

# Protecting Our Heritage

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Noxious weeds affect healthy ecosystems by displacing native plants. This reduces Montana's local biodiversity, threatens rare species, alters nutrient and water cycling, decreases wildlife habitat, and increases soil erosion and stream sedimentation which directly affects water quality. The best, most effective, and least costly defense against the consequences of native plant displacement is to prevent weed establishment in weed-free or relatively weed-free areas. These high quality, valued areas have a high percentage of native vegetation and should be identified and "protected" from weed invasion and establishment.

Protecting high quality or valued areas includes limiting weed seed dispersal into these sites. To accomplish this, the following strategies could be implemented:

- Use only certified noxious weed-free gravel, forage when packing livestock and feed, seed mixes when reseeding is necessary, and mulch when mulching newly seeded areas.
- Thoroughly clean the undercarriage and tires of vehicles prior to entering the "protected" area. Vehicle travel should be limited to established roads.
- Avoid adjacent weed patches and infestations during the seeding period—weed seeds can be transported attached to boots, clothing, and animals. Nearby patches should be eradicated through hand pulling or herbicide spot treatments, carefully applied only to the target weeds, with judicious follow-up management to ensure reproduction is stopped completely. Any nearby infestations should be controlled (entire population is managed) or contained (population perimeter is managed to limit spread). Consider revegetation with competitive plants when desired vegetation is less than 20 percent within the infestation.

Limiting seed dispersal into "protected" areas is a large component of preventing establishment and ultimately conserving Montana's heritage. However, it is not possible to entirely prevent weed seeds from reaching these "protected" areas. By far, the most critical component in protecting these landscapes is frequent, systematic monitoring efforts to detect new weeds early for quick eradication prior to vegetative spread or seed production and dispersal.

A monitoring plan should include the following schedule, with concentrated effort along roadways, railways, and waterways, where new weeds often begin establishment:

**Spring/early summer.** Methodically examine the "protected" area when young weeds could be hand-pulled, dug-up (ensure the entire root crown is removed, especially with rhizomatous weeds) with a shovel, or carefully spot treated with an appropriate herbicide.

**Summer.** Examine the area again during the early bud stage to eradicate any overlooked weeds.

**Early fall.** Examine the area again to clip, bag, and burn any developed seed heads. Otherwise, entire weeds could be removed through hand pulling/digging, or regrowth could be carefully treated with an appropriate herbicide.

According to most experts, noxious weeds currently infest between 9 and 10 percent of Montana. Current infestations should be managed by preventing spread and reestablishing healthy plant communities. To conserve Montana's heritage, private and public land managers should aggressively "protect" these remaining areas from native plant displacement. This could be successfully accomplished in a cost-effective manner by actively limiting weed seed dispersal into these areas through simple prevention techniques. Further, and most importantly, the key to protecting these remaining and valued areas is frequent,

systematic monitoring efforts to detect and eradicate new weeds early, well before reproduction.

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