

MANAGING INVASIVE PLANTS IN THE BOUNDARY



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Control of invasive plants designated as Noxious Weeds is the legal responsibility of the land owner or occupier.

It's Time to Get Involved and do your part to manage and prevent spread of invasive plants.

MANAGEMENT STATUS OF SELECT INVASIVE PLANTS

Spotted knapweed (*Centaurea stoebe*)



Containment work will continue along road systems to keep spotted knapweed from spreading to un-infested areas. So far bio-control insects have not produced significant drops in plant density or size. Spotted knapweed is just a lot harder to kill than diffuse knapweed. If you have spotted knapweed on your property you should control it before it spreads. If you are within Electoral Area D or E, the RDKB is offering a 50% cost share program to assist land owners with control.

Leafy Spurge (*Euphorbia esula*)

We are lucky to only have small isolated infestations of leafy spurge in our area. All sites are under management (herbicide or biocontrol) and we have seen declines on all but one site where the insects are not working as well. Presence of this weed has decreased property values in some US states so don't let it get onto your property. **Identification:** Perennial with a creeping root system growing up to 0.7 m tall. It has very odd greenish-yellow flowers inserted above greenish bracts. The stem contains a milky latex that is an irritant to grazing animals.



Blueweed (*Echium vulgare*)

Blueweed occurs in the Christina Lake area and management has focussed on reducing it on travel corridors. There is some on private lots and steep roadside banks. If you have blueweed on your property please deal with it before it becomes your neighbour's problem. Blueweed has the potential to dominate open grassland sites so it is very important to keep it from invading the Gilpin Grasslands. Beware: This plant is hard to kill with digging, so make sure you get as much of the root as possible. There are some effective selective herbicides.



Common Tansy (*Tanacetum vulgare*)

Control work has been happening along road systems to keep common tansy from spreading. Work is being done on private land as well but lots more work needs to be done to deal with the large infestation in the Sidley area.

Identification:

Long-lived perennial growing to 1.8 m in height. Crushed leaves have a strong odour. It has dense clusters of button yellow flowers at the top of the stem. It is a garden ornamental that has escaped. If you have common tansy on your property control it before it takes over your yard or field. The RDKB New Invaders program will cover 100% of the control cost up to 5 acres within Area D & E.



Orange hawkweed (*Hieracium aurantiacum*)

Orange hawkweed seems to be coming in on vehicles to recreation sites and forest service roads and is also escaping from gardens. It can take over a well manicured lawn since mowing stimulates it to spread through runners and underground roots. In natural areas this species will grow in the shade or the open and has the potential to dominate sites throughout most of the region. Since it is not palatable to wildlife further spread of this species is of high concern. The RDKB New Invaders program will cover 100% of the control cost up to 5 acres within area D & E.





Common bugloss (*Anchusa officinalis*)

Common bugloss is being managed on almost all known sites. Most isolated sites have been reduced over the past few years. The main infestation is large so full control will take years. Keep an eye out for isolated plants and patches in other areas. The flower is blue to purple with white centres. On sites where it is being manually treated we are finding the cut-off roots regenerating. We have found roots up to 1 metre long, so it will take years of treatment to starve the roots. We have found herbicide treatment in spring or late fall after the first frost to be effective. The RDKB New Invaders program covers 100% of treatment costs, so contact the program if you think you have common bugloss on your property.



Sulphur cinquefoil (*Potentilla recta*)

Sulphur cinquefoil is a long lived perennial species spreading by seed and vegetatively. It is widespread in many grasslands reducing forage for wildlife and livestock. These plants outcomplete other plants forming a monoculture. In disturbed or heavily grazed areas this can occur within a couple years. It is easily controlled through cultivation and typical cropping practices. However on range and natural grasslands herbicide is the most effective option. Grazing practices that rest areas and maintain strong competitive grass and forbs can reduce expansion on a site. The RDKB weed program - New Invaders Program covers 50% of treatment costs up to 5 acres in Area D and E. **Identification:** Sulphur yellow flowers with 5 petals born at the end of flowering stalks. The leaves are palmate with 5-7 leaflets. The stem and leaves are covered in dense hairs.



Hoary alyssum (*Berteroa incana*)

Grand Forks is the epicentre for this weed and more landowners are controlling it on their property than a few years ago. The infestation is huge and so far management has focused on roadsides through agricultural areas including Nursery, the west end, Brown Creek area and portions of Carson Rd areas. Unfortunately the herbicides available for control are short-lived, providing control up to two years.

Outside of the main infestations management is focusing on treating sites next to agricultural areas and assisting landowners with control. The RDKB is cooperating with the Min. Forests, BC Parks, Min. Transportation and utility companies to control sites on all jurisdictions. So far we are holding ground thanks to control efforts of landowners.

Management Options:

Mowing will delay seed production but stimulates the plant to flower and produce seed low to the ground. Hand pulling of small patches or lightly infested areas is effective, particularly when it is combined with reseeding. Irrigation and improving fertility improves the ability of grass or crops to compete with hoary alyssum. There are some effective selective herbicides available for fields and pastures, for more information contact us. The RDKB weed program offers 50% cost sharing for herbicide treatment in the main infestation in Area D up to 5 acres, offers 100% coverage for properties in Electoral Area E, and also offers a spray equipment loan-out program in all areas.



For FREE information on managing invasive plants:
www.boundaryinvasives.com or phone 250-446-2232
 or info@boundaryinvasives.com
 For information on the RDKB weed programs visit
www.rdkb.com under Services

INVASIVE ORNAMENTALS TO AVOID



Many invasive species were brought in as garden ornamentals and then escaped. Aggressive horticulture species spread from garden beds, hanging baskets and improperly disposed garden waste to invade adjacent parks, neighbours yards and nearby natural areas.

Be PlantWise!

Choose non-invasive plants for
your garden

www.beplantwise.ca



- Learn about invasive plants in your area and **select the right plant for the right place.** Be suspicious of exotic plants promoted as "fast spreaders" or "vigorous self-seeders" as they are often invasive plants.
- **Deadhead** (clip off) flowers, seedpods and berries of known invasive plants to reduce spread by birds and animals.
- **Properly dispose** of yard and garden waste and hanging baskets into a properly functioning compost pile or facility, or by drying out the materials sufficiently to kill remaining vegetative parts. Invasive plant parts should be put in the landfill for burial.
- **Use wildflower seed mixes with caution** as many are not properly labelled and may contain invasive species.
- **Avoid picking plants along roadsides,** gravel pits or other disturbed areas. Many of the prettiest flowers along the roadside are aggressive invasive plants.
- **Encourage** others to grow non-invasive plants.



Many gardeners are rediscovering and appreciating the beauty and diversity of **native plants.** Native species are well adapted to the local climate which helps to reduce water use, require low maintenance and improve garden soil.



GARDEN PONDS CAN BE A SOURCE OF NEW INVASIVE PLANT INFESTATIONS.

Local examples include planting of **yellow flag iris** at Saunier Lake and Wilgress Lake and **fragrant water lily** planted in Christina Lake. There are many species including **hydrilla** (*Hydrilla verticillata*), **Brazilian elodea** (*Egeria densa*), and **fanwort** (*Cabomba caroliniana*) which are believed to have been introduced to some lakes in Washington from people dumping aquarium or pond waste contents. Some introduced trees have been planted along rivers becoming a problem including **Russian olive** and **saltcedar**. Please properly dispose of pond and aquarium contents to keep our waterways healthy.

INVASIVE PLANTS SPREAD IN MANY WAYS.....



Weeds can get **stuck under vehicles dropping seed as they move**. Vehicles, ATVs, dirt bikes, UTVs and machinery can all move weed seed into remote areas.

Remove plants from under vehicles and equipment.



During landscaping projects **materials brought on site** can contain invasive plant seeds or plant fragments that can regrow.

Obtain all topsoil, manure and gravels from clean sources.



Burred seeds like hound's tongue (*cynoglossum officinale*) can get **caught on animals** passing by or clothing and shoes.

Remove seeds from clothing, pets, and gear.



Weed seeds can **hitch-hike** in hay, straw, and crop seed. Seeds can get **caught on farm equipment** (swathers, balers, etc.) and be carried to new fields or pastures.

Clean equipment regularly to avoid spreading seeds.



Puncturevine (*Tribulus terrestris*) seeds can be **picked up by bike tires** puncturing them or moving them to new locations. The seeds can also stick to pets feet.

Clean bikes and gear before travelling to new areas.



Plumed seeds like Canada thistle (*Cirsium arvense*) can travel great distances on the wind or be caught on vehicles.

Control invasives with windblown seed before seed is released.



Content of **bird seed** is not regulated so there is no requirement to clean the seed before packaging it.

Monitor under bird feeders and remove new plants you don't recognise.



Some seeds can **float on water** and spread down waterways. This infestation of Japanese knotweed (*Fallopia japonica*) is so thick it is blocking access to the water for people.

Control invasive plants in your yard to prevent spread into waterways.

GIVE INVASIVE SPECIES THE BRUSH OFF. Help Prevent Spread of Invasive Plants and Animals.



- Arrive with clean gear
- Burn local firewood
- Use local or weed-free hay
- Stay on the trails
- Before leaving remove mud and seed



**STOP INVASIVE SPECIES
IN YOUR TRACKS.**

PlayCleanGo.org

BIOLOGICAL WEED SUPPRESSION

Biological control insects are natural predators that feed on invasive plants in their native country. The insects are carefully screened to ensure they will not cause problems and then introduced to control the target weed. The insects feed on the plants and reproduce suppressing growth of the target plant. Biological agents will not eradicate the population because they depend on it to complete their life cycle. For more information on biological control insects being used within BC visit www.for.gov.bc.ca/hra/plants/biocontrol/

RECOGNIZING BIOCONTROL INSECTS?

Finding the insects can be difficult so looking for signs of feeding is a good way to check or by looking for grubs (larvae) in the plant. Some widespread insects are featured below.

St. John's Wort

(*Hypericum perforatum*)

Presence of the weevil *Chrysolina* can be found from June to July and again in September. The weevils can be seen feeding on the leaves and flower buds.



Dalmatian toadflax

(*Linaria dalmatica*)

Presence of the stem boring weevil *Mecinus janthinformis* can be recognised by small round feeding holes in the leaves and oviposition marks on the stem. Adults are usually present in May and early June.



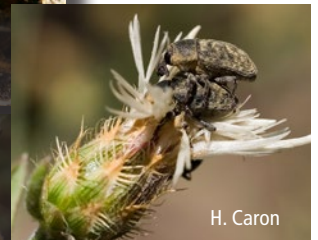
Diffuse knapweed

(*Centaurea diffusa*)

Good suppression has been observed over the past few years but populations of plants and insects to continue to cycle up and down. The most common insects include a weevil that eats seed, a weevil that mines out the root and a moth that mines out the root.



Cyphocleonus achates feeds on the root (left)
Larinus minutus eats seed (below)



H. Caron

Agapeta zoegana moth larvae in root (left)

HOW TO GET BIOLOGICAL CONTROL FOR YOUR PROPERTY?

To request a release of insects contact the Boundary Invasive Plant Program. For information on how to see if biocontrol agents are present visit <https://www.boundaryinvasives.com/monitoring>

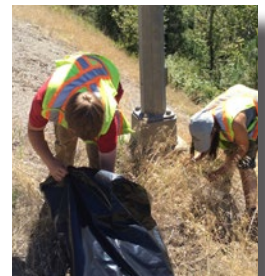
REGIONAL DISTRICT OF KOOTENAY BOUNDARY PROGRAMS

DISPOSAL OF INVASIVE PLANTS

Invasive plants are accepted FREE of charge at all landfills and transfer stations in the Regional District of Kootenay Boundary. You are required to **double bag** the plants to ensure that seed is not spread during transport to the landfill and please tell the attendant so that it is buried rather than put in the compost.

Landowner Treatment Assistance Programs offered by the RDKB:

- The RDKB [Spray Equipment Loan Program](#) has backpacks, skid mount and 3 point hitch sprayers for residents within the Boundary to borrow.
- The RDKB offers a [New Invaders Program](#) (Area D & E only) that will treat up to 5 acres with herbicide for control of priority invasive plant species without charge to the landowner.
- The RDKB also offers a [Cost Share Program](#) (Area D & E only) that will cover 50% of the cost of herbicide treatment by a treatment contractor up to 5 acres for more widespread invasive plants.



For more information on the RDKB program visit www.rdkb.com under Services or call the RDKB @ 1.800.355.7352 or contact the Boundary Invasive Plant Program at 250-446-2232 or info@boundaryinvasives.com

WHEN TO SEED DISTURBED AREAS

Disturbed ground or exposed soil provides an ideal location for invasive plants to grow and reproduce. If you recently pushed a new road in on your property, or if you are planning to develop your property there are things you can do to reduce future weed problems.

The First Step is to minimize the amount of area disturbed. So carefully plan your development to retain as much intact vegetation as possible.

- Develop on previously disturbed areas where possible.
- Limit the number of roads, and reuse old roads/trails where possible.
- Salvage natural vegetation and topsoil where possible and use it to reclaim the site.



The Second Step is to revegetate the site as soon after disturbance as possible. If you can irrigate the area, then it can be seeded anytime. If it is a large area that cannot be irrigated (ex. new road) then seed as soon after disturbance as possible. The best time to broadcast seed is immediately after disturbance and before the first rain storm so the seed mixes in with the loose soil. The next best time to seed disturbed areas that are not irrigated is in the fall just before or into the first snowfall. **The Third Step** is to monitor the site to ensure your seeding worked and re-seed if needed.



*This road was not seeded after it was built creating an ideal location for Oxe-eye daisy (*Leucanthemum vulgare*) to quickly establish.*

WHAT SEED TO USE?

There is no such thing as totally weed free seed, but there are different grades of seed available with differing tolerances for noxious and other weed seed. The seed grades available are Canada and Common. Each of these grades are further broken down into No 1 and No 2, with No. 1 being of higher quality. **The seller and packager or labeller, are required to provide information on any noxious weed seed present upon request by the purchaser.** This information is not listed on the label, so if you want it, you should ask for the germination test results. Considering how expensive the equipment and labour costs are to reseed an area, it is better to ask questions and pay a little more for high quality seed, rather than bring in new weeds.

Contaminated seed is suspected for introducing orange and yellow flowered

hawkweeds onto several roads in our area, and scentless chamomile to a hayfield in Rural Grand Forks. The minimum recommended seed grade for seeding disturbances is **Common No. 1 Forage mix grade or a mix with less weed seed content than this grade.** Contact local seed suppliers for a recommendation on what species to plant.

Wildflower seed mixes can be another source of weed introductions. Only some



Single species seed packages are less likely to be contaminated with invasive plant seeds.

individual flower species are regulated under the Seeds Act, unfortunately wildflower mixes are not. Wildflower does not equal native flower. A study by the University of Washington Centre for Urban Horticulture grew 19 packets of wildflower seed mixes marketed in the Pacific Northwest and found each contained between three to 13 invasive species, and eight had seeds from plants considered noxious in at least one state or Canadian province. The study recommended purchasing single species seed packages rather than wildflower mixes.

Ask questions when you buy seed and read the label to ensure you are getting the quality of seed that you want.

BOUNDARY INVASIVE SPECIES SOCIETY

The Boundary Invasive Species Society was initiated in 1998 in response to public pressure to improve invasive plant management. The over riding objective of the society is to work cooperatively to effectively manage invasive plants in the Boundary to protect our shared environmental, agricultural and recreation resources from further impacts. For **FREE** information on managing invasive plants, assistance with identification or to report contact us 250-446-2232 or info@boundaryinvasives.com, Facebook or www.boundaryinvasives.com

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"We acknowledge the financial assistance of the Province of British Columbia"



NEW INVADERS TO WATCH FOR



Yellow Starthistle
(*Centaurea solstitialis*)



Puncturevine
(*Tribulus terrestris*)



Black henbane
(*Hyoscyamus niger*)



Rush Skeletonweed
(*Chondrilla juncea*)



Field Scabious
(*Knautia arvensis*)



Tansy ragwort
(*Senecio jacobaeae*)



Perennial pepperweed
(*Lepidium latifolium*)



Flowering rush
(*Butomus umbellatus*)



Hydrilla
(*Hydrilla verticillata*)

PLEASE REPORT ANY SITES that you suspect the presence of NEW invasive plants to info@boundaryinvasives.com or use the Report-A-Weed app available for iphone and android.

