

# NAVAJO NATION INTEGRATED WEED MANAGEMENT PLAN

25th NNC RDC Meeting  
September 20, 2023



## Navajo Nation Integrated Weed Management Plan

FINAL

August 2022

FOR MANAGEMENT OF LANDS ON:  
THE NAVAJO NATION

UNITED STATE DEPARTMENT OF THE INTERIOR  
BUREAU OF INDIAN AFFAIRS NAVAJO REGION



## BUREAU OF INDIAN AFFAIRS - NAVAJO REGION

# Presentation Overview

1. What is an Integrated Weed Management Plan?
2. Weeds covered by the Plan.
3. Treatment methods.
4. Using the Plan to address weeds.



# What is an Integrated Weed Management Plan

- Identifies what noxious weeds to treat.
- Combines various methods to treat them
- Public education and community involvement to inform projects



# What is a Noxious Weed?

- Not native to the U.S.
- Invasive
  - Grows quickly
  - Reduces growth of native plants
  - Large number of seeds
  - Alter site suitability and resource availability



# What is the Problem with Noxious Weeds?

- Reduce grazing and wildlife forage
- Short-lived plants replace perennial plants
- Increase erosion and limit plant growth
- Harm livestock
- Property damage
- Reduces water quality and quantity
- Increases fire risk



# Noxious Weed List – Category A



Tree of Heaven



Bull Thistle



Sahara Mustard

Category A - HIGH	
COMMON NAME	SPECIES
African rue	<i>Peganum harmala</i>
Blue mustard	<i>Chorispora tenella</i> (Pall.) DC.
Bull thistle	<i>Cirsium vulgare</i>
Canada thistle	<i>Cirsium arvense</i>
Common Mediterranean grass	<i>Schismus barbatus</i>
Dalmatian toadflax	<i>Linaria dalmatica</i>
Fountaingrass	<i>Pennisetum setaceum</i>
Leafy spurge	<i>Euphorbia esula</i>
Musk thistle	<i>Carduus nutans</i>
Perennial pepperweed	<i>Lepidum latifolium</i>
Ravenna grass	<i>Saccharum ravennae</i>
Sahara mustard	<i>Brassica tournefortii</i>
Scotch thistle	<i>Onopordum acanthium</i>
Spotted knapweed	<i>Centaurea maculosa, C. stoebe</i>
Squarrose knapweed	<i>Centaurea virgata</i>
Sulphur cinquefoil	<i>Potentilla rect L.</i>
Tall whitetop	<i>Cardaria draba</i>
Tamarisk	<i>Tamarix spp., including hybrids</i>
Tree of Heaven	<i>Ailantus altissima</i>
Uruguyan pampas grass	<i>Cortaderia sellonana</i>
Yellow nutsedge	<i>Cyperus esculentus</i>
Yellow starthistle	<i>Centaurea solstitialis</i>



Musk Thistle



Perennial Pepperweed



Yellow Starthistle

# Noxious Weed List – Category B



Diffuse Knapweed



Russian Knapweed

Category B - MEDIUM	
COMMON NAME	SPECIES
Camelthorn	<i>Alhagi camelorum</i>
Diffuse knapweed	<i>Centaurea diffusa</i>
Halogeton	<i>Halogeton glomeratus</i>
Johnsongrass	<i>Sorghum halepense</i>
Russian knapweed	<i>Acroptilon repens</i>
Russian olive	<i>Elaeagnus angustifolia</i>
Siberian elm	<i>Ulmus pumila</i>
Tamarisk, saltcedar	<i>Tamarix ramosissima</i>



Russian Olive



Halogeton



Johnsongrass



Tamarisk

# Noxious Weed List – Category C



Red Brome



Cheatgrass



Field Bindweed

Category C – LOW	
COMMON NAME	SPECIES
Bald brome	<i>Bromus racemosus</i>
California burclover	<i>Medicago polymorpha</i>
Cheatgrass	<i>Bromus tectorum</i>
Field bindweed	<i>Convolvulus arvensis</i>
Field brome	<i>Bromus arvensis</i>
Horehound	<i>Marrubium vulgare</i>
Jointed goatgrass	<i>Aegilops cylindrica</i>
Kochia	<i>Bassia scoparia, K. scoparia</i>
Puncturevine	<i>Tribulus terrestris</i>
Red brome	<i>Bromus rubens</i>
Rescuegrass	<i>Bromus catharticus</i>
Ripgut brome	<i>Bromus diandrus</i>
Russian thistle	<i>Salsola collina, S. paulsenii, S. tragus</i>
Smooth brome	<i>Bromus inermis</i>
Spreading wallflower	<i>Erysimum repandum</i>



Kochia

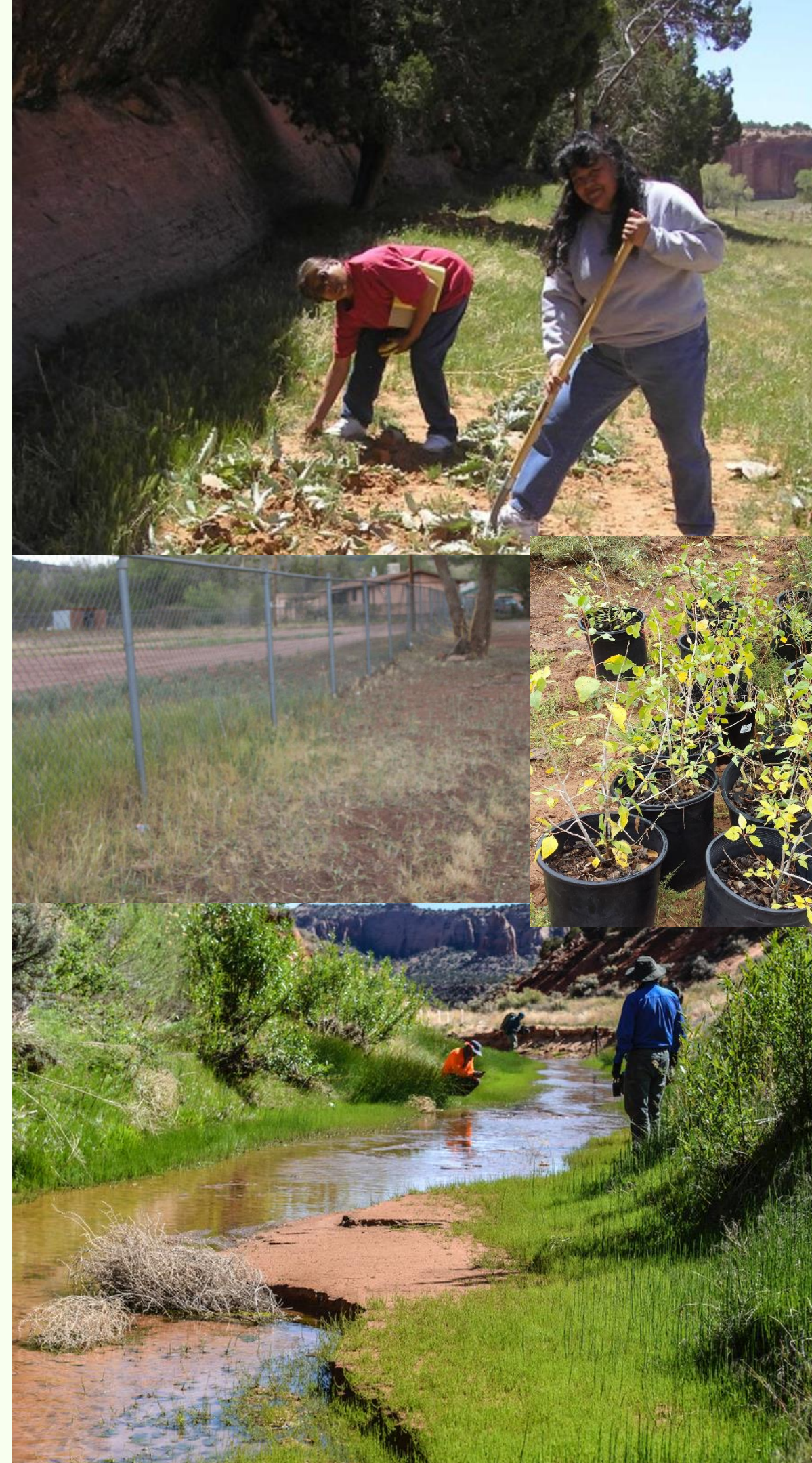


California Burclover



# Weed Control Methods

- Methods in the Plan assessed for effectiveness and potential impacts
- Main Methods
  - Prevention, Early Detection/Rapid Response
  - Manual
  - Mechanical
  - Cultural
  - Biological
  - Chemical



# Prevention and Early Detection/Rapid Response

- Prevent new weeds from spreading to save on future treatments
- Category A weeds and neighboring listed noxious weeds
- Education and monitoring



# Manual Control

- Hand pulling
- Use of hand tools
- Good for small areas and remote sites
- Areas where other methods are restricted



# Mechanical Control

- Power tools and heavy machinery
- Mowing, tilling, grubbing, chipping, and bulldozing
- Prescribed burning
- Effective on large areas
- Several measures to protect human health and the environment



# Cultural Control

- Agricultural practices
- Targeted grazing
- Native plant restoration
- Limit the growth of noxious weeds and use common practices



# Biological Control

- USDA-approved organisms
- Rigorous testing and history of effective use
- Good for small areas and remote sites
- Areas where other methods are restricted



# Chemical Control

- 21 Herbicides approved for use
- Efficient and cost-effective
- Direct applications and broadcast spraying
- Several restrictions on when and where to use



# Safety Measures

- Protects the public, workers, and the environment
- Developed with Navajo Nation, other federal agencies, and public input.
- Coordinate planning with communities and agencies.
- Restrictions on when, where, and how treatments are used.



Zach Simpson & Hayden Garringer

Allyse Pablo - Ft Lewis  
Shiprock

Garrickson Riess (yellow) - Dixie College - Tuba



# Using an Integrated Plan

**All projects must consider the following:**

- Location of the infestation
- Noxious weeds present
- Nearby resources
- Community concerns about weeds and potential treatment methods.
- Involvement of other agencies or entities

**Develop site-specific approach and parameters for each project based on local concerns and needs.**

# How to Start a Project under the Plan

- Contact Local BIA Noxious Weed Coordinator
- Small projects – treatment recommendations
- Large projects
  - Project Planning
  - Project Funding
  - Implementation
  - Monitoring



# Required for All Projects

- **Projects using federal resources require planning and coordination**
- **Consultation with**
  - Navajo Nation EPA (water and air resources)
  - Navajo Nation Department of Fish and Wildlife (wildlife and vegetation)
  - Navajo Nation Historic Preservation (cultural resources)
  - Locally affected communities

# Questions?

**For More Information, Visit the Project Website:**

<https://www.bia.gov/regional-offices/navajo/navajo-nation-integrated-weed-management-plan>

- Final Integrated Weed Management Plan
- Record of Decision
- Final PEIS