

Monitoring for Success of the Invasive Species Strategy for British Columbia



Acknowledgements

Thank you to the many agencies, organizations and individuals that contributed to the development of the Monitoring for Success Framework and the associated provincial survey.

COVER PHOTOS:

Top to bottom:

European fire ant (*Myrmica rubra*),

Photo: S. McCann;

Japanese Knotweed (*Fallopia japonica*),

Photo: University of Alaska;

Goldfish (*Carassius auratus*),

Photo: Bugwood Org.

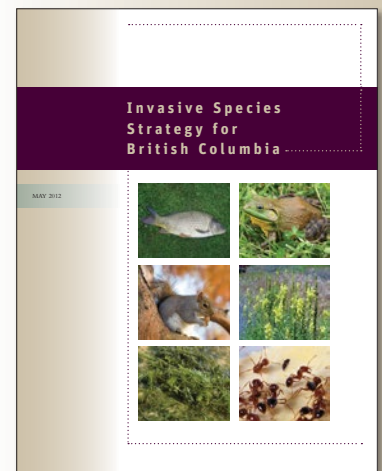
**Publication created on June 2017*

Executive Summary

With collaboration and support from multiple partner organizations and agencies across British Columbia, the 2012–2016 Invasive Species Strategy for British Columbia (the ‘Strategy’) was developed and released in Spring 2012. This Strategy would act as a framework and foundational document to guide improved invasive species prevention and management in BC. To support the delivery of the Strategy, a Monitoring for Success (MFS) Framework was developed to determine if collective efforts were being successful. Input and development of the MFS Framework was provided by an advisory committee comprised of the provincial Inter-Ministry Invasive Species Working Group, Invasive Species Council of BC, governments and regional committees. Using the MFS Framework, a province-wide survey was distributed to all organizations, groups and individuals involved in invasive species management in the province from 2012–2016 to measure progress against the goals laid out in the Framework. Input into the survey was over 4 months, spanned more than 37 organizations and agencies within BC and saw a large range of responses. The input and feedback derived from these survey questions are reflective of the goals and outcomes within the Framework, set a baseline by which to compare against for future measurement, and are meant to highlight key results against the Strategy.

Management and control of invasive species in BC has, since the 2012 release of the first Invasive Species Strategy for BC, seen considerable advancement and improvement in coordination and effectiveness. Since this time, provincial and local governments, indigenous groups, organizations and citizens have increasingly taken action to prevent the spread and introduction of new invasions of both plants and species. Improved action on invasive species management in BC has been enabled through consistent and/or increased funding, allowing for greater on-the-ground success. At the National level, the federal, provincial and territorial Conservation, Wildlife and Biodiversity Ministers renewed their commitment to work towards strategic goals of the Invasive Alien Species (IAS) Strategy for Canada and thereby established an ad-hoc Federal-Provincial-Territorial IAS Task Force to identify key actions to support continued progress on the implementation of the IAS Strategy. These actions all support improved invasive species prevention and management in BC.

In 2017, the BC provincial government is investing over \$10 million in invasive species management



2012–2016 Invasive Species Strategy for British Columbia.



Zebra mussels (*Dreissena polymorpha*).
Photo: J. Leekie

Monitoring for Success (MFS) of the Strategy (2012 – 2016) Summary Results

The following information provides a high-level summary of the monitoring for success of the Invasive Species Strategy for BC (2012-2016). The Strategy is organized into 6 Solutions with one or more goals each. Survey results are organized to follow this format for ease of review.

Please refer to the full *Monitoring for Success Framework* and the *Provincial Survey Report* for a full rationale

60% of respondents monitor for compliance with enforcement actions.

Solution 1:

Establish and Enforce Effective Regulatory Tools

Goal 1: Establish effective regulatory tools - The development of a single piece of provincial legislation for all invasive species in British Columbia would be developed to address and resolve any current conflicts that exist between regulations, and would promote cross-government agreements with other jurisdictions.

Although a single invasive species act is not yet in place, 51% of survey respondents have legislation and regulation (including bylaws) responsibilities. This, along with improvements made to provincial regulations, means greater control and management of invasive species in BC. This is indicative of British Columbia's strong Early Detection Rapid Response program that is in place for all species and continues to be worked on and strengthened based on newest available data. In addition, updates to the Wildlife Act's Controlled Alien Species Regulation is effectively ensuring that British Columbia is better protected against a broader range of unwanted invasive species. Other legislation that is positive for BC and its citizens is the soon to be released updated the Weed Control Regulation, better protecting us from species such as invasive cordgrasses (*Spartina Anglica*, *S. Densiflora*, *S. Patens*), periwinkle (*Vinca minor*) and English ivy (*Hedra helix*).

Goal 2: Enforce regulatory tools - Active enforcement of legislation would be implemented by all enforcement agencies and would be applicable across all aspects of invasive species management, including pathways of introduction, vectors of spread, and early detection and rapid response activities.

Survey results indicate that 60% of respondents monitor for compliance with enforcement actions.



Japanese Knotweed (*Fallopia japonica*).
Photo: D. Sigg

Solution 2:

Build strong collaboration

Goal 3: Build strong collaboration and coordination – All groups involved in invasive species management in British Columbia and beyond would collaborate on shared goals, including supporting current partnerships, fostering new ones and building cross-jurisdiction partnerships.

Survey results indicate that 92% of respondents work with other invasive species-related organizations. This result strongly indicates the value that governments, organizations and individuals place on the importance of invasive species management and is indicative of the level of collaboration among organizations within British Columbia.

Solution 3:

Prevent the introduction and spread of invasive species

Goal 4: Close entry pathways and manage vectors of spread – Reducing the number of invasive species entering British Columbia requires eliminating the means by which invasive species can enter the province and requires active management of the key mechanisms responsible for the transfer of established invasive species.

Survey results indicate that the majority of key entry pathways do not have formal restrictions in place. This is an important area of research and improved coordination moving forwards.

Goal 5: Encourage British Columbians to undertake responsible actions – Promoting positive behaviour change and enabling best management practices for land base users and resource managers will foster responsible actions towards invasive species management.

Survey results indicate that the majority of respondents are using one or more behavior change programs, specifically: 38% of respondents use Clean, Drain, Dry; 46% use PlantWise 27% use Don't Let It Loose; 11% use Buy It Where You Burn It; and 24% use Play Clean Go. While 46% of respondents are not employing any behavior change programs. Behavior change programs such as these are continuing to grow in BC to support and foster responsible actions.



Regional Invasive Species Organizations.
Photo: J. Leekie

Behaviour change programs continue to grow in BC to support and foster responsible actions.



Invasive plant removal. Photo: J. Leekie

Solution 4:

Implement effective control, restoration and monitoring programs

Goal 6: Eradicate new invasive species occurrences – The early detection and rapid response to new invasions increases the likelihood that invasives will be addressed successfully while populations are still localized and relatively small.

Survey results show that 100% of federally regulated and provincially prohibited invasive species were responded to upon entry to BC.

Goal 7: Effectively treat invasive species populations to minimize impacts – Successfully treating priority invasive species populations to reach acceptable levels (2012–2013 level) minimizes their impacts to the environment, economy, and society.

Survey results indicate that 76% of respondents conduct treatments on invasive species to minimize impacts, meaning that British Columbia is working hard to tackle invasive species to prevent their spread and introduction into new areas.

Goal 8: Restore ecosystems impacted by invasive species – Restoration of ecosystems helps to prevent the opportunity for future invasive species establishment.

Survey results indicate that 51% of respondents include post-treatment restoration in their programs. Collaboration in the field of restoration on impacted ecosystems is an area of opportunity for increased research and collaboration in BC.

Goal 9: Monitor management efforts to enhance effectiveness and efficiencies – Monitoring of invasive species management efforts will determine short- and long-term trends that can lead to new knowledge and understanding, and subsequently improve management effectiveness and efficiencies.

Survey results indicate that 67% of treatment sites are monitored by respondents. Through increased and improved monitoring standards and protocols for invasive species management efforts, we will have greater understanding and knowledge of effectiveness of control methods.

Solution 5:

Conduct relevant and applicable research

Goal 10: Conduct relevant research on invasive species – Research on invasive species is needed, supplemented with knowledge transfer on prioritized topics and issues among academia, resource managers, and policy makers.

Survey results indicate that 56% of respondents are conducting research, defined within the survey as peer reviewed papers, field trials and finding new treatment methods. Remaining gaps in research have been identified and through initiatives such as the Invasive Species Research Conference, these gaps can be better communicated and addressed through the facilitation of key partnerships between industry, land users and academia.

Solution 6:

Provide stable, long-term funding

Goal 11: Establish adequate, stable, long-term funding for invasive species management – Ensure there is adequate, stable, long-term funding for effective and successful invasive species prevention and management in British Columbia.

The survey was unable to capture this information without duplication of reporting. Solution 6 is therefore not addressed within this summary report. However, there has been an increase of financial investments to invasive species. For example, there are growing invasive species programs in local governments where cities like Surrey and Richmond now invest close to a million dollars annually. The province of BC has committed to increased investment in invasive plant management and invasive mussels as of 2017. Non-profit organizations are attracting new funding from foundations and the private sector. Further work is needed to document current investments and needs in BC.

Moving Forward

Overall, organizations and individuals within British Columbia are working to address common issues and challenges relating to invasive species, as is clearly evidenced within the MFS Framework and Provincial Survey. There are still many opportunities for collaboration, increased coordination and improved public understanding, however great strides have and will continue to be made in the management of invasive species.



2017 Invasive Species Research Conference.
Photo: D. Melan



Orange Hawkweed (*Hieracium aurantiacum*).
Photo: L. Wilson