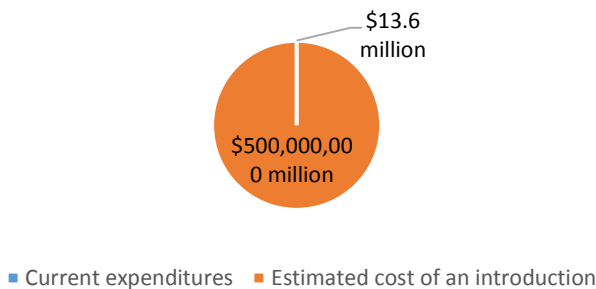


Advancing a Regional Defense Against Dreissenids in the Pacific Northwest

EXECUTIVE SUMMARY

The estimated costs associated with failing to prevent an invasion of dreissenids in the Pacific Northwest exceed \$0.5 billion annually to the PNW states and Canadian provinces. Pacific Northwest states and provinces as well as a few key states that are source states for dreissenids are spending more than \$13.6 million annually on prevention efforts.



The Pacific Northwest is the only region in the United States that does not have established populations of invasive quagga or zebra mussels (*Dreissenid* spp.)

An effective and implementable perimeter strategy includes prevention, surveillance and monitoring, rapid response and management capabilities, an aware, informed, an educated public, enhanced detection and response tools and technologies, and improved communication and information about key vectors and pathways. The prerequisites include awareness and support at the policy level and cooperation at the community level, regional and bilateral coordination to harmonize methods and procedures for preventing further spread, and capacity and allocation of resources that provide for action implementation, and research that informs understanding of dreissenid biology and effective methods for control.

To successfully implement an aquatic invasive species perimeter defense effort for the Pacific Northwest requires an additional \$20 million in funding to:

1. **Contain dreissenids at the source.**
 - a. **Address moored vessels at contaminated source waters.**
 - i. **Implement mandatory decontamination for any conveyance moored in a contaminated water body.**
2. **Develop and foster long-term sustainable funding solutions for dreissenid and other aquatic invasive species prevention efforts, including industry**

participation. Engage the greatest benefactors of dreissenid prevention efforts in funding those efforts.

3. **Build and fund the institutional capacity for collaboration in the region to monitor, assess, and renew regional AIS strategies, including enhancing the effectiveness of perimeter defense, on an annual basis**
4. **Establish and implement a real-time rapid response notification database.**
5. **Coordinate annual watercraft inspection and decontamination stations in the Pacific Northwest and with neighboring states and provinces annually using an online database.**
6. **Fund adequate infrastructure, including installing permanent decontamination stations at key locations, along the perimeter of the PNW.**
7. **Fully fund State Aquatic Nuisance Species Management Plans.**
8. **Facilitate, through PNWER, consistent and comprehensive cross-border training for United States/Canada border patrol officers, equipping them with the necessary information, materials, and training to effectively.**
9. **Develop boater movement models to predict the most likely locations for an introduction of dreissenids in the Pacific Northwest.**
10. **Request and document the status of vulnerability assessments for all hydropower facilities in the PNW quarterly.**
11. **Ensure all chemical options for dreissenid treatment are registered for use in each state and province and that coordination among states and provinces continues through the established Rapid Response Working Group.**
12. **Support mechanisms to share resources across jurisdictions.**
13. **Develop an AIS coordinator position in the US Army Corps of Engineers in Washington, DC.**
14. **Strengthen alliances with organizations in Lake Tahoe and the states and provinces through consistent communication and collaboration and sharing notification, watercraft inspection and decontamination station, and fouled conveyance interceptions via real-time online databases.**

Average annual state and provincial dreissenid prevention effort costs, including watercraft inspection and decontamination, outreach, and monitoring.

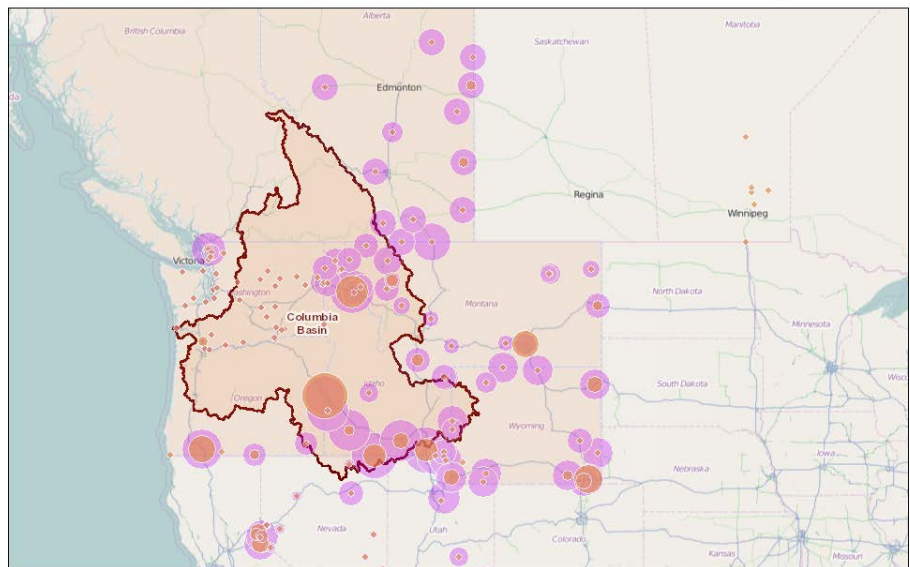
Pacific Northwest States and Provinces	Amount	Source
Alberta	\$1,500,000	K. Wilson, Environment and Parks
British Columbia	\$1,300,000	M. Herborg, Invasive Species Council of British Columbia
Saskatchewan	*\$260,000	C. Doherty, Saskatchewan Ministry of Environment
Idaho	\$1,250,000	T. Woolf, Idaho Department of Agriculture
Montana	\$1,140,000	T. Boos, Montana Fish, Wildlife and Parks
Oregon	\$542,340	R. Boatner, Oregon Department of Fish and Wildlife
Washington	\$420,000	A. Pleus, Washington Department of Fish and Wildlife
	\$6,412,340	TOTAL
States and Provinces Adjacent to the PNW	Amount	Source
Wyoming	\$800,000	B. Bear, Wyoming Game and Fish Department
California/Nevada – Lake Tahoe	\$1,500,000	D. Zabaglo, Tahoe Regional Planning Agency
California	**\$2,931,207	D. Norton, California Department of Fish and Wildlife
Nevada	\$700,000	K. Vargas, Nevada Department of Wildlife
Utah	\$1,350,000	J. Nielson, Utah Department of Wildlife Resources
	\$7,281,207	TOTAL
	\$13,693,547	GRAND TOTAL

*This is an estimate of the amount that will be expended in 2015-16 for equipment and salaries. It does not include that portion of the program carried out by the Communications Branch and Compliance and Field Services Branch.

**In California, watercraft inspection programs at individual waterbodies are implemented and conducted by the local water manager. These programs and fees vary by waterbody and are not tracked by the state. For information on boating restrictions and inspections please contact the waterbody manager directly.

2015 Regional Watercraft Inspection & Decontamination Planning

REGIONAL WATERCRAFT INSPECTION AND DECONTAMINATION PLANNING, ILLUSTRATING PLANNED INSPECTION EFFORT, AND PAST FOULED BOAT INTERCEPTIONS. THE ORANGE CIRCLES REPRESENT LOCATIONS WHERE FOULED CONVEYANCES WERE INTERCEPTED – THE LARGER THE CIRCLE, THE MORE FOULED CONVEYANCES WERE INTERCEPTED AT THAT LOCATION. THE PURPLE CIRCLES REPRESENT WATERCRAFT INSPECTION AND DECONTAMINATION EFFORT – THE LARGER THE CIRCLES, THE LONGER THE STATION IS OPERATING DURING THE SEASON AND PER EACH DAY. SOURCE: PACIFIC STATES MARINE FISHERIES COMMISSION.



May 25, 2015

PNW Region States & Provinces
 Columbia Basin Boundary

1:18,489,298
 0 160 320 640 mi
 0 240 480 960 km
 USGS, PSMFC GIS Center

2015 Regional Watercraft Inspection & Decontamination Planning Team
 Aquatic Invasive Species Program, Pacific States Marine Fisheries Commission