



# REPORT

To: Chair and Directors

Date: February 24, 2020

From: Kari Bondaroff, Environmental Services Manager

**Subject: February 20, 2020 Invasive Plant Committee Recommendations**

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**RECOMMENDATION #1: [Corporate Unweighted]**

That the Regional Board forward a letter to the BC Oil and Gas Commission requesting information on current invasive plant control strategies being implemented by the BC Oil and Gas Commission on “abandoned” well sites.

**RECOMMENDATION #2: [Corporate Unweighted]**

That the Regional Board obtain a legal opinion to determine which agency has jurisdiction and responsibility to control invasive plants/noxious weeds on abandoned well sites.

**RECOMMENDATION #3: [Corporate Unweighted]**

That the Regional Board approve the 2019 Annual Invasive Plant Program Report ; further, that the Report be posted to the Regional District’s website.

**RECOMMENDATION #4: [Corporate Unweighted]**

That the Regional Board approve the 2020 Invasive Plant Strategic Plan and Profile; further, that further, that the Invasive Plant Strategic Plan and Profile be posted to the Regional District’s website.

**BACKGROUND/RATIONALE:**

In 2019 there was an increased volume of calls from concerned citizens regarding abandoned wells on their property and the lack of treatment of invasive plants on those well sites. Abandoned wells occur when companies fall into receivership and negate on all of their contractual obligations. Often in these cases, rent is not paid to the landowner and maintenance of the site is not conducted. Until a well is considered “orphaned” the BC OGC states that they do not have the ability to respond as there is no budget to allow for assistance in this case. As abandonment of wells can take years to resolve in court, invasive plants have increased opportunity to grow and spread to surrounding lands. It is important that the PRRD seek information and legal advice as to which agency has jurisdiction and responsibility for controlling invasive plants while titled “abandoned.”

The 2019 Annual Invasive Plant Program Report is built to summarize activities performed under the guidance of the Board approved 2019 Invasive Plant Strategic Plan and Profile. The 2020 Invasive Plant Strategic Plan and Profile has been reviewed by both the Strategic Plan and Profile of Invasive Plants Monitoring Committee and the Invasive Plant Committee and has been recommended for approval by the Regional Board. The 2020 document has been updated to include the new PRRD Strategic Focus Areas as well as the newly updated Provincial Priority Invasive List.

Staff Initials:  Dept. Head: 

CAO: 

For full details, please see the attachments for background information as provided to the Invasive Plant Committee on February 20, 2020. The minutes of the February 20<sup>th</sup> meeting are on the Consent Calendar.

**ALTERNATIVE OPTIONS:**

1. That the Regional Board provide further direction.

**STRATEGIC PLAN RELEVANCE:**

- Partnerships
- Collaboration with Local and First Nations governments

**FINANCIAL CONSIDERATION(S):**

None identified.

**COMMUNICATIONS CONSIDERATION(S):**

N/A

**OTHER CONSIDERATION(S):**

N/A

Attachments:

1. 2019 Invasive Plant Annual Report
2. 2020 Strategic Plan and Profile

## **Invasive Plant Program Manager – PRRD – 2019 Year at a Glance – Annual Report**

For 2019, the Invasive Plant program and PRRD continued to promote the Destroy Daisy campaign. We played the commercial at the local movie theatres, played the radio commercial on our local radio stations, and attended the Canada Day Pouce Coupe Parade with the Destroy Daisy truck.

Not only did we re-hire our two seasonal staff from May 1 to September 1 to complete the efficacy monitoring for the Province, we added a 3-month compliance and enforcement officer dedicated to Invasive Plants. Devre Gibson returned for her third year and Ashley Schweitzer, her second year, Cathy Ashcroft came on board as our Bylaw Officer.

Devre and Ashley handed out information packages to many different businesses and organizations around the PRRD regarding scentless chamomile and oxeye daisy in hopes of gaining voluntary compliance from the companies. As a result, many different companies cleaned up their yards and the volume of complaints from the industrial areas reduced. Cathy handled 117 weed reports, issued 2 warning tickets, 10 financial penalties, and 1 weed notice. 27 files will require follow-up in the spring to ensure spring treatment occurs prior to re-seeding of agriculture crops.

Outreach activities included many school visits, science fairs, Parks Day, local fairs as well as material delivery to landfill and transfer stations, pet stores, hunting stores, garden centres, and tourist information centres. We also created a brand new Peace River Regional District Plant ID book that focusses on our listed plants within each of our categories.

**Together • Prevent • Report**

















Kari Bondaroff, P.Ag









Manager of Invasive Plants, Environmental Services, and Field Services Program









The following subsequent table follows the work plan as outlined within the 2019 Strategic Plan and Profile.






## 2019 Invasive Plant Program Work Plan Priorities and Results

Priorities	Results
<b>Planning</b>	
 Prioritize the 101 PRRD owned/occupied properties using the IAPP data for reported invasive plant species infestations.	62 sites were surveyed, 57 sites were treated.
 Create a schedule of treatment months to ensure proper timing of treatment.	Treatments occurred from June-September 2019 by MGP Contracting.
 Evaluate the PRRD IAPP data for invasive species infestations and outline sensitive areas that need to be visited in 2018.	Planning sessions occurred between the PRRD and the Province on February 20, 2019 to outline areas in need of high priority treatments.
 Inventory current outreach materials and update/purchase as required.	New carabiner cards were printed, 4 new species (mountain bluet, common toadflax, meadow goat's beard, wild parsnip). PRRD Plant ID booklets were re-designed and 10,000 copies are on order.
<b>Inventory and Surveys</b>	
 Site visits required for 1/3 of PRRD owned/occupied lands.	Contractor visited all PRRD sites as per the contractual obligations. 57 sites were treated and 42 were monitored for efficacy by PRRD staff.
 Survey of historical Regional EDRR sites.	The following plants were surveyed in the 2019 season: <ul style="list-style-type: none"> <li>1- Diffuse Knapweed</li> <li>26- Marsh Plume Thistle</li> <li>12- chicory</li> <li>1- Blueweed</li> <li>2- Himalayan Balsam</li> <li>1- Field Scabious</li> <li>38- Mountain Bluet</li> <li>3- Cypress Spurge</li> <li>1- Bighead Knapweed</li> <li>1- Wild Parsnip</li> <li>1- Baby's Breath</li> </ul>









<p><b>Treatment</b></p>	
<p> Treat all invasive species surveyed/inventoried on PRRD owned/occupied lands using the designated three pass system.</p>	<p>All PRRD sites were visited and infested sites were treated 1-4 times as per requirements.</p>
<p><b>Treatment Monitoring</b></p>	
<p> This is the 3rd year of the Area Controllers contract, 30% of the PRRD sites will be monitored for treatment in 2019.</p>	<p>42/57 sites were monitored for treatment which is 74% of our sites.</p>
<p> The PRRD will conduct treatment efficacy monitoring for the Ministry of Transportation and Infrastructure and the Ministry of Forests, Lands, and Natural Resource Operations and Rural Development. All monitoring will be completed as per the contract agreement.</p>	<p>115 sites were monitored for treatment efficacy as per the contract. These sites were spread within the boundaries of the PRRD. All required documentation has been submitted to the Ministry of Transportation and Infrastructure as per the contract. This was an annual contract of \$25,000.</p>
<p><b>Data Entry</b></p>	
<p> 100% of inventory, survey, or treatment documentation will be entered into IAPP within 3 working days of completing the data collection.</p>	<p>IP staff were very diligent in data entry this season. 100% of the data entry was completed within 3 working days of data collection.</p>
<p><b>Education and Awareness</b></p>	
<p> Continue to support the Peace River Forage Association's quarterly seminars.</p>	<p>PRRD supplied information for a Forage Fact in November 2019.</p>
<p> Support a formal or non-formal Pesticide Applicators Course within the PRRD to include both staff and stakeholders.</p>	<p>No Pesticide Applicators courses were held within the PRRD in the 2019 year that required support.</p>
<p> Continue to promote the activities of teaching livestock to eat weeds through research, outreach articles, and knowledge transfer.</p>	<p>Saulteau FN embarked in a sheep flock training session in June 2019. 30 yearlings were successfully trained to eat Canadian thistles.</p>
<p> Continue to offer Regional support to stakeholders through invasive plant ID,</p>	







<p>outreach materials, integrated pest management planning, and best management practices.</p>	
<p> Attend local events that promote environmental health and sustainability including regional fall fairs, 4-H events, local garden tours, career fair days, and science fairs.</p>	<p>Staff attended regional fall fairs, science fairs, garden centers, forage tours, parks day, and parades.</p>
<p> Continue to engage youth in biodiversity and ecological sustainability activities that focus on the prevention and awareness of invasive plant infestations.</p>	<p>Programming that the IP staff offer is ever changing and adapting to meet the needs of the audience. All activities are hands-on and focused on biodiversity and ecological sustainability with an Invasive Plant focus.</p>
<p> Continue to utilize “Weedy Wednesday” Facebook posts to promote events, highlight invasive plant species, and offer information about integrated pest management techniques.</p>	<p>Weedy Wednesday posts were very successful this season. There were 55 posts with an average of 825 people reached for each post.</p>
<p> Continue to conduct presentations on issues and knowledge obtained within the PRRD with shareholders. These presentations may include but are not exclusive to Facebook posts, physical presentations, seminars, and YouTube videos.</p>	<p>Information, resources, lessons, presentation, and activities are shared upon request.</p>
<p> Educational materials will be replaced upon depletion of resources.</p>	<p>Ongoing.</p>
<p> New educational materials will be purchased as they come available and if they are applicable within the PRRD.</p>	<p>New materials for 2019 include 4 new carabineer cards to add to the existing cards and a new PRRD Plant ID book.</p>
<p> PRRD staff will continue to attend professional development activities as per their work plans.</p>	<p>ISCBC directors meetings, asset management.</p>
<p> PRRD staff will continue to develop new and useful materials to deliver to PRRD residents.</p>	<p>New updated carabineer cards designed and developed for the Peace Region as well as the PRRD Plant ID booklet.</p>



<b>Coordination and Partnership Building</b>	
 Hold two IPCPRRD and SPPIPMC meetings.	Meeting held November 26, 2019. There were no additions to the agenda for the Spring 2019 meeting and as such updates were emailed to members as they were received from partnering organizations.
 Engage a minimum of two First Nations Partnerships in activities such as Weed ID, community weed pulls, or treatment of existing infestations.	Saulteau FN engaged in surveying of their lands as well as sheep training in 2019 for livestock and weeds. West Moberly FN is interested in a partnership educational day or weed pull in 2020.
 Continue to support the ISCBC programs.	“Plantwise,” “Don’t let it loose,” “Clean Drain Dry,” “PlayCleanGo” are all communicated through the PRRD.
 Attend the 2019 ISCBC AGM and Forum in February.	Due to unforeseen circumstances, the forum was unable to be attended.
 Continue to partner with industry to promote Best Management practices by offering plant identification resources, offering free commercial dumping at the three local landfills, and partnering in outreach events.	Free dumping was offered at the three landfills this season (North Peace, Bessborough, and Chetwynd) for both residential and commercial users. Bessborough received 13824 kg (1864 residential, 11960 commercial), Chetwynd received 3060 kg (460 residential, 2600 commercial), and North Peace received 8825 kg (8735 residential, 90 commercial).
 Continue to promote and support the local Rancher contracts offered by the Ministry of Forests, Lands, and Natural Resource Operations to enable local crown grazing occupants to treat high priority and other regionally listed invasive plant species.	One rancher contract was again held between FLNRO and Sunset Community Pasture.
 Continue to work with local governments and municipalities increase residents awareness of invasive plant species through joint inspections and sharing of outreach materials.	Follow-up on treatment activities will occurred in the spring. Many door knockers, invasive plant weed bags, and information packages were handed out within all of the neighbouring municipalities.
 Continue to support PlayCleanGo.org in partnership with PRRD parks, BC Parks, and the Ministry of Forests, Lands and Natural Resource operations to expand	14 Parks, both Regional and Provincial, were hosts to the PlayCleanGo.org signage and boot stations for the third year. BC Parks placed 4 more signs in their own parks to

<p>the education and outreach programs to include users of local parks and trails located in areas that have identified invasive plant infestations.</p>	<p>promote the program for 2019 moving forward.</p>
<p> Host an outreach event in partnership with PRRD parks staff.</p>	<p>This event was held July 27 at Sundance Park. Summer staff attended the event.</p>
<p> Increase awareness of the “Grow Me Instead”/“Plantwise” programs through local nursery visits, delivery of outreach materials.</p>	<p>“Plantwise” and “Grow Me Instead” documentation as well as the PRRD plants document were distributed to Garden centres in Dawson Creek, Fort St. John, Hudson’s Hope, Taylor, and Chetwynd.</p>
<p> Increase awareness and promotion of the Good Neighbour Cost share program which allows non-commercial residents to access between 50-75% of costs, up to \$500-\$750 of treatment or chemical costs on a one-time, pre-approved, basis.</p>	<p>This is the 3<sup>rd</sup> year of this program and it was offered to all residents that were issued either an information package or a warning ticket for an infestation found on their property. As well, it was offered to residents that called wanting information on treatment options. However, there was no up-take for the 2019 season. It is recommended that we cancel this program for 2020 and try a different approach.</p>
<p> Increase awareness and promotion of the Trade-A-Weed program for gardeners that allows participants to document removal and disposal of an invasive plant from their flower garden in exchange for the purchase of a “plantwise” perennial.</p>	<p>For 2019, all REDRR plants were made available for trade-a-weed through the entire month of May through FB posts and information delivered to garden centres across the region. There was no up-take for this program.</p>
<p><b>Leveraging Additional Resources</b></p>	
<p> Additional financial resources will be received from the Ministry of Transportation. This will cover the cost of monitoring treatments conducted by MoTI and FLNRO contractors within the three PRRD Invasive Plant Management Areas.</p>	<p>A \$25,000 contract was negotiated between the PRRD and MoTI for efficacy monitoring of IP treatments within the Pine Pass, South Peace, and North Peace invasive plant management areas.</p>
<p><b>Provincial EDRR Support</b></p>	



 <p>When requested, invasive plant program staff will support the efforts of the Provincial EDRR staff in verifying reported infestations and coordinating any further actions required.</p>	<p>None requested within the 2019 season.</p>
<p><b>“Report-A-Weed” Verification</b></p>	
 <p>When requested, invasive plant program staff will support the efforts of the Provincial Invasive Plant Specialist in verifying reported infestations and coordinating any further actions required.</p>	<p>None requested in 2019.</p>
 <p>Staff will continue to promote the “Report-A-Weed” app through communications within the PRRD.</p>	<p>The “Report-A-Weed” app is listed within the Strategic plan and profile of the Invasive Plant program, within our deck of cards, and within the destroy daisy commercial.</p>
 <p>All invasive plant reports received within the office of the PRRD will receive follow-up within 3 working days of receipt. Any follow-up required will follow the policies and procedures outlined in the C&amp;E manual.</p>	<p>Procedures were followed according to the C&amp;E manual and documentation of communications was made. 117 weed reports were received via phone call, email, and sent in weed report forms. This included 5 “Report-A-Weed” reports.</p>
<p><b>Reporting and Data Management</b></p>	
<p>When requested, invasive plant program staff will provide updates to the PRRD Board on operational activities conducted by the program.</p>	<p>As per requests.</p>
 <p>An annual report will be conducted for the 2019 year.</p>	<p>Deadline is January 31, 2020.</p>
 <p>Any and all reporting requirements as per contract agreements will be met by or before the outlined due dates.</p>	<p>All requirements completed and submitted as per contractual agreements between the PRRD and MoTI.</p>
 <p>IAPP data will be handled with utmost care to prevent potential errors.</p>	<p>IAPP data has been double checked and any errors corrected or passed on for correction. At this point, all data is found to be accurate.</p>
 <p>PRRD invasive plant staff will enter IAPP data for other jurisdictions as per their request.</p>	<p>None requested in 2019.</p>

 The Strategic Plan and Profile will be maintained to reflect current operations and will be approved by the IPCPRRD committee following the spring meeting.	<p>Suggestions for improvements and updates will be requested at the November 26, 2019 meeting. Any changes will be made prior to the spring 2019 meeting.</p>
 All manuals, policies and procedures, and operational plans will be posted on the PRRD website for shareholders to utilize.	<p>Completed.</p>
<p><b>Other program Activities</b></p>	
 When requested, invasive plant program staff will participate in research trials that have the potential to increase the resources available to PRRD land occupiers in preventing, controlling, suppressing, or eradicating invasive plants.	<p>No new requests for 2019.</p>
<p><b>Compliance and Enforcement</b></p>	
 Appointed Weed Officers/Weed Inspectors of the PRRD will follow all policies and procedures outlined by Provincial Legislation, Local Legislation, and the C&E policies and procedures manual.	<p>Throughout the 2019 season, Paulo Eichelberger, Kari Bondaroff, and Mike Pangman were appointed by the Board as weed officers and inspectors. Cathy Ashcroft was appointed by the Board as a weed officer.</p>
 Hire one seasonal staff for the field season from June – August 31, 2019 to increase compliance and enforcement efforts throughout the summer months.	<p>Cathy Ashcroft was hired in June of 2019.</p>
<p><b>Special Projects</b></p>	
 Continue to promote the Destroy Daisy Campaign to increase public awareness of invasive daisies such as scentless chamomile and oxeye daisy.	<p>Newspaper ads were run in the coffee talk, FB posts were plentiful, the destroy daisy commercial was played at the local movie theatre and the audio commercials were played at our local radio stations.</p>

<p> Free invasive plant dumping for all users (residential and commercial) will continue at the three local landfills (Bessborough, Chetwynd, and North Peace).</p>	<p>This 2019 year, 25,709 kg of invasive plants were received at the local landfills, an increase of over 4,000kg from 2018.</p>
<p> Hire two seasonal staff for the field season from May 1 – August 31, 2018.</p>	<p>Devre Gibson and Ashley Schweitzer successfully worked in areas such as outreach, monitoring, planning and data entry.</p>

**Thank You Funders**

Ministry of **Forests, Lands and  
Natural Resource Operations**



Ministry of  
Transportation  
and Infrastructure



PEACE RIVER REGIONAL DISTRICT

# Invasive Plant Program Strategic Plan and Profile 2020



diverse. vast. abundant.

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## PRRD STRATEGIC FOCUS AREAS



**Our Role:** The PRRD plays a vital role in providing a variety of regional, sub-regional and local services that are valued by our residents and contribute to a high quality of life. We collaborate with other local governments, First Nations, agencies and volunteer organizations to deliver services and address challenges and needs in the region. As a regional government, we provide leadership and use our influential, collective voice to advocate on behalf of our residents, businesses and industry in support of a prosperous economy, a healthy natural environment and livable communities.



**Our Approach:** As we fulfill our obligations and responsibilities as a regional government, the PRRD will:



COMMUNICATE AND ENGAGE with our constituents to understand their interests as well as foster a better understanding of the Regional District's role and services.



COLLABORATE AND COOPERATE with our partners to enhance the effectiveness of our efforts and resources.



Be CONSISTENT in the application of our policies and decisions.









**Goal:** The Invasive Plant Program's goal is to protect our economy, environment and social values from invasive plants and to ensure that existing infestations are managed using an integrated pest management approach.

## Sociocultural

### Why Care About Invasive Plants?

A **weed** is defined as a plant growing where it isn't wanted. In British Columbia, **invasive plants** have been defined as non-native (alien) plants whose introduction into BC cause, or are likely to cause, economic or environmental damage, or harm to human health (IMISWG 2011). They are plants that 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 can quickly colonize an area.

Once established, invasive plants can:

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

**Noxious weeds** are invasive plants referred to in the *Provincial Weed Control Act*. Noxious weeds are also referred to in local government bylaws. Legislation requires that all occupiers of lands manage infestations of invasive plants, as they negatively affect our economic, environmental and social values. The provincial invasive plant list can be found in Appendix 6.

All invasive plants that are currently a concern for the PRRD are listed in the four categories outlined in the Plant Species Invasiveness within the PRRD section starting on page 18. The lists also contain native plants that may plague the agriculture sector. To ensure proper identification and management strategies are used by those who discover them, detailed information about each plant can be found in the **PRRD Invasive Plant List and Descriptions** document located on the PRRD website.



## Legislation, Compliance & Enforcement

### Legislation Involved

Invasive plant management is enforced by federal and provincial legislation, as well as through local bylaw. In the PRRD, there are two main pieces of legislation used to enforce invasive plants: the PRRD Invasive Plants Bylaw No. 2121, 2014, and the *Weed Control Act* and its regulations. It is the responsibility of the owner or occupier to control any invasive plants growing on their property.

*The Weed Control Act*, section 2 states:



“An Occupier must control noxious weeds growing or located on land and premises and on any other property located on land and premises, occupied by that person.”

*Bylaw No. 2121*, section 3 states:



“No person who is an Owner or Occupier of Real Property shall allow any Invasive Plant or Noxious Weed to grow on that Real Property”

The General Manager of Environmental Services, the Environmental Services Manager, the Invasive Plant Bylaw Officer, and the Area Controller are all designated as Weed Inspectors / Weed Control Officers, and are responsible for enforcing these two pieces of legislation.

### Compliance and Enforcement Regime?

The Invasive Plant Program strives to ensure their compliance & enforcement (C&E) model is fair, objective, & transparent. The progressive model consists of 4 steps:



Outreach and Education



Warning Notice



Monetary Penalty



Weed Notice

C&E decisions rely on weed reports from stakeholders, Invasive Alien Plant Program (IAPP) data, and physical evidence collected through the inspection process. In order to remain objective in decision making, the C&E manual with detailed policies and procedures is utilized. For additional information on the programs C&E policies and procedures, refer to the supplemental C&E Manual located on the PRRD website at: <http://prrd.bc.ca/wp-content/uploads/page/plans-reports-invasive-plants/CE-Manual-Post-Version.pdf>.

## Invasive Plant Committees of the Peace River Regional District

### Structure

The Invasive Plant Program is a division of the PRRD's Environmental Services Department. The program has two separate committees that provide advice and direction to operational aspects, the Strategic Plan and Profile of Invasive Plants Monitoring Committee (SPPIPMC), and the Invasive Plant Committee of the Peace River Regional District (IPCRRD), respectfully.

The SPPIPMC is comprised of stakeholders and individuals, interested in invasive plant management within the Regional District. The terms of reference for this committee can be found in Appendix 1.

The IPCRRD is a Regional Board 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 IPCRRD, and together consider issues which affect the constituents within the Regional District and provide operational direction for the invasive plant program. The terms of reference for this committee can be found in Appendix 2.

### Area of Operations

The Strategic Plan's area of operation covers BC east of the Rocky Mountains to the Alberta border, and north from Kakwa Provincial Park to the 58<sup>th</sup> parallel, just south of Fort Nelson. The area covers both private and Crown Land, and is divided into 3 Invasive Plant Management Areas (IPMA): North Peace, South Peace, and Pine Pass. The provincial government agencies which have jurisdiction over the Crown land portion include:



Ministry of Forest Lands and Natural Resource Operations (*Northeast Region / Peace District*)



Ministry of Environment / BC Parks (*Peace Region*)



Ministry of Transportation and Infrastructure (*Peace Region*)



Oil and Gas Commission



Ministry of Energy and Mines

## Membership






Membership in the Strategic Plan and Profile of Invasive Plants Monitoring Committee (SPPIPMC) is open to all and there is no membership fee. To become a member, send an email to: [prrd.dc@prrd.bc.ca](mailto:prrd.dc@prrd.bc.ca). This group represents all perspectives and land-related vantage points including, but not limited to:

-  Concerned citizens
-  All levels of government (*federal, provincial, interprovincial, & local*)
-  Environmental & ecological organizations
-  Local & aboriginal communities in the Region
-  Industrial & resource sector (*forestry, mining, & oil & gas*)
-  Youth groups & educational organizations
-  Horticulture / gardening clubs & organizations
-  Guide outfitters, trappers, tourism, clubs & organizations
-  Agriculture produces, Agri-business, & support companies
-  Utilities & Transportation
-  BC's Regional Invasive Organization

## Invasive Plant Management Strategies

### Management Strategy Overview

The invasive plant strategy has the following five components:

-  Prevention
-  Eradication / Suppression
-  Containment / Rehabilitation
-  Rehabilitation / Surveying
-  Compliance & Enforcement.

The most effective and efficient management of invasive plants is to **prevent** them from arriving. After invasive plants have arrived, the most efficient and effective management strategy is to **eradicate** them before they become well established through early detection and rapid response. 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 important. 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. For species that have established at the landscape level, the focus is on **surveying** to determine which sites have the highest likelihood and value for **rehabilitation** and which species and sites are suitable for biocontrol release.

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** as described in Table 1. Plants are placed in categories by reviewing literature on the habitat range and aggressiveness of invasive plants, technical advice and, incorporating 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 to move a species up or down the categories. In addition, the BC Provincial Prohibited Weeds list can be found in Appendix 6 for additional invasive plant species of concern.

### Site Prioritization

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

-  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 in Appendix 5. 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.

## IPCRRD Treatment Matrix and Thresholds

Tables 2 and 3 in Appendix 5 utilize the site priority categorization laid out in Table 1 with the invasive plant categorization to determine treatment thresholds for regional infestations.





## Implementing Invasive Plant Management Strategies





The following actions are undertaken to implement the IPCRRD 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.
-  Collaborate with the various agencies and private landowners to meet the Goals of the PRRD.
-  Support EDRR initiatives at the federal, provincial and regional levels.

## 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 IPCRRD supports and encourages are:

-  Farming and grazing practices that prevent invasive plant establishment.
-  Seeding all disturbances as quickly as possible using native and agronomic seed choices on a site by site basis using the Peace Forage Seeding Tool. <http://www.peaceforagetool.ca/>
-  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: [https://www.for.gov.bc.ca/hra/invasive-species/Publications/Prov\\_EDRR\\_IS\\_Plan.pdf](https://www.for.gov.bc.ca/hra/invasive-species/Publications/Prov_EDRR_IS_Plan.pdf)








-  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.

## Reporting 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 to the appropriate jurisdiction for treatment. 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:

<https://www2.gov.bc.ca/gov/content/environment/plants-animals-ecosystems/species-ecosystems-at-risk>

There are many ways to report invasive plants. To ensure correct identification collect the plant, roots and press it in a book. Bagged samples wilt quickly and are difficult to identify. Photographs are excellent; please take time to ensure the plant is on a plain background such as the hood of a truck and to note the size and location of the infestation.

-  Email the scan of the plant, pictures and location to [prrd.dc@prrd.bc.ca](mailto:prrd.dc@prrd.bc.ca)
-  Bring a sample to the Regional District Office
-  Call the PRRD office at 250-784-3200 or toll-free at 1-800-670-7773
-  Write a letter to the Invasive Plant Program, Box 810, Dawson Creek BC, V1G 4H8
-  Use your phone, go to maps and record the location, then email it to [prrd.dc@prrd.bc.ca](mailto:prrd.dc@prrd.bc.ca) along with a description of the plant / infestation
-  Download the free app: [www.reportaweedbc.ca](http://www.reportaweedbc.ca) 

## Eradication, Containment, Rehabilitation and Inventory

- 1) Canada's invasive species strategy:  
<https://www.canada.ca/en/environment-climate-change/services/biodiversity/invasive-alien-species-strategy.html>
- 2) The Invasive Species Council of BC's strategy:  
[https://bcinvasives.ca/documents/Invasive\\_Species\\_Strategy\\_2017\\_2022\\_171019\\_WEB.pdf](https://bcinvasives.ca/documents/Invasive_Species_Strategy_2017_2022_171019_WEB.pdf)
- 3) The Provincial Inter-Ministry Invasive Species Working Group strategy:  
[https://www.for.gov.bc.ca/hra/invasive-species/Publications/Prov\\_IS\\_Strategy.pdf](https://www.for.gov.bc.ca/hra/invasive-species/Publications/Prov_IS_Strategy.pdf)

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.



Ministry of  
Transportation  
and Infrastructure






Ministry of **Forests, Lands and  
Natural Resource Operations**





*We gratefully acknowledge the financial support of the Province of British Columbia.*

## 2020 Invasive Plant Program Work Plan


### Planning

-  Update the list of PRRD owned/occupied properties and cross-reference the properties for historical invasive plant infestation using the IAPP data.
-  Create a schedule of treatment months to ensure proper timing of treatment.
-  Evaluate the PRRD IAPP data for Regional Early Detection Rapid Response invasive species infestations and outline sensitive areas that need to be surveyed in 2020.
-  Inventory current outreach materials and update/purchase as required.
-  Prepare RFP documents for a new Area Controller contract to be awarded prior to May 1, 2020.

### Inventory and Surveys

-  Site visits required for 1/3 of PRRD owned/occupied lands.
-  Survey of historical Regional EDRR sites for 10% of sites entered into IAPP.


### Treatment

-  Treat all invasive species surveyed/inventoried on PRRD owned/occupied lands using the designated three pass system.




### Treatment Monitoring

-  This will be the 1<sup>st</sup> year of the new Area Controllers contract, 30% of the PRRD sites will be monitored for treatment in 2020.










### Data Entry

-  100% of inventory, survey, or treatment documentation will be entered into IAPP within 3 working days of completing the data collection.

### Education and Awareness

-  Continue to support the Peace River Forage Association's work with invasive plants and healthy pastures as requested.
-  Support a formal or non-formal Pesticide Applicators Course within the PRRD to include both staff and stakeholders.
-  Continue to promote the activities of teaching livestock to eat weeds through research, outreach articles, and knowledge transfer.






-  Continue to offer Regional support to stakeholders through invasive plant ID, outreach materials, integrated pest management planning, and best management practices.
-  Attend local events that promote environmental health and sustainability.
-  Continue to engage youth in biodiversity and ecological sustainability activities that focus on the prevention and awareness of invasive plant infestations.
-  Continue to utilize “Weedy Wednesday” Facebook posts to promote events, highlight invasive plant species, and offer information about integrated pest management techniques.
-  Continue to conduct presentations on issues and knowledge obtained within the PRRD with shareholders. These presentations may include but are not exclusive to Facebook posts, physical presentations, seminars, and YouTube videos.
-  Educational materials will be replaced upon depletion of resources.
-  New educational materials will be purchased as they come available and if they are applicable within the PRRD.
-  PRRD staff will continue to attend professional development activities as per their work plans.
-  PRRD staff will continue to develop new and useful materials to deliver to PRRD residents.


### Coordination and Partnership Building






-  Hold IPCPRRD meetings.
-  Engage a minimum of two First Nations Partnerships in activities such as Weed ID, community weed pulls, or treatment of existing infestations.
-  Continue to support the ISCBC programs.
-  Participate in provincial coordination meetings, ISCBC board member meetings, and interprovincial meetings as requested and applicable.
-  Continue to partner with industry to promote Best Management practices by offering plant identification resources, offering free commercial dumping at the three local landfills, and collaborating in outreach events.
-  Continue to promote and support the local Rancher contracts offered by the Ministry of Forests, Lands, and Natural Resource Operations to enable local crown grazing occupants to treat high priority and other regionally listed invasive plant species.
-  Continue to work with governments and municipalities increase residents awareness of invasive plant species through joint inspections and sharing of outreach materials.

-  Continue to support PlayCleanGo.org in partnership with PRRD parks, BC Parks, and the Ministry of Forests, Lands and Natural Resource operations to expand the education and outreach programs to include users of local parks and trails located in areas that have identified invasive plant infestations.
-  Host an outreach event in partnership with PRRD staff.
-  Increase awareness of the “Grow Me Instead/Plantwise Program” through local nursery visits, delivery of outreach materials.








### Provincial EDRR Support

-  When requested, invasive plant program staff will support the efforts of the Provincial EDRR staff in verifying reported infestations and coordinating any further actions required.

### Report-A-Weed Verification

-  When requested, invasive plant program staff will support the efforts of the Provincial Invasive Plant Specialist in verifying reported infestations and coordinating any further actions required.
-  Staff will continue to promote the Report-A-Weed app through communications within the PRRD.
-  All invasive plant reports received within the office of the PRRD will receive follow-up within 5 working days of receipt. Any follow-up required will follow the policies and procedures outlined in the C&E manual.

### Reporting and Data Management

-  When requested, invasive plant program staff will provide updates to the PRRD Board on operational activities conducted by the program.
-  Write a 2020 annual report.
-  Any and all reporting requirements as per contract agreements will be met by or before the outlined due dates.
-  IAPP data will be handled with utmost care to prevent potential errors.
-  PRRD invasive plant staff will enter IAPP data for other jurisdictions as per their request.
-  The Strategic Plan and Profile will be maintained to reflect current operations and will be approved by the IPCPRRD committee.
-  All operational plans will be posted on the PRRD website for shareholders to utilize.

## Other program Activities



When requested, invasive plant program staff will participate in research trials that have the potential to increase the resources available to PRRD land occupiers in preventing, controlling, suppressing, or eradicating invasive plants.

## Compliance and Enforcement



Appointed Weed Officers/Weed Inspectors of the PRRD will follow all policies and procedures outlined by Provincial Legislation, Local Legislation, and the C&E policies and procedures manual.



Hire one seasonal staff for the field season from June 15 – September 15, 2020 to increase compliance and enforcement efforts throughout the summer months.

## Special Projects



Continue to promote the Destroy Daisy Campaign to increase public awareness of invasive daisies such as scentless chamomile and oxeye daisy.



Hire two seasonal staff for the field season from May 1 – Nov 30, 2020 cost shared with Parks.



Free invasive plant dumping for all users (residential and commercial) will continue at the three local landfills (Bessborough, Chetwynd, and North Peace).



## Plant Species Invasiveness within the Peace River Regional District

### Regional Early Detection Rapid Response (REDRR)

Regional EDRR species are a significant threat and are new to the area. 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. See Table 4.

### Category A

These invasive plants are highly competitive, have the ability to spread rapidly and pose a 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. See Table 5.

## 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. See Table 6.

## 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. See Table 7.

**Table 4 – Regional Early Detection Rapid Response (REDRR)**

Common Name	Latin Name
Baby's breath	<i>Gypsophila paniculata</i>
Big Head knapweed	<i>Centaurea macrocephala</i>
Black Henbane	<i>Hyoscyamus niger</i>
Blueweed	<i>Echium vulgare</i>
Bohemian knotweed	<i>Fallopia x bohemica</i>
Brown knapweed	<i>Centaurea jacea</i>
Cheat grass	<i>Bromus tectorum</i>
Chicory	<i>Cichorium intybus</i>
Creeping bell flower	<i>Campunaula rapunculoides</i>
Cypress spurge	<i>Euphorbia cyparissias</i>
Diffuse knapweed	<i>Centaurea diffusa</i>
Field Scabious /Blue button	<i>Knautia arvensis</i>
Giant knotweed	<i>Polygonum sachalinense</i>
Himalayan balsam/Policeman's Helmet	<i>Impatiens glandulifera</i>
Himalayan knotweed	<i>Polygonum polystachyum/Persicaria wallichii</i>
Hoary alyssum	<i>Bereroa incana</i>
Hoary cress	<i>Cardaria draba</i>
Hound's tongue	<i>Cynoglossum <u>officinale</u></i>
Japanese knotweed	<i>Fallopia japonica</i>
Leafy spurge	<i>Euphorbia esula</i>
Marsh plume thistle	<i>Cirsium palustre</i>
Mountain bluet	<i>Centaurea Montana</i>
Nodding thistle	<i>Carduss nutans</i>
Plumeless thistle	<i>Carduus acanthoides</i>
Purple loosestrife	<i>Lythrum spp.</i>
Queen Anne's lace	<i>Daucus carota</i>
Rush skeletonweed	<i>Chondrilla juncea</i>
St. John's Wort	<i>Hypericum perforatum</i>
Sulphur cinquefoil	<i>Potentilla recta</i>
Tansy ragwort	<i>Senecio jacobeeae</i>
Tartary buckwheat	<i>Fagopyrum tataricum</i>
Wild Chervil	<i>Anthriscus sylvestris (L.)</i>
Wild parsnip	<i>Pastinaca sativa</i>
Wormwood/Absinthium	<i>Artemisia absinthium</i>
Yellow archangel	<i>Lamiastrum galeobdolon</i>

**Table 5 - Category A - High Priority for Eradication and Containment**

Common Name	Latin Name
Burdock	<i>Arctium spp.</i>
Comfrey	<i>Symphytum spp</i>
Common tansy	<i>Tanacetum vulgare</i>
Dalmatian toadflax	<i>Linaria dalmatica</i>
Green foxtail	<i>Sertaria viridis</i>
Meadow goat's-beard or salsify	<i>Tragopogon pratensis</i>
Orange hawkweed	<i>Heiracium aurantiacum</i>
Russian thistle	<i>Salsola kali</i>
Spotted knapweed	<i>Centaurea stoebe L.</i>
Invasive yellow hawkweeds	<i>Pilosella spp.</i>
Wild caraway	<i>Carum carvi</i>

**Table 6 - Category B - Medium Priority for Eradication and Containment**

Common Name	Latin Name
Annual bluegrass	<i>Poa Annua</i>
Common toadflax	<i>Linaria vulgaris</i>
Creeping (Canada) thistle	<i>Cirsium arvense</i>
Kochia	<i>Kochia scoparia</i>
Night-flowering catchfly	<i>Silene noctiflora</i>
Oxeye daisy	<i>Chrysanthemum leucanthemum</i>
Scentless chamomile	<i>Matricaria perforata</i>
Tall/Meadow buttercup	<i>Ranunculus acris</i>

Table 7 - Education and Awareness List

Common Name	Latin Name
American dragonhead	<i>Dracocephalum parviflorum</i>
Arrow Grass	<i>Triglochin maritime</i>
Bladder campion	<i>Silene cucubalus</i>
Bluebur western	<i>Lappula spp</i>
Buckwheat, wild	<i>Polygonum convolvulus</i>
Bull thistle	<i>Cirsium vulgare</i>
Chickweed, mouse eared	<i>Cerastium spp.</i>
Cleavers	<i>Galium aparine</i>
Corn spurry	<i>Spergula arvensis</i>
Curled dock	<i>Rumex crispus</i>
Dame's rocket	<i>Hesperis matronalis</i>
Flixweed	<i>Descurainia sophia</i>
Flowering rush (aquatic)	<i>Butomus umbellatus</i>
Foxtail barley (native)	<i>Hordeum jubatum</i>
Groundsel, common	<i>Senecio vulgaris</i>
Hawksbeard, narrowleaf	<i>Crepis tectorum</i>
Hemp nettle	<i>Galeopsis tetrahit</i>
Lamb's quarters	<i>Chenopodium album</i>
Mallow	<i>Malva neglecta</i>
Mullein	<i>Verbascum thapsus</i>
Mustard, dog	<i>Eruscastrum gallicum</i>
Mustards	<i>Sisymbrium spp.</i>
Pineapple weed	<i>Matricaria matricarioides</i>
Prickly lettuce	<i>Lactuca serriola</i>
Quackgrass	<i>Agropyron repens</i>
Sea Buckthorn	<i>Hippophae rhamniodes</i>
Shasta daisy	<i>Leucanthemum x superbum</i>
Sheep sorrel	<i>Rumex acetosella</i>
Smartweed	<i>Polygonum spp.</i>
Sow thistles	<i>Sonchus spp.</i>
Stinking mayweed, dog	<i>Anthemis cotula</i>
Stinkweed or pennycress	<i>Thlaspi arvense</i>
Stork's bill	<i>Erodium spp.</i>
Tarweed (native)	<i>Madia glomerata</i>
Western water hemlock (native)	<i>Cicuta douglasii</i>
White cockle	<i>Lychnis alba</i>
Wild mustard	<i>Sinapsis arvensis</i>
Wild oats	<i>Avena fatua</i>
Yellow clematis	<i>Clematis tangutica</i>
Yellow floating heart (aquatic)	<i>Nymphoides pelata</i>

## APPENDIX 1:

### Terms of Reference for the Strategic Plan and Profile of Invasive Plants Monitoring Committee

Chair: Director Leonard Hiebert, Appointed by the Committee in 2019.

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

#### 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.”

#### 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

#### Accountability

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

#### Committee Organization

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

#### Membership



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



Membership will be continuous.



## APPENDIX 2:

### Terms of Reference for the Invasive Plant Committee

#### 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.”

#### Purpose



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

- 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

#### Accountability and Committee Organization



The committee will be comprised of:

- a) A minimum of three directors appointed by the Chair of the Regional Board
- b) The General Manager of Environmental Services
- c) The Manager of Invasive Plants



Provisions for a Standing Committee are provided for in the PRRD Board Procedure Bylaw as amended from time to time. These provisions can be found here: [https://prrd.bc.ca/wp-content/uploads/bylaws/board-procedure-bylaw/BL\\_2200\\_Brd-Procedure\\_consolidated-Dec-2019.pdf](https://prrd.bc.ca/wp-content/uploads/bylaws/board-procedure-bylaw/BL_2200_Brd-Procedure_consolidated-Dec-2019.pdf)

#### 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:

### 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.
-  Dissolution of the pooled delivery model occurred in May, 2014.

### **2016-2019 – Efficacy Monitoring for the Province (FLNRORD and MoTI)**

-  The PRRD hired 2 seasonal Invasive Plant Assistants to monitor treatments on Crown land. \$25,000 was annually paid to the PRRD to monitor 10% of treatments within the 3 IPMA's on FLNRORD and MoTI jurisdiction.
-  In 2019, a Bylaw Officer designated to Invasive Plants was hired for 3 months.

## Appendix 4:

### Site Prioritization, Treatment Matrix and Thresholds












Table 1. Site Prioritization	
Priority/Opportunity for Control	Site condition / management intent or goal
<b>1 Extremely High</b>	<ul style="list-style-type: none"> <li> 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.</li> <li> Intent is to prevent establishment or spread and to eradicate the infestation quickly and efficiently.</li> <li> Effective treatment (eradication or containment) is critical.</li> </ul>
<b>2 High</b>	<ul style="list-style-type: none"> <li> Moderate sized infested area (0.25-0.50 ha or 1.25 ac) in susceptible areas and an expectation that control will be effective.</li> <li> 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.</li> </ul>
<b>3 Moderate</b>	<ul style="list-style-type: none"> <li> Larger infested area (greater than 0.50 ha or 1.25 ac), not adjacent to agriculture or delicate habitats and ecosystems that need to be protected.</li> <li> Expectation that control will be effective.</li> <li> Goal is to contain the infestation.</li> </ul>
<b>4 Low Opportunity for Control</b>	<ul style="list-style-type: none"> <li> Infested areas larger than 5 hectares or 12 acres where control would require high investment of resources.</li> <li> Areas are not adjacent to agriculture or susceptible high value habitats and ecosystems that need to be protected.</li> <li> Goal is to reduce the damage from the infested area, record changes to the size and ensure that all vectors of spread are treated.</li> </ul>

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

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"> <li>Regional Early Detection Rapid Response</li> </ul>	Immediate Regional or local eradication: <ul style="list-style-type: none"> <li>Identify and eradicate the local population, prevent new invaders, see the Provincial EDRR process at <a href="http://www.for.gov.bc.ca/hra/invasive-species/edrr.htm">http://www.for.gov.bc.ca/hra/invasive-species/edrr.htm</a></li> <li>See the regionally specific list on page 12.</li> <li>Stop the spread of recently established invaders</li> </ul>
A	1	ERADICATION <i>and</i> CONTAINMENT	Treatment or some form of management is mandatory: <ul style="list-style-type: none"> <li>Immediate requirement to prevent newly arriving invasive plants, or those with low population, from establishing or spreading.</li> <li>Mid and long term goal is to eliminate the population from within the region.</li> </ul>
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"> <li>Within containment areas, treatments occur when protection or rehabilitation of social, environmental or economic areas is required; or,</li> <li>A need is indicated and approved by funders or,</li> <li>Land owner or occupier has other reasons for containment or rehabilitation.</li> </ul>
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"> <li>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.</li> </ul>

## APPENDIX 5:

### List of Regulated Invasive Plants in BC (12/12/2018)

See below for a list of the provincially and regionally specific regulated noxious plants, and additional unregulated invasive plants of concern in BC.














#### REGULATION: PROVINCIALLY NOXIOUS

 Bur Chervil ( <i>Anthriscus caucalis</i> )	 Knotweed, Himalayan ( <i>Polygonum polystachyum</i> )
 Canada Thistle ( <i>Cirsium arvense</i> )	 Knotweed, Japanese ( <i>Fallopia japonica</i> )
 Common Reed ( <i>Phragmites australis</i> subsp. <i>australis</i> )	 Leafy Spurge ( <i>Euphorbia esula</i> )
 Cordgrass, Dense-flowered ( <i>Spartina densiflora</i> )	 Milk Thistle ( <i>Silybum marianum</i> )
 Cordgrass, English ( <i>Spartina anglica</i> )	 North Africa Grass ( <i>Ventenata dubia</i> )
 Cordgrass, Saltmeadow ( <i>Spartina patens</i> )	 Nutsedge, Purple ( <i>Cyperus rotundus</i> )
 Cordgrass, Smooth ( <i>Spartina alterniflora</i> )	 Nutsedge, Yellow ( <i>Cyperus esculentus</i> )
 Crupina ( <i>Crupina vulgaris</i> )	 Purple Loosestrife ( <i>Lythrum salicaria</i> )
 Dodder ( <i>Cuscuta</i> spp.)	 Rush Skeletonweed ( <i>Chondrilla juncea</i> )
 Flowering Rush ( <i>Butomus umbellatus</i> )	 Scentless Chamomile ( <i>Matricaria maritima</i> )
 Garlic Mustard ( <i>Alliaria petiolata</i> )	 Sow-thistle, Annual ( <i>Sonchus oleraceus</i> )
 Giant Hogweed ( <i>Heracleum mantegazzianum</i> )	 Sow-thistle, Perennial ( <i>Sonchus arvensis</i> )
 Giant Mannagrass/Reed Sweetgrass ( <i>Glyceria maxima</i> )	 Tansy Ragwort ( <i>Senecio jacobaea</i> )
 Gorse ( <i>Ulex europaeus</i> )	 Toadflax, Common / Yellow ( <i>Linaria vulgaris</i> )
 Hound's-tongue ( <i>Cynoglossum officinale</i> )	 Toadflax, Dalmatian ( <i>Linaria genistifolia</i> )
 Jointed Goatgrass ( <i>Aegilops cylindrica</i> )	 Velvetleaf ( <i>Abutilon theophrasti</i> )
 Knapweed, Diffuse ( <i>Centaurea diffusa</i> )	 Wild Oats ( <i>Avena fatua</i> )
 Knapweed, Spotted ( <i>Centaurea stoebe</i> )	 Yellow Flag Iris ( <i>Iris pseudacorus</i> )
 Knotweed, Bohemian ( <i>Fallopia x bohemica</i> ) Knotweed, Giant ( <i>Fallopia sachalinensis</i> )	 Yellow Starthistle ( <i>Centaurea solstitialis</i> )

**REGULATION: REGIONALLY SPECIFIC NOXIOUS (Peace River)**

-  Burdock (*Arctium* spp.)
-  Cleavers (*Galium aparine*)
-  Green Foxtail (*Setaria viridis*)
-  Kochia (*Kochia scoparia*)
-  Night-Flowering Catchfly (*Silene noctiflora*)
-  Oxeye Daisy (*Chrysanthemum leucanthemum*)
-  Quackgrass (*Agropyron repens*)
-  Thistle, Russian (*Salsola kali*)
-  Wild Mustard (*Sinapsis arvensis*)

**ADDITIONAL UNREGULATED INVASIVE PLANTS OF CONCERN IN BC**

 Baby's Breath ( <i>Gypsophila paniculata</i> )	 Field Bindweed ( <i>Convolvulus arvensis</i> )
 Bachelor's Button ( <i>Centaurea cyanus</i> )	 Foxtail Barley ( <i>Hordeum jubatum</i> )
 Bladder Campion ( <i>Silene cucubalus</i> )	 Goatsbeard - Western ( <i>Tragopogon dublus</i> )
 Bull Thistle ( <i>Cirsium vulgare</i> )	 Himalayan Blackberry ( <i>Rubus discolor</i> )
 Butterfly Bush ( <i>Buddleja davidii</i> )	 Himalayan Balsam ( <i>Impatiens glandulifera</i> )
 Chicory ( <i>Cichorium intybus</i> )	 Knapweed, Brown ( <i>Centaurea jacea</i> )
 Cluster Tarweed ( <i>Madia glomerata</i> )	 Mountain Bluet ( <i>Centaurea montana</i> )
 Common Mallow ( <i>Malva neglecta</i> )	 Nightshade ( <i>Solanum</i> spp.)
 Common Periwinkle ( <i>Vinca minor</i> )	 Nodding Thistle ( <i>Carduus nutans</i> )
 Creeping Buttercup ( <i>Ranunculus repens</i> )	 Russian Olive ( <i>Elaeagnus angustifolia</i> )
 Curled Dock ( <i>Rumex crispus</i> )	 Scotch Broom ( <i>Cytisus scoparius</i> )
 Daphne ( <i>Daphne laureola</i> )	 St. John's-Wort ( <i>Hypericum perforatum</i> )
 Didymo ( <i>Didymosphenia geminate</i> )	 Tamarisk ( <i>Tamarix chinensis, T. ramosissima</i> )
 English Holly ( <i>Ilex aquifolium</i> )	 Teasel ( <i>Dipsacus fullonum</i> )
 English Ivy ( <i>Hedera helix</i> )	 Water Hemlock ( <i>Cicuta douglasii</i> )
 Eurasian Watermilfoil ( <i>Myriophyllum spicatum</i> )	 Yellow Archangel ( <i>Lamium galeobdolon</i> )



## APPENDIX 6:

### Provincial Priority Invasive List (December 16, 2019)

#### PREVENT

- ✂ African rue (*Peganum harmala*)
- ✂ Camelthorn (*Alhagi maurorum*)
- ✂ Clary sage (*Salvia sclarea*)
- ✂ Common crupina (*Crupina vulgaris*)
- ✂ Dyer's woad (*Isatis tinctoria*)
- ✂ Eggleaf spurge (*Euphorbia oblongata*)
- ✂ Goatsrue (*Galega officinalis*)
- ✂ Halogeton/Saltlover (*Halogeton glomeratus*)
- ✂ Hydrilla (*Hydrilla verticillata*)
- ✂ Iberian starthistle (*Centaurea iberica*)
- ✂ Italian thistle (*Carduus pycnocephalus*)
- ✂ Johnsongrass (*Sorghum halepense*)
  
- ✂ Jointed goatgrass (*Aegilops cylindrical*)
- ✂ Kudzu (*Pueraria montana var. lobate*)
- ✂ Meadow clary (*Salvia pratensis*)
- ✂ Mediterranean sage (*Salvia aethiopsis*)
- ✂ Medusahead (*Taeniatherum caput-medusae*)
- ✂ Purple nutsedge (*Cyperus rotundus*)
- ✂ Purple starthistle (*Centaurea calcitrapa*)
- ✂ Red bartsia (*Odontites serotina*)
- ✂ Silverleaf nightshade (*Solanum elaeagnifolium*)
- ✂ Slenderflower thistle (*Carduus tenuiflorus*)
- ✂ Slender/Meadow foxtail (*Alopecurus myosuroides*)
- ✂ Spring milletgrass (*Milium vernale*)
- ✂ Spurge flax (*Thymelaea passerina*)
- ✂ Squarrose knapweed (*Centaurea virgate spp. Squarrose*)
- ✂ Syrian bean-caper (*Zygophyllum fabago*)
- ✂ Texas blueweed (*Helianthus ciliaris*)
- ✂ Water hyacinth (*Eichhornia crassipes*)
- ✂ Water lettuce (*Pistia stratiotes*)
- ✂ Water soldier (*Stratiotes aloides*)
- ✂ Yellow starthistle (*Centaurea solstitialis*)

#### PROVINCIAL EDRR

- ✂ Black henbane (*Hyoscyamus niger*)
- ✂ Brazilian Elodea/Waterweed (*Egeria densa*)
- ✂ Invasive cordgrasses (*Spartina spp.*)
- ✂ European common reed (*Phragmites australis*)
- ✂ Flowering rush (*Butomus umbellatus*)
- ✂ Maltese starthistle (*Centaurea melitensis*)
- ✂ Mouse-ear hawkweed (*Hieracium pilosella*)
- ✂ North African grass (*Ventenata dubia*)
- ✂ Perennial pepperweed ) *Lepidium latifolium*)
- ✂ Giant reed (*Arundo donax*)
- ✂ Shiny geranium (*Geranium lucidum*)
- ✂ Slender false brome (*Brachypodium sylvaticum subsp. Sylvaticum*)
- ✂ Yellow floating heart (*Nymphoides pelata*)

## APPENDIX 7:

### Noxious Weeds in Alberta

The following plants are designated as Noxious in Alberta. Control of these plants is required. (All plants listed in **Bold** have been found within the County of Grande Prairie).

- |                                                                                                                                                  |                                                                                                                                       |
|--------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
|  <b>Baby's Breath, common</b>                                   |  <b>Bellflower, creeping</b>                         |
|  Bindweed, field                                                |  Blueweed                                            |
|  Brome, downy                                                   |  Brome, Japanese                                     |
|  <b>Burdock, common (lesser)</b>                                |  <b>Burdock, great</b>                               |
|  <b>Burdock, woolly (<i>Arctium tomentosum</i>)</b>             |  <b>Buttercup, tall (<i>Ranunculus acris</i>)</b>    |
|  <b>Chamomile, scentless (<i>Tripleurospermum inodorum</i>)</b> |  <b>Clematis, yellow (<i>Clematis tangutica</i>)</b> |
|  <b>Daisy, oxeye</b>                                            |  <b>Cockle, white (<i>Silene latifolia</i>)</b>      |
|  <b>Henbane, black</b>                                        |  <b>Dame's Rocket</b>                              |
|  <b>Hoary Cress</b>                                           |  <b>Hound's-tongue</b>                             |
|  Pepper-grass, broad-leaved                                   |  <b>Mullein, common</b>                            |
|  <b>Sow thistle, perennial</b>                                |  <b>Scabious, field</b>                            |
|  <b>Tansy, common</b>                                         |  <b>Spurge, leafy (<i>Euphorbia esala</i>)</b>     |
|  <b>Toadflax, Dalmatian</b>                                   |  <b>Thistle, Canada</b>                            |
|                                                                                                                                                  |  <b>Toadflax, yellow</b>                           |