

2013 Noxious Weedpulls in the Pryor Mountains with Recommendations for Future Action

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The idea for noxious weedpulls arose in the fall of 2012 based on the desire to help protect the unique habitats in the Pryor Mountains from the seriously increasing noxious weed problem. Weedpulls could involve and educate public lands users in the Pryor Mountains by creating a basic volunteer weed program to assist Pryor Mountains land management agencies. Because volunteer weedpulls are effective on some species of noxious weeds, the cost of trained sprayers and negative effects on desirable plants are avoided.

Montana Wilderness Association (MWA) 2012 Summer Walks offered weedpulls on other Region 1 Forests; some of those leaders provided helpful information on organizing weedpulls.

Groups and agencies included in the discussion included Forest Service (FS) Beartooth Ranger District, Bureau of Land Management (BLM) Billings Field Office, Carbon County Weed District and Yellowstone Valley Audubon Society (YVAS). Everyone wanted to be a part of the effort.

Dates and locations for weedpulls were based on FS/BLM requests and recommendations. MWA-EWC (Eastern Wildlands Chapter) weedpull organizers were Susan Newell, Dick Walton and Bernie Quetchenbach. Agency contacts were Sean Monahan and Terry Jones – FS; Larry Padden – BLM; Rita Harding - liaison with EWC and YVAS; Brian Ostwald – Carbon County Weed District.

Information about three Pryor Mountain weedpulls and requests for volunteers were published in MWA's 2013 Summer Walks booklet, as part of an April 2013 McCracken presentation on noxious weeds, in YVAS newsletter, Montana Native Plant Society newsletter, on PryorMountains.org website, a notice in Billings Gazette and announcements at Conservation Roundtable meetings.

Date	Location	Weeds pulled	Volunteers
June 15	FS - Sage Creek Campground area	spotted knapweed	9
June 22	FS - Crooked Creek Rd	hound's tongue	5
June 29	BLM & FS Burnt Timber Ridge	spotted knapweed	10

Volunteers had a short orientation on identifying the target weed, were provided tools if they had not brought their own and large bags for collecting pulled weeds.

In addition, Yellowstone Valley Audubon Society hosted a weed day in Bear Canyon in June. Brian Ostwald and Carbon County Weed District crew sprayed while YVAS members pulled weeds.

Sage Creek Campground Area – June 15 – Nine Volunteers and Sean Monahan – FS

The volunteer crew worked hard, often on hands and knees, digging out the abundant knapweed and roots. The hillside north of Sage Creek, west from the bend in the road to Sage Creek Campground to the north/south fence north of the rock dam were seriously infested with knapweed. (See red boundaries on map below.) The group filled about twelve large leaf bags with knapweed.

It was not obvious on the day of the weedpull that the effort was going to be effective because of the large area and density of the knapweed infestation. The plants were small, pre-bloom and therefore not easy to see. However, a return visit to the site eight weeks later on August 9 showed that the June 15 effort had been quite successful. There were very few knapweed plants on the hillside. As a result, significantly fewer seeds were added to the seedbank in 2013, and there will be fewer large multiyear plants in 2014. We understand that Sean Monahan sprayed this area in 2012. This contributed to the success.



*Sage Creek Campground area – June 15, 2013
Les Hedquist and Mike Penfold pulling knapweed.*



Sage Creek Area Recommendations:

There will probably be plenty of knapweed on that hillside again next year due to the residual seedbank and rosettes not pulled. A similar weedpull effort each of the next couple years will greatly decrease the seedbank and be big step toward eradication. After that, continued weed pulling attention will be needed to get the last plants, but the effort should become much less strenuous. It would be best to schedule next year's weedpull about a month later so the plants will be larger, in bloom and easier to see.

About 300 feet west of the north/south fence and just north of Sage Creek there is a dense and well established patch of knapweed approximately 100 feet in diameter. **N 45.21598°, W 108.56428°** (Small red "circle" on map.) Four of the volunteers spent a couple of hours digging the healthy knapweed – too many and too hard to pull. We strongly recommend that this patch be sprayed carefully for a couple years, preferably a couple times each year. After that, regular pulling may be able to eliminate the patch.

Crooked Creek Road – June 22 – Five Volunteers

Four volunteers pulled hound's tongue and one volunteer sprayed Canada thistle. Noxious weeds are a major problem on Crooked Creek Road from vehicular traffic, road re-construction, fire restoration and livestock use. Serious efforts are needed here just stay even.

For unknown reasons (maybe just random chance, and maybe because of competition from the other weedpulls) we did not have the great volunteer turnout we did on June 15 and June 29. Due to the small group and the large scale of the hound's tongue problem on Crooked Creek Rd the day was not nearly as successful as the weedpulls at Sage Creek and Burnt Timber Ridge. Nevertheless we did pull a bunch of hound's tongue along the north end of the road. Volunteer Clayton McCracken also sprayed Canada thistle as he did many other days over the summer. His impressive effort is the big accomplishment of the summer along Crooked Creek Road.

Crooked Creek Road Recommendations:

We recommend that the Crooked Creek Road corridor be a focus of attention for weed spraying (Canada thistle and hound's tongue) for a couple of years. That might reduce the problem to the point that volunteer pulling (hound's tongue) and volunteer spraying (thistle) can make progress toward elimination of these weeds.

Burnt Timber Ridge Road – June 29 – Ten Volunteers and Larry Padden - BLM

BLM: Approximately 1½ mile south of the BLM USFS boundary at **N 45.06958°, W 108.34720°** and north a couple hundred feet, apparently confined close to the road.

USFS: Scattered along a quarter mile section of the road centered about **N 45.09477°, W 108.34948°** about ½ mile north of the BLM/USFS boundary. Knapweed was found among scattered trees 50 to 100 ft off both sides of the road. We did not find knapweed in the open grassy areas north and south of this treed section.

The ten volunteers walked both sides of the road pulling all visible knapweed in these two areas identified in 2012. We understand Sean Monahan sprayed knapweed on the Forest here in late July 2013. On August 9, two volunteers returned to both the BLM and FS sections and again pulled all visible knapweed – about 400 plants.

New Knapweed start – FS: A small new patch of knapweed was discovered on August 9 at **N 45.11073°, W 108.35006°** on Burnt Timber Rd about 1 ½ mile north of the BLM/FS boundary. These were all pulled.

Leafy Spurge - BLM: **N 45.07770°, W 108.34217°** on Burnt Timber Rd about ¾ mile south of the BLM/FS boundary. One previously known leafy spurge patch on BLM was flowering on June 29 so volunteers removed all seeds and flowers to prevent spread of this patch. This small spurge patch (6 ft by 2 ft) was later sprayed with herbicide and was very dead on August 9. This is apparently the only known spurge patch on Burnt Timber Road.

Since these are fairly new, small and isolated populations of knapweed and spurge, Burnt Timber Ridge Road has an excellent chance to have its knapweed and spurge populations completely eradicated. Three times in the summer of 2013 all visible plants were pulled or sprayed. The seed bank for this location is very small compared to what it might have been without the volunteer weedpull work.

Burnt Timber Ridge Recommendations:

This was probably the most successful of the three weedpulls in 2013. It should be top priority for a repeat in 2014. The weedpull leaders are already making tentative plans to do so; several volunteers have requested notification so they can participate again.

The knapweed was small and inconspicuous - none were blooming on June 29. Mid to late July would probably be a better time for the knapweed pull. But the spurge patch should be checked and sprayed if necessary by the end of June or earlier in 2014.

We found that in the often hard and rocky soil the best tool for knapweed pulling/digging is often a hammer and large screwdriver.



*Leafy Spurge on Burnt Timber Ridge Rd – June 29, 2013
L to R: Dave Omen, June Stillwell, Susan Newell, Margaret Webster.*

General Recommendations

1. Successful 2013 weedpulls need to be followed by weedpulls and/or spraying in 2014 so the infestations do not simply revert to the previous condition or worse. Weed eradication is possible in some areas with continued efforts.
2. It is important to have more than one visit to each area during the summer to get plants that were missed or not yet up for the first weedpull or spray. Dates for future weedpulls should be chosen based on experience in 2013. Multiple weedpulls and sprayings need to be timed and coordinated to optimize effectiveness. Spraying from vehicles helps, especially with large and dense infestations, but the only way to finally eradicate weeds is by pulling or spraying on foot.
3. One possible strategy is to find specific leaders to adopt, monitor and pull weeds in a specific location over a multiyear period. That individual would confer with agency weed manager at the beginning of each field season and provide a summary of work to agency at the end of the field season.
4. For heavily traveled routes like Crooked Creek Road, any ground disturbing actions should include a sufficient budget line item for thorough weed control and eradication. Permittees (recreation, utility areas, timber/forest products, grazing, etc) who use the area as part of their permit should pay a fee and/or be obligated to prevent, control and/or eradicate noxious weeds in the area of their permit.
5. Seriously consider limiting traffic through badly infested areas by emergency closure. Invite users to help with weed eradication so the area can be re-opened..

Thanks to the Volunteers (some of whom participated in two or three weedpulls) - Craig Christopherson, Laura Silsbee, Mike Penfold, Doug Durward, Les Hedquiist, Bob Johnson, Jennifer Lyman, Tom Lyman, Clayton McCracken, Jack Sterling, Rita Harding, Margaret Webster, Dave Omen, Terri Hogan, Carolyn Torske, June Stilwell and organizers Susan Newell, Bernie Quetchenbach and Dick Walton.

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Cc: Billings Field Office BLM: Larry Padden, Jim Sparks, Craig Drake;
Beartooth Ranger District, Custer National Forest: Sean Monahan, Terry Jones, Traute Parrie;
Carbon County Weed District: Brian Ostwald