



New Mexico DEPARTMENT OF
TRANSPORTATION
MOBILITY FOR EVERYONE



Weed Control Manual

BEST MANAGEMENT PRACTICES

GENERAL

- Follow manufacturer's label instructions on chemicals being used
- Follow all federal, state and local regulations for herbicide usage
- Use cultural or mechanical control whenever possible (Ideal times of the year should be specified for control of weeds when using mowing as a treatment)
- Avoid broadcast spraying; targeted spot spraying is the best application technique
- Clean equipment following use
- Ensure applicators are able to differentiate target plant species from desirable plant species
- Avoid preemergent herbicides; choose other methods of weed suppression like revegetation with desirable species or mechanical mowing

HUMAN SAFETY

- Carry spill kits, at least 5 gallons of rinse water, detergent, and wear proper PPE
- Only apply herbicide during favorable weather conditions (e.g. wind speeds less than 10 mph or as indicated on the label, suitable temperatures per manufacturer label to avoid aerosolization)

ENVIRONMENTAL SAFETY

- Environmental clearances are required for patrols with sensitive resources/restricted spray zones in order to maintain regulatory compliance
- Only apply herbicides approved for aquatic use near water bodies, wetlands and arroyos
- Clean spills immediately
- Do not wash herbicide equipment or containers in ditches, streams, ponds, arroyos, or wetlands
- Avoid allowing wash water to enter any surface waters, including wetlands.
- Do not apply herbicide to flowers in bloom
- Avoid application while caterpillars are present
- Do not apply herbicide if rainfall is predicted over the next 12 hours

Types of Weed Control



Mechanical Treatment – Techniques such as mowing, tilling and mastication that involve the use of machinery to uproot, cut or pulverize weeds. Mowing is an effective way of controlling annual weeds such as kochia and tumbleweed without the use of herbicide but may require multiple treatments.



Hand Treatment – Hand pulling and hoeing of weeds is labor-intensive but causes minimal disturbance compared to mechanical or chemical techniques. It is generally suitable for small infestations, or in areas where machinery or herbicide cannot be used. These methods are best used for annual weeds or young perennials that have not yet developed extensive root systems.



Chemical/Herbicide Treatment – Herbicide application is the only effective and efficient treatment method for certain species, and under certain conditions. Spot treatments are always preferable to broadcast application, as they target specific weeds without harming desirable native species within the site. Herbicides are classified into pre-emergent (chemicals that prevent seed germination) and post-emergent (chemicals that disrupt growth). Herbicides should not be used within 50’ of sensitive resources or restricted spray zones. Always wear PPE and follow label recommendations when applying herbicides.

Record Keeping



Anytime a weed treatment is implemented in a specific location, it should be documented. Mechanical or hand treatment records should include the treatment objective, approach, machinery used, date, location, and staff. Chemical treatment records must include all herbicides applied, including brand name, usage objective, target species, spot vs broadcast treatment, formulation, EPA registration number, amount and date applied, exact location of application, vehicle calibration, and name, address, and certification number of applicator.

610 - Spot Mowing and Grooming: If spot mowing is used for the process of weed control, record code 610 in the MMS notes. Use this same code for hand treatment of noxious weeds.

625 - Chemical Spraying of Vegetation: Record any herbicide treatment (spot or broadcast) in the MMS notes.

Treatment Table

Class	Common Name	Life Form	Herbicide	Optimum Treatment	Mechanical/Hand Removal Notes	Optimum Months
A	Camelthorn	Forb	Polaris AC/ Arsenal Powerline	Chemical	Mechanical removal ineffective - leads to spread of root fragments	Apr, May, June, Sep, Oct
A	Canada Thistle	Forb	Milestone	Chemical	Repeated cultivation, or mowing before seed set	Sep, Oct
A	Diffuse knapweed	Forb	Milestone	Chemical	Must remove at least 3-4” of root crown	Sep, Oct
A	Hoary cress	Forb	Polaris	Chemical	Must remove root system	Apr, May, June
A	Oxeye Daisy	Forb	Milestone	Chemical	Must remove root system	Apr, May, June, Sep, Oct
A	Ravennagrass	Graminoid	Polaris	Hand removal	Remove entire root mass using pick/shovel	Any
A	Scentless chamomile	Forb	Roundup Pro Max	Chemical		Apr, May, June, Sep, Oct
A	Scotch thistle	Forb	Milestone	Chemical	Hand remove before seed production	Apr, May, June
B	Bull thistle	Forb	Milestone	Chemical	Cut roots below soil; remove stems before flowering	Apr, May, June
B	Chicory	Forb	Milestone	Chemical	Cultivation is effective, mowing is not	Apr, May, June, Sep, Oct
B	Halogeton	Forb	Polaris or Roundup/Rodeo	Chemical	Hand removal effective for small infestations	Apr, May, June, Sep, Oct
B	Perennial Pepperweed	Forb	Polaris	Chemical	Hand pull all roots and seedlings	Apr, May, June
B	Poison hemlock	Forb	Roundup Pro Max	Chemical	Hand pull or cut below root crown; repeated cultivation or mowing	Apr, May, June, Sep, Oct
B	Teasel	Forb	Milestone	Chemical	Mow before seed set	Sep, Oct



Class	Common Name	Life Form	Herbicide	Optimum Treatment	Mechanical/Hand Removal Notes	Optimum Months
C	Arundo	Graminoid	Roundup Pro Max	Chemical	Must remove rhizomes and stem fragments	Apr, May, June, Sep, Oct
C	Cheatgrass	Graminoid	Hand pull	Hand removal	Remove with stirrup hoe	Apr, May, June
C	Jointed Goatgrass	Graminoid	Roundup Pro Max	Chemical	Tilling and hand roughing both effective	Apr, May, June
C	Musk Thistle	Forb	Milestone	Chemical	Cut roots below soil; remove stems before flowering	Apr, May, June
C	Russian Knapweed	Forb	Milestone	Chemical		Sep, Oct
W	Yellow bluestem	Graminoid	Polaris or Roundup Pro Max	Chemical		Apr, May, June

APPLICATION CONSIDERATION

Label Name	Milestone	Polaris AC/ Arsenal Powerline	Roundup Pro Max	Garlon 3A/ Garlon 4
Mode of action	Growth regulator	Protein inhibitor	Protein inhibitor	Growth regulator
Pollinator toxicity	Moderately toxic to honey bees upon contact and ingestion	Moderately toxic to honey bees upon ingestion Practically non-toxic upon contact Toxic to butterflies exposed as larvae, including some imperilled species	Moderately toxic to honeybee adults and their brood, with impacts on gut biota, navigation, and survival	Practically non-toxic to honeybees Toxic to butterflies as exposed as larvae, including some imperilled species
Pollinator treatment consideration	Do no apply to or allow to drift onto flowers in bloom (including weeds)	Do not apply to or allow to drift onto flowers in bloom (including weeds) Make applications outside season	Do not apply to or allow to drift onto flowers in bloom (including weeds)	Avoid regular/repeated use on flowering plants Make applications outside season when caterpillars are active
Effective For	Broadleaf	All	All	Broadleaf
Formulation	Aminopyralid	Imazapyr	Glyphosate	Triclopyr
Pre-Emergent	N	Y	N	N
Post-Emergent	Y	Y	Y	Y
Average half life in water	1 day	2 days	12 days to 10 weeks	4 days
Primary degradation mechanism	Microbial	Microbial	Microbial	Microbial
Aquatic use	Up to waters edge	Some formulations	Some formulations	Some formulations

* Label instructions must be followed when mixing any chemicals

NOXIOUS WEED ID

Species	Inflorescence/Seed	Leaf/Flower/Sheath	Full Plant
GRASSES			
ARUNDO <i>(Class C)</i>			
CHEATGRASS <i>(Class C)</i>			
JOINTED GOATGRASS <i>(Class C)</i>			
RAVENNAGRASS <i>(Class A)</i>			
YELLOW BLUESTEM <i>(Watchlist)</i>			



Species	Inflorescence/Seed	Leaf/Flower/Sheath	Full Plant
THISTLES			
BULL THISTLE <i>(Class B)</i>			
CANADA THISTLE <i>(Class A)</i>			
MUSK THISTLE <i>(Class C)</i>			
SCOTCH THISTLE <i>(Class A)</i>			
FORBS			
CHICORY <i>(Class B)</i>			

Species	Inflorescence/Seed	Leaf/Flower/Sheath	Full Plant
DIFFUSE KNAPWEED <i>(Class A)</i>			
HALOGETON <i>(Class B)</i>			
HOARY CRESS <i>(Class A)</i>			
OXEYE DAISY <i>(Class A)</i>			
PERENNIAL PEPPERWEED <i>(Class B)</i>			



Species	Inflorescence/Seed	Leaf/Flower/Sheath	Full Plant
POISON HEMLOCK (Class B)			
RUSSIAN KNAPWEED (Class C)			
TEASEL (Class B)			
SHRUBS			
CAMELTHORN (Class A)			

