



PEACE RIVER REGIONAL DISTRICT

STRATEGIC PLAN and PROFILE OF INVASIVE PLANTS MONITORING COMMITTEE MEETING

A G E N D A

for the meeting to be held on Wednesday, December 2, 2015
at the Regional District offices, **1981 Alaska Avenue, Dawson Creek, BC**
commencing at 10:00 a.m.

Conference call: 1-877-385-4099 Participant ID: 8353633#

1. **Call to Order:** **Chair Leonard Hiebert**
2. **Notice of New Business:**
3. **Adoption of the Agenda:**
4. **Adoption of Minutes:**
 - M-1 Strategic Plan and Profile of Invasive Plants Monitoring Committee Meeting Minutes of April 1, 2015
5. **Business Arising from the Minutes:**
6. **Correspondence:**
 - C-1 November 3, 2015 email from Arthur Hadland regarding Scentsless Chamomile (*referred by the Regional Board from its November 12, 2015 meeting*)
7. **Delegations:**
 - 10:30 am** D-1 Re: Educating Livestock to eat weeds
 - a) Kathy Voth, Livestock for Landscapes; and
 - b) Lori Vickers update on success of program
 - 1:30 am** D-2 Mike Pangman, Area Controller regarding an update on the Regional District's 2015 invasive plant program activities.
8. **Reports:**
 - R-1 Roundtable 2015 Agency Program Reports:
 - a) Ministry of Forests, Lands and Natural Resource Operations;
 - b) BC Hydro;
 - c) Ministry of Transportation and Infrastructure;
 - d) Rancher Program;
 - e) Aboriginal groups;
 - f) Mike Edgar, Progress Energy – 2015 Invasive Plant Program;
 - g) Other Oil and Gas sectors;
 - h) Other agencies.
 - R-2 2015 Compliance and Enforcement program and input for initiation of 2016 field season by **Denise Booy**, PRRD Invasive Plant Coordinator

8. **Reports:** (continued)

- R-3 2015 Education and Outreach program and First Nations outreach program by **Kari Bondaroff**, PRRD Invasive Plant Program Manager. Program Manager

9. **New Business:**

- NB-1 2015 Strategic Plan and Profile – changes for 2016 – **Kari Bondaroff**
- NB-2 2015 Plant document - feedback
- NB-3 Hawkweed Containment line - **Denise McLean**
- NB-4 Scentsless Chamomile bio-control and strategy for treatment - **Denise McLean**
- NB-5 New programs – “Play, Clean, Go” and “Buy it where you burn it” – **Kari Bondaroff**

10. **Items for Information**

- I-1 Terms of Reference for the Strategic Plan and Profile of Invasive Plants Monitoring Committee.

12. **Adjournment:**



PEACE RIVER REGIONAL DISTRICT

M-1

Strategic Plan and Profile of Invasive Plant Monitoring Committee Meeting Minutes

DATE: Wednesday, April 1, 2015

PLACE: Regional District offices, Dawson Creek, BC

PRESENT: Director Leonard Hiebert – Meeting Chair
Director Brad Sperling, Electoral Area 'C'
Art Seidl, Peace River Regional Cattlemen's Association
Eric Weetman, Caribou Road Service
Mike Pangman, MGP Contracting
Perry DeAlmeida, District of Taylor
Elizabeth Hunt, Ministry of Forests, Lands and Natural Resource Operations
Eric Nijboer, Spectrum Resource Group
Katrinya Schreiner, Spectrum Resource Group
Doug Beale, Operations Manager, District of Tumbler Ridge
Ella Head, District of Tumbler Ridge
Vaughn Leuschen, Dow AgroSciences
Jill Copes, Cecil Lake
Jim Collins, Fort St. John
Brian Stratuliak, Peace River Regional Cattlemen's Association
Julie Robinson, Ministry of Agriculture
Denise McLean, Ministry Forests, Lands and Natural Resource Operations
Fernie May Garbitt, Saúlteau First Nations
Inge-Jean Mattson
Brian Paterson

By teleconference

Katherine Capot-Blanc, Fort Nelson First Nations
Raylene Otto, Ministry of Transportation and Infrastructure

Staff

Jeff Rahn, General Manager of Environmental Services
Kari Bondaroff, Manager of Invasive Plant Program
Suzanne Garrett, Corporate Services Coordinator

- 1) Call to Order: The meeting was called to order at 10:05 a.m.
- 2) Adoption of the Agenda
MOVED by Doug Beale, SECONDED by Brian Stratuliak, that the Strategic Plan and Profile of Invasive Plant Monitoring Committee meeting agenda for the April 1, 2015 meeting, including additional items for the agenda, be adopted as amended:
- Notice of New Business:**
- Adoption of the Minutes:**
- M-1 Strategic Plan and Profile of Invasive Plants Monitoring Committee Meeting Minutes of November 5, 2014
- Business Arising from the Minutes:**
- Correspondence:**
- C-1 February 12, 2015 letter from the Minister of Forests, Lands and Natural Resource Operations regarding the *Weed Control Act*.
- C-2 handout – March 30, 2015 email regarding New Forest Invasive Species
- Reports:**
- R-1 2015 IPC – PRRD Strategic Plan and Profile – for discussion

2) Adoption of the
Agenda (continued)

New Business:

NB-1 Update on changes to Tordon 101 and Grazon – Vaughn Leuschen

NB-2 Update on Weed Control Act and regulation – Denise McLean

Items for Information

I-1 Northern Rockies IPC Meeting Minutes of November 13, 2014

I-2 IPC Monitoring Committee Terms of Reference

Adjournment:

CARRIED.

ADOPTION OF MINUTES:

3) M-1 SPP IPC
Mtg. Min. of Nov 5,
2014

MOVED by Elizabeth Hunt, SECONDED by Jim Collins,
that the Strategic Plan and Profile of Invasive Plant Monitoring Committee Meeting
minutes of November 5, 2014 be adopted.

CARRIED.

CORRESPONDENCE:

4) C-1 re; Weed
Control Act

Concern was expressed that range tenure holders are not able to treat weeds
i.e. Creeping (Canada) Thistle under the current Integrated Pest Management Plan
(IPMP) on range lands. Yet the tenure holder has an obligation to treat weeds on
their tenure. This is a gray area and needs to be clarified.

REPORTS:

5) R-1 re: Strategic
Plan review

Committee reviewed the draft 2015 Strategic Plan and Profile, with the following
revisions:

- Page 3, last paragraph – add the words “some” before native plants and “may”
before plague. To read as follows “Within the PRRD, some native plants may plague
our agriculture sector,
- Page 4, description of EDRR is not the same as the description on Page 15 (they
should be the same).
- Page 5, add cell number
- **Appendix 5 EDRR revisions:**
- Annual bluegrass, is common grass and used on golf courses in the region.
However it is detrimental to fine seed industry. Move to Category B.
- Bid Headed Knapweed – under Management recommendations - delete the second
sentence .
- Himalayan balsam – also known as Policemen’s Helmut, include both names for
ease of reference.
- Hound’s Tongue – regulated under another agency list, put on new appendix list
- Jointed Goatgrass – needs to be mentioned, Provincial EDRR list – put on new
appendix list
- Mustard, dog – picture needs to be clearer, obtain more information and move to
“Education/Awareness”
- Knotweed species – list all 4 i.e. Giant, Japanese
- Scotch Broom – remove from list, does not grow here
- Nodding Thistle – move to “Education/Awareness”
- Stinking mayweed, dog weed – move to “Education/Awareness”
- Velvet Leaf – on Provincial EDRR list – put on new appendix list
- Wormwood or Absinthium – move to “Education/Awareness”

REPORTS:

- 5) R-1 re: Strategic Plan review (continued) - **Appendix 5 Category A – High Priority**
- Comfrey – needs more research, sites in Chetwynd and Fort St. John
 - Cypress, spurge – move to Regional EDRR list, make sure horticultural societies are not selling the seeds.
 - Dame's Rocket – move to "Education/Awareness"
 - Field scabious/blue button – move to Regional EDRR list
 - Marsh thistle – move to Regional EDRR list
 - Mountain bluet – move to Regional EDRR list
 - Russian Thistle – need to complete more inventory, how many sites in the area
 - Shasta Daisy – move to "Education/Awareness"
- 6) Lunch The meeting recessed for lunch at 12:10 p.m.
- 7) Reconvene The meeting reconvened at 12:35 p.m.
- 8) R-1 cont'd: **Appendix 5 Category A – High Priority**
- Tall (Meadow) buttercup – move to Category B, need to complete more inventory, collect samples and clearer pictures for educational purposes. Change name tag to "Tall/Meadow buttercup"
 - Yellow clematis – move to "Education/Awareness"
- Appendix 5 – Category B – Medium Priority**
- Creeping (Canada) Thistle – survey and treat if threatening agriculture, add clause to management recommendation (use same wording used in Toadflax description)
 - Goat's-beard – can be confused with "pratensis" - carry out education/awareness on native versus aggressive species, identification information on how to recognize differences. Remove the reference to the non-aggressive species.
 - Oxeye Daisy – impacts fine seed industry, seeds cannot be separated. It is a priority in terms of risk, need to stay ahead of it. If site is adjacent to/and threatens agriculture then it needs to be treated.
 - Sow Thistle - move to "Education/Awareness"
 - Wild Caraway – priority for Northern Rockies IPC, environmental risk, move to Category A (latin name is incorrect in the list on page 18)
 - Wild Mustard - move to "Education/Awareness"
- Appendix 5 – Education and Awareness (used to be Category C)**
- Tarweed plant – detrimental to organic farmers, keep on the list – educational for newcomers to the area.
 - Wild Oats – add "may show herbicide resistance"
 - Yarrow – remove from list

It was noted that the Appendix will be separated from the main Plan.

MOVED by Jill Copes, SECONDED by Jim Collins,
That the Strategic Plan and Profile of Invasive Plants Monitoring Committee recommend to the Invasive Plant Standing Committee that the 2015 Strategic Plan and Profile, as amended, be adopted.

CARRIED.

NEW BUSINESS:

- 9) NB-1 re: Chemical update Vaughn Leuschen, DowAgro provided an update on changes to Tordon 101, Grazon and new products Aspect and Gateway. Topics included:
- New Aspect and Gateway
 - Clearview label additions
 - Range and pasture update
 - Additional Resources
- www.IVMExperts.com for training information
<http://provmweb.ca>
www.dowagro.com/en-ca/canada for products and information
- 10) NB-2 re: WCA and regulation update The Weed Control Act and regulation revisions will be forwarded to Committee members soon for input and review.
- 11) Committee Report MOVED by Jill Copes, SECONDED by Doug Beale, that the recommendations from the Strategic Plan and Profile of Invasive Plants Monitoring Committee Meeting of April 1, 2015 be recommended to the Invasive Plant Standing Committee for approval.
- CARRIED.
- 12) Adjournment MOVED by Jim Collins, SECONDED by Art Seidl, that the meeting be adjourned.
- CARRIED.
- The meeting adjourned at 2:45 p.m.

Leonard Hiebert
Chair

Suzanne Garrett
Corporate Services Coordinator

SEPTEMBER 2015

EVERYTHING YOU NEED TO KNOW

About Teaching Cows to Eat Weeds



PRESENTER
KATHY VOTH

WEED EATING COW SEEDS

WWW.LIVESTOCKFORLANDSCAPES.COM

This is a simple, inexpensive process that anyone can use to teach livestock to eat weeds in just 8 hours over 7 to 8 days.

You Can Do This!!

It's Not Magic. It's Animal Behavior

I started teaching cows to eat weeds in 2004 with a pilot project at Grant-Kohrs Ranch National Historic Site in Montana. The simple process I developed and refined over the next few years is based on decades of research about how animals choose what to eat, and on the research done by animal behaviorists like Skinner and Pavlov.

It's Easy

Farmers and ranchers don't have any time or money to waste. So I made the steps easy and inexpensive. Using them, anyone can teach a cow, sheep, goat, bison or any other creature to eat new foods in just 8 hours spread over 5 to 7 days.

I'm Here to Help!

I want you to be able to quit worrying about your weeds and start using them as forage. So, in this handout I've provided all the basics, along with articles and videos that will show you how to get started.

I've done so many projects with farmers and ranchers, that I can solve just about any problem you may have over the phone. So if you run into problems, give me a call.

Kathy Voth
Owner, Livestock for Landscapes
www.livestockforlandscapes.com
kvoth@livestockforlandscapes.com
520-326-8751 (Home Ofc. Tucson, AZ)

If I don't answer your call right away, do leave a message. I'm actually kind of shy and once I know who you are, I'm happy to call back.

WHY DON'T MY ANIMALS EAT WEEDS NOW?

Because they never have, and there's nothing that says they should.

Here's what we've learned about how animals choose what to eat:

Mother is the most important influence on what a young animal eats. They will eat what she eats and avoid what she avoids. As they grow, they begin to learn from their herdmates too. Here's a link to an article with a video to demonstrate this at work: <http://wp.me/p3iZtI-1Ay>

If Mom didn't eat a plant, and no herd mates eat it, the animal is unlikely to try it. Second, animals are "neophobic" or afraid of new things. Like us, they're likely to keep doing what they've always done as long as it works for them.

Here's a link to an article to help you see how this works: <http://sp.me/p3iZtI-iii>

To get around this, we're going to use routine, and tasty treats to open trainees minds to all the tasty things in their pastures.

How to Teach a Cow to Eat A Weed

Here's an article describing the entire process, along with a video showing how I used this to train cows in Boulder, Colorado: <http://op.me/p31ZtI-vM>

1. Know Your Plant.

Big Bonus - Weeds are nutritious and no more toxic than other forages!

Nutritional value is important because scientists have learned that animals choose what to eat based on the internal feedback from nutrients and toxins in their foods. The more nutritious a weed is, the more likely the animal is to eat it.

I've tested enough weeds for nutritional value to have developed a rule of thumb: "If it's green and growing, it's nutritious." In fact, most weeds are equal to or better than alfalfa in nutritional value. As forbs, they are generally less fibrous than grasses, so they are more digestible. Last but not least, many maintain their value through the growing season longer than grasses do. All this means that weeds are good forage.

But what about toxins?

All plants contain toxins, including the grasses we plant for our livestock. But very few plants are so high in toxins that they will cause harm or kill livestock.

Naturally, you don't want to teach your animals to eat a weed that could cause harm. To help you know the difference, I've put together information about weeds here:

www.livestockforlandscapes.com/edible.htm. And here's a flyer on Weed Nutritional Values and Toxins too: <http://wp.me/p31ZtI-2Aj>

2. Choose Trainees.

Big Bonus - You don't have to train all your animals. Herd mates will learn from each other when you mix trainees into the larger herd.

Make the process easy on you. Choose animals that will be around for awhile, and that are in a pasture that is convenient. It's best to have at least a dozen animals in your group. I generally train groups of 25 to 50 at a time.

3. Make the unfamiliar seem familiar.

Big Bonus - Train once and you're done. As long as you have one trained animal on your place, or animals that have learned from a trainee, you will never have to train again.

Routine makes everything seem normal. Your training routine will be to show up at a particular time, morning and afternoon, making the same sounds, driving the same vehicle, with the same feed tub/trough, and something tasty for your trainees to try.

Every morning and afternoon for 4 days, you'll feed something an unfamiliar nutritious food. Just go to the feed store and pick 8 different things, one fifty pound bag per 25 cattle. Choose a variety of textures, flavors, shapes and smells (Soy flake, wheat bran, rolled oats, alfalfa pellets, range cubes,

Used supplement tubs are a great training tool. They're big enough that more than one animal can eat at a time, but deep enough that one can't see what the other is eating. This boosts competition and encourages trainees to try new things. You'll need one per 3 cows.



and COB for example). Trainees learn that every time you show up, they may not recognize what you're giving them, but it will surely be something good to eat.

On the 5th and 6th, and 7th days skip the morning feeding. Then clip weeds, mix with a bit of feed and serve them up in the afternoon. Loosely fill two 50 lb grain sacks or one 250 lb supplement tub per 25 cattle trainees.

Weeds will just be one more new thing in a series of strange things. Trainees will try the weeds, get the good feedback, and begin eating them in pasture. Start watching the weeds in your pasture as soon as you start feeding weeds. Trainees will often try them shortly after eating them in tubs.

Final Bonus - You don't have to train them to eat every single weed.

Once trainees realize that not all food looks the same, they will begin to experiment in pasture, and eventually eat a little, or even a lot of everything they find. Here's why, as long as they have variety, they won't be harmed. <http://wp.me/p31ZtI-M7>.

Bonus Training Tips

You don't have to teach cattle to eat every single weed in your pasture.

Choose one, teach them to eat that, and then watch to see what else they start to eat in pasture. If they don't try something that you know is safe for them. Bring a few training tubs out and put them near the weed you'd like them to try. Clip a bit of the weed, put it in the tub, and you're good to go. The cows will remember that the tubs mean "Good Food," they'll eat the weed, and then begin to eat it in pasture. It's easy!



Use your training tubs as a tool to make moving cows to new areas easier.

My trainees know that when they hear my truck horn or see me with tubs it means "Good Food." When I'm all alone and need to call them in from a long distance, I drive my truck to where I'd like them to be, honking along the way. I've also used the car alarm to call them while standing nearer their line of site holding a tub up so they can see. They come running, making it easier for me to work in large pastures by myself.



Working with stockers? Use weed training to acclimate them to their new home.

Even the wildest cattle and bison I've worked with have gentled as part of the short teaching process. They quickly learn to expect that the teacher brings good food and can be trusted.

By teaching your stockers to eat weeds, you'll also be able to use them to manage your pastures, and they'll put on weight thanks to the extra forage you have to offer beyond just grass.



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"Lots and lots of information I can access easier and read quickly."

"We like the innovative and practical advice you bring us from yourself and others that encourage us to break away from starve to death traditional agricultural practices."

"I really appreciate the broadly accessible writing that takes complicated science and replaces the jargon with understandable/actionable language."

"I get inspiration from the underlying sense of community that holds the articles together. A pervasive sense of humor is a plus too."

Regional Early Detection Rapid Response Plants

Regional EDRR species are a significant threat and is new to the area under consideration. The achievable management objective is eradication. This list includes brand new incursions and high risk invasive plant species that are extremely limited in extent (i.e. have less than 10 very small sites) in the area under consideration. Some of these species may not be present within the PRRD but are found in adjacent areas and are at risk of being introduced.

COMMON NAME	SCIENTIFIC NAME	EAT IT?
Baby's breath	<i>Gypsophila Paniculata</i>	There's no indication that this causes problems. Best control will come based on grazing it before it flowers.
Big Head knapweed	<i>Centaurea macrocephala</i>	Yes. Knapweeds are very tasty!
Bohemian knotweed	<i>Fallopia x bohémica</i>	I couldn't find this one.
Brown knapweed	<i>Centaurea jacea</i>	Yes. Knapweeds are very tasty!
Cheat grass	<i>Bromus tectorum</i>	Yes, but it needs to be while it's green. Otherwise it's not very palatable.
Chickory	<i>Cichorium intybus</i>	Yes. Cows in Colorado taught themselves to eat this. It may not be as nutritious because it's got a lot of stem to leaf.
Creeping bell flower	<i>Campanula rapunculoides</i>	This plant is not associated with any known toxins. I have not trained animals to eat it, so I'd teach them to eat something else first and then let them add this on their own in a pasture with lots of variety..
Cypress spurge	<i>Euphorbia cyparissias</i>	There are a number of Euphorbia species listed that do cause irritation and even poisoning, but this one is not listed among them. I have not taught animals to eat it, so I would teach them to eat something else and then let them add this one on their own in a pasture with lots of variety.
Field Scabious/Blue Button	<i>Knautia arvensis</i>	Yes, you can graze this one, but again, it's high stem to leaf ratio makes it less tasty to animals.
Giant knotweed	<i>Polygonum sachalinense</i>	Yes! Start slowly though. Knotweeds can be nitrate accumulators, so rumen microbes need 7 to 9 days to adapt.
Himalayan balsam/Policeman's Helmet	<i>Impatiens glandulifera</i>	Yes!
Hoary alyssum	<i>Berteroa incana</i>	With decent crude protein and no known issues, this is a good candidate for grazing.
Hoary cress	<i>Cardaria draba</i>	Yes! High protein, and it regrows well, so can provide a lot of forage, especially during drought.
Hound's tongue	<i>Cynoglossum officinale</i>	No. If animals eat a small amount as part of a balanced diet, they should be fine. But toxins accumulate over time and they can cause liver damage, wasting and ultimately death.

D-1 handout - Dec 2, 2015

COMMON NAME	SCIENTIFIC NAME	EAT IT?
Japanese Knotweed	Fallopia japonica	Yes. And people can eat it too! :-) Start ruminants slowly though. Knotweeds can be nitrate accumulators, so rumen microbes need 7 to 9 days to adapt.
Leafy Spurge	Euphorbia esula	Yes. Animals may strip leaves from stems. Also, the more variety they have in pasture, the more of this plant they will eat.
Marsh plume thistle	Cirsium palustre	Yes. Many thistles are potential nitrate accumulators so start slow to allow rumen microbes to adjust. Animals that learn to eat one thistle will teach themselves to eat all varieties.
Mountain bluet	Centaurea Montana	Yes. Another lovely knapweed.
Nodding thistle	Cardus nutans	Yes. High in protein, but a potential nitrate accumulator so start slow to allow rumen microbes to adjust. Animals that learn to eat one thistle will teach themselves to eat all varieties.
Purple loosestrife	Lythrum salicaria	Plants in this family are not known for toxin issues, but some of the toxins they have are known to cause issues by other plants. I wouldn't train animals to eat this one, but would allow them to teach themselves after they've learned to eat other plants, and as always, only in places with variety to choose from.
Rush skeletonweed	Chondrilla juncea	I've watched Colorado cows eat this. The biggest problem with it is that it's mostly a stick, so likely not very palatable.
St. John's Wort or goatweed	Hypericum perforatum	No. While they can eat it as part of a balanced diet, it can cause photosensitivity.
Sulphur cinquefoil	Potentilla recta	I found nothing on this plant. I've seen cows eating it in Montana.
Tansy Ragwort	Senecio jacobaeae	NO!
Tartary Buckwheat	Fagopyrum tataricum	Yes. And people can eat it too! :-)
Wild parsnip	Pastinaca sativa	Yes, BUT, be sure this is really what you have. It can look like some plants that are quite poisonous.

Category A. High Priority for Eradication and Containment

These plants are highly competitive, have the ability to spread rapidly and pose a significant threat. That's according to folks who put this list together. I look at most of the plants on this list and think of them as great forage that is resilient and ready to eat all the time.

COMMON NAME	SCIENTIFIC NAME	EAT IT?
Burdock	<i>Arctium</i> spp.	Yes!. It's good for people too!
Comfrey	<i>Symphytum</i> spp	I wouldn't train them to eat this but would not worry if they ate some as part of a widely varied diet.
Common tansy	<i>Tanacetum vulgare</i>	This one is ok. But be sure this is what you have and that you're not confusing it with Tansy Ragwort
Dalmatian toadflax	<i>Linaria dalmatica</i>	Yes. I trained cows to eat this and they loved it.
Diffuse knapweed	<i>Centaurea diffusa</i>	Yes. I trained cows to eat this and they loved it.
Green foxtail	<i>Sertaria viridis</i>	Yes. But timing will be your issue. Animals won't eat it when it's dry.
Meadow goat's beard or salsify	<i>Tragopogon pratensis</i>	Yes. I've seen cows eating this.
Orange hawkweed	<i>Heiracium aurantiacum</i>	Yes. Folks in B.C. trained cows to eat this. The issue is the high stem to leaf ratio.
Russian thistle	<i>Salsola kali</i>	Yes. I've trained cows to eat this. Horses can be poisoned by eating very large quantities of this. So don't let them.
Spotted knapweed	<i>Centaurea biebersteinii</i>	Yes. I trained cows to eat this and they loved it.
Invasive yellow hawkweed	<i>Pilosella</i> spp.	See orange hawkweed
Wild caraway	<i>Carum carvi</i>	I have nothing on this one.

Category B. Medium Priority for Eradication and Containment

Here are some really great forages!

COMMON NAME	SCIENTIFIC NAME	EAT IT?
Annual bluegrass	Poa Annua	Yes.
Common toadflax	Linaria vulgaris	Yes. Cows in Montana LOVE this and once they learned to eat it, ranchers couldn't find a non-grazed plant in pasture.
Creeping (Canada thistle)	Cirsium arvense	YES! This is the easiest and my favorite plant to teach animals to eat. Do start slowly and make sure they have other foods to eat because it is a nitrate accumulator and rumen microbes need time to adjust.
Kochia	Kochia scoparia	Yes. It was brought here to be a forage so we ought to teach our livestock to eat it.
Night-flowring catchfly	Silene noctiflora	Nothing found on this one.
Oxeye daisy	Chrysanthemum leucanthemum	Yes. Cows in B.C. were taught to eat this and they did well. The issue again is stem to leaf ratio.
Scentless chamomile	Matricaria perforata	Nothing found on this one.
Tall/Meadow Buttercup	Ranunculus acris	This one is a tricky plant. I worked with a fellow in Virginia whose dairy cows were producing lots of milk on a buttercup, and he wanted to know how he could grow more. On the other hand, there are buttercups that are poisonous and shouldn't be grazed. We need to talk about what you have to really know for sure. But it's doubtful you should teach animals to do this. Rather, teach them to eat other plants and let them decide on their own whether to add this to their diet.

Education and Awareness List

I've only chosen a few out of this list because it was so long.

COMMON NAME	SCIENTIFIC NAME	EAT IT?
Bull thistle	<i>Cirsium vulgare</i>	Cows love this!
Curled dock	<i>Rumex crispus</i>	I'd teach them to eat other things first and add this one in.
Lambs quarters	<i>Chenopodium album</i>	Yes
Mallow	<i>Malva neglecta</i>	Yes
Mullein	<i>Verbascum thapsus</i>	Cows in Colorado decided to eat this on their own.
Mustards	<i>Erucasstrum</i>	I taught cows to eat these in California. Please eat them. They get out of control otherwise.
Quack grass	<i>Agropyron repens</i>	Yes
Sow thistle	<i>Sonchus spp</i>	Yes
Western water hemlock	<i>Cicuta douglasii</i>	NO
Wormwood or Absinthium	<i>Artemisia absinthium</i>	yes

DELEGATION:

D-1
Arthur Hadland

WEED CONTROL PROGRAM – SCENTLESS CHAMOMILE

The delegation provided information on the noxious weed known as Scentless Chamomile and its effects on agriculture. Topics included:

- *Weed Control Act* – education and enforcement
- Ministry of Transportation and Infrastructure and municipal programs in urban and rural areas
- Scentless Chamomile – plant description, control, origin, reproduction and rate of spread

RD/15/11/06

MOVED Director Goodings, SECONDED Director Hiebert,

That the November 12, 2015 presentation by Arthur Hadland on Weed Control Program – Scentless Chamomile be referred to the Invasive Plant Committee.

CARRIED.

Received DC Office November 3/15

Weed Control Function

~This is a very important function of the PRRD.
Reference is made to Jared Diamond's book "Collapse"

~Locally- need to redevelop diligence in controlling all noxious weeds.

~ Focus is on Scentless Chamomile
Please refer to profile in attachment.
Other problem weeds are Foxtail Barley and Canada Thistle.

~Urban and rural
Need to improve MOTH and Municipal programs.

~Weed control Act
Comments

~Am requesting renewed EFFORT to EDUCATE and ENFORCE the Weed Control Act with specific emphasis on controlling and containing Scentless Chamomile.. May be called the Triple E of the PRRD

Presentation by
Arthur A. Hadland

Scentless Chamomile: Biology and Control

It spreads quickly along roadsides and fencelines and reduces yields in hay fields, pastures and cropland. This weed is of primary concern in hay land and pasture where control options are limited and there is little competition from slow establishing forages.

Origin and Rate of Spread

Scentless chamomile was introduced into Canada as a garden flower or seed contaminant from Europe, where it is also a major weed. Since its introduction in the 1930's, scentless chamomile has spread to most areas of the province.

Plant Description

Scentless chamomile, also known as mayweed, scentless mayweed or daisy, is distinguished by its white daisy-like flowers and its finely divided fern-like leaves. The flowers are solitary at the ends of smooth, erect or semi-erect branches and measure 2 to 3 cm in diameter.

Flowers

Scentless chamomile flowers from May to October. Flowers can be produced within 58 days of germination. In a non-competitive situation, annuals begin to flower in early July. In a competitive crop situation, flowering does not generally occur until the crop is removed. Overwintering biennials and short-lived perennials usually begin to flower in mid-May or early June.

Scentless chamomile has an indeterminate flowering habit; therefore, flowers and seed are continually formed. At any one time, a plant can have flowers, immature seed and mature seed. This growth habit makes eradication difficult.

Reproduction

Scentless chamomile reproduces only by seed. Abundant seed production and variable dispersal methods are this weed's key to success. The seed can be widely dispersed on equipment and as a contaminant in crop seed and feed. Dispersal by water is also common.

Facts about scentless chamomile seed

- A single plant can produce as many as a million seeds.
- In a dense stand, as many as 1.8 million seeds/m² may be produced.
- One flower head can have as many as 300 seeds.
- The seeds develop quickly. Seed is viable as soon as the flower is formed.
- Biennial and short-lived perennial forms set seed as early as mid-June.
- Flowering and seed production are best under high light intensity.
- The ribs on the small, light seed allow for ready spread by wind and water.
- The seed can float for at least 12 hours.
- As much as 26 per cent of seed fed to cattle remains viable in the manure.

Competition

C-1

Scentless chamomile does not grow well in a competitive crop. If scentless chamomile becomes established on bare soil or in weak plant stands, it can become very aggressive and cause significant crop yield losses.

Once scentless chamomile has overwintered in the biennial or short-lived perennial form, it becomes more competitive and more difficult to control. A single plant growing without competition may cover an area in excess of a square metre. Seedlings that emerge in the spring will often form a very dense carpet in low-lying areas and limit growth of seedlings of other species.

Forests, Lands and Natural Resource Operations
Report to the IPC, PRRD
November 30, 2015
Denise McLean, PAg, Invasive Plant Specialist

Report-A-Weed

24 Reports were received for the Peace area.

- only 1 was a miss-identification.
- 3 became new sites
- some forwarded to PRRD.

FLNR jurisdiction work:

North Peace

- 240 surveys on 169 sites. (each invasive plant has its own survey so you can have multiple surveys on a site)
- 49 chemical treatments and 64 mechanical treatments on 90 sites.
- Invasive plants targeted to be treated included:
 - Wild Caraway
 - Dalmatian Toadflax
 - Yellow hawkweeds
 - Orange hawkweed
 - Scentless Chamomile
 - Common Tansy

Pine Pass

- 536 surveys on 208 sites.
- 183 chemical treatments and 22 mechanical treatments on 117 sites.
- Invasive plants targeted to be treated included:
 - Dalmatian Toadflax
 - Yellow hawkweeds
 - Orange hawkweed
 - Scentless Chamomile
 - Common Tansy
 - Diffuse Knapweed
 - Spotted knapweed

South Peace

- 365 surveys on 204 sites.
- 333 chemical treatments and 20 mechanical treatments on 180 sites.
- Invasive plants targeted to be treated included:
 - Burdock
 - Wild Caraway
 - Common Tansy
 - Yellow Hawkweed
 - Orange Hawkweed
 - Scentless Chamomile
 - Yellow Toadflax

New Species to watch for in the Peace area:

- **St. John's Wort:** has been under biocontrol for decades but is re-emerging. No biocontrol has been observed on the sites. This species blooms at the same time as Canada Goldenrod and Common Tansy so may have been missed in reporting. Sites confirmed in the Pine Pass at MacLeod Lake.
DECISION NEEDED: Should this species go onto the REDRR list and be treated rather than let it expand and wait for biocontrol to catch up.
- **BlueWeed:** one new site found and treated. This species is notoriously difficult to control.

Other Observations/Issues:

- Invasive yellow hawkweeds continue to expand along roads south of Tumbler Ridge and down the Clearwater FSR.
- Biocontrol on Scentless Chamomile has been observed throughout the Peace.
- Caraway continues to expand its area and may have been missed in the past due to its early blooming.

Invasive Plant Program
Compliance & Enforcement Review & Summary (2015)

PRRD C&E Model Overview

The Invasive Plant Program strives to ensure their compliance & enforcement model is fair, objective, & transparent. The progressive model consist of 4 steps:

- 1) Outreach & Education
- 2) Warning Ticket
- 3) Monetary Penalty
- 4) Weed Notice

The PRRD always tries to gain voluntary compliance before moving onto enforcement action. This is first achieved through the outreach & education and/or verbal warnings. For 2015, 82% of PRRD complaints fell into this category.

Situations in which warning tickets are issued include:

- Failure to follow through with verbal warning or cooperate with weed control officer
- Unknown client / unable to contact owner or occupier of premise
- Multiple premises connected to a complaint (all dealt with in the same manner)

For 2015, 7 warning tickets were issued. Warning tickets do not have penalties attached & are always accompanied by an outreach letter requesting the individual to contact the Invasive Plant Program to discuss a plan for managing the infestation. Two weeks is given for the owner to contact the program, with the date clearly specified in the letter.

Situations in which monetary penalties are issued include:

- Failure to respond to all outreach attempts and/or verbal warning
- Failure to respond to initial warning letter & warning ticket issued

For 2015, only 1 bylaw ticket was issued with monetary fines. Although there is a penalty amount attached to the ticket, the individual always has the ability to enter into a compliance agreement with the PRRD, allowing for the amount to be eliminated completely or partly upon compliance.

If the amount is not paid after 32 days, the PRRD has the ability to start the process for sending the amount owing to collections. Once again these tickets are always accompanied by an outreach letter requesting the individual to contact the program. The current penalty amounts are:

Penalty Amount	Early Payment (within 21 days)	Late Payment (After 32 days)
\$200.00	\$150.00	\$250.00

Situations in which Weed Notices are issued include:

- Failure to respond to monetary penalty ticket
- Invasive plant is either a EDRR or Category A
- Invasive plant poses a significant threat to surrounding land and/or environment

Weed Notices do not have any direct monetary penalty attached to them; however, they allow the PRRD to treat the infestation at the land owners or occupiers cost.

PRRD Weed Report Process

For 2015, all weed reports went through the general process listed below:

- 1) Called complainant back & gathered additional information (within 3 b. days)
- 2) Jurisdiction determined
 - Not PRRD Jurisdiction. PRRD forwarded by email to appropriate agency.
 - PRRD Jurisdiction. Site inspection was scheduled.
- 3) Site inspection completed
- 4) PRRD contacts land owner or occupier
 - Outreach & education and verbal warning given.
 - If unable to contact land owner, warning letter & ticket issued (no penalty attached)
- 5) Site re-inspected
 - If infestation has been appropriately managed, complaint is closed.
 - If infestation is not appropriately managed, additional outreach & education.
 - If infestation has not be dealt with at all, bylaw ticket & letter issued (with penalty attached).
- 6) Site re-inspected again (if required)
 - If site is still not dealt with, another bylaw ticket or a weed notice is issued.
- 7) If sites are unable to be properly dealt with before winter, they are scheduled to be followed up with next year.

PRRD Weed Report Summary (2015)

A total of 54 Weed Reports were received for 2015.

Jurisdiction

- 28 (51.9 %) - Fell within PRRD jurisdiction
- 26 (48.1%) - Forwarded to the appropriate agency (FLNRO / MOTI / BC Hydro)

Location

- 22 (40.7%) - Fort St. John
- 23 (42.6%) - Dawson Creek
- 4 (7.4%) - Chetwynd
- 4 (7.4%) - Hudson Hope
- 1 (1.9%) - Fort Nelson

Property Type

- 7 (13.0%) - Farm
- 12 (22.2%) - Industry
- 12 (22.2%) - Residential
- 21 (38.9%) - Road Right of Ways
- 2 (3.7%) - Crown Land

Action Taken

Of the 28 Weed Reports that were PRRD Jurisdiction:

- 12 (42.7%) - Verbal warnings issued
- 5 (18.0%) - Enforcement action taken (ticket)
- 11 (39.3%) - Education provided or other

PRRD Compliance Rate:

- 17 (60.7%) - Required treatment
- 15 (88.2%) - Treatment was followed
- 2 (11.8%) - Treatment not followed

Weeds Dealt With:

- Bull Thistle
- Burdock
- Canada Thistle
- Common Tansy
- Common Toadflax
- Curled Dock
- Dalmatian Toadflax
- Dame's Rocket
- Goat's Beard
- Himalayan Knotweed
- Oxeye daisy
- Rough Pigweed
- Scentless Chamomile
- Sow Thistle
- Spotted & Diffuse Knapweed
- Yellow Hawkweed

PRRD C&E Ideas for 2016

- The PRRD Invasive Plant Program would like to start taking a slightly more proactive approach; however, still remain primarily complaint driven.
- A more proactive approach with industrial and commercial properties.
 - The PRRD would like to send out a notification letter or provide some other kind of advertising early spring 2016.
 - To be a reminder to the property owners that it is their responsibility to control the weeds on their premises.
 - PRRD would then aim to monitor approx. 10% of these properties.
 - If weeds are found, automatic warning ticket (no monetary penalty).
- Create a list of herbicide contractors available.

- Would be kept up to date yearly.
- Provide to property owners as part of the outreach and education step.
- Additional outreach & education activities aimed toward other users who may be able to assist PRRD with locating infestations.
 - PRRD staff (Development Services, Solid Waste, Parks, etc)
 - Municipal Staff in the PRRD
 - Ensure District offices or public buildings have weed carabiners available
- Promote weed pull events as an option for treatment.
 - Arrange for 4H groups or other youth groups to be available. Possibly utilize as an alternative for non-compliant properties. (donate to these groups and have them pull your weeds for you)
- Conduct random weed inspections
 - Create a random list of residential premises to inspect throughout the summer.
 - If weeds are found, primary focus would be on outreach & education.
 - Leave door knocker, with appropriate TIPS sheet.

Invasive Plant Program Manager – PRRD – 2015 Year at a Glance

Education and outreach was successful this year with many classrooms touched by exciting new activities such as building fairy gardens, kaleidoscopes, geocaching, plant ID, relay races, weedy art projects, and ecology games. We attended events hosted by the Northern Lights College, Ministry of Transportation and Infrastructure, ISCBC, municipal training days, and the North and South Peace fall fairs. The PRRD supported FLNRO's implementation of a rancher contract with Sunset Community Pasture, financially and physically supported the livestock eat weeds project delivered through the PRFA, and worked with Saulneau FN to implement an integrated community approach to managing invasive plants on their land. The invasive plant program hired an invasive plant coordinator in a new full time position to allow for more efficient use of time towards coordination and collaboration with landowners and stakeholders in our region as it is apparent that there are many different paths this program can take and with increased staffing resources, we will begin to feel the benefits of a strong education and outreach program.

Planning for monitoring and treatment times has been initiated for the 2016 growing season and the PRRD wishes to expand this side of the program to include monitoring the efficiencies within the region as a whole. Treatment timing for different species of invasive plants is really important and takes time. We have the capability of analyzing the data in IAPP and planning treatment timings according to this data. It is still important to note that weed reports are taken very seriously however, when these reports are for jurisdictions other than our own and private land it makes it difficult to physically respond other than to verify the infestation and pass the complaint on to the respectful shareholder. We are therefore working to establish our relationships with other jurisdictions to ensure that these reports are not disregarded. Treatment contracts need to be aligned with proper timing and treatment efficiencies that allow our taxpayer dollars to be spent on the ground.

The PRRD is also wanting to launch two or three new programs this year to increase awareness. The first is Play Clean Go. We are going to partner with the parks division of the PRRD, and are wanting to partner with FLNRO and BC Parks to establish boot cleaning stations at trailheads. This program allows for educational awareness on site with minor costs. As well, this will allow for more fun giveaways such as boot brushes also known as hoof picks.

Plantwise is another program that we are going to ambassador with ISCBC to work with our local nurseries to eliminate the sale of invasive ornamentals and increase the sale of native, or non-invasive alternatives.

The third program might help with municipal and small lot agriculture producers that want to maintain a beautiful lawn. The healthy lawn tips guide was an older program run by Health Canada and the intentions would be to revamp this package to make it applicable to our area and reach residents.

The PRRD also welcome's suggestions from all of our shareholders and would love to hear your feedback on any of the current programs or how you feel we could do better and reach more people.



PEACE RIVER REGIONAL DISTRICT

2015

Strategic Plan and Profile

Of

Invasive Plants and Noxious Weeds

diverse. vast. abundant.



Peace River Regional District
 1981 Alaska Avenue
 Box 810
 Dawson Creek, BC V1G 4H8
 1-800-670-7773
www.prrd.bc.ca

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1 Why Care About Invasive Plants

Once established, invasive plants can:

- Endanger public health and safety by increasing allergies and by having toxic properties harming humans, pets, livestock, and wildlife.
- Outcompete native vegetation and destroy natural habitats.
- Reduce agriculture forage yields and hay quality.
- Increase wildfire hazards and interfere with regeneration of forests.
- Decrease land values and impact recreation areas.
- Accelerate soil erosion and cause stream sedimentation with negative impacts to water quality.

A **weed** is just a plant growing where it isn't wanted. However, in BC, **invasive plants** have been defined as non-native (alien) plants whose introduction into British Columbia cause, or are likely to cause, economic or environmental damage, or harm to human health (IMISWG 2011). They originated elsewhere and are often introduced unintentionally to our area, arriving without the natural predators that kept them in check in their native homelands. Once here, they have the ability to establish easily, expand exponentially and quickly colonize an area.

Noxious weeds are invasive plants referred to in the Provincial Weed Control Act. Noxious weeds are also referred to in local government bylaws. Legislative powers require that all occupiers of lands manage infestations of plants listed in a particular piece of legislation as they negatively affect our economic, environmental and social values. The provincial invasive plant list can be found in Appendix 5.

Within the Peace River Regional District (PRRD), some native plants may plague our agriculture sector, these plants are listed in this strategy to ensure that proper identification and management strategies are used by those who discover them. Poisonous native plants and those that cause harm to livestock are in the Education and Awareness list.

All invasive plants that are the subject to this strategy are listed in four categories outlined in Section 6. They are:

Regional Early Detection Rapid Response (REDRR)

Regional EDRR species are a significant threat and is new to the area under construction. The achievable management objective is eradication. This list includes brand new incursions and high risk invasive plant species that are extremely limited in extent (i.e. have less than 10 very small sites) in the area under consideration. Some of these pieces may not be present within the PRRD but are found in adjacent areas and are at risk of being introduced.

Category A

These invasive plants are highly competitive, have the ability to spread rapidly and pose as significant threat. They have been aggressively managed over time and their populations are minimal at the landscape level. These plants require continued persistent treatment over time in order to achieve eradication.

Category B

These plants have established themselves at the landscape level and are still aggressively treated by the agriculture sector to protect crop yields and production of other agriculture products. These plants are expected to be managed where they threaten environmental, social or economic values.

Education and Awareness List

These plants plague the agriculture industry, this list includes native plants that are poisonous, difficult to control or cause harm to livestock.

2 Role of the Invasive Plant Committee of the Peace River Regional District

2.1 Goal of the Committee

The goal of the Invasive Plant Committee of the PRRD (IPCPRRD) is to complement the Mission, Vision and Goals of the Regional District by: “protecting our economy, environment and social values from invasive plants and ensuring that existing infestations are managed using an integrated pest management approach.”

2.2 Structure

Two groups work together in order to achieve broad program objectives. The Invasive Plant Committee of the Peace River Regional District (IPCPRRD) is an advisory committee with three directors appointed by the Chair of the Regional Board. The General Manager of Environmental Services and the Manager of Invasive Plants support the IPCPRRD and together, they consider issues which affect the constituents within the Region and provide operational and strategic direction for the program.

The second group is broad in scope and in the spring of 2014, consisted of over 100 members. This group is the Strategic Plan and Profile of Invasive Plants Monitoring Committee and is comprised of stakeholders and individuals interested in invasive plant management within the boundaries of the Peace River Regional District of British Columbia.

IPCPRRD holds meetings with the Monitoring Committee in the spring and fall. In the fall, members report their activities and bring forward any new invaders to the Region. The annual report, circulated early in the New Year, lists the plants and provides information for further discussion. During the spring meeting, the proposed changes are reviewed and changes to the strategic plan are made. An updated strategic plan is presented to the Board for adoption. The early history of these programs and strategies are available in Appendix 4.

2.3 Area of Operations

The Strategic Plan area includes both private and crown land. It coincides with Peace River Regional District Area which covers the area of BC east of the Rocky Mountains to the Alberta border, and north from Kakwa Provincial Park to the 58th parallel, just south of Fort Nelson. The provincial government agencies which have jurisdiction over the crown land portion include:

- Ministry of Forests Lands and Natural Resource Operations – Northeast Region and Peace District
- Ministry of Environment/BC Parks - Peace Region
- Ministry of Transportation and Infrastructure - Peace District
- Oil and Gas Commission
- Ministry of Energy and Mines

2.3 Membership

Membership in the Strategic Plan Monitoring Committee is open to all and there is no membership fee, to be a member, send an email to: kari.bondaroff@prrd.bc.ca. This group representation all perspectives and land-related vantage points including, but not limited to:

- Concerned citizens
- All levels of government: federal, provincial, local
- Environmental and ecological organizations
- Communities and aboriginal communities in the region
- Youth groups and organizations
- Horticulture and gardening clubs and organizations
- Educational organizations
- Guide outfitters, trappers, tourism companies, clubs and organizations
- Agriculture producers, agri-business and support companies
- Industry and resource sector – forestry, mining, oil and gas
- Utilities and Transportation
- BC's Regional Invasive Organization,
http://bcinvasives.ca/documents/Regional_Committee_Map_Contacts_01_19_2014.pdf

3 Legislative on Invasive Plant Management

Invasive plant management is dealt with by federal and provincial legislation. Government agencies involved in invasive plant management in British Columbia through regulation or for lands under their management authority:

Federal Government:

- Parks Canada
- Environment Canada
- Canadian Food Inspection Agency
- Aboriginal Affairs and Northern Development Canada (Indian Reserves and Treaty Lands)
- Airports, post offices, national defence lands

Province of British Columbia:

- Ministry of Energy and Mines
- Ministry of Environment
- Ministry of Forests, Lands and Natural Resource Operations
- Ministry of Transportation and Infrastructure
- Ministry of Community and Rural Development
- Oil and Gas Commission

Local Governments:

- Municipalities
- Regional Districts

Other groups and societies assist with invasive plant management, but have no jurisdiction over lands with the exception of various agencies like Ducks Unlimited, the Nature Trust, et al.

A key resource called the *Legislative Guidebook to Invasive Plant Management in BC* can be obtained from the Invasive Species Council of British Columbia. The document summarizes pertinent federal, provincial and regional government legislation and can be found at:

www.bcinvases.ca under the technical reports tab.¹

¹ Invasive Plant Council of BC, “A Legislative Guidebook to Invasive Plant Management in BC,” December 2007.

3.1 Progressive Compliance and Enforcement Regime

The Regional District implements strategies focused on increasing awareness, sharing on-the-ground observations and annually updating the strategic plan. A progressive compliance and enforcement regime for the Region and its municipalities draws upon the powers of the *Local Government Act* and the *Community Charter*. The powers being considered would allow for warning tickets and monetary penalties to be issued prior to issuing a Weed Notice.

In order for the regime to be effective, compliance and enforcement will follow on the heels of education strategies and focus on sites where land occupiers are reluctant to manage infestations deemed to be critical as per the decision matrices and plants listed in section five. The objective is to engage managers of various jurisdictions to employ long term management techniques based on Integrated Pest Management. The progressive regime is outlined as:

- 1 **Outreach and Education** targeted at specific segments within the general public and various industries
- 2 **Warning Ticket** issued to jurisdictional managers and occupiers of land who require an authority for motivation.
- 3 **Monetary Penalty** issued to jurisdictional managers and occupiers of land who have not heeded the warning ticket and are subject to an adjudication process.
- 4 **Weed Notice** once issued will allow a time period for the occupier to treat the infestation, where the treatment is not completed to an expected standard within the time allowed, the Weed Inspector can enter onto lands and deliver treatments. An invoice will be presented to the occupier of the land. If the invoice remains unpaid, a mechanism will be triggered to collect treatment costs through the taxation process

4 Invasive Plant Management Strategies

NB-1

The invasive plant strategy has the following five components derived from the invasion curve in section 5.1:

- Prevention
- Eradication / Suppression
- Containment / Rehabilitation
- Rehabilitation / Surveying
- Compliance and Enforcement

The steps in the invasive plant management scheme are:

1. The most effective and efficient management of invasive plants is to **prevent** them from arriving. The Peace-Liard Re-Vegetation Manual is available on our website to help guide reclamation and seeding efforts aimed towards prevention.
2. After invasive alien plants have arrived, the most efficient and effective management is to **eradicate** them before they become well established through early detection and rapid response. Eradication is always the goal as the agriculture industry within the Region must be protected.
3. If establishment occurs and the invasive plant population expands, the population should be contained until eradication strategies can be initiated. A long term goal of decreasing the infestation annually is of most importance. Containment involves aggressive management of high vectors of spread within the defined infestation as well as any satellite infestations outside of the containment area. Infestations should be managed with an integrated pest management approach which may include mechanical, chemical or biological techniques.
4. For species that have established at the landscape level focus is on **surveying** to determine which sites have the highest likelihood and value for **rehabilitation** and which species and sites are suitable for bio control release.
- 5 **Progressive Compliance and Enforcement Regime** explained in section 3.1.

There are many invasive plant species that are, or could establish themselves in the Region. It would not be feasible, given the resources available, to eliminate all occurrences of each of these species. Therefore, a system has been developed to guide and prioritize management efforts. The system involves a decision-making grid or matrix of three plant **invasiveness categories** and a range of four **site conditions**. Plants are placed in categories by:

- a. reviewing the literature on the habitat range and aggressiveness of invasive plants;
- b. technical advice; and,
- c. incorporating the substantial expertise and experience of the membership.

The categories and Invasive Plant Profile are regularly reviewed and changed as new information and observations indicate a need to add a plant to any of the five categories, or move a species up or down the categories. In addition, the BC Provincial Prohibited Weeds list can be found in Appendix 5 for additional invasive plant species of concern.

5 Implementing Strategies

The following actions are undertaken to implement the IPCPRRD Strategies:

- Encourage the public to report invasive plant sightings and to further engage them by replying in a timely manner and provide information regarding:
 - economic, social and environmental threats,
 - integrated pest management and
 - compliance and enforcement.
- Inform the public about invasive plant programs and incorporate comments into the continuous improvement loop.
- Assess problems and threats that various invasive plants present to the economic, social and environmental values within the area.
- Prevent the establishment of invasive plants not currently in the region.
- Prevent or minimize the spread of the invasive plants present in the region.
- Conduct invasive plant programs in the region based on Integrated Pest Management principles.
- Coordinate the activities and responsibilities of the various agencies and private landowners to meet the Goals of the Peace River Regional District.
- Facilitate Early Detection Rapid Response initiatives at the federal, provincial and regional levels.

5.1 How to Report Invasive Plants

In order to ensure that appropriate and timely action is taken regarding invasive plants, it is important to understand what you can do. Take note of any changes in the plant composition in areas that you frequent. Changes often indicate the presence of an invasive plant. It is imperative that these sightings be REPORTED. Be aware that native and rare plants, like some invasive plants, may appear on the landscape sporadically. Some of these may be listed as “Species at Risk”. For more information on Species at Risk, click here: <http://www.speciesatrisk.bc.ca/>

There are many ways to report invasive plants. The key is quick identification which ensures the correct management regime. To ensure correct identification collect the plant, roots and all, and press it in a book. Bagged samples wilt quickly and are difficult to identify. Photographs are excellent, but care should be taken to ensure the plant is on a plain background such as the hood of a truck. Be sure to note the location and how large the infestation is.

- Email the scan of the plant, pictures and location to kari.bondaroff@prrd.bc.ca
- Bring a sample to the Regional District Office
- Fill out a form at the front counter of the Regional District Office
- Call the Invasive Plant Program Manager at 250-784-3227 /250-219-4807
- Call the toll-free number: 1-800-670-7773
- Write a letter to the Invasive Plant Program, Box 810, Dawson Creek BC, V1G 4H8
- Use your smartphone, turn on your GPS, go to maps and record the location, then email it to kari.bondaroff@prrd.bc.ca along with a description of what you are seeing
- Download the free app: www.reportaweedbc.ca
- Use an interactive web tool, the app and web tool are provincial in nature, for more information go to the website: <https://www.for.gov.bc.ca/hra/plants/raw.htm>

5.2 Site Prioritization

As well as species, the strategy considers site conditions. There are numerous factors to consider for sites and this strategy focuses on the:

- susceptibility of sites and areas for invasion;
- loss or risks if invasion occurs; and,
- feasibility and costs of managing the species on the site.

Site conditions are divided into four groups in decreasing expected potential for control (See Table 1).

Table 1. Site Prioritization	
Priority/Opportunity for Control	Site condition / management intent or goal
1 Extremely High	<ul style="list-style-type: none"> • A relatively small infestation (up to 0.25 ha or 0.5 acre) likely to spread to large highly susceptible areas or high value crops (e.g. certified seed, grains and oilseed). • Intent is to prevent establishment or spread and to eradicate the infestation quickly and efficiently. • Effective treatment (eradication or containment) is critical.
2 High	<ul style="list-style-type: none"> • Moderate sized infested area (0.25-0.50 hectare or 1.25 acres) in susceptible areas and a good expectation that control will be effective. • Goal is to quickly reduce the population of the invasive plant, contain the infested area and reduce impacts on agriculture and susceptible habitats and ecosystems.
3 Moderate	<ul style="list-style-type: none"> • Larger infested area (greater than 0.50 hectare or 1.25 acres) that are not adjacent to agriculture areas or other delicate habitats and ecosystems that need to be protected. • Expectation that control will be effective. • Goal is to contain the infestation.
4 Low Opportunity for Control	<ul style="list-style-type: none"> • Infested areas larger than 5 hectares or 12 acres where control would require high investment of resources. • Areas are not adjacent to agriculture or susceptible high value habitats and ecosystems that need to be protected. • Goal is to reduce the damage from the infested area, record changes to the size and ensure that all vectors of spread are treated.

Site conditions ranked #1 have the highest opportunity for control being effective. A site ranked as #4 has a much lower potential or opportunity for eradication or control. Costs are also part of this ranking where #4 has the highest cost/benefit ratio. The following invasion curve, Figure 1, references the thought process regarding landscape distribution and opportunities for eradication.

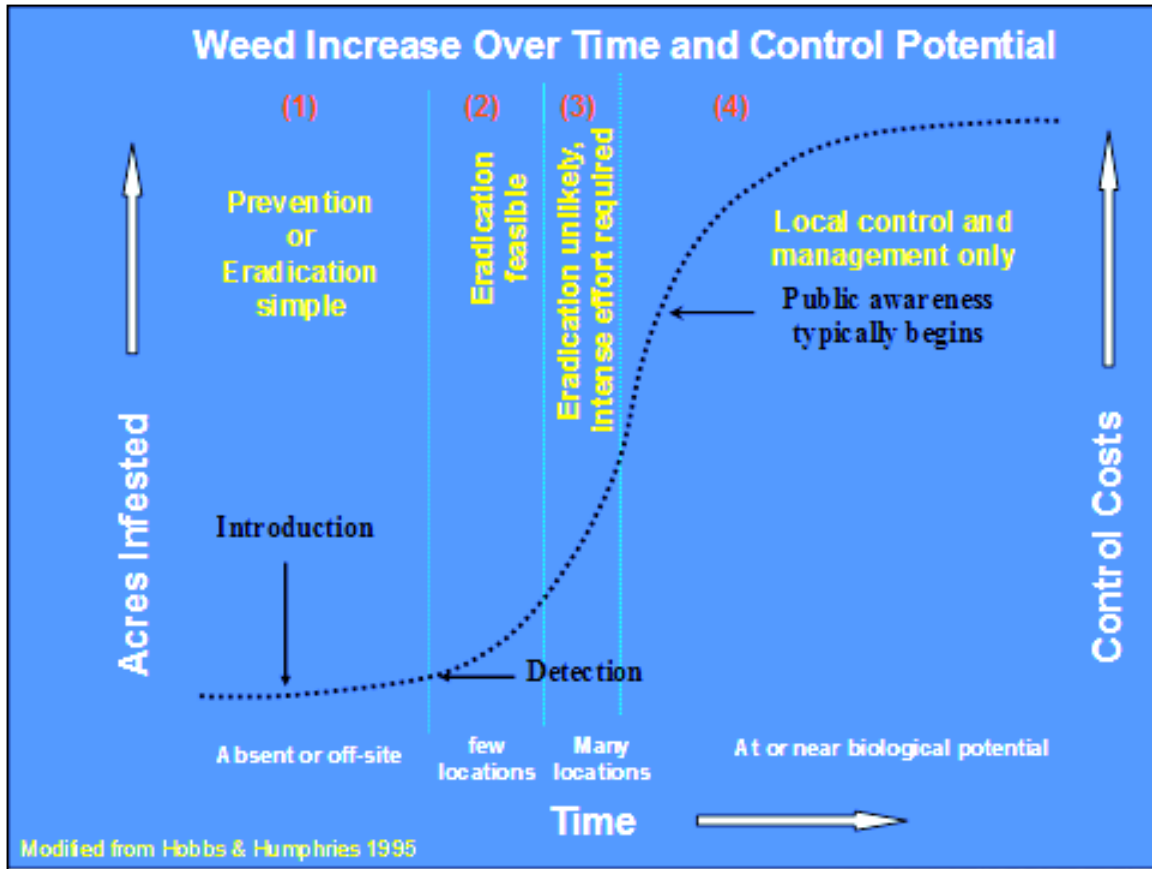


Figure 1: Weed Increase over Time and Control Potential

5.3 IPCPRRD Treatment Matrix

Table 2 IPCPRRD Treatment Matrix		
Plant Species Invasiveness Category		
Site Priority	A	B
1		
2		
3		
4		

5.4 Program Thresholds

Table 3. Program Thresholds			
Invasive Plant Category	Site Priority	Program Level	Control Objective or Requirement
A/R-EDRR	1	REDRR <ul style="list-style-type: none"> Regional Early Detection Rapid Response 	Regional or local eradication: <ul style="list-style-type: none"> Identify and eradicate the local population, prevent new invaders, see the Provincial EDRR process at http://www.for.gov.bc.ca/hra/invasive-species/edrr.htm See the regionally specific list on page 12. Stop the spread of recently established invaders
A	1	ERADICATION <i>and</i> CONTAINMENT	Treatment or some form of management is mandatory: <ul style="list-style-type: none"> Immediate requirement to prevent newly arriving invasive plants, or those with low population, from establishing or spreading. Mid and long term goal is to eliminate the population from within the region.
A	2		
A	3		
B	1		
A	4	CONTAINMENT <i>and</i> REHABILITATION	Treatments are mandatory for sites outside of containment lines or where values are threatened: <ul style="list-style-type: none"> Within containment areas, treatments occur when protection or rehabilitation of social, environmental or economic areas is required; or, A need is indicated and approved by funders or, Land owner or occupier has other reasons for containment or rehabilitation.
B	2		
B	3		
B	4	REHABILITATION <i>and</i> SURVEYING	Control and rehabilitation will be attempted when biological control agents are available and effective: <ul style="list-style-type: none"> Specific issues and requests are made, whereby an analysis of risks and/or cost-benefit indicates control is required to protect or rehabilitate agriculture areas or critical habitats.

5.5 Prevention

Prevention of invasive plant problems requires an aggressive outreach and education program focused on all segments of the population. Managing susceptible sites and taking actions that prevent movement of invasive plant seeds and propagules is complimentary to education. Some of the actions IPCPRRD supports and encourages are:

- Farming and grazing practices that prevent invasive plant establishment.
- Seeding all disturbances as quickly as per the Peace Liard Re-Vegetation manual found here: http://prrd.bc.ca/services/environmental/weed_control/documents/NEIPC_Reveg_manual_PeaceLiard_April2010.pdf
- Use of local clean or weed free seed, reference to the Certificate of Seed Analysis and adherence to the *Seed Act*.
- Inter-ministry Invasive Species Working Group Early Detection Rapid Response Plan found here: <http://www.for.gov.bc.ca/hra/invasive-species/edrr.htm>
- Best practices based on various industries within the region, such as cleaning equipment between sites, tarping or covering grain, hay and other agriculture loads when transporting and harvesting hay before weed seeds are viable.
- Using locally grown weed free forage when taking livestock into the wilderness.
- Using locally grown weed free straw for rehabilitation and rehab of erosion areas.
- Controlling invasive plants at chronic sources of seed and spread vectors such as gravel pits.

5.6 Eradication, Containment, Rehabilitation and Inventory

1. Canada has an invasive species strategy found here: http://www.ec.gc.ca/eee-ias/98DB3ACF-94FE-4573-AE0F-95133A03C5E9/Final_IAS_Strategic_Plan_smaller_e.pdf
2. The Invasive Species Council of BC has finalized their strategy found here: http://www.bcinvases.ca/images/stories/documents/reports/IS%20Strategy%20for%20BC%20Final%202012_06_07.pdf
3. BC has recently finalized the Provincial EDRR strategy and it is available here: <http://www.for.gov.bc.ca/hra/invasive-species/edrr.htm>.

Regardless of invasive plant list, federal, provincial and regional EDRR strategies must be activated in a timely manner. The plant must be correctly identified and samples collected, prepared and submitted to the Royal BC Museum. GPS location, photographs, sketches and notes on density and distribution of the plant must be collected. Following initial containment and eradication steps, a management strategy with the land occupier must be prepared and followed annually.

Efficient and effective management of invasive plants requires integration of awareness to prevent unintentional introduction, planning, inventory and integrated pest management treatments. Public and stakeholder support is needed to locate invasive alien plant sites, particularly remote sites started from activities like backcountry recreation, transport of industrial equipment and distribution wildlife, livestock and weather. The public is encouraged to contact the invasive plant program to report any newly arriving aggressive invasive plant.

6 Plant Species Invasiveness within the Peace River Regional District

Table 4. Regional Early Detection Rapid Response (REDRR)

Regional EDRR species are a significant threat and is new to the area under consideration. The achievable management objective is eradication. This list includes brand new incursions and high risk invasive plant species that are extremely limited in extent (i.e. have less than 10 very small sites) in the area under consideration. Some of these species may not be present within the PRRD but are found in adjacent areas and are at risk of being introduced.

Common Name	Latin Name	Occurrences/Threat
Baby's breath	<i>Gypsophila paniculata</i>	Not present at this time
Big Head knapweed	<i>Centaurea macrocephala</i>	One infestation of 6 plants discovered in 2013, is a provincial EDRR species
Blueweed	<i>Echium vulgare</i>	Not present at this time
Bohemian knotweed	<i>Fallopia x bohemica</i>	Not present at this time
Brown knapweed	<i>Centaurea jacea</i>	Exists in the NWIPC along Highway 16.
Cheat grass	<i>Bromus tectorum</i>	Not present at this time
Chicory	<i>Cichorium intybus</i>	1 site found in 2013. Numerous sites found in southern BC.
Creeping bell flower	<i>Campunaula rapunculoides</i>	One small infestation discovered in 2013
Cypress spurge	<i>Euphorbia cyparissias</i>	The New Invaders Program notes cypress spurge to be a problem in the Hudson's Hope area. This invasive plant is highly aggressive and toxic.
Field Scabious /Blue button	<i>Knautia arvensis</i>	One site between Arras and Groundbirch, may still be sold in nurseries
Giant knotweed	<i>Polygonum sachalinense</i>	Not present at this time
Himalayan balsam/Policeman's Helmet	<i>Impatiens glandulifera</i>	Horticulture plant in a few gardens in Dawson Creek. 1 new site discovered in 2014.
Himalayan knotweed	<i>Polygonum polystachyum</i>	Not present at this time
Hoary alyssum	<i>Bereroa incana</i>	Sites present in the Prince George area.
Hoary cress	<i>Cardaria draba</i>	None present at this time
Hound's tongue	<i>Cynoglossum officinale</i>	Two sites previously mis-identified, plant is under effective bio-control in southern portions of BC since 2007.
Japanese knotweed	<i>Fallopia japonica</i>	Not present at this time
Leafy spurge	<i>Euphorbia esula</i>	Present in Grande Prairie AB
Marsh plume thistle	<i>Cirsium palustre</i>	Less than 10 sites documented with 3 sites under control.
Mountain bluet	<i>Centaurea Montana</i>	Noted in horticulture settings in 2011 historically at Telegraph Creek BC
Nodding thistle	<i>Carduus nutans</i>	Not present at this time, exists in the NWIPC along Highway 16.
Plumeless thistle	<i>Carduus acanthoides</i>	Found in Trail, BC and has biocontrol agents.
Purple loosestrife	<i>Lythrum spp.</i>	Present in Grande Prairie AB
Rush skeletonweed	<i>Chondrilla juncea</i>	N sites in the PRRD to date
St. John's Wort or goatweed	<i>Hypericum perforatum</i>	No sites reported

Regional Early Detection Rapid Response (REDRR) Continued		
Common Name	Latin Name	Occurrences/Threat
Sulphur cinquefoil	<i>Potentilla recta</i>	Not present at this time
Tansy ragwort	<i>Senecio jacobeeae</i>	No sites reported
Tartary buckwheat	<i>Fagopyrum tataricum</i>	No known sites in the region
Wild parsnip	<i>Pastinaca sativa</i>	One small infestation discovered in 2013.

Table 5. Category A – High Priority for Eradication and Containment		
These invasive plants are highly competitive, have the ability to spread rapidly, and pose as significant threat.		
Common Name	Latin Name	Occurrences/Threat
Burdock	<i>Arctium spp.</i>	Historic sites in Taylor along the rail line, Lynx Creek subdivision at Hudson’s Hope, Clayhurst area and areas along the Peace, Jackfish Lake area, and Groundbirch community pastures and East Pine, 46 sites in 2012
Comfrey	<i>Symphytum spp</i>	Two sites in Chetwynd, one in Fort St. John ID’d in 2012.
Common tansy	<i>Tanacetum vulgar</i>	. Likely present since homesteader times, medicinal plant used to keep insects away and induce miscarriage.
Dalmatian toadflax	<i>Linaria dalmatica</i>	Present in small patches since 1987 south of Charlie Lake. Currently there are 45 sites, largest site at the Peace Lookout 7 ha., occupying private and crown land, initial site was small, but present since 1991.
Diffuse knapweed	<i>Centaurea diffusa</i>	One historical site within BC HYDRO’s Site C. Plant may have spread outwards, need better education around identification and reporting
Green foxtail	<i>Sertaria viridis</i>	Plant is difficult to see as it heads out later in the summer, few sporadic sites in Cecil Lake, Hudson’s Hope highway, historically in Dawson Creek, Fort St. John, Chetwynd, and Taylor, and the 103 road.
Meadow goat’s-beard or salsify	<i>Tragopogon pratensis</i>	Sporadic distribution.
Orange hawkweed	<i>Heiracium aurantiacum</i>	62 sites, noted since 1994, sporadic infestations in the region, see notes under yellow hawkweed
Russian thistle	<i>Salsola kali</i>	Present in the Stewart Lake Gravel Pit, East Pine, historically in Taylor
Spotted knapweed	<i>Centaurea biebersteinii</i>	Historically, there were 12 spotted knapweed sites in 1999, 14 in 2000 and 15 in 2001, 2002 and 2003. New IAPP records indicate a total of 24 sites infesting approximately 10 ha in 2011, there were 26 sites spread throughout the area
Invasive yellow hawkweeds	<i>Pilosella spp.</i>	Inventory began in 2005. There were 199 sites in 2008, currently there are 108 sites located in the region located at Mile 137 Alaska Highway, Monkman, Tumbler Ridge, Johnson Creek and the Hudson’s Hope area. Treatments have occurred since 2007.
Wild caraway	<i>Carum carvi</i>	Prevalent north of Pink Mountain, historical infestation at Site C.

Table 6. Category B – Medium Priority for Eradication and Containment

Primary invasive plants have the ability to spread rapidly but are not as aggressive as Category A plants, or have become naturalized, are still considered a threat to the fine seed industry.

Common Name	Latin Name	Occurrences/Threat
Annual bluegrass	<i>Poa Annua</i>	Present on local golf courses and worldwide on lawns.
Common toadflax	<i>Linaria vulgaris</i>	Under biological control since the 1950's, larger patches are surveyed and treated if threatening farm land.
Creeping (Canada) thistle	<i>Cirsium arvense</i>	Wide spread, are surveyed and treated if threatening farm land.
Kochia	<i>Kochia scoparia</i>	Historically in commercial lots, landfill sites and gas plant at Taylor, minor amounts on private land, Beaton Hills on Cecil Lake Road
Night-flowering catchfly	<i>Silene noctiflora</i>	Seeds introduced with alfalfa. Important to review seed analysis prior to purchasing seed.
Oxeye daisy	<i>Chrysanthemum leucanthemum</i>	Prevalent in Southern BC, Pine Pass and Hudson's Hope several sporadic infestations showing up throughout the region
Scentless chamomile	<i>Matricaria perforata</i>	Widespread in the area, rare in southern BC.
Tall/Meadow buttercup	<i>Ranunculus acris</i>	First occurrence noted in 2011, species was confirmed in 2013 as <i>Ranunculus acris</i> . More infestation discovered in 2013

Table 7. Education and Awareness List

The plants on this list can spread easily but requirements to contain are site specific. The priority is to educate, raise awareness and maintain an up to date inventory. This list includes native plants that are weedy in nature and cause damage to environment, social and economic values and invasive plants under successful biological control.

Common Name	Latin Name	Occurrences/Threat
American dragonhead	<i>Dracocephalum parviflorum</i>	Native, distribution unknown
Arrow Grass	<i>Triglochin maritime</i>	Native, distribution unknown
Bladder campion	<i>Silene cucubalus</i>	Distribution unknown
Bluebur western	<i>Lappula spp</i>	Distribution unknown
Buckwheat, wild	<i>Polygonum convolvulus</i>	Distribution unknown
Bull thistle	<i>Cirsium vulgare</i>	Widely distributed, under biocontrol.
Chickweed, mouse eared	<i>Cerastium spp.</i>	Widely distributed
Cleavers	<i>Galium aparine</i>	Distribution unknown
Corn spurry	<i>Spergula arvensis</i>	Distribution unknown
Curled dock	<i>Rumex crispus</i>	Sporadically distributed
Dame's Rocket	<i>Hesperis matronalis</i>	Two garden escapes noted in 2011.
Flixweed	<i>Descurainia sophia</i>	Distribution unknown
Foxtail barley (native)	<i>Hordeum jubatum</i>	Native, widely distributed
Groundsel, common	<i>Senecio vulgaris</i>	Distribution unknown
Hawksbeard, narrowleaf	<i>Crepis tectorum</i>	Widely distributed
Hemp nettle	<i>Galeopsis tetrahit</i>	Widely distributed
Lamb's quarters	<i>Chenopodium album</i>	Widely distributed
Mallow	<i>Malva neglecta</i>	Distribution unknown
Mullein	<i>Verbascum thapsus</i>	Distribution unknown
Mustard, dog	<i>Eruscastrum gallicum</i>	Distribution isolated to the Kootenays
Mustards	<i>Sisymbrium spp.</i>	Distribution unknown
Pineapple weed	<i>Matricaria matricarioides</i>	Widely distributed
Prickly lettuce	<i>Lactuca serriola</i>	Widely distributed
Quackgrass	<i>Agropyron repens</i>	Widely distributed
Sea Buckthorn	<i>Hippophae rhamniodes</i>	Widely distributed
Shasta daisy	<i>Leucanthemum x superbum</i>	One site noted along the Murray FSR in 2011
Sheep sorrel	<i>Rumex acetosella</i>	Widely distributed
Smartweed	<i>Polygonum spp.</i>	Distribution unknown
Sow thistles	<i>Sonchus spp.</i>	Prevalent throughout the region.
Stinking mayweed, dog	<i>Anthemis cotula</i>	Introduced in seed to an isolated area in 2013.
Stinkweed or pennycress	<i>Thlaspi arvense</i>	Widely distributed
Stork's bill	<i>Erodium spp.</i>	Distribution unknown
Tarweed (native)	<i>Madia glomerata</i>	Native, present on the hills of the Peace
Western water hemlock	<i>Cicuta douglasii</i>	Native, present in moist areas, very toxic.
White cockle	<i>Lychnis alba</i>	Sporadically distributed
Wild mustard	<i>Sinapsis arvensis</i>	Prevalent throughout the region
Wild oats	<i>Avena fatua</i>	Widely distributed
Wormwood or Absinthium	<i>Artemisia absinthium</i>	Distribution unknown
Yellow clematis	<i>Clematis tangutica</i>	One site confirmed at WAC Bennett Dam.

APPENDIX 1: Stakeholders and Members of the Strategic Plan and Profile of the Invasive Plants Monitoring Committee

Chair: Appointed by the Invasive Plant Committee of the Peace River Regional District

Agriculture Producer Groups

- BC Grain Producer’s Association
- Groundbirch Community Pasture Association
- Peace River Organic Producers Association
- Peace River Regional Cattlemen’s Association
- Peace River Forage Association
- South Peace Stockmen’s Association

Agriculture – Other Jurisdictions

- Clear Hills County
- Leduc County
- Municipal of District Greenview
- Saddle Hills County

Communities

- City of Fort St. John
- City of Dawson Creek
- District of Chetwynd
- District of Tumbler Ridge
- District of Hudson’s Hope
- District of Taylor
- Village of Pouce Coupe
- City of Grande Prairie (Alberta)

Contractors – Invasive Plants

- K.A.M. Ventures
- Spectrum Resource Group Inc.
- Sunrise Environmental Inc.
- MGP Contracting Vegetation Management

Federation of BC Naturalists

- Timberline Trail and Nature Club

First Nations

- Prophet River First Nations
- Sauteau First Nations
- Treaty 8 Tribal Associations
- West Moberly First Nations
- Tsay Keh Dene Band
- Doig River First Nations

Government Partners

- Agriculture and Agri-Food Canada
- BC Hydro
- BC Oil & Gas Commission
- BC Transmission Corporation
- Ministry of Agriculture
- Ministry of Environment (BC Parks)
- Ministry of Forests, Lands and Natural Resource Operations
- Ministry of Transportation and Infrastructure
- National Energy Board
- Northwest Invasive Plant Council
- Invasive Species Council of BC
- Northern Rockies Invasive Plant Management Area
- School District No. 59 and 60

Transportation

- Caribou Road Services Ltd

Oil & Gas, Forestry, Mining Industry &

Related Partners

- Ace Vegetation Control Service Ltd.
- Anglo American plc.
- DOW Chemical
- Encana Corporation
- EWD Consulting Corp.
- Ghostpine Environmental Services ltd.
- Hemmera (Bear Mountain Wind Park Project)
- Heritage North Consulting Ltd.
- Louisiana Pacific Canada Ltd.
- Pathfinder Endeavours Ltd.
- Peace River Coal Inc.
- SemCAMS | Red Willow ULC
- Shell Canada Limited
- Spectra Energy Corp.
- Stantec Consulting Ltd.
- TERA Environmental Consultants
- Trend Mine | Northern Energy & Mining Inc.
- Walter Energy

APPENDIX 2 Terms of Reference for the Invasive Plant Committee

1. Goal

To complement the **Mission, Vision and Goals** of the Regional District by: “protecting our economy, environment and social values from invasive plants and ensuring that existing infestations are managed with integrated pest management.”

2. Purpose

The general purpose of the Invasive Plant Committee of the Peace River Regional District (IPCPRRD) will include, but not be limited to the following:

- a. To act as the conduit between the Strategic Plan and Profile of Invasive Plants Monitoring Committee (SPIP) and the Peace River Regional District Board regarding matters relating to noxious/invasive plants in the region

3. Accountability and Committee Organization

The committee will be comprised of:

- I. A minimum of three directors appointed by the Chair of the Regional Board
- II. The General Manager of Environmental Services
- III. The Manager of Invasive Plants

Provisions for a Standing Committee are provided for in By-Law No 1633, 2006
http://prrd.bc.ca/services/administration/documents/1633_2006_Board.pdf

4. Roles and Responsibilities

To ensure regulatory provisions are appropriate to program delivery and recommend amendments to the Board and staff.

- a. Strategic Plan and Profile of Invasive Plants
- b. Program delivery
- c. Compliance and Enforcement Policy
- d. Budget

The above are intended to be reviewed annually

APPENDIX 3: Terms of Reference for the Strategic Plan and Profile of Invasive Plants Monitoring Committee

Strategic Plan and Profile of Invasive Plants Monitoring Committee of the Peace River Regional District Terms of Reference March 2014

1. Goal

To complement the **Mission, Vision and Goals** of the Regional District by: “protecting our economy, environment and social values from invasive plants and ensuring that existing infestations are managed with integrated pest management.”

2. Purpose

To act as a forum to network and provide feedback to the Invasive Plant Committee of the Peace River Regional District (IPCPRRD) regarding:

- a. the Strategic Plan and Profile of Invasive Plants
- b. the effects of noxious/invasive plants in the region
- c. advice regarding best practices for industries operating within the Region
- d. noxious/invasive plant occurrences
- e. information on matters referred by the IPCPRRD
- f. any other matters related to noxious/invasive plants

3. Accountability

- a. Roberts Rules of Order apply
- b. Recommendations will be made to the IPCPRRD as required

4. Committee Organization

- a. A Chair and Vice Chair will be appointed by the IPCPRRD
- b. Secretarial services will be provided by the Peace River Regional District
- c. Members may be chosen to form an Advisory Committee and provide technical advice

5. Membership

Membership is open to all who are interested in in noxious/invasive plant management.

Membership will be continuous

APPENDIX 4: History of Weed Control in the Peace River Regional District

Invasive plants were first introduced to the northeast corner of BC with the arrival of fur traders, homesteaders, and agriculture. Fur traders were expected to live off the land and developed gardens and livestock pastures around their posts. Along with the garden and forage plants, invasive alien plants were introduced. As settlement and development of agriculture, resources, transportation and utilities continued, introduction and spread of invasive alien plants occurred. Invasive alien plants or weeds have long been recognized as indicated by the *Thistle Prevention Act* of 1877 followed by the *Noxious Weed Act* of 1888.

In 1973, the *Noxious Weed Act* was replaced by the *Weed Control Act* which imposes “a duty on all land occupiers to control designated noxious plants.” It also provides for regional districts and government agencies to appoint weed inspectors; this led to the formation of the Peace River Regional District Weed Control Committee in 1973.

1977-1997 – PRRD’s Weed Control Program Summary:

- Delivered according to the *B.C. Weed Control Act* and Regulations
- Varied from one or two inspectors and up to fourteen inspectors working in three different regions –North Peace, South Peace and West Peace
- In the latter years, summer employees were hired to inspect within designated areas throughout the Peace, with weed notices being issued to the land occupier to control and subsequent enforcement, if there was no compliance.
- The Ministry of Agriculture was a key player in the program, whereby the Field Crop Agrologist was required to provide the technical advice for the means of control on agriculture properties.
- A Weed Control Committee, made up of five members, designated according to the *Weed Control Act* with various representatives from regional agriculture associations, municipalities, railways, Crown Lands, and the resource sector (forestry, oil and gas) developed recommendations that guided the program.
- Program files are archived by the Peace River Regional District (PRRD).
- The Weed Control Program was discontinued in 1997 by the PRRD due to a lack of provincial funding.

1998-2008 - Invader Weed Control Program and Weed Warrior Program

- The Ministry of Agriculture, in conjunction with the PRRD, initiated the “*New Invader Weed Control Program*” to ensure that known sites of new invasive weed species, such as knapweeds and hawkweeds, would be controlled. It not only involved the control of invasive plants, but included the release of biological agents for scentless chamomile, identification of weeds, displays at the local fairs, and coordinating a Weed Warrior Program.
- The main objectives of the program were accomplished through contracts to appoint spray contractors and a coordinator.

2003-2011 – Formation of the Northeast Invasive Plant Committee (NEIPC)

- Development of a shared regional strategic plan between the Fort Nelson and Regional district boundaries resulted in the formation of NEIPC
- The first “pooled resource delivery model,” established for the Pine Pass, brought together key stakeholders to integrate funding, awareness, reporting of sites, inventory work and treatments based on a common strategic approach across land jurisdictions.
- This model involves the various stakeholders contributing to a funding pool that is used to integrate awareness, reporting of sites, inventories and treatments based on a strategic approach across land jurisdictions, previously managed by environmental departments within each jurisdiction.
- Leveraging the success of the Pine Pass project model, the Fort Nelson Invasive Plant Management Area Steering Committee was developed to address the susceptible habitats and expansion of resource industry activities in the area.
- NEIPC continued developing the pooled resource delivery model and as of 2011 there were four IPMAs: Fort Nelson, North Peace, South Peace and Pine Pass.

2011-2013 - Peace River Regional District: Invasive Plant Program Manager Position

- In May 2011, the PRRD created a full-time position to manage the Invasive Plant Program, under its Environmental Services function.
- In the spring of 2012 an invasive plant disposal pilot was established. Disposal bins were set up at the Chetwynd, Bessborough and North Peace landfills and tipping fees were waived for private land owners. In the fall of 2013, this was made a regular service for the public.
- In the fall of 2011, the Fort Nelson area was encouraged to become independent and the NEIPC was dismantled. The PRRD delivers an independent weed management program within their boundaries while continuing to collaborate with the Fort Nelson group.
- In the fall of 2012, the NEIPC made a recommendation to the board of the PRRD to re-name the advisory committee to the Invasive Plant Committee of the Peace River Regional District (IPCPRRD). The recommendation was adopted.

2014- The Peace River Regional District explores a Progressive Compliance and Enforcement Regime

- In 2013, the Regional District’s Agriculture Advisory Committee expressed concern over invasive plants and noxious weeds on agriculture settings in 2013.
- The pooled delivery model was reviewed by the PRRD staff to ensure broad objectives of the program were being accomplished.
- A bylaw was proposed using powers from the *Local Government Act* which will allow issuance of a warning ticket and a monetary penalty to be available as enforcement tools prior to engaging the authority of the *Weed Control Act*.
- Education and Outreach will remain the focus of the program in order to achieve prevention through increased awareness.
- The structure of the committee was altered to create a Standing Committee (IPCPRRD) to guide operational delivery of the program. Member representing stakeholders within the Region remain an integral part of the program and will continue to monitor the landscape for new species, share knowledge and have input regarding the strategic plan, the broad group is the Peace River Regional District Strategic Plan and Profile of Invasive Plants Monitoring Committee (Monitoring Committee).
Municipalities are supported and encouraged to partner with the Regional District for assistance in identifying invasive plants, determining appropriate treatments and to employ regulatory powers to create invasive plant bylaw.

APPENDIX 5 BC Provincially Prohibited Weeds

The following invasive plant species are not present in BC or are present but extremely limited in extent, and pose a significant threat to BC's environment, economy and/or human health. These species have been identified as a result of an extensive review that considered their regulation and status in BC and bordering jurisdictions, presence elsewhere in similar environments to those that occur in BC, and listing under federal regulations. These invasive plant species are proposed BC Prohibited Weeds and candidates for the BC Early Detection Rapid Response Program.

Common Name	Scientific Name	Type
African-rue	<i>Peganum harmala</i> L.	Terrestrial
Black Henbane	<i>Hyoscyamus niger</i> L.	Terrestrial
Brazilian Elodea/ Waterweed	<i>Egeria densa</i> Planch.	Aquatic - submerged, rooted
Camel Thorn	<i>Alhagi maurorum</i> Medik.	Terrestrial
Common Crupina	<i>Crupina vulgaris</i> Cass.	Terrestrial
Common Reed, European	<i>Phragmites australis</i> (Cav.) Trin. ex Steud. <i>subsp. australis</i>	Semi aquatic - emergent
Cordgrass, Dense-flower	<i>Spartina densiflora</i> Brongn.	Semi-aquatic - tidal
Cordgrass, Salt Meadow	<i>Spartina patens</i> (Aiton) Muhl.	Semi-aquatic - tidal
Cordgrass, Smooth	<i>Spartina alterniflora</i> Loisel.	Semi-aquatic - tidal
Cordgrass, Common	<i>Spartina anglica</i> C.E. Hubbard	Semi-aquatic - tidal
Dyer's Woad	<i>Isatis tinctoria</i> L.	Terrestrial
Eggleaf Spurge	<i>Euphorbia oblongata</i> Griseb.	Terrestrial
False-brome, Slender	<i>Brachypodium sylvaticum</i> (Huds.) P. Beauv.	Terrestrial
Foxtail, Slender/Meadow	<i>Alopecurus myosuroides</i> Huds.	Terrestrial
Goatsrue	<i>Galega officinalis</i> L.	Terrestrial
Halogeton/Saltover	<i>Halogeton glomeratus</i> (M. Bieb.) C.A. Mey.	Terrestrial
Hawkweed, Mouse-ear	<i>Hieracium pilosella</i> L.	Terrestrial
Hyacinth, Water	<i>Eichhornia crassipes</i> (Mart.) Solms	Aquatic - semi- emergent
Hydrilla	<i>Hydrilla verticillata</i> (L. f.) Royle	Aquatic – submerged, rooted
Johnsongrass	<i>Sorghum halepense</i> L.	Terrestrial
Jointed Goatgrass	<i>Aegilops cylindrica</i> Host	Terrestrial
Knapweed, Squarrose	<i>Centaurea virgata</i> Lam. ssp. <i>squarrosa</i> (Boissier) Gugler	Terrestrial
Kudzu	<i>Pueraria montana</i> (Lour.) Merr. var. <i>lobata</i> (Willd.) Maesen & S. Almeida	Terrestrial
Meadow Clary	<i>Salvia pratensis</i> L.	Terrestrial



B.C. Proposed Prohibited Weeds

Common Name	Scientific Name	Type
Medusahead	<i>Taeniatherum caput-medusae</i> (L.) Nevski	Terrestrial
Nightshade, Silverleaf	<i>Solanum elaeagnifolium</i> Cav.	Terrestrial
North Africa Grass	<i>Ventenata dubia</i> (Leers) Coss.	Terrestrial
Nutsedge, Purple	<i>Cyperus rotundus</i> L.	Terrestrial
Nutsedge, Yellow	<i>Cyperus esculentus</i> L.	Terrestrial
Pepperweed, Perennial	<i>Lepidium latifolium</i> L.	Terrestrial
Red Bartsia	<i>Odontites serotina</i> Dum.	Terrestrial
Reed, Giant	<i>Arundo donax</i> L.	Terrestrial
Sage, Clary	<i>Salvia sclarea</i> L.	Terrestrial
Sage, Mediterranean	<i>Salvia aethiopsis</i> L.	Terrestrial
Spring Milletgrass	<i>Milium vernale</i> M. Bieb.	Terrestrial
Spurge Flax	<i>Thymelaea passerina</i> (L.) Coss. & Germ.	Terrestrial
Starthistle, Iberian	<i>Centaurea iberica</i> Trev. ex Sprengel	Terrestrial
Starthistle, Purple	<i>Centaurea calcitrapa</i> L.	Terrestrial
Starthistle, Yellow	<i>Centaurea solstitialis</i> L.	Terrestrial
Syrian Bean-Caper	<i>Zygophyllum fabago</i> L.	Terrestrial
Texas Blueweed	<i>Helianthus ciliaris</i> DC.	Terrestrial
Thistle, Italian	<i>Carduus pycnocephalus</i> L.	Terrestrial
Thistle, Slenderflower	<i>Carduus tenuiflorus</i> W. Curtis	Terrestrial
Velvetleaf	<i>Abutilon theophrasti</i> Medik.	Terrestrial
Water soldier	<i>Stratiotes aloides</i> L.	Aquatic – submerged/emergent, rooted

December 2, 2015



PEACE RIVER REGIONAL DISTRICT

Strategic Plan and Profile of Invasive Plants Monitoring Committee of the Peace River Regional District Terms of Reference

1. Goal

To complement the **Mission, Vision and Goals** of the Regional District by: *“protecting our economy, environment and social values from invasive plants and ensuring that existing infestations are managed with integrated pest management.”*

2. Purpose

To act as a forum to network and provide feedback to the Invasive Plant Committee of the Peace River Regional District (IPCPRRD) regarding:

- a. the Strategic Plan and Profile of Invasive Plants
- b. the effects of noxious/invasive plants in the region
- c. advice regarding best practices for industries operating within the Region
- d. noxious/invasive plant occurrences
- e. information on matters referred by the IPCPRRD
- f. any other matters related to noxious/invasive plants

3. Accountability

- a. Roberts Rules of Order apply
- b. Recommendations will be made to the IPCPRRD as required

4. Committee Organization

- a. A Chair and Vice Chair will be appointed by the IPCPRRD
- b. Secretarial services will be provided by the Peace River Regional District
- c. Members may be chosen to form an Advisory Committee and provide technical advice

5. Membership

- a. Membership is open to all who are interested in in noxious/invasive plant management
- b. Membership will be continuous