

Action Items for B.C. Invasive Mussel Prevention

October 20, 2017

PREVENTION OF INVASIVE MUSSEL INTRODUCTION TO BRITISH COLUMBIA

SUMMARY

Following recent meetings at the Union of BC Municipalities 2017 conference meetings with various local governments and the Okanagan Basin Water Board (OBWB), Honorable George Heyman, Minister of Environment and Climate Change Strategy, asked for a comprehensive list of action items to enhance invasive mussel prevention in B.C. Further, he asked that these items be prioritized. The following list is in response to this request, separated into items for prevention of invasive mussels, and preparation should an invasion occur. The full list is provided point-form, and details of each called-for action item are included in the second section, entitled “Detailed Rationale and Expected Outcomes.”

We call on the Province of B.C. to do a full costing of all action items as outlined below and to budget permanent, sufficient funding to guarantee ongoing mussel prevention, preparation and response efforts.

Further, we call on the government to continue to make prevention and preparation decisions based on science and data, and to further develop scientific and data gathering and analysis capabilities for effective management.

ACTION ITEMS FOR PREVENTION - RANKED

Prevention

1. Make legislative changes that require all watercraft entering B.C. to report to an inspection station prior to launching in any provincial waters.
2. Expand watercraft inspection and decontamination options for all boaters, and increase signage at boat launches to raise awareness of Aquatic Invasive Species (AIS).
3. Expand the number of full-status B.C. Conservation Officers (COs) with authority to intercept those who fail to stop at mandatory inspection stations.
4. Review the effectiveness of mussel detection dogs as part of the Conservation Officer Service K9 program, and expand the use of multi-purpose dogs as appropriate for increased efficiency and effectiveness.
5. Provide funding and materials to regional invasive species societies for ongoing mussel monitoring and public outreach efforts.
6. Create a province-wide, broad public education and awareness campaign, beyond boaters, and beyond the “Clean, Drain, Dry” message. Engage all professional regulatory bodies that are

established in provincial legislation (such as Engineers and Geoscientists of BC, the College of Applied Biology, etc.), to give information to their members and request that they take appropriate precautions regarding AIS.

7. Coordinate with the Canadian government and call for more federal action to contain infestations in already-infested provinces, and for prevention resources in non-infested provinces.

8. Call on the federal government to amend air transport regulations with regard to aquatic aircraft such as float planes and water bombers to prevent the spread of AIS from one water body to another.

9. Request that the federal government amend the Pleasure Craft Operator Card to include a component on AIS and the responsibility to “Clean, Drain, Dry” watercraft.

10. Work with other western provinces to coordinate a call for action from the Government of Canada to support mussel containment and prevention efforts.

ACTION ITEMS FOR PREPARATION - RANKED

1. Build a contingency fund (such as the emergency fund for natural disasters) to provide for rapid response and long-term containment and management of a possible infestation.

3. Assist local governments, water purveyors and utilities to conduct vulnerability assessments and infrastructure upgrades to reduce their risk in case of an infestation.

4. Provide facilities for centralized inspection and decontamination near at-risk water bodies to promote awareness and best-practices for boaters and other water recreationists.

5. Provide funding for research into materials to contain or eradicate invasive mussels, and pre-approve materials for appropriate rapid response.

6. Provide internal and external funding opportunities for further study into mussel-related issues such as effects on native species and the economy, infrastructure preparation, enhanced detection techniques, and materials for control or eradication.

DETAILED RATIONALE AND EXPECTED OUTCOMES

ACTION ITEMS FOR PREVENTION - RATIONALE

1. Make legislative changes that require all watercraft entering B.C. to report to an inspection station prior to launching in any provincial waters.

Currently, inspection stations are seasonal (April 1 – October 31), and limited to hours between dusk and dawn. People transporting watercraft outside of the inspection season, or when stations are closed are not under any legal obligation to report for inspection before launching in B.C. waters. Further, 20% of vehicles transporting watercraft currently fail to stop when inspection stations are open. The expected outcome of such a legislative change is that a far greater number of watercraft will be inspected, including those coming from out-of-province outside of inspection season, or when highway stations are closed. Further, this will lead to more public awareness of the threat of invasive species. Should a localized infestation occur in the future, the procedure of reporting to an inspection station will already be known to boaters, helping to contain the infested water body, and prevent further spread.

2. Expand inspection and decontamination options for all watercraft transporters, and increase signage at boat launches to raise awareness of (AIS).

Currently when inspection stations are closed, the only option for watercraft transporters coming from out-of-province is to call the RAPP line, and arrange to meet an inspection crew. Since there is no regulatory requirement to arrange an out-of-season inspection, it is likely that a majority of these watercraft are launched into provincial waters uninspected. Centralized inspection and decontamination options would allow boaters to report for inspection, even if they did not pass a highway inspection station en route to their destination. Private marinas, boat detailers, car washes, and others could have trained staff to provide this service, offsetting some provincial costs.

With expanded options, a greater number of watercraft will report for inspection and decontamination. Further, it would encourage awareness and behaviour changes that would enhance the prevention regime. It would also support the requirement for out-of-province watercraft transporters to report to an inspection station.

3. Expand the number of full-status B.C. Conservation Officers (COs) with authority to intercept those who fail to stop at mandatory inspection stations.

In 2017, 20% of vehicles with watercraft failed to stop at roadside inspection stations. In the case that a vehicle fails to stop, auxiliary COs must call the RAPP line and report the vehicle for follow-up enforcement. More full-status COs would enhance inspection and enforcement efforts. With this change, full-status COs would be available to respond more quickly to watercraft that are not stopping at inspection stations, reducing the chance that they launch into provincial waters. More full-status COs would also have the authority to enforce all other resource and conservation related laws in the province.

4. Review the effectiveness of mussel detection dogs as part of the Conservation Officer Service K9 program, and expand the use of multi-purpose dogs as appropriate for increased efficiency and effectiveness.

Early reports from 2017 indicate that the use of multi-purpose dogs enhanced the mussel prevention program since K9 officers may be more successful and efficient at detecting mussel-fouled watercraft. Dogs also raise the public profile of the invasive mussel prevention program, and enhance public relations. The province should review the effectiveness of the program, and expand the use of dogs as appropriate to achieve better outcomes. The dogs can also enhance the enforcement options for other conservation-related regulations.

5. Provide funding and materials to regional invasive species societies for ongoing mussel monitoring and public outreach efforts.

Much of the monitoring for invasive mussels in B.C. is currently carried out by non-profit regional invasive species societies. Many of these groups lack stable funding, and rely on donations to carry out monitoring and a host of other invasive-related activities. When public outreach materials have been made available through provincial funding, in some cases, regional non-profit groups have still been required to pay for those materials. Regional invasive species societies play a fundamental role in the preservation of our waters, and the province should support these groups. These societies, as local experts, can reduce provincial costs for monitoring and public outreach with low overhead costs and year-round engagement.

6. Create a province-wide, broad public education and awareness campaign, beyond boaters, and beyond the “Clean, Drain, Dry” message. Engage all professional regulatory bodies that are established in provincial legislation (such as Engineers and Geoscientists of BC, the College of Applied Biology, etc.), to give information to their members and request that they take appropriate precautions regarding AIS.

Public awareness into the threat of invasive mussels has been increased by regional information and awareness campaigns. Primary among these campaigns is the message for boaters to “Clean, Drain, Dry” their watercraft when leaving a water body. However, there is a need to increase awareness and education among the non-boating public which will lend support to prevention efforts, and better prepare the population for the potential costs and actions required should an infestation occur. The [“Don’t Move A Mussel”](#) public awareness campaign in the Okanagan has led to very high public recognition in the valley, demonstrating that it can be effective.

Professionals working regularly in and around water should also be educated on the risks associated with AIS, and the best practices of moving watercraft from one water body to another. Using professional networks will help to spread the message, and create greater awareness.

7. Coordinate with the Canadian government and call for more federal action to contain infestations in already-infested provinces, and for prevention resources in non-infested provinces.

Federal funding for action on invasive mussels is significantly lacking, with only \$7 million annually to address all AIS across Canada in both freshwater and marine environments. The federal government has responsibility in several areas such as fisheries, navigable waters and other environmental considerations which will be significantly impacted should mussels invade.

8. Call on the federal government to amend air transport regulations with regard to aquatic aircraft such as float planes and water bombers to prevent the spread of AIS from one water body to another.

Mussels in their larval stage are microscopic and free-floating in the water. Also, aircraft which stay on the water for longer periods of time may have their floats encrusted by mussels. In both instances, when the aircraft moves to another water body – carrying mussel-infested water or mussels on their floats – it facilitates the spread of the species.

9. Request that the federal government amend the Pleasure Craft Operator Card to include a component on AIS and the responsibility to “Clean, Drain, Dry” watercraft.

In Canada, if you operate a boat with a motor, you are required to show proof of competency, usually through a Pleasure Craft Operator Card. As pleasure craft owners represent the most likely vector to transport invasive mussels, best practices such as “Clean, Drain Dry” should be a required component of boater education.

10. Work with other western provinces to coordinate a call for action from the Government of Canada to support mussel containment and prevention efforts.

B.C has been actively engaged in coordination with other western provinces and states to prevent invasive mussels from entering the Pacific Northwest. The B.C. CO service has also been highly proactive in educating Canada’s Border Services Agents about the need to inspect watercraft and report any that are considered high-risk. However, the provincial governments should coordinate a call for federal action to support the containment, prevention, and preparation for invasive mussel infestations.

ACTION ITEMS FOR PREPARATION

1. Build a contingency fund (such as the emergency fund for natural disasters) to provide for rapid response and long-term containment and management of a possible infestation.

Should a mussel infestation occur, the province needs to have resources in place to establish an incident command centre, and to put the Early Detection Rapid Response Plan into action. Much like other natural disasters, the initial response will be expensive, and urgent. Having funds in place will help to mitigate the effects of an initial infestation, and will help prevent the spread to additional water bodies.

3. Assist local governments, water purveyors and utilities to conduct vulnerability assessments and infrastructure upgrades to reduce their risk in case of an infestation.

Once established, invasive mussels will create significant negative stresses on local infrastructure. With current spending on infrastructure improvement and repair, vulnerability assessments are a timely addition to designing any in-the-water systems with protection measures and redundancies to keep operating costs low, and systems functioning and in good repair.

4. Provide facilities for centralized inspection and decontamination near at-risk water bodies to promote awareness and best-practices for boaters and other water recreationists.

Should an infestation occur in the province, perimeter inspection stations will need to be supported by inspection and decontamination facilities around any contaminated waters to prevent further spread. With legislation requiring all watercraft entering B.C. to report to an inspection station, more facilities, centralized around high-risk water bodies will ensure that the spread of an infestation is contained as long as possible.

5. Provide funding for research into materials to contain or eradicate invasive mussels, and pre-approve materials for appropriate rapid response.

While there is no current material which will eradicate a large-scale infestation of invasive mussels, several materials are being tested and have proven successful in smaller areas. However, in Canada the ability to use these materials requires a long permitting process through the federal government which will not allow for a rapid response where appropriate. More research, and pre-approval of appropriate materials will provide the flexibility to react to an initial invasion, based on scientific-based protocols, and a high likelihood of success.

6. Provide internal and external funding opportunities for further study into mussel related issues such as effects on native species and the economy, infrastructure preparation, enhanced detection techniques, and materials for control or eradication.

Preventing and preparing for mussel infestations requires many gaps to be filled. Further research must be conducted to assess the best options for preventing, preparing for, and controlling an infestation of invasive mussels. Long-term costs may be mitigated with further research in these areas.