- Trinity River Sediment TMDL (2001)
- Trinity River (South Fork) Sediment TMDL (1998)
- Van Duzen River Sediment TMDL (1999)

5.3.6 Bureau of Reclamation (Reclamation)

- Anadromous Fish Restoration Program Comprehensive Assessment and Monitoring Program (2001)
- The Trinity River Mainstem Fishery Restoration Environmental Impact Statement/Environmental Impact Report and Record of Decision (2000)
- Central Valley Project Improvement Act (1992)
- CALFED Bay-Delta Authorization Act FEIS and Record of Decision (2000)

5.3.7 Federal Energy Regulatory Commission

- Draft Historic Properties Management Plan, Klamath Hydroelectric Project (FERC Project No. 2082) PacifiCorps (2004)
- DeSabra-Centerville Hydroelectric Project FERC Project No. 803 (2008)

5.3.8 Department of Energy–Western Area Power Administration

- North Area Right-of-Way Maintenance Program Operations and Maintenance Plan (2005)
- North Area Right-of-Way Maintenance Program; Western–Bureau of Land Management (2010)

5.4 NON-GOVERNMENT CONSERVATION PLANS AND AGREEMENTS

- Amphibian Conservation Action Plan Proceedings: International Union for Conservation of Nature/Species Survival Commission Amphibian Conservation Summit 2005

- California Partners in Flight (CalPIF) North American Landbird Conservation Plan (2004, 2016 revision)
- CalPIF Coniferous Forest Bird Conservation Plan (2002)
- CalPIF Coastal Scrub/Chaparral Bird Conservation Plan (2004)
- CalPIF Grassland Bird Conservation Plan (2000)
- CalPIF Oak Woodland Bird Conservation Plan (2002)
- CalPIF Riparian Bird Conservation Plan (2004)
- CalPIF Sagebrush Bird Conservation Plan (2005)
- CalPIF Sierra Nevada Bird Conservation Plan (1999)
- North American Waterfowl Management Plan (Original 1986, 1998, 2004, updated 2012 and 2018)
- Fish Habitat Action Plan, California Fish Passage Forum Fish Habitat Partnership, California Fish Passage Forum Strategic Framework 2013-2018 (2013)
- Fish Habitat Action Plan, Desert Fish Habitat Partnership, Framework for Strategic Conservation of Desert Fishes (2015)
- Fish Habitat Action Plan, Pacific Marine and Estuarine Fish Habitat Partnership Strategic Framework 2018–2022 (2018)
- Fish Habitat Action Plan, Reservoir Fisheries Habitat Partnership, A Framework for Strategic Conservation of Fish Habitat In the Reservoir Systems of the United States 2018–2022 (2018)
- Fish Habitat Action Plan, The California Salmon Stronghold Initiative (2012)
- Fish Habitat Action Plan, Western Native Trout Initiative A Plan for Strategic Actions (2007)
- Freshwater Mussels of the Pacific Northwest (2009)
- Green Diamond Forest Habitat Conservation Plan (2018)
- Humboldt Bay Harbor Recreation and Conservation District, Humboldt Bay Management Plan (2007)
- Sierra Pacific Industries Habitat Conservation Plan for Northern and California Spotted Owl (2020)

5.5 POTENTIAL COOPERATION AND PARTNERSHIP

The BLM has identified the following federal, state, and local agencies and tribal governments as potential cooperating agencies and partners for the NCIP development process.

5.5.1 Potential Cooperators

Federal Agencies

- Forest Service
 - Shasta-Trinity National Forest
 - Klamath National Forest
 - Lassen National Forest
 - Mendocino National Forest
 - Plumas National Forest

- Six Rivers National Forest
- Pacific Crest National Scenic Trail
- Pacific Southwest Forest and Range Experiment Station
- US Fish and Wildlife Service
 - Sacramento National Wildlife Refuge
 - Humboldt Bay National Wildlife Refuge
 - Arcata Fish and Wildlife Office
 - Sacramento Fish and Wildlife Office
 - Yreka Fish and Wildlife Office
- National Park Service
 - Lassen Volcanic National Park
 - Whiskeytown National Recreation Area
 - Redwood National Park
 - California National Historic Trail
- US Army Corp of Engineers
 - Black Butte Lake
- US Bureau of Reclamation
 - Trinity River Restoration Program
 - Shasta Dam and Reservoir
 - Lewiston Dam and Reservoir
 - Keswick Dam and Reservoir
 - Iron Gate Reservoir
 - Copco Lake
 - Buckhorn Reservoir
- Environmental Protection Agency
- Federal Highway Administration
- Western Area Power Administration

State Agencies

- CDFW
 - Region 1 Office (Northern Region)
 - Region 7 Office (Marine Region)
 - Horseshoe Ranch Wildlife Area
 - Butte Valley Wildlife Area
 - Tehama Wildlife Management Area
 - Eel River Wildlife Area
- California Department of Conservation
- California Department of Water Resources

- CAL FIRE
 - Humboldt-Del Norte Unit
 - Mendocino Unit
 - Tehama-Glenn Unit
 - Shasta-Trinity Unit
 - Siskiyou Unit
 - Butte Unit
- California Air Resources Board
 - North Coast Unified Air Quality Management District
 - Tehama County Air Pollution Control District
 - Butte County Air Quality Management District
 - Lassen County Air Pollution Control District
 - Mendocino County Air Pollution Control District
 - Shasta County Air Quality Management District
 - Siskiyou County Air Pollution Control District
 - Northeast Air Alliance, Butte, Lassen, Modoc, Plumas, Shasta, Siskiyou, and Tehama Counties
- California Conservation Corps
- California Department of Transportation
- California State Parks
 - Latour State Forest
 - Lake Oroville State Recreation Area
 - Humboldt Redwood State Park
 - Shasta State Park
- California Natural Resource Agency
 - Wild and Scenic Rivers
- Native American Heritage Commission
- Office of Historic Preservation
- State Water Resources Control Board
 - North Coast Regional Water Quality Control Board
 - Central Valley Regional Water Quality Control Board
- Wildlife Conservation Board

Counties and Cities

- Butte County
- Del Norte County
- Humboldt County
- Mendocino County

- Shasta County
- Siskiyou County
- Tehama County
- Trinity County
- City of Anderson
- City of Arcata
- City of Blue Lake
- City of Chico
- City of Corning
- City of Crescent City
- City of Etna
- City of Eureka
- City of Ferndale
- City of Fort Jones
- City of Fortuna
- City of Garberville
- City of Laytonville
- City of Montague
- City of Oroville
- City of Redding
- City of Red Bluff
- City of Willits
- City of Yreka
- Town of Magalia
- Town of Paradise
- Town of Trinidad

Federally Recognized Tribes

- Bear River Band of Rohnerville Rancheria
- Berry Creek Rancheria
- Big Lagoon Rancheria
- Blue Lake Rancheria
- Cachil Indian Community of the Calusa Rancheria
- Cahto Tribe of Laytonville Rancheria
- Cher-Ae Heights Indian Community of the Trinidad Rancheria
- Confederated Tribes of Grand Ronde
- Confederated Tribes of Siletz
- Elk Valley Rancheria
- Enterprise Rancheria

- Greenville Rancheria
- Grindstone Rancheria of Wintun-Wailaki
- Hoopa Valley Tribal Council
- Karuk Tribe of California
- Klamath Tribes
- Mechoopda Indian Tribe/Chico Rancheria
- Modoc Tribe of Oklahoma
- Mooretown Rancheria
- Paskenta Band of Nomlaki Indians
- Pit River Tribe
- Quartz Valley Indian Rancheria
- Redding Rancheria
- Resighini Rancheria
- Round Valley Tribal Council
- Sherwood Valley Rancheria
- Tolowa Dee-ni' Nation
- Wiyot Tribe
- Yurok Tribe

5.5.2 Potential Partners

The BLM has identified the following as potential partners for the NCIP development process.

Non-Federally Recognized Tribes

- Koncow Valley Band of Maidu
- Nor-Rel-Muk Nation
- Pakan-Yani Maidu Band of Strawberry Valley Rancheria
- Shasta Nation
- Shasta and Upper Klamath Indians
- Sinkyone intertribal Wilderness Council
- Wintu Tribe and Toyon Center
- Tsangwe Council
- Tsurai Ancestral Society
- Winnemen Wintu
- Winton Tribe

Resource Conservation Districts (RCD)

- Butte County RCD
- Humboldt County RCD
- Mendocino RCD
- Shasta Valley RCD

- Tehama RCD
- Trinity County RCD
- Western Shasta RCD

Watershed Groups and Conservancies

- Battle Creek Watershed Group
- Bear Creek Watershed Group
- Butte Creek Watershed Conservancy
- Cottonwood Creek Watershed Group
- Sacramento River Watershed Program
- Upper Clear Creek Watershed Group
- Lower Clear Creek Watershed Group
- Upper Mid Klamath Watershed Council
- Watershed Research Center-Hayfork
- Trinity Collaborative
- The Nature Conservancy
- River Partners
- Eel River Watershed Improvement Group
- Mattole Restoration Council
- Deer Creek Watershed Conservancy
- Mill Creek Watershed Conservancy
- Chico Creek Watershed Conservancy?
- Cow Creek Watershed Conservancy?
- Scott River Watershed Council

Community Groups

- Fire Safe Councils
- Horse-Town Clear Creek Preserve
- Redwood Community Action Agency
- McConnell Foundation
- Save-the-Redwoods League
- Redding Rotary Club
- Shasta-Cascade Wonderland Association
- Redding Mountain Bike Club
- Trust for Public Lands
- Greater Redding Trails and Bikeways Association
- Friends of the Dunes
- Humboldt Trails Council
- The Wildlands Conservancy–Eel River Estuary Preserve

- Weaverville Community Forest Steering Committee
- Paradise Parks and Recreation Department
- Upper Ridge Wilderness

Private Industry Groups

- Sierra Pacific Industries
- Pacific Gas & Electric
- Trinity River Lumber Company
- Barnum Timber Company
- Mendocino Redwoods Company
- Humboldt Redwoods Company
- Green Diamond Resource Company
- PacifiCorp/Pacific Power
- Trinity Public Utilities District
- Fruit Growers Supply Co.
- Crane Mills
- Wheelabrator Shasta Energy Company
- Timber Products Co

Other Interested Groups/Stakeholders

- The Archaeological Conservancy
- Society for California Archaeology
- Society of American Foresters (SAF)
- Colleges and universities
- Community historical societies and museums (Fort Jones, Shingletown, Anderson, Chico, Oroville, Weaverville, Clarke Historical [Eureka], etc.)
- See lists in earlier proposed plans and final EISs

5.6 RESOURCE ADVISORY COUNCIL

The BLM's resource advisory councils (RACs) are authorized under the FLPMA of 1976. Function of the RAC is governed by the Federal Advisory Committee Act of 1972. The Act directs the establishment, operation, oversight, and termination of advisory boards.

A RAC is a committee established by the Secretary of the Interior to provide advice or recommendations to BLM management. A RAC is generally composed of 15 members of the public, representing different areas of expertise. As provided for by FLPMA, the USDI established the RAC program in 1995 as a forum for local citizens to provide advice and recommendations to the Department on management of public lands.

The RAC members serve a 3-year term, which is staggered among members such that one-third of the membership is subject to appointment in any given year. The members serve in an advisory capacity to develop recommendations for the BLM regarding the preparation, amendment, and implementation of

land use plans for the public lands and resources within their jurisdiction. The RAC also advises the BLM in developing recommendations for implementation of ecosystem management concepts, principles, and programs, and assists in establishing landscape goals and objectives.

The BLM Northern California District RAC was established in June 2015. The council replaces the former Northeast California and Northwest California RACs and advises the entire Northern California District, also including Arcata and Redding FOs. The RAC reports to the Secretary of the Interior through the BLM designated federal official, which, for the Northern California District, is the Northern California District manager. A standing subcommittee, consisting of five members of the RAC, will be established for the NCIP.

Chapter 6. Specific Mandates and Authority

6.1 INTRODUCTION

Chapter 6 provides a description of laws, regulations, and policy applicable to all resources and resource uses that will be considered in the development of the NCIP. This list is not exhaustive but is intended to be representative of items to be considered by the BLM during the planning process.

6.2 LAWS, REGULATIONS, POLICIES, AND OTHER PLANNING DOCUMENTS FOR ALL RESOURCES AND RESOURCE USES

6.2.1 Federal Laws, Statutes, Regulations

- The National Environmental Policy Act of 1969
- The Federal Land Policy and Management Act of 1976, as amended (43 USC. 1701 et seq.)
- Executive Order 11514, Protection and Enhancement of Environmental Quality, March 5, 1970 (35 FR 4247), as amended by Executive Order 11991, May 24, 1977
- 40 CFR 1500–1508, Council on Environmental Quality Regulations Implementing NEPA (last updated on September 14, 2020)

6.2.2 BLM Activity and Implementation-Level Plans

- South Spit Management Plan (2002)
- Lacks Creek Management Plan (2008)
- Ma-le'l Dunes Cooperative Management Area Public Access Plan (2010)
- Interlakes Special Recreation Management Area Environmental Impact Statement and Record of Decision (1997)
- Swasey Drive Area Implementation Plan Finding of No Significant Impact and Record of Decision (2004)
- 2009 Redding Resource Management Plan Maintenance Swasey Drive ACEC Boundary (2009)
- Japanese Knotweed Control Protocol (2006) (Programmatic EA for the Arcata FO)

USDI and BLM Manuals and Handbooks

- BLM H-1601-1, Land Use Planning Handbook (USDI BLM 2010b)
- BLM H-1790-1, National Environmental Policy Act
- BLM H-3160-5, Inspection and Enforcement Documentation and Strategy Development Handbook
- BLM H-3809-1, Surface Management Handbook
- BLM H-6840, Special Status Species Management

Memorandum of Agreements, Informational Bulletins, Instructional Memoranda

- IM 2011-003, Solar Energy Development Policy (USDI BLM 2010d)
- IM 2009-043, Wind Energy Development Policy (2008)

6.2.3 Federal Plans/Programmatic EIS or Programmatic Environmental Impact Reports

- California Vegetation Management Final Environmental Impact Statement (FEIS) (1988)
- Vegetation Treatment on BLM Lands in Thirteen Western States (USDI BLM 1991)
- Vegetation Treatments Using Herbicides on Bureau of Land Management Lands in 17 Western States Programmatic Environmental Impact Statement (USDI BLM 2007a)
- Record of Decision for Vegetation Treatments on Bureau of Land Management Lands in 17 Western States Programmatic Environmental Impact Statement (USDI BLM 2007b)
- Final Vegetation Treatments using Aminopyralid, Fluroxypyr, and Rimsulfuron on Bureau of Land Management Lands in 17 Western States Draft Programmatic EIS (USDI BLM 2016b)
- National Invasive Species Management Plan 2008-2012 (US National Invasive Species Council 2008)
- Rangeland Health Standards and Guidelines for California and Northwestern Nevada Final EIS (1998)
- National Fire Plan of 2001 (Public Law 106–291)
- Final Environmental Statement for Timber Management (SYU-15) (1976)
- Final Timber Management Environmental Assessment: Sustained Yield Unit 15 (SYU-15) (USDI BLM 1981b)
- Interim Strategy for Managing Anadromous Fish-producing Watersheds on Lands Administered by the Forest Service and Bureau of Land Management in Eastern Oregon and Washington, Idaho, and Portions of California (1995)

6.3 LAWS, REGULATIONS, POLICIES, AND OTHER PLANNING DOCUMENTS FOR SPECIFIC RESOURCES AND RESOURCE USES

6.3.1 Resources

Air

- Federal laws, statutes, and regulations
 - Clean Air Act of 1990, as amended (42 USC 7401)
 - National Ambient Air Quality Standards (40 CFR 50.4-50.12)
- USDI and BLM manuals and handbooks
 - BLM Manual 7000, Soil, Water, and Air Management
 - BLM Manual 7300, Air Resource Management Program

Cave and Karst Resources

- Federal laws, statutes, and regulations
 - Federal Cave Resources Protection Act of 1988 (16 USC 4301 et seq.)
- USDI and BLM manuals and handbooks
 - BLM Manual 8380, Cave and Karst Resources Management
- Agreements, informational bulletins, instructional memoranda
 - IM WO 2010-181, White-nose Syndrome

Climate Change

- Federal laws, statutes, and regulations
 - Energy Policy Act of 2005
 - Secretarial Order 3289, Addressing the Impacts of Climate Change on America’s Water, Land, and Other Natural and Cultural Resources, September 14, 2009
- California State laws, statutes, and regulations
 - California Coastal Commission Sea Level Rise Policy Guidance—Interpretive Guidelines for Addressing Sea Level Rise in Local Coastal Programs and Coastal Development Permits

Coastal Resources and Management

- Federal laws, statutes, and regulations
 - Coastal Zone Management Act of 1972
- California state laws, statutes, and regulations
 - California Coastal Act Public Resources Code Division 20
 - Humboldt County Beach and Dunes Management Plan (1992)

Cultural Resources

- Federal laws, statutes, and regulations
 - Historic Sites Act of 1935 (16 USC. 461)
 - National Historic Preservation Act of 1966, as amended (16 USC 470)
 - Native American Graves Protection and Repatriation Act, as amended (25 USC. 3001 et seq.)
 - Antiquities Act of 1906 (P.L. 59-209; 34 Stat. 225; 16 USC 431–433)
 - Archaeological Resources Protection Act of 1979, as amended (16 USC 470)
 - 36 CFR 78 (Waiver of Federal Agency Responsibilities under Section 110 of the National Historic Preservation Act)
 - 36 CFR 79 (Curation of Federally Owned and Administered Archaeological Collections)
 - 36 CFR 60 (National Register of Historic Places)
 - 36 CFR 800 (Protection of Historic Properties)
 - 43 CFR 3 (Preservation of American Antiquities; implementing regulations for the Antiquities Act)
 - 43 CFR 7 (Protection of Archaeological Resources)
 - 43 CFR 10 (Native American Graves Protection and Repatriation Act Regulations; Final Rule)
 - Executive Order 13007—Indian Sacred Sites
- USDI and BLM manuals and handbooks
 - BLM Manual 8100, The Foundation for Managing Cultural Resources
- Agreements, informational bulletins, instructional memoranda
 - Information Bulletin (IB) WO-2002-101, Cultural Resource Considerations in Resource Management Plans (2002)

- IB WO-2003-093, Implementation of Executive Order (EO) 13287 and Preserve America Initiative
- IB WO-2004-154, Amendments to 36 CFR 800, Protection of Historic Properties
- IM WO-98-131, Disposition Policy on Native American Graves Protection and Repatriation Act Repatriated Museum Collections
- IM WO-2003-147, Application for Permit to Drill, Process Improvement No. 3—Cultural Resources
- IM WO 2004-020, Guidance for Recording Cultural and Paleontological Resource Locations for the Bureau of Land Management (BLM) using Global Positioning System (GPS) Technology
- IM WO-2004-052, Assessing Tribal and Cultural Considerations as Required in IM-2003-233, Integration of the Energy Policy and Conservation Act Inventory Results into the Land Use Planning Process
- IM WO-2005-003, Cultural Resources and Tribal Consultation and Fluid Minerals Leasing
- IM WO-2005-027, National Historic Preservation Act Section 106 and Oil and Gas Permitting
- IM 2007-002, BLM Reburial Policy on BLM Lands (USDI BLM 2006)
- IM 2012-067, Clarification of Cultural Resources Considerations for Off-Highway Vehicle Designations and Travel Management
- State Protocol Agreement among the California State Director of the Bureau of Land Management and the California State Historic Preservation Officer and the Nevada State Historic Preservation Officer Regarding the Manner in Which the Bureau of Land Management Will Meet its responsibilities under the National Historic Preservation Act and the National Programmatic Agreement among the BLM, the Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers (Revised 2019)
- Programmatic Agreement among the Bureau of Land Management, The Advisory Council on Historic Preservation, and the National Conference of State Historic preservation Officers Regarding the Manner in Which the BLM Will Meet Its Responsibilities under the National Historic preservation Act February 9, 2012

Fish and Wildlife and Special Status Species

- Federal laws, statutes, and regulations
 - Endangered Species Act of 1973, as amended (16 USC 1531 et seq.)
 - Fish and Wildlife Coordination Act (16 USC 661 et seq.)
 - Migratory Bird Conservation Act of 1929, as amended (16 USC 715)
 - Migratory Bird Treaty Act of 1918, as amended (16 USC 703-712)
 - Establishment of the Klamath River Basin Fisheries Task Force (16 USC 460ss-3)
 - Anadromous Fish Conservation Act (16 USC 757 et seq.)
 - Federal Aid in Sport Fish Restoration Act (Dingell-Johnson Act) (16 USC 777, et seq.)
 - Magnuson-Stevens Fishery Conservation and Management Act of 1976 (16 USC. 1801 et seq.)

- Salmon and Steelhead Conservation and Enhancement Act of 1980 (16 USC 3301 et seq.)
- Marine Life Protection Act (1999)
- USDI and BLM manuals and handbooks
 - BLM Manual 6500, Wildlife and Fisheries Management
 - BLM Manual 6720, Fisheries and Aquatic Resources Management
 - BLM Manual 6780, Habitat Management Plans
 - BLM Manual 6840, Special Status Species Management
- Memorandum of agreements, informational bulletins, instructional memoranda
 - Memorandum of Understanding between the US Department of the Interior Bureau of Land Management and the U. S. Fish and Wildlife Service To Promote the Conservation of Migratory Birds (2010)
 - Memorandum of Understanding, Federal Lands Hunting, Fishing, and Shooting Sports Roundtable (2014)
 - Rangewide Conservation Agreement for the Conservation and Management of Interior Redband Trout (2014)
- Endangered species recovery plans
 - Revised Recovery Plan for the Northern Spotted Owl (2011b)
 - Recovery Plan for the Red-Legged Frog (2002)
 - Recovery Plan for the Pacific Coast Population of the Western Snowy Plover (2007b)
 - Recovery Plan for the Marbled Murrelet (1997)
 - Valley Elderberry Longhorn Beetle Recovery Plan (1984)
 - Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon (2005)
 - Recovery Plan for Seven Coastal Plants and the Myrtle's Silverspot Butterfly (1998) Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for Four Vernal Pool Crustaceans and Eleven Vernal Pool Plants (2006)
 - Recovery Plan for Sacramento River Winter-Run Chinook Salmon, Central Valley Spring-Run Chinook Salmon, and California Central Valley Steelhead (2014)
 - Draft Recovery Plan for the Giant Garter Snake (*Thamnopsis gigas*) (1999)
 - Recovery Plan for the California Red-legged Frog (*Rana aurora draytonii*) (2002)
 - Revised Recovery Plan for the Lost River Sucker and Shortnose Sucker (*Deltistes luxatus* and *Chasmistes brevirostris*) (2013)

Forestry

- Federal laws, statutes, and regulations
 - Healthy Forest Restoration Act (2003) (P.L. 108-148)
 - CFR Subchapter E - Forest Management (5000)
 - Part 5000 (Administration of Forest Management Decisions)
 - Part 5040 (Sustained Yield Forest Units)
 - Part 5400 (Sales of Forest Products; General)
 - Part 5410 (Annual Timber Sale Plan)

- Part 5420 (Preparation for Sale)
- Part 5430 (Advertisement)
- Part 5440 (Conduct of Sales)
- Part 5450 (Award of Contract)
- Part 5460 (Sales Administration)
- Part 5470 (Contract Modification - Extension - Assignment)
- Part 5500 (Nonsale Disposals; General)
- Part 5510 (Free Use of Timber)

Lands with Wilderness Characteristics

- Federal laws, statutes, and regulations
 - Wilderness Act, as amended (16 USC 1131 et seq.)
- USDI and BLM manuals and handbooks
 - BLM Manual 6310, Conducting Wilderness Characteristics Inventory on BLM Lands
 - BLM Manual 6320, Considering Lands with Wilderness Characteristics in the BLM Land Use Planning Process (USDI BLM 2012b)
- Memorandum of agreements, informational bulletins, instructional memoranda
 - The Healthy Forests Initiative and Healthy Forests Restoration Act Interim Field Guide (2004)
 - Healthy Forests Restoration Initiative (2002)

Minerals

- Federal laws, statutes, and regulations
 - Mining and Mineral Policy Act of 1970 (30 USC 181 et seq.)
 - Surface Mining Control and Reclamation Act of 1977 (30 USC 1201 et seq.)
 - The Mineral Leasing Act of 1920, as amended
 - The Mineral Leasing Act for Acquired Lands of 1947, as amended
 - The United States Mining Laws of 1872
- California state laws, statutes, and regulations
 - The Surface Mining and Reclamation Act 1975
 - USDI and BLM Manuals and Handbooks
 - BLM H-3042-I, Solid Minerals Reclamation Handbook
 - BLM H-3150-I, Onshore Oil and Gas Geophysical Exploration Surface Management Requirements
 - BLM H-3420-I, Competitive Coal Leasing
 - BLM H-3600-I, Mineral Materials Disposal Handbook
 - BLM H-3720-I, Abandoned Mine Land Program Policy Handbook
 - BLM Manual 2881, Mineral Leasing Act—General
 - BLM Manual 3720, Abandoned Mine Land Program Policy

- BLM Manual 3800, Mining Claims Under the General Mining Laws
- Memorandum of agreements, informational bulletins, instructional memoranda
 - Surface Operating Standards and Guidelines for Oil and Gas Exploration and Development: The Gold Book (USDI and USDA 2007)

Paleontology

- Federal laws, statutes, and regulations
 - Paleontological Resources Preservation Act (16 USC 473 et seq.)
- USDI and BLM Manuals and Handbooks
- BLM Manual 8270, Paleontological Resource Management
- BLM IM 2009-011, Guidelines for Assessment and Mitigation of Potential Impacts to Paleontological Resources
- BLM IM 2016-124, Potential Fossil Yield Classification (PFYC) System for Paleontological Resources on Public Lands
- USDI, 2000. Assessment of Fossil Management on Federal & Indian Lands.
- Forest Service, Paleontological Resources Preservation. *Federal Register* vol 80, no. 74, 2015.

Soils

- Federal laws, statutes, and regulations
 - Soil and Water Resources Conservation Act of 1977, as amended (16 USC 2001)
- USDI and BLM manuals and handbooks
 - BLM Manual 7000, Soil, Water, and Air Management

Tribal Consultations/Interests

- Federal laws, statutes, and regulations
 - Tribal Forest Protection Act (2004) (P.L. 108)
 - American Indian Religious Freedom Act (49 USC 47125 et seq.)
 - Native American Graves Protection and Repatriation Act, as amended (25 USC 3001 et seq.)
 - 43 CFR 10 (Native American Graves Protection and Repatriation Act Regulations; Final Rule)
 - Executive Order 13007—Indian Sacred Sites
 - Executive Order 13175—Consultation and Coordination with Indian Tribal Governments
- USDI and BLM manuals and handbooks
 - BLM Handbook (H)1780-I, Improving and Sustaining BLM-Tribal Relations (2016)
 - State Protocol Agreement among the California State Director of the Bureau of Land Management and the California State Historic Preservation Officer and the Nevada State Historic Preservation Officer Regarding the Manner in which the Bureau of Land Management Will Meet its Responsibilities under the National Historic Preservation Act and the National Programmatic Agreement among the BLM, the Advisory Council on Historic

Preservation, and the National Conference of State Historic Preservation Officers (revised 2019).

Vegetation, Special Status Species, and Invasive Species

- Federal laws, statutes, and regulations
 - The Endangered Species Act of 1973, as amended.
 - Federal Noxious Weed Act of 1974, Public Law 93-692, as amended (7 USC 2814)
 - Noxious Weed Control and Eradication Act of 2004 (Public Law 108-412)
 - National Invasive Species Act of 1996 (16 USC §4701, et seq.)
 - Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990 (16 USC 4701).
 - Executive Order 13112, Invasive Species (dated Feb 3, 1999).
 - Public Law 95-250, To amend the Act of October 2, 1968, an Act to establish a Redwood National Park in the State of California, and for other purposes (1978) (discusses the Park Protection Zone)
- USDI and BLM manuals and handbooks
 - BLM H-1740-2, Integrated Vegetation Management
 - BLM H-1745-1, Native Plant Materials Handbook
 - BLM H-6840-1, Special Status Plant Management (USDI BLM 2012a)
 - BLM Manual 1745, Introduction, Transplant, Augmentation, and Reestablishment of Fish, Wildlife, And Plants
 - BLM Manual 6840, Special Status Species Management
 - BLM Manual 9011, Chemical Pest Control
 - BLM Manual 9015, Integrated Weed Management
- Memorandum of agreements, informational bulletins, instructional memoranda
 - Humboldt Weed Management Area Memorandum of Understanding
 - IM 2016-013, Managing for Pollinators on Public Lands
- Endangered species recovery plans
 - McDonald’s Rock-cress Recovery Plan (1984)
 - Recovery Plan for Seven Coastal Plants and the Myrtle’s Silverspot Butterfly (1998) Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for Four Vernal Pool Crustaceans and Eleven Vernal Pool Plants (2006)
- Federal initiatives and strategies
 - Partners Against Weeds Initiative (USDI BLM 1996)
 - National Seed Strategy for Rehabilitation and Restoration 2015-2020 (USDI 2015)
 - National Strategy to Promote the Health of Honeybees and Other Pollinators (2015)

Visual Resources

- USDI and BLM manuals and handbooks
 - BLM H-8410-1, Visual Resource Inventory (1986)

Water

- Federal laws, statutes, and regulations
 - Clean Water Act of 1972 (33 USC 1251 et seq.)
 - Water Resources Development Act of 1974
 - Soil and Water Resources Conservation Act of 1977, as amended (16 USC 2001)
 - Pollution Prevention Act of 1990
 - Executive Order 11990, Protection of Wetlands (dated May 24, 1977).
 - Executive Order 12088, Federal Compliance with Pollution Control Standards, October 13, 1978 (43 FR 47707)
 - Executive Order 11988, Floodplain Management (dated May 24, 1977).
 - Land and Water Conservation Fund Act of 1965 (16 USC §4601, et seq.)
 - Watershed Restoration and Enhancement (Wyden Amendment) (16 USC §1011)
 - Water Quality Act of 1987, as amended from the Federal Water Pollution Control Act (Clean Water Act) of 1977 (33 USC §1251 et seq.).
- California state laws, statutes, and regulations
 - Water Quality Control Plan for the North Coast Region, May 2011
 - Water Quality Control Plan for the California Regional Water Quality Control Board Central Valley Region, Fourth Edition, June 2015.
 - Porter-Cologne Water Quality Control Act, January 2016.
 - California Water Code §5101
- USDI and BLM manuals and handbooks
 - BLM Manual 1737, Riparian-Wetland Area Management
 - BLM Manual 6721, Reservoirs
 - BLM Manual 6740, Wetland-Riparian Area Protection and Management
 - BLM Manual 7000, Soil, Water, and Air Management
 - BLM Manual 7250, Water Rights Manual
 - Technical Reference 1737-9, Riparian Area Management, Process for Assessing Proper Functioning Condition
 - Technical Reference 1737-11, Riparian Area Management, Process for Assessing Proper Functioning Condition for Lentic Riparian-Wetland Areas
 - Technical Reference 1737-15, Riparian Area Management, Proper Functioning Condition Assessment for Lotic Areas
- Memorandum of agreements, informational bulletins, instructional memoranda
 - IM 78-410, Policy on Protection of Wetland-Riparian Areas
 - IM 78-523, Compliance with Bureau of Land Management Interim Floodplain Management Procedures
 - IM 87-274, Riparian Area Management Policy

Wildland Fire Management

- Federal laws, statutes, and regulations
 - Federal Fire Prevention and Control Act, October 29, 1974 (88 Stat. 1535, 15 USC 2201)
 - Reciprocal Fire Protection Act of May 27, 1955 (69 Stat. 66; 2 USC 1856, 1856a)
 - Review and Update of the 1995 Federal Wildland Fire Management Policy (2001)
- USDI and BLM manuals and handbooks
 - BLM H-9214-I, Prescribed Fire Management Handbook
 - BLM H-9211-I, Fire Management Planning Handbook
 - BLM H-9238-I, Fire Trespass Handbook
 - BLM Manual 9212, Fuels Prevention
 - BLM Manual 9214, Fuels Management and Community Assistance
 - USDI Departmental Manual, DM 34, Part 620 Wildland Fire Management, Chapter 1: General Policies and Procedures
 - USDI Departmental Manual, DM 34, Part 620 Wildland Fire Management, Chapter 3: Burned Area Emergency Stabilization and Rehabilitation
- Memorandum of agreements, informational bulletins, instructional memoranda
 - Interagency Standards for Fire and Fire Aviation Operations (“The Red Book”) (Federal Fire and Aviation Task Group 2014)
 - Interagency Prescribed Fire Planning and Implementation Procedures Guide (National Wildfire Coordinating Group 2014)
 - Federal Initiatives and Strategies
 - Guidance for Implementation of Federal Wildland Fire Management Policy (2009)
 - 1995 Federal Wildland Fire Management Policy (revised in 2001)
 - A Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment: 10-Year Comprehensive Strategy Implementation Plan (2006)
 - A National Cohesive Wildland Fire Management Strategy (2011)
 - The National Strategy: The Final Phase of the Development of the National Cohesive Wildland Fire Management Strategy (2014)
 - National Action Plan: An Implementation Plan for the National Cohesive Wildland Fire Management Strategy (2014)
 - Executive Memorandum, Subject: Mitigating Impacts on Natural Resources from Development and Encouraging Related Private Investment (2015)

6.3.2 Resource Uses

Comprehensive Trail and Travel Management

- Federal laws, statutes, and regulations
 - National Trails System (16 USC 27)
 - Increasing Recreational Opportunities Through the Use of Electric Bikes (43 CFR 8340)
- USDI and BLM manuals and handbooks
 - BLM H-8342-I, Travel and Transportation

- BLM H-9113-1, Roads
- BLM H-9113-2, Roads National Inventory and Condition Assessment
- BLM H-9215-1, Primitive Roads Design
- BLM H-9115-2, Roads National Inventory & Condition Assessment Guidance & Instructions
- BLM Manual 1626, Travel and Transportation
- Memorandum of agreements, informational bulletins, instructional memoranda
 - IM 2008-014, Clarification of Guidance and Integration of Comprehensive Travel and Transportation Management Planning into the Land Use Planning
 - IM 2008-069, Addressing National Recreation Trails in the Land Use Planning Process
 - IM 2008-091, Guidance for Signing when Implementing Travel Management Planning
 - IM 2010-167, Travel and Transportation Management Performance Measures and Planning updates
 - IM 2018-102, Guidance for Implementation of the new Travel Management Area and Plans Data
 - BLM-MS-1626, Travel and Transportation Manual
 - BLM-MS-9130, Sign Manual
 - BLM Technical Notes 422, Roads and Trails Terminology
 - BLM Roads and Trails Terminology Report 2006
 - BLM Technical Reference 9113-1 Planning and Conducting Route Inventories

Livestock Grazing

- Federal laws, statutes, and regulations
 - Public Rangelands Improvement Act of 1978 (43 USC 869 et seq.)
 - Taylor Grazing Act of 1934 (43 USC 315)
 - Public Rangelands Improvement Act of 1978 (43 USC 1901 et seq.).
 - BLM Manual 1741-2, Water Developments
- USDI and BLM manuals and handbooks
 - BLM H-4180-1, Rangeland Health Standards
 - BLM Manual 1741-1, Fencing
 - Technical Reference 1734-6, Interpreting Indicators of Rangeland Health

Lands and Realty

- Federal laws, statutes, and regulations
 - Recreation and Public Purposes Act of 1926, as amended (43 USC 869 et seq.)
 - Recreation and Public Purposes Amendment Act of 1988
 - Renewable and Alternative Energy Development
- USDI and BLM manuals and handbooks
 - BLM H-2100-1, Acquisition
 - BLM H-2200-1, Land Exchange Handbook

- BLM MS-2800, Rights-of-Way Manual

Recreation and Visitor Services

- Federal laws, statutes, and regulations
 - 43 CFR 8340 Off-Road Vehicles, Subparts 8341, 8342, 8343, 8344
 - Increasing Recreational Opportunities Through the Use of Electric Bikes (43 CFR 8340)
 - Executive Order 11644—Use of Off-Road Vehicles on the Public Lands
- USDI and BLM manuals and handbooks
 - BLM H-8320-1, Planning for Recreation and Visitor Services
 - BLM H-2930-1, Recreation Permit and Fee Administration Handbook
 - BLM Recreation Strategy: Connecting with Communities, 2014-2019
- Recreation management plans
 - 2008 Clear Creek Greenway Plan
 - 1986 Sacramento River Area Management Plan
 - 1990 Forks of Butte Creek Recreation Management Plan
 - 1983 Trinity River Recreation Management Plan
 - 1990 Final Eligibility and Suitability Report for the Upper Klamath Wild and Scenic River Study
 - 1998 Interlakes Special Recreation Area Management Plan
 - 1997 Samoa Dunes Recreation Area Final Visitor Services Plan
 - 2014 Foundation Document Whiskeytown National Recreation Area

6.3.3 Special Designations

Areas of Critical Environmental Concern

- USDI and BLM manuals and handbooks
 - BLM Manual 1613, Areas of Critical Environmental Concern

National Scenic and Historic Trails

- Federal laws, statutes, and regulations
 - The National Trails System Act of 1968, as amended (16 USC 1241 et seq.)
- USDI and BLM manuals and handbooks
 - BLM Manual 6280, Management of National Scenic and Historic Trails and Trails Under Study or Recommended as Suitable for Congressional Designation

Wild and Scenic Rivers

- Federal laws, statutes, and regulations
 - Wild and Scenic Rivers Act, as amended (16 USC 1271 et seq.)
- USDI and BLM manuals and handbooks
 - BLM Manual 6400, Wild and Scenic Rivers—Policy and Program Direction for Identification, Evaluation, Planning, and Management

Wilderness and Wilderness Study Areas

- Federal laws, statutes, and regulations
 - Wilderness Act, as amended (16 USC 1131 et seq.)
- USDI and BLM manuals and handbooks
 - BLM Manual 6330, Management of Wilderness Study Areas
 - BLM Manual 6340, Management of Designated Wilderness
 - BLM Manual 8561, Wilderness Management Plans

6.3.4 Support

Mitigation

- USDI and BLM manuals and handbooks
- Memorandum of agreements, informational bulletins, and instructional memoranda
 - IM 2014-021 Direction Regarding the Survey and Manage Mitigation Measure as a Result of Court Ruling in Conservation Northwest et al v. Bonnie et al., Case No. 08-1067-JCC (W.D. Wash.) (USDI BLM 2014)

Social, Economic, Environmental Justice

- Federal laws, statutes, and regulations
 - Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations
 - Multiple-Use Sustained-Yield Act of 1960 (16 USC 528-531)
 - Federal-Aid Highway Act of 1958, 1962, 1966, 1968, and 1973, as amended
 - Highway Safety Act of 1966 as amended
 - Architectural Barriers Act of 1968 as amended
 - Surface Transportation Act of 1978 and 1982 as amended
 - Disaster Relief Act of 1974, as amended in 1980 and 1988, Sec. 5121 (42 USC 5121)
 - Environmental Quality Improvement Act, as amended (42 USC 4371 et seq.)
 - Economy Act of June 30, 1932 (47 Stat. 417; 31 USC 686)
 - Federal Grant and Cooperative Agreement Act, 1977 (P.L. 950224, as amended by P.L. 97-258, September 13, 1982)
 - Federal Land Assistance, Management and Enhancement (FLAME) Act (2009)
 - Noise Control Act of 1972 (42 USC 4901 et seq.)
 - Protection Act of September 20, 1922 (42 Stat. 857; 16 USC 594)
 - The Sikes Act of 1974, as amended (16 USC 670 et seq.)
 - Appropriations Act of 1952, McCarran Amendment
 - Executive Order 11987—Exotic Organisms
 - Executive Order 13514, Federal Leadership in Environmental Energy, and Economic Performance, October 5, 2009

6. Specific Mandates and Authority (Laws, Regulations, Policies, and Other Planning Documents For Specific Resources and Resource Uses)

- Lacey Act of 1900 (16 USC 3371–3378)
- The Children's Environmental Health Protection Act (California Senate Bill 25, Escutia, 1999)

Chapter 7. Envisioning Report

The RMP revision process historically included several phases for the public to provide input, including the scoping process and commenting on the Draft RMP. Recently, The BLM's Planning 2.0 initiative added additional opportunities for the public to participate in the planning process, including Envisioning. Envisioning took place prior to the public scoping process to provide an early opportunity for public engagement that helped the BLM shape the early stages of RMP development.

The objective of the Envisioning process was to understand public values for the planning area and what the BLM's role was in these values. Identifying public values across the planning area helped support a landscape approach to RMP development in which the management of the Redding and Arcata FOs from multiple perspectives and will help build the foundation of the Purpose and Need for the RMP.

The BLM held a total of four public Envisioning Meetings between March and June 2016. An Envisioning Meeting was also held with the RAC on April 8, 2016. Meeting attendees were guided into small groups at tables where a BLM staff member facilitated the discussion. An overview presentation was given to each group by a BLM staff member that oriented the group to the planning area and the Envisioning process. The BLM facilitator familiarized attendees to the workbooks and to the landscape values. Posterboards depicting each landscape value (through example photographs and text) were stationed around the room for reference. Meeting attendees were encouraged to ask questions and engage in dialog with other participants and their BLM facilitator.

The Envisioning Meetings Comment Summary Report is on the NCIP ePlanning site, <https://eplanning.blm.gov/eplanning-ui/project/63960/570>. This report describes the meetings and the input that the BLM received at the meetings.

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Chapter 8. Scoping

This section refers to previous scoping efforts conducted in 2017; the BLM plans to use this information during the alternatives development and impact analysis for the RMP/EIS after a new scoping period has occurred. Two primary principles of NEPA are full disclosure of potential environmental effects and open public participation throughout the decision-making process. NEPA requirements for public involvement are set forth in Council on Environmental Quality (CEQ) regulations (40 CFR 1500–1508). Additional BLM guidance and direction for public involvement are provided in the BLM Land Use Planning Handbook H-1601-1 and the BLM NEPA Handbook H-1790-1.

The BLM follows the public involvement requirements according to CEQ regulations set forth in 40 CFR 1501.9, which states “there should be an early and open process for determining the scope of issues to be addressed and for identifying the process for determining the scope of issues to be addressed during the planning process.” The scoping process is open to all interested agencies and the public. Planning issues are disputes or controversies about existing and potential land and resource allocations, levels of resource use, production, and related management practices.

Issues include resource use, development, and protection opportunities for consideration in the preparation of the RMP. These issues may stem from new information or changed circumstances and the need to reassess the appropriate mix of allowable uses. Planning issues are addressed in and provide major focus for the development of alternatives.

Other objectives of scoping are as follows:

- Identifying and inviting agencies with jurisdiction or special expertise relevant to the project to participate in the preparation of the EIS as cooperating agencies
- Identifying other environmental review and consultation requirements
- Identifying the relevant and substantive issues that need to be addressed during the analyses and in the RMP/EIS
- Determining the range of alternatives to be evaluated
- Developing the environmental analysis criteria and systematic planning process and allocating EIS assignments among agencies, as appropriate

The BLM received 6,270 submissions during the scoping period (**Table 8-1**). Most comment submissions were form letters or “form pluses” (form letters that had small edits/additions to them).

Table 8-1. Submittal Summary by Type

Type	Number of Submittals
Unique submissions	243
Form letters	5,714
“Form plus” submissions	313
TOTAL	6,270

Out of the submissions, the BLM identified and coded 2,241 substantive comments. Of this total, 1,092 comments also were coded to a second primary resource, for a total of 3,333 substantive comments to be considered in **Table 8-2**, below. Locational codes were also assigned to comments that mentioned specific areas in the planning area.

Table 8-2. Substantive Comment Summary by Resource Issue

Resource Issue	Quantity
Process	320
Public involvement	58
General EIS process	68
Consultation and coordination	74
National monuments	21
Collaboration/coordination with volunteer organizations	99
Purpose and Need	11
Alternatives	51
Resources	
Air quality	4
Cave and karst resources	1
Climate change	48
Coastal resources (general)	10
Cultural resources	53
Fire management	55
Fish	90
Forestry	83
Lands and realty	226
Lands with wilderness characteristics	184
Invasive species	26
Minerals management	42
Public health and safety	55
Livestock grazing	26
Paleontology	3
Recreation	683
Renewables	2
Special designations	187
Wilderness and wilderness study areas	58
Wild and scenic rivers	72
National trails	4
Areas of critical environmental concern	34
Other special designations	19
Socioeconomics	77
Soils	22
Travel management	612
Vegetation, including threatened and endangered species	80
Wildlife, including threatened and endangered species	211
Wild horses	2
Visual resources	15
Water resources	86
Other	
Mailing list	15
Other	9
Comment acknowledged	44
Total	3,333

The scoping summary report provides an overview of the public scoping process and a summary of the scoping comments and concerns identified during public scoping (USDI BLM 2017). The report can be accessed on the NCIP ePlanning website, <https://eplanning.blm.gov/eplanning-ui/project/63960/570>. The BLM will address issues identified during the envisioning process (Chapter 7) and scoping during development of alternatives and impact analysis in the RMP/EIS.

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Chapter 9. Contributors

9.1 BLM NORCAL DISTRICT AND FIELD OFFICE MANAGEMENT INVOLVED WITH THE NCIP

Table 9-1 identifies Northern California District and Field Office Management contributors to the NCIP AMS Revision.

Table 9-1. BLM Northern California District and Field Office Management Involved with the NCIP

Name	NCIP Role
Sara Acridge	Redding Field Office Resources Supervisor (former)
Alan Bittner	Northern California District Manager (former)
Molly Brown*	Arcata Field Office Manager
Nancy Haug	Northern California District Manager (former)
Chris Heppe	Arcata Associate Field Office Manager
Dan Wooden*	Arcata Assistant Field Manager (Resources Staff Manager)
Jennifer Mata*	Redding Field Office Manager
Alden Neel*	Redding Assistant Field Manager (Resources Staff Manager)
Jennifer Wheeler*	Arcata Assistant Field Manager (Recreation, Realty, Operations)
Natasha Braziel*	Planning and Environmental Specialist
Dereck Wilson*	Northern California District Manager
Laura Brodhead*	Redding Assistant Field Manager (Recreation, Realty, Operations)
Charles Wright*	Redding Assistant Field Manager (Recreation, Realty, Operations)

*Currently assisting with updates to the AMS

9.2 BLM ARCATA AND REDDING FIELD OFFICE CONTRIBUTORS

Table 9-2 identifies the Arcata and Redding Field Office contributors to the NCIP AMS Revision.

Table 9-2. BLM Arcata and Redding Field Office Contributors

Name	NCIP Role
Stewart Allen	Social/Economic/Environmental Justice
Eric Antrim	Travel Management/OHV, Public Safety-Hazardous Materials
Jeffrey Bellaire	Forestry
Benjamin Blom	ACECs, Research
Tim Bradley	Air, Wildland Fire Management
Laura Brodhead*	Climate Change, Vegetation, Research, Livestock Grazing
Bruce Cann	Visual Resources, Lands with Wilderness Characteristics
Gary Diridoni	Fish, Special Status Fish, Wildlife, Special Status Wildlife
Kendra Fallon	Vegetation, Special Status Plants, Livestock Grazing, Noxious Weeds
Tobias Felbeck*	Wildlife/Special Status Species, Cave and Karst Resources
Sam Flanagan*	Paleontology, Air Quality, Climate Change, Coastal Resources, Soil and Water
Paul Fritze*	GIS/Data Steward
David Fuller	NCIP Planner Social/Economic/Environmental Justice, Mitigation, Coastal Resources, Climate Change
Lisa Grudzinski	NCIP Project Manager/ID Team Lead
Casey Hague*	Wild and Scenic Rivers, Wilderness Characteristics, Recreation, Visitor Services

Name	NCIP Role
Jesse Irwin*	Wildlife, Special Status Wildlife
Bill Kuntz	Recreation and Visitor Services, Wilderness, Lands with Wilderness Characteristics, Wild and Scenic Rivers, Interpretation and Environmental Education, ACECs
Tim Jones	Air, Wildland Fire Management
Amy Jordan	Tribal Concerns, Cultural Resources, Paleontology
Sharyl Kinnear-Ferris*	Tribal Concerns, Cultural Resources, Paleontology
Steve Laymon*	Wildlife/Special Status Species
Mike Millay	Wilderness, Lands with Wilderness Characteristics, Visual Resources
Alex Miyagishima*	Wildland Fire Management
Burgess Munyer	Livestock Grazing
Alden Neel	NCIP Planner, Cultural Resources, ACECs
Leisyka Parrott*	Interpretation and Environmental Education
Ashley Phillips	NCIP Planner
Eric Ritter*	Tribal Concerns, Cultural Resources, National Scenic and Historic Trails, Paleontology, Cave and Karst Resources, Socioeconomics, Environmental Justice
Heidi Rogers*	Forestry
Ron Rogers	Minerals
Zane Ruddy*	Wild and Scenic Rivers, Fish, Special Status Fish
Clara Sander-McDonald*	Lands and Realty, Renewable and Alternative Energy
Katie Shaw*	Lands and Realty, Renewable and Alternative Energy
Kody Shellhouse*	Air Quality, Climate and Greenhouse Gases, Minerals, Paleontology
Manuel Silva	Minerals, Soil and Water
Shawn Stapleton	Visual Resources
Andy Suppiger*	GIS/Data Steward
Brooke Thompson*	Vegetation (including NNIS and SS Plants)
Jessica Tyra*	Travel Management/OHV, Recreation and Visitor Services
Marissa Vossmer*	Forestry
Leanna Weissberg*	Socioeconomics, Environmental Justice
Jennifer Wheeler*	Vegetation, Special Status Plants, Livestock Grazing, Noxious Weeds
Robert Winkler*	Wildland Fire Management
Dan Wooden*	Forestry
Charles Wright*	Lands and Realty, Renewable and Alternative Energy
Sky Zaffarano*	Travel Management/OHV

*Currently assisting with updates to the AMS

Table 9-3 identifies the EMPSi consulting team contributors to the NCIP AMS Revision.

Table 9-3. NCIP AMS Revision Consultant Team

Name	NCIP Role
Vicki Amato	Wildland Fire Management
Alyssa Bell	Paleontology
Mandy Bengtson	Soils
Chris Bockey	Visual Resources
Lindsay Chipman	Wildlife/Special Status Species
Stephanie Cimino	Cultural Resources/Tribal Interests
Sean Cottle	ACECs/National Historic Trails/WRSRs
Francis Craig	Minerals
Jim Dawson	Public Health and Safety
Laura Delio	Soils
Erin Dunable	Coastal Resources and Management

9. Contributors (BLM Arcata and Redding Field Office Contributors)

Name	NCIP Role
Jeremy Eyre	Lands and Realty/Renewable Energy
Jill Grams	Interpretation and Environmental Education
Peter Gower	Comprehensive Trail and Travel Management/Recreation/Visitor Services
Janet Guinn	QA/QC
Hanna Harper	GIS Specialist
Derek Holmgren	Lands with Wilderness Characteristics and Wilderness and Wilderness Study Areas
Steve Van Kampen-Lewis	Cave and Karst Resources
Kate Krebs	ACECs/National Historic Trails/WSRs
Amy Lewis	Project Manager
Joshua Peabody	Tribal Interests
Matthew Peterson	Assistant Project Manager and QA/QC
Jake Powell	Livestock Grazing
Holly Prohaska	NEPA Lead and QA/QC
Julie Remp	Wildlife/Special Status Species
Kevin Rice	Forestry
Shannon Regan	Vegetation (including Nonnative Invasive Species and Special Status Plants)
Marcia Rickey	GIS Lead, Wildlife
Cindy Schad	Word Processing
Josh Schnabel	Socioeconomics/Environmental Justice
Frank Shrier	Fish/Aquatic Special Status Species
Brad Sohm	Air Quality/Climate and Greenhouse Gases
Megan Stone	Socioeconomics/Environmental Justice
Jennifer Thies	QA/QC
Morgan Trieger	Vegetation (including Nonnative Invasive Species and Special Status Plants)/Forestry
Calah Worthen	Water Resources
Meredith Zaccherio	Vegetation (including Nonnative Invasive Species and Special Status Plants)

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Chapter 10. Glossary

ACRE (ac): A standard unit of measure representing 43,560 ft².

ADVISORY COUNCIL ON HISTORIC PRESERVATION: An independent agency of the United States government that promotes preservation, enhancement, and productive use of the nation's historic resources. This agency advises the President and US Congress on national historic preservation policy.

AGGREGATE: Mineral material, such as sand, gravel, shells, slag, or broken stone, or combinations thereof, with which cement or bituminous material is mixed to form a mortar or concrete.

ALLOWABLE SALE QUANTITY: The quantity of timber that may be sold from an area covered by a forest plan during a time period specified by the plan.

ALLUVIUM: Unconsolidated sedimentary deposit (e.g., streambed of sand and gravel).

ANADROMOUS: Fish (e.g., salmon) that migrate from the marine environment to spawn in fresh water.

ANALYSIS OF THE MANAGEMENT SITUATION (AMS): A comprehensive documentation of the present conditions of the resources, current management guidance, and opportunities for change.

ARCHAEOLOGICAL RESOURCES: Sites, areas, structures, objects, or other evidence of prehistoric or historic human activity.

ARCHAEOLOGICAL SITE: Geographic locale containing structures, artifacts, material remains, or other evidence of past human activity. See also: cultural resources, heritage resources.

AREA OF CRITICAL ENVIRONMENTAL CONCERN (ACEC): Land where special management attention is needed to protect life, to provide safety from natural hazards, or to prevent irreparable damage to important values (historic, cultural, or scenic), resources (plants, fish and wildlife), or processes (natural systems).

BASAL AREA (BA): The cross-sectional area of a single stem, including the bark, measured at breast height (4.5 feet above the ground on the uphill side of a tree). The equation is $0.00545415 \times \text{DBH}^2 = \text{BA}$.

BASE METAL: A type of locatable mineral that is more common and cheaper than gold and silver.

BIODIVERSITY: The number and variety of organisms found within a specified geographic region.

BIOMASS: Plant materials used as a source of renewable combustible fuel. Also includes woody material ground up into fiber and used in secondary wood products.

BIOTURBATION: The reworking of soils and sediments by animals or plants.

BIOTIC: Associated with or derived from living organisms.

BOARD FOOT (BF): A unit of measure of forest products related to wood volume. One BF equals a piece of wood that is 12 inches x 12 inches x 1 inch. Often projected as MBF (thousand board feet) and MMBF (million board feet).

BUREAU OF LAND MANAGEMENT (BLM): A federal agency within the US Department of the Interior that is responsible for administering 261 million surface acres of federally owned lands in accordance with all applicable laws to sustain the health, diversity, and productivity of those lands. Most of the acreage is in Alaska and the western states.

CHIPPED STONE: Tools and implements made by striking a rock and “chipping” away portions of the rock. This process is also known as “flintknapping,” and the result of the process can be a tool such as a projectile point or a knife.

CLEARCUT: A timber-harvesting method that removes essentially all trees in an area, producing a fully exposed microclimate over the majority of the harvested area.

CLOVIS POINTS: Large projectile points associated with human occupation of North America at the end of the last ice age during the Pleistocene/Holocene transition.

COMMERCIAL FOREST LAND (CFL): Area that is 1) at least 10 percent stocked by commercial forest trees, 2) is capable of yielding at least 20 cubic feet (240 board feet) of wood per acre per year, and 3) is not currently developed for non-timber use.

COMMERCIAL THINNING: Stand thinning in which some or all of the cut trees are removed from the stand for timber. Commercial thinning in this context does not include individual tree falling or stand thinning in which all the cut trees are left in the stand or some of the cut trees are moved for restoration purposes or fuels reduction treatments in which cut trees are burned, chipped, or otherwise disposed of without removal from the stand for timber. Commercial thinning may be implemented through a variety of mechanisms, including timber sale contracts and stewardship agreements or contracts.

COUNCIL ON ENVIRONMENTAL QUALITY (CEQ): An executive office advisory council established by the National Environmental Policy Act of 1969 (NEPA) for review of federal program effects on the environment.

CULTURAL RESOURCES: Those fragile and nonrenewable remains of human activities, occupations, and endeavors as reflected in sites, buildings, structures, or objects, including works of art, architecture, and engineering. Cultural resources are commonly discussed as prehistoric and historic values, but each period represents the full continuum of cultural values from earliest to most recent.

DECISION AREA: The subset of BLM-administered lands within the planning area for which the BLM has the authority to make land use and management decisions.

DEPOSIT MODELING: Modeling to determine the placement of mineral deposits in the subsurface of the earth.

DIAMETER AT BREAST HEIGHT (DBH): The diameter of a tree measured at 4.5 feet above the ground on the uphill side of the tree.

DISCHARGE: In geothermal operations, allowing hot water or steam to flow out from where it has been confined.

DISTANCE ZONES: In visual resource management, landscapes are divided into three distanced zones based on relative visibility from travel routes or observation points. The three zones are foreground-middleground, background, and seldom seen.

ECOLOGICAL NICHE: The role and position a species has in its environment in meeting its needs for food, shelter, and reproduction. A species' niche includes all of its interactions with the living and nonliving parts of its environment.

ECONOMICALLY MARGINALIZED (as in individual or family): The process where a person or family is pushed to the edge of a societal group on the basis of having less money, and consequently is seen as less important.

ECOREGION: A large unit of land or water containing a geographically distinct assemblage of species, natural communities, and environmental conditions.

ENDEMIC SPECIES: A species that is unique to a defined geographic location or habitat type.

ENVIRONMENTAL ASSESSMENT (EA): A document that analyzes the potential environmental impacts of a proposed federal action and provides sufficient evidence to determine the level of significance of the impacts.

ENVIRONMENTAL JUSTICE: Following Executive Order 12898, the BLM considers environmental justice to be the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of federal environmental laws, regulations, and policies.

ESSENTIAL FISH HABITAT (EFH): Those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity (16 USC 1802(10)).

ESTUARINE: An estuarine species is a species found in the transition zone between freshwater and the marine environment. This habitat is typically referred to as estuarine habitat and examples include bays, lagoons, river mouths, and tidal creeks.

EXCAVATION (archaeological): The scientifically controlled recovery of subsurface materials and information from an archaeological site. Recovery techniques are relevant to research problems and are designed to produce maximum knowledge about the site's use, its relation to other sites and the natural environment, and its significance in the maintenance of the cultural system under study.

EXTIRPATION: Local extinction in a geographic location or study area, although the species may still exist elsewhere.

FEDERALLY LISTED: A species (plant or animal) under the protection of the Endangered Species Act.

FEDERAL LAND POLICY AND MANAGEMENT ACT (FLPMA): A federal law enacted in 1976 that governs the way in which the public lands administered by the BLM are managed. The Federal Land Policy and Management Act phased out homesteading in the United States by repealing the pre-existing Homestead Acts. The BLM is directed to allow a variety of uses on public lands while protecting the natural and cultural resources — a concept commonly referred to as “multiple use.”

FIRE RETURN INTERVAL: Number of years between two successive fires in a specified area.

FORVIS (FOREST VEGETATION INVENTORY SYSTEM): A system for storage, retrieval, and analysis of both tabular and spatial data about forest lands. The focus of the system is the management of attribute data about vegetation polygons and about associated land management events. The system provides data management and analytical capabilities for inventorying and monitoring vegetation.

GEOLOGIC OCCURRENCE: The commonality of a mineral in a geographic area.

GEOHERMAL ENERGY: Electrical energy created when steam or heat from subsurface resources is used to turn a turbine.

GEOHERMAL LEASING: Areas of BLM-administered land that can be leased to prospective permittees for geothermal exploitation.

GEOHERMAL RESOURCES: Underground reservoirs of hot water or steam or hot, dry rock beneath the surface of the earth.

GEOHERMAL RESOURCE POTENTIAL: A statistical and mapped outlook of geothermal resources in a given area.

GRAZING DISTRICT: Grazing districts are specific areas where public lands are administered in accordance with Section 3 of the Taylor Grazing Act. Areas of public land grazed outside of established grazing districts are administered under Section 15.

GROUND STONE: A category of stone tool that is made by using a grinding process. Examples of such tools are manos and metates that are used to grind food. See milling station.

HABITAT FRAGMENTATION: The process by which habitat loss results by the division of large, continuous habitats into smaller, more isolated remnants.

HARDROCK MINERALS: The minerals or commodities that would usually qualify as locatable on public domain lands but can only be obtained through mineral prospecting permits and leases on pre-FLPMA acquired lands and within the Shasta Unit of the Whiskeytown-Shasta-Trinity National Recreation Area.

HOLOCENE: The current geological epoch, beginning around 11,700 years ago, and marked by the lack of large ice sheets, a more stable climate (in comparison to previous geologic epochs), and the extinction of many large-bodied mammals.

HOMOGENOUS: Being composed of the same or similar parts.

HYDROLOGY: The scientific study of water in all of its forms, including as a liquid, solid, or gas as it exists on the Earth's surface, in the soil and underlying rocks, and in the atmosphere.

INDICATORS (nonenergy leasable mineral resource use): The number of prospecting permits and leases within the planning area. Active permits and leases are a quantitative measure that indicates current use.

INDIGENOUS: Originating in a particular place; native.

INVASIVE SPECIES: A plant, animal, or pathogen species that is not native to a specific ecosystem under consideration, and whose introduction causes, or is likely to cause, damage to the environment, human economy or human health.

ISOLATED FIND: An occurrence of a single artifact or cultural feature including stone tools, milling tools, and other artifacts.

KILLOWATT HOURS PER SQUARE KILOMETER (kWh/km²): A unit of measure for the amount of energy produced in a certain surface area for a given application or technology.

LAND USE PLAN (LUP): A set of decisions that establish management direction for land within an administrative area, as prescribed under the planning provisions of the FLPMA.

LENTIC: Still water, examples include wetlands, ponds and reservoirs, seeps and springs, bedrock basins, stock ponds, vernal pools.

LITHIC SCATTER: A prehistoric or protohistoric site characterized by a scatter of stone tools and/or debitage (tool making debris) that may indicate a number of functions.

LITTORAL: A region along the shore of a sea or a lake.

LOCATABLE MINERALS: Minerals that have certain value and may be "located" with a mining claim under the General Mining Law of 1872.

LODE: A mineral deposit in place, including veins, between definite boundaries.

LOTIC: Flowing water, examples include rivers and streams.

LOW-SULFIDE QUARTZ VEIN: Known as Mother Lode-type, they are primarily mined for their gold content and contain no more than 2 to 3 percent volume sulfide minerals.

LR2000: The BLM's Legacy Rehost System, which provides reports on BLM-administered land and mineral use authorizations for oil, gas, and geothermal leasing, ROWs, coal and other mineral development, land and mineral title, mining claims, withdrawals, classifications, and more on federal lands or on federal mining estate.

MANO: A cobble used on a flat rock surface to grind food products, usually hard seeds, to produce flour. Such tools exhibit grinding scars and polish.

MEDIEVAL WARM PERIOD: A period of time, from about A.D. 900 to 1300, during which some areas in the Northern Hemisphere were warmer than the period before and after that time.

MEGAFUNA: Large-bodied animals, generally from 40 kilograms (90 pounds) to over a metric ton (1,000 kilograms or 2,205 pounds). A large number of megafauna went extinct at the end of the last ice age, and this extinction event is a marker of the geological transition from the Pleistocene to the Holocene period.

MIDDEN: Largely decomposed cultural refuse and remains from fires, food refuse, tool making, collapsed structures, and other human activities, which is localized and creates a noticeable soil discoloration and build-up. Sometimes this build-up can create a large mound covering a few acres.

MILLING STATION (archaeological): Portable or bedrock stone milling artifacts including metates, bedrock grinding slicks, and mortars. Milling stations can be found isolated or in groups.

MITIGATION: Measures that avoid, minimize, or compensate for effects caused by a proposed action or alternatives, as described in an environmental document or record of decision, and that have a nexus to those effects. While NEPA requires consideration of mitigation, it does not mandate the form or adoption of any mitigation. Mitigation includes:

- (1) Avoiding the impact altogether by not taking a certain action or parts of an action
- (2) Minimizing impacts by limiting the degree or magnitude of the action and its implementation
- (3) Rectifying the impact by repairing, rehabilitating, or restoring the affected environment
- (4) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action
- (5) Compensating for the impact by replacing or providing substitute resources or environments

MORTAR (archaeological): A cupped grinding slab used with an elongated cobble (or pestle) to pulverize vegetative food products, such as acorns.

NATIONAL ENVIRONMENTAL POLICY ACT OF 1969 (NEPA): The NEPA requires federal agencies to assess the environmental effects of their proposed actions prior to making decisions, evaluate the environmental and related social and economic effects of their proposed actions, and provide opportunities for public review and comment on those evaluations. The NEPA was signed into law on January 1, 1970.

NATIONAL HISTORIC PRESERVATION ACT (NHPA): The primary federal law providing for the protection and preservation of cultural resources. Making it a national policy to preserve our cultural heritage, NHPA established the National Register of Historic Places (NRHP), the Advisory Council on Historic Preservation, and State Historic Preservation Office (SHPO).

NATIONAL REGISTER OF HISTORIC PLACES (NRHP): A list of districts, sites, buildings, structures, and objects significant in American history, architecture, archaeology, and culture maintained by the Secretary of the Interior. Expanded as authorized by Section 2(b) of the Historic Sites Act of 1935 (16 USC 462) and Section 101(a)(1)(A) of the National Historic Preservation Act of 1966 (as amended).

NATIVE AMERICAN (Indian): An individual who traces their ancestry or genealogy to the aboriginal inhabitants of the planning area. These persons are referred to as Native Americans, Indians, or Native American Indians.

NON-COMMERCIAL FOREST LAND: Area that is capable of being at least 10 percent stocked by commercial forest trees but is not capable of yielding at least 20 cubic feet (240 board feet) of wood per acre per year of any tree species.

NONENERGY LEASABLE MINERALS: Minerals consisting of Phosphate, Sodium, Potassium, Sulphur, Gilsonite, and Hardrock minerals, which are leased under the Minerals Leasing Act of 1920 and are not related to energy production.

NON-FOREST LAND (NFL): Areas that are not at least 10 percent stocked with forest trees (native woody plants that regularly attain a height of 20 feet or more) or land converted for non-timber uses. Examples of non-forest lands are grasslands, brush fields, rock outcrops, urban areas, and roads.

NORTHWEST FOREST PLAN (NWFP): A 1994 common management approach for the 19 national forests and 7 BLM districts located in the Pacific Northwest ecological region and jointly approved by the Secretary of Agriculture and the Secretary of the Interior.

NOTICES (minerals): A posted requirement or regulation, indicating current mineral development interest and use.

NOTICE OF INTENT: A notice published in the *Federal Register* announcing an agency's intent to prepare an environmental impact statement.

NOXIOUS WEEDS: In the broadest sense, it is any plant growing where it is not wanted. Weeds can be native or nonnative, invasive or non-invasive, and noxious or not noxious. Legally, a noxious weed is any plant designated by a federal, state, or county government as injurious to public health, agriculture, recreation, wildlife or property.

OVERBURDEN ROCK: The loose soil, silt, sand, gravel, or other unconsolidated material overlying bedrock, either transported or formed in place.

PERISHABLE ARTIFACT: Artifacts that are made from organic material that can decay. An example of a perishable artifact is a basket made from willow sticks with spruce root, black fern, white bear grass, and woodwardia fern weaving strips. Other examples of perishable artifacts include sandals, cordage, and fur blankets.

PETROLEUM SYSTEM: A unifying concept that encompasses all of the different elements and processes of petroleum geology.

PHENOLOGY: The scientific study of cyclical biological events, such as flowering, breeding, and migration, in relation to climatic conditions.

PLACER: A mineral deposit of unconsolidated particles.

PLACER CLAIM: A mining claim located for a surface mineral deposit formed by a natural concentration of a valuable mineral (e.g., gold).

PLACER TAILINGS: The by-product of placer mining: the scraped, washed, or otherwise processed boulders, cobbles, and finer sediments left as an end result of mining.

PLAN OF OPERATIONS: Mine plan for exploration activities disturbing in excess of 5 acres, bulk sampling of 1,000 tons or more, and all proposed mining or milling operations.

PLANNING AREA: The overall geographical area the BLM must consider during the land use planning effort, regardless of ownership.

PLATINUM GROUP: Six metal elements (iridium, osmium, palladium, platinum, rhodium, and ruthenium) that are chemically, physically, and anatomically similar.

PLEISTOCENE: A geological epoch lasting from around 2.58 million years ago to 11,700 years ago. The Pleistocene is the most recent ice age and was characterized by large ice sheets covering much of the Northern Hemisphere above 40° latitude, lower sea levels, higher climatic variation (compared to the current epoch), and the existence of large-bodied mammals, or megafauna, which have since gone extinct.

PRE-COMMERCIAL THINNING (PCT): The practice of reducing the density of trees within a stand by manual cutting, girdling, or herbicides to maintain or promote growth increases of desirable tree species. The trees killed are generally not merchantable and not removed from the treated area.

PREHISTORIC: Refers to the period of time in North America prior to European contact and colonization of the planning area, generally prior to A.D. 1550.

PRIORITY HABITAT: Habitat that has been identified as occurring within the planning area and requiring special management considerations.

PRIORITY SPECIES (BLM): BLM Priority Species are those species or habitats recognized as significant for at least one factor such as density, diversity, size, public interest, remnant character, or age.

PROPER FUNCTIONING CONDITION (PFC): Describes both the assessment method and a defined, on-the-ground condition of a riparian area. The on-the-ground condition termed PFC refers to how well physical processes are functioning.

PROBABLE SALE QUANTITY: A best assessment of the average amount of timber likely to be available for sale annually in a planning area over the next 20 years.

PROTOHISTORIC: Refers to the time period in North America after European contact but before extensive colonization and political control. Small numbers of European artifacts are found in archaeological sites, but major social change had not yet occurred in local native populations.

PROSPECTING PERMIT: Grant of an exclusive right to prospect and explore for leasable mineral deposits.

RANGELAND HEALTH ASSESSMENT: In the grazing program, an interdisciplinary approach to assessing the impacts of livestock grazing on land health to evaluate whether rangeland conditions are achieving fallback standards and guidelines, or region-specific standards and guidelines approved by the Secretary of the Interior, as well as Land Use Plan objectives. Standards consider soils, wetland/riparian, stream function, and native species health.

RECORD OF DECISION (ROD): A document required by the National Environmental Policy Act, that is separate from, but associated with, an EIS. The ROD publicly and officially discloses the responsible official's decision on which alternative assessed in the EIS will be implemented.

REFUGIA: An area in which a population of organisms can survive through a period of unfavorable conditions.

RESERVOIR ROCK: A place that oil migrates to and is held underground. Sandstone, limestone, and dolomite are the most common reservoir rocks, with sandstone acting like a sponge.

RESOURCE MANAGEMENT PLAN (RMP): A BLM planning document, prepared in accordance with Section 202 of the Federal Land Policy and Management Act that presents systematic guidelines for making resource management decisions for a resource area. An RMP is based on an analysis of an area's resources, their existing management, and their capability for alternative uses. RMPs are issue oriented and developed by an interdisciplinary team with public participation.

RIGHT-OF-WAY (ROW): A BLM authorization to use, occupy, or maintain public lands for a particular use for a particular duration.

RIPARIAN: The interface between land and a river or a stream.

RIVERINE: An area situated along a river or riverbank.

SALABLE MINERALS: Uncommon varieties of minerals and building materials (pumice, rock, cinders, and sand) that are sold by sales contract or a free use permit from the federal government, under the Materials Act of 1947.

SALVAGE HARVEST: Removal of dead trees or of trees damaged or dying because of injurious agents other than competition, to recover their economic value.

SCENIC QUALITY: In visual resource management, a measure of the visual appeal of a tract of land.

SEDENTARY (village): A village site that is occupied for the entirety or majority of the year or for multiple years.

SENSITIVE SPECIES (BLM): BLM sensitive species are those species that require special management consideration to reduce the need for listing (under ESA) as well as all federal candidate species, proposed species, and delisted species in the 5 years following delisting.

SENSITIVITY LEVEL: In visual resource management, a measure of public concern for scenic quality.

SERAL: An intermediate stage of a vegetative community as it advances through ecosystem succession towards a climax state.

SILVICULTURE: The art and science of controlling the establishment, growth, composition, health, and quality of forests and woodlands to meet the diverse needs and values of landowners and society on a sustainable basis.

SLASH: The branches, bark, tops, cull logs, and broken or uprooted trees left on the ground after logging has been completed.

SOCIOCULTURAL USE: A social or cultural group use of resources, places, structures, or objects that help maintain the heritage or identity of a group.

SOCIOCULTURAL VALUE: A belief or perception that is important to a group of people in the maintenance of their identity and ethnic heritage. This term is used in this RMP solely to denote value(s) unique to Native Americans.

SOURCE ROCK: Sedimentary rock in which organic material under pressure, heat, and time was transformed to liquid or gaseous hydrocarbons. Source rock is usually shale or limestone.

SPECIAL STATUS SPECIES: Suite of species that require special management considerations (e.g., threatened and endangered [T&E], BLM sensitive and BLM priority).

STATE HISTORIC PRESERVATION OFFICE OR OFFICER: A state government office created when the National Historic Preservation Act was enacted in 1966. The State Historic Preservation Officer is an appointed official. The office administers many types of historic preservation programs to ensure the preservation and protection of cultural resources.

SUSTAINED YIELD: The board foot volume of timber that a forest can produce in perpetuity at a given intensity of management; the achievement and maintenance in perpetuity of a high-level annual or regular periodic output of the various renewable resources.

TEMPORARY CAMP: Archaeological sites occupied for a short length of time or by a relatively small group of people. Cultural remains may include any combination of artifacts, stone tool manufacturing debris, features, fire-affected rock, milling tools, and cultural modified soil or midden.

TERRESTRIAL: Living or growing on land or in the ground.

THINNING: A silvicultural treatment made to reduce the density of trees primarily to improve tree/stand growth and vigor, or recover potential mortality of trees, generally for commodity use.

TIMBER PRODUCTION CAPABILITY CLASSIFICATION: The process of partitioning forestland within the sustained yield unit into major classes based on the biological and physical capability of the site to support and produce forest products on a sustained yield basis using operational management practices.

TRIBES/TRIBAL: Federally recognized Native American entities that are legally entitled to specific treaty rights and other legally enshrined rights as sovereign nations.

TRADITIONAL CULTURAL PROPERTY: Properties of traditional religious and cultural importance to a Native American organization that may be determined to be eligible for inclusion on the National Register of Historic Places.

TRAJECTORIES: A path or line of development. It is used in this document to describe the linear progression of events across time (e.g., historic and prehistoric trajectories).

VERNAL POOL: A seasonal pool of water with no defined inlet or outlet, which, due to unique biogeochemistry, is habitat for many endemic and rare species of flora and fauna.

VILLAGE (archaeological): An archaeological village site containing a wide range of artifacts, refuse, and features representing a long-term or intense seasonal activity or a number of people. Archaeological evidence can include, but is not limited to, artifacts associated with a wide range of subsistence activities, floral and faunal remains that represent subsistence activities, the manufacture of artifacts, and ceremonial activities. Such a site is characterized by the following: extensive scatters and quantities of cultural debris such as fire-affected rock, complete or broken stone tools, chipping waste, milling tools, structural depressions, hearths, and mortuary remains. A well-developed cultural deposit (or midden) is an essential constituent of these large sites.

VISUAL RESOURCE INVENTORY (VRI): The inventory of visual resources using three inventory factors (scenic quality, sensitivity level, and distance zones) to establish VRI classes for landscapes.

VISUAL RESOURCE MANAGEMENT (VRM): The inventory and planning actions taken to identify visual resource values and to establish objectives for managing those values, and the management actions taken to achieve the visual resource management objectives.

WILDLAND URBAN INTERFACE (WUI): The areas where homes are built near or within lands at risk of wildland fire.

WOODLAND (WL): Area that is capable of being at least 10 percent stocked by non-commercial forest trees such as oaks, junipers, gray pines.

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Chapter I I. References

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Appendix A

Chapter 2 Maps

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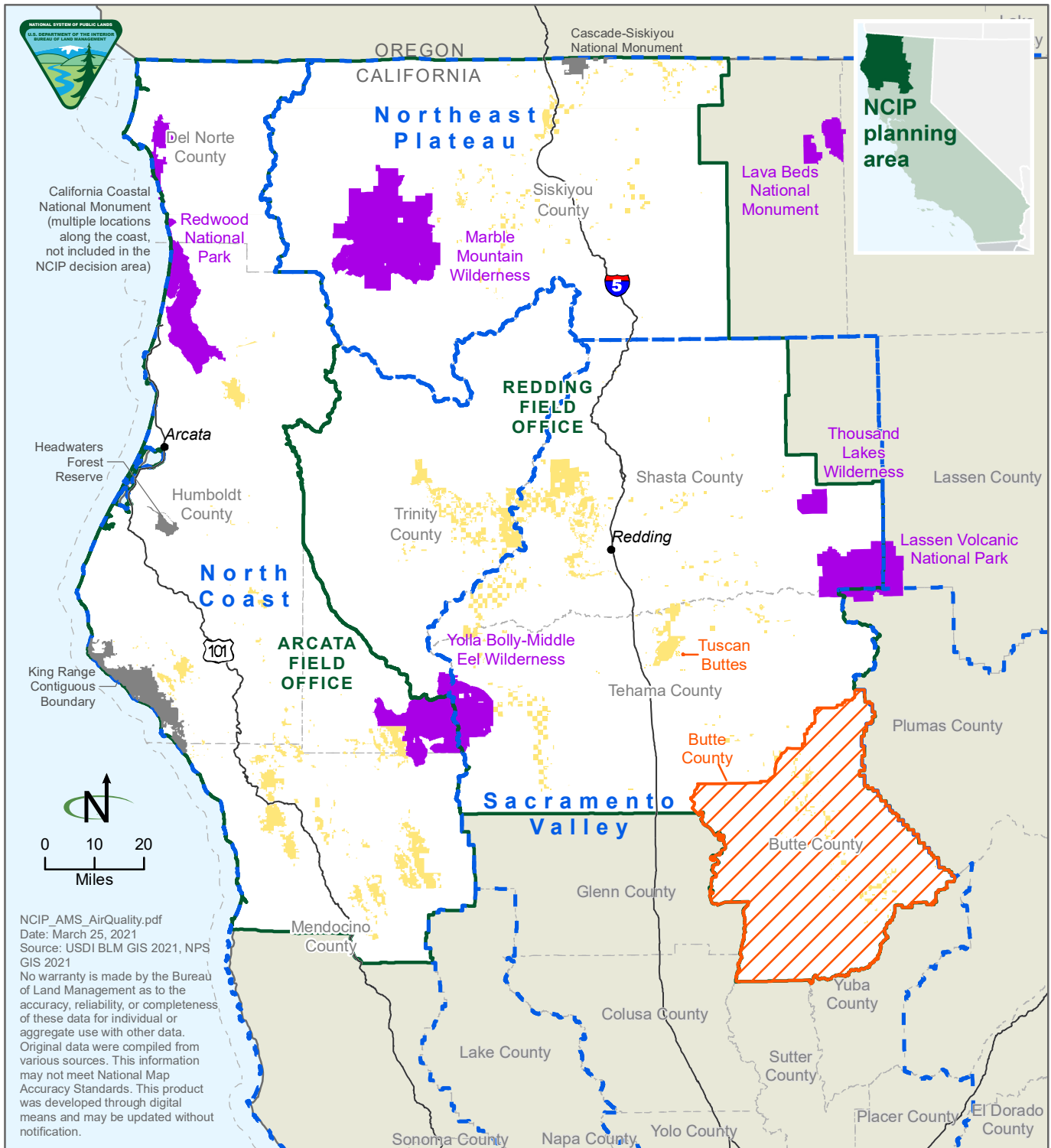
APPENDIX A

Maps

CHAPTER 2

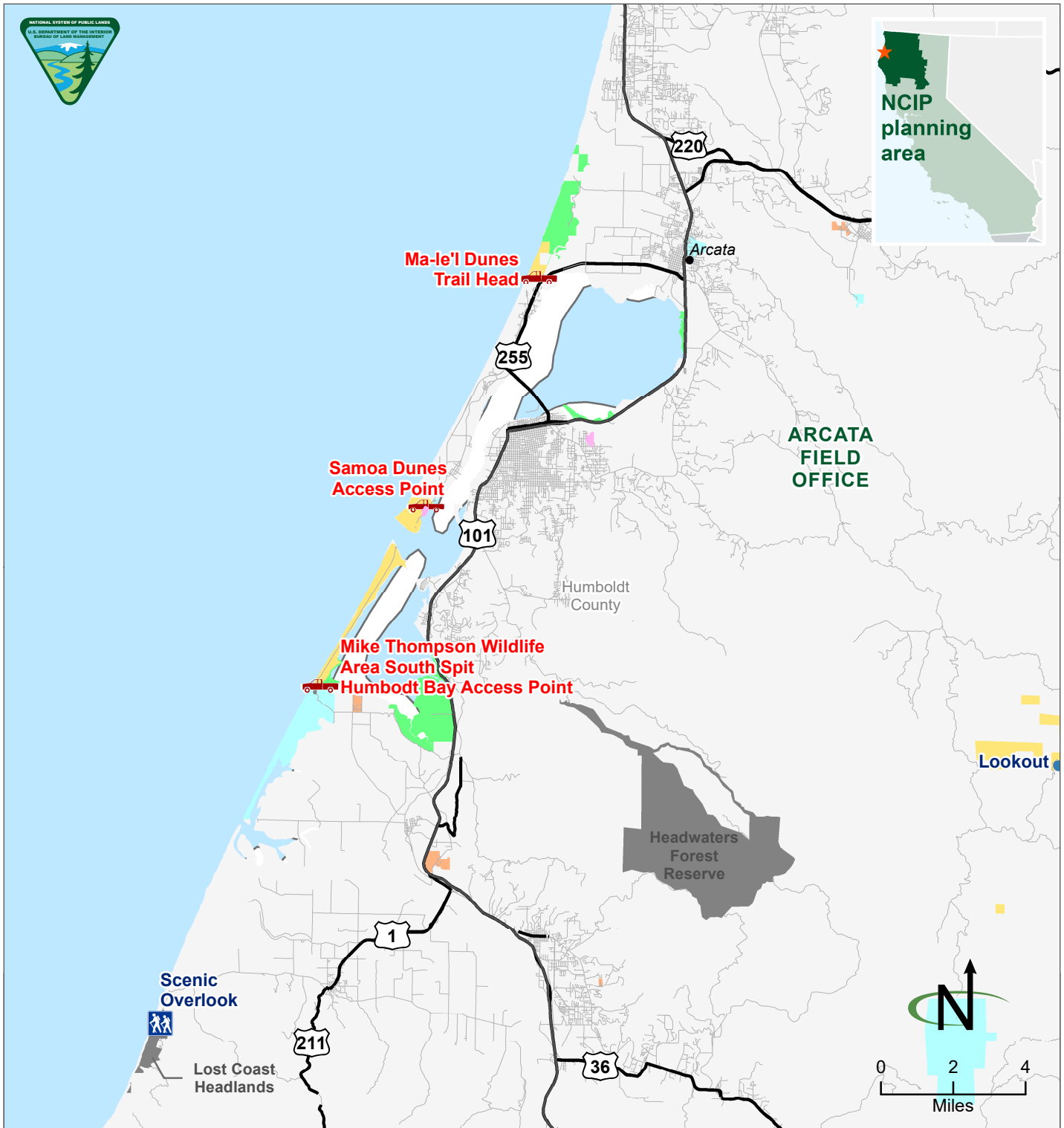
- 2-1 Federal Class I Areas, Air Quality Basins, and Nonattainment Areas Included in Air Quality Assessment
- 2-2 Managed Coastal Access Points
- 2-3 California Freshwater Conservation Success Index: Connectivity Indicator
- 2-4 California Freshwater Conservation Success Index: Habitat Integrity Score
- 2-5 Mean August Stream Temperature (1993-2011)
- 2-6 Future 2040 Scenario Stream Temperatures
- 2-7 Future 2080 Scenario Stream Temperatures
- 2-8 Vernal Pools and Fire History
- 2-9 Burn Severity
- 2-10 Sudden Oak Death Mortality and Risk
- 2-11 Forestry Important Area: Grass Valley Creek (GVC) Stewardship Area
- 2-12 Forestry Important Area: Weaverville Community Forest Stewardship Area
- 2-13 Forestry Important Area: Interlakes Stewardship Area
- 2-14 Forestry Important Area: Baker Cypress Stewardship Area
- 2-15 Forestry Important Area: Sacramento River Bend ACEC
- 2-16 Forestry Important Area: Lacks Creek
- 2-17 Forestry Important Area: Ma-l'el Dunes
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- 2-20 Forestry Classes on BLM-administered Land and Fire History
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- 2-28 Essential Connectivity Corridors and Largely Protected Natural Landscape Blocks
- 2-29 Northern Spotted Owl Habitat and Burn Severity
- 2-30 Existing Areas of Critical Environmental Concern
- 2-31 Potential Areas of Critical Environmental Concern
- 2-32 National Scenic and Historic Trails
- 2-33 Eligible, Suitable, and Designated Wild and Scenic Rivers
- 2-34 Active Grazing Allotments
- 2-35 Vacant Grazing Allotments

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




**Map 2-1
Federal Class I Areas, Air Quality Basins, and Nonattainment Areas Included in
Air Quality Assessment**

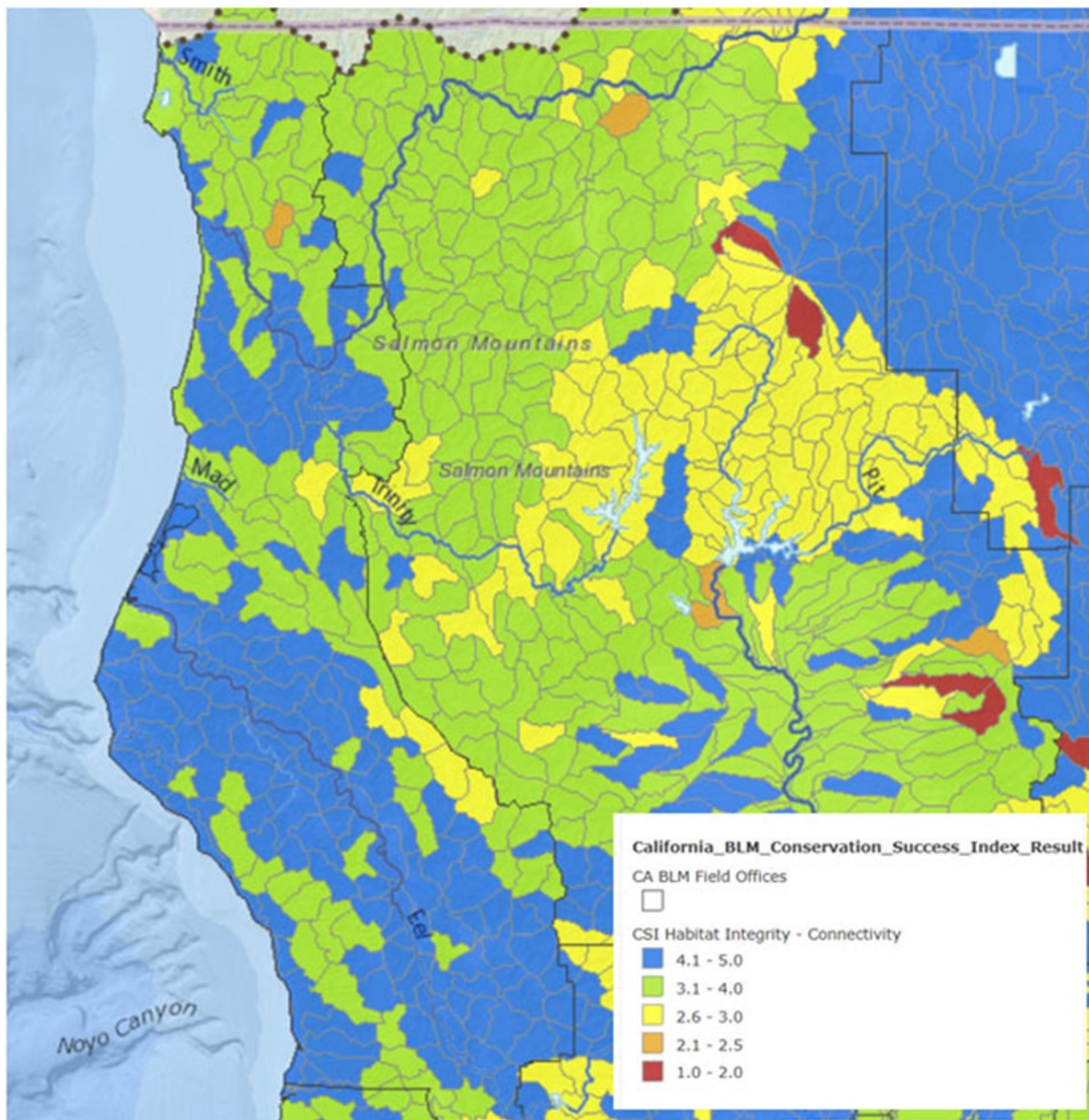
- Federal class 1 area
- Not included in the NCIP decision area
- Nonattainment area
- Air quality basin
- Bureau of Land Management



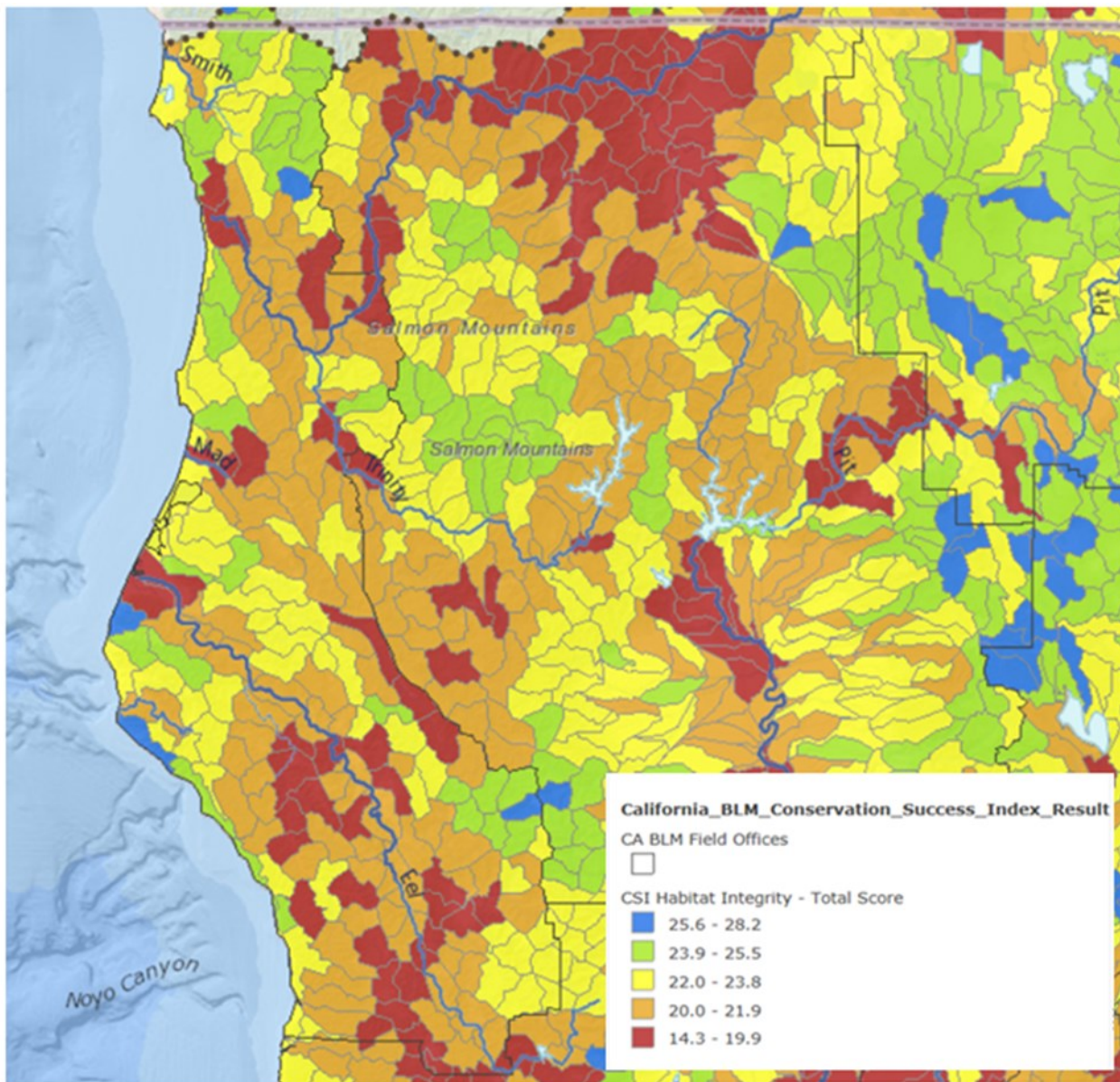
Map 2-2 Managed Coastal Access Points

-  Access point
-  Day use site
-  Unknown
-  Bureau of Land Management
-  Military or Corps of Engineers
-  Tribal Reservation
-  U.S. Fish and Wildlife Service
-  Private or other
-  State
-  Not included in the NCIP decision area

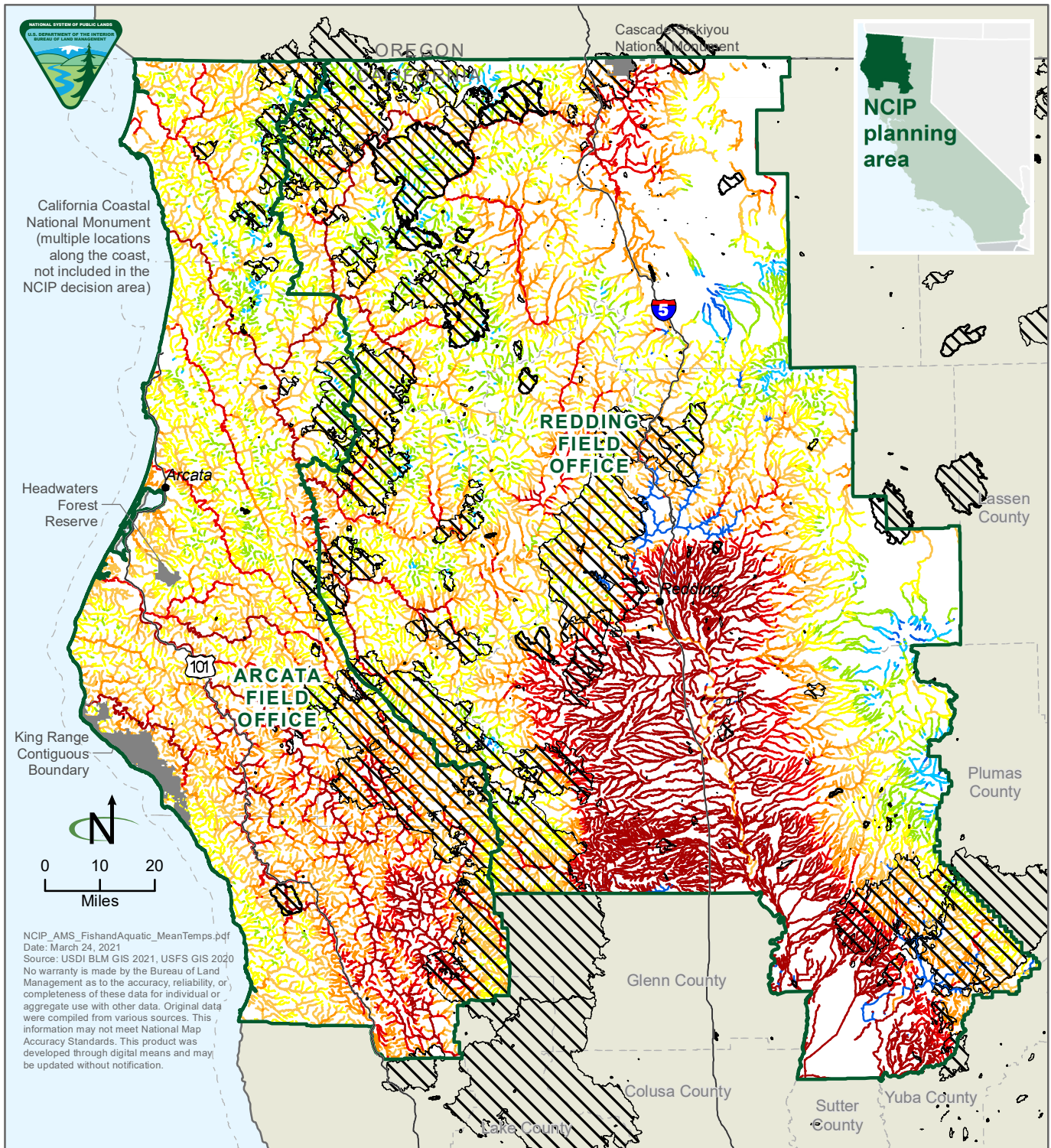
NCIP_AMS_CoastalAreas.pdf, Date: April 29, 2021
 Source: USDI BLM GIS 2021. No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data, or for purposes not intended by BLM. Spatial information may not meet National Map Accuracy Standards. This information may be updated without notification.



Map 2-3
California Freshwater Conservation Success Index: Connectivity Indicator

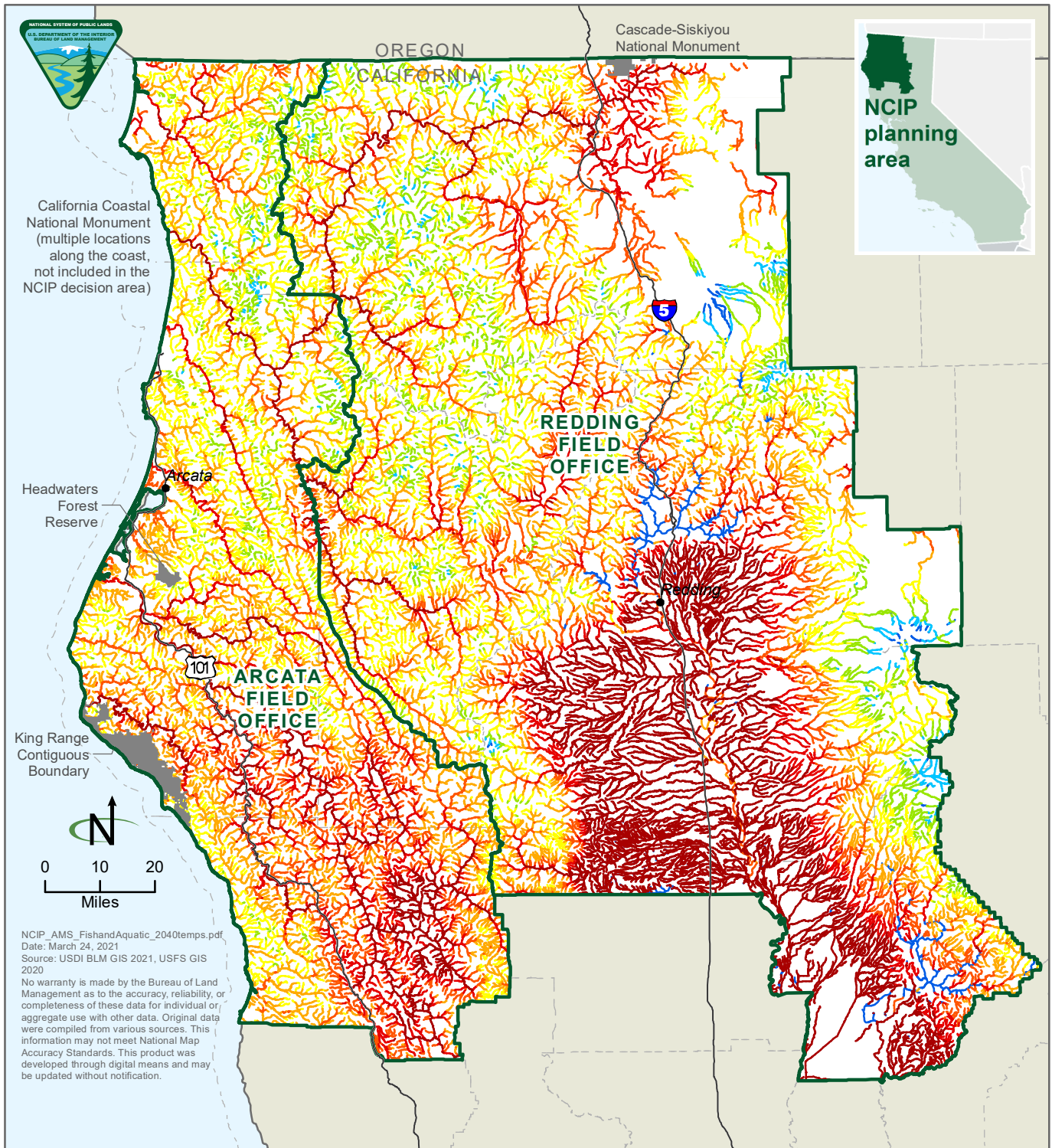


Map 2-4
California Freshwater Conservation Success Index: Habitat Integrity Score



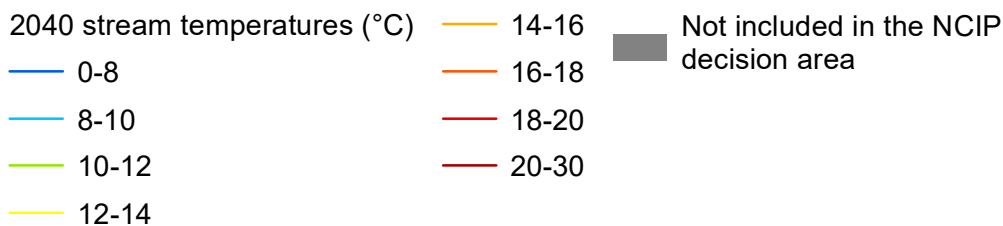
**Map 2-5
Mean August Stream Temperature (1993-2011)**

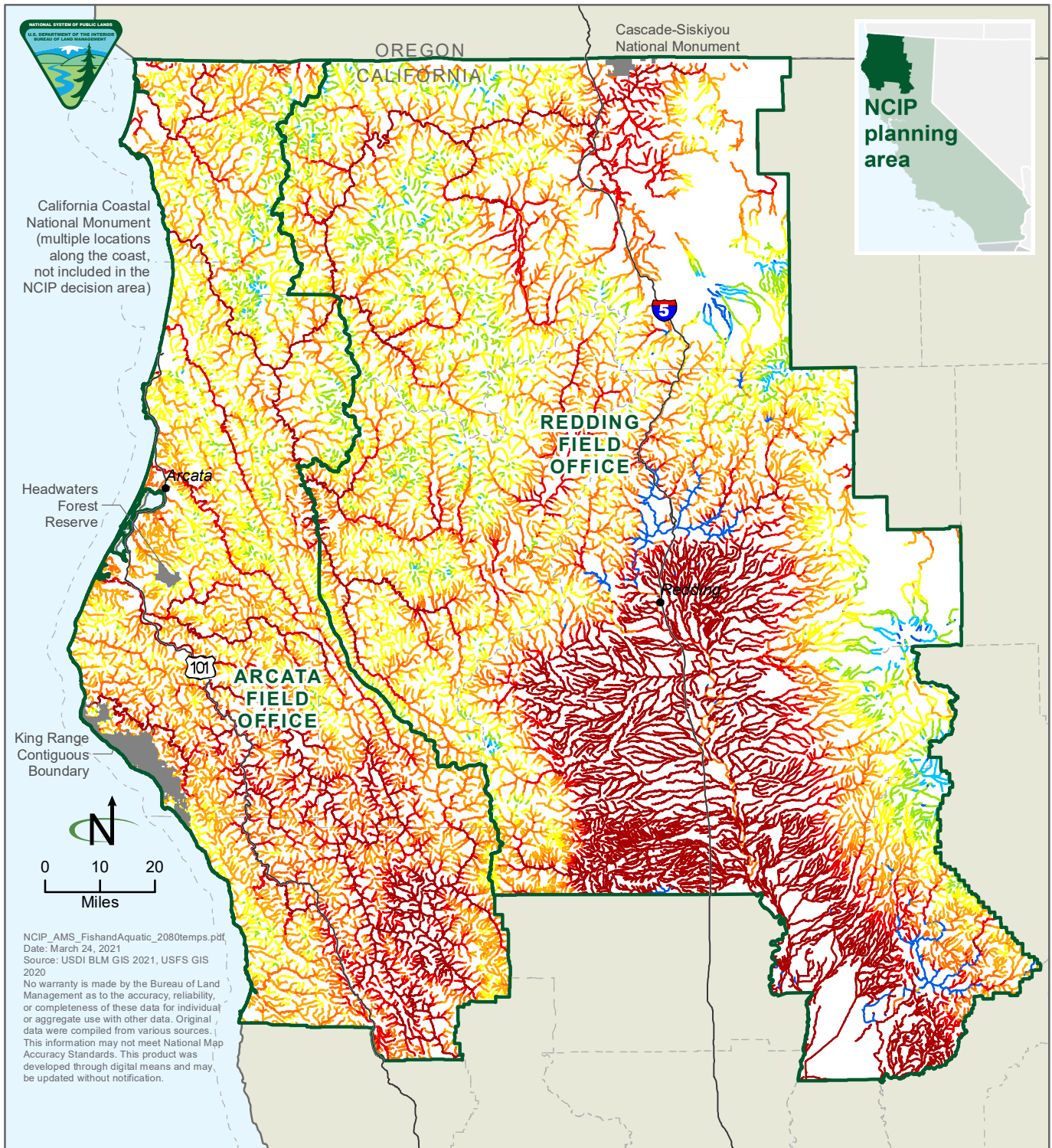




NCIP_AMS_FishandAquatic_2040temps.pdf
 Date: March 24, 2021
 Source: USDI BLM GIS 2021, USFS GIS 2020
 No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data. Original data were compiled from various sources. This information may not meet National Map Accuracy Standards. This product was developed through digital means and may be updated without notification.

Map 2-6 Future 2040 Scenario Stream Temperatures

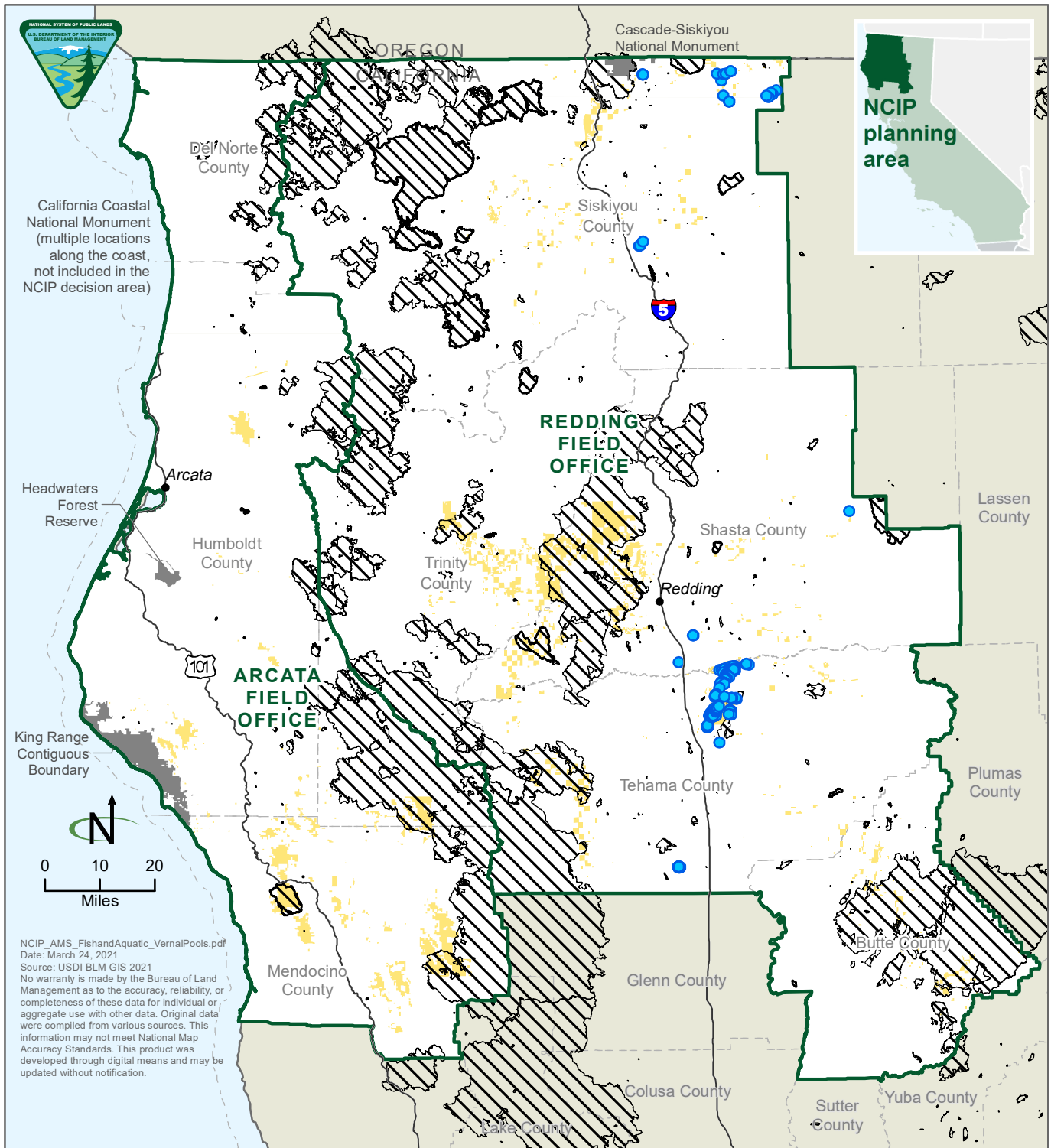




NCIP_AMS_FishandAquatic_2080temps.pdf
 Date: March 24, 2021
 Source: USDI BLM GIS 2021, USFS GIS 2020
 No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data. Original data were compiled from various sources. This information may not meet National Map Accuracy Standards. This product was developed through digital means and may be updated without notification.

Map 2-7 Future 2080 Scenario Stream Temperatures

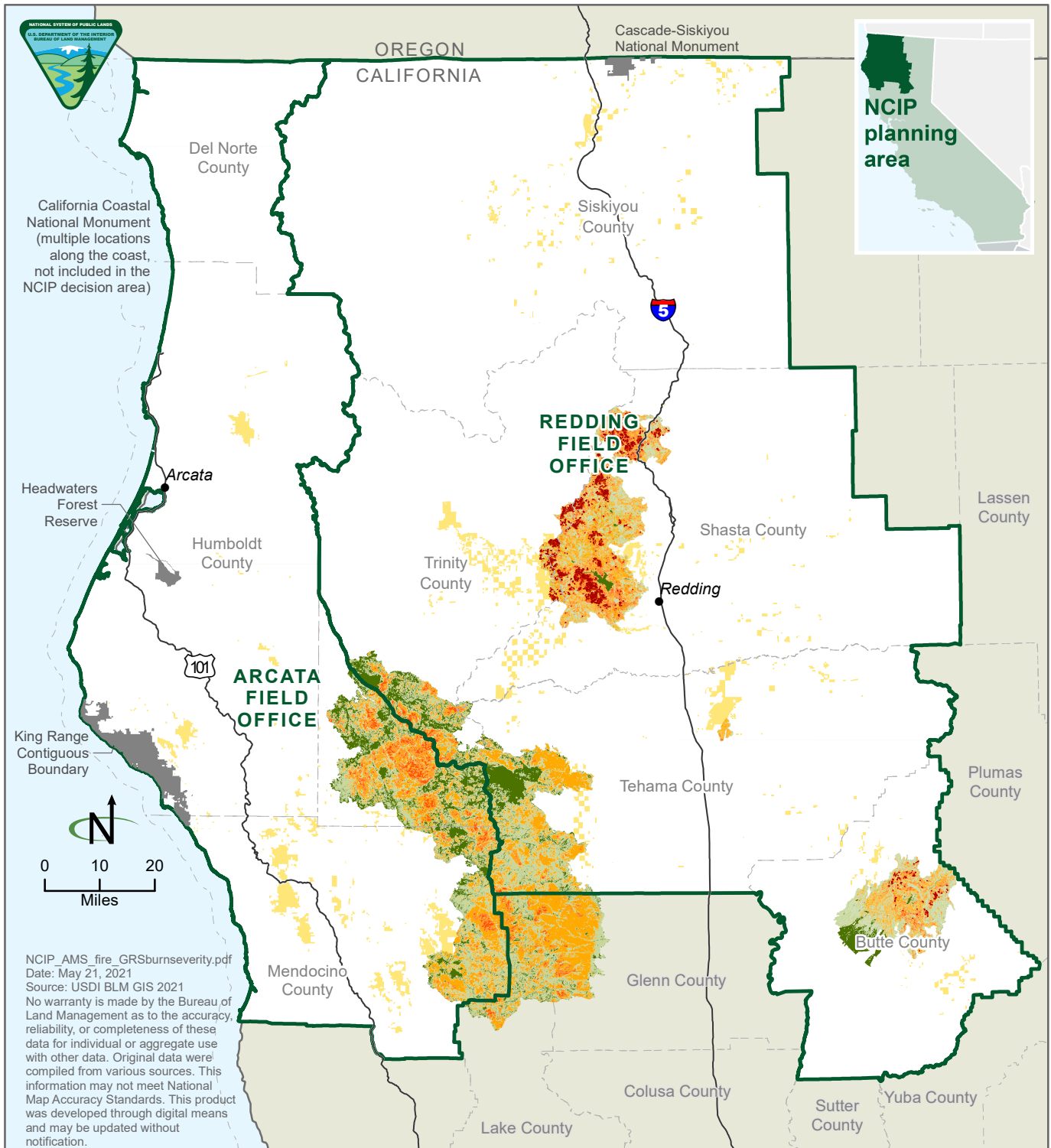
2080 stream temperatures (°C)	14-16	Not included in the NCIP decision area
0-8	16-18	
8-10	18-20	
10-12	20-30	
12-14		



NCIP_AMS_FishandAquatic_VernalPools.pdf
 Date: March 24, 2021
 Source: USDI BLM GIS 2021
 No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data. Original data were compiled from various sources. This information may not meet National Map Accuracy Standards. This product was developed through digital means and may be updated without notification.

Map 2-8 Vernal Pools and Fire History

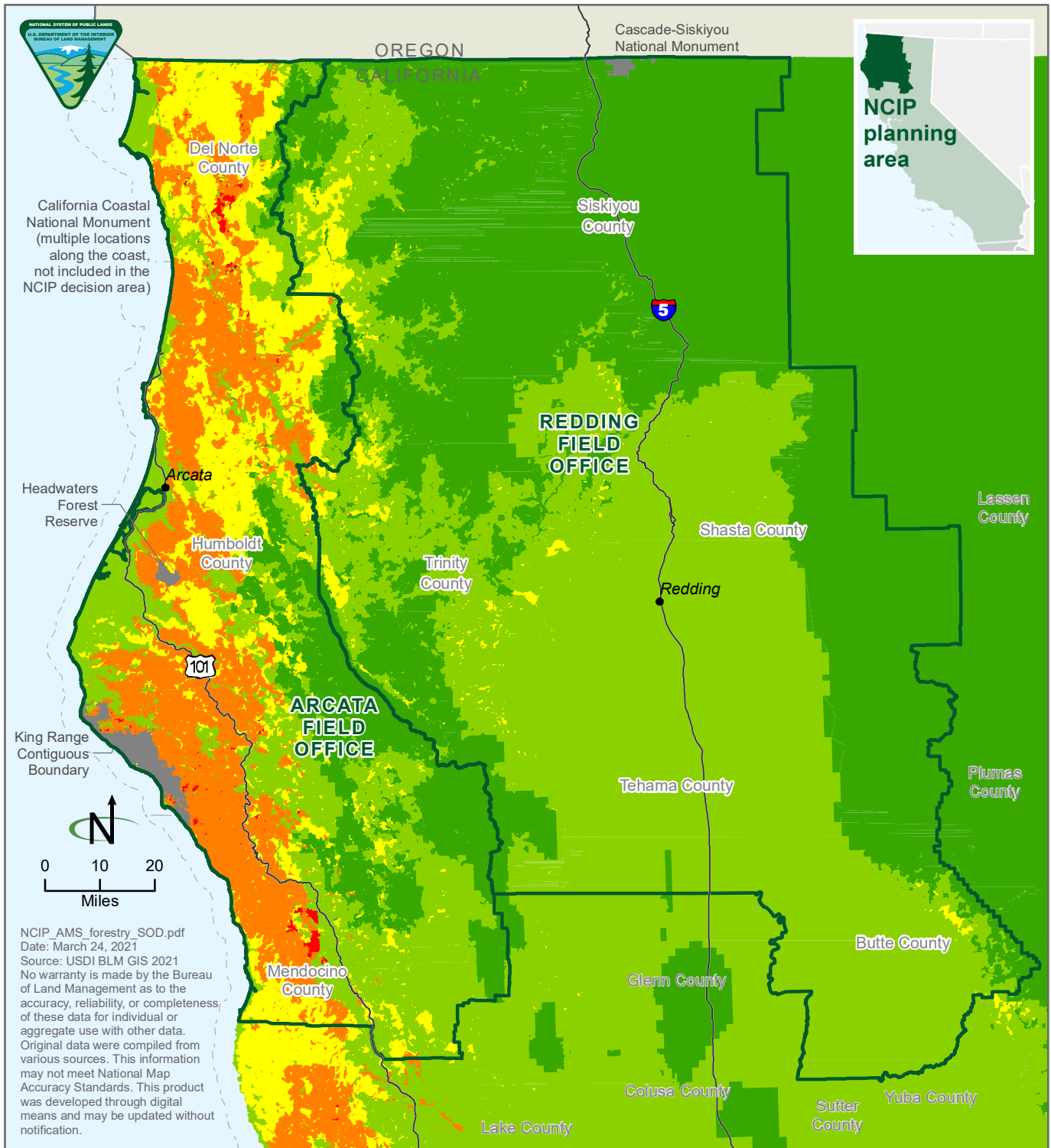
- Vernal pool on BLM-administered land
- Fire history (2014-2020)
- Bureau of Land Management
- Not included in the NCIP decision area



NCIP_AMS_fire_GRSburnseverity.pdf
 Date: May 21, 2021
 Source: USDI BLM GIS 2021
 No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data. Original data were compiled from various sources. This information may not meet National Map Accuracy Standards. This product was developed through digital means and may be updated without notification.

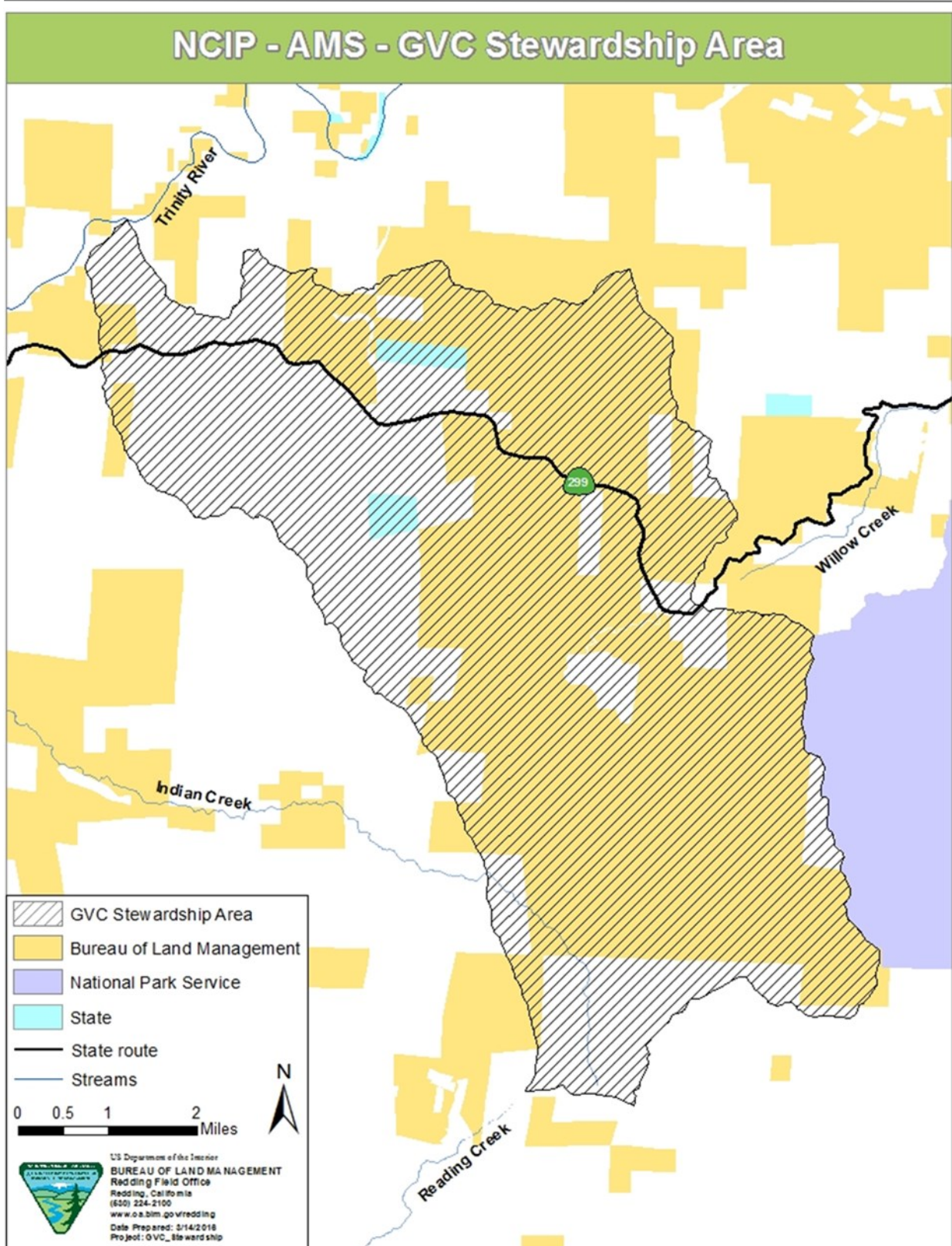
Map 2-9 Burn Severity

- | | | |
|----------------|----------------|--|
| Severity level | Moderate | Bureau of Land Management |
| Severe | Low | Not included in the NCIP decision area |
| High | Little to none | |
- BLM burn severity data includes the August, Camp, Carr, Delta, and Sun California wildfires (2018-2020).

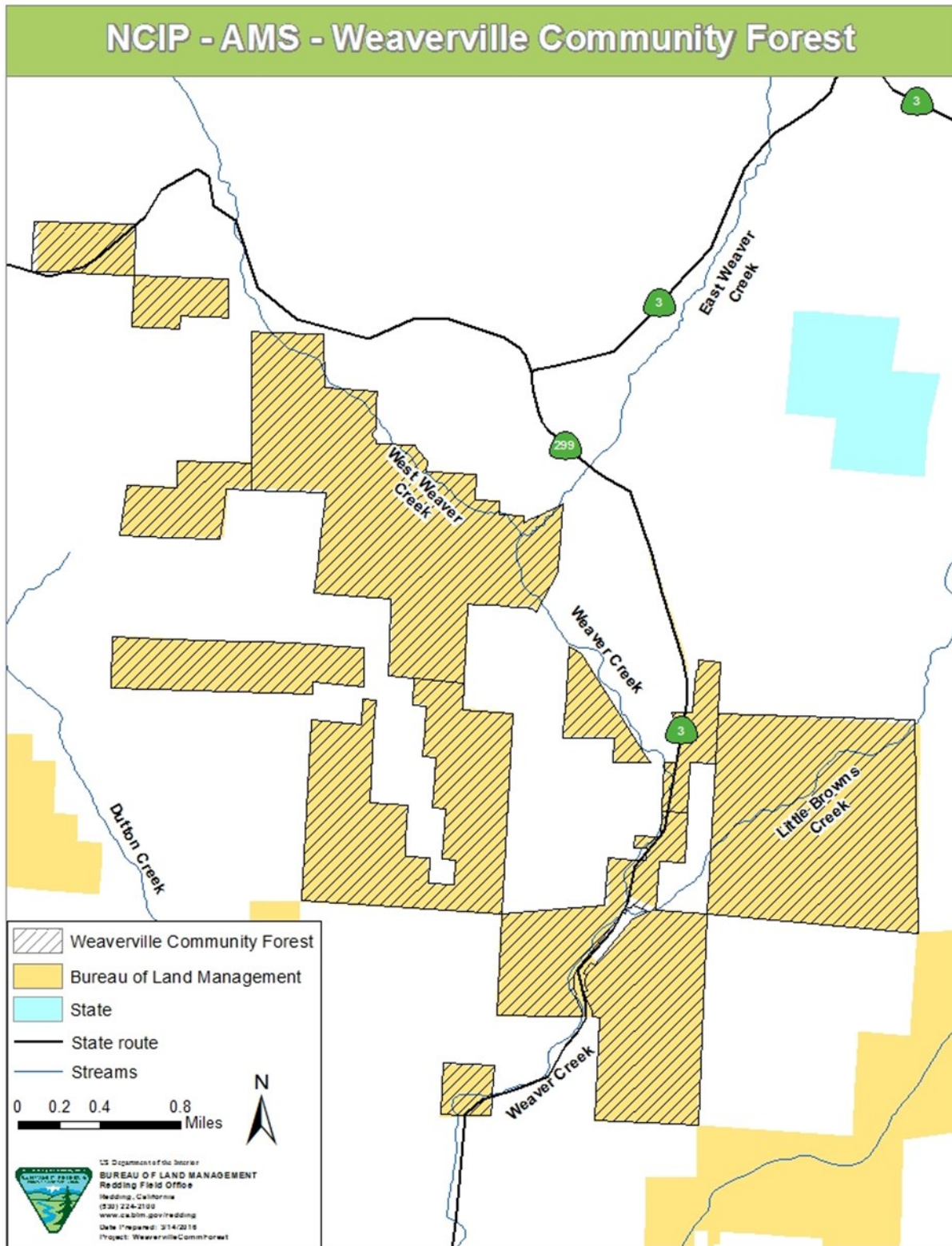


Map 2-10
Sudden Oak Death Mortality and Risk

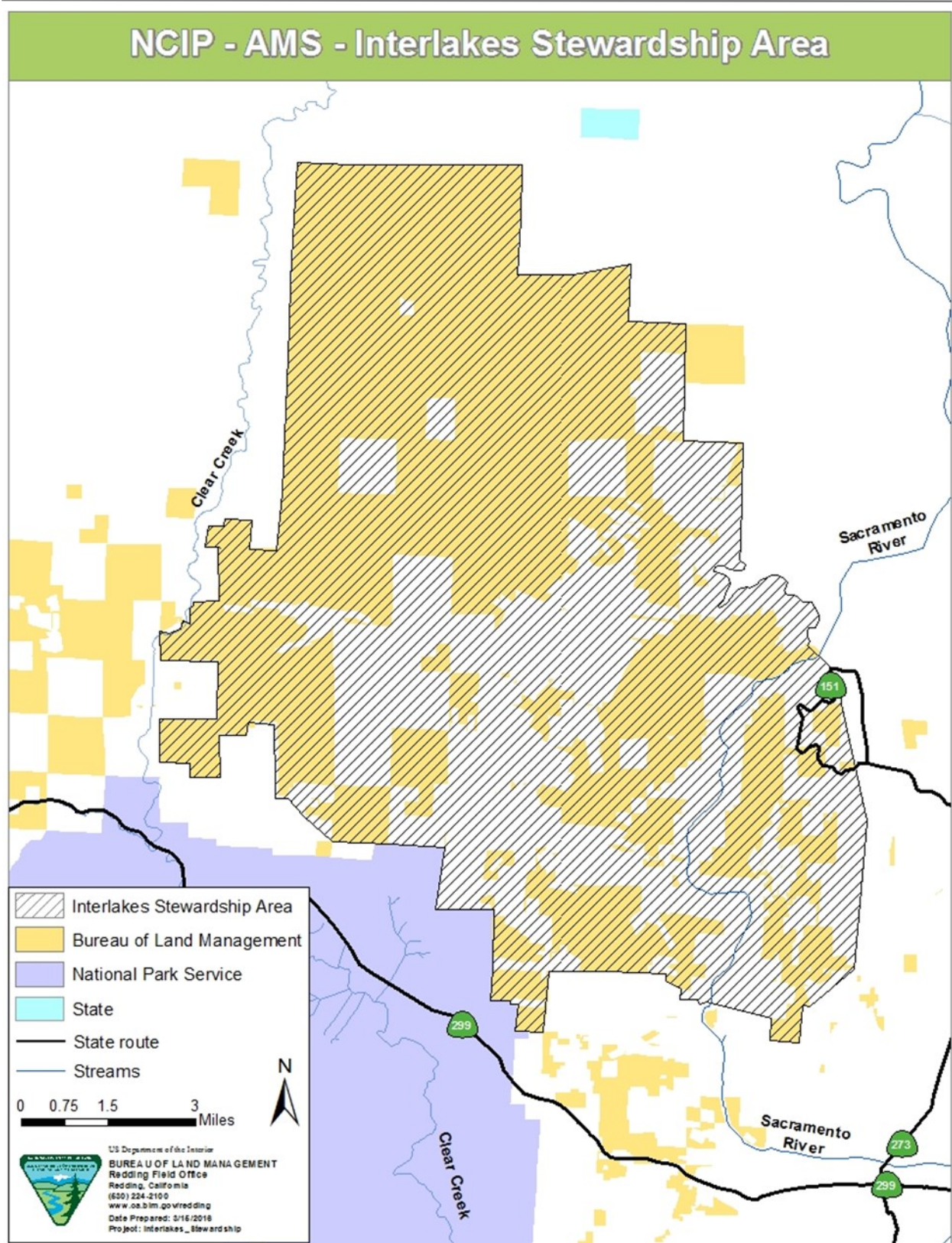
Spread risk ■ Moderate Not included in the NCIP decision area
■ Very low ■ High
■ Low ■ Very high



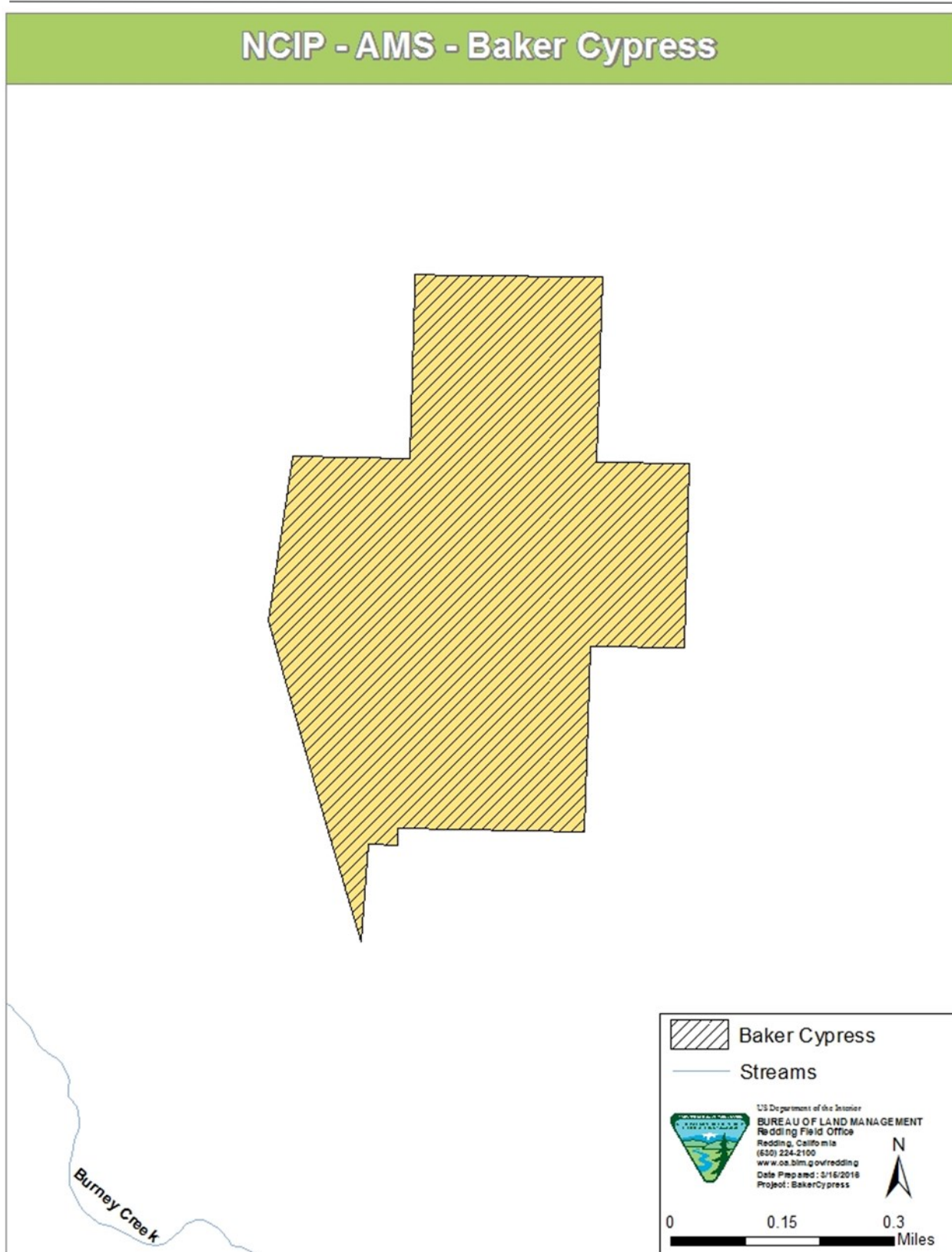
Map 2-11
Forestry Important Area: Grass Valley Creek (GVC) Stewardship Area



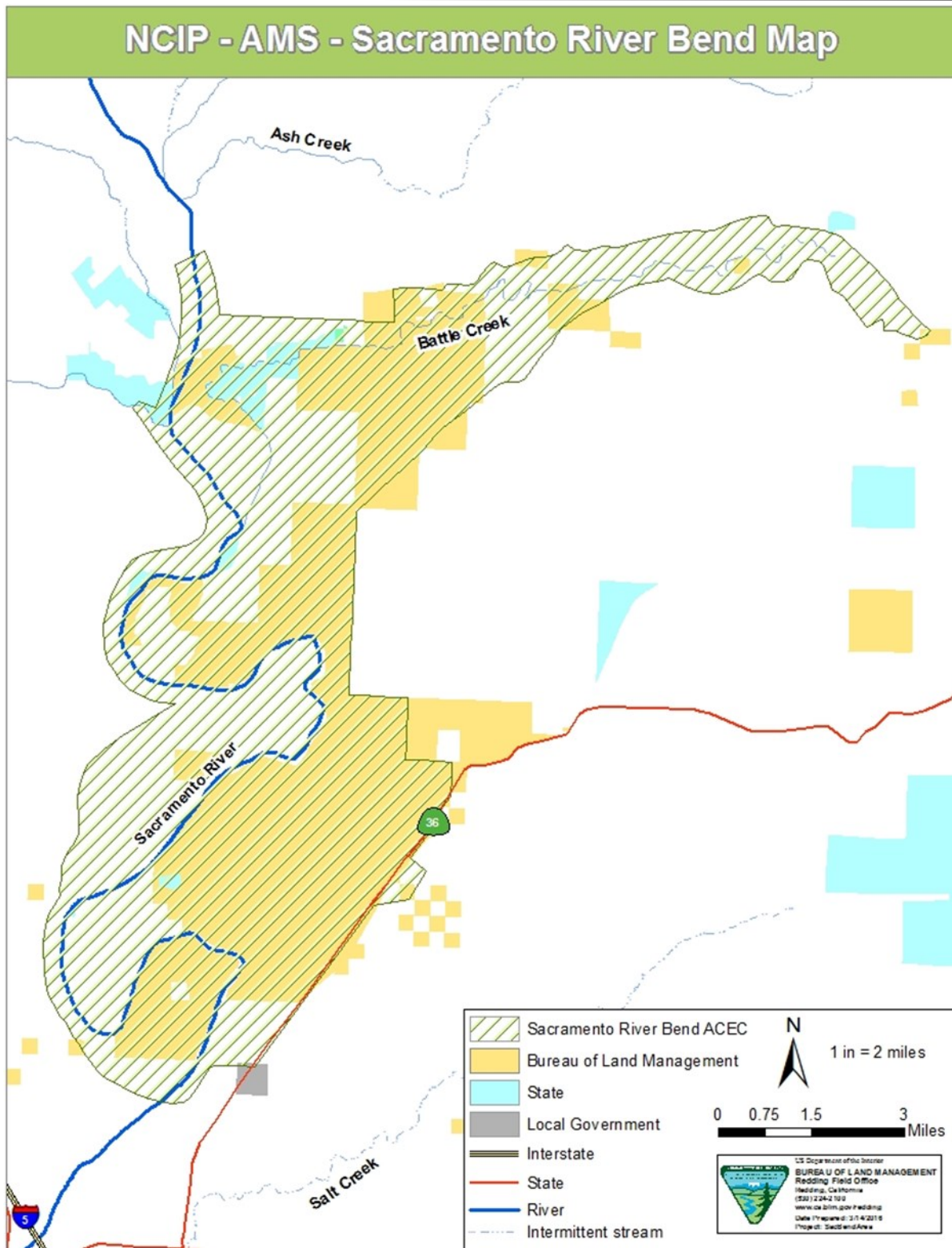
**Map 2-12
 Forestry Important Area: Weaverville Community Forest Stewardship Area**



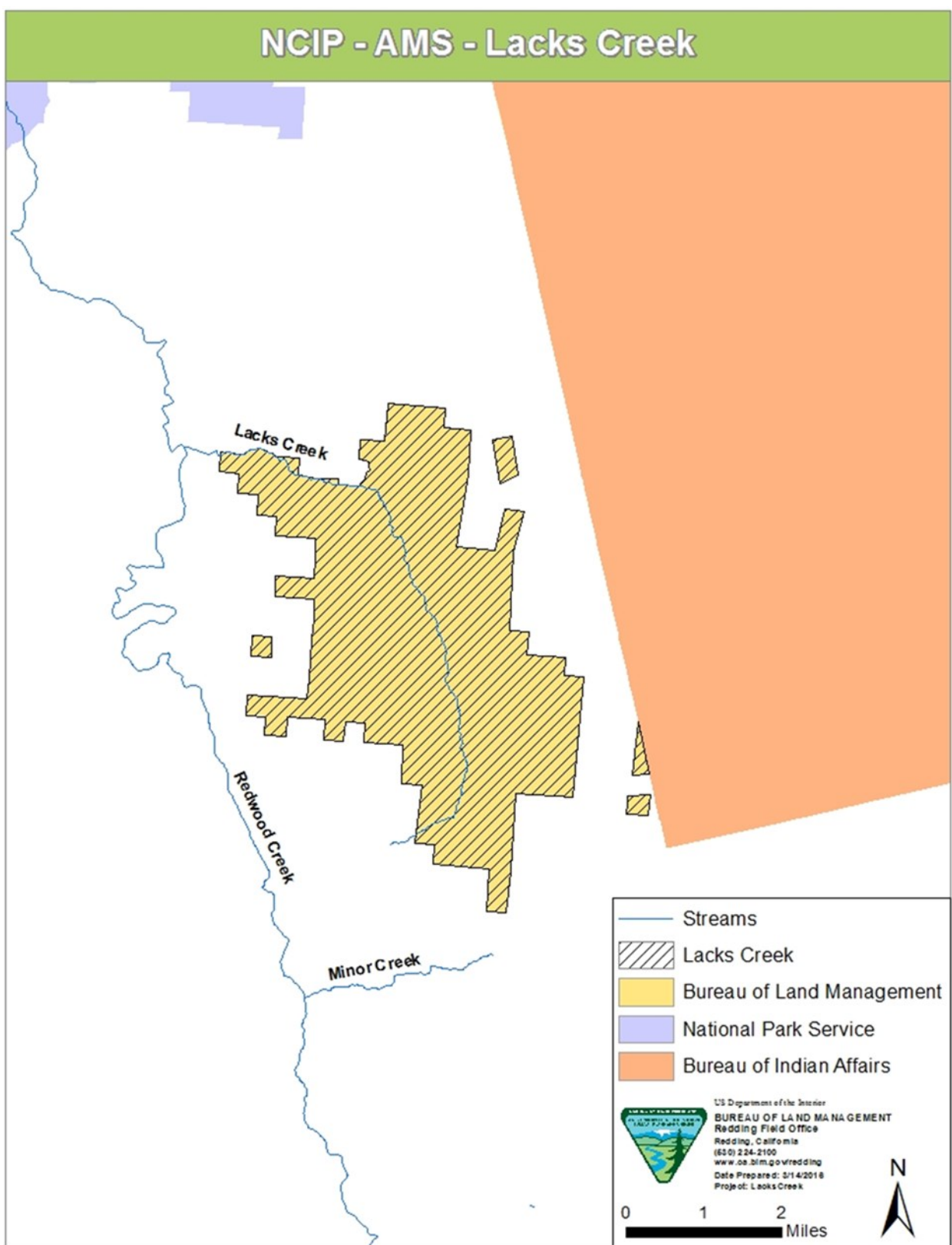
**Map 2-13
 Forestry Important Area: Interlakes Stewardship Area**



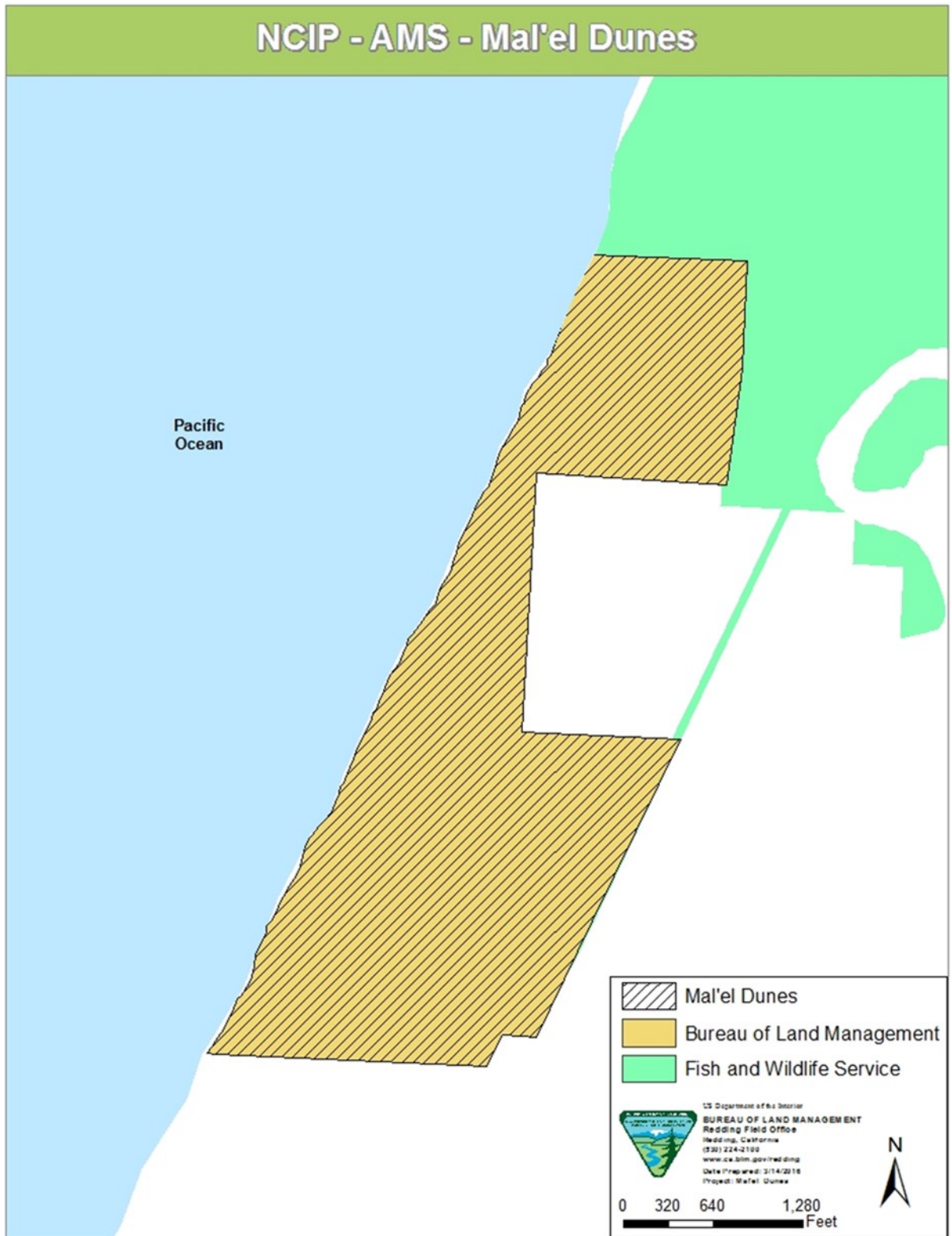
Map 2-14
Forestry Important Area: Baker Cypress Stewardship Area



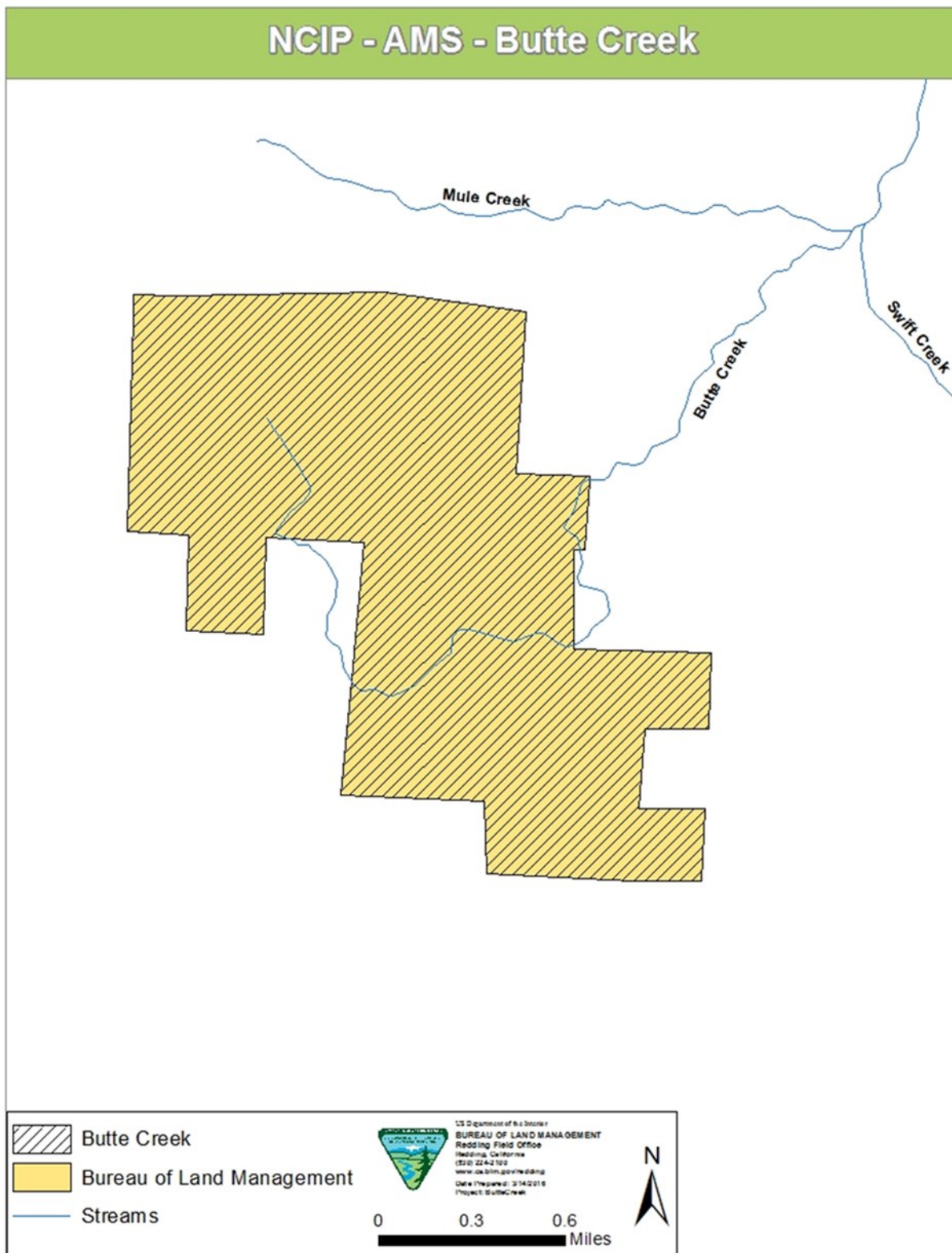
Map 2-15
Forestry Important Area: Sacramento River Bend ACEC



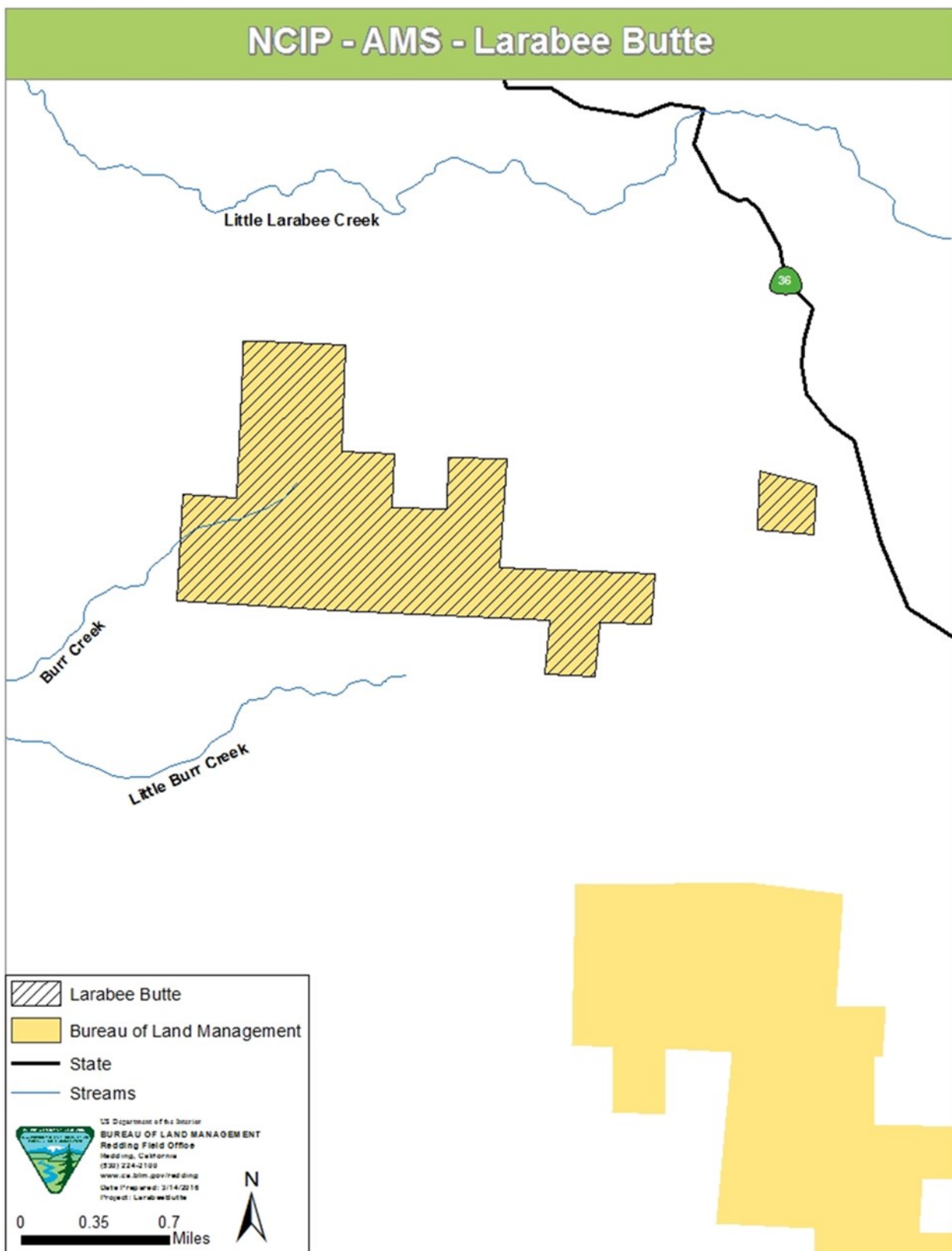
Map 2-16
Forestry Important Area: Lacks Creek



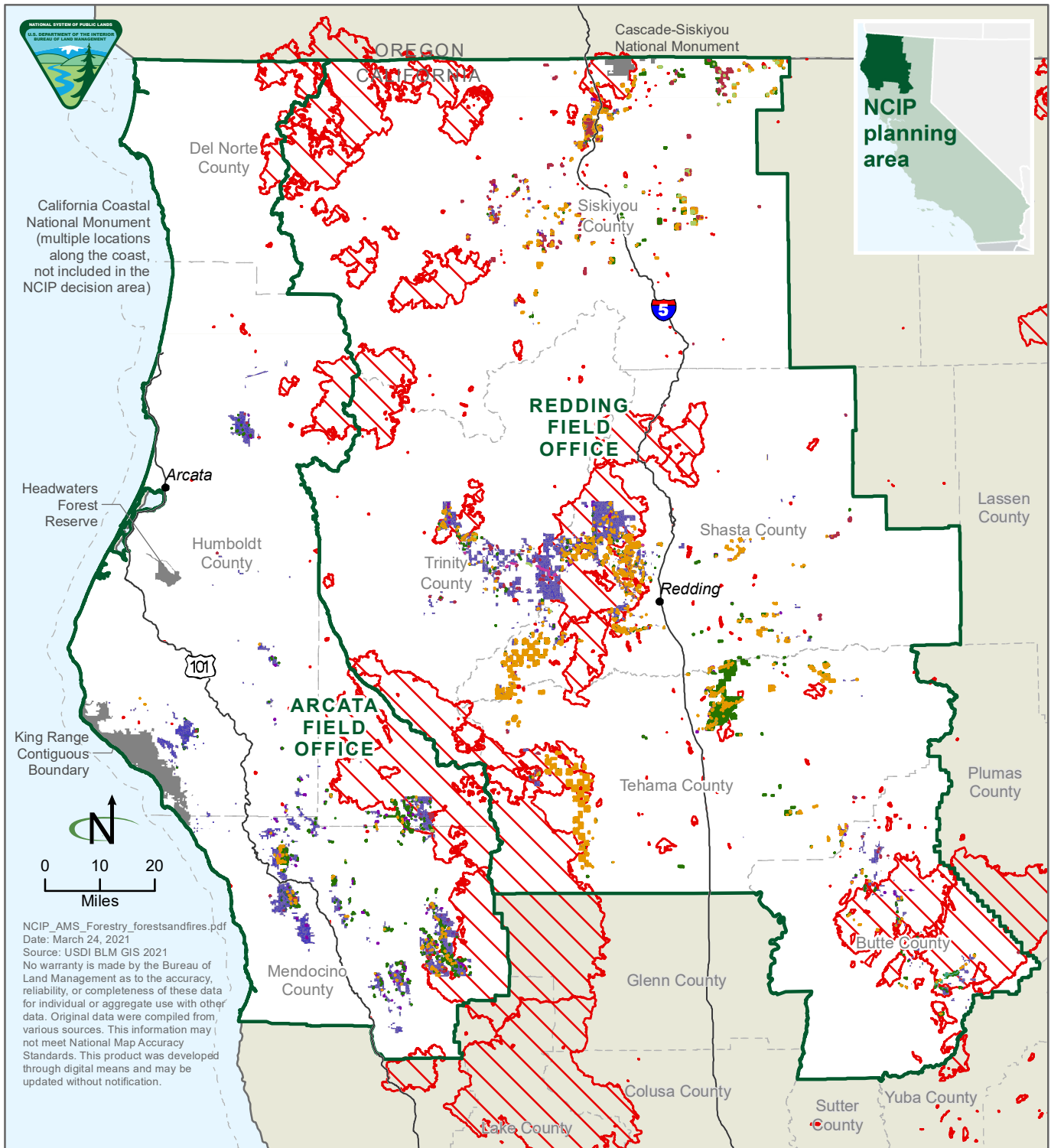
Map 2-17
Forestry Important Area: Ma-l'el Dunes



Map 2-18
Forestry Important Area: Butte Creek

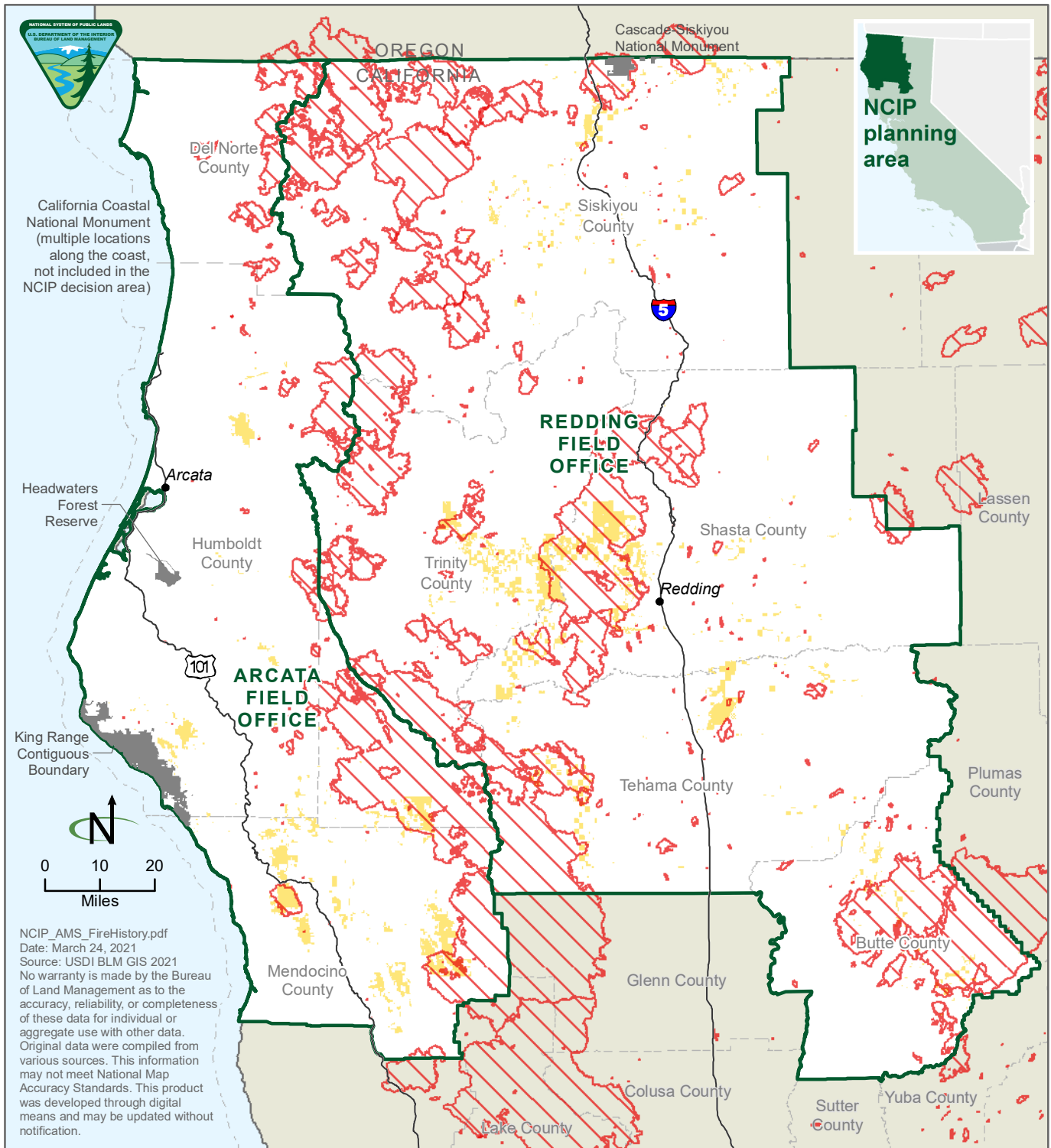


Map 2-19
Forestry Important Area: Larabee Butte






Map 2-20
Forestry Classes on BLM-administered Land and Fire History

- | | | | |
|----------------------|------------|---------|--|
| Forestry class | Hardwood | Unknown | Fire history (2016-2020) |
| Barren | Herbaceous | Urban | Not included in the NCIP decision area |
| Conifer/Hardwood Mix | Shrub | Water | |
| Conifer | Sparse | | |

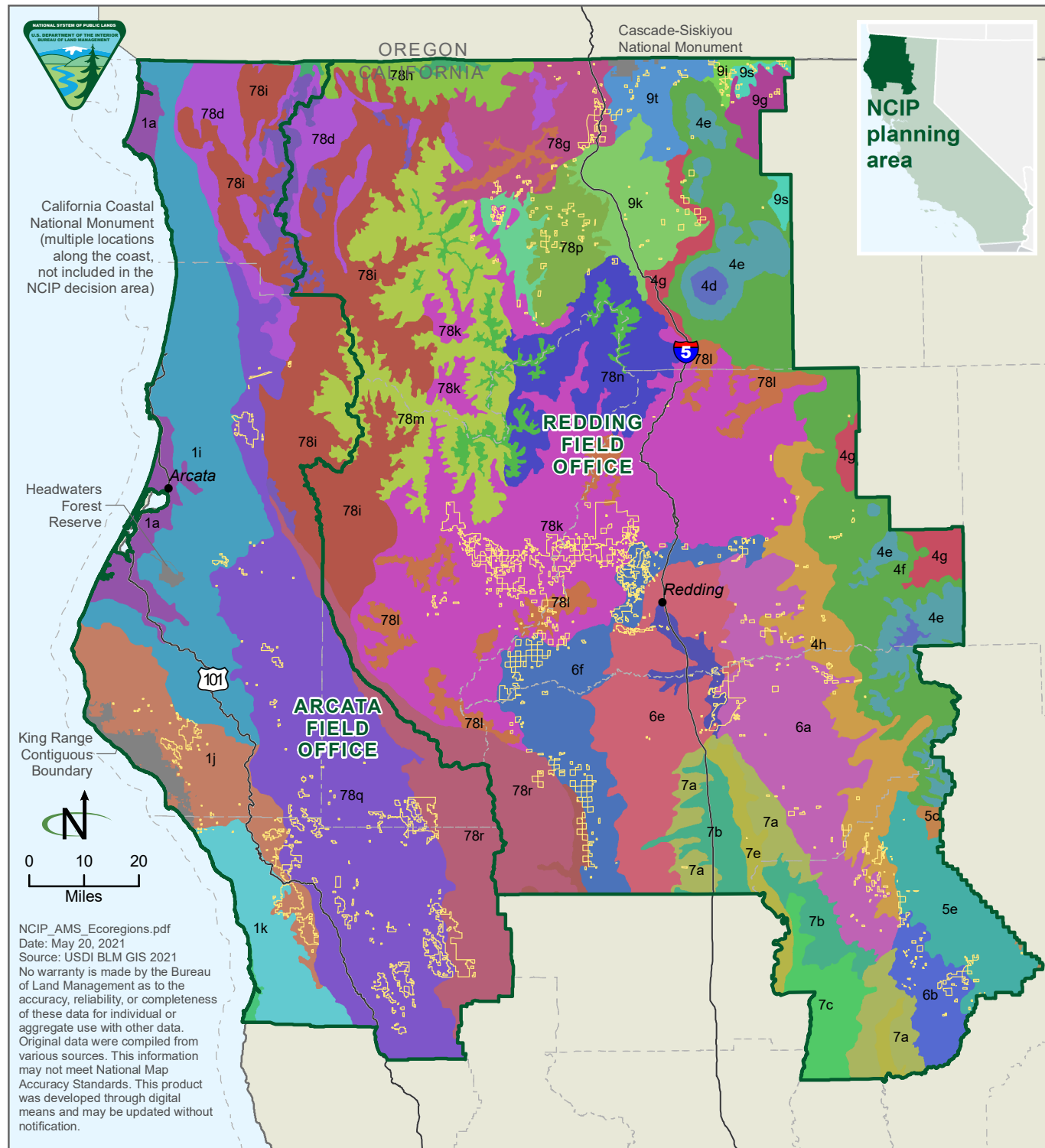


Map 2-21
Fire History Within and Adjacent to the Planning Area

-  Fire history (2014-2020)
-  Bureau of Land Management
-  Not included in the NCIP decision area



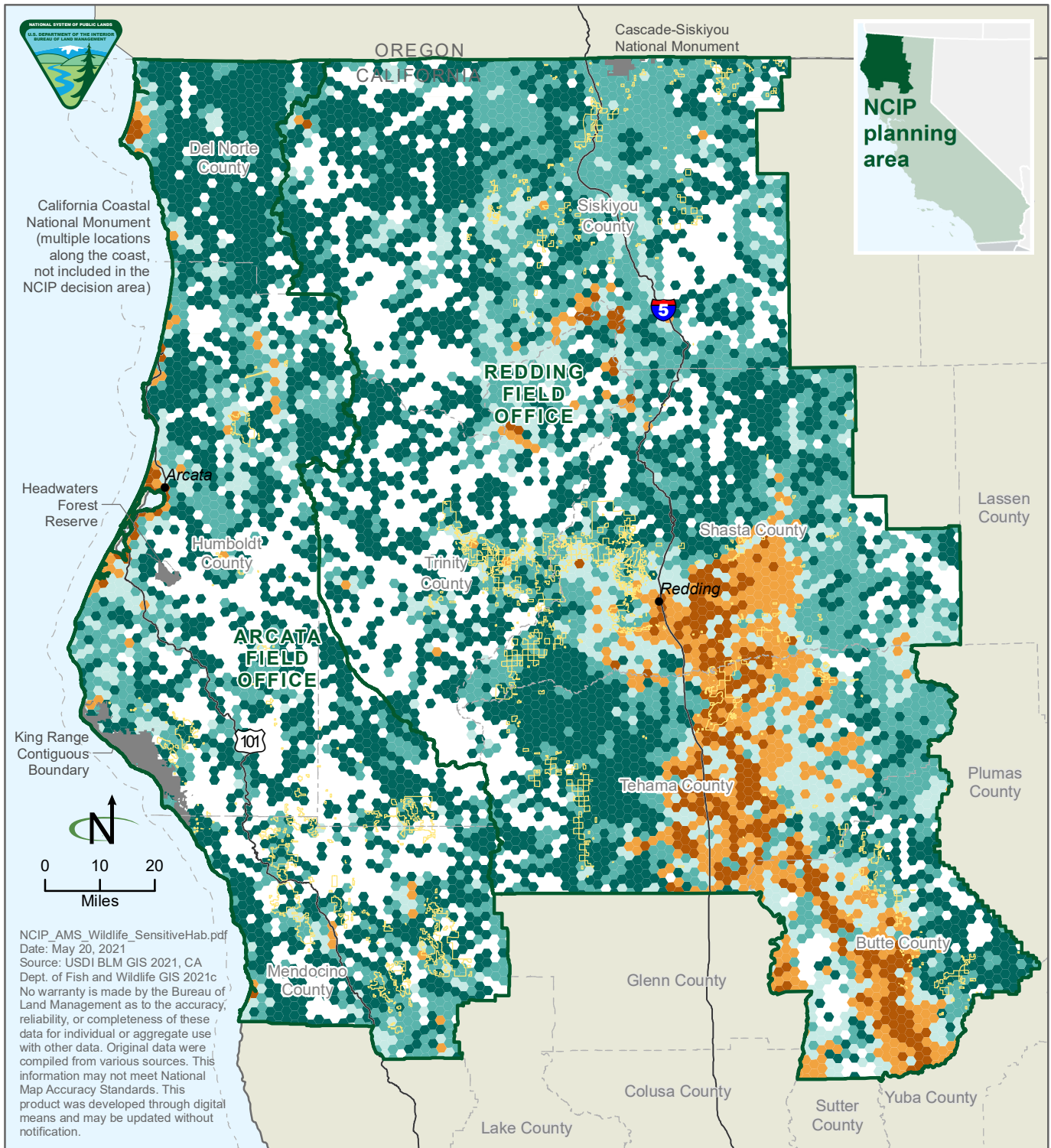
Map 2-22
California Floristic Province



- 1a Coastal Lowlands
- 1i Northern Franciscan Redwood Forest
- 1j King Range/Mattole Basin
- 1k Coastal Franciscan Redwood Forest
- 1l Fort Bragg/Fort Ross Terraces
- 4d Cascade Subalpine/Alpine
- 4e High Southern Cascades Montane Forest
- 4f Low Southern Cascades Mixed Conifer Forest
- 4g California Cascades Eastside Conifer Forest
- 4h Southern Cascades Foothills
- 5c Northern Sierra Upper Montane Forests
- 5d Northern Sierra Mid-Montane Forests
- 5e Northern Sierra Lower Montane Forests
- 6a Tuscan Flows
- 6ar Upper Sacramento River Alluvium
- 6b Northern Sierran Foothills
- 6e Tehama Terraces
- 6f Foothill Ridges and Valleys
- 6g North Coast Range Eastern Slopes
- 78a Rogue/Illinois/Scott Valleys
- 78d Serpentine Siskiyou
- 78e Inland Siskiyou
- 78f Coastal Siskiyou
- 78g Klamath River Ridges
- 78h Border High-Siskiyou
- 78i Western Klamath Low Elevation Forests
- 78j Western Klamath Montane Forests
- 78k Eastern Klamath Low Elevation Forests
- 78l Eastern Klamath Montane Forests
- 78m Marble/Salmon Mountains-Trinity Alps
- 78n Scott Mountains
- 78o Klamath Subalpine
- 78p Duzel Rock
- 78q Outer North Coast Ranges
- 78r High North Coast Ranges
- 7a Northern Terraces
- 7b North Valley Alluvium
- 7c Butte Sink/Sutter and Colusa Basins
- 7e Sacramento/Feather Riverine Alluvium
- 9g Klamath/Goose Lake Basins
- 9i Southern Cascades Slope
- 9k Shasta Valley
- 9s Modoc Lava Flows and Buttes
- 9t Old Cascades








Map 2-23
Level IV Ecoregions

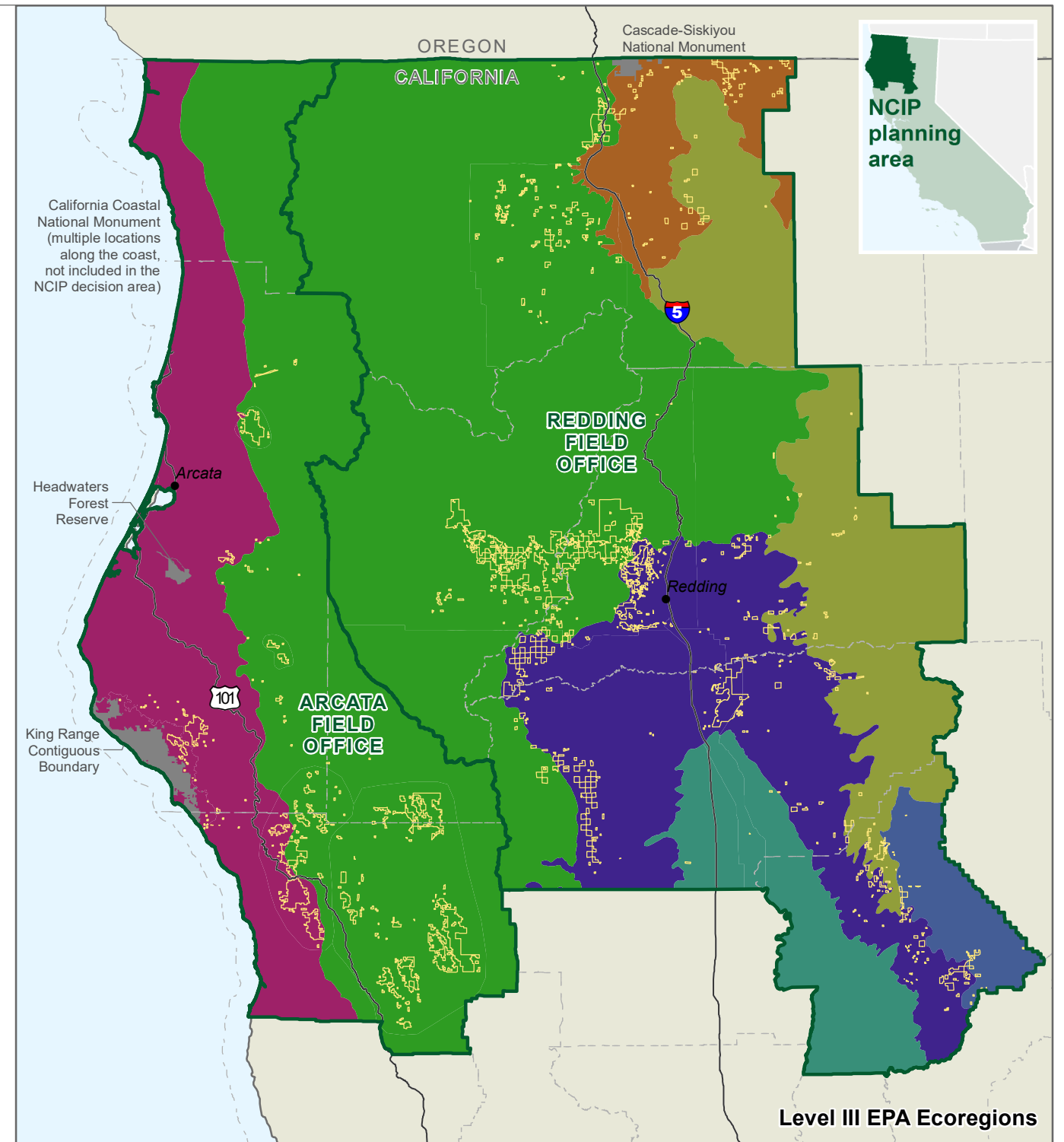
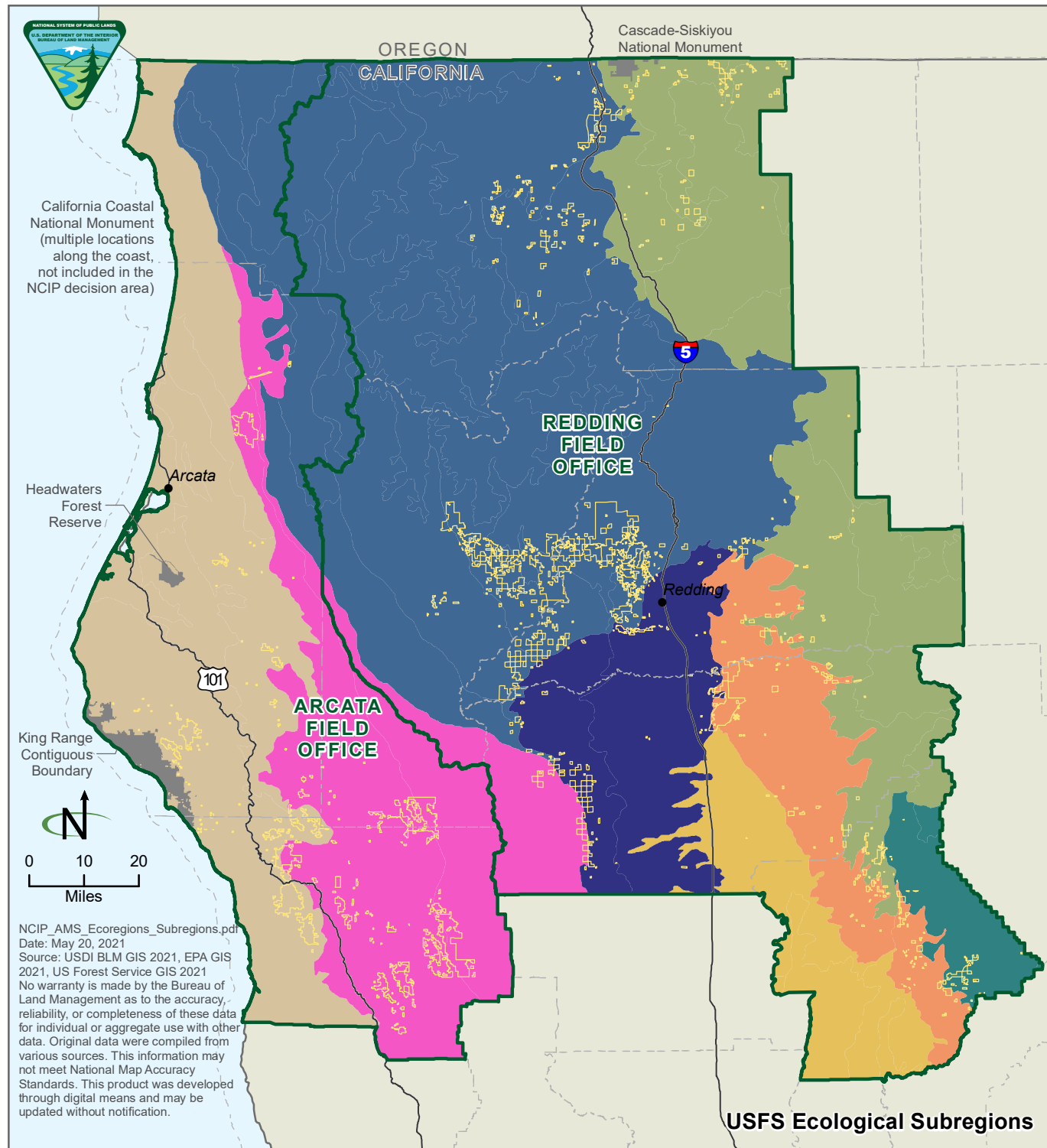
- Bureau of Land Management
- Not included in the NCIP decision area



Map 2-24
Sensitive Habitat Areas

Areas of conservation emphasis, sensitive habitat index

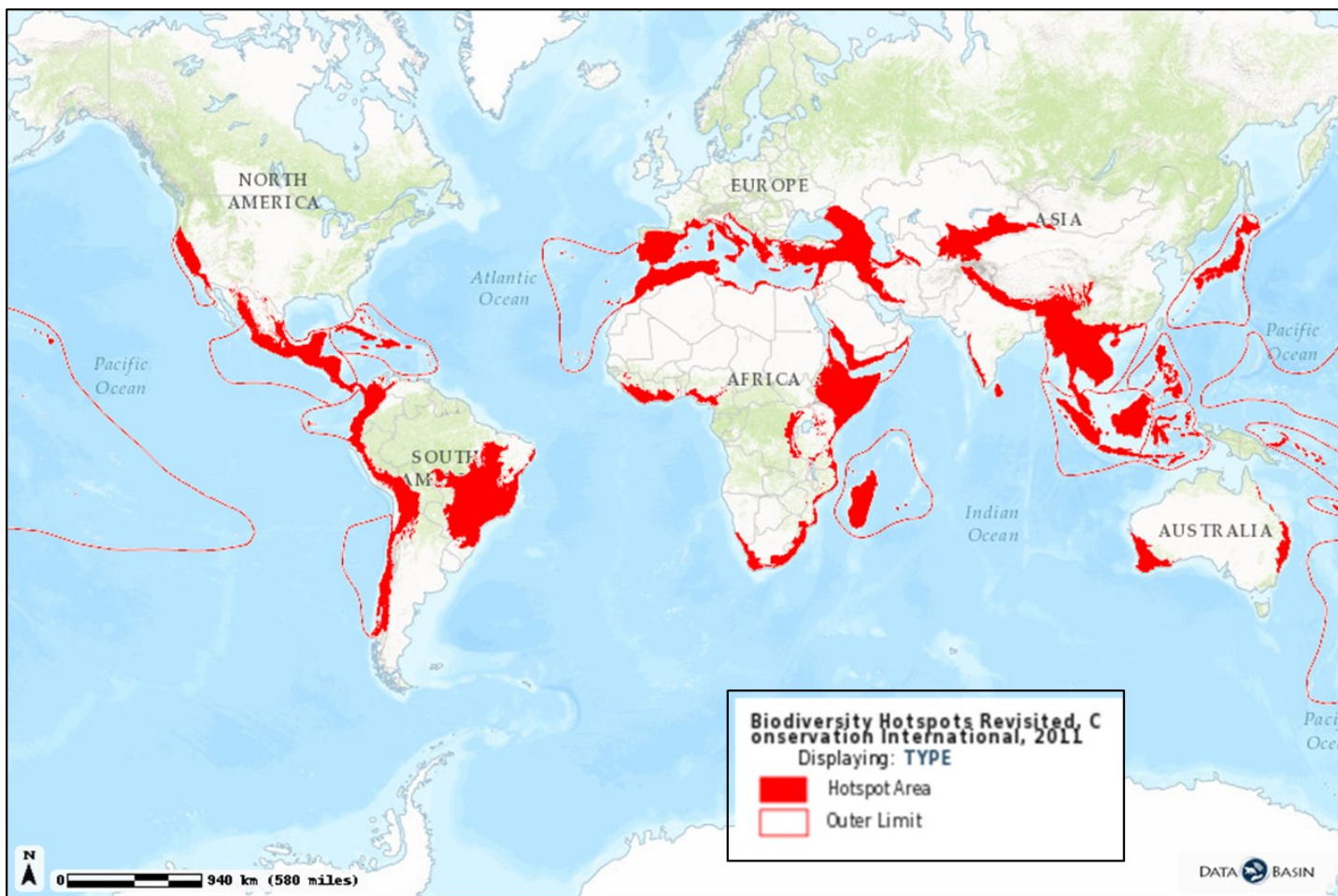
	5—high		Bureau of Land Management
	4		Not included in the NCIP decision area
	3		
	2		
	1—low		



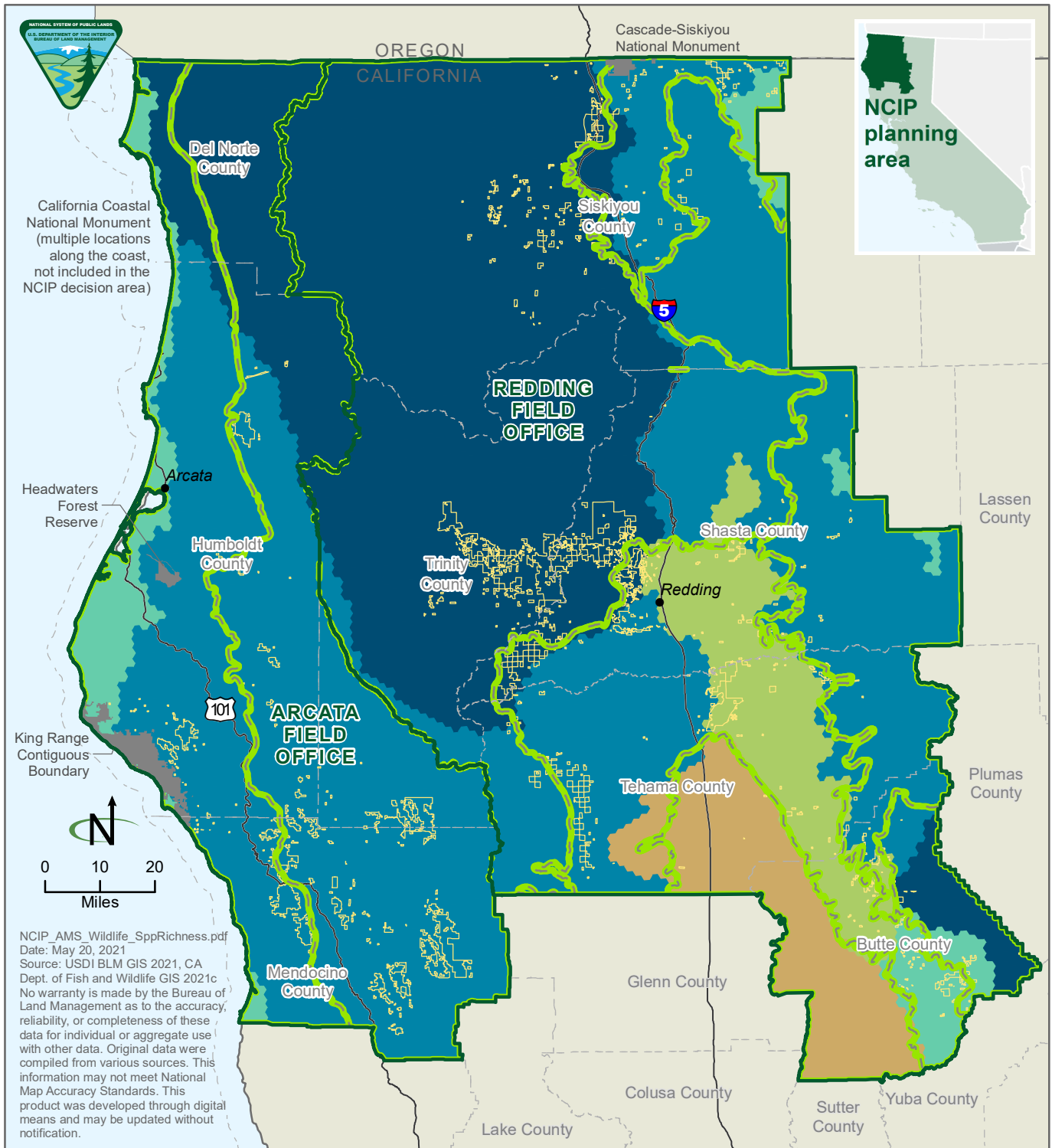
Map 2-25
Ecological Subregions of California versus Level III EPA Ecoregions

- | | |
|----------------------------------|---|
| Great Valley | Northern California Interior Coast Ranges |
| Klamath Mountains | Sierra Nevada |
| Northern California Coast | Sierra Nevada Foothills |
| Northern California Coast Ranges | Southern Cascades |
| | Bureau of Land Management |
| | Not included in the NCIP decision area |

- | | |
|---|--|
| Cascades | Bureau of Land Management |
| Central California Foothills and Coastal Mountains | Not included in the NCIP decision area |
| Central California Valley | |
| Coast Range | |
| Eastern Cascades Slopes and Foothills | |
| Klamath Mountains/California High North Coast Range | |
| Sierra Nevada | |



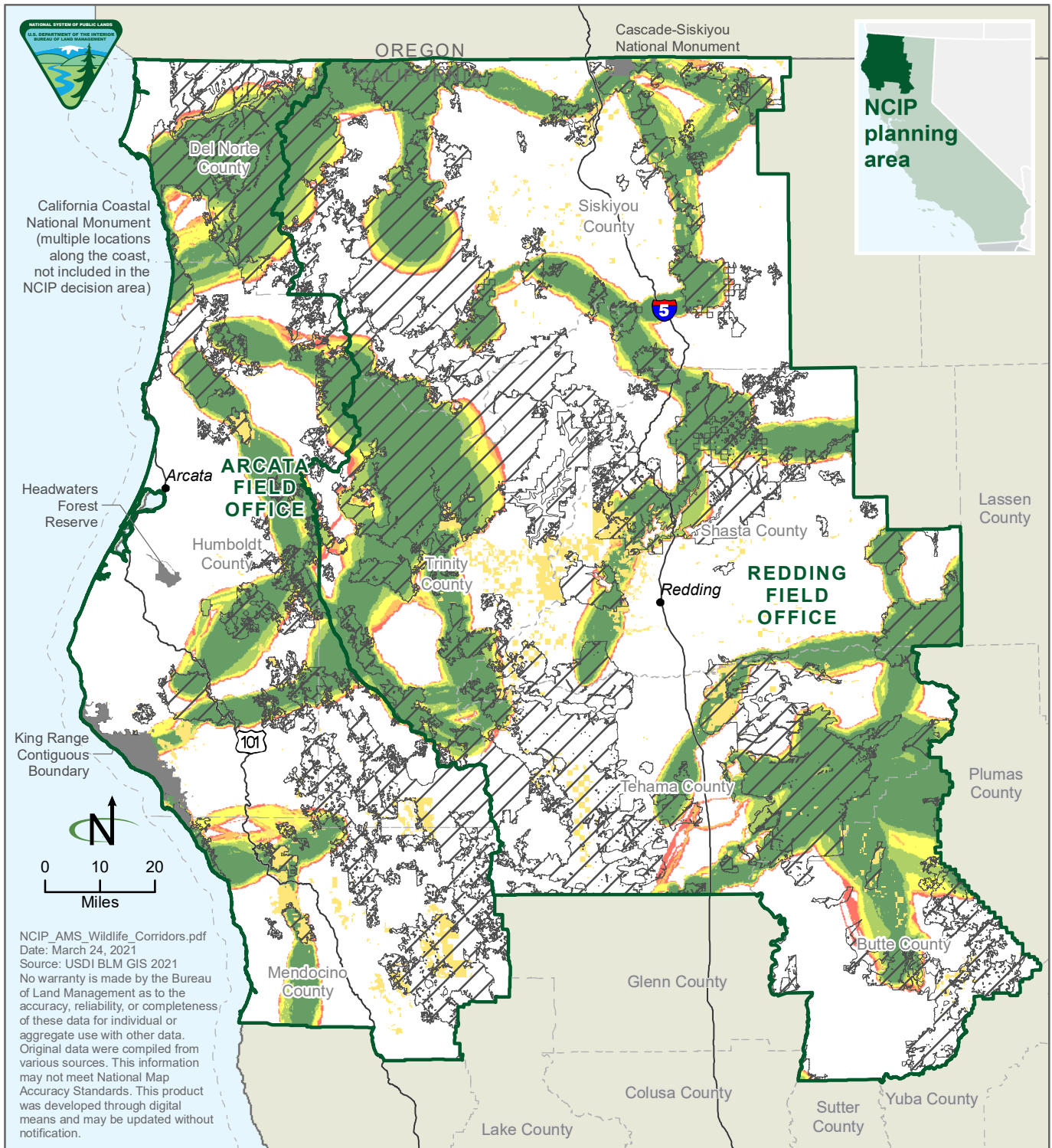
Map 2-26
Global Biodiversity Hotspots

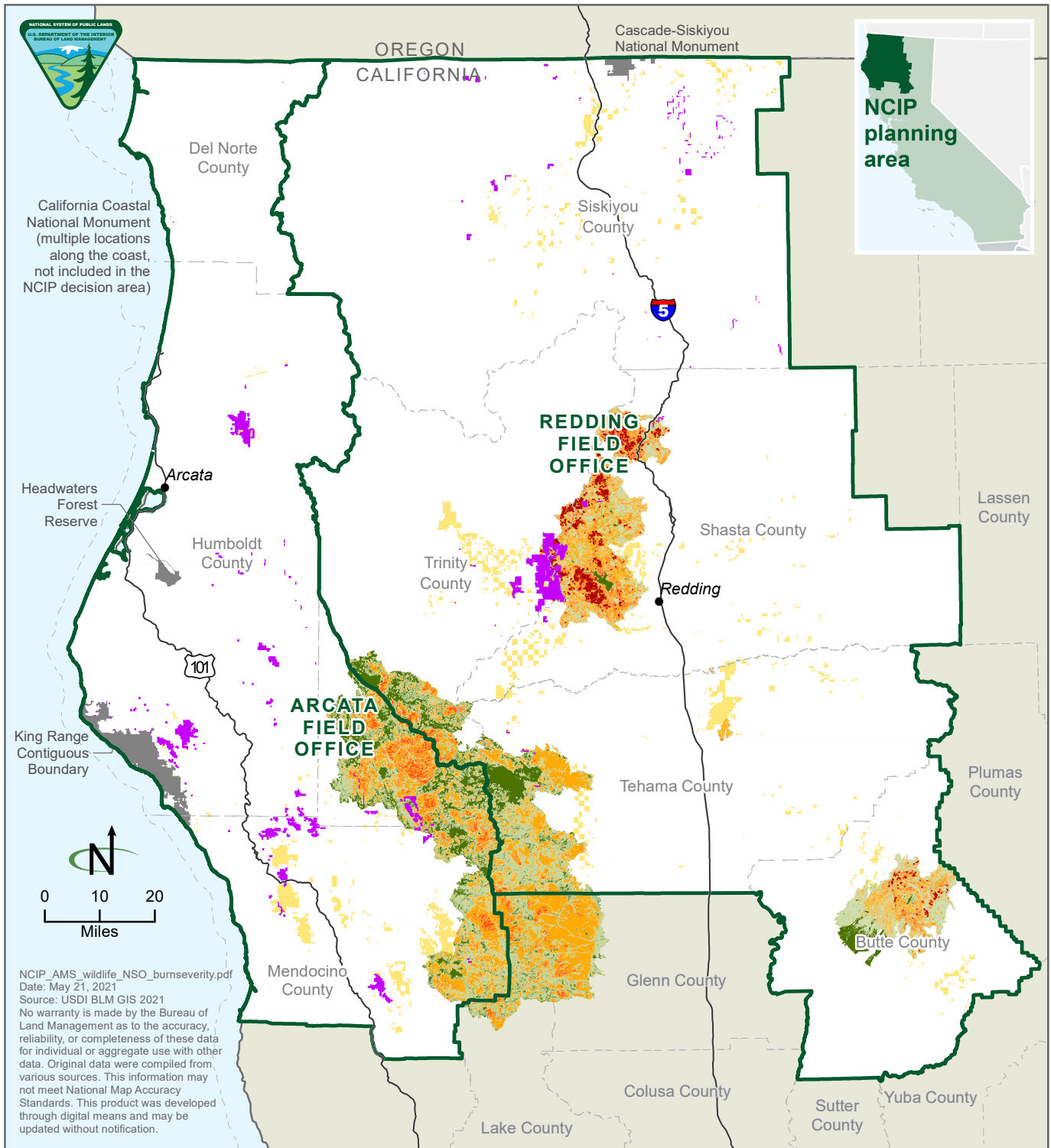


NCIP_AMS_Wildlife_SppRichness.pdf
 Date: May 20, 2021
 Source: USDI BLM GIS 2021, CA Dept. of Fish and Wildlife GIS 2021c
 No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data. Original data were compiled from various sources. This information may not meet National Map Accuracy Standards. This product was developed through digital means and may be updated without notification.

Map 2-27
Native Plant Species Richness across EPA III Ecoregions

- | | | |
|--------------------|-------------|--|
| Native plant count | 1045 - 1257 | Level III ecoregion |
| 1460 - 1709 | 883 - 1044 | Bureau of Land Management |
| 1258 - 1459 | 732 - 882 | Not included in the NCIP decision area |

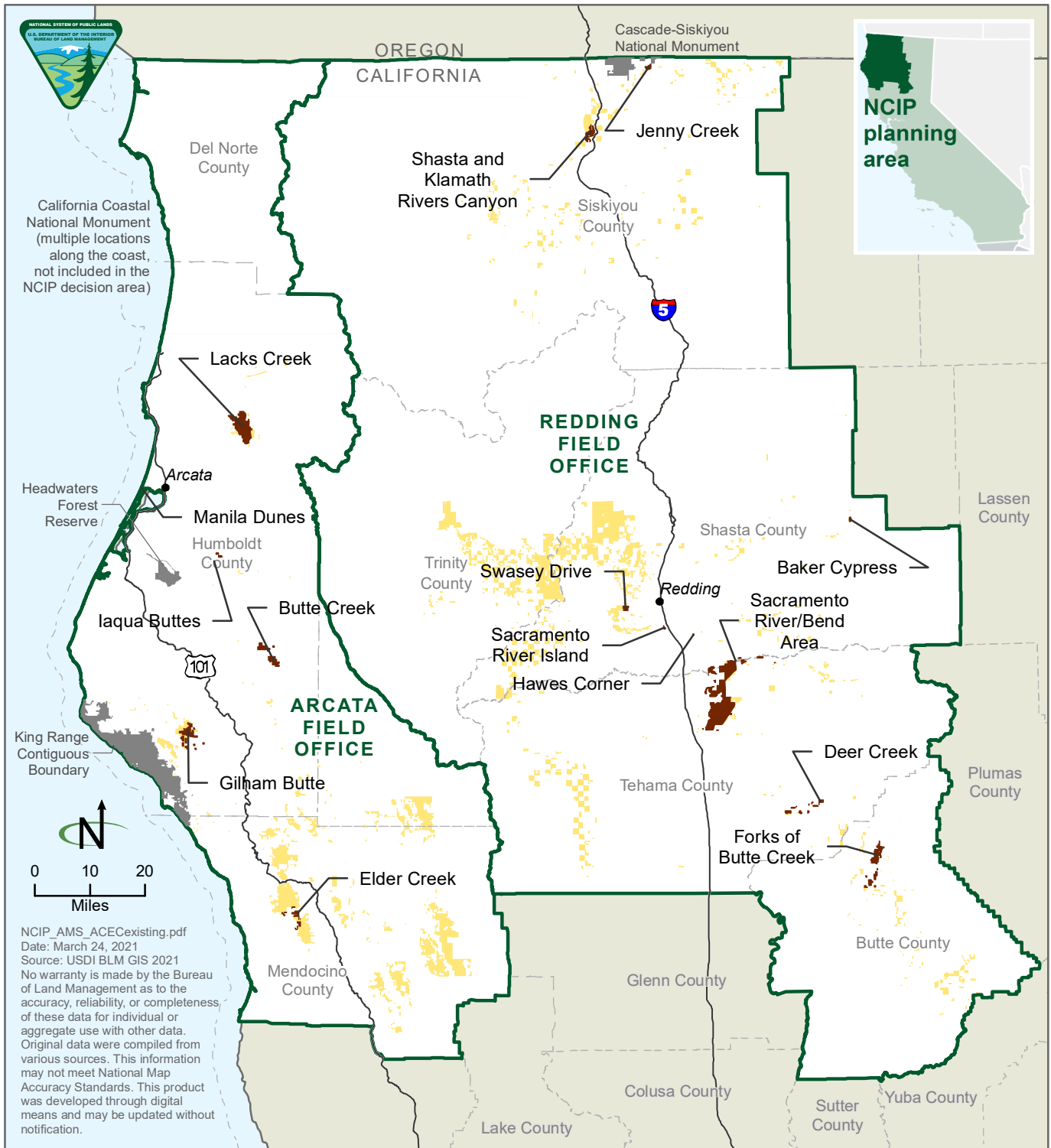




Map 2-29
Northern Spotted Owl Habitat and Burn Severity

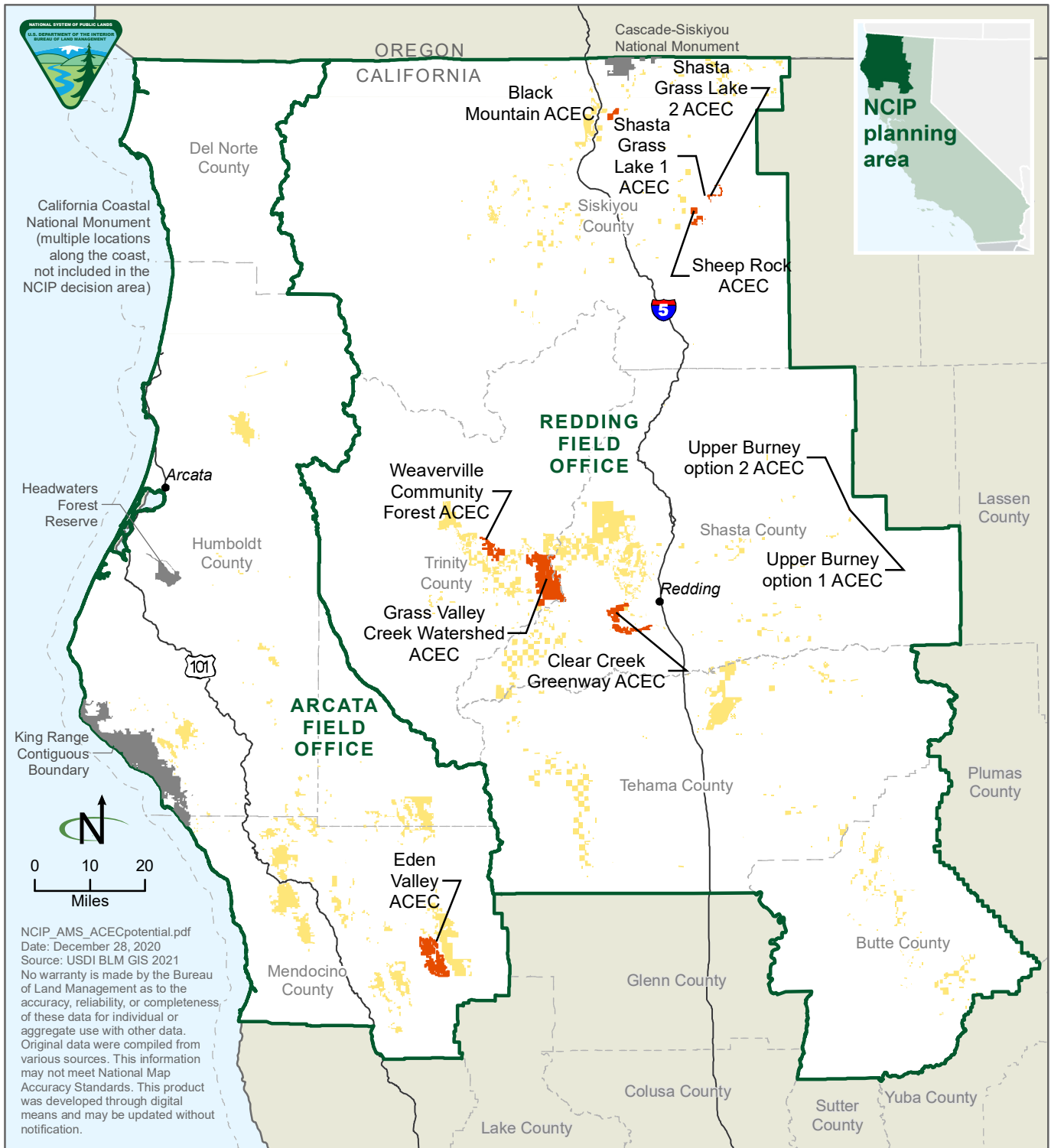
Northern Spotted Owl habitat on BLM-administered land	Burn severity level Moderate	Bureau of Land Management
Severe	Low	Not included in the NCIP decision area
High	Little to none	

BLM burn severity data includes the August, Camp, Carr, Delta, and Sun California wildfires (2018-2020).



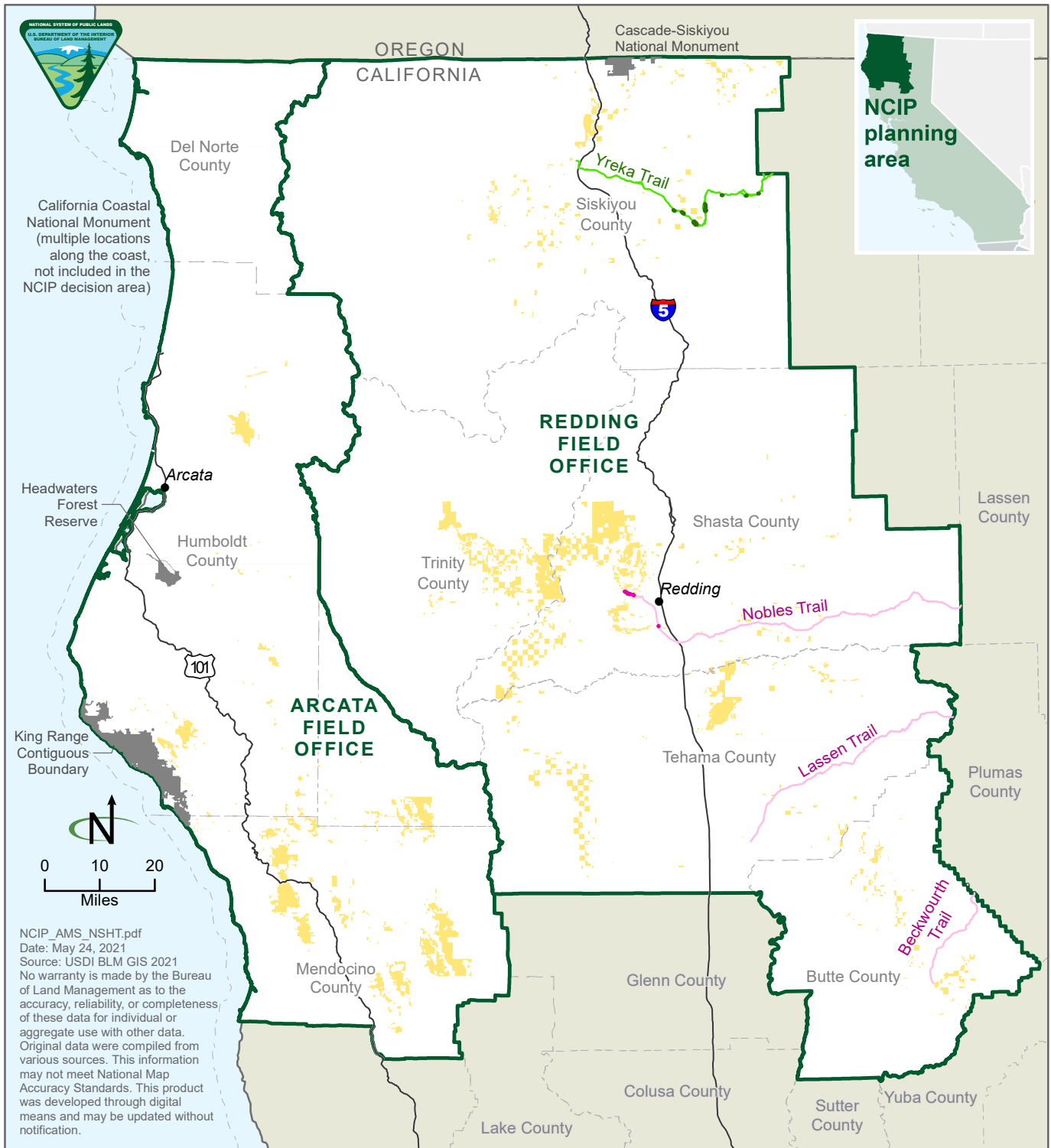
Map 2-30
Existing Areas of Critical Environmental Concern

- Existing ACEC
- Bureau of Land Management
- Not included in the NCIP decision area



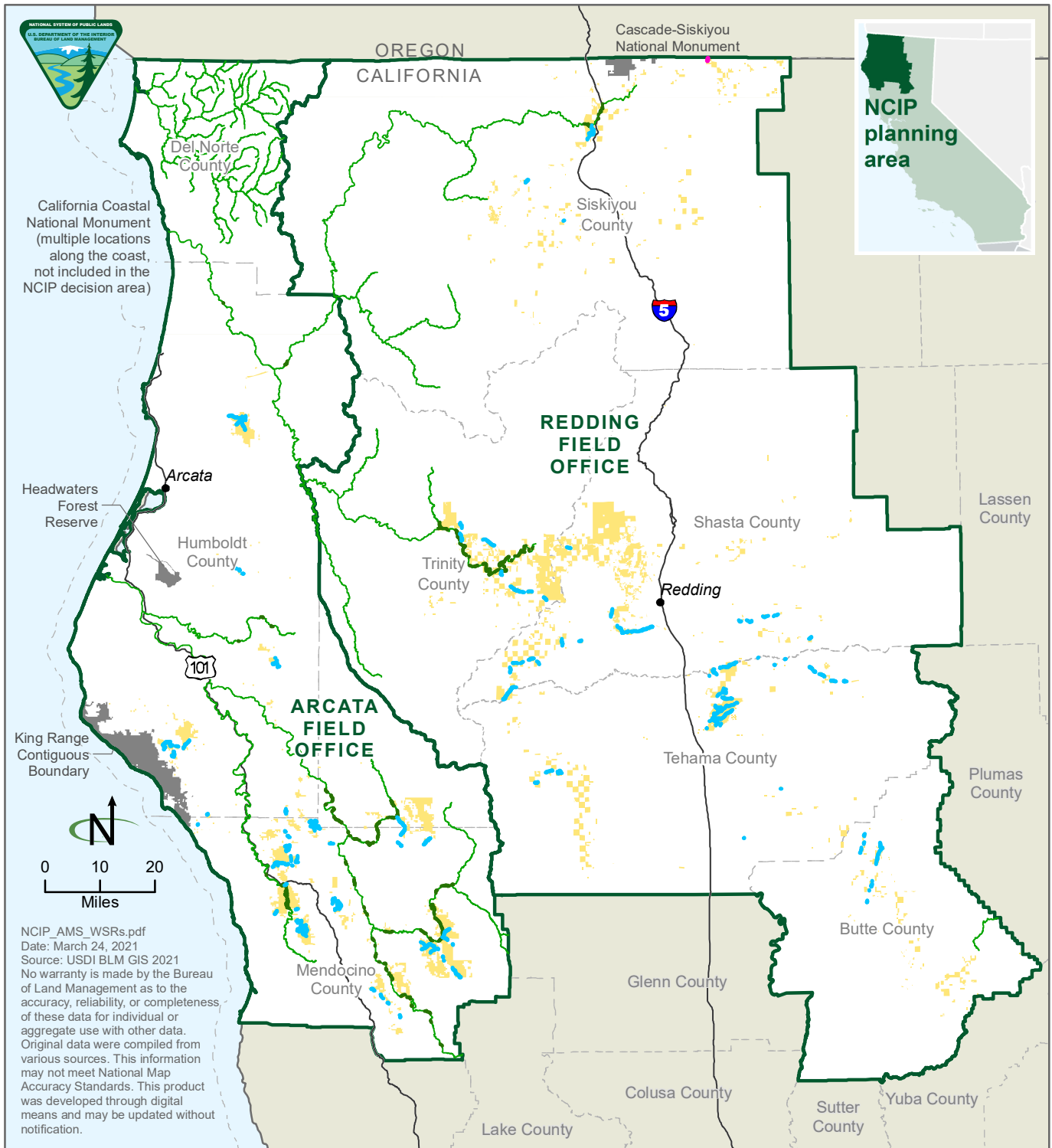
**Map 2-31
Potential Areas of Critical Environmental Concern**

- Potential ACEC
- Bureau of Land Management
- Not included in the NCIP decision area



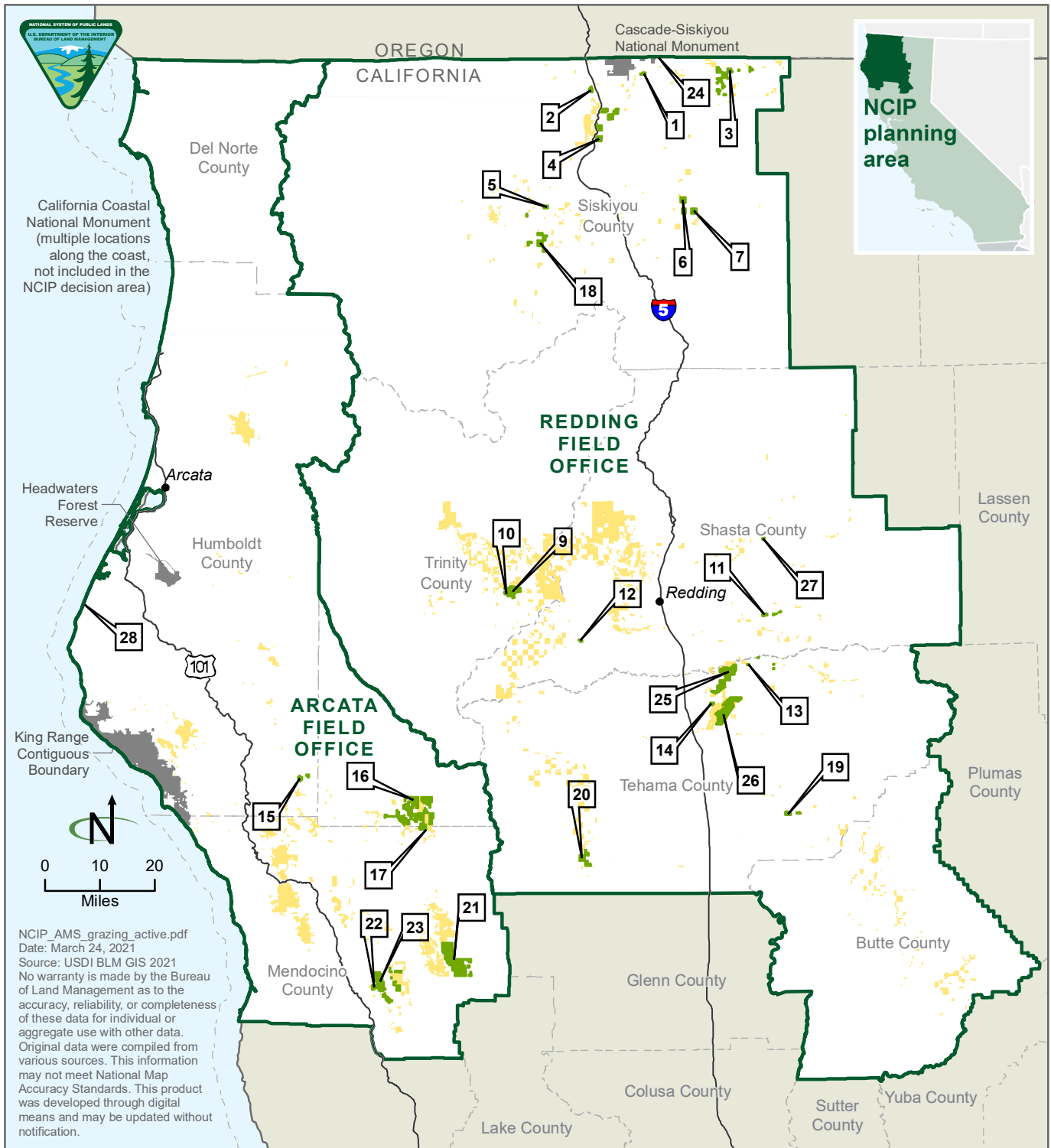
Map 2-32
National Scenic and Historic Trails

- California National Historic Trail on BLM-administered land
- California National Historic Trail
- Trail under feasibility study on BLM-administered land
- Trail under feasibility study
- Bureau of Land Management
- Not included in the NCIP decision area



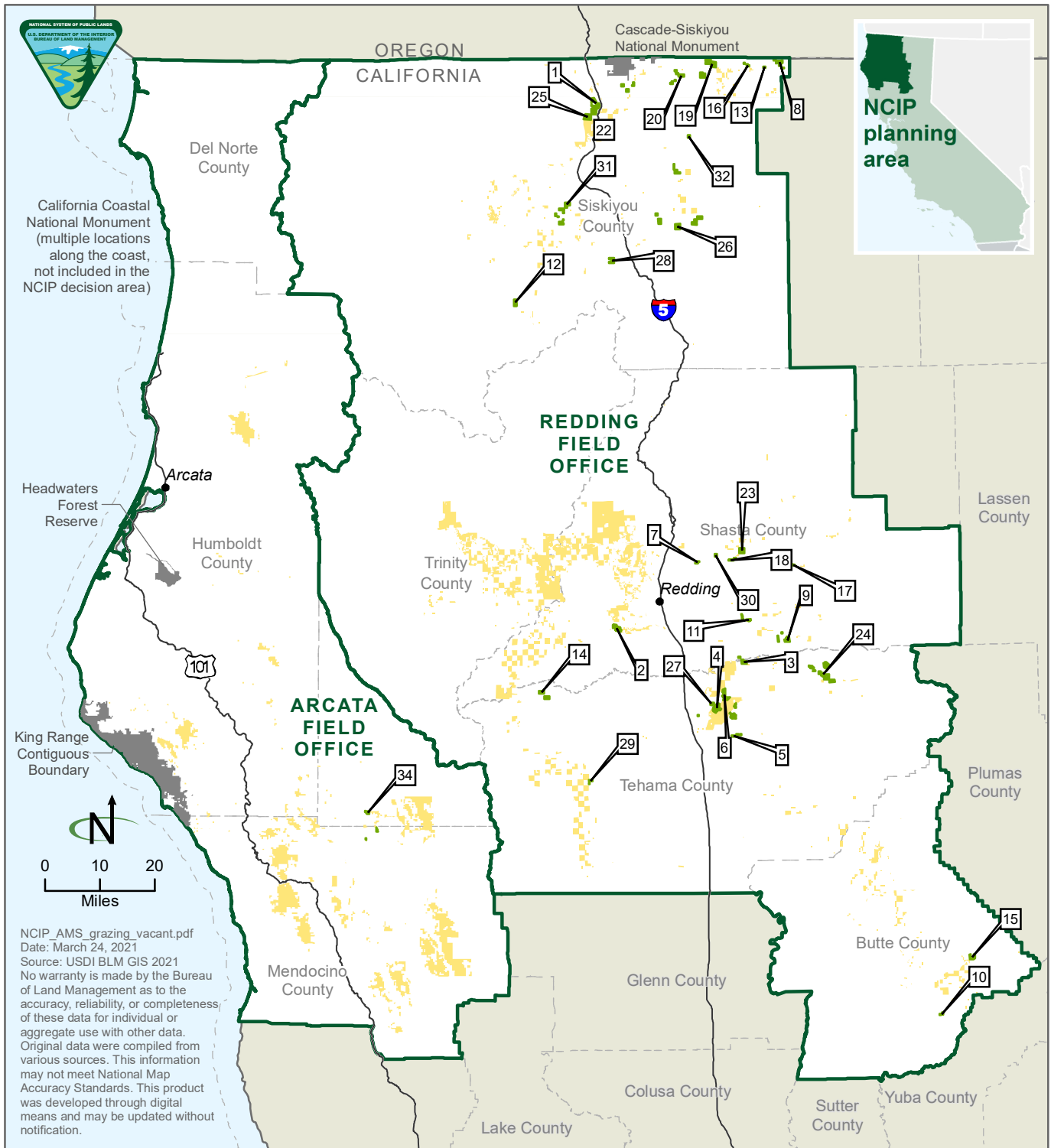
Map 2-33
Eligible, Suitable, and Designated Wild and Scenic Rivers

- Eligible WSR on BLM-administered land
- Suitable WSR on BLM-administered land
- Designated WSR on BLM-administered land
- Designated WSR
- Bureau of Land Management
- Not included in the NCIP decision area



Map 2-34
Active Grazing Allotments

- Active grazing allotment on BLM-administered lands
- Bureau of Land Management
- Not included in the NCIP decision area



**Map 2-35
Vacant Grazing Allotments**

- Vacant grazing allotment on BLM-administered land
- Bureau of Land Management
- Not included in the NCIP decision area