

Southwestern Wheatland County Noxious Weed Treatment Project

2020-2022



Targeted Implementation Plan
HARLOWTON NRCS FIELD OFFICE

The purpose of this project is to assist landowners with control of leafy spurge, dalmatian toadflax, and knapweed species in southwestern Wheatland County through proper rangeland management, education, and chemical control methods.

Background Information

The Wheatland County Local Working Group's (LWG) longest standing priority resource concern has been noxious weeds. For decades, the county, state and federal agencies, and producers have put a significant emphasis on controlling weeds on the county's rangelands. 2020 was no exception with the LWG placing a significant focus on noxious weeds, as documented in the Wheatland County Long Range Plan.

Through the direction of the Upper Musselshell Conservation District (UMCD) the Wheatland County Weed Board has formed four Weed Management Areas (WMAs) within the county in order to focus conservation efforts. These WMAs have been utilized to prioritize implementation projects, individually compete for specialized funding, and capitalize on other resources within the individual areas. The WMA approach implemented by Wheatland County utilizes grant funds from DNRC that match investments from individual landowners, thereby doubling the impact. This approach has proven to be incredibly successful in implementing one of the most robust targeted weed spraying programs in the state of Montana.

In recent years, Wheatland County has seen an influx of dalmatian toadflax in the uplands, a sudden expansion of leafy spurge, and a significant amount of movement of both Russian and spotted knapweed on, or near riparian areas. These weeds have been identified in each of the four WMAs but have increased significantly in the Southwest and Central WMA's. The dramatic increase in the presence of these weeds combined with reduced grant funding opportunities due to budget constraints has increased the need for treatment in these areas.

The goal of this Targeted Implementation Plan (TIP) will be to expand on existing efforts in Wheatland County within the area South of Hwy 12 and West of Hwy 191. Approximately 25% of the estimated 200,000 acres within the TIP area are infested with the target weed species and approximately 500 acres are treated annually according to the Wheatland County Weed District Coordinator. Through the application of 4,500 acres of herbaceous weed treatment and 15,000 acres of prescribed grazing NRCS will be treating nearly half of the acres in the Targeted Implementation Plan boundary below.

Goals and Objectives



The objective of this project is to control the spread of leafy spurge, dalmatian toadflax, and spotted and knapweed species on rangeland and pastureland in Wheatland County through the application of herbaceous weed treatment. Prescribed grazing will allow for treated sites to recover with perennial grasses that can suppress future weed infestations while providing forage for livestock and habitat for wildlife. An additional objective will be to provide outreach and education to local producers to help with identification and control of weeds while promoting good rangeland management practices.

Goals:

(315) Herbaceous Weed Control on 4,500 acres.

- Much of the infestation may be confined to relatively rugged areas, therefore spot spraying or ground application practice components will most likely be chosen to access the infestation sites.

Leafy Spurge

(528) Prescribed Grazing on 15,000 acres

- 90 consecutive days of growing season (May through July or June through August) deferment from grazing will be applied following treatment on the treated area only (if it can be fenced off separately) or the entire fenced field with the treated area.

Objectives:

- Decrease plant pest pressure
- Improve plant productivity and health on rangeland and pastureland.

Resource Concern:

- Plant pest pressure

Alternatives

Alternative 1: No action will result in continued degraded condition of rangeland and pastureland, decreased stocking rates, and an overall long-term negative effect on the local economy of Wheatland county due to no control of leafy spurge, dalmatian toadflax, and knapweed. Degraded range and pasture landscapes negatively affect individual operators by reducing production for lease or sale. This creates a ripple effect resulting in fewer contributions to the community and local businesses. The no action alternative does not meet the goals of the local landowners, the Upper Musselshell Conservation District, the Local Working Group, or the Wheatland County Weed District.

Alternative 2: This alternative would consider utilizing chemical control of Leafy Spurge, dalmatian toadflax, and knapweed on rangeland acres. For heavier infestations, it is likely the site would need to be reseeded to a perennial grass mixture. Degraded range and pasture landscapes negatively affect individual operators by reducing production for lease or sale. This creates a ripple effect resulting in fewer contributions to the community and local businesses.

Alternative 3: (Preferred) The third alternative would utilize both chemical control of the target noxious weeds and prescribed grazing to allow for long-term control and management of noxious weeds. Combined with proper grazing management and education, this alternative provides the project with the best opportunity for long term success. Prescribed grazing is necessary to ensure the protection of the herbaceous weed treatment investment by NRCS.



As with any projects involving NRCS technical or financial assistance, National Environmental Policy Act (NEPA) concerns will be addressed through environmental evaluations that include cultural resource and endangered species reviews.

Dalmatian Toadflax



Proposed Solutions and Actions

The solution to these major resource challenges is to take a comprehensive approach that engages private landowners, leverages partnerships, and utilizes a productive suite of practices to address the resource concern and achieve desirable results. NRCS will utilize work that has been completed by the Wheatland County Weed District and the Upper Musselshell Conservation District to identify the areas with the greatest risk and highest infestation levels, and determine where our investment would be best utilized. With the help of our listed partners, we will continue a targeted outreach campaign to generate additional interest and awareness of the program. We will also take advantage of current program participants, individuals who have previously expressed interest, and new applicants we identify as a result of our targeted outreach.

Herbaceous weed treatment is typically implemented at the point where the economic threshold is for infestation is met. This threshold occurs when treatment will provide an economic return. Thresholds will vary across landscapes and specific treatment areas depending on manager goals and the economic impacts resulting from reduced desirable forage for livestock. Figure 1. Demonstrates the relationship between weed infestation rates and management goals. In most cases, land managers will not tolerate an infestation rate of greater than 25 percent canopy cover. In Montana a reduction of 25 percent forage would cost approximately 3 to 7 dollars per acre, depending on local forage production potential. Once an infestation reaches 25 percent, the risk of it quickly reaching 75 percent canopy cover is very high. Therefore, treatment options should be considered at all levels of infestation. However, once the infestation reaches 25 percent canopy cover the treatment threshold will be met in most cases. The treatment goal should be to reduce canopy cover to 5 percent or less to restore economic viability of the land and to prevent weeds from spreading.

Infestation Rate	Weed Free: Weeds are not present, and the site is in good health	Slight: Weeds are present on the site at 1 to 5 percent canopy cover	Slight to Moderate: Weeds are present on the site at 5 to 25 percent canopy cover	Moderate: Weeds are present on the site at 25 to 50 percent canopy cover	Extreme: Weeds dominate the site and are present at levels greater than 50 percent canopy cover	
Management Goal	Prevention and Maintenance		Eradication		Aggressive Treatment	
	Apply Proper Landscape Management Practices					
	Restoration					

The Wheatland County Weed Coordinator will make the site-specific chemical recommendations based on the Montana State University field trial research and the weeds that are present. Much of the project is planned for spot treatment but based on infestation levels and acreages present, aerial spraying could be a strong component to fully address the resource concern. Leafy spurge, dalmatian toadflax, and knapweeds were targeted due to their prevalence, overall range-wide impact, growing conditions and habitats. All three of these species grow in similar landscapes, during the same time of year, and are susceptible to the same chemicals.

Practices to treat the resource concern will include:

Herbaceous Weed Treatment (315) will be utilized to treat noxious weeds with a primary focus on leafy spurge, dalmatian toadflax, and knapweeds that are currently present and prevalent. NRCS will be tying into an active weed program within the targeted area that has experienced cuts in grant funding. This is an ideal opportunity for NRCS to partner with landowners and identified partners to improve the implementation of targeted weed control efforts within the focus area.

Prescribed Grazing (528) will be utilized to improve grazing management on land that has been treated with herbaceous weed treatment. Prescribed grazing will only be contracted in the fields where contracted herbaceous weed treatment activities have taken place. Prescribed grazing is a necessary practice to ensure protection of the NRCS investment of herbaceous weed control, and to ensure proper follow-up management.

The following Table A provides specific targeted acreages for individual practices implemented over a 3-year period, as previously defined by the Wheatland County Long Range Plan.

Table 1. NRCS Deliverable Goals (in acres)

Activity	2020	2021	2022	Total
Herbaceous Weed Treatment	1,000	2,000	1,500	4,500
Prescribed Grazing	5,000	5,000	5,000	15,000

Project Partners and Other Funding Sources

Partners with this project are:

- Upper Musselshell Conservation District (UMCD)
- Wheatland County Weed District
- Private landowners

The Upper Musselshell CD has committed to assisting landowners through various funding sources while assisting NRCS in providing outreach and education to local landowners. The Wheatland County Weed District is committed to providing ready, willing, and able producers to partner in the project, coordinating potential contractors, and providing outreach to landowners who may be interested in the project. Future grant funding allocations to the Wheatland County Weed District along with existing biological control efforts will supplement NRCS applications of herbaceous weed treatment.

Wheatland County currently entrusts the Weed District with \$15,000 annually within the two WMA's of the focused area which results in approximately 500 acres of annual treatment. The focused area does not include privately treated or unreported acres. The county also treats all the public road right-of-way's annually, which mitigates the spread of newly deposited noxious weeds. This is a significant number of acres annually treated.

A substantial number of landowners in the area have also utilized biological control for the treatment of these noxious weeds in the past several years. The number of landowners and acres treated are not publicly available. These biological controls are noteworthy and significant in the continued control of noxious weeds.



Toadflax flower eating beetle

Implementation

The Harlowton Field Office, along with the majority of the listed partners, have an extensive history of working with rangeland and forestry landowners which has resulted in successful implementation of conservation practices.

This project will occur over a three-year period, beginning in 2020. Conservation planning has been done and will continue to be done by the NRCS field office staff and cooperating partners. Previous planning or site-specific recommendations that have been made from partners will be utilized, provided that the recommendations meet NRCS standards and specifications.

First year participants will be selected from previously submitted applications and new signups during the open application period. Additional application periods in subsequent years will create more opportunities for producers. In future years, interest will be generated using several implementation strategies including targeted mailings, referrals from partners, NRCS outreach, and producer word of mouth.

Budget projections are based on the 2019 cost list items for the above estimated acre goals. Actual costs may vary from year to year based on changes in the cost list, practices selected, and overall programmatic interest. Future budget projections have been estimated based on practice implementation history, current interest pool, and Field Office engagement with landowners.

The proposed timeframe for this proposal is three years. NRCS will plan to have an Environmental Quality Incentives Program (EQIP) TIP signup for FY 2020 through FY2022. The budget request is detailed below in Table 2. By implementing this TIP through EQIP in conjunction with Wheatland County's Weed District's targeted approach, and through utilizing landowner match to DNRC grand funding, this proposal can make a dramatic impact on the targeted weeds within the project area.

This project will help offset the cost of controlling leafy spurge, dalmatian toadflax, and knapweed infestations on rangeland and pastureland in Wheatland county by utilizing the (315) Herbaceous Weed Treatment practice through EQIP. Additionally, the (528) Prescribed Grazing practice will be used through EQIP to promote long-term grazing management. The county weed district will also partner with UMCD and NRCS to conduct educational outreach events to promote awareness, identification, and management practices.

Table 2. NRCS Estimated Budget

Contributions	2020	2021	2022	Total
EQIP FA	\$71,000	\$127,000	\$99,000	\$297,000

Russian Knapweed



Spotted Knapweed

Progress Evaluation and Monitoring

Contract status reviews will be performed twice yearly during the contract duration. On the fifth year of the project, NRCS will complete an in-depth review and project report to document implementation. We will also plan to provide a report on the project at local workshops.

Producers will set up annual photo point monitoring in the areas of control and will plan to use these points to document long-term weed control and improved grazing management. Photo monitoring will be used for reports and progress.

Inventories will be completed before and after the project treatments to document conditions and improvements including acreages, stocking rates, rangeland composition, species present (including wildlife), and producer expenditure documentation. Each project will be overseen by field office staff with certifications being made upon completion, contingent on practices meeting NRCS standards and specifications. Progress will be recorded in Conservation Desktop or other appropriate databases. Photo monitoring will be conducted annually to ensure outcome longevity and address any unforeseen complications that may arise due to natural disturbances, or land use changes. Follow-up treatments can then be determined if deemed necessary at that time.

The long-term goal will be to increase range productivity by 20% (toward historic climax) through utilizing herbaceous weed treatment and prescribed grazing. This will hinge on reducing the noxious weed populations on targeted acres by 80% through our programmatic response. Ongoing landowner efforts will be critical to show long-term and permanent success.

Ranking

The following additional ranking questions will allow the field office to further prioritize the pool of applications to ensure the proposed projects are meeting the stated objectives:

1. Will prescribed grazing be contracted as a planned practice? 50% of applicable points
2. Will the applicant's target and primary species of control be leafy spurge, dalmatian toadflax, or spotted and Russian knapweed? 25% of applicable points
3. Will 315 Herbaceous Weed Treatment be contracted for more than 1 year? 25% of applicable points

Prioritization

Due to the ongoing interest in EQIP projects across the county, applicant prioritization criteria will be necessary to prioritize projects that fit within TIP objectives. The following questions will be used to prioritize applications that fall outside the target area and/or do not meet minimum criteria for program funding:

1. Has the applicant had an NRCS program contract terminated since January 1, 2017; OR does the applicant have an existing contract that has been determined to be in non-compliance and currently under an active NRCS CPA 153 (only answer as Yes if the non-compliance was for something within the participant's control)? If yes, identify the following: Date of termination or date participant signed the NRCS CPA 153 with an existing deadline to bring the contract back into compliance. If Yes – Application is a LOW Priority; No – Continue to #2
2. Is the proposed conservation treatment within the geographic boundaries of this Targeted Implementation Plan (TIP)? If No – Application is a LOW Priority and will not be ranked; If YES – continue to question #3
3. Does the application meet the intent of the Targeted Implementation Plan (TIP), and is for practices currently offered in the TIP that will treat the identified priority resource concern? If Yes – application is a HIGH priority and will be ranked; If No – Application is LOW priority and will not be ranked.