



Updated December 17, 2015

Ecosystem Restoration in the Puget Sound

Introduction

The Puget Sound (the Sound), located in the state of Washington, is the second-largest estuary in the United States, covering 35,500 square kilometers, and the largest estuary in the country by volume. It has been deemed an Estuary of National Significance by the U.S. Environmental Protection Agency (EPA) and is noted for its species diversity, ecosystem services, and economic benefit to the region. For example, activities associated with the Sound are reported to contribute nearly half of the state's gross domestic product. The Puget Sound watershed also contains 67% of the state's population and is home to 49 federally listed threatened and endangered species.

Figure I. Puget Sound Watershed



Source: Puget Sound Partnership.

The Puget Sound ecosystem is being degraded by several factors, including air and water pollution, shoreline modification, habitat alteration, development, and climate change. For example, nearly 14 million pounds of toxic chemicals enter the Sound yearly through runoff and atmospheric deposition.

Interest in restoring the Puget Sound stems from its status as the second-largest estuary in the United States and from the large amount of federally managed land in the Sound. Approximately 44% of the land area within the Puget Sound watershed is federally managed. Currently, there are no stand-alone authorizations that holistically govern restoration of the Sound, such as those in other areas (e.g., the Florida Everglades). Rather, restoration efforts largely have been spearheaded by a state body, the Puget Sound Partnership, with several federal agencies actively conducting or participating in restoration projects under

other broad but related authorities. In the 114th Congress, H.R. 3630, the Promoting United Government Efforts to Save Our Sound (or Puget SOS) Act, would authorize a restoration program for the Sound.

Federal Restoration Efforts

Federal efforts to restore the Puget Sound are largely conducted under the authority of broad environmental laws such as the Clean Water Act. Several federal agencies participate in efforts to restore the Sound, including the EPA, U.S. Army Corps of Engineers (the Corps), U.S. Fish and Wildlife Service, Natural Resources Conservation Service, and National Oceanic and Atmospheric Administration, among others. (See **Table 1**.)

EPA is considered by stakeholders to be the primary federal agency responsible for conducting restoration activities in the Sound. EPA funds activities that address priorities in the state of Washington's Action Agenda (see "State Efforts" section, below) for restoring the Sound. The Corps is working with the Washington Department of Fish and Wildlife on the Puget Sound Nearshore Restoration Study, which aims to evaluate problems and pose solutions related to ecosystem degradation in the Sound.

Table I. Selected Federal Puget Sound Restoration Activities and Funding

(\$ in millions)

Agency	Description	FY2015
EPA	Puget Sound Program.	\$25.0
FWS	Conducts research on threatened and endangered plants and wildlife and implements projects to protect them.	9.2
USGS	Collects ecosystem data on the Puget Sound and creates models, such as one that predicts the effect of development on estuarine habitat.	3.9
NOAA	Conducts programs to protect and restore nearshore and floodplain habitats for fish, marine mammals, and shellfish.	_
Corps	Implements the Puget Sound Nearshore Restoration Study.	5.1

Source: EPA Budget documents and personal communication from the Dept. of Interior, Corps, and NOAA.

Notes: EPA = U.S. Environmental Protection Agency; FWS = U.S. Fish and Wildlife Service; USGS = U.S. Geological Survey; NOAA = National Oceanic and Atmospheric Administration; Corps = U.S. Army Corps of Engineers.

Coordination Among Federal Agencies

Absent the explicit authority for a federal entity to lead restoration efforts in the Sound, a Puget Sound Federal

Caucus (Caucus), consisting of 15 federal agencies, was created by a memorandum of understanding (MOU) in 2014. The Caucus's stated objectives are to enhance federal coordination for restoration activities, develop work plans and strategies to coordinate efforts, and encourage federal coordination with other nonfederal entities (such as the Puget Sound Partnership; see "State Efforts" section, below). The MOU is currently scheduled to sunset in 2017. In 2011, a Puget Sound Regional Federal Agency Action Plan was created to guide coordination of restoration activities, but no subsequent versions of the plan have been disseminated.

State Efforts

The state of Washington organizes restoration activities largely through the Puget Sound Partnership (PSP), a state agency that coordinates efforts of citizens, governmental and nongovernmental organizations, tribes, and others. It was created in 2007 to prioritize and sequence actions that aim to achieve a set of restoration goals that range from restoring and protecting habitat to improving marine and freshwater quality. The PSP is also a National Estuary Program (NEP), authorized 33 U.S.C. §1330. The PSP has a Comprehensive Conservation Plan for the Puget Sound authorized under the NEP and approved by the EPA.

This plan is termed the Action Agenda, and it lists ongoing and new restoration activities aimed at achieving restoration goals for the Puget Sound. The document also lists a set of strategic initiatives that serve to prioritize certain near-term restoration actions. Current strategic initiatives include reducing pollutants from stormwater runoff; protecting and restoring habitat; and recovering shellfish beds. The Action Agenda is updated every two years and, according to the PSP, is a result of the collaboration of state and federal agencies, tribal governments, local governments, and other stakeholders. The most recent Action Agenda (for 2014-2015) was published in May 2014.

Coordination Among State and Federal Efforts

There is no overarching coordinating entity that attempts to integrate state and federal restoration activities. Coordination between state and federal agencies occur under various committees and teams. For example, EPA coordinates with the PSP to meet requirements under NEP. EPA activities are directed toward implementing the Action Agenda. Further, the Ecosystem Coordination Board (under the PSP) contains representatives from federal and state agencies. The board provides recommendations to implement the Action Agenda.

Potential Issues for Congress

In the 114th Congress, H.R. 3630 would address several key issues related to restoration of the Puget Sound. The bill raises several questions for Congress related to the Sound, which are discussed below.

Coordination of Restoration Efforts

Among other things, federal legislation could direct coordination efforts among federal agencies and between federal and state agencies conducting restoration in the Sound. For example, H.R. 3630 proposes to enhance the

Puget Sound Federal Caucus to coordinate recovery efforts in the Sound and to develop a federal action plan for restoration. Alternatively, a permanent coordinating entity could be authorized in law to take the form of other coordinating entities involved in large-scale ecosystem restoration initiatives.

Congress also might consider the authorization of efforts to ensure coordination among state and federal agencies. For example, a comprehensive restoration plan for federal agencies might also incorporate state actions and might serve as a focal point for measuring the progress of restoration efforts. However, some may oppose any effort to create a new plan with the potential to duplicate and/or compete with the Action Agenda. Under H.R. 3630, coordination would occur through the guidance of a Puget Sound Federal Task Force and a newly created EPA Puget Sound restoration program office. The bill also would direct federal restoration activities to be consistent with the Action Agenda as much as possible under law.

Progress of Restoration Efforts

Since the PSP was initiated in 2007, several of the goals set by the Action Agenda have not been met and progress appears to be slow. In 2015, the PSP reported that 10 of 37 indicators are showing progress and that 15 indicators are either not changing, have mixed results, or are getting worse. Twelve indicators do not have enough data available to make a determination. Little or no progress under some indicators was attributed to a lag in getting results from the time restoration activities were completed.

Whether an overall lack of restoration progress could be improved through additional federal involvement (and, if so, to what extent) is another potential question for Congress. Aside from governance and coordination under existing authorities, some contend that enhanced monitoring and reporting would improve understanding of the ecosystem. (There is no coordinated monitoring for federal efforts in the Sound.) H.R. 3630 would address this issue by, among other things, authorizing the director of the Puget Sound program office to procure research and monitoring to fulfill the "objectives and priorities of the action plan."

Ocean Acidification and Climate Change

Ocean acidification and climate change are two long-term factors that could affect Puget Sound restoration. The Action Agenda parallels the state climate change response strategy to address climate change issues. Federal actions might consider climate change and ocean acidification on a project-by-project basis or holistically over all activities. H.R. 3630 would direct federal agencies to consider actions that would promote resilience to climate change and ocean acidification effects, but the bill does not provide further direction on this issue.

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IF10334

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