

# Strategic Plan for Invasive Species Management in the Boundary

## Introduction

Invasive species have far reaching impacts on agricultural production, environmental resources, ecosystem health, local economies, and aesthetic values. These introduced species have been brought in, often accidentally, and once here thrive and disrupt natural functioning systems. Each year resources are spent to control these species to minimise impacts on our resources. Invasive species affect us all and we need to all work together to reduce their introduction and impacts on our resources.

Under current legislation all landowners and managers have a legal responsibility to control designated noxious weeds and invasive species. The Boundary Invasive Species Society functions to coordinate management efforts of partners and undertakes an awareness program to inform the public. The purpose of this strategy is provide guidance to coordinate management to protect the productive capacity of the natural resources and the land base of the Boundary through effective management of invasive species. This strategy was developed based on input from agencies, local government, industry, community groups, and individuals. It will be sent out to First Nations for comment during summer 2014 and amended to address any input brought forward.

## Scope of the Strategic Plan

This five year strategy provides guidance on management of invasive species in the Boundary. It focuses on education and management of invasive plants both in terrestrial and aquatic systems, and preventing introduction of aquatic invasive species. There are some other agencies working on invasive species beyond the scope of this strategy. This strategy does not address management of introduced fish species since the Ministry of Environment (MOE) has an existing program to address fish, nor does it address forest pests or other insect pests since MFLNRO and Canadian Food Inspection Agency (CFIA) already have existing programs to address management of these species. It does address education to reduce introductions for introduced invasive species. The strategy is intended to be a living document and updated as needed to reflect the ever changing challenges created by introduced species

## Strategic Plan Goals

The goals and objectives for this strategy complement the provincial strategies set forth by the BC Inter-ministry Invasive Species Working Group (IMISWG) and the Invasive Species Strategy for BC<sup>1</sup>. Specific management objectives for each invasive species are contained in the *Operational Plan for Invasive Species Management in the Boundary*.

The broad goals of the program are:

*Goal 1. To prevent the introduction of new invasive species into the Boundary.*

*Goal 2. To manage existing priority invasive species populations to reduce their impact on the natural resources of the Boundary.*

*Goal 3. To increase awareness and participation by the public in invasive species management.*

*Goal 4. To promote the development, compliance, and enforcement of legislation and bylaws to enable effective invasive species management.*

Achieving these goals will require an integrated program involving prioritization, inventory, prevention, early detection and rapid response, monitoring, coordination, partnerships, education, and program evaluation. The following objectives have been set to enable measuring the success of the program over time.

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<sup>1</sup> Invasive Species Strategy for BC <http://www.bcinvases.ca/special-events/invasive-species-strategy-for-bc>

## Strategic Plan for Invasive Species Management in the Boundary

Strategic Plan Objectives	
Five Year Objectives	One to Three year Objectives
<i>Prevention</i>	
<ul style="list-style-type: none"> <li>To continue partnerships with adjacent jurisdictions to facilitate communication and control of species prior to reaching the Boundary.</li> <li>To support the work of ISCBC and other regional committees to inform regulators about the importance of effective legislation to curb the introduction of new invasive species.</li> </ul>	<ul style="list-style-type: none"> <li>For retailers in the Boundary to be selling only non-invasive aquarium and horticulture plants by 2015.</li> <li>To implement a Clean-Drain-Dry awareness program by 2015 to protect our water bodies in the Boundary from new introductions.</li> <li>For all new development permit applications to receive best management practices for their respective sector to prevent introduction of invasive species when operating in the Boundary by 2015.</li> </ul>
<i>Early Detection and Rapid Response (EDRR)</i>	
<ul style="list-style-type: none"> <li>To assess the potential invasiveness of new species to the Boundary (already present in BC) using the information available to enable informed, timely decisions on whether to implement management action.</li> <li>To support efforts of the appropriate entities with jurisdictional responsibility and community groups to control new aquatic species occurrences.</li> <li>To support provincial EDRR efforts.</li> </ul>	<ul style="list-style-type: none"> <li>To establish a network of people in the Boundary trained to identify and report new invasive species by 2015 and provide training annually to keep them effectively engaged.</li> <li>To annually implement management action for regional EDRR invasive plant species to stop seed release and control all growth with the goal of eradication.</li> </ul>
<i>Inventory and Monitoring</i>	
<ul style="list-style-type: none"> <li>To maintain up to date occurrence information of invasive plants and aquatic animal species present in the Boundary.</li> </ul>	<ul style="list-style-type: none"> <li>To annually monitor infestations of species targeted for eradication to enable tracking of progress towards objective of eradication.</li> </ul>
<i>Coordination and Partnerships</i>	
<ul style="list-style-type: none"> <li>To continue coordinating invasive species management through the BIS and to continue delivering invasive plant herbicide treatment programs through a partnership delivery model lead by the RDKB for all jurisdictions.</li> </ul>	<ul style="list-style-type: none"> <li>To expand partnerships to non-plant related organisations in the Boundary with an interest in invasive species management by 2014.</li> </ul>
<i>Planning and Management</i>	
<ul style="list-style-type: none"> <li>To promote implementation of effective legislation for invasive species management on private land.</li> <li>To support and encourage research on new effective management options for invasive</li> </ul>	<ul style="list-style-type: none"> <li>To support efforts of landowners and managers to rehabilitate areas with high populations of invasive plants designated for strategic control as resources allow.</li> </ul>

species of concern in our area.	
<i>Education</i>	
<ul style="list-style-type: none"> <li>To continue to offer an information service to support efforts of landowners to conduct management treatments on their property.</li> </ul>	<ul style="list-style-type: none"> <li>To develop a communications plan by 2014 and begin implementation in 2015.</li> </ul>
<i>Program Evaluation</i>	
<ul style="list-style-type: none"> <li>To monitor progress towards reaching strategic objectives.</li> </ul>	<ul style="list-style-type: none"> <li>To annually monitor achievement of operational objectives.</li> </ul>

## Prioritization of Species

Only a subset of the introduced species present in the Boundary are considered invasive with the potential to cause negative impacts either economically, environmentally or socially. Preventing new species is the most cost-effective strategy, followed by control of species with limited distributions to prevent spread. Development of the priority list considered species already designated as invasive (or noxious) under current legislation in addition to species present on lists from adjacent that are not legislated in BC. Information from risk assessments was used, where available, however this information is only available for a few of species. Criteria considered in whether to list a species included:

- Risk of spread (based on a combination of available habitat, biological methods of reproduction and the dispersal potential of the plant itself or via anthropogenic vectors of spread);
- Level of “invasiveness” (e.g. competitive ability, mode of reproduction, behaviour in similar ecosystems in other jurisdictions, does it out-compete existing vegetation to form dense stands, etc.);
- Potential to cause social, economic or environmental damage;
- Legal designation for control; and
- Likelihood of success, which depends on a combination of the control methods/tools available for the species, and its current range or distribution. New infestations and/or species with limited distribution are more likely to be successfully controlled than larger, well established populations.

Prioritizing invasive plants for management activities involved putting invasive plant species into program levels based on consideration of the criteria above. Categorisation was done based on three management units which roughly follow the Regional District electoral boundaries: West Boundary - Area E, East Boundary- Area D, and Christina Lake - Area C and portion of Area B up to Paulson summit. Species lists are contained in the Operational Plan for Invasive Species Management in the Boundary.

Early Detection and Rapid Response (EDRR) refers to the processes undertaken to find and eradicate a new incursion or infestation of an invasive species in the early stages of establishment when the new invasive species remains relatively easy to control. New species found that are not on the priority list will be correctly identified and then assessed to determine the potential impacts. The results of this process will determine whether management action is taken. Each year the priority species list will be updated with new species found in addition to any changes to program level assignments and then sent out for comment in the fall of each year. Based on input the list will be revised and adopted the following spring.

## Strategic Plan for Invasive Species Management in the Boundary

Table 1. Prioritisation of Invasive Species based on Management Focus

Program Level	Status	Management Focus
Watch List (Prevention) (1)	New Species not present in BC or in the Plan Area, but likely to establish if introduced	Early Detection and Rapid Response; Assess new species not currently on list.
Eradication or Annual Control (2)	Species that are new to the management area with limited distribution and low density on infested sites; and/or Species invading susceptible habitats, sensitive areas, or sites containing red- or blue-listed species.	Eradication or the permanent removal of 100% of an invasive species from a selected site or area. This is usually only attainable for small isolated patches/clumps of an invasive plant or noxious weed species and may take many years of repeated treatments to be achieved.
Containment (3)	New infestations of established species in the area outside of the main population; Can include established infestations along transportation corridors and areas of concentrated activities such as trails, campgrounds, parking lots, garbage dumps, maintenance yards, and gravel pits; For some species in this category, where agreement among agencies conducting invasive plant management programs in the area is reached, a containment line can be established and mapped online in IAPP.(regional EDRR)	Containment to the current location and/or distribution. Preventing or reducing access to areas with invasive species infestations is also a strategy employed in containment. Herbicide treatments or other removal method would generally only occur within the containment boundary if sensitive sites or unique resources were at risk;
Strategic Control (4)	Established low-density or high-density infestations that are widely distributed and fairly common throughout the Boundary area; and Eradication or Containment is no longer possible within the management area. Targeted treatment for specific values or management objectives	Treatments will be focused in high value or sensitive areas only, either for environmental, social or economic reasons.
Biological Control (4)	Established low-density or high-density infestations where effective biological control agents are established.	To suppress plant populations through biological control insect releases and monitoring effectiveness.
Unclassified	Species which are present but are either not considered invasive or have not yet been assessed.	To assess species that have not been assessed.