



"Montana's Native Grassland Rehabilitation Specialists"

WEST RIVER LAND MANAGEMENT, LLC

WWW.WESTRIVERLANDMANAGEMENT.COM

Email: Westriverland@Gmail.com

Missouri River Islands – 2025

Noxious and Invasive Weed Management Report



Prepared By:
West River Land Management, LLC
Haley Klarich
Colter Sternhagen



2025 Application Summary

Total Acreage Covered: Approximately 721 acres were treated across all managed properties. Herbicide application totals for UMOWA grant-funded properties are included at the end of this report. This report focuses specifically on noxious weed treatments conducted on the Missouri River Islands.

Acres Covered vs Acres Applied

Missouri River Islands - 95 acres covered, 14.5 acres applied

During the 2025 season, herbicide applications were conducted using a selective, site-specific approach to maximize treatment efficacy while minimizing impacts to native plant communities and desirable grasses. We utilized GPS tracking, waypoint setting, and polygon construction to document all mapped, gridded, and treated areas within the project boundary. These methods confirm that approximately 721 acres were actively managed by our crew.

A comprehensive herbicide use summary is provided at the end of this report. In total, herbicide application was equivalent to approximately 242 total acres treated across all properties. For the Missouri River Island project specifically, acres applied decreased from 25.5 acres to 14.5 acres. This reduction is due to Helena Weed Control taking on treatment of the large islands downstream of Pelican Point. Totals for that application are not included in this report.

Access to treatment areas for the islands was achieved using a 16-foot raft launched from a combination of public and private boat ramps. The raft was equipped with a 35-gallon spray tank mounted to the frame, with herbicide solutions transferred to 5-gallon battery powered backpack sprayers for application. The backpacks used incorporate agitation pumps, pressure regulators, and aluminum spray guns equipped with precision tip nozzles. Backpack sprayers were determined to be the most efficient method for accessing and treating the interior portions of the islands. Treatment efforts focused on large islands above the high-water mark located between Holter Dam and the Pelican Point Fishing Access Site. For all other properties, a combination of UTV sprayers and battery powered backpacks were used.

Due to the success of previous applications using our Intelli-Sprayer system in large open areas, the overall density of noxious weeds has declined, allowing for increased reliance on backpack applications. All herbicide treatments were focused on noxious weeds located above the high-water mark. Protective buffers were maintained along riverbanks, beneath tree canopies, and in areas where soil conditions increased the potential for herbicide leaching.

Summer Application

The summer island application period occurred between August 17th and August 21st, 2025. Primary target weeds in the upper portion of the river corridor included Montana Priority 2B



noxious weeds including spotted knapweed, canada thistle, dalmatian toadflax, and houndstongue, with isolated populations of leafy spurge also identified and treated.

Downstream of the Stickney Creek Fishing Access Site, the dominant noxious weed species treated were leafy spurge, houndstongue, dalmatian toadflax, canada thistle, and whitetop. Treatment efforts concentrated on island interiors above the high-water mark, as well as riverbanks identified through coordination efforts with UMOWA and cooperating landowners.

Treatment results were positive, with remaining infestations and regrowth confined to high-traffic areas and zones of dense vegetation. These areas will be monitored to prevent expansion beyond their current boundaries. Recreational use such as floating, fishing and hunting continues to be a significant vector for seed dispersal throughout the river corridor.

Observations

Field observations indicate continued success from previous years' applications. Compared to earlier treatment cycles, there are fewer mature weed stands present across the islands, with a corresponding increase in native grasses and forbs. The suppression of dominant invasive weeds has allowed for greater flexibility in treatment methods and supports broader revegetation efforts.

The most prevalent noxious weeds observed during the 2025 season included spotted knapweed, leafy spurge, canada thistle, whitetop, houndstongue, and dalmatian toadflax. An increase in poison hemlock was noted during this season, along with increased houndstongue presence on large islands immediately upstream of the Cascade Bridge.

An increase in secondary weed species following successful control of a dominant invasive species is a common ecological response. For example, areas where large stands of leafy spurge were effectively treated in 2022 showed subsequent occupation by houndstongue in 2025. While overall noxious weed density continues to decline, ongoing weed management remains necessary to maintain control levels, and to allow native vegetation to reestablish.

In some areas, including Eagle Island, site-specific environmental conditions have resulted in cheatgrass establishment in areas previously occupied by noxious weeds. We are currently working with UMOWA and Montana Fish, Wildlife and Parks to establish multiple quarter-acre test plots on Eagle Island. These plots will be used to evaluate cheatgrass control techniques and native revegetation strategies. If multi-year success is demonstrated, these methods may be applied more broadly throughout the project area.



Herbicides Used - Additional Properties

The following herbicides and application rates were used during the 2025 field season. All products and rates were submitted to UMOWA and the Montana Department of Agriculture, and were approved prior to application. All herbicide label requirements, precautions, re-entry intervals, and notification protocols were followed.

Mix 1:

Tordon 22k @ 1 quart/acre - (Picloram) EPA Reg #62719-6
Platoon 2,4-D @ 1 quart/acre - (2,4-D) EPA Reg #228-145
Escort XP @ 1 oz/acre - (Metsulfuron Methyl) EPA Reg #101563-167

Mix 2:

Method 240SL @ 8 oz/acre - (Aminocyclopyrachlor) EPA Reg #101563-177
Escort XP @ 1 oz/acre - (Metsulfuron Methyl) EPA Reg #101563-167

These mixes were used for selective broadleaf weed control, and were applied in accordance with label-recommended rates. A non-ionic surfactant (Liberate) was included with all applications to improve herbicide adhesion and plant uptake.

Total Herbicides Applied

Herbicide totals include herbicide used across all properties listed.

Tordon: 160 quarts
Platoon: 160 quarts
Method: 680 ounces
Escort: 242 ounces (by weight)

Antelope Ln. Properties: 106 acres covered - 28.5 acres applied (Mix 1)
UMOWA/Weeda/Strobbe: 160 acres covered - 78 acres applied (Mix 2)
Perkins: 450 acres covered - 33 acres applied (Mix 1)
Bluebird/Bluejay Dr: 10 acres covered - 4 acres applied (Mix 2)
Devils Kitchen Ranch: 350 acres covered - 84 acres applied (Mix 1)

Thank you for the opportunity to continue this important work. We look forward to continued collaboration and future weed management efforts.

Haley Klarich, Owner
Colter Sternhagen, Owner



"Montana's Native Grassland Rehabilitation Specialists"

WEST RIVER LAND MANAGEMENT, LLC

WWW.WESTRIVERLANDMANAGEMENT.COM

Email: Westriverland@Gmail.com

Missouri River Island Weed Control

2025 Before/After Photos

All photos shown below were taken at various islands between Holter Dam and Pelican Point.



"Montana's Native Grassland Rehabilitation Specialists"

WEST RIVER LAND MANAGEMENT, LLC

WWW.WESTRIVERLANDMANAGEMENT.COM

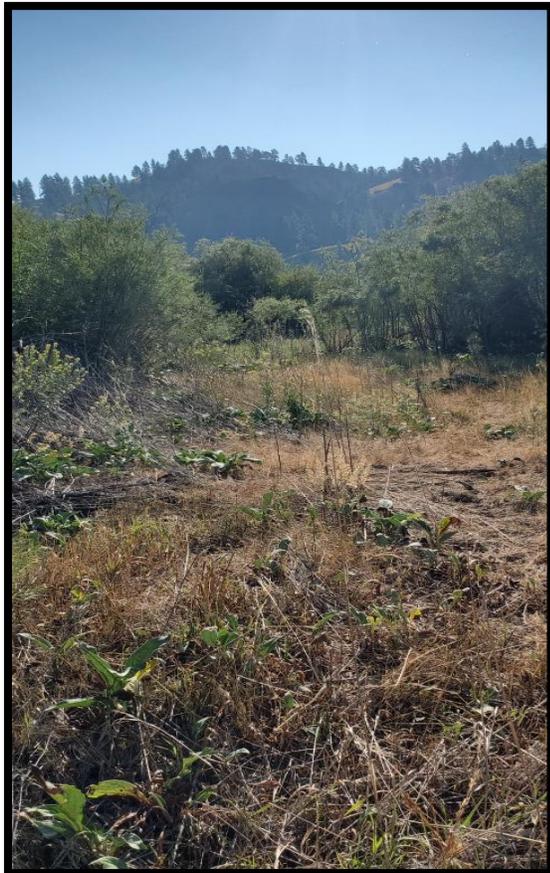
Email: Westriverland@Gmail.com



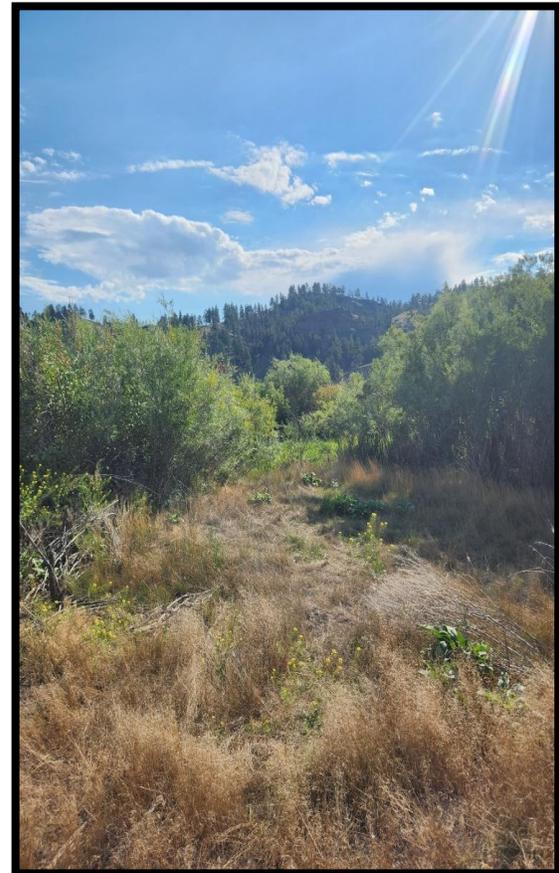
Leafy spurge 2024



Leafy spurge 2025



Houndstongue 2024

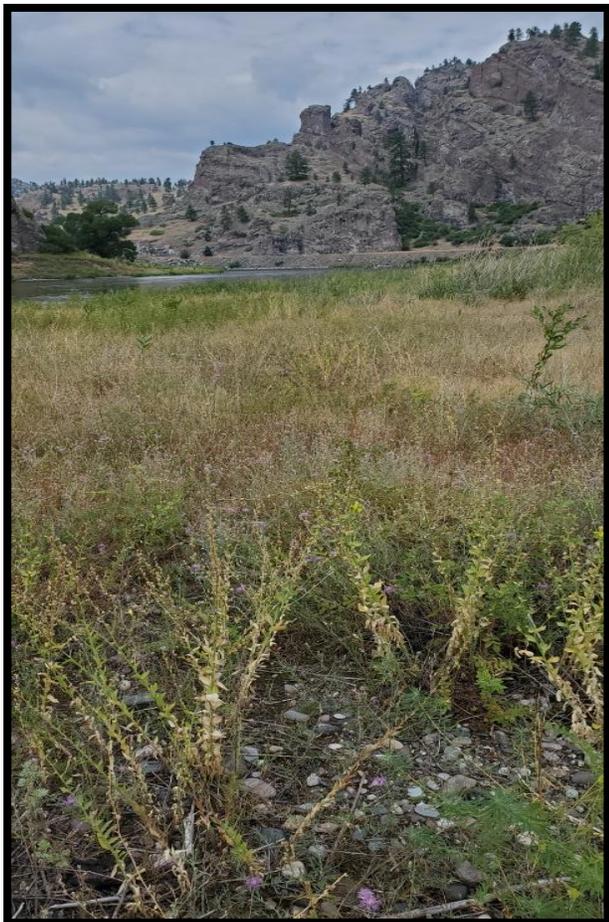


Houndstongue 2025

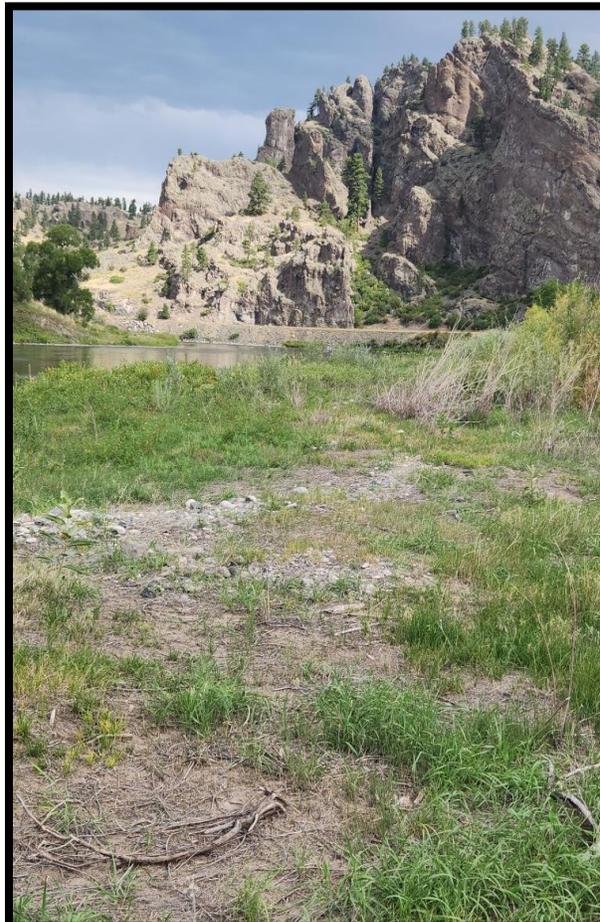


"Montana's Native Grassland Rehabilitation Specialists"

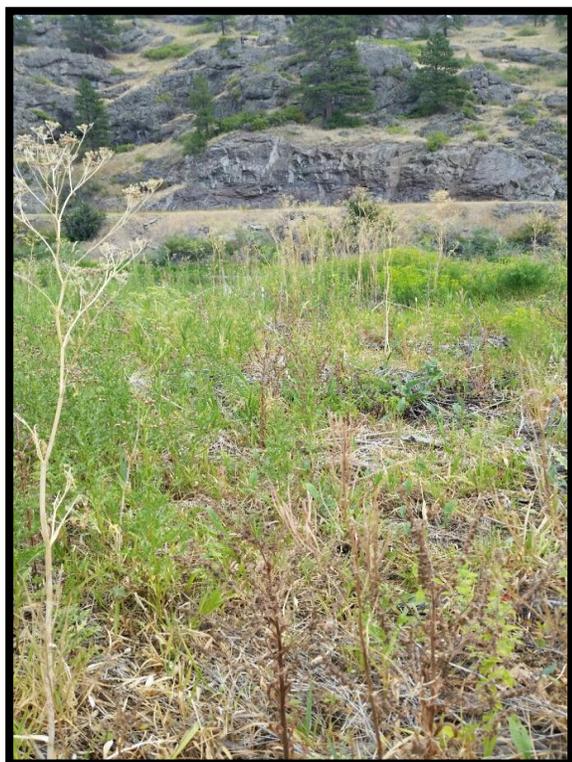
WEST RIVER LAND MANAGEMENT, LLC
WWW.WESTRIVERLANDMANAGEMENT.COM
Email: Westriverland@Gmail.com



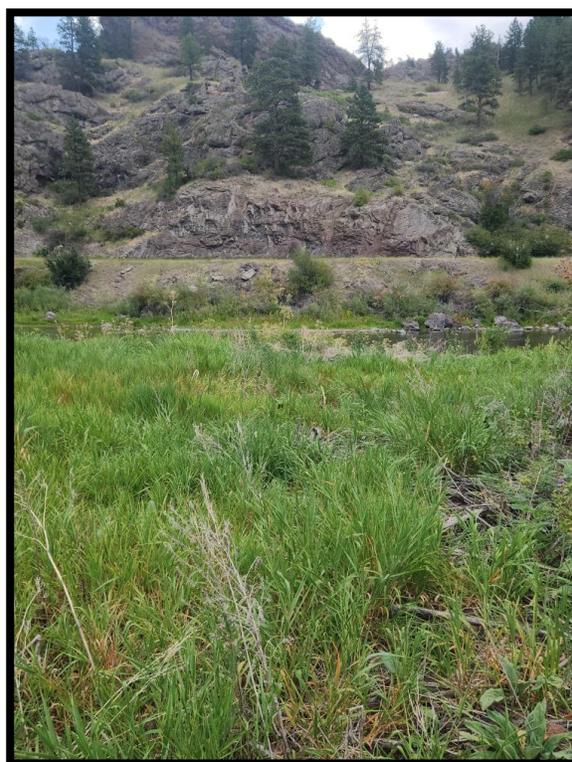
Dalmatian toadflax 2024



Dalmatian toadflax 2025



Hemlock, canada thistle 2024



Hemlock, canada thistle 2025