

A Collaborative Project
of Missoula County and
the University of Montana

Landowner Views on Weeds

Moving Forward on Invasive Plant Management



To better understand

the views, practices, and needs of landowners in the Ninemile and Potomac Valleys, the Missoula County Weed District and the University of Montana partnered in 2006 to survey area landowners. We learned a variety of lessons that can improve the way counties, community groups, and landowners manage weeds **and work together.**

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SURVEY OVERVIEW

THE NINEMILE AND POTOMAC VALLEYS are each within 30 minutes of Missoula, Montana. Both valleys have experienced substantial growth during the last 15 to 20 years, primarily in the form of rural residential subdivision. Noxious weeds are a growing problem in these valleys, with spotted knapweed, leafy spurge, and Dalmatian toadflax increasingly common. These non-native, invasive plants displace native plant communities, reduce forage for wildlife and livestock, and decrease habitat for many birds and insects.

The Missoula County Weed District works to inform and educate the residents of Missoula County about the problems associated with noxious weeds, to facilitate a process for all private and public landowners to minimize the impact of noxious weeds through use of sound ecological practices, and to monitor the control and eradication of noxious weeds throughout Missoula County.

In 2006, Missoula County and the University of Montana surveyed landowners in the Ninemile and Potomac Valleys to better understand their views, practices, and needs. Surveys were developed by the Weed District and the University of Montana in collaboration with a committee of landowners and community members. Mail surveys were sent to 536 of the 732 landowners in the Ninemile and Potomac Valleys. More than 73% of the landowners returned a completed survey. The standard error for this survey is approximately 1%, indicating that the “true” value for any given question is within 1% of the number reported here. In short, we can be fairly confident that the results reported here represent the views of landowners in the Ninemile and Potomac Valleys.

Results from the survey are provided in this document as a resource for landowners, community groups, and weed managers. It is our hope that these results will facilitate dialogue about how to best manage noxious, invasive weeds in Western Montana.



Photo by Ronni Flannery

Ninemile Valley



Photo by Marjissa Haverhals

Potomac Valley

SUMMARY RESULTS

LANDOWNERS IN THE POTOMAC AND NINEMILE VALLEYS are concerned about weeds and conduct weed control activities on their properties (78% of landowners conduct weed control activities). More than 80% of landowners believe that weeds are a problem in their valley and 75% are concerned about the ecological impact of weeds.

The top three methods of weed control used by landowners are hand pulling, spraying chemicals, and mowing. For landowners who control weeds, the biggest barriers to effective control are seeds coming in from adjacent properties, lack of money, and lack of time. Landowners who do not control weeds are uncertain which weeds to control and what methods would work best to control weeds.

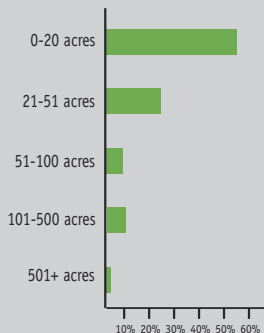
Almost 28% of landowners from the Potomac and Ninemile Valleys have utilized Missoula County Weed District resources for weed control. When asked what role Missoula County should play, landowners prioritized providing resources (such as equipment, grants, and chemicals), spraying roadsides, and providing information about weeds and weed management. More than half of landowners expressed interest in attending an educational program about weeds.

WHO ARE THE LANDOWNERS?

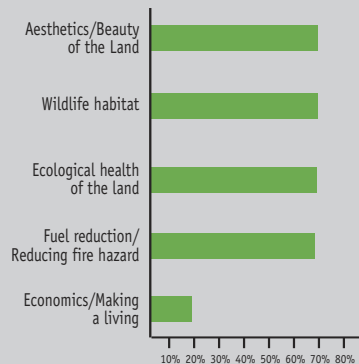
- 54:** average age
- 62%** employed
- 28%** retired
- 48%** have a college degree

Size of Parcel

(Private Lands)



What Guides Private Land Management



Most landowners in the Ninemile and Potomac Valleys own small parcels (20 acres or less) and less than 10% are agricultural producers. Landowners value natural beauty, wildlife, and a rural lifestyle. Wildlife habitat, ecological health, fuel reduction, and aesthetics guide private land management. While 27% of landowners raise livestock (including cattle, horses, sheep, donkeys, llamas, etc.), only 7% reported that livestock are important to their income.

Resident landowners have lived in the area for an average of 16 years. Nearly 26% of landowners are absentee owners who live out-of-state or elsewhere in Montana. Absentee landowners spend an average of 1.4 months per year on their property. It is important to note that many (perhaps the majority) of absentee landowners do not reside out-of-state, but rather in other areas of Montana. Absentee owners are less likely to conduct weed control activities and less knowledgeable about weeds.

Hand pulling is one of the most common methods of weed control used by landowners.

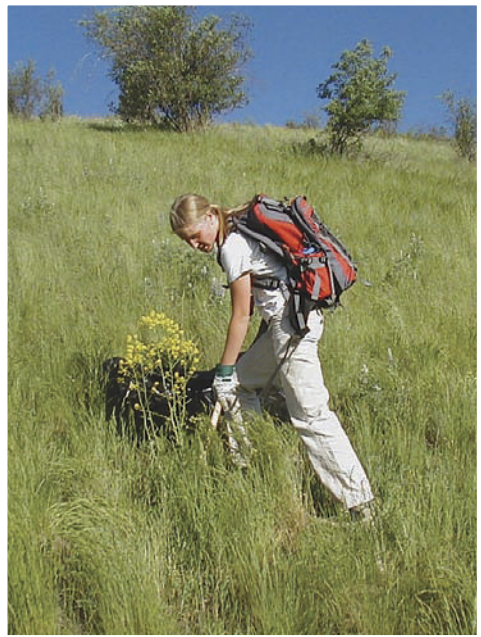
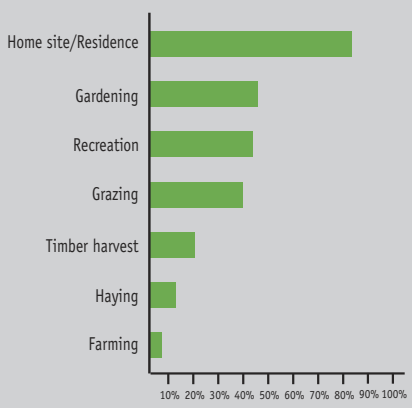


Photo by Marilyn Weiler

Private Land Use



Concerns about Weeds

Survey results indicate that most landowners are concerned about weeds. More than 80% agreed that weeds are a problem in their valley and 66% agreed that weeds are a problem on their property. Spotted knapweed is considered the most problematic weed (76% ranked this species most problematic), far and above all other weeds. The next most problematic was leafy spurge – only 8% of landowners ranked this species most problematic. Nearly 73% of landowners are concerned about the ecological impacts of weeds. Only 9% believe that weeds do not need to be controlled, and less than 3% feel that weeds are not harmful. Fifteen percent reported that weeds are a low priority for them, and 30% feel that controlling weeds is a losing battle.

Almost 60% of landowners considered themselves knowledgeable about weed control, but 18% reported that they did not know which weeds were problematic.

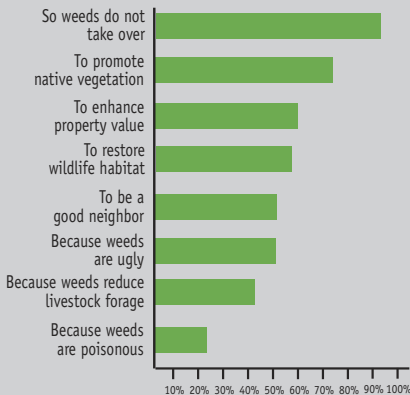


Photo by Paul Alaback

Landowners consider spotted knapweed to be the most problematic weed.

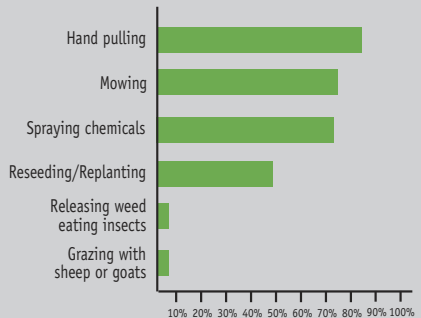
Reasons Landowners Control Weeds

Only answered by the 78% of landowners who control weeds



Types of Weed Control Actions Used in the Past

Only answered by the 78% of landowners who control weeds



Weed Control

A total of 78% of landowners in the Ninemile and Potomac Valleys conduct weed control. Landowners conduct weed control for a variety of reasons, in particular so that weeds do not take over and to promote native vegetation (see graph on page 4).

More than half of landowners who control weeds have utilized the following techniques: hand pulling, spraying chemicals, mowing, and reseeding/replanting (see graph on page 4).



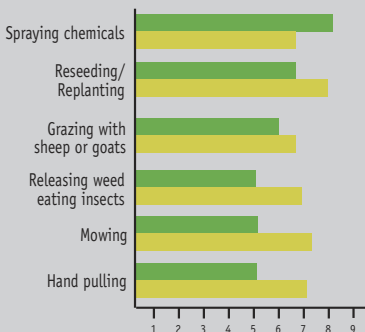
Most landowners who control weeds plan to keep using the same techniques (i.e. insects, chemicals, reseeding, etc.) that they have used in the past. However, people who have hand pulled weeds in the past plan to use a variety of methods in the future, perhaps because hand pulling is very labor intensive. Nearly 57% of landowners plan to mow in the future, while 45% plan to release weed eating insects and 21% plan to graze with goats or sheep. Landowners who have utilized chemicals in the past are the least likely to use other techniques (such as hand pulling, mowing, etc.).

Landowners who have utilized chemicals in the past are the least likely to use other techniques.

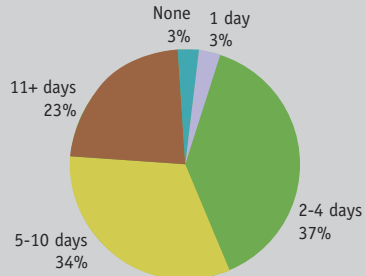
Effectiveness and Acceptability of Different Weed Control Actions

10 is highly acceptable/effective
and 1 is highly unacceptable/ineffective

Effectiveness
Acceptability



Number of Days Per Year Landowners are Willing to Spend on Weed Control



Barriers to Weed Control

Landowners reported that seeds coming from adjacent properties are the most significant barrier to effective weed control. Other significant barriers include lack of time, lack of money, lack of equipment, and lack of information/knowledge (see graph on page 10). Of the landowners who do not control weeds, more than 40% reported that they do not know what would work best and that they do not have the time to control weeds (see graph below for more reasons why some landowners do not control weeds). These landowners reported that they would consider conducting weed control if it would benefit wildlife or native plants. Non-controllers are also concerned about the safety of weed control activities and interested in



increasing their property value through weed control (see graph below for more reasons that non-controllers would consider).

Why Some Landowners Do Not Conduct Weed Control Activities

Only answered by the 22% of landowners who do not control weeds





Photo by Alan Knudsen

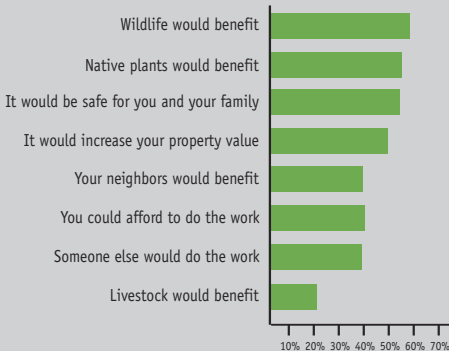
Sixty-one percent of landowners are interested in attending an educational program about weeds.

Views on Weed Education

Nearly 28% of landowners have utilized Missoula County resources for controlling weeds, and almost 30% have attended a meeting about weeds. Almost 19% of landowners believe that specialized education programs are one of the three most important activities Missoula County should pursue and 61% are interested in attending an educational program about weed control. Approximately 80% of landowners want to be contacted by mail regarding educational programs and with other information about weeds. Only 18% prefer to be contacted by email and 36% prefer to use the internet to obtain weed control information.

What Would Motivate Landowners Who Do Not Control Weeds

Only answered by the 22% of landowners who do not control weeds



Effective Weed Controllers

To better understand landowners and weed control in the Ninemile and Potomac Valleys we compared landowners who conduct effective weed control with landowners who do not. Landowners who conduct effective weed control were those individuals who reported that they control weeds and that they knew which weeds were problematic, and demonstrated some knowledge of weed control on a true/false test. Accordingly, 67% of landowners are effective weed controllers (78% of landowners reported that they conduct weed control on their property). Effective weed controllers tend to be residents as opposed to absentee owners.

Effective weed controllers are more likely to cite ecological health of the land and economics/making a living as guiding their land management, as compared with all landowners. Effective weed controllers are also more likely to view individual landowners as responsible for weed control (see graph on page 10).



Photo by Paul Ataback

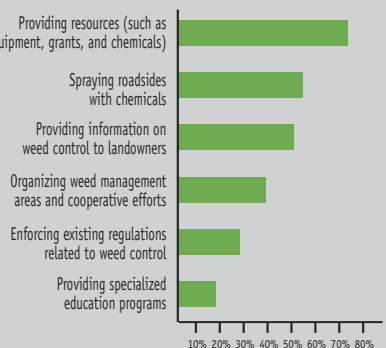
Seven percent of landowners who conduct weed control utilize biological controls (such as weed-eating insects).

Type of Information that Would be Most Helpful



Most Important Weed Control Activities for Missoula County

Activities ranked as top three most important



Absentee Ownership and Weed Control

Absentee owners are less likely to control weeds, partly due to lack of time and knowledge. Of all landowners, 26% were absentee owners (people who reported that their primary residence was elsewhere in Montana or out-of-state). Absentee landowners were much less likely to conduct weed control activities (55% of absentee owners conduct weed control, while 78% of all landowners conduct weed control). Furthermore, while 61% of landowners consider

themselves knowledgeable about weed control, only 51% of absentee owners reported that they were knowledgeable.

Nearly half of absentee owners reported that they did not control weeds because they did not have the time. Absentee owners were particularly interested in controlling weeds if it would benefit wildlife, native plants, and neighbors.

Seven percent of landowners who conduct weed control utilize sheep to manage weeds.



Photo by Gary Hewitt

Neighbors and Weed Control

Management of weeds by neighboring landowners was a topic of major importance to Ninemile and Potomac landowners. The biggest barrier to effective weed control that landowners cited was seeds coming in from adjacent properties (52% of landowners cited this as one of the top three barriers and 28% cited this as the biggest barrier). Only 17% believe that most of their neighbors do a good job of managing weeds. More than half of landowners who control weeds do so to be a good neighbor. Of the landowners that do not control weeds, 39% reported that they would consider conducting weed control activities if they believed that their neighbors would benefit.

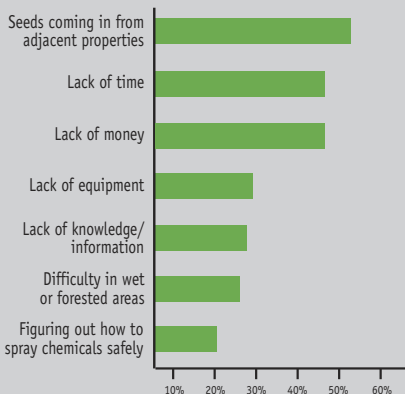
When asked who should be responsible for weed control, 51% of landowners cited neighbors working together and 43% a valley wide

community group (by comparison, 84% cited individual landowners and 61% cited Missoula County). More than 73% of landowners agreed that neighbors need to cooperate more on weed control. Currently, 28% of landowners who control weeds work with their neighbors or other landowners to do so. A total of 43% want Missoula County to organize weed management areas and cooperative efforts and 13% want information on how they can organize their neighbors.

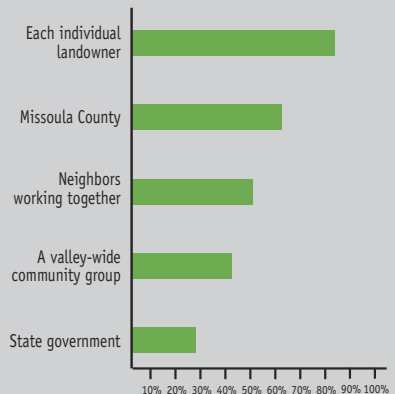
While nearly 70% of landowners agreed that individual landowners have the right to decide how to control weeds on their property, only 40% agreed that individual landowners have the right to decide whether or not to control weeds on their property. More than 74% believe that each landowner has a responsibility to the valley as a whole to control weeds.

Barriers to Effective Weed Control

Only answered by the 78% of landowners who control weeds



Who Should be Responsible for Weed Control



Concern About Chemicals

Most landowners were concerned about the safety of the chemical herbicides used to control weeds. Chemicals were rated as the most effective, but least acceptable type of weed control. While 68% of landowners were concerned about herbicides, nearly 60% of landowners had utilized chemicals to control weeds in the past. The 33% of landowners who are *very* concerned about the safety of chemicals used to control weeds are much less likely to have used herbicides. In fact, 28% of landowners who do not control weeds do not think chemicals are safe. Those who were *very* concerned about chemicals were also more likely to support an individual landowners' right to decide *how* to control weeds. More than 17% of landowners who do control weeds reported that figuring out how to spray chemicals safely was a significant barrier to effective weed control.



Photo by Marijka Haverhals

Chemicals were rated as the most effective but least acceptable type of weed control.

Demographics

There were no differences in weed control actions or views on weeds based on age, gender, length of residence, education, employment status, or size of community where landowners grew up.

Lessons for Counties, Community Groups, and Landowners

An improved understanding of landowner views and practices can help counties, community groups, and landowners develop programs to more effectively manage weeds and provide much-needed resources for landowners. The landowners surveyed for this project own property in Missoula County. However, the Potomac and Ninemile Valleys are similar to many valleys in Western Montana and elsewhere in the Northern Rockies. Many of the lessons learned from this study may be applicable in other communities. We encourage you to consider how you, your county, and your community can use this information to move forward on weed control.

What can counties do?

- Demonstrate how effective weed control benefits wildlife and native plants, since many landowners prioritize these values on their properties.
- Work more with absentee owners, who are less likely to control weeds and less knowledgeable about weed control. Find ways to contact and communicate with these landowners.
- Ensure that landowners know what resources County Weed District Offices offer. Only 28% of landowners in this study had worked with the Weed District.
- Provide interactive hands-on programs and resources that focus on specific topics of interest to landowners, such as weeds and wildlife, weed-eating insects, herbicide safety and training, and controlling weeds without chemical herbicides.
- Provide information in a variety of formats, including through the internet, mailings, community meetings, one-on-one field consultations with landowners, and educational programs. Target mailings to specific topics that interest landowners (e.g. wildlife habitat). Remember that most landowners want to be contacted by mail.
- Develop resources and programs on alternative control methods for landowners who are concerned about chemicals. Provide information on how to correctly use chemical herbicides.

- Develop resources and programs specifically on weed-eating insects for landowners interested in utilizing this tool in the future.

What can community groups do?

- Consider organizing a local community group focused on weed control.
- Nurture and build on a sense of community responsibility for weed control.
- Work with the County Weed District to provide resources and programs focused on weed control.
- Ensure that landowners know about the resources provided by local weed districts.
- Include information on weed control in welcome packets.
- Build weed control information into local meetings.
- Make print materials available in public places.

What can counties and community groups do together?

- Explore options for equipment rental. For many landowners, lack of equipment is a significant barrier to effective weed control.

- Increase awareness of grant programs for landowners who need financial resources to control weeds.
- Work with landowners to organize neighbors and cooperative groups. Develop resources for landowners who are interested in cooperating with neighbors.
- Provide hands-on training on vegetation management.

What can individual landowners do?

- Consider how weed control might benefit wildlife, native plants, and aesthetics.
- Talk with neighbors about weeds and weed management. Make a special effort to talk with absentee owners.
- Explore ways for neighbors to cooperate on weed management (sharing equipment and information, trading labor, pooling resources, etc.).

For additional copies of this publication and for details on survey results and methods, please visit:

www.missoulaeduplace.org/weeds.php

For more information about weed management, please contact:

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