

# Prevent and Respond to the Introduction of Freshwater and Terrestrial Invasive Species

## The Challenge

History shows that it is significantly less expensive and more effective to prevent or rapidly respond to introductions of invasive species than it is to control and eradicate them once they have become established. The goal of this strategy is to 1) prevent the introduction of new high-priority, high-risk invasive species to freshwater and terrestrial ecosystems; 2) rapidly respond when new priority invasive species are detected; 3) stop invasive species already here from spreading to other locations; and 4) completely eliminate them as soon as possible, wherever possible.

Accomplishing these goals requires the following elements:

- A forum to provide policy-level planning and direction for regional invasive species efforts and coordination, collaboration, and information sharing among federal, state, tribal, local, and private partners
- Education and outreach that increases awareness of the invasive species problem and offers solutions
- A Puget Sound Basin early detection and rapid response system
- Prevention efforts that target the highest risk pathways
- Maintained or enhanced programs to control, contain, or eradicate existing infestations
- Asking and answering research questions that fill critical information gaps

## Relationship to Recovery Targets

The recovery target most related to control of freshwater invasive species is insects in freshwater, as they indicate biological health of wadeable, lowland streams. The target states that by 2020, 100 percent of Puget Sound lowland stream drainage areas monitored with baseline B-IBI scores of 42–46 or better retain these “excellent” scores and mean B-IBI scores of 30 Puget Sound lowland drainage areas improve from “fair” to “good.” Control of invasive species in fresh water also likely will contribute towards achieving recovery targets for southern resident killer whales and wild Chinook salmon.

## A11. Prevent and respond to the introduction of freshwater and terrestrial invasive species.

### A11.1 Prevent and rapidly respond to the introduction and spread of invasive species.

Elements of this strategy include:

- *Maintain capacity to support the Invasive Species Council.* A key element of this strategy is maintaining capacity to support the Washington Invasive Species Council's role to provide outreach and policy-level planning, direction, coordination, and information sharing among member agencies and stakeholders. This provides structure and infrastructure for coordinated efforts to prevent and manage invasive species. The Washington Invasive Species Council serves as the forum for providing coordinated policy-level planning and direction on invasive species. Major funding sources include the Vessel Response Account and contributions from member agencies.
- *Basin-wide detection and rapid response efforts.* A second element is to enhance basin-wide detection and rapid response efforts to address invasive species risks. This enables early detection of—and rapid response to— invasive species in the Puget Sound Basin before they become established and widespread. Related ongoing programs include zebra/quagga mussel monitoring, boat inspections, Ecology's early detection grant program, Washington State Noxious Weed Control Board's (WSNWCB) Class A grant program, and DNR and WSDA's insect and disease surveillance and control. Funding sources include the Aquatic Invasive Species Prevention and Enforcement Account, Freshwater Aquatic Algae Control Account, state general fund (GF-S), and federal grants.
- *Ongoing efforts to contain, control, and eradicate existing infestations of invasive species.* The effectiveness of the state's ability to prevent and respond to invasive species lies in ongoing programs operated by agencies with jurisdictions. It is essential to maintain and, in some cases, enhance these base programs. Reducing their capacity will open the gate to further invasions and associated effects on the region's economy and ecosystem. Ongoing programs include the County Noxious Weed Control Boards, Ecology's freshwater weed control grants, and Agency weed management per RCW 17.10. Funding sources include GF-S and the Freshwater Aquatic Algae Control Account.

### Local Strategies

Island, Skagit, and Hood Canal are all thinking about a number of related local strategies.\*

\* See *Local Areas Chapters* for more detail on local areas that are in the process of completing strategy and action identification and prioritization.

## Ongoing Programs

- Washington State Invasive Species Council provides outreach and policy-level planning, direction, coordination, and information sharing among member agencies and stakeholders to prevent and manage aquatic and terrestrial invasive species in the state and to collaborate regionally to align management programs.
- WSDA leads the Puget Sound effort to monitor for and eradicate invasive knotweed infestations, as well as other insect, plant pathogen, and weed pests. The agency also prevents the introduction of invasive aquatic plants through its quarantine and inspection program, and controls other invasive aquatic plants.
- Washington State Noxious Weed Control Board classifies the threats related to terrestrial and aquatic plants and works with local weed boards and landowners to control and eradicate invasive plants infesting private property.
- Ecology provides technical and financial assistance to local governments and lake associations to manage and eradicate freshwater invasive weeds such as Brazilian elodea and Eurasian milfoil.
- Washington DFW regulates pathways and practices that introduce non-native animals, classifies non-native animals and responds to newly found animal invaders.
- Washington DOT controls terrestrial and aquatic weed species along the state's major highway corridors. This work is vital in prevention and checking spread of weed species because vehicular traffic and linear corridors serve as primary vectors for introduction and spread.

## Near-Term Actions

The following near-term actions will advance the ability of the state partnership to improve management programs through better science and to prevent and rapidly respond to invasive species threats. All actions depend on availability of funding.

**A11.1 NTA 1: The Invasive Species Council will expand its baseline assessment to include an additional 15 of the Council's priority invasive species.**

*Performance measure: Complete assessment by June 30, 2015*

**A11.1 NTA 2: The Invasive Species Council, in collaboration with PSP, will begin developing an early detection and monitoring program plan for priority invasive species in Puget Sound. The Council and PSP will coordinate the plan and implementation efforts with the Puget Sound Coordinated Ecosystem Monitoring and Assessment Program.**

*Performance measure: Develop work plan and cost estimates by June 30, 2015*

**A11.1 NTA 3: DFW will prepare to respond to a potential zebra/quagga mussel invasion in the Puget Sound Basin.**

*Performance measure: Complete a management plan by June 30, 2015*

**A11.1 NTA 4: DFW will develop a plan with the objective of limiting the spread of New Zealand mud snails in the Puget Sound basin.**

*Performance measure: Change in the number of known areas or acreage infested with New Zealand or change in the number of known locations containing mudsnails*

## **A11.2 Answer key invasive species research questions and fill information gaps.**

*Key Questions: How invaded is the Puget Sound Basin? What is the full extent of the problem and level of risk? Use this information as a means to develop future, more targeted, strategies.*

This strategy provides a strong scientific basis for managing a serious threat to the Puget Sound Basin and its ecological health, understanding the effects of climate change on the spread and distribution of invasive species in freshwater and terrestrial ecosystems, and targeting specific pathways and species for management. Organizations that will play a role in answering these questions include the Puget Sound Science Panel and Puget Sound Institute.

### **Near-Term Actions**

**A11.2 NTA 1: The Washington Invasive Species Council and PSP will initiate a risk assessment to evaluate the environmental and economic impacts of invasive species in the Puget Sound Basin and incorporate short-term climate change considerations.**

*Performance measure: Complete risk assessment by June 2015*