



PEACE RIVER REGIONAL DISTRICT



Invasive Plant Program Strategic Plan and Profile 2024

Current as of January 9, 2024

diverse. vast. abundant.

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PRRD STRATEGIC FOCUS AREAS



Our Role:

A strong, diverse, and sustainable Peace River region inspired by innovative leadership that promotes livable and safe communities.

The Peace River Regional District provides regional and sub-regional services that are socially, environmentally, and economically sustainable in response to expressed needs in the region.



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 human health (IMISWG 2011). They are plants that originated elsewhere and are often introduced unintentionally to our area, arriving without natural predators or pathogens that kept them in check in their native homelands. Once here, they can 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 noxious weeds, as they negatively affect our economic, environmental, and social values. The provincial noxious weeds 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 on page 16 of this plan. The lists also contain native plants that trouble the agriculture sector. These plants are prioritized to assist land managers working within the PRRD to focus on invasive plants of concern within the region. Detailed information for identification and management strategies for each plant can be found in the **PRRD Invasive Plant List and Descriptions** document on the PRRD website.

Legislation, Compliance & Enforcement

Legislation Involved

Invasive plant management is enforced by federal and provincial legislation, and through local bylaws. In the PRRD, there are two main pieces of legislation used to enforce invasive plants: the PRRD Invasive Plant Control Amendment Bylaw No. 2482, 2022, which is enforced on privately owned lands, and the *Weed Control Act* and its regulations, which is enforceable on both publicly and privately owned lands. It is the responsibility of the owner or occupier to control any listed 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. 2482, 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, 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 three steps:

1. Outreach and Education
2. Warning Notice
3. Refer the file to Ministry appointed Compliance & Enforcement Officers.

C&E decisions rely on weed reports from stakeholders, Report Invasives and Invasives BC data, and physical evidence collected through the inspection process. To remain objective in decision making, the C&E manual with detailed policies and procedures is utilized.

Invasive Plant Committees of the Peace River Regional District

Structure

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

The SPPIP 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 IPCPRRD 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 Environmental Services support the IPCPRRD, 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 are in Appendix 2.

Area of Operations

The Strategic Plan's area of application covers BC east of the Rocky Mountains to the Alberta border, and north from Kakwa Provincial Park to the 58th parallel, south of Fort Nelson. The area covers both private and Crown Land and is divided into three 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 Forests



Ministry of Water, Land and Resource Stewardship



Ministry of Energy, Mines and Low Carbon Innovation



BC Energy Regulator



Ministry of Environment and Climate Change Strategy



Ministry of Transportation and Infrastructure

Membership






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

-  Concerned citizens.
-  All levels of government (*federal, provincial, interprovincial, & local*)
-  Environmental & ecological organizations
-  Local 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 producers, Agri-business, & support companies
-  Utilities & Transportation
-  Regional Invasive Organizations

Invasive Plant Management Strategies

Management Strategy Overview

The invasive plant strategy has the following five components for all PRRD owned and operated lands:

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

The most effective and efficient management of invasive plants is to **prevent** their arrival. After invasive plants have arrived, the most efficient and effective management strategy is to **eradicate** them before they become established by 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. Implementing a long-term goal of decreasing the infestation is important to do on an annual basis. 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. Given the resources available, it would not be feasible to eliminate all occurrences of each of these species. Therefore, a system has been developed to guide and prioritize management efforts. The prioritization 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 in Appendix 4. 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, including a link to the document, for additional provincial 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 4. 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 4 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 through the Report Invasives app.
-  Reply to invasive plant related communications in a timely manner and provide information regarding economic, social, and environmental threats, and integrated pest management and compliance and enforcement options available.
-  Inform the public about invasive plant programs and incorporate comments into the continuous improvement loop.
-  Prevent or minimize the spread of the invasive plants present in the region through programming such as free invasive plant disposal, invasive plant resources for identification, and sharing of information pertaining to invasive plants and their management.
-  Conduct invasive plant programs in the region based on Integrated Pest Management principles.
-  Collaborate with 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 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: <https://upick.beefresearch.ca>
-  Use of local clean or weed free seed, referring 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://www2.gov.bc.ca/assets/gov/environment/plants-animals-and-ecosystems/invasive-species/guidance-resources/final_imiswg_bc_is_edrr_plan_nov_2014.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. Although tarping is not viable for large scale removal of hay and straw, tarping and covering of hay is suggested to eliminate the potential of spreading seeds through transport.
-  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

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, description and location to: environmental.services@prrd.bc.ca
-  Bring a sample to the Peace River 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
-  Download and report through the free Report Invasives BC app:  <https://www2.gov.bc.ca/gov/content/environment/plants-animals-ecosystems/invasive-species/reporting-invasive-species>
-  Download and report through the free iNaturalist app: <https://www.inaturalist.org/> 

Eradication, Containment, Rehabilitation, and Inventory




- 1) Canada’s invasive species strategy:
https://publications.gc.ca/collections/collection_2014/ec/CW66-394-2004-eng.pdf
- 2) The Invasive Species Strategy for BC:
https://bcinvasives.ca/wp-content/uploads/2021/09/Invasive_Species_Strategy_for_BC-2018-180117-WEB.pdf
- 3) The Provincial Inter-Ministry Invasive Species Working Group strategy:
https://www2.gov.bc.ca/assets/gov/environment/plants-animals-and-ecosystems/invasive-species/imiswg/prov_is_strategy.pdf

Federal, provincial, and regional EDRR strategies must be activated in a timely manner. For Provincial EDRR species, the plant must be reported to the Province of BC via the Report Invasives mobile application, or by email to invasive.plants@gov.bc.ca, or through the online form at <https://forms.gov.bc.ca/industry/report-an-invasive-species/>. Alternatively, EDRR species can be reported to the invasive plant program and the details will be forwarded to the appropriate Provincial or Federal EDRR contact. 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 of wildlife, livestock, and weather. The public is encouraged to contact the invasive plant program to report any newly arriving aggressive invasive plants.

Invasive Plant Program Annual Work Plan


Planning

-  Update the list of PRRD owned/occupied properties and cross-reference the properties for historical invasive plant infestation using the Report Invasives data.
-  Create a schedule of treatment months to ensure proper timing of treatment.
-  Inventory current outreach materials and update/purchase as required.


Inventory and Surveys

-  Visit one-third of PRRD owned/occupied sites.

Treatment

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







Treatment Monitoring

-  Conduct invasive plant monitoring as part of scheduled facility and site inspections outlined in the PRRD Inspection policy.







Data Entry

-  Enter 100% of inventory, survey, or treatment documentation into the InvasivesBC database.


Education and Awareness

-  Offer Regional support to stakeholders through invasive plant ID, outreach materials, integrated pest management planning information, and best management practices.
-  Utilize “Weedy Wednesday” Facebook posts to promote events, highlight invasive plant species, and offer information about integrated pest management techniques.
-  Update educational materials to reflect the PRRD Invasive Plant Prioritization list which is current from 2022-2025.
-  Purchase and/or share new educational materials as they become available and if they are applicable within the PRRD.
-  Attend professional development activities pertaining to Invasive Plants and or new treatments.
-  Develop new and useful materials to deliver to PRRD residents.



Coordination and Partnership Building

-  Hold one SPPIP and a minimum of two IPCPRD meetings annually.
-  Continue to support the ISCBC programs.
-  Participate in provincial coordination meetings and interprovincial meetings as requested and applicable.
-  Continue to partner with industry to promote Best Management practices by offering plant identification resources and offering free commercial dumping of invasive plants at regional landfills.
-  Continue to work with all levels of government and municipalities to increase awareness of invasive plant species through sharing of outreach materials.
-  Provide invasive plant control and awareness grants to regional First Nations interested in prevention and control of invasive plant infestations in their communities.

Provincial EDRR Support






-  Support the efforts of the Provincial EDRR program in verifying reported infestations and coordinating any further actions required, as requested.

Report Invasives Verification


-  Promote the Report Invasives app through PRRD communications.
-  All invasive plant reports received by the PRRD will receive follow-up within five working days of the report.



Reporting and Data Management

-  Provide updates to the PRRD Board on operational program activities, as requested.
-  Compile a 2024 annual report.
-  Maintain the Strategic Plan and Profile to reflect current operations and ensure IPCPRD committee approval and referral to the Regional Board for final approval.
-  Post operational plans on the PRRD website for shareholders to utilize.
-  Follow all policies and procedures set by the Regional Board.

Special Projects

-  Relaunch the Destroy Daisy and Eye on Hawkweeds campaigns to increase public awareness of these invasive plants.



Hire two seasonal staff for the field season from May 1 – Nov 30, 2024, to assist with the implementation of the program in coordination with the workplan of the Community Services Department.



Provide free invasive plant dumping for all users (residential and commercial) at all manned transfer stations and landfills within the PRRD.



Participate as an advisor for the Invasive Species Strategy for BC.



Strengthen partnerships with neighbouring First Nation communities through collaboration and support for invasive plant management and control.

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. Bolded plants are BC provincially listed noxious weeds that can be enforced through the *Weed Control Act*. Some of these species may not be present within the PRRD but are found in adjacent areas and are at risk of being introduced to the region as outlined in Table 4.

Category A

These invasive plants are highly competitive, can 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 to achieve eradication and are listed in Table 5.

Category B

These plants have established themselves at the landscape level and are 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 and are listed in 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 and are listed in 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 (Provincial EDRR)	<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 officinale</i>
Japanese knotweed	<i>Fallopia japonica</i>
Leafy spurge	<i>Euphorbia esula</i>
Marsh plume thistle	<i>Cirsium palustre</i>
Meadow goat's-beard or salsify	<i>Tragopogon pratensis</i>
Mountain bluet	<i>Centaurea montana</i>
Nodding thistle	<i>Cardus nutans</i>
Plumeless thistle	<i>Cardus 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 jacobaeae</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 vulgar</i>
Green foxtail	<i>Sertaria viridis</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>

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

Common Name	Latin Name
Common toadflax	<i>Linaria vulgaris</i>
Creeping (Canada) thistle	<i>Cirsium arvense</i>
Dalmatian toadflax	<i>Linaria dalmatica</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) (Provincial EDRR)	<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 caraway	<i>Carum carvi</i>
Wild mustard	<i>Sinapsis arvensis</i>
Wild oats	<i>Avena fatua</i>
Yellow clematis	<i>Clematis tangutica</i>
Yellow floating heart (aquatic) (Provincial EDRR)	<i>Nymphoides pelata</i>

APPENDIX 1:

Terms of Reference for the Strategic Plan and Profile of Invasive Plants Monitoring Committee (March 2014)

Chair: Director Leonard Hiebert, Appointed by the Committee in 2023.

Goal



To complement the **Vision, Mission, 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 **Vision, Mission, 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 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 Environmental Services Manager



Provisions for a Standing Committee are 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/Board-Procedure-Bylaw-No.-2490-Consolidated.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 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.



The PRRD established an invasive plant disposal pilot in 2012. Disposal bins were set up at the Chetwynd, Bessborough and North Peace landfills. The PRRD waived tipping fees for private landowners. This was a regular service for the public in the fall of 2013.



Dismantling of the NEIPC happened in fall 2011. 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 PRRD passed the recommendation.



2014-2015 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 in agriculture settings.

-  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 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 three months.

2020 – 2022 - Field Services Assistants

-  For the 2020/2021 season, two seasonal field services assistants were hired from June until November. Their main roles were to support the compliance and enforcement officer in hand-pulling invasive plants in areas of concern, such as riparian areas and on private land where residents were struggling to manage on their own and requested support. These roles were shared amongst the park's maintenance responsibilities.
-  The PRRD adopts Invasive Plant Control Amendment Bylaw No. 2482, 2022 which focuses on education and pushes compliance and enforcement of the Weed Control Act back to the Province of BC. Invasive Plant disposal sites are expanded to include invasive plant disposal at manned transfer stations with compactor bins.

Appendix 4:

Site Prioritization, Treatment Matrix, and Thresholds












Table 1. Site Prioritization	
Priority/Opportunity for Control	Site condition / management intent or goal
1 Extremely High	<ul style="list-style-type: none">  A small infestation (up to 0.25 ha or 0.5 acre) likely to spread to large highly susceptible areas or high value crops.  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 ha or 1.25 ac) in susceptible areas and an 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 ha or 1.25 ac), not adjacent to agriculture or delicate habitats and ecosystems that require protection.  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 ha or 12 ac where control would require high investment of resources.  Areas are not adjacent to agriculture or susceptible high value habitats and ecosystems that require protection.  Goal is to reduce the damage from the infested area, record changes to the size and treat all vectors of spread.

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"> Regional Early Detection Rapid Response 	Immediate 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 https://www2.gov.bc.ca/assets/gov/environment/plants-animals-and-ecosystems/invasive-species/guidance-resources/prov_edrr_is_plan.pdf 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, Landowner 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.






Appendix 5:

List of Regulated Invasive Plants in BC (January 8, 2024)












See below for a list of the provincially and regionally specific regulated noxious plants, and additional unregulated invasive plants of concern in BC. These are subject to change on an on-going basis and the complete list can be accessed here:

https://www.bclaws.gov.bc.ca/civix/document/id/complete/statreg/10_66_85





REGULATION: PROVINCIALY 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>)	 Yellow Starthistle (<i>Centaurea solstitialis</i>)
 Knotweed, Giant (<i>Fallopia sachalinensis</i>)	

REGULATION: REGIONALLY SPECIFIC NOXIOUS (Peace River)

- | | |
|---|--|
|  Burdock (<i>Arctium</i> spp.) |  Quackgrass (<i>Agropyron repens</i>) |
|  Cleavers (<i>Galium aparine</i>) |  Thistle, Russian (<i>Salsola kali</i>) |
|  Green Foxtail (<i>Setaria viridis</i>) |  Tartary Buckwheat (<i>Fagopyrum tataricum</i>) |
|  Kochia (<i>Kochia scoparia</i>) |  White Cockle (<i>Lychnis alba</i>) |
|  Night-Flowering Catchfly (<i>Silene noctiflora</i>) |  Wild Mustard (<i>Sinapsis arvensis</i>) |
|  Oxeye Daisy (<i>Chrysanthemum leucanthemum</i>) | |

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 January 8, 2024)

These are subject to change on an on-going basis and the current list can be accessed here:

https://www2.gov.bc.ca/assets/gov/environment/plants-animals-and-ecosystems/invasive-species/guidance-resources/edrr_candidate_invasive_plants.pdf

PREVENT

PROVINCIAL EDRR

Camelthorn (<i>Alhagi maurorum</i>)	African rue (<i>Peganum harmala</i>)
Clary sage (<i>Salvia sclarea</i>)	Black helbane (<i>Hyoscyamus niger</i>)
Common crupina (<i>Crupina vulgaris</i>)	Brazilian Elodea/Waterweed (<i>Egeria densa</i>)
Eggleaf spurge (<i>Euphorbia oblongata</i>)	Dyer's woad (<i>Isatis tinctoria</i>)
Goatsrue (<i>Galega officinalis</i>)	European common reed (<i>Phragmites australis</i>)
Halogeton/Saltlover (<i>Halogeton glomeratus</i>)	Flowering rush (<i>Butomus umbellatus</i>)
Hydrilla (<i>Hydrilla verticillata</i>)	Giant reed (<i>Arundo donax</i>)
Iberian starthistle (<i>Centaurea iberica</i>)	Invasive cordgrasses (<i>Spartina spp.</i>)
Italian thistle (<i>Carduus pycnophalus</i>)	Maltese starthistle (<i>Centaurea melitensis</i>)
Johnsongrass (<i>Sorghum halepense</i>)	Mouse-ear hawkweed (<i>Hieracium pilosella</i>)
Jointed goatgrass (<i>Aegilops cylindrical</i>)	North African grass (<i>Ventenata dubia</i>)
Kudzu (<i>Pueraria montana var. lobate</i>)	Perennial pepperweed (<i>Lepidium latifolium</i>)
Meadow clary (<i>Salvia pratensis</i>)	Shiny geranium (<i>Geranium lucidum</i>)
Mediterranean sage (<i>Salvia aethiopsis</i>)	Slender false brome (<i>Brachypodium sylvaticum</i>)
Medusahead (<i>Taeniatherum caput-medusae</i>)	Water hyacinth (<i>Eichhornia crassipes</i>)
Red bartsia (<i>Odontites serotina</i>)	Water lettuce (<i>Pistia stratiotes</i>)
Silverleaf nightshade (<i>Solanum elaeagnifolium</i>)	Yellow floating heart (<i>Nymphoides pelata</i>)
Slenderflower thistle (<i>Carduus tenuiflorus</i>)	Yellow starthistle (<i>Centaurea solstitialis</i>)
Slender/Meadow foxtail (<i>Alopecurus myosuroides</i>)	
Spring milletgrass (<i>Milium vernale</i>)	
Spurge flax (<i>Thymelaea passerine</i>)	
Squarrose knapweed (<i>Centaurea virgate spp. Squarrose</i>)	
Syrian bean-caper (<i>Zygophyllum fabago</i>)	
Texas blueweed (<i>Helianthus ciliaris</i>)	
Water soldier (<i>Stratiotes aloides</i>)	

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).

<https://www.alberta.ca/provincially-regulated-weeds.aspx>

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