A 2019 Weed Guide for the High Lostine Owners Association

To help property owners cope with invasive weeds the Weed Committee (Jim Dameron) put together a guide tailored to the HLOA. You can look for 4 things here:

1. A list of resources (both people and material help);
2. A targeted list of problem weeds specific to the High Lostine, with information about how to identify each;
3. Coping strategies;
4. Proposed weed management strategies for HLOA common areas.

I'd like to thank Jean Jancaitis and Kris Crowley of Wallowa Resources, and Ryan Oberhelman, the Wallowa County Vegetation Manager, for their invaluable help and critique in putting together this document.

2019 Wallowa County's Cost Share Program

As in past years, the County will help pay for the cost of fighting weeds on your property. Note however the changes in effect for 2019:

If you hire a professional contractor (see list of contractors on last page of this report):

1. The County will reimburse 50% of those services up to $500 cap.
2. However if some of your weeds include **knapweed** or **meadow hawkweed**, the county will eliminate the cap and reimburse 50% of your costs without limit.

If you treat weeds yourself:

1. The county will provide free herbicide in exchange for your time and effort, as long as you are treating for knapweed or meadow hawkweed. The county will also provide backpack sprayers or hand sprayers to property owners, without charge.
2. Ryan Oberhelman the County Vegetation Manager has offered to visit the HLOA and do a demonstration on mixing and spraying herbicides.

2019 HLOA Targeted Weeds

I've identified 6 weeds to worry about[1]:

1. Spotted knapweed
2. Cheatgrass
3. Canada thistle
4. Meadow hawkweed
5. Houndstongue
6. Sulfur cinquefoil

[1] I developed this list in consultation with Wallowa Resources and the County Vegetation Manager. I also reviewed the Wallowa County Integrated Weed Management plan.

Of course the world is full of many more weeds than these. Besides…what constitutes a weed is partially in the eyes of the beholder. So treat this list as a starting point; feel free to develop your own favorite weed list. But remember that weeds become a community-wide problem when they become invasive, reduce bio-diversity by driving out other species of plants, increase fire danger and reduce the economic value of the land. The HLOA is also a gateway to Eagle Cap. We can help provide a barrier to keep weeds from encroaching into the wilderness.

General Approaches to Controlling Weeds

We in the HLOA really have only four ways to deal with invasive weeds.

1. Manual removal—Dig/pull them up. This is do-able for some weeds on our target list (but not all of them). Manual labor works best for small areas. Digging is hard work, but can also be satisfying to some folks.

2. Herbicides—Herbicides can be very effective, but must be treated with great respect. It is often best to allow professionals to apply. This is especially true if you live along the river or a stream. Two keys: 1) match herbicide to weed; 2) apply at the proper time of year. If you pick the wrong month to spray you will be wasting time and money.

> **Note on Roundup**: Roundup is a general purpose herbicide. It will kill everything it is sprayed on. It has its place, but note that many weed seeds are impervious. If a plant has already formed seeds, Roundup might not kill the next generation. In addition, if you spray with Roundup and don't replant, it is likely that invasive weeds will soon be your uninvited guests. In a sense Roundup can act as if it were encouraging weeds.

3. Biological agents—This refers to the use of organisms (insects or diseases) that target (eat, kill, etc.) weeds. While an intriguing approach, many weeds aren't susceptible to any known agents. However, this is an area with lots of on-going research. If you are interested in biologicals, please contact the Oregon Department of Agriculture.

4. Replanting/revegetation—Weeds grow back, sometimes more vigorously than before removal. Replanting an area with native or non-invasive plants is often a critical step in successfully controlling invasive weeds. Toward that end, Wallowa Resources has put together a list of seeding recommendations for us. So if native grasses bring out the Walt Whitman in you take a look at these websites:

- For non-natives:
  - Oregon Trail Seeds has an Imbler location and they are a great source for pasture grasses. https://www.otseeds.com/products.html
  - Grassland West is another option out of Clarkston, WA. http://grasslandwest.com/reclaimation/
- For native plants, BFI is a great source. http://www.bfinativeseeds.com/contact.aspx

- EASTERN OR-WA MOUNTAIN FOREST MIX - $12.90/lb.
  26% Blue Wildrye
  14% Bluebunch Wheatgrass
  18% Idaho Fescue
  18% Mountain Brome
  14% Prairie Junegrass
  10% Red Fescue
- For open areas, OREGON HIGH DESERT - $14.25/lb.
  42% Bluebunch Wheatgrass
  16% Bottlebrush Squirreltail
  22% Idaho Fescue
  8% Prairie Junegrass
  12% Sandberg's Bluegrass

Specific strategies for each of the six targeted weeds:

1. Spotted knapweed (Centaurea Stoebe)

Wallowa County weed experts have identified the High Lostine (and neighboring areas) as a "spotted knapweed containment area." This means that knapweed is well established here. The County's goal is to keep it from spreading further. We owe it to ourselves and the County to assist in this effort.

Identification: Knapweed is a member of the sunflower family. It was introduced from Eastern Europe (where, ironically, and perhaps perversely, it is now endangered!). An individual plant will live for 2 years and reach a height of 1 to 3 feet. Flowers are pink to pink/purple. The area just below the flower (the bract) has a distinctive oval shape and black spots (hence the weed's name). The plant blooms from June to October.

What we are up against: In a way knapweed (and all weeds) are horticultural marvels. They do so many things well. Consider that a single knapweed plant can produce 40,000

seeds in a year. Those seeds can remain viable in the soil for 7 years or longer. Even more impressive, knapweed produces a chemical that inhibits the growth of surrounding plants. Grazing animals will not eat it. In fact, (to cite one example) elk have been known to change their migration patterns to avoid it.[2]

Controls:

Manual removal: Hand pulling is feasible for scattered plants or for small areas where other control methods are not practical. Try to get as much root as possible. You'll have to repeat your efforts up to 3 times a year. If you pull it, best to wear gloves. Some people have claimed serious hand damage from chemicals secreted by knapweed.

Herbicides (note the timing differences among these options):

Aminopyralid—effective before knapweed puts out buds
Picloram[3]—in Spring before stem develops
Clopyralid—until buds form
Triclolyr + clopyralid—until stem develops
Glyphosate (Roundup)—Until bud stage.
2,4,D—Until stems start to develop.

Biological Controls: Seed head moth, root boring moth, seedhead weevil, broadnosed knapweed seedhead weevil, seedhead peacock fly, root weevil.

Revegetation: See general comments above.

2. Cheatgrass (Bromus tectorum)

In my limited experience cheatgrass isn't new to Wallowa County but is new to our sub-division. It seems to be quickly gaining a hold.

Identification: Cheatgrass is an annual grass, meaning it sprouts, grows, produces seed, and dies within one growing season. It is known as a winter annual because its seeds usually germinate in the early or late winter months. The plant grows in spring, and then it dies by early summer. Cheatgrass can be several inches to more than 18 inches tall. Typically, it has a nodding seed head that resembles a shepherd's crook. The leaves are hairy and bright green for a short time in early spring. However, they quickly dry out and turn reddish-brown, then straw color as the summer progresses. The seeds are notorious for getting stuck in socks and dogs' ears.

[2] Wallowa Resources
[3] Picloram is restricted use herbicide and can only be purchased/applied by certified applicators.

What we are up against: Cheatgrass roots grow in the winter and germinate early, taking moisture from other plants. Cheatgrass can reach densities exceeding 10,000 plants per square yard. Since it dries out so early in the season, cheatgrass is also a very serious fire hazard. If started on a windy day, a cheatgrass fire can produce flames in excess of 8 feet and travel 4½ mph. After a fire cheatgrass out-competes native grasses and shrubs (it is very hard to kill cheatgrass seeds, even with fire).

Controls:

The best way to deal with cheatgrass is to keep it from getting started by maintaining healthy native and non-invasive plant communities. However, if you have cheatgrass, the key is to limit seed production. Remember that this is an annual plant—no seeds, no cheatgrass.

Manual removal: you can pull small areas of cheatgrass by hand. But do it before the seeds drop and be careful to bag the plants and remove them from your property.

Herbicides: Ryan Oberhelman, the county Vegetation Manager told me that the county has gotten much better control of annual grasses (like cheatgrass) by spraying in the Fall. Fall spraying has the added benefit of lowering the risk of injuring perennial grasses (which are more vulnerable in the spring). Ryan recommends using Imazapic (Plateau/Panoramic) at 5-7oz in the acre in the late summer early fall before the rains begin again.[4]

Biological Controls: There are, as yet, no approved biological control agents for cheatgrass.

Revegetation: Replanting is critical. In Ryan's words, "I would always re-seed. Each little square inch that cheatgrass occupied is going to re-infest with weeds if you don't get some good seed in there." See list of grasses to plant.

[4] E-mail communication. Ryan Oberhelman is willing to provide a bottle of Imazapic for HLOA members to share.

3. Canada thistle (cirsium arvense)

There are many kinds of thistles in Wallowa County. I've targeted Canada thistle because it spreads both by seed and by a tenacious underground system of vertical and horizontal roots.

Identification: Canada thistle has small pink to purple flowers, one to a branch tip. The plants vary in height from 3 to 5 feet, with glossy foliage on the upper surface and woolly foliage on the lower leaf surface (this is reportedly one of the more variable characteristics). Leaves have stiff spines.[5] Stems are spineless (the cowards!).

What we are up against: A Canada Thistle seedling can reproduce in as little as 6 weeks after germination, and in one season a single plant can develop a root system that goes 6 feet deep and 20 feet sideways. Severed roots can produce new plants, so breaking roots while pulling can actually spread the weed from root fragments as small as one quarter inch long.[6]

Controls:

To eliminate Canada thistle you must tackle its root system. A successful control program requires multiple seasons, and multiple treatments within a season.

Manual Removal: Most sources state that manual removal is not effective for Canada thistle (those roots!). However, Ryan Oberhelman (County Vegetation Manager) says that he's seen success in digging out small infestations.

Herbicides: Experts recommend a spring and fall treatment cycle, with fall being more critical. Fall is when the plant is recharging its root system for the next growing season and is most susceptible to herbicides. Spraying in the spring can prevent seed set and eliminate the first growth. However, herbicide choice is less critical in the spring, since well-

[5] Oregon State Nursery
[6] Clackamas Soil and Water Conservation District

established Canada thistle will eventually regrow after a spring application, regardless of the treatment.[7]

- Clopyralid + Triclopyr: up to bud stage
- Aminopyralid (Product name: Milestone): in spring to plants in the pre-bud growth state. In fall when plant is active.
- Picloram[8]: Before budding
- Metsulfuron + chlorsulfuron: first appearance of base leaves through flowering stage
- Metsulfuron + Dicamba + 2,4,D: in spring to plants in early stage.

Biological Controls; None have proven very effective.

Revegetation: a well-established groundcover, particularly a grassland planting, greatly aids control efforts by competing with the thistle as you suppress it. See above list.

4. Meadow Hawkweed (Hieracium pratense)

County weed managers have set their sights on a few critical areas, including the Lostine (our backyards in other words), in an attempt to keep Meadow Hawkweed from spreading. They consider Meadow Hawkweed "a truly aggressive invader."

Identification: Meadow Hawkweed is a creeping perennial plant with shallow, fibrous roots and long runners that look a little like strawberry runners. The leaves are spatula shaped, up to 6 inches long, and typically stay very close to the ground. The stems are up to 3 feet tall, covered with short bristly hairs, usually leafless, and contain a milky sap. One clump of leaves will have 2-8 flower stems. Flowers look like dandelions with up to 30 flower heads near the top of the plant. The plant flowers from May to July. The seeds also look very similar to Dandelion seeds and are spread by wind. [Bye the bye….The name Hieracium comes from the Greek 'hierax', meaning hawk: allegedly keen-sighted hawks of yore ate the sap to sharpen their eyesight. I do not recommend you try it.]

[7] http://www.pgc.state.pa.us/crep UADA Fact Sheet #1

[8] Picloram is restricted use herbicide and can only be purchased/applied by certified applicators.

Caution: There is a native Hawkweed that looks very similar to the invasive weed variety, but the native is extremely hairy, does not have runners, and usually does not grow in thick patches.[9]

What we are up against: Meadow Hawkweed can take root and form new plants through rhizomes (underground horizontal stems), runners or via wind-born, highly mobile seeds that spread very quickly.

Controls:

Manual Control: Some experts say that small infestations of meadow hawkweed can be eradicated by careful and repeated digging of the ground-hugging leaves and roots. If you do so, be sure not scatter the roots or runners: they will start new plants. Mowing is ineffective. Fertilizer can help natives out-compete meadow hawkweed. [10] That said, Ryan Oberhelman cautions: " I am REALLY wary of the risk of digging meadow hawkweed. All it takes is 1/8th of an inch of root or stolon fragment to make it somewhere it doesn't belong, and then we are accidentally spreading the weed while trying to kill it."

Herbicides: Spring treatments, with both herbicide and nitrogen fertilizer, work best. Picloram[11] (Tordon 22k), Clopyralid (i.e. Transline, Redeem) or Aminopyralid (Milestone) should be applied after the leaves at the base of the plant emerge, but before formation of the flower buds. Fall treatments should also be effective using these chemicals, but research is limited.[12]

Biological controls: No approved biological control agents are available.

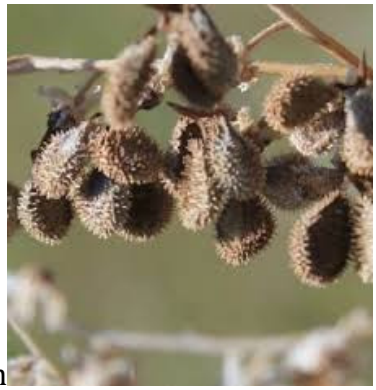
Revegetation: same drill as above.

5. Houndstongue (Cynoglossum officinale)

Houndstongue is highly invasive, thanks in part to the successful mobility strategy of its seeds, which are covered in hooked barbs that easily attach to all creatures great and small.

Identification: Houndstongue is named for the leaves at the base of the plant that are velvety and shaped like a dog's tongue. The typical plant is from 8 to 30 inches tall. The leaves on the stems are long, but get smaller toward the top. The flowers are reddish/burgundy and bloom from June to August. Seeds are famously nicknamed 'Velcro buttons.' They stick to just about everything.

[9] Wallowa Resources
[10] Wallowa Resources
[11] Picloram is a restricted use herbicide and can only be purchased/applied by certified applicators.
[12] Wallowa Resources

 m  m 

What we are up against: The barbed seeds stick to hair, wool, fur, socks, you name it. Houndstongue also contains pyrrolizidine alkaloids which is toxic to livestock.

Controls:

Don't spread the seeds.

Manual Controls: Digging and/or pulling are effective if done frequently. Remove as much root as possible. Try to pull up plants before they go to seed. If you pull up the plants after they have flowered, be careful to bag and remove them from your site to prevent seed spread.

Herbicides:

Metsulfuron (Escort): any time the plant is actively growing.
Chlorsulfuron: early to flowering stage.

Note: Because of the hairy leaf, it is important to use a surfactant to help the herbicide stick to the plant. The easy way to do this is to add a bit of dish soap to the mix. The normal dose is about a tablespoon per gallon of spray.

Biologicals: No approved biological control agent is currently available.

Revegetation: Strongly encouraged. Houndstongue does not withstand regular cultivation and is less competitive in areas with healthy grass cover. See list above.

6. Sulfur cinquefoil (Potentilla recta)

Sulfur Cinquefoil spreads rapidly and is difficult to control. Once established, it forms dense stands and out-competes perennial grasses and other plants.

Identification: Named for its pale, "sulfur yellow" flowers, Sulfur Cinquefoil is a woody perennial with a taproot and several shallow branch roots. It can grow to about two feet in height. The leaves look like marijuana. They grow upright against the stem, overlap one

another and are lighter green on the bottom than on the top. The plant is covered with both fine and coarse iridescent hairs (everywhere except the flower itself). Flowers can have a slightly orange hue in the center. The plant produces thousands of tiny brown seeds.[13]

Caution: Be careful not to confuse the sulfur cinquefoil with the native cinquefoil. The native has bright yellow flowers, not pale sulfur-colored flowers. The native also lacks long hairs along the stems.

Control:

Manual Control: Digging is effective for small populations if the soil is moist and loose enough and if the majority of the woody root is removed. Mowing is not effective, since it can stimulate "crown-sprouting" and/or spread the infestation if plants are already in seed.

Herbicides: Several herbicides are effective but may require repeat treatment and a suitable surfactant. According to Wallowa Resources: Spring treatments, with both herbicide and nitrogen fertilizer, work best. Picloram[14] (Tordon 22k), Clopyralid (i.e. Transline, Redeem) or Aminopyralid (Milestone) should be applied after most of the basal leaves emerge, but before flower buds form. Fall treatments should also be effective for these chemicals, but research is limited.[15]

Biological Control: There is no approved biological control agent for Sulfur Cinquefoil.

Revegetation: Do it! Establishing healthy perennial plant communities, with both broadleaves and grasses, is essential to long-term success.

[13] Wallowa Resources
[14] Picloram is a restricted use herbicide and can only be purchased/applied by certified applicators.
[15] Wallowa Resources, Wallowa County Weed Watch

Proposed Weed Management Plan for HLOA Common Areas

The HLOA has joint responsibility for at least 4 common areas. To manage weeds in those areas, the HLOA Weed Committee proposes the following activities:

- Along Tamarack Lane: Contract with a professional sprayer in late spring.
- Commons (along the river): Weeds are currently under control. Ask property owners to remain alert to weed invasions, especially Knapweed.
- Forested area behind the west edge of the development: Re-assess after any tree thinning.
- Water tank (and access road to tank): Manually pull weeds near the tank in spring. Replant with native grasses. Contract with professional weed sprayer to treat access road.

List of Professional Weed Sprayers in Wallowa County (2017-2018 Contractor List)

Herbicide Contractors:

Josh VanderZanden (Veezy Contracting)- 541-398-1092
Jake Spaur (Back Country Spraying)- 541-398-0810
Fred LaChance (Able Honor LLC)- 541-398-1620
Eric – 541-577-3202
Nikki Beachy (Meadowlark Land Services)- 541-263-1305
Heath Naughton- 541-263-2965
Skip and Luke Royes- 541-426-0265
Jon Wick- 541-263-0930
Charlie Johnson 541-398-0951

Goat grazing:

Larry Davis and Nicole Bellows (NW Goat Grazers)- 541-263-0995

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