



**Forest  
Practices  
Board**

## **Follow Up Report: Update on Control of Invasive Plants**

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*Special Report*

**FPB/SR/38**

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# Executive Summary

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Monitoring and control of invasive plants is important because of the serious environmental, economic, and health consequences they can have. For example, invasive plants can displace native species and disrupt the functioning of natural ecosystems.

In 2006, the Forest Practices Board made several recommendations to government to help improve the province's invasive plant legislation and to better define agency roles and responsibilities in effectively dealing with invasive plants. The Board has followed up to see what changes have occurred as a result of its recommendations.

The Board found that its recommendations have largely been implemented and that several other positive actions have been taken. In particular, a great deal of training, planning, inter-agency coordination and sharing of resources in invasive plant management has occurred since 2006.

However, despite that good work, indications are that invasive plants in BC continue to expand, both in area affected and the number of species. The Board encourages all levels of government, non-government organizations, forest and range licensees and other user-groups to build on the work done since 2006, and to exercise continued vigilance in monitoring and preventing the spread of invasive plants.

# Introduction

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In its October 2006 report, *Control of Invasive Plants on Crown Land in British Columbia*, the Forest Practices Board (the Board) evaluated the effectiveness of the Ministry of Forests and Range (MFR), and forest and range licensees, in managing the threat of invasive plants to forest and range resources under the *Forest and Range Practices Act* (FRPA). The Board found room for improvement in provincial coordination of legislation, agency roles and responsibilities, and on-the-ground delivery of treatments for dealing with invasive plants.

The Board made five recommendations:

1. The Inter-Ministry Invasive Plant Committee should review and consolidate the invasive plant and weed lists and consolidate them into a single list for the province.
2. MFR should identify which invasive plants will be managed as priorities at the district level, so that treatments can be applied in a coordinated fashion. In addition, MFR inventories should include all species listed in the FRPA *Invasive Plant Regulation* so that licensees are aware of their presence when they are preparing operational plans.
3. The linkage among FRPA, the *Weed Control Act* (WCA), and the *Integrated Pest Management Act* needs to be clarified so that government agency, licensee, and private landowner responsibilities are clearly understood by all parties. Government should develop policy or legislation that integrates invasive plant responsibility among Acts to provide this clarity.
4. MFR should develop training courses for licensees to increase skills in plant identification, control measures and the use of the Invasive Alien Plant Database.<sup>1</sup>
5. MFR should give consideration to amending section 26 of FRPA to include invasive plants. This would enable government to require strategies to address invasive plants in appropriate areas on both Crown and private land.

MFR and the Ministry of Agriculture and Lands (MAL) responded to the Board in April 2007, and identified actions and commitments they intend to undertake. This report focuses on the implementation of the commitments made by MFR and MAL. In addition, it documents other notable management actions for invasive plants in BC that have occurred since 2006, and identifies actions still needed.

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<sup>1</sup> The Invasive Alien Plant Program application is a database for invasive plant information in BC.

# Background

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For this report, *invasive plants* include provincially-listed invasive plants and noxious weeds, and other alien invasive species that cause, or are likely to cause, economic or environmental harm, or harm to human health. In 2008, *Biodiversity BC*<sup>2</sup> identified alien species as one of the three most significant threats to biodiversity in BC. Uncontrolled, these species can invade new environments and alter the structure and function of natural ecosystems. In 1995, an estimated 100,000 hectares of grassland and open forest were infested with a variety of invasive plant species, and at least another 10 million hectares of Crown land were susceptible to invasion.<sup>3</sup> Today, there are over 200,000 hectares of Crown land infested with 56 of the 60 FRPA—and WCA—designated invasive plants and noxious weed species.<sup>4</sup> MFR estimates that, given pine beetle, wildfires, timber harvesting, and other land development and recreational activities, over 20 million hectares of Crown land are now susceptible to invasion.

Some of the major agencies and organizations that manage invasive plants in BC are:

## Ministry of Forests and Range

MFR is responsible for invasive plant and noxious weed management on provincial forest and range lands. The **Invasive Plant Program**, within the Range Branch, plans and implements the operational invasive plant management program (with some support provided by forest district staff), is custodian of the Invasive Alien Plant Program (IAPP) application, and is responsible for the development of new biological control agents. MFR has been engaged in invasive plant management since the 1940s. The ministry continues to work cooperatively with many partners, providing funding to support extension, regional committee establishment and, since 2005, collaborative planning and delivery of on-the-ground treatment, inventory and monitoring of projects.<sup>5</sup>

## Ministry of Agriculture and Lands

MAL works with other provincial ministries and external stakeholders for the promotion, development and implementation of provincial invasive plant management strategies, policies, programs and practices throughout BC. The ministry has its own **Invasive Plant Management Program** that has provided grants to local and regional invasive plant management activities since 1985.<sup>6</sup>

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<sup>2</sup> *Biodiversity BC* is a partnership of conservation and government organizations formed in 2005 to develop a biodiversity strategy for BC. <<http://www.biodiversitybc.org/EN/main/findings/4576.html>>

<sup>3</sup> Wikeem, B. and S. Turner, "BC Ministry of Forests Noxious Weed Biocontrol Function 1995 Annual Report," Silviculture Practices Branch, Ministry of Forests, Victoria, 1996, 48p.

<sup>4</sup> As calculated from the IAPP application. Over 350,000 hectares are infested over all land jurisdictions in BC.

<sup>5</sup> <<http://www.for.gov.bc.ca/hra/plants/index.htm>>

<sup>6</sup> <<http://www.agf.gov.bc.ca/fsq/branch/invasiveplant.htm>>

## **Inter-Ministry Invasive Species Working Group (IMISWG)**

This group was formerly known as the Inter-Ministry Invasive Plant Committee, established in 2004. The role of the IMISWG is to provide provincial leadership for management of all invasive species—plant, animal, aquatic and terrestrial. The IMISWG is coordinated by MAL and reports directly to the Assistant Deputy Ministers' Committee on Integrated Land Management.<sup>7</sup>

IMISWG membership consists of several provincial government agencies and affiliates. The Invasive Plant Council of BC (IPCBC) is sometimes invited to participate, to provide updates to the working group and for discussion on joint initiatives.

## **Invasive Plant Council of British Columbia (IPCBC)**

The IPCBC was established in 2004 as a registered, non-profit charity whose members are involved in all aspects of invasive plant management. Over 1,000 individuals and 300 organizations are IPCBC members. The Council works to:

- educate the public and professionals about invasive species and their risk to ecosystems and economies;
- fund research related to invasive species and make findings available to the public; and
- undertake and support actions that improve the health of BC's natural ecosystems.<sup>8</sup>

## **Regional Invasive Plant Committees (RIPCs)**

RIPCs are comprised of representatives from various government and non-government agencies, including provincial ministries and Crown corporations; First Nations; regional districts and municipalities; oil and gas, rail and utility companies; forest and range licensees; environmental groups and the public. RIPCs are responsible for coordinating regional invasive plant programs. As such, the role and membership of these committees varies greatly across the province. Many are registered societies, some are registered charities, some are multi-stakeholder groups and others are operated by local governments. RIPCs typically provide a conduit for information and local expertise on invasive plants.

## **Forest and Range Tenure Holders**

Forest and range licensees have legal and voluntary roles with respect to invasive plant management. Section 47 of FRPA requires any person carrying out a forest or range practice to carry out measures that are (a) specified in the applicable operational plan, or (b) authorized by the minister, to prevent the introduction or spread of invasive plant species listed in FRPA's *Invasive Plants Regulation*. Under section 17 of the *Forest Planning and Practices Regulation*, a person who prepares a forest stewardship plan (FSP) must specify measures in the plan to prevent the introduction or spread of species of plants that are invasive plants under the *Invasive Plants Regulation*, if the introduction or spread is likely to be the result of the person's forest practices. Section 15 of the *Range Planning and Practices Regulation* provides the same

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<sup>7</sup> <<http://www.ilmb.gov.bc.ca/about.html>>

<sup>8</sup> <<http://www.invasiveplantcouncilbc.ca/about-us/about-ipc>>

requirement to persons preparing a range use plan or range stewardship plan for range practices. Currently, forest and range licensees have no obligation to conduct invasive plant inventories, nor do they have a responsibility (unless specified in their planning documents) to control existing invasive plants on Crown land, though many report and manually treat invasive plants on a voluntary basis.

### **Local Government**

Many local governments operate their own invasive plant management and education programs, and participate in RIPC's. Local governments are often a conduit for invasive plant management on private lands.

## **Discussion**

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To prepare this report, the Board interviewed 21 people from government agencies, forest and range licensees, and non-government organizations involved with invasive plant management. The Board also reviewed relevant legislation, invasive weed management practices, and several ranking procedures for invasive plants.

The Board asked:

1. How have our earlier recommendations been implemented?
2. What additional resources or actions for invasive plant management have happened since October 2006?
3. Are there any gaps, weaknesses or apparent needs related to management of invasive plants on Crown land?
4. What actions are still needed for invasive plant management?

### **1. How have our earlier recommendations been implemented?**

#### **a) Consolidation of the invasive plant and weed lists**

In 2006, the Board recommended that the Inter-Ministry Invasive Plant Committee (now the IMISWG) review and consolidate the invasive plant and weed lists into a single list for the province. In their 2007 response to the Board's recommendation, MAL and MFR supported development of a common list.

Currently, MAL is planning to revise the *Weed Control Regulation* under the WCA to better harmonize BC's regulation with similar legislation in nearby states and provinces. Ultimately, government's goal is to have one regulation that would include common categories of invasive plants (e.g., prohibited, provincial noxious, regional noxious). Potentially, other legislation such as FRPA could then be amended to reference and use the revised list under the WCA, in effect creating a single list. MAL's draft legislation is under review by the IMISWG, and consultation is

planned with local governments and RIPC's. A timeline for completion of the revisions is not available.

### **b) Prioritization of invasive plants at the district level**

In 2006, the Board recommended that MFR identify district-level priorities for invasive plant management, such that treatments can be coordinated. In addition, the Board recommended that MFR inventories include all species listed in FRPA's *Invasive Plant Regulation* so licensees could be aware of their presence when preparing operational plans. In its 2007 response, MFR said it was developing options for a risk and rank process to help determine provincial, regional, and local priorities. MFR also said it would review current inventory procedures and reporting mechanisms, and explore options to prioritize which invasive plants are inventoried within a geographic area.

Later in 2007, MFR reviewed and evaluated selected invasive plant risk and ranking assessment procedures from across North America, Australia, and the United Kingdom to assess their potential application in BC.<sup>9</sup> MFR presented its findings to the IMISWG with the conclusion that none of the tools were adequate, but found that a scientifically-based ranking and risk assessment process would be valuable for BC. In 2008, with the support of the IMISWG, MFR provided funding and partnered with the IPCBC to develop an invasive plant ranking procedure for BC. The *BC Invasive Plant Core Ranking Process* is to be released soon, and is intended for use by land management agencies, RIPC's and others to identify invasive plants that should be actively managed and those that should be monitored.

### **c) Integration of invasive plant responsibility among provincial Acts**

In 2006, the Board recommended clarification of the linkages between FRPA, the WCA, and the *Integrated Pest Management Act* so that agency, licensee, and landowner responsibilities can be clearly understood by all. The Board suggested that government develop policy or legislation that integrates invasive plant responsibility among Acts to provide this clarity. In 2007, MFR and MAL responded that a discussion paper prepared by MAL acknowledged the need to integrate the province's invasive plant legislation and policy, and would be used to seek direction from government in that regard.

In December 2007, the IPCBC released *A Legislative Guidebook to Invasive Plant Management in BC*,<sup>10</sup> to clarify the linkages between BC's existing invasive plant legislation along with other federal and international legislation. MFR and MAL helped to develop that guidebook. Work leading toward integration of the province's invasive plant legislation and policy is continuing. Recently, government effectively put harmonization of legislation into policy when it approved the IMISWG's 2008 report, *Invasive Alien Plants in British Columbia – The Provincial Government*

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<sup>9</sup> Wikeem, Brian, "Evaluation of Ranking Procedures for Invasive Plants: Application to British Columbia," 2007, 56p. Unpublished report. Ministry of Forests and Range, Range Branch.

<sup>10</sup> <<http://www.invasiveplantcouncilbc.ca/publications/ipcbc-reports/IPC3-Legislative-Guidebook.pdf>>



*Strategy for Protecting our Resources*.<sup>11</sup> As mentioned above, in 2009, MAL reviewed the legislation of adjoining jurisdictions as background for possible amendment of the *Weed Control Regulation*. The IMISWG continues to work on potential legislative amendment, a consolidated invasive plants list for BC, and a common protocol for categorizing invasive species.

#### **d) Development of training workshops for licensees**

In 2006, the Board recommended that MFR develop training courses for forest and range licensees to improve skills in plant identification, control measures and the use of the IAPP application database. In 2007, MFR responded that, in partnership with the IPCBC, it had already taught 15 training sessions on the database, and would continue and expand the sessions to include invasive plant identification, inventory methods, and possibly control measures.

Since 2007, MFR and the IPCBC have continued to provide training workshops across BC on how to use the IAPP application (13 sessions to date in 2010), and have included some invasive plant identification and field inventory information. In 2009, the workshops expanded to include an overview of *Report-A-Weed*, a new web-based, interactive mapping and reporting tool (discussed later in this report). To date, workshops have not included information on control measures. Some forest licensees have attended the sessions but few range licensees have participated. MFR said that all licensees were encouraged to attend; however, several people indicated that there were problems with notification of these events. MFR said it intends to improve the notification process for next year.

In addition to the training above, since 2006, MFR has also instructed some individual range licensees and livestock associations in invasive plant identification and reporting. These meetings, as they continue, might present a value-added opportunity. The Board, in its 2010 report, *Range Planning under the Forest and Range Practices Act*,<sup>12</sup> found that range use plan measures for preventing the introduction and spread of invasive plants were consistently vague, did not always address either introduction or spread, and were mostly not measurable or enforceable. This indicates a further need for training in preparing appropriate measures for invasive plants in such plans.

#### **e) Amend section 26 of FRPA**

In 2006, the Board recommended that MFR consider amending section 26 of FRPA to include invasive plants. This would enable government to require strategies to address invasive plants in appropriate areas on both Crown and private land. In 2007, MFR responded that it would take the suggestion under advisement.

Section 26 enables MFR to require a private landowner or forest licensee to control or dispose of insects, disease, animals or abiotic factors on forested land. Section 26 is intended for forest

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<sup>11</sup> Inter-Ministry Invasive Plant Working Group, *"Invasive Alien Plants in British Columbia – The Provincial Government Strategy for Protecting Our Resources,"* 2008, 4p. Unpublished report. Province of BC.

<sup>12</sup> <<http://www.fpb.gov.bc.ca/WorkArea/DownloadAsset.aspx?id=5028>>

protection, and in the Board's view, it is logical that invasive plants (and grassland and open forest ecosystems) be included. Adding invasive plants to section 26 would shift forest and range licensees from a preventative invasive plants management approach to one where mandatory control is potentially required. MFR does not apparently support further regulation; it said it prefers to maintain the current and more cooperative approach. Consequently, it seems unlikely that this recommendation will be implemented.

MFR gave an example of a cooperative approach. In 2007, MFR, along with the Ministry of Environment and the IPCBC worked together to produce and distribute the IPCBC brochure, *Targeted Invasive Plant Solutions: Forestry Operations*,<sup>13</sup> designed to help forest licensees identify and consider invasive plant prevention and management practices. Since 2006, MFR has also worked on, but has yet to finalize, a potential FRPA bulletin intended to provide additional guidance to forest licensees about invasive plant management under FRPA.

The Board agrees that guidance documents, when provided, are beneficial, but the intent of the Board's 2006 recommendation was to enable MFR to ensure control of invasive plants where necessary; a power the ministry currently has for insects, diseases, animals and abiotic factors. Coincidentally, the Council of Forest Industries is exploring an option to establish 'default' invasive plant practices in FRPA's *Forest Planning and Practices Regulation*. Default practices would focus on preventative management of invasive plants and would set standards that licensees would have to achieve, or would otherwise create their own measures that equal or exceed the defaults. Of interest, government is considering a more regulatory approach to invasive plant prevention and control for the oil and gas industry. A regulation under the draft *Oil and Gas Activities Act* would, when enacted, require a person carrying out an oil and gas activity to take steps to prevent the introduction and establishment of invasive plants on a seismic line, wellsite, facility area or pipeline corridor.

## **2. What additional resources or actions for invasive plant management have happened since October 2006?**

Five notable new or evolved activities for invasive plant management in BC have happened since release of the Board's earlier report in 2006:

1. expansion of RIPC's across BC
2. increasing role of local governments
3. the expanding role of the IPCBC
4. invasive plant manuals and organizational change at MFR
5. IAPP application improvements.

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<sup>13</sup> <[http://www.invasiveplantcouncilbc.ca/publications/TIPS/Forestry\\_Oper\\_TIPS.pdf](http://www.invasiveplantcouncilbc.ca/publications/TIPS/Forestry_Oper_TIPS.pdf)>

## Expansion of RIPC's across BC

Since 2006, several new RIPC's have formed through cooperation between the IPCBC, MFR and MAL; 12 RIPC's now cover most of the province (see Appendix 1). These independent "weed committees" strengthen and influence work on invasive plant management through the pooled resources of the committee members. Each committee has a common goal of raising awareness and educating the public and land managers about the biology, management and effects of invasive plants. However, because each committee has a broad membership across many interests, the role of the individual committees can be vary. Most committees function to promote coordinated and collaborative management of invasive plants among agencies and land users. Some have developed priority lists and strategies for management within their region of operation. Some deliver operational programs on behalf of a variety of agencies including First Nations, local and provincial government, utility companies, forest licensees and interest groups.

## The increasing role of local government

Since 2006, local government has assumed an expanded role in dealing with invasive plants. In association with the RIPC's, about half of the province's regional districts and many municipalities are directly involved in invasive plant management or educational programs. Often, there is also an enforcement role associated with local government activities.

## The expanding role of the IPCBC

Since 2006, the IPCBC has been a positive influence on invasive plant management in BC. The council has motivated considerable action among government agencies, stakeholders and RIPC's, by taking a lead role at both national and provincial levels. For example, at the national level, with its sister agencies in other provinces, IPCBC participated in a cross-Canada *National Spotters' Network* and education campaign about the negative impacts of giant hogweed. This intentionally-introduced horticultural plant has spread from coast to coast and is a potential threat to public safety because of its toxic sap.

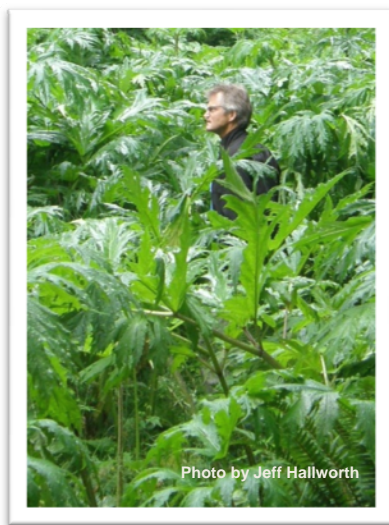


Figure 1. Giant hogweed

Another example of IPCBC leadership is the *Hot Spots Action Now!* program. This federal-provincial funded program began in 2009 and ends in 2011. It focuses on diversifying work skills for those in the resource sectors, with a particular emphasis on rural and resource communities. In the first seven months, more than 140 unemployed workers across BC have gained meaningful employment, developed new skills and contributed to improved habitat quality by inventorying and removing invasive plants, and restoring damaged habitats.

Interim accomplishments (first year) include:

- approximately 6,000 sites inventoried across BC
- over 2,000 sites treated
- invasive plants outreach programs offered by 14 staff placed across BC

The IPCBC also provides courses and learning opportunities in collaboration with RIPC's and government agencies. Examples include the *Weeds and Roads* workshops delivered to highways contractors and a week-long training program for unemployed resource workers that focused on invasive plant identification, inventory, monitoring, and treatment. To capitalize on that investment, it may be valuable to consider developing a similar program to offer generally to forest and range licensees.



**Figure 2. Manual Treatment**

The IPCBC has also taken a lead role in enhancing collaboration among various invasive species-related committees through monthly conference calls, bimonthly emails, and organizing or assisting in annual forums about invasive species.

### **Invasive plant manuals and organizational change at MFR**

In 2008, as part of its Forest and Range Evaluation Program training for staff, MFR produced the *Invasive Plants Identification Field Guide*<sup>14</sup> for use by ministry staff in identifying, reporting and monitoring FRPA-listed invasive plants. The field guide was also available to licensees on request and, in 2008, sent to RIPC coordinators. None of the licensees interviewed were aware of the field guide, however, most indicated an interest in obtaining a copy. MFR also suggests the 2001 document, *Field Guide to Noxious Weeds and Other Selected Invasive Plants of British Columbia*<sup>15</sup> as a pocket guide for field personnel. Both guides serve to expand awareness and the inventory of invasive plants across BC and thus facilitate early detection and control actions. In June 2010, MFR updated its *Invasive Alien Plant Program Reference Guide*,<sup>16</sup> which provides information about managing invasive plants and use of the IAPP application.

In 2009, MFR moved its Biocontrol Development Group (a team of three) from the ministry's Forest Practices Branch to the Range Branch, to provide more cost-effective delivery for invasive plant management under a single invasive plant program and to improve communication between ministry staff involved with invasive plants.

<sup>14</sup> <[http://www.for.gov.bc.ca/hfp/frep/site\\_files/indicators/IP-Identification-Field-Guide-June2008.pdf](http://www.for.gov.bc.ca/hfp/frep/site_files/indicators/IP-Identification-Field-Guide-June2008.pdf)>

<sup>15</sup> <<http://www.agf.gov.bc.ca/cropprot/weedguid/weedguid.htm>>

<sup>16</sup> <<http://www.for.gov.bc.ca/hra/plants/RefGuide.htm>>

### **Invasive Alien Plant Program (IAPP) application**

The IAPP application is a database intended to coordinate and share invasive plant information generated by various government and non-government agencies involved with invasive plant management. Inventory is important, and must be an ordered and ongoing process to enable prioritization of treatments based on invasive species threat, management strategies, and the likelihood of treatment success. When the IAPP application was launched in 2005, it lacked some key functionality. There was minimal training and support and uncertainty about accuracy and data integrity. In 2006, the Board was uncertain that the IAPP application would be a reliable tool.

Since 2006, MFR has addressed many of the earlier technical and training concerns with the system. Use of the database has elevated considerably since 2006, with almost all RIPC's that are conducting invasive plant inventories and treatments entering that data into the IAPP application. Prior to 2006, 33,661 sites and 120 invasive species had been entered. There are now records for 83,243 sites and 168 species.<sup>17</sup> About half of the forest licensees interviewed use the IAPP application when preparing operational plans.

In 2009, MFR launched *Report-A-Weed* as a component of the IAPP application's mapping function.<sup>18</sup> *Report-A-Weed* enables online users to report suspected new sightings of invasive plants in BC, and thus aids in early detection and rapid response and adds to the existing inventory of reported species. A reported sighting is compared to known locations in the IAPP database, and is sent directly to an MFR invasive plant specialist. As appropriate, the specialist then shares the information with the local RIPC coordinator so that the agency/land owner responsible for the infestation can be notified.

### **3. Are there any gaps, weaknesses or apparent needs related to management of invasive plants on Crown land in British Columbia?**

The Board considered whether any gaps, weaknesses or needs for additional management of invasive plants were apparent, given government's 2007 response to the Board's earlier recommendations and the new information and activities that have resulted since 2007.

#### **The role and responsibility of MFR district staff**

MFR's district staff are likely the most familiar with local invasive plant conditions and the interests of area forest and range licensees. Some MFR district range staff are engaged with RIPC's, and also help with release of biological control agents. However, district range staff are not responsible for invasive plant management—some say they've been directed to not deal with invasive plants. That task is therefore left to the few invasive plant specialists at MFR's Range Branch, which does not have the apparent capacity to deal in detail with such large

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<sup>17</sup> Information supplied by the *Range Branch*; April 2010.

<sup>18</sup> <<http://www.for.gov.bc.ca/hra/plants/raw.htm>>

geographic areas and numbers of stakeholders (particularly in Southern BC). It would help if additional government staff had a formal, recognized role in invasive plant management by:

- being the eyes on-the-ground for invasive plant issues;
- participating in planning and implementation of invasive plant management; and
- being the conduit of information to forest and range licensees.

Under FRPA, forest and range licensees are required to include measures in their operational plans to prevent the introduction and spread of some invasive plants. It is the MFR district manager that approves those plans. Staff with a recognized role in invasive plant management could help assess whether measures specified in such plans are appropriate and likely to be effective.

Several people interviewed held the opinion that MFR does not deal much with controlling invasive plants on-the-ground. MFR's full contribution to invasive plant treatment is likely obscured because it often provides funding to partners that carry out much of that work. In addition, MFR said that its invasive plant program activities, including on-the-ground treatments by ministry staff, contractors, and through grants, have seen a 57 percent reduction since 2007. To improve public awareness and instill confidence in stewardship of forest and range resources, it would help if MFR staff were more formally and visibly engaged in invasive plant management and control.

### **Local action**

Many range licensees do not apparently know how to interpret and apply priorities for invasive plant management to their range units and, at times, there is disagreement over priorities.<sup>19</sup> MFR district staff frequently try to assist, but their available effort is often limited. Some RIPC's have attempted to fill the gap, but may find dealing with a large number of individual range licensees overwhelming. Additionally, there is little or no financial assistance or incentive for range licensees to do ground-work, other than what is specified in their range use plan or range stewardship plan, for invasive plants on their range tenures. It would help if range licensees were better trained and enabled to manage invasive plants themselves.<sup>20</sup>

Other than that specified in its operational plans, a forest licensee is not required to manage or treat invasive plants. However, it appears that an increasing number of forest licensees are becoming involved with their local RIPC's and undertake invasive plant management within their tenured areas.

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<sup>19</sup> There is district level prioritization through many of the RIPC's with participation from MFR, MAL and other stakeholders including livestock association representatives—but not all range licensees.

<sup>20</sup> All chemical treatments on Crown land must comply with the *Integrated Pest Management Act* and regulations. MFR has established "contracts" with several ranchers to enable the rancher to treat specified invasive plants (MFR priorities and their own) on Crown land under MFR's Pest Management Plan (PMP). MFR is responsible to ensure treatments conducted under its PMP adhere to legislation, pesticide label restrictions, and the contents of its PMP.



RIPC membership should be encouraged, not only for forest and range licensees, but also other industries such as oil and gas, transportation and other utilities. Active membership adds capacity and furthers the ability of RIPC's to coordinate resources and activities for greatest benefit within their area of operation. Most RIPC's employ a local delivery model with several committees adopting a pooled funding approach for greater effectiveness. It is, therefore also important for local staff from government ministries (for example, MAL, MFR at both the Range Branch and district levels, as well as the ministries of Environment; Energy, Mines and Petroleum Resources; Transportation and Infrastructure; and Culture, Tourism and the Arts) to maintain active involvement in the RIPC's.

### **The need for consistent inventory**

Our interviews revealed that:

- limited invasive plant inventory data is collected by forest and range licensees;<sup>21</sup>
- some RIPC's are not collecting inventory data in a consistent fashion; and
- not all invasive plant managers (i.e., some companies) share results with RIPC members.

It seems that all stakeholders would benefit from continued training on how to conduct an inventory using standardized protocols and on the potential benefits of pooled information and resource sharing.

### **Spread of invasive plants by recreationists**

Recreational activities on Crown land are significant, and many people interviewed were concerned about the spread of invasive plants through off-road motorized recreation. Soil disturbance by off-road vehicles creates opportunities for invasive plant establishment, and the vehicles themselves facilitate spread. There is a need for more coordinated effort to address invasive plant spread by non-tenured users of Crown land.

An example of coordinated effort is a 2009 memorandum-of-understanding between the provincial government and the Quad Riders Association of BC (ATVBC). That agreement is intended to foster shared environmental stewardship; respect for other Crown land users; and safe, responsible riding. Consequently, the ATVBC is in the process of drafting environmental stewardship guidelines for backcountry ATV riding. Those draft guidelines include practices intended to minimize the spread of invasive plant species.

In addition, government recently announced its new Off-Road Vehicle (ORV) Management Framework, with regulations expected by 2011. The goal of the framework is to encourage safe and responsible ORV use. The ORV framework does not specifically deal with potential spread of invasive plants by ORVs. However, under the framework, government agencies will continue to work to resolve land use-recreation conflicts by zoning areas for appropriate use through

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<sup>21</sup> Many range licensees live in remote areas with limited or no ability to report weeds over the internet.

designated trails and facilities.<sup>22</sup> Invasive plant management will therefore continue to improve as government implements its ORV framework and undertakes the planning necessary to manage trail systems and spread of invasive plants by ORV use.

### **Roles, responsibilities and coordination**

In 2006, the Board found that:

The distribution of invasive plants in BC transcends jurisdictional boundaries, and the need for a coordinated invasive plant program with well-defined roles and responsibilities is widely understood. Effective coordination, however, requires a champion for the program, clear leadership and organization at both the provincial and local level. To some extent, this role has been assigned to the IPCBC.

This earlier finding is still true today — there remains a confusing array of agencies, organizations, roles and responsibilities that deal with invasive plant management. Both the IMISWG and IPCBC said they want to establish more clearly defined roles and responsibilities for invasive plant management. The non-government IPCBC, like the government’s IMISWG, has recently expanded its role to be inclusive of all invasive species (plant and animal) and is working with key partners to clarify its future role. As this report was being finalized, government reorganized the natural resource ministries, moving responsibility for invasive plants to a new organization. It is not yet clear what the new roles and responsibilities of government agencies will be.

It would help if all involved government agencies continue to support the IMISWG and IPCBC as equal champions for coordination of invasive species management (i.e., clear roles and responsibilities) in the province. Each group has a considerable leadership role and, with continued cooperation, there appears to be opportunity for even greater collaborative benefits to be achieved.

## **Conclusions**

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Some action has been undertaken by government to implement the Board’s recommendations from 2006:

- a) MAL is working with the IMISWG to revise the *Weed Control Regulation*, with a view to essentially consolidating the invasive plants and noxious weed lists.
- b) With the support of the IMISWG, MFR provided funding and partnered with the IPCBC to develop the *BC Invasive Plant Core Ranking Process*, to be released soon.

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<sup>22</sup> <<http://www.tca.gov.bc.ca/tourism/orv>>



- c) The IMISWG provided input to the IPCBC to develop *A Legislative Guidebook to Invasive Plant Management in BC*, to clarify the linkages between BC's existing invasive plant legislation.
- d) MFR and the IPCBC are continuing to provide training on the IAPP application, invasive plant identification and reporting.

One Board recommendation from 2006 was not acted upon; it is unlikely that government will choose to incorporate invasive plants into FRPA section 26.

Five notable new or evolved activities for invasive plant management in BC have happened since release of the Board's report in 2006:

1. expansion of RIPC's across most of BC
2. increasing role of local governments in invasive plant management
3. the expanding leadership role of the IPCBC and its education and training programs
4. development of invasive plant manuals and organizational change at MFR
5. MFR's refinement of the IAPP application and addition of *Report-A-Weed*

Invasive plant identification, monitoring and control in BC is a highly complex and multi-jurisdictional challenge involving numerous government and non-government agencies. To manage effectively, a cooperative, coordinated approach is required, which includes clearly-defined roles and responsibilities and open lines of communication between all involved. Both the IMISWG and IPCBC have coordinating, leadership roles in invasive plant management. These organizations should work cooperatively to achieve the greatest success in management of invasive species.

To improve public awareness and instill confidence in stewardship of forest and range resources, it would help if staff at the new Ministry of Natural Resource Operations are given a more formal, recognized role in the management and control of invasive plants.

There is a need for continued involvement, training and education of forest and range licensees, other Crown land users and RIPC members about the identification, reporting, monitoring, recording and control of invasive plants.

Invasive plant management will continue to improve as government implements its ORV framework and undertakes the planning necessary to manage trail systems and spread of invasive plants by ORV use.

A great deal of planning, coordination and sharing of available resources in invasive plant management has occurred since 2006, but the presence and threat of invasive plants on-the-ground continues to grow. If new sightings and additional species are any indication, the threat and management of invasive plants is still, and will remain, a significant issue in BC. The Board will continue to watch this issue with interest.

# Appendix 1

## Regional Invasive Plant Committees

**1. Coastal Invasive Plant Committee**  
Coastal Invasive Plant Committee (CIPC)  
Ph: 250-857-2472  
www.coastalinvasiveplants.com  
Email: info@coastalinvasiveplants.com

▶The CIPC covers the geographic areas of Vancouver Island, the Gulf Islands and the Regional Districts of Powell River, Strathcona, and Mount Waddington, occurring on the Mainland Coast.

**2. Greater Vancouver**  
Greater Vancouver Invasive Plant Council (GVIPC)  
Ph: 604-880-8358  
www.gvipc.ca  
Email: info@gvipc.ca

▶The GVIPC covers all lands within the Metro Vancouver Regional District.

**3. Fraser Valley**  
Fraser Valley Invasive Plant Council (FVIPC)  
Ph: 604-615-WEED(9333)  
Email: fvipp@shaw.ca  
www.fraservalleyweeds.com

▶The FVIPC covers the boundaries inclusive in the Fraser Valley Regional District, from east of Hope to west of Abbotsford/Mission, and north to Skatin and Lil'wat territory. Adjacent communities may also be included in the FVIPC where invasive plant infestations are observed.

**4. Sea to Sky Corridor**  
Sea to Sky Invasive Species Council  
Ph: 604-935-7665  
www.ssisic.info • Email: ssiinvasives@gmail.com

▶SSISIC covers all lands in the Sea to Sky Corridor from Lions Bay to height of land on the Duffy Lake Road (Hwy 99).

**5. Okanagan-Similkameen**  
South Okanagan-Similkameen Invasive Plant Society (SOSIPS)  
Ph: 250-404-0115  
www.rdos.bc.ca  
Email: sosips@show.ca

▶SOSIPS covers all lands within the Regional District Okanagan-Similkameen (RDOS), including the municipalities of Summerland, Penticton, Oliver, Osoyoos, Keremeos and Princeton. Please direct all inquiries to SOSIPS or for further information on invasive plants in this region, refer to the RDOS website.

**6. Boundary**  
Boundary Weed Management Committee (BWMC)  
Ph: 250-446-2232  
www.rdkb.com  
Email: bwmc@nethop.net

▶The BWMC program covers all lands within the Kettle River Drainage; the Boundary portion of the Regional District of Kootenay Boundary.

**7. Central and West Kootenay**  
Central Kootenay Invasive Plant Committee (CKIPC)  
Ph: 250-352-1160  
www.kootenayweeds.com  
Email: coordinator@kootenayweeds.com

▶The CKIPC program covers the Central Kootenay Regional District and areas A & B of the Kootenay Boundary Regional District from the Paulson Summit East.

**8. East Kootenay**  
East Kootenay Invasive Plant Council (EKIPC)  
Ph: 1-888-55-EKIPC (35472)  
www.ekipc.com  
Email: coordinator@EKIPC.com

▶The EKIPC covers all land within the Regional District of East Kootenay and is approximately 26,000 km<sup>2</sup> in size.

**9. Central Okanagan**  
Central Okanagan Regional District (CORD)  
Ph: 250-469-6218  
www.regionaldistrict.com/departments/inspections/inspections\_noxweeds.aspx

▶Currently there is no invasive plant committee in the Central Okanagan. Please direct inquiries to CORD.

**10. North Okanagan**  
North Okanagan Regional District (NORD)  
Ph: 250-550-3749  
www.rdnho.ca

▶Currently there is no invasive plant committee in the North Okanagan. Please direct inquiries to NORD.

**11. Columbia-Shuswap**  
Columbia-Shuswap Regional District (CSRD)  
Ph: 250-832-8194  
www.csrd.bc.ca

▶Currently there is no invasive plant committee for the Columbia-Shuswap. Please direct inquiries to CSRD.

**12. Thompson-Nicola**  
Southern Interior Weed Management Committee (SIWMC)  
Ph: 250-851-1699  
www.siwmc.ca  
Email: siwmc@telus.net

▶The SIWMC covers the Thompson-Nicola Regional District, with an area of 45,279 square kilometers. It includes ten municipalities (Ashcroft, Barriere, Cache Creek, Chase, Clearwater, Clinton, Kamloops, Logan Lake, Lytton and Merritt) as well as ten electoral areas.

**13. Cariboo, Chilcofin, Coast**  
Cariboo Chilcofin Coast Invasive Plant Committee (CCCIPC)  
Ph: 250-392-1400  
www.cccipc.ca  
Email: info@cccipc.ca

▶The CCCIPC covers the Cariboo Regional District and the Central Coast Regional District. This ranges from Hixon north of Quesnel, south to 70 Mile House, east to Wells Grey Park, and west to the Pacific Ocean.

**14. Northeast**  
Northeast Invasive Plant Committee (NEIPC),  
Peace River Regional District  
Ph: 250-784-6838  
www.peacriverrd.bc.ca  
Email: damfam@prds.ca

Fort Nelson Invasive Plant Management Committee  
Ph: 250-233-8745  
Email: ccumbin@geoterra.net

▶The NEIPC covers all areas of the Peace River Regional District. The FNIPMASC covers all areas within the Northern Rockies Regional Municipality boundary and is approximately 85,000 square km.

**15. Northwest**  
Northwest Invasive Plant Council (NWIPC)  
Ph: 1-866-44WEEDS (449-3337)  
www.nwipc.org  
Email: info@nwipc.org

▶The NWIPC covers four regional districts: Bulkley-Nechako, Fraser Fort George, Kitimat-Stikine, and Skeena Queen Charlotte; and, the Stikine Region adjacent to the Yukon border, and all municipalities within these regions.

Sourced from the Invasive Plant Council of BC <http://www.invasiveplantcouncilbc.ca>