

## Roadside Weeds to be Controlled

### Noxious Weeds in District 4:

The table below names the listed noxious weeds in District 4. NDOT must control these species when found within the right-of-way or on any NDOT property, including maintenance yards.

### Noxious Weed Species in District 4 (2023)

Common Name	Scientific Name
Canada thistle	<i>Cirsium arvense</i>
Common reed	<i>Phragmites australis</i> ssp. <i>australis</i>
Japanese knotweed	<i>Fallopia japonica</i> (and hybrids including giant knotweed, <i>Fallopia sachalinensis</i> )
Leafy spurge	<i>Euphorbia esula</i>
Musk thistle	<i>Carduus nutans</i>
Spotted & Diffuse Knapweed	<i>Centaurea stoebe</i>
Plumeless thistle	<i>Carduus acanthoides</i>
Purple loosestrife	<i>Lythrum salicaria</i>
Salt cedar	<i>Tamarix ramosissima</i>
Sericea lespedeza	<i>Lespedeza cuneata</i>
Caucasian Bluestem	<i>Bothriochloa bladhii</i>

### Invasive Weed Species to Be Controlled on NDOT Roadsides

Common Name	Scientific Name
Caucasian Bluestem	<i>Bothriochloa bladhii</i>
Dalmatian toadflax	<i>Linaria dalmatica</i>

## Herbicide Chemical Guide

### Canada, musk, plumeless, Scotch, and bull thistles:

Product	Quantity	Water	Surfactant	Notes
Escort XP (metsulfuron methyl) + 2,4-D	3 grams, 0.1 oz 3 oz	10 gal.	3 oz non-ionic	Requires good agitation
Transline (Clopyralid)	3-5 oz	10 gal.	Optional	Higher rate is for Canada thistle
Telar XP (Chlorsulfuron)	10 grams, 1/3 - 1 oz	10 gal.	3 oz non-ionic	Requires good agitation; must use within 24 hours
Milestone * (Aminopyralid)	2.4 oz	10 gal.	3 oz non-ionic	Also effective as a fall application
Method 240SL	8 oz	25 gal.	1%	

### For Canada thistle

Product	Quantity	Water	Surfactant	Notes
Milestone (Aminopyralid)	5-7 oz	10 gal. per ac	3 oz non-ionic	Also effective as a fall application. Doesn't affect
Telar XP (Chlorsulfuron)	10 grams, 1/3 oz	10 gal. per ac	1 oz ammonia	Requires good agitation;
Escort XP (metsulfuron methyl)	3 grams, 0.1 oz 3 oz	10 gal. per ac	3 oz non-ionic	Requires good agitation
Transline (Clopyralid)	6 oz	10 gal. per ac	Optional	Doesn't affect grasses
Method 240SL	4-8 oz	25 gal.	1%	

### Common reed

Product	Quantity	Water	Surfactant	Notes
Habitat* (Polaris) (Imazapyr)	1.5% solution 48 oz	25 gallons	MSO: 13 oz Non-ionic: 3 oz	Considered to be the most effective
Rodeo* (glyphosate)	1.5% solution 48 oz	25 gallons	Non-ionic, 5 oz	May require repeat application

### Japanese knotweed

Product	Quantity	Water	Surfactant	Notes
Method	5 oz	25 gallons	0.25%	Apply to active growing plants
Milestone	7 oz/acre	10 gallons	3 oz non-ionic	

### Leafy spurge

Product	Quantity	Water	Surfactant	Notes
Overdrive	6 oz	1 quart	Non-ionic	
Grazon P+D	32 oz	100 gal.	1 quart non-ionic	<b>Restricted use</b>
2,4-D Low Volatile Ester	3 quarts	100 gal.	Non-ionic, follow the	30 gallons per ac rate; 16 oz
Method	4-8 oz	25 gal.	1 oz non-ionic	Spray at full bloom
Tordon 22K * + 2,4-D	10 pints 2.5 gal	100 gal.	1 quart/100 gal.	30 gal per acre. Apply

### Purple loosestrife

Product	Quantity	Water	Surfactant	Notes
Habitat* (imazapyr)	1 pint	10 gallons	Non-ionic: 3 oz MSO: 13 oz	
2,4-D amine	1 pint	10 gallons	Follow the label	Use aquatic formulation for plants in water
Rodeo* (glyphosate)	1 pint	10 gallons	5 oz non-ionic	Summer or fall
Garlon 3A **	1.5 quart/ac	50 gallons per ac	1 pint/50 gallons	Apply at mid bloom

**Saltcedar**

Product	Quantity	Water	Surfactant	Notes
Habitat* (Imazapyr)	20 oz	10 gal.	MSO: 13 oz Non-ionic: 3 oz	Apply during flowering (June)
Rodeo* (glyphosate)	13-25 oz	10 gal.	Non-ionic, 5 oz	May require repeat application
Milestone + Garlon 4 Ultra	7 oz 3quarts	10 gal/ac	Non-ionic, 3 oz MSO, 1 quart	Used for resprout treatments as well

**Sericea lespedeza**

2,4-D is not effective against sericea lespedeza.

1. Early summer, before flowering – Remedy, Garlon (triclopyr)
2. During flowering phase – Escort, Cimarron (metsulfuron)

Product	Quantity	Water	Surfactant	Notes
Garlon 4 Ultra	1.5 pint/ac	10 gallons	3 oz non-ionic	Apply in spring and fall
Garlon 3A	2 oz	1 gallon		Apply prior to bloom
Escort XP	1 oz	50 gallons	1 quart non-ionic	Late summer to fall during
Opensight	3 oz/ac	10 gallons	3 oz non-ionic	Apply in spring and fall

**Teasel**

Product	Quantity	Water	Surfactant	Notes
Method	5 oz	25 gallons	1 oz non-ionic	
Telar	1 oz	25 gallons	6 oz non-ionic	Apply from bolting through early flowering
Milestone	6 oz/acre	10 gallons	3 oz non-ionic	Apply from bolting through early flowering
Opensight	3 oz/acre	10 gallons	3 oz non-ionic	Apply from bolting through early flowering
Transline	½ pint / acre	1 gallon		Apply from bolting through early flowering

## Control Calendar

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Canada Thistle												
Leafy Spurge												
Biennial Thistles												
Japanese Knotweed												
Knapweed Species												
Purple Loosestrife												
Salt Cedar												
	Apply seasonally recommended chemical to cut stump.											
Sericea lespedeza												
Red Cedar	Priority given to hazard trees, seed bearing ( <i>has berries</i> ), adjacent to rangeland and pasture.											
Unwanted Trees & Shrubs												

	Plant is flowering
	Mechanical control
	Chemical control

## General Information on Herbicides

Broadleaf					
Product	Active Ingredient(s)	Surfactant	Hay Restriction	Rainfast	Other
Several	2,4-D amine or ester	Follow label	30 days	4 hrs	Amine formulation causes irreversible eye damage; do not use around grapes
Cimarron Plus	Metsulfuron methyl + Chlorsulfuron	Non-ionic	37 days	4 hrs	Effect not seen immediately, leaching potential increases with soil pH
Escort XP	Metsulfuron methyl	Non-ionic	0-3 days	4 hrs	Effect not seen immediately
Milestone	Aminopyralid	Non-ionic	See label	4 hrs	Eye irritant
Opensight	Aminopyralid +	Non-ionic	See label	4 hrs	Eye irritant
Overdrive	Diflufenzopyr	Follow label	0	4 hrs	Use with caution around alfalfa & soybeans, high runoff potential - do not over apply
Garlon 4 Ultra	Triclopyr (ester)	Non-ionic	See label	4 hours	Toxic to fish
Garlon 3A	Triclopyr (amine)	Non-ionic	See label	4 hours	Aquatic labeled; irreversible eye damage
Method	Aminocyclopyrachlor	Non-ionic	Not for haying/grazing acres	2 hours	
Tordon 22K	Picloram	Non-ionic	See label	4 hours	No aquatic label. Restricted use herbicide.
Telar	Chlorsulfuron	Non-ionic	0	2 hours	Effect not immediately seen, not effective in fall; leaching potential increases with soil pH
Transline	Clopyralid		See label	2 hrs	High runoff and leaching potential, do not over apply or use near shallow groundwater, eye irritant
Vista XRT	Fluroxypyr	MSO	See label	1 hour	High runoff potential, do not over apply; toxic to fish

Non-Selective					
Product	Active Ingredient(s)	Surfactant	Hay Restriction	Rainfast	Other
Landmaster	Glyphosate + 2,4-D		30 days	6 hours	Eye injury potential
Polaris (Habitat)*	Imazapyr	Non-ionic or MSO required	7 days	1 hour	High runoff & leaching potential
Journey	Imazapic + Glyphosate		7 days	1 hour	Runoff & leaching potential
Plateau	Imazapic	Methylated seed oil (MSO)	7 days	1 hour	High runoff & leaching potential, especially in high pH soils
Rodeo*	Glyphosate	Non-ionic	0-56 days	2-6 hours	
Round-Up	Glyphosate	Non-ionic	0-56 days	2-6 hours	Low leaching & runoff potential, carried by sediment
Spike 80 DF	Tebuthiuron	N/A	See label	N/A	Soil residual

Trees & Brush					
Product	Active Ingredient(s)	Surfactant	Hay Restriction	Rainfast	Other
Garlon 3A*	Triclopyr amine	Non-ionic	See label	6 hours	Irreversible eye damage Wear goggles, especially when
Method	Aminocyclopyrachlor	MSO, Non-ionic	Not for haying/grazing acres	2 hours	
Garlon 4 Ultra	Triclopyr ester		See label		Toxic to fish
Spike 80 DF	Tebuthiuron	N/a	See label	N/A	Soil residual
Opensight	Aminopyralid + Metsulfuron methyl	Non-ionic	See label	4 hours	Eye irritant
Krenite	Fosamine		NA		
Pathfinder II	Triclopyr ester	None	14 days		Lactating animals shouldn't eat the hay before 14 days have elapsed.
Escort	Metsulfuron methyl	Non-ionic	None	2 hours	Uniform coverage needed on plants
Stalker (winter use)	Imazapyr	optional	7 days		High runoff & leaching potential

Pathway	Picloram	None			Ready to use for cut stumps
<b>Bare ground</b>					
<b>Product</b>	<b>Active Ingredient(s)</b>	<b>Surfactant</b>	<b>Hay Restriction</b>	<b>Rainfast</b>	<b>Other</b>
Polaris	Imazapyr	Nonionic		1 hour	High runoff & leaching potential
Plainview	Idaziflam	Non-ionic	See label	1 hour	
Payload	Flumioxazin	Non-ionic	Season long	1 hour	Low leaching, medium runoff – attaches to sediment
Pendulum Aquacap	Pendimethalin				Toxic to fish, Low leaching, medium runoff – attaches to sediment
Endurance	Prodiamine	None			
Spike 80 DF	Tebuthiuron	N/A	See label	N/A	Soil residual
Method 240SL	Aminocyclopyrachlor	N/A	Yes		
Esplanade Sure	Indaziflam + rimsulfuron	Non-ionic		1 hour	
Esplanade 200SC	Indaziflam	N/A	Yes		