



July 2018

PUGET SOUND RESTORATION

Additional Actions Could Improve Assessments of Progress

GAO Highlights

Highlights of [GAO-18-453](#), a report to the Committee on Transportation and Infrastructure, House of Representatives

Why GAO Did This Study

Puget Sound is the nation's second-largest estuary and serves as an important economic engine in Washington State, supporting millions of people, major industries, and a wide variety of species. However, according to the CCMP, human use and development have degraded water quality and habitats and harmed critical species such as salmon.

GAO was asked to review efforts to restore Puget Sound. This report examines, among other objectives, (1) Puget Sound restoration efforts and related expenditures for fiscal years 2012 through 2016, (2) how federal and nonfederal entities coordinate their restoration efforts, and (3) the framework for assessing progress toward Puget Sound restoration. GAO reviewed restoration plans and other documentation, conducted a two-phase survey of the more than 25 federal and state entities that GAO determined had participated in restoration efforts, conducted discussion groups with tribal and local representatives, and interviewed representatives from these federal and nonfederal entities.

What GAO Recommends

GAO is making two recommendations, including that EPA work with the management conference to help ensure that measurable targets are developed where possible for the highest priority indicators currently lacking such targets. EPA agreed with GAO's recommendations and highlighted steps the agency has begun taking and plans to take to address the recommendations.

View [GAO-18-453](#). For more information, contact J. Alfredo Gómez at (202) 512-3841 or gomezj@gao.gov.

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Additional Actions Could Improve Assessments of Progress

What GAO Found

Through its survey of federal and Washington State entities, GAO identified numerous federal and state efforts that, in whole or in part, supported Puget Sound restoration from fiscal years 2012 through 2016. The efforts involved a variety of activities, including habitat protection, water quality improvement, and monitoring. Some of these efforts focused exclusively on Puget Sound restoration, while others had a broader geographic or programmatic scope. Funding for these efforts came from a variety of sources, such as the Environmental Protection Agency (EPA), which reported expending about \$142 million for activities in Puget Sound through the National Estuary Program and the Puget Sound Geographic Program during this time frame. However, total expenditures for all efforts are unknown, in part because of difficulties isolating expenditures specific to Puget Sound. A 2017 state audit recommended that two state agencies develop a plan to create a more complete inventory of restoration efforts and related funding. The state agencies concurred and have plans to develop this inventory by August 2019.

Federal and nonfederal entities coordinate restoration efforts through two primary interagency groups. First, the state-led Puget Sound Management Conference has developed a comprehensive conservation and management plan (CCMP), approved by EPA under the National Estuary Program, that serves as the primary planning document for Puget Sound restoration. Second, the Puget Sound Federal Task Force complements the work of the management conference by coordinating the efforts of federal agencies to support the CCMP, including by developing a draft Federal Action Plan that identifies priority federal actions to protect and restore Puget Sound.

The CCMP lays out a framework for assessing restoration progress, including 6 goals, 47 indicators, and recovery targets for 31 of the indicators. In 2017, the Puget Sound Partnership, a state agency, reported that progress had been made in some areas, but many key indicators had not shown improvement. For example:

- One indicator that showed improvement was acres of harvestable shellfish beds, which the Partnership reported increased from 2007 to 2016.
- One indicator that showed no improvement was the abundance of Puget Sound Chinook salmon populations, which the Partnership reported remained below desired levels.

The Partnership also reported that most of the 31 recovery targets that the management conference has adopted for 2020 are not likely to be attained. However, the Partnership's ability to assess progress has been limited in some instances, in part because the management conference has not developed targets for 16 of the 47 indicators. GAO has identified measurable targets as a key attribute of successful performance measures. By working with the management conference to help ensure that measurable targets are developed where possible for the highest priority indicators currently lacking such targets, EPA would better position the Partnership to assess progress toward restoration goals.

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Abbreviations

BIA	Bureau of Indian Affairs
CCMP	Comprehensive Conservation and Management Plan
CEQ	Council on Environmental Quality
DNR	Washington State Department of Natural Resources
EPA	U.S. Environmental Protection Agency
Federal Action Plan	<i>The Puget Sound Federal Task Force Action Plan (Fiscal Years 2017-2021)</i>
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FWS	U.S. Fish and Wildlife Service
GPRAMA	GPRA Modernization Act of 2010
JBLM	Joint Base Lewis-McChord
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
NPS	National Park Service
NRCS	Natural Resources Conservation Service
OFM	Washington State Office of Financial Management
RCO	Washington State Recreation and Conservation Office
USGS	U.S. Geological Survey
WDFW	Washington Department of Fish and Wildlife
WSCC	Washington State Conservation Commission
WSDA	Washington State Department of Agriculture
WSDOT	Washington State Department of Transportation

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July 19, 2018

The Honorable Bill Shuster
Chairman
The Honorable Peter DeFazio
Ranking Member
Committee on Transportation and Infrastructure
House of Representatives

Washington State’s Puget Sound is the second-largest estuary in the United States and supports a wide variety of fish, birds, and marine mammals, including economically and culturally important species such as salmon, killer whales, and different types of shellfish.¹ The Puget Sound basin extends north into Canada, encompassing a complex landscape featuring mountains, rivers, forests, farmlands, urban development, and about 2,500 miles of shoreline. More than 4.5 million people live in the Puget Sound basin, and the region is home to large ports, industries, and critical military installations. The Sound and the surrounding region serve as an important economic engine and include metropolitan areas that accounted for more than \$365 billion in gross domestic product in 2016.²

However, human use and development have contributed to the degradation of habitats and water quality in Puget Sound. For example, an estimated 70 percent of important habitats—including estuaries, salt marshes, and eelgrass beds—have been damaged or lost over the past 125 years.³ In addition, stormwater runoff contaminated with toxic chemicals and other pollutants threatens wildlife in Puget Sound, and several species in the Sound are listed as endangered or threatened

¹Estuaries and their surrounding wetlands are bodies of water usually found where rivers meet the sea.

²This amount represents the combined 2016 current-dollar gross domestic product for the following metropolitan areas: Bellingham, Bremerton-Silverdale, Mount Vernon-Anacortes, Olympia-Tumwater, and Seattle-Tacoma-Bellevue. U.S. Bureau of Economic Analysis, “Gross Domestic Product by Metropolitan Area, 2016,” news release, September 20, 2017, https://www.bea.gov/newsreleases/regional/gdp_metro/2017/pdf/gdp_metro0917.pdf.

³Puget Sound Federal Task Force, *Memorandum of Understanding among Federal Agencies* (2016).

under the Endangered Species Act.⁴ The U.S. Environmental Protection Agency (EPA) has designated Puget Sound as one of the 28 estuaries of national significance under the National Estuary Program.⁵

A large number of federal, state, local, tribal, and nongovernmental entities play important roles in Puget Sound restoration efforts.⁶ Washington State has provided much of the high-level leadership for the restoration efforts, and in 2007 the state legislature created a state agency, the Puget Sound Partnership, to oversee the restoration of the Sound's environmental health.⁷ Other state agencies, such as the Washington State Conservation Commission and the Departments of Ecology, Fish and Wildlife, and Natural Resources, help fund and carry out restoration-related work in the Puget Sound basin. At the federal level, numerous agencies directly and indirectly support restoration efforts by, for example, funding restoration projects, conducting research, providing technical expertise to other entities, enforcing applicable laws and regulations, and managing lands, such as national forests, that provide habitat for salmon and other species. Local governments, tribal entities, and nongovernmental organizations also support Puget Sound restoration in various ways, such as by funding and implementing restoration projects. In addition, Canadian agencies have been involved in efforts to restore the broader Salish Sea—of which Puget Sound is a

⁴Puget Sound Partnership, *The 2016 Action Agenda for Puget Sound* (Olympia, WA: June 2016).

⁵EPA's National Estuary Program was created in 1987 to, among other things, identify nationally significant estuaries that are threatened by pollution, development, or overuse, and promote comprehensive planning for, and conservation and management of, such estuaries.

⁶For the purpose of our report, we use the phrase Puget Sound restoration instead of Puget Sound recovery, which entities in the region sometimes use. We define Puget Sound restoration to include all types of recovery activities in the Sound, including habitat restoration and protection activities (e.g., removing levees to restore wetlands); water quality improvement activities (e.g., activities to reduce toxins in stormwater runoff); and relevant research, monitoring, and education and outreach activities. We also include salmon recovery efforts within the Puget Sound basin in the scope of this definition.

⁷See Wash. Rev. Code § 90.71.210. The Partnership consists of, in addition to an executive director, three statutorily established boards: (1) the Leadership Council, a board that serves as the primary decision-making body for the Partnership; (2) the Ecosystem Coordination Board, which advises and assists the Leadership Council on carrying out its responsibilities; and (3) the Science Panel, a board that provides independent scientific advice to the Leadership Council. The Partnership also is supported by an advisory body, the Puget Sound Salmon Recovery Council, which advises the Leadership Council on decisions relating to salmon recovery issues.

part—including some joint efforts with federal and state agencies in the United States.⁸

You asked us to review federal and nonfederal efforts to restore Puget Sound. This report examines (1) Puget Sound restoration efforts and related expenditures for fiscal years 2012 through 2016; (2) how federal and nonfederal entities coordinate their restoration efforts and their views on this coordination; (3) the framework for assessing progress toward Puget Sound restoration; and (4) key factors, if any, federal and nonfederal entities identified that may limit the success of Puget Sound restoration.

To examine Puget Sound restoration efforts and related expenditures for fiscal years 2012 through 2016, we used the first phase of a two-phase survey to identify federal and state efforts that supported Puget Sound restoration during this time frame. We selected this period to allow us to obtain information on a range of restoration efforts carried out in recent years. In addition, we used the first phase of the survey to obtain information on the availability of expenditure data for the federal and state efforts and to help determine whether any limitations existed that would affect the reliability of such data. In June 2017, we sent the first phase of the survey to the 15 federal and 11 state entities that we determined had participated in restoration efforts, and all of them responded.⁹ We used the survey results in part to develop catalogs of federal and state efforts that supported Puget Sound restoration from fiscal years 2012 through 2016. To obtain additional information about these efforts, we reviewed

⁸For example, Environment and Climate Change Canada has worked with EPA in Puget Sound to lead a transboundary initiative and working group that promote information and data sharing among government agencies and nongovernmental entities in the United States and Canada. Fisheries and Oceans Canada has also worked with federal and state agencies in the United States on research about salmon and killer whales.

⁹We made this determination based on our review of federal and state documentation and our discussions with federal and state officials. The 15 federal entities were the Bureau of Indian Affairs, EPA, Federal Emergency Management Agency, Federal Highway Administration, Federal Transit Administration, National Oceanic and Atmospheric Administration, National Park Service, Natural Resources Conservation Service, U.S. Army Corps of Engineers, U.S. Army Joint Base Lewis-McChord, U.S. Coast Guard, U.S. Fish and Wildlife Service, U.S. Forest Service, U.S. Geological Survey, and the U.S. Navy. The 11 Washington State entities were the Office of Financial Management; Puget Sound Partnership; Recreation and Conservation Office; Washington State Conservation Commission; and the Washington departments of Agriculture, Commerce, Ecology, Fish and Wildlife, Health, Natural Resources, and Transportation.

documentation, such as agency websites and reports, and interviewed agency officials.

Based on the results of the first phase of the survey and additional follow-up interviews with agency officials, we determined that we would be unable to collect sufficiently reliable data encompassing all federal and state efforts to enable us to report on the total amount of expenditures that have supported Puget Sound restoration. In particular, we determined that data limitations, such as difficulties isolating expenditures within the geographic boundaries of Puget Sound for some efforts, would have made it difficult for us to collect consistent, reliable, and comparable expenditure data across all of the federal and state entities. As a result of the data limitations we identified, we limited our collection of expenditure data to a nongeneralizable sample of three federal programs and one state program to provide examples of the diversity in funding approaches used to support Puget Sound restoration. We considered the following factors in selecting these efforts: 1) the programs' prominence in Puget Sound restoration, 2) variations in the federal and state entities involved in carrying out these programs, 3) variations in their size, and 4) evidence of reliable expenditure data. In addition, to help illustrate how funds are used at the project level, we obtained expenditure data for two recently completed restoration projects and conducted two site visits to observe the outcomes of these projects.¹⁰ We assessed the reliability of the expenditure data for the selected programs and projects by comparing the data we obtained with data from other sources where possible, reviewing agency documentation, and interviewing knowledgeable agency officials. We found the data to be sufficiently reliable for our purposes.

To examine how federal and nonfederal entities coordinate their restoration efforts and their views on this coordination, we reviewed agency documentation, interviewed agency officials, and used the second phase of our survey of federal and state entities to obtain their views on steps taken to coordinate restoration efforts.¹¹ To obtain additional views, we interviewed representatives from conservation, agricultural, and

¹⁰We selected these projects because they received funding from a variety of federal and nonfederal sources and illustrate how federal and nonfederal entities work together at the project level.

¹¹We sent the second phase of our survey to the same federal and state entities to which we sent the first phase, as well as to the Washington State Governor's Office, for a total of 15 federal and 12 state entities.

fishing industry organizations and obtained written responses from two Canadian agencies. We also held six moderated telephone discussion groups with representatives from 15 tribal entities and 20 local entities.¹² We selected these tribal and local entities because of their involvement in implementing restoration projects. We compared the information we obtained on the coordination of Puget Sound restoration efforts with selected leading collaboration practices that we have previously identified and that were most relevant based on our initial audit work, such as leadership, bridging organizational cultures, and the inclusion of relevant participants.¹³

To examine the framework for assessing progress toward Puget Sound restoration, we reviewed laws, regulations, and key restoration planning documents. We obtained additional views on this topic from federal and nonfederal entities through the second phase of our survey and interviews described above. We compared this information with agency guidance and leading practices for performance measurement and reporting to determine whether efforts to assess Puget Sound restoration progress have followed leading practices.¹⁴

To determine key factors, if any, federal and nonfederal entities identified that may limit the success of Puget Sound restoration, we used the second phase of our survey of federal and state entities and our discussion groups to obtain views on factors that may pose a risk to the success of restoration efforts. We also reviewed agency documentation and used our interviews with the federal and nonfederal entities described above to obtain additional views on limiting factors. Appendix I contains a more detailed description of our objectives, scope, and methodology.

¹²Appendix I includes the full list of tribal and local entities that participated in our discussion groups.

¹³GAO, *Managing for Results: Key Considerations for Implementing Interagency Collaborative Mechanisms*, [GAO-12-1022](#) (Washington, D.C.: Sept. 27, 2012).

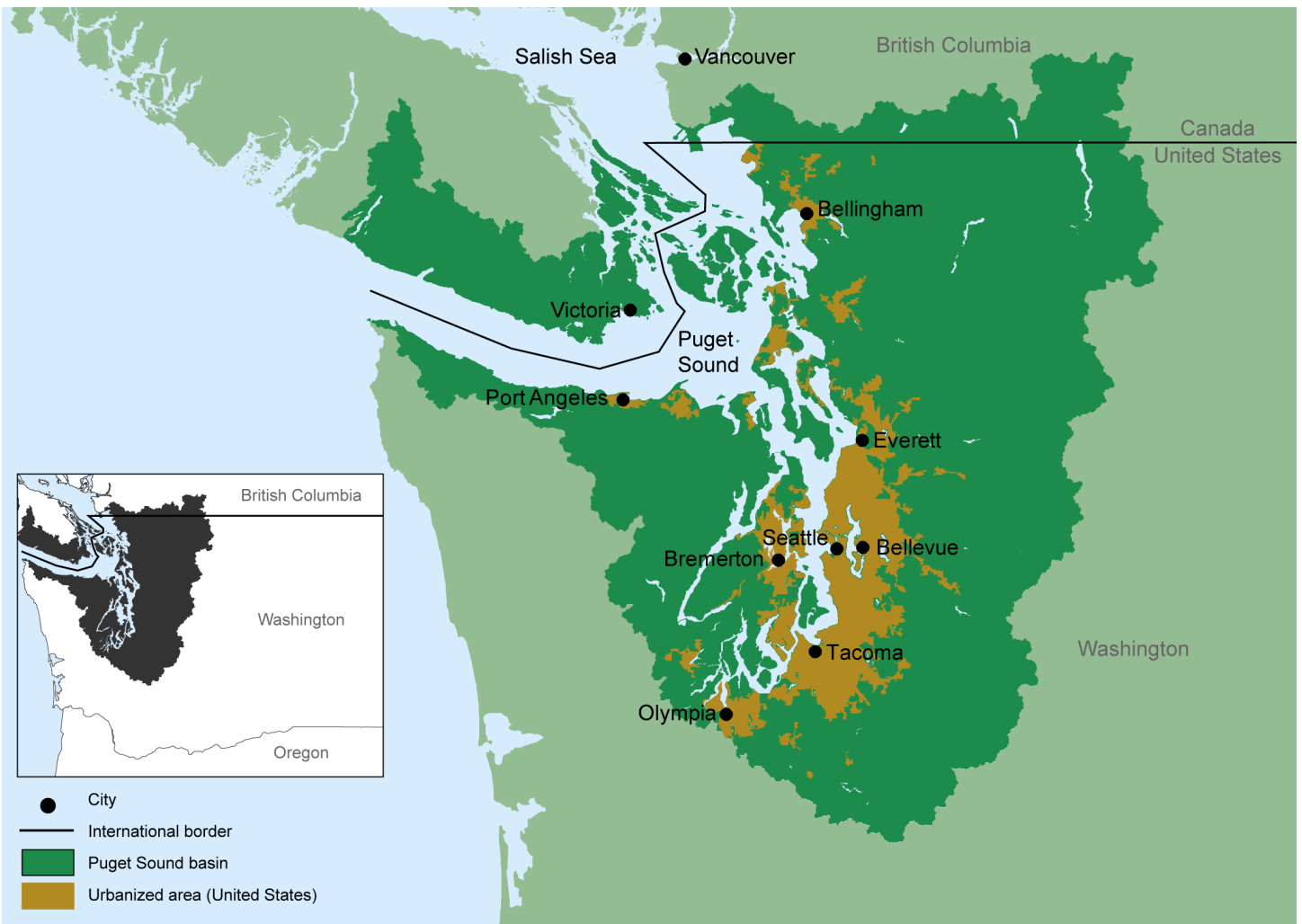
¹⁴GAO, *Managing for Results: Executive Branch Should More Fully Implement the GPRA Modernization Act to Address Pressing Governance Challenges*, [GAO-13-518](#) (Washington, D.C.: June 26, 2013); *Environmental Justice: EPA Needs to Take Additional Actions to Help Ensure Effective Implementation*, [GAO-12-77](#) (Washington, D.C.: Oct. 6, 2011); *Managing for Results: Enhancing Agency Use of Performance Information for Management Decision Making*, [GAO-05-927](#) (Washington, D.C.: Sept. 9, 2005); and *GPRA Performance Reports*, [GAO/GGD-96-66R](#) (Washington, D.C.: Feb. 14, 1996).

We conducted this performance audit from October 2016 to July 2018 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Background

The Puget Sound basin—the southern half of the transboundary Salish Sea—consists of about 19 major watersheds, according to EPA, and spans much of western Washington State and portions of British Columbia, Canada, as shown in figure 1. The basin covers more than 10,000 square miles, including about 2,800 square miles of inland marine waters and thousands of rivers and streams. The Puget Sound basin features a wide variety of land uses, including highly urbanized areas, agricultural lands, large swaths of commercial forests, and areas that are largely protected from development, such as national parks and wildlife refuges.

Figure 1. Area Comprising the Puget Sound Basin



Source: GAO analysis of data from the Department of Homeland Security, Puget Sound Partnership, U.S. Census Bureau, and U.S. Geological Survey; MapInfo. | GAO-18-453

Note: Puget Sound is the southern half of the transboundary Salish Sea.

The Puget Sound Partnership has identified numerous environmental stressors that threaten Puget Sound and that have impaired water quality. In particular, the Partnership has reported that nonpoint sources of pollution, such as polluted stormwater runoff from roads and agricultural fields, are the biggest threats to Puget Sound water quality.¹⁵ Polluted

¹⁵Puget Sound Partnership, *The 2016 Action Agenda for Puget Sound*.

stormwater runoff can also threaten sources of drinking water and carries toxic chemicals, nutrients, sediment, and bacteria into Puget Sound, where these pollutants can harm aquatic life.¹⁶ For instance, a 2017 study found that toxic stormwater runoff is linked to the high rates of adult coho salmon mortality that have been observed in some urban streams in central Puget Sound.¹⁷ Moreover, fish, shellfish, and other species that are contaminated by toxic chemicals and other pollutants in Puget Sound may subsequently pose a threat to other marine wildlife and to humans that consume them. For example, in 2017 the Partnership reported that approximately 16 percent of the roughly 225,000 acres managed for commercial shellfish harvesting in Puget Sound were closed because of water pollution caused by fecal bacteria from sources such as failing septic systems and agricultural runoff.¹⁸ Such closures have economic impacts, as Washington State is the country's leading producer of farmed oysters, clams, and mussels, and much of this production comes from the Puget Sound region. In addition, contaminated shellfish may pose potential health threats to people who consume it, including tribes that rely on shellfish for subsistence and ceremonial uses.

Human activities have also degraded habitats that salmon and other marine species depend on for survival. The Partnership has reported that some of the primary threats to Puget Sound habitats include hardened shorelines (such as shorelines that have been armored with seawalls), filled estuaries, channelized rivers, and altered floodplains.¹⁹ These threats affect habitats in various ways. For example, according to a 2018 Washington State report, seawalls interfere with natural coastal processes and cause beaches to erode, which in turn can decrease and degrade habitat for fish, birds, and wildlife.²⁰ The report states that about 27 percent of the shoreline in Puget Sound has been armored by

¹⁶Puget Sound Partnership, *2017 State of the Sound* (Olympia, WA: November 2017), and *The 2016 Action Agenda for Puget Sound*.

¹⁷B. E. Feist, E. R. Buhle, D. H. Baldwin, J. A. Spromberg, S. E. Damm, J. W. Davis, and N. L. Scholz, "Roads to ruin: conservation threats to a sentinel species across an urban gradient," *Ecological Applications*, vol. 27, no. 8 (2017).

¹⁸Puget Sound Partnership, *2017 State of the Sound*.

¹⁹Puget Sound Partnership, *The 2016 Action Agenda for Puget Sound*.

²⁰Washington Department of Fish and Wildlife and Washington State Department of Natural Resources, *Shoreline Armoring Implementation Strategy: Reducing armor impacts on Puget Sound shorelines* (2018).

structures such as seawalls. Figure 2 illustrates the sources of water quality impairment and habitat degradation in the Puget Sound basin.

Figure 2: Sources of Water Quality Impairment and Habitat Degradation in the Puget Sound Basin



Sources of water quality impairment include pollution by point sources, such as factories and wastewater treatment plants that discharge wastewater from pipes or other discrete points, and nonpoint sources, such as agricultural runoff from fields and livestock; failing septic systems; timber harvest operations; vessel pollution; and some stormwater runoff from roofs, lawns, ports, parking lots, and roads. Sources of habitat degradation include seawalls and levees, which are constructed to protect development but can harm natural coastal and river processes, and culverts and other barriers under roads and bridges, which can prevent fish from reaching upriver spawning grounds.

Source: GAO analysis of state agency documentation. | GAO-18-453

Federal laws, including the Clean Water Act and the Endangered Species Act, play a role in addressing water quality issues and habitat degradation in Puget Sound. The Clean Water Act's objective is to restore and maintain the chemical, physical, and biological integrity of the nation's waters.²¹ A 1987 amendment to the act created the National Estuary Program to, among other things, identify nationally significant estuaries that are threatened by pollution, development, or overuse, and promote comprehensive planning for, and conservation and management of, such estuaries.²² The National Estuary Program calls for management conferences to be convened for designated estuaries of national significance to, among other things, develop a comprehensive conservation and management plan (CCMP).²³ The current CCMP for Puget Sound is *The 2016 Action Agenda for Puget Sound*, a document developed to meet both federal and state requirements.²⁴ By federal statute, when selecting estuaries and convening management conferences, EPA is to give priority consideration to certain named

²¹Federal Water Pollution Control Act Amendments of 1972, Pub. L. No. 92-500, 86 Stat. 816 (codified as amended at 33 U.S.C. §§ 1251-1387) (commonly referred to as the Clean Water Act).

²²Water Quality Act of 1987, Pub. L. No. 100-4, § 317, 101 Stat. 7, 61 (1987) (codified as amended at 33 U.S.C. § 1330). For purposes of the National Estuary Program, an estuary is all or part of the mouth of a river or stream or other body of water having unimpaired natural connection with open sea and within which the sea water is measurably diluted with fresh water derived from land drainage. 33 U.S.C. § 1254(n)(4).

²³Under the Clean Water Act, each management conference is to include, at a minimum, the Administrator of the EPA and representatives of: (1) each state and foreign nation located in whole or in part in the relevant estuarine zone; (2) international, interstate, or regional agencies or entities with jurisdiction over all or a significant part of the estuary; (3) each interested federal agency; (4) local governments with jurisdiction over any land or water within the estuarine zone; and (5) affected industries, public and private educational institutions, and the general public, as determined appropriate by the EPA Administrator. 33 U.S.C. § 1330(c). In Puget Sound, officials from EPA's Region 10 office represent the agency in the management conference.

²⁴Puget Sound Partnership, *The 2016 Action Agenda for Puget Sound*. Under Washington State law, the Partnership is to develop an action agenda for Puget Sound. WASH. REV. CODE § 90.71.310. According to Partnership officials, in the interest of efficiency the state prepares the action agenda so as to also comply with the federal requirements for CCMPs. Under the Clean Water Act, CCMPs are to recommend priority corrective actions and compliance schedules addressing point and nonpoint sources of pollution to restore and maintain the chemical, physical, and biological integrity of the estuary—including restoration and maintenance of water quality; a balanced indigenous population of shellfish, fish, and wildlife; and recreational activities in the estuary—and ensure that the designated uses of the estuary are protected. 33 U.S.C. § 1330(b)(4).

estuaries, including Puget Sound.²⁵ Under the act, EPA also works with Washington State to regulate water quality.

The Endangered Species Act was enacted to, among other things, provide a means to conserve the ecosystems upon which endangered and threatened species depend and to provide a program for the conservation of such species.²⁶ Several species in the Puget Sound basin are listed as endangered or threatened, including bull trout, Chinook salmon, Southern Resident Killer Whales (a population that spends spring, summer, and fall months in the Salish Sea, including Puget Sound), northern spotted owl, and steelhead trout.

In addition to environmental laws that relate to Puget Sound waters and species, tribal treaty rights play an important role in restoration efforts within the basin's watersheds. In particular, 19 federally recognized tribes are within the Puget Sound basin, and many of them have explicit treaty rights to the fish in Puget Sound waters. In 1974, a federal court held that the treaty tribes had the right to take up to 50 percent of the harvestable fish in areas where fishing rights had been reserved, an allocation upheld by the Supreme Court in 1979.²⁷ In 1994, a federal court stated that tribes were also entitled to take half of the harvestable shellfish on most Washington beaches.²⁸ According to several federal officials we interviewed, considerations relating to tribal treaty fishing rights have served as an important catalyst for some federal agencies' restoration activities, particularly with regard to restoring and protecting habitat.

²⁵33 U.S.C. § 1330(a)(2)(B).

²⁶Pub. L. No. 93-205, 87 Stat. 884 (1973) (codified as amended at 16 U.S.C. §§ 1531-1544). Endangered species generally means a species that is in danger of extinction throughout all or a significant portion of its range, and threatened species means a species that is likely to become endangered within the foreseeable future throughout all or a significant portion of its range. 16 U.S.C. § 1532(6), (20).

²⁷Washington v. Washington State Commercial Passenger Fishing Vessel Ass'n, 443 U.S. 658 (1979); United States v. Washington, 384 F. Supp. 312 (W.D. Wash. 1974).

²⁸United States v. Washington, 873 F. Supp. 1422 (W.D. Wash. 1994), *aff'd in part, rev'd in part*, 157 F.3d 630 (9th Cir. 1998).

Federal and State Entities Carried Out Numerous Efforts that Supported Puget Sound Restoration Using a Variety of Funding Sources, but Total Expenditures Are Unknown

Federal and state entities we surveyed identified numerous federal and state efforts that, in whole or in part, supported Puget Sound restoration from fiscal years 2012 through 2016.²⁹ Some of these efforts focused exclusively on restoration activities in the Puget Sound basin, while others had a broader national, regional, or statewide focus or had a broader scope of work that did not center directly on restoration activities. These efforts were supported by a variety of federal and nonfederal funding sources, such as EPA's National Estuary Program and Puget Sound Geographic Program, which together expended about \$142 million for activities in Puget Sound during this time frame according to EPA data. However, total expenditures across all restoration efforts are unknown, in part because of data limitations such as difficulties isolating expenditures specific to the Puget Sound basin for some efforts.

Federal and State Entities Carried Out Numerous Restoration Efforts that Varied in Geographic and Programmatic Scope

Through their responses to the first phase of our survey, officials from federal and state entities identified numerous efforts that supported Puget Sound restoration from fiscal years 2012 through 2016. Specifically, respondents from federal entities identified 73 federal efforts, and respondents from state entities identified 80 state efforts that, in whole or in part, supported Puget Sound restoration during this period. Appendix II lists the restoration efforts identified by federal entities, and appendix III lists the restoration efforts identified by state entities.³⁰ According to the survey responses, the federal and state entities often worked with local governments, tribal entities, and nongovernmental organizations to carry out these efforts. These efforts primarily involved six types of restoration activities (see table 1).

²⁹Specifically, we asked survey respondents to identify all of their agency's programs or initiatives that supported Puget Sound recovery activities through (1) direct agency expenditures, (2) staff time, or (3) providing funds to other entities to help them implement recovery activities. For the purposes of our report, we refer to recovery activities as restoration activities, and we collectively refer to the programs and initiatives as efforts.

³⁰Some efforts in appendix II and appendix III are listed more than once. These include federal and state efforts that are carried out by more than one entity as well as state efforts to carry out federal programs, such as the state's administration of grants under EPA's National Estuary Program.

Table 1: Types of Puget Sound Restoration Activities and Examples of Related Efforts from Fiscal Years 2012 through 2016

Type of restoration activity	Example of related effort
Habitat restoration	The Washington Department of Fish and Wildlife's Estuary and Salmon Restoration Program supported the removal of levees and shoreline armoring structures (such as seawalls) to help restore salmon habitat.
Habitat protection	The U.S. Department of Agriculture's Natural Resources Conservation Service helped nonfederal partners acquire conservation easements to protect agricultural lands and wetlands under the Agricultural Conservation Easement Program.
Water quality improvement	The Washington State Department of Ecology's Local Source Control Partnership program provided technical assistance to small businesses to help identify and resolve sources of water pollution, such as through site visits to ensure proper management of hazardous wastes to avoid contaminating stormwater.
Monitoring	The Washington State Department of Natural Resources performed a variety of nearshore monitoring activities in Puget Sound, such as monitoring the abundance and distribution of eelgrass in Puget Sound waters.
Research	The National Oceanic and Atmospheric Administration's Ecotoxicology Program conducted research on issues such as green infrastructure methods to improve water quality and stormwater threats to salmon.
Education and outreach	The Washington State Department of Agriculture's Dairy Nutrient Management Program conducted education and outreach to dairy farms about best management practices to control livestock manure to protect surface and ground waters.

Source: GAO analysis of federal and state agency survey responses and program information. | GAO-18-453

The federal and state restoration efforts carried out during this time period varied in geographic scope. Some of the efforts survey respondents reported focused exclusively on the Puget Sound basin, such as Washington State's Puget Sound Acquisition and Restoration Fund.³¹ According to agency fact sheets, this fund has helped state agencies, local governments, and others carry out projects that address high-priority salmon habitat protection and restoration needs in Puget Sound. Other efforts that supported restoration activities in Puget Sound during the time frame we reviewed have a broader national, regional, or statewide focus. For example, EPA's section 319 nonpoint source management program is a nationwide program that supports state and tribal efforts to address nonpoint sources of pollution.³² Within Puget Sound, EPA's data show that the section 319 program has supported activities such as carrying out

³¹The Puget Sound Partnership and the Washington State Recreation and Conservation Office jointly manage this fund.

³²Section 319 of the Clean Water Act established a non-regulatory program through which EPA administers annual grants to help states develop and implement their own programs for managing nonpoint source water pollution. See 33 U.S.C. § 1329.

projects that target nonpoint source pollution from urban areas, agricultural lands, and marinas.

The federal and state restoration efforts survey respondents identified also varied in programmatic scope, with some efforts focusing exclusively on restoration-related activities and other efforts supporting such activities within a broader scope of work. Through the U.S. Fish and Wildlife Service's National Coastal Wetland Conservation Grant Program, Washington State carried out activities specifically aimed at restoring wetlands, estuaries, and marshes in Puget Sound. In contrast, some efforts survey respondents cited had a broader scope of work that did not center directly on restoration but included some activities that also benefited Puget Sound restoration. One such effort was the Natural Resources Conservation Service's Environmental Quality Incentives Program, which helps farmers carry out conservation practices on agricultural land. According to agency documentation, such as the program's website, some of these practices, such as those that reduce the amount of sediment and nutrients entering waterways, can also help improve water quality in the Puget Sound basin.

A Variety of Federal and Nonfederal Funding Sources Support Restoration Efforts, but Total Expenditures Are Unknown

Funding for Puget Sound restoration efforts has come from a wide variety of federal and nonfederal entities. At the federal level, some agencies, such as EPA and the National Oceanic and Atmospheric Administration (NOAA), supported restoration efforts by providing funds to other federal or nonfederal entities to carry out restoration projects. In contrast, other agencies, such as the U.S. Army Corps of Engineers, directly carried out restoration activities in Puget Sound, sometimes working in conjunction with nonfederal entities. Based on our analysis of survey responses and interviews with agency officials, we selected the following examples of federal programs to show the diversity in federal funding approaches in support of Puget Sound restoration and to illustrate how federal funds have been leveraged to obtain nonfederal contributions in support of restoration efforts.

- **EPA's National Estuary Program.** According to EPA's website, this program aims to protect and restore the water quality and ecological integrity of designated estuaries of national significance, such as Puget Sound. EPA Region 10 officials stated that the agency uses funds from this program in conjunction with funds from EPA's Puget Sound Geographic Program to support restoration efforts. According to data provided by EPA, these programs together expended about \$142 million for activities in Puget Sound from fiscal years 2012

through 2016. EPA provided most of these funds through grants to state and tribal entities. According to EPA Region 10 officials we interviewed, EPA requires an overall dollar-for-dollar nonfederal match for these grants, and the officials stated that the National Estuary Program funds have been leveraged to obtain significant nonfederal funding support for Puget Sound restoration efforts. For example, the Floodplains by Design program, a joint effort led by The Nature Conservancy and state agencies to restore natural floodplain functions, has used National Estuary Program funds to help leverage nonfederal funding support, according to the EPA officials.

- **NOAA’s Pacific Coastal Salmon Recovery Fund.** Under this program, NOAA awards funds through grants to state and tribal entities to carry out salmon recovery activities in five western states. In Washington State, NOAA provided funds to the Washington State Recreation and Conservation Office and the Northwest Indian Fisheries Commission for use in Puget Sound and other areas. According to data and estimates provided by NOAA, as of November 2017 these entities had expended or allocated about \$59 million from this program for activities in the Puget Sound basin from fiscal years 2012 through 2016. This program requires a 33 percent match from state agencies, such as the Washington State Recreation and Conservation Office, that receive funds, and NOAA officials we interviewed said that Washington State usually exceeds this matching requirement.³³ For example, a 2015 NOAA report cites a habitat restoration project in Puget Sound that received about \$117,000 from the Pacific Coastal Salmon Recovery Fund and secured an additional \$1.75 million in matching and other funds.³⁴
- **Corps’ Puget Sound and Adjacent Waters Restoration Program.** Under this program, the Corps carries out habitat restoration projects in Puget Sound in conjunction with nonfederal entities, such as cities. In 2000, Congress created this program and authorized \$40 million to be appropriated to carry out the program.³⁵ As of November 2017, the Corps had expended approximately \$12 million over the life of the

³³According to NOAA documentation, this matching requirement does not apply to tribal entities.

³⁴National Oceanic and Atmospheric Administration, National Marine Fisheries Service, *Pacific Coastal Salmon Recovery Fund (FY2000-2013): 2014 Report to Congress* (Silver Spring, MD: 2015).

³⁵Water Resources Development Act of 2000, Pub. L. No. 106-541, § 544, 114 Stat. 2572, 2674 (2000).

program on five restoration projects, according to data provided by the Corps. This program includes a cost-sharing requirement for the participating nonfederal entity to contribute at least 35 percent of the total project costs.

Survey respondents cited nonfederal funds as the exclusive source of funding for about one-third of the state efforts presented in appendix III. For example, Washington State's Puget Sound Acquisition and Restoration Fund, which the Partnership and the Washington State Recreation and Conservation Office jointly manage, has been a significant source of nonfederal funding for habitat restoration projects. According to expenditure data provided by the Partnership, the Puget Sound Acquisition and Restoration Fund expended approximately \$100 million on restoration projects throughout Puget Sound from state fiscal years 2012 through 2016.³⁶ In its response to our survey, the Recreation and Conservation Office stated that these projects included culvert replacements, levee setbacks, and acquisition of important habitat, among other things.

When carrying out specific restoration projects in Puget Sound, federal and nonfederal officials we interviewed said that project managers may need to secure funds from multiple federal and nonfederal sources, such as the federal and state programs discussed above. According to tribal and local participants in our discussion groups, their experiences carrying out restoration projects has similarly shown a need to piece together multiple sources of funding for some projects. The discussion group participants said that this need commonly arises with expensive and complex projects that take a long time to complete, as reflected in the project examples below that involved tribal and local entities.

- **Qwuloolt Estuary Restoration Project.** According to a project fact sheet and officials, this project restored more than 350 acres of estuary habitat in the Snohomish River Delta that had previously been converted into farmland. By breaching existing levees and taking other actions to reestablish natural stream channels and allow for tidal inundation of the historic floodplain, this project aimed to restore salmon habitat and improve water quality in the estuary (see fig. 3). In 2016, NOAA reported that this project had led to improvements in

³⁶The Washington State fiscal year is a 12-month period extending from July 1 to June 30.

salmon abundance, productivity, and diversity.³⁷ The Tulalip Tribes of Washington served as the overall project manager and worked with numerous federal, state, and local partners to complete this project, which took more than 20 years and ended in 2015. According to tribal data, this project cost about \$21 million and received funding from more than 20 federal, state, tribal, and local sources. Federal funds accounted for a little more than half of this amount; the Corps contributed the largest amount, around \$5 million, using funds from the Puget Sound and Adjacent Waters Restoration Program.³⁸

Figure 3. The Qwuloolt Estuary Restoration Project Featured the Breaching of a Levee to Restore Salmon Habitat



The breaching of a levee (left) helped to restore estuary habitat (right) that supports salmon and other species.

Source: Tulalip Tribes. | GAO-18-453

- **Seahurst Park Shoreline Restoration Project, Phase II.** This phase of the project lasted from 2007 to 2014 and included removing about 1,800 feet of seawall, creating a small wetland, and restoring shoreline habitat at a coastal park in Burien, Washington (see fig. 4).³⁹ Through these actions, this project aimed to improve nearshore marine habitat for salmon and other species, restore natural sedimentation processes, and improve recreational access to Puget Sound. The city of Burien led this effort in conjunction with the Corps.

³⁷National Oceanic and Atmospheric Administration, National Marine Fisheries Service, *Pacific Coastal Salmon Recovery Fund: 2015/2016 Report to Congress* (Silver Spring, MD: 2016).

³⁸According to NOAA officials we interviewed, in addition to providing funding, federal agencies also supported this project in other ways, such as by providing staff support and technical assistance.

³⁹Phase I of the Seahurst Park Shoreline Restoration Project restored about 1,200 feet of the beach along the south shore of the park. That effort was completed in 2005.

According to documentation provided by the city and the Corps, this phase of the project cost about \$10 million and received funding from at least seven federal, state, and local sources, including EPA's National Estuary Program, the Corps' Puget Sound and Adjacent Waters Restoration Program, and Washington State's Puget Sound Acquisition and Restoration Fund.

Figure 4. The Seahurst Park Shoreline Restoration Project Featured the Removal of a Seawall to Restore Natural Shoreline Habitat



The removal of a seawall (left) to restore the shoreline (right) improved nearshore marine habitat for salmon and other species and helped to restore the site's natural sedimentation processes.

Source: City of Burien. | GAO-18-453

As shown in the program and project examples above, we obtained expenditure information for a selection of programs and projects to help illustrate how federal and nonfederal funds have been used to support Puget Sound restoration. However, we found that the total amount of expenditures incurred for Puget Sound restoration across all federal and nonfederal efforts for fiscal years 2012 through 2016 is unknown. We identified two primary barriers to determining the total amount of expenditures. First, data limitations present challenges to obtaining accurate and consistent expenditure data across entities. For example, federal and state agency officials said that for some national and statewide programs, it is difficult to isolate expenditures specific to the Puget Sound basin or to quantify expenditures related to staff time that supported restoration-related activities. Second, no comprehensive database of Puget Sound restoration activities and expenditures exists. This issue was identified by the Washington State Joint Legislative Audit and Review Committee in its 2017 audit of the Puget Sound Partnership, which recommended that the Partnership and the Washington State Office of Financial Management develop a plan to create a more

complete inventory of restoration efforts and related funding.⁴⁰ Both agencies concurred with the recommendation, and the Partnership reported in December 2017 that a more complete inventory of efforts and funding would significantly enhance the agency's ability to prioritize actions and recommend strategic investments. The Partnership reported that it plans to develop such an inventory by August 2019.⁴¹

Federal and Nonfederal Entities Have Taken Steps to Coordinate Restoration Efforts and Identified Both Benefits and Challenges to Interagency Coordination

Federal and nonfederal entities have established two primary interagency groups, the Puget Sound Management Conference and the Puget Sound Federal Task Force, to coordinate Puget Sound restoration efforts at the strategic level.⁴² Coordination also occurs at the project level and, according to our discussion group participants, has been most effective under certain circumstances, such as when written plans and agreements are in place to help entities work together across their normal jurisdictions. Federal and nonfederal entities provided their views on the benefits produced by the management conference and the federal task force as well as challenges that could limit the effectiveness of these groups, such as not having had continuous national-level leadership for the federal task force.

⁴⁰Washington State Joint Legislative Audit and Review Committee, *Final Report: Puget Sound Partnership 2016*, Report 17-05 (Olympia, WA: May 2017).

⁴¹The Partnership reported that it will first collect state information on restoration efforts and funding for this inventory, then federal and local information to the extent feasible. Puget Sound Partnership, letter to Representative Derek Stanford, Senator John Braun, Representative Ed Orcutt, and Senator Mark Mullet [all members of the Washington State Legislature], December 29, 2017.

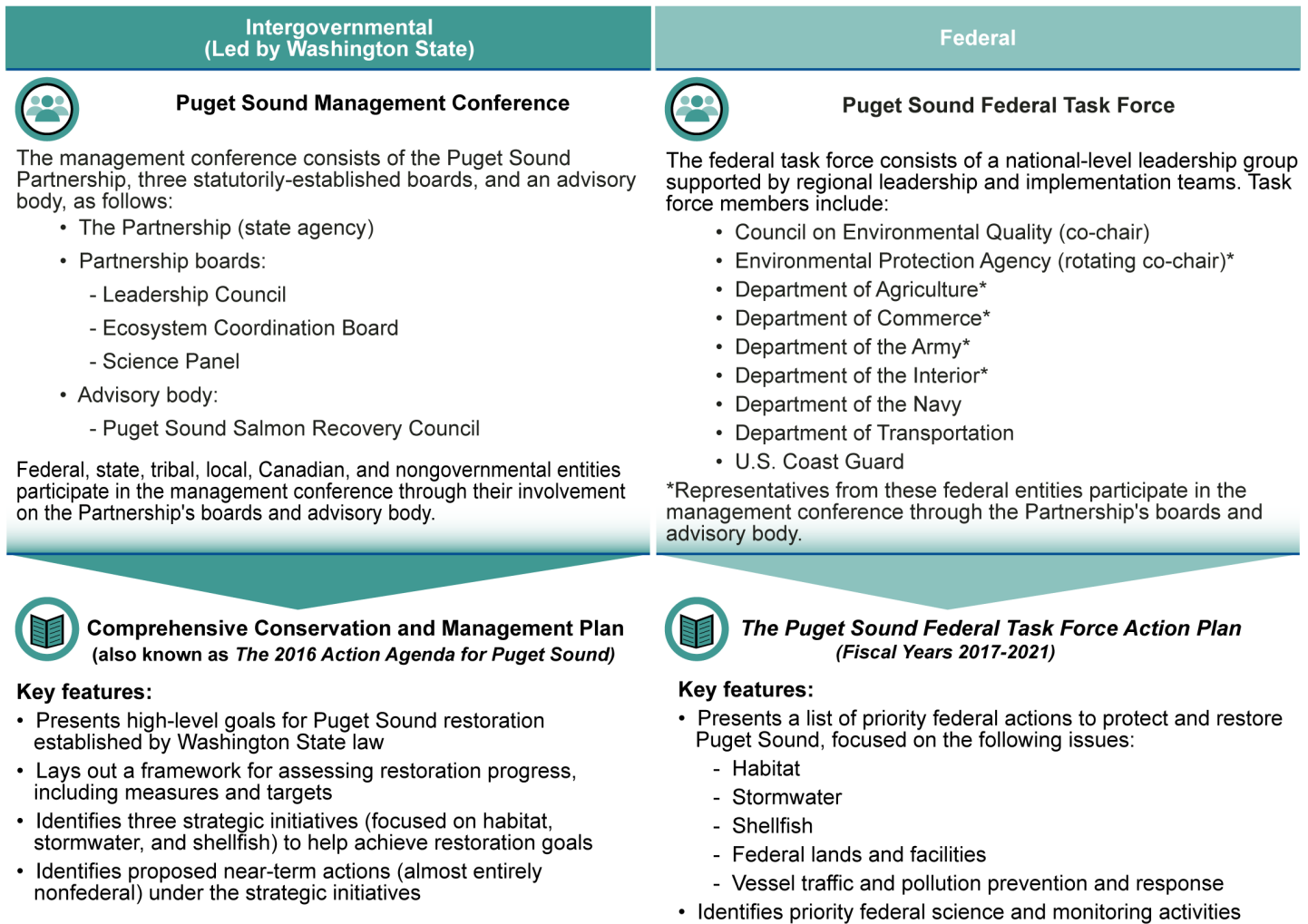
⁴²For the purposes of this report, we define coordination at the strategic level to mean coordination among federal and nonfederal entities to plan, carry out, and oversee the restoration of the entire Puget Sound basin. In contrast, we define coordination at the project level to mean coordination among federal and nonfederal entities on the implementation of a discrete restoration project in a specific location.

**Federal and Nonfederal
Entities Coordinate
Restoration Efforts at the
Strategic Level through
Two Primary Interagency
Groups**

Federal and nonfederal entities coordinate at the strategic level to, among other things, identify goals, develop strategies to achieve the goals, and set priorities for action. This coordination primarily occurs through two main interagency groups: the state-led Puget Sound Management Conference, which started in its current form in 2007, and the Puget Sound Federal Task Force, which started in 2016.⁴³ Each group has developed a planning document to guide its efforts. Figure 5 provides an overview of each group's structure and planning document.

⁴³Before the creation of the task force, federal entities worked together through a regional interagency group known as the Puget Sound Federal Caucus. The federal caucus was replaced by the Puget Sound Federal Task Force, which elevated the arrangement among federal entities from the regional level to the departmental level.

Figure 5: Overview of Primary Coordination Groups and Planning Documents for Puget Sound Restoration



Source: GAO analysis of federal and state agency documentation. | GAO-18-453

Note: *The Puget Sound Federal Task Force Action Plan* was in draft form as of July 2018.

The management conference serves as the governance structure for Puget Sound restoration under the National Estuary Program and helps set the general direction for the restoration effort.⁴⁴ To do so, the

⁴⁴Under the National Estuary Program, a management conference has several purposes, including to develop a CCMP, develop plans for coordinated implementation of the CCMP by various entities, and monitor the effectiveness of actions taken pursuant to the CCMP. See 33 U.S.C. § 1330(b).

management conference brings together federal and nonfederal entities under a common planning process led by the Partnership to develop and periodically update the CCMP.⁴⁵ EPA's Region 10 office then works with EPA's National Estuary Program national office to review and approve any new or updated CCMPs developed by the management conference. The CCMP serves as the primary planning document for Puget Sound restoration and identifies proposed near-term actions to help restore the Sound, nearly all of which are to be carried out by nonfederal entities.⁴⁶ For example, one of the proposed near-term actions calls for a local university to sample contaminants of emerging concern in regional waters to help characterize risks and prioritize follow-up actions.

The Puget Sound Federal Task Force complements the work of the management conference by coordinating the efforts of federal agencies in support of the CCMP and by helping these agencies work together to fulfill federal trust responsibilities to the tribes as they relate to *The Puget Sound Federal Task Force Action Plan (Fiscal Years 2017-2021)* (Federal Action Plan).⁴⁷ The task force was created through a memorandum of understanding signed by nine federal agencies as of October 2016, and in January 2017 the task force released its Federal Action Plan, which is

⁴⁵Examples of federal entities that participate in the management conference include EPA and NOAA. Examples of nonfederal entities that participate in the management conference include state agencies (e.g., Washington State Department of Ecology), tribes, local governments (e.g., cities and counties), Canadian agencies (e.g., Fisheries and Oceans Canada), and nongovernmental entities (e.g., groups representing business and environmental interests).

⁴⁶The CCMP states that these near-term actions do not represent a comprehensive list of actions needed to restore Puget Sound.

⁴⁷The federal government recognizes Indian tribes as distinct, independent political communities that possess certain powers of self-government. Federal recognition confers specific legal status on a particular Native American group, establishes a government-to-government relationship between the United States and the tribe, imposes on the federal government a fiduciary trust relationship with the tribe and its members, and imposes specific obligations on the federal government to provide benefits and services to the tribe and its members.

currently in draft form.⁴⁸ The federal task force consists of a national-level leadership group—which focuses on higher-level policy, oversight, and coordination issues—and regional leadership and implementation teams that perform much of the on-the-ground implementation and coordination work of the task force. The national-level group is co-chaired by the Council on Environmental Quality (CEQ) and a co-chair that rotates among the other agencies. The task force’s regional teams are led by EPA’s Region 10 and a co-chair that rotates among the other agencies.

According to EPA Region 10 officials, the draft Federal Action Plan developed by the task force is not intended to be a strategic plan with its own overarching restoration objectives. Instead, the federal task force used the priorities established in the CCMP and tribal documents, as well as salmon recovery priorities, as the basis for developing its draft Federal Action Plan, which identifies priority federal actions to help protect and restore Puget Sound. For example, to support the habitat-related priorities established in the 2016 CCMP and elsewhere, the draft Federal Action Plan identifies more than 40 priority federal actions that focus on protecting and restoring habitats, such as by removing fish passage barriers and implementing projects to restore estuaries.

Federal and Nonfederal Entities Coordinate at the Project Level in Various Ways

Based on our interviews with federal and nonfederal officials and the local and tribal discussion groups, federal and nonfederal entities coordinate at the project level to plan, secure funding for, and carry out specific restoration actions, such as projects to improve water quality or restore habitat in a particular location. According to federal officials, federal involvement at the project level varies and may range from providing funding to being more directly involved in project planning and implementation. Participants in our discussion groups said that local and tribal entities often lead the on-the-ground planning and implementation of restoration projects, including coordinating with other participating entities throughout a project’s lifecycle. For example, the Qwuloolt Estuary

⁴⁸The signing agencies were the Departments of Agriculture, the Army, Commerce, the Interior, the Navy, and Transportation; the Council on Environmental Quality; EPA; and the U.S. Coast Guard. The stated purposes of the memorandum of understanding include to strengthen coordination among federal agencies; strengthen intergovernmental coordination of federal actions with tribal, state, and local governments as well as with private efforts; strengthen the integration of federal activities in the CCMP; strengthen the federal contribution of scientific and technical expertise; contribute to fulfilling federal trust responsibilities to Puget Sound federally recognized tribal governments; and serve to create a standing federal venue through which to share information.

Restoration Project we previously discussed was largely led by a local tribe that coordinated the involvement of numerous federal, state, local, and nongovernmental entities throughout project planning, permitting, and implementation.

The management conference recognizes nine local integrating organizations—local groups made up of various local, tribal, and other nonfederal participants—to, among other things, guide the implementation of the CCMP’s priorities at a local scale in specific geographic areas of Puget Sound. In addition, 15 salmon recovery lead entities, which are local watershed-based organizations that develop local salmon habitat recovery strategies and manage projects to implement the strategies, are active in the Puget Sound region. Representatives from these local integrating organizations, salmon recovery lead entities, and tribal entities participated in our moderated discussion groups and identified several factors that have helped to facilitate effective collaboration among entities on restoration projects. Some of the factors discussion group participants commonly cited were consistent with key features that we have previously identified as benefiting interagency collaboration,⁴⁹ including:

- **Involving all relevant participants.** Discussion group participants highlighted the importance of ensuring that the appropriate entities are involved to bring together a broad range of knowledge, skills, and expertise in support of restoration projects. For example, one discussion group participant commented that his local organization’s ability to partner with both government and nongovernmental entities and harness their talents has enhanced its efficiency in carrying out restoration projects. Other participants stated that an important part of successfully involving all relevant participants has been early engagement with members of the local community to identify priorities and vet projects. In addition, several participants described projects that could not have been carried out without the financial, technical, and political support of diverse partners. Ensuring that the appropriate entities are involved is consistent with our previous work on interagency collaboration, which found that it is important to ensure that all relevant participants have been included in collaborative

⁴⁹See [GAO-12-1022](#) for information on key features we have identified as benefiting interagency collaboration.

efforts, including federal agencies, state and local entities, and organizations from the private and nonprofit sectors.⁵⁰

- **Bridging organizational cultures to build trust.** Discussion group participants cited the long-standing relationships that have been built over time among different restoration partners as critical to developing the level of trust needed for project-level collaboration to succeed across organizational boundaries.⁵¹ For example, one participant said that having long-standing collaborative relationships with other partners has helped her local organization identify, secure funding for, and carry out good restoration projects. Another participant described a separate example of a local watershed council that has met monthly for 30 years, explaining that these meetings have developed a level of trust among the key partners that helps them work toward common goals and deal with difficult issues. We have previously reported that different agencies participating in any collaborative mechanism bring diverse organizational cultures to it. Accordingly, it is important to address these differences to enable a cohesive working relationship and to create the mutual trust required to enhance and sustain the collaborative effort. We have also reported that positive working relationships among participants from different agencies help to bridge organizational cultures, build trust, and foster communication, which then facilitates collaboration.⁵²
- **Having written plans and agreements.** Discussion group participants also described the benefits that have resulted from having local plans and agreements in place to help entities work together across their normal jurisdictions on restoration projects. For example, according to one local discussion group participant, the decades-old formal agreement among the local governments within his watershed was a fundamental reason for the restoration successes they achieved. The participant explained that this agreement has helped the local governments look beyond their immediate jurisdictions and think more broadly about priorities for the entire watershed. We have previously reported that agencies that articulate their agreements in

⁵⁰[GAO-12-1022](#).

⁵¹In addition, the coordinator of one salmon recovery lead entity that was unable to participate in the discussion groups sent us written comments in which she cited the importance of longstanding relationships for collaborating on restoration projects.

⁵²[GAO-12-1022](#).

formal documents can strengthen their commitment to working collaboratively.⁵³

According to Federal and Nonfederal Entities, the Steps Taken to Coordinate Restoration Efforts Have Yielded Benefits, but Challenges Remain that May Limit Effectiveness

Federal and nonfederal entities we surveyed and interviewed identified benefits produced by the steps taken to coordinate restoration efforts, including the development of the management conference, the federal task force, and their respective planning documents.⁵⁴ Federal and nonfederal officials generally described the management conference as having provided an effective forum for different entities to share their diverse views and work collaboratively to address priority restoration issues in Puget Sound. Moreover, officials said that the management conference has helped Puget Sound restoration by enabling federal and nonfederal entities to identify common goals and develop strategies to achieve the goals, among other things.

These benefits are consistent with our previous work on interagency collaboration, which found that defining and articulating common outcomes and establishing strategies to achieve them are practices that can enhance and sustain collaboration.⁵⁵ Federal officials credited the federal task force, and in particular the task force regional teams, with having helped to improve communication and coordination of efforts among federal agencies by bringing together a broad group of agencies to focus on issues surrounding Puget Sound restoration and tribal treaty rights. Other benefits of the task force that survey respondents identified include providing national-level awareness of restoration activities and providing a forum for nonfederal entities to engage with federal agencies on restoration or species-related issues.

Federal and nonfederal entities also identified strengths of the key planning documents that the management conference and federal task force developed to help coordinate Puget Sound restoration efforts, based on our interviews and our analysis of survey responses.⁵⁶ For

⁵³[GAO-12-1022](#).

⁵⁴Specifically, we analyzed narrative responses to open-ended questions in the survey about how the work of the management conference and the task force has helped Puget Sound restoration efforts.

⁵⁵GAO, *Results-Oriented Government: Practices That Can Help Enhance and Sustain Collaboration among Federal Agencies*, [GAO-06-15](#) (Washington, D.C.: Oct. 21, 2005).

⁵⁶Specifically, we analyzed narrative responses to open-ended questions in the survey about the primary strengths of the CCMP and the draft Federal Action Plan.

example, 8 of the 27 federal and state entities that responded to our survey said the 2016 CCMP provides a clear blueprint or road map for the restoration of Puget Sound that helps guide restoration efforts in a common direction. In the case of the draft Federal Action Plan, survey respondents from 7 of the 27 federal and state entities said that one of the plan's primary strengths is that it clearly defines a list of priority federal actions and identifies roles and responsibilities for implementing them. This is consistent with our previous work on interagency collaboration, which found that agreeing on roles and responsibilities is a leading practice that can help enhance and sustain collaborative efforts.⁵⁷ In addition, one federal survey respondent credited the development of the draft Federal Action Plan with helping to raise awareness among federal agencies of each other's efforts, which the respondent said has led to improved coordination.

Federal and nonfederal entities also identified challenges the management conference faces that could limit its effectiveness as an interagency coordinating group. For example, according to Partnership officials we interviewed, within the management conference there are differing views and disagreements about how to balance local versus regional perspectives and decision-making authorities. In addition, some federal and nonfederal entities described the planning process to produce the CCMP as overly burdensome and frustrating. The Joint Legislative Audit and Review Committee's 2017 audit of the Partnership similarly reported on frustration and planning fatigue among the entities they interviewed that stemmed from the frequency of plan updates, which state law had required take place every 2 years.⁵⁸ In 2017, Washington State amended the law to extend the required planning cycle to every 4 years, which the Partnership said should result in a more effective use of time for the agency and its partners.

We also found, through our analysis of agency documents and interviews with federal officials, that the federal task force faced an additional challenge that it has since addressed. Specifically, the federal task force did not have continuous leadership at the national level because the task force's national leadership group was inactive for more than a year beginning in January 2017. During this time, CEQ, the permanent co-

⁵⁷[GAO-06-15](#).

⁵⁸Washington State Joint Legislative Audit and Review Committee, *Final Report: Puget Sound Partnership*.

chair of the national-level task force leadership group, did not convene the group for meetings, and there was uncertainty about who would represent some agencies after the change in administration and subsequent changes in agency personnel, according to officials from the task force agencies.⁵⁹ EPA Region 10 officials said that the federal task force's regional implementation team remained active during this period and facilitated continued engagement among federal agencies and nonfederal partners at the regional level. Nevertheless, without an active national-level leadership group in place, the federal agencies did not have a fully functioning task force and were not in a position to fulfill some of the task force's responsibilities under the memorandum of understanding, such as approving a federal action plan.⁶⁰

In April 2018, a senior CEQ official informed us that CEQ had taken action in response to our discussions with CEQ staff about this challenge and convened a meeting of the national-level task force group on April 4, 2018. In addition, according to the CEQ official, the task force agencies have committed to working together going forward and plan to continue meeting. By working with the other federal agencies to hold this meeting and secure this commitment, CEQ has taken an important step toward addressing the challenge we identified and ensuring that national-level leadership is in place for the federal task force.

⁵⁹According to the memorandum of understanding that established the task force, the national-level task force is to meet approximately biannually, or as needed, to fulfill its purposes and is to include senior designees from a number of federal agencies.

⁶⁰According to the memorandum of understanding, the national-level task force was to approve a federal action plan by June 1, 2017. In January 2017, the national-level task force accepted the draft Federal Action Plan developed by the regional implementation team and gave permission to that team to operate under the draft plan while final approval was pending. As of July 2018, this plan remained in draft status and had not received final approval.

The CCMP Lays Out a Framework for Assessing Progress toward Puget Sound Restoration, but Assessment of Progress Has Been Limited in Some Instances

The CCMP lays out the primary framework for assessing progress toward Puget Sound restoration, including six high-level goals created by state law and a variety of associated indicators and targets. The Partnership leads the management conference's efforts to assess restoration progress under this framework, but its assessments have been limited because of insufficient data and because targets have not been established for all indicators. In addition, we found that the federal task force has limited ability to assess how the implementation of the Federal Action Plan, which is currently in draft form, contributes to overall restoration progress under the CCMP's framework, because the task force has not clearly linked the plan's priority federal actions to the framework's goals, indicators, and targets.

The CCMP's Framework for Assessing Progress Includes Goals, Indicators, and Targets

The CCMP lays out the primary framework for assessing progress toward Puget Sound restoration, including goals, indicators, and targets.⁶¹ In 2007, the Washington State legislature established six high-level goals for Puget Sound restoration that continue to guide the CCMP, with an overarching directive to strive to achieve the goals by 2020.⁶² The six high-level goals are:

- **Healthy human population.** A healthy human population supported by a healthy Puget Sound that is not threatened by changes in the ecosystem.
- **Vibrant human quality of life.** A quality of human life that is sustained by a functioning Puget Sound ecosystem.

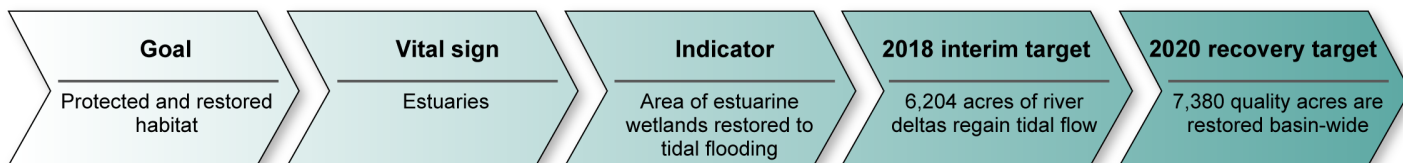
⁶¹Additionally, the Puget Sound Salmon Recovery Plan adopted by NOAA's National Marine Fisheries Service in 2007 established an overarching goal for salmon recovery that is reflected in the CCMP, and each of the 14 local salmon recovery planning areas across the Sound has developed its own set of qualitative and quantitative goals. Shared Strategy Development Committee, *Puget Sound Salmon Recovery Plan* (January 19, 2007).

⁶²Wash. Rev. Code § 90.71.300. The Washington State Joint Legislative Audit and Review Committee's 2017 audit of the Puget Sound Partnership found that Puget Sound restoration will not be complete by 2020 and recommended that the Partnership propose a more appropriate restoration time frame. In its December 2017 response, the Partnership agreed with the Committee's finding and recommendation and outlined initial steps to develop more long-term planning and restoration time frames beyond 2020.

- **Thriving species and food web.** Healthy and sustaining populations of native species in Puget Sound, including a robust food web.
- **Protected and restored habitat.** A healthy Puget Sound where freshwater, estuary, nearshore, marine, and upland habitats are protected, restored, and sustained.
- **Abundant water.** An ecosystem that is supported by groundwater levels as well as river and streamflow levels sufficient to sustain people, fish, and wildlife, and the natural functions of the environment.
- **Healthy water quality.** Fresh and marine waters and sediments of a sufficient quality so that the waters in the region are safe for drinking, swimming, shellfish harvest and consumption, and other human uses and enjoyment, and are not harmful to the native marine mammals, fish, birds, and shellfish of the region.

The CCMP identifies 25 categories of measures, called vital signs, used to gauge the health of Puget Sound. Each vital sign is designed to support one of the six high-level goals. For example, the CCMP has assigned four vital signs—marine water quality, freshwater quality, marine sediment quality, and toxics in fish—to collectively assess progress toward the goal of healthy water quality. According to the CCMP, most vital signs are represented by one or more specific measures, called indicators, for a total of 47 indicators.⁶³ Based on our analysis of Partnership data, more than half of these indicators have measurable recovery targets set for the year 2020, and some of the indicators also have measurable interim targets to assess incremental progress. Figure 6 provides an example of the relationship among goals, vital signs, indicators, and targets for 1 of the 47 indicators.

Figure 6: Example from the Framework for Assessing Restoration Progress for One Puget Sound Indicator



Source: The 2016 Action Agenda for Puget Sound and Puget Sound Partnership documentation. | GAO-18-453

⁶³According to the Partnership’s website, as of 2017, three additional indicators—focused on air quality, drinking water, and recreational shellfish—were under development. Once those indicators have been finalized, there will be a total of 50 indicators.

To achieve the CCMP's recovery targets, the Partnership, supported by other members of the management conference, has initiated an effort to develop implementation strategies that will outline, among other things, specific approaches, actions, and program and policy changes that are needed. According to the Partnership's implementation strategy guidelines, each implementation strategy will focus on the recovery targets for indicators under a particular vital sign or a set of related vital signs. The guidelines state that the implementation strategies are to also estimate the costs of achieving recovery targets, including the cost-effectiveness of specific activities to inform decisions about priority investments and expectations for progress. Officials from EPA and the Partnership said no official estimates have yet been developed for the total costs to restore the Sound, but EPA Region 10 officials stated that investments on the order of tens of billions of dollars, if not more, will likely be necessary.⁶⁴ According to EPA Region 10 officials, the implementation strategies will help more directly link investments to restoration progress, a step consistent with our previous reporting on enhancing the use of performance information. Specifically, in September 2005 we reported that linking cost with performance information brings performance concerns into planning and budgetary deliberations, prompting agencies to reassess their performance goals and strategies and to more clearly understand the cost of performance.⁶⁵

The Partnership Has Taken Steps to Assess Restoration Progress under the CCMP's Framework, but Its Assessment of Progress Has Been Limited in Some Instances

The Partnership leads the management conference's efforts to assess Puget Sound restoration progress and has taken steps to do so under the CCMP's framework. In particular, the Partnership created the Puget Sound Ecosystem Monitoring Program to help monitor the effectiveness of restoration actions and assess restoration progress. The Puget Sound Ecosystem Monitoring Program includes representatives from federal entities, such as EPA, and nonfederal entities, such as state and local agencies. The Partnership uses information from the Puget Sound Ecosystem Monitoring Program and other sources to assess and report on restoration progress in a biennial *State of the Sound* report, which was

⁶⁴EPA and Partnership officials said that estimates for certain restoration activities have been developed in the past. For instance, the 2016 CCMP included an estimated cost of \$242 million for 363 proposed near-term actions—such as restoration projects, studies, and outreach activities—that could be taken within the following 2-year period to help advance restoration efforts. However, according to senior Partnership officials, these actions represent only a small amount of the work needed to restore Puget Sound.

⁶⁵[GAO-05-927](#).

Assessments of Progress
Relative to Baseline Conditions

most recently published in November 2017.⁶⁶ The Partnership has assessed two primary aspects of restoration progress for the CCMP's 47 indicators: (1) progress relative to baseline conditions⁶⁷ and (2) progress toward the 2020 recovery targets.⁶⁸

The 2017 *State of the Sound* reported the general results of assessments of progress relative to baseline conditions for 29 of the 47 indicators, with additional details available on the Partnership's website. According to the *State of the Sound*, progress was made in some areas but many key indicators did not show improvement, as reflected below:

- Ten indicators improved compared to baseline data.⁶⁹ For example, one of the indicators reported as improved was acres of harvestable shellfish beds, which is associated with the goal of a healthy human population. According to the Partnership's website, from 2007 to 2016 the number of acres of harvestable shellfish beds increased by approximately 4,800 acres.⁷⁰
- Fifteen indicators showed mixed results or no improvement relative to baseline data. For example, one indicator reported as showing no improvement was the abundance of Puget Sound Chinook salmon

⁶⁶Puget Sound Partnership, *2017 State of the Sound*. In addition, the Partnership maintains an online report card that tracks the progress of each near-term action identified in the CCMP. Moreover, EPA tracks and reports on two agency-specific performance measures related to Puget Sound restoration that align closely with some of the CCMP's indicators. One of the performance measures focuses on improving water quality in Puget Sound shellfish bed growing areas, and the other focuses on the number of aquatic habitat acres that are protected or restored. For more information, see Environmental Protection Agency, *Fiscal Year 2014-2018 EPA Strategic Plan* (Washington, D.C.: April 10, 2014).

⁶⁷Baseline conditions refer to the conditions at a previous point in time against which indicators are measured.

⁶⁸Based on our analysis of information on the Partnership's website, for some indicators the results of these assessments were based on data that were several years old when more recent data were not available.

⁶⁹This characterization reflects the direction of change for the indicators. Based on our analysis of information on the Partnership's website, the magnitude of improvement for these indicators varied.

⁷⁰The Partnership assessed the progress of this indicator using data from the Washington State Department of Health's Office of Environmental Health and Safety. According to the Partnership's website, this total represents the net change from 2007 to 2016, as the condition of some shellfish harvest areas improved but the condition of other areas worsened.

populations, which is associated with the thriving species and food web goal.⁷¹ According to the Partnership's website, these populations remain below desired levels.

- Four indicators worsened compared to baseline data. For example, another indicator for the thriving species and food web goal tracks the number of Southern Resident Killer Whales. According to the Partnership's website, from 2010 to September 2017, the number of Southern Resident Killer Whales declined.⁷²

However, the *State of the Sound* was unable to report on assessments of progress relative to baseline conditions for 18 of the 47 indicators because of data limitations. Specifically, the *State of the Sound* reported that there were insufficient data or no data available to assess progress relative to baseline conditions for these indicators. Based on our analysis of information on the Partnership's website, the most common reason for these data insufficiencies is that the data for many indicators are in the early stages of collection and more time is needed to obtain enough data to assess progress. For example, the Partnership plans to assess nine indicators under the healthy human population and vibrant quality of life goals using new data collected through a survey, which the website states should allow the Partnership to assess progress within several years. According to a senior Partnership official, in addition to needing more time to collect data and assess progress for some indicators, resource limitations have posed a challenge to addressing some of the data gaps.

Assessments of Progress toward Recovery Targets

The 2017 *State of the Sound* reported general information on the progress made toward recovery targets, with additional details available on the Partnership's website. Based on our analysis of Partnership data, we found that the management conference has adopted measurable 2020 recovery targets for 31 of the 47 indicators. According to the *State of the Sound*, most indicators have not met their interim targets, and most of the 2020 targets are not likely to be attained, as reflected in the examples below.

- The Partnership reported that the indicator for restoration of floodplains showed some progress toward its 2020 target to restore

⁷¹The Partnership assessed the progress of this indicator using data from the Washington Department of Fish and Wildlife.

⁷²The Partnership assessed the progress of this indicator using data from the Center for Whale Research.

15 percent of degraded floodplain acreage in Puget Sound, but the 2020 target was still far from being met.⁷³

- According to the Partnership's website on the Southern Resident Killer Whales indicator, the 2016 interim target of an end-of-year census of 91 whales was not met, and as of September 2017 the number of Southern Resident Killer Whales was well below the 2020 target of 95 whales.⁷⁴

However, the overall ability to assess progress toward recovery targets has been limited because the management conference, led by the Partnership, has not established recovery targets for all indicators. Specifically, according to our analysis of Partnership data, recovery targets have not been established for 16 of the 47 indicators. We have previously reported on the importance of using performance measures to track progress in achieving goals and have identified key attributes of successful performance measures, such as having measurable targets.⁷⁵ More specifically, a measurable target should have a numerical goal, without which it is difficult to tell whether performance is meeting expectations.

Partnership officials we interviewed said that recovery targets have not been established for all indicators because they first focused on developing targets for indicators about which more information was known. The officials said they have not had sufficient resources to fully develop all of the indicators and associated recovery targets to assess progress, and that additional information and expertise are needed to

⁷³According to the Partnership's website, no interim targets have been established for this indicator.

⁷⁴According to the 2017 *State of the Sound*, recovery of the Southern Resident Killer Whale population will depend on increasing its main prey, Chinook salmon; reducing the load of toxins entering Puget Sound; and minimizing the impacts and risks of vessel traffic.

⁷⁵[GAO-13-518](#) and [GAO-12-77](#). Our past work in this area built off of the GPRA Modernization Act of 2010 (GPRAMA), which requires federal agencies to establish performance goals and a balanced set of performance indicators to be used in measuring or assessing progress toward each performance goal in annual agency performance plans, among other things. Pub. L. No. 111-352, § 3, 124 Stat. 3866, 3867 (2011) (codified at 31 U.S.C. § 1115). GPRAMA amended the Government Performance and Results Act of 1993, Pub. L. No. 103-62, 107 Stat. 285 (1993). Although GPRAMA's requirements apply at the departmental level (e.g., Department of the Interior), we have previously stated that they can serve as leading practices at other organizational levels, such as component agencies, programs, and projects. See for example, GAO, *Motor Carriers: Better Information Needed to Assess Effectiveness and Efficiency of Safety Interventions*, [GAO-17-49](#) (Washington, D.C.: Oct. 27, 2016).

develop targets for some indicators. According to EPA Region 10 officials we interviewed, developing targets for the remaining indicators would be useful, but given limited resources, it may be necessary to prioritize indicators for which to develop targets.

We recognize that developing measurable recovery targets can take time and resources and that prioritizing among the remaining 16 indicators for the development of targets is important. The management conference plans to issue an updated CCMP in December 2018, with another update scheduled for 2022, according to Partnership officials. EPA officials said that EPA's Region 10 office will be responsible for reviewing and approving these updated CCMPs in conjunction with EPA's National Estuary Program national office. Partnership officials we interviewed said that the management conference intends to reexamine and, as appropriate, revise the indicators and targets during the development of the 2022 CCMP. EPA's National Estuary Program guidance directs EPA regions to work with management conferences to ensure that revisions of the CCMP contain all the appropriate content, including quantitative performance measures where possible.⁷⁶ By working with the management conference on future updates to the CCMP to help prioritize among the indicators that currently lack measurable targets and ensure that such targets are developed for the highest priority indicators where possible, EPA would better position the Partnership to assess progress toward restoration goals.

The Federal Task Force Has Limited Ability to Assess How the Implementation of the Federal Action Plan Contributes to Overall Restoration Progress under the CCMP's Framework

The federal task force has limited ability to assess how the implementation of its Federal Action Plan, currently in draft form, contributes to overall restoration progress under the CCMP's framework, according to our analysis of agency documents and interviews. We found that except in a small number of cases, the federal task force has not clearly linked the priority federal actions identified in the draft Federal Action Plan to the CCMP's goals, vital signs, indicators, or recovery targets. For example, one of the plan's priority federal actions is to replace or remove culverts that pose a barrier to fish passage on Forest Service roads. However, the plan does not specify how the expected outcome of this action will contribute to the CCMP's goals, vital signs, indicators, or recovery targets.

⁷⁶Environmental Protection Agency, *FY 2017 – FY 2019 Clean Water Act §320 National Estuary Program Funding Guidance* (2016).

The federal task force's memorandum of understanding calls for the integration of federal efforts with those of nonfederal entities in the implementation of the CCMP. According to EPA Region 10 officials we interviewed, one of the primary purposes of the federal task force is to support the CCMP as the strategic plan for Puget Sound restoration, which includes the overarching goals and targets for the restoration effort. The federal task force's regional implementation team is responsible for annually evaluating the Federal Action Plan and making any necessary modifications. As the permanent co-chair of the regional implementation team, EPA's Region 10 office leads the effort to track and report information on the progress made in implementing the action plan, according to Region 10 officials. EPA has developed a tool to track the implementation of each priority federal action in the plan and has started to collect initial information from the other task force members, according to the Region 10 officials. The tracking tool documents the implementation status of each of the priority federal actions, but similar to the action plan, the tracking tool does not show how the actions are linked to the CCMP's goals, vital signs, indicators, or recovery targets.

We have previously reported on the importance of interagency collaborative efforts, such as federal task forces, to track and monitor progress toward their desired outcomes.⁷⁷ In addition, we have reported that agencies can increase the value of their performance reporting by linking annual performance information with their goals, a leading practice for performance reporting.⁷⁸

According to an EPA official involved in leading the regional implementation team, the draft Federal Action Plan did not link the priority federal actions to the CCMP's framework for assessing restoration progress because the task force had focused on higher-level alignment between the organization of the action plan and the CCMP's strategic initiatives, which focused on habitat, stormwater, and shellfish. In addition, the EPA official said that the tracking tool does not include such linkages because the tool has focused more narrowly on tracking the progress made in carrying out the priority federal actions.

According to the EPA official, better documenting the linkage between the priority federal actions and the CCMP's goals, vital signs, indicators, and

⁷⁷[GAO-12-1022](#).

⁷⁸[GAO-05-927](#) and [GAO/GGD-96-66R](#).

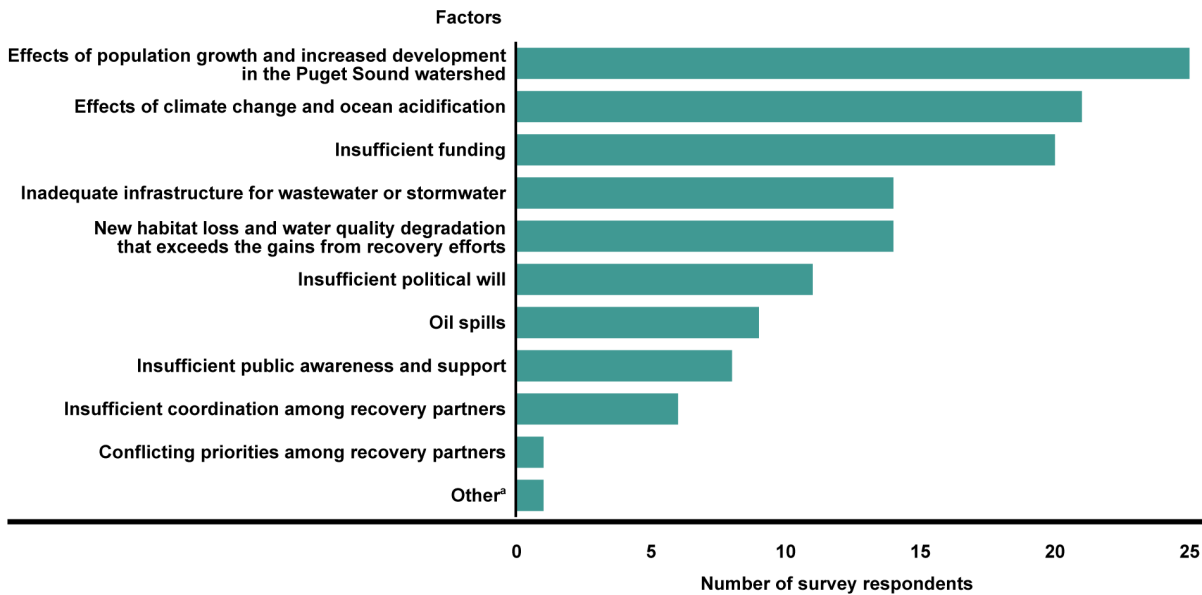
targets would be helpful for assessing progress. The official said that he sees value in making these linkages more explicit, and that one opportunity to do so would be to add more detail in the tracking tool on how some of the key federal actions connect to the various elements of the CCMP's framework for assessing progress. Similarly, some federal and state survey respondents reported that more explicitly linking the information in the Federal Action Plan to the CCMP would be helpful, based on our analysis of narrative responses about shortcomings to the draft Federal Action Plan and the plan's alignment with the CCMP. By working with the appropriate members of the regional implementation team to clearly link, such as through the tracking tool, the plan's priority federal actions to the CCMP's framework for assessing progress toward Puget Sound restoration, EPA would better position the federal task force to assess the impact of its efforts and the implementation of the draft—and, if applicable, final—action plan.

Federal and Nonfederal Entities Identified Several Factors, Including Population Growth and Climate Change, that May Limit the Success of Puget Sound Restoration

Federal and state respondents to our survey and tribal and local participants in our discussion groups identified a number of factors that may limit the long-term overall success of Puget Sound restoration efforts. Federal and nonfederal entities have control over some of these factors, such as coordination, but entities in the region may have less ability to influence other factors, such as climate change. To obtain views from federal and state agency officials, we asked survey respondents to rate the level of risk that 10 factors could pose to the long-term overall success of Puget Sound restoration efforts.⁷⁹ We identified these factors based on our review of key restoration documents, such as the CCMP, and our interviews with federal and nonfederal entities. Figure 7 illustrates the number of survey respondents that identified each of the factors as posing a great risk.

⁷⁹In addition to rating the level of risk for all 10 factors, our survey asked respondents to identify the factor that they think poses the greatest risk to the long-term overall success of Puget Sound restoration efforts and to explain why.

Figure 7: Number of Federal and State Survey Respondents that Stated Certain Factors Pose a Great Risk to the Long-Term Overall Success of Puget Sound Restoration Efforts



Source: GAO analysis of survey responses from 15 federal entities and 12 state entities. | GAO-18-453

^aSurvey respondents also had the option to identify other factors. One respondent identified the following additional factor as posing a great risk: new industry with high potential to contaminate waters or impact habitat in Puget Sound.

Through our analysis of the survey results, discussion group transcripts, federal and nonfederal documentation, and agency interviews, we found that federal and nonfederal entities consistently identified certain key factors as posing significant risks that may limit the success of Puget Sound restoration, including:

- Effects of population growth and increased development.** According to estimates in the CCMP, the population of the Puget Sound region is projected to increase from roughly 4.5 million in 2016 to 7 million people by 2040. Survey respondents and discussion group participants explained that population growth and the associated increase in development threaten restoration efforts in a variety of ways. For example, population growth and development contribute to new habitat loss and water quality degradation and may contribute to increases in property values that can raise the costs of restoration projects that involve land acquisitions. Nearly all of the survey respondents rated this factor as posing a great risk, and the majority of survey respondents identified this factor as the single greatest risk to the long-term overall success of Puget Sound restoration efforts.

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- **Effects of climate change and ocean acidification.** According to the CCMP, climate change and ocean acidification could affect many aspects of Puget Sound’s ecosystem and natural resources.⁸⁰ In addition, a 2015 University of Washington report stated that projected increases in sea surface temperatures associated with climate change could harm salmon populations and increase the magnitude and frequency of harmful algal blooms in Puget Sound.⁸¹ Moreover, according to a report from the Washington State Blue Ribbon Panel on Ocean Acidification, more than 30 percent of Puget Sound’s marine species—including oysters, clams, mussels, and crabs—are believed to be vulnerable to ocean acidification because of its corrosive effects on some shelled organisms.⁸² According to a December 2017 report by the Washington Marine Resources Advisory Council, Washington’s waters are considered to be among the most highly affected by ocean acidification in the world.⁸³ A variety of actions are under way in Washington State to respond to this threat, including the implementation of stormwater and nutrient reduction programs to reduce the severity of acidifying conditions and research on kelp cultivation to absorb carbon dioxide to improve seawater conditions.

⁸⁰According to the 2014 Third National Climate Assessment, climate change and ocean acidification stem, at least in part, from the same source—carbon dioxide emissions. Jerry M. Melillo, Terese (T. C.) Richmond, and Gary W. Yohe, eds., *Climate Change Impacts in the United States: The Third National Climate Assessment*, U.S. Global Change Research Program (Washington, D.C.: 2014).

⁸¹The report states that climate change may also have some positive effects in Puget Sound. For instance, increasing sea surface temperatures and sea level rise may increase growth rates in eelgrass beds, which provide food and shelter for a wide variety of marine life. G.S. Mauger, J.H. Casola, H.A. Morgan, R.L. Strauch, B. Jones, B. Curry, T.M. Busch Isaksen, L. Whitely Binder, M.B. Krosby, and A.K. Snover, *State of Knowledge: Climate Change in Puget Sound*. Report prepared for the Puget Sound Partnership and the National Oceanic and Atmospheric Administration. ed. Climate Impacts Group, University of Washington (Seattle, Washington: November 2015).

⁸²Washington State Blue Ribbon Panel on Ocean Acidification, *Ocean Acidification: From Knowledge to Action, Washington State’s Strategic Response*, eds. H. Adelman and L. Whitely Binder, Publication no. 12-01-015 (Olympia, WA: 2012). For additional information on the effects of ocean acidification, see GAO, *Ocean Acidification: Federal Response Under Way, but Actions Needed to Understand and Address Potential Impacts*, [GAO-14-736](#) (Washington, D.C.: Sept. 12, 2014).

⁸³Washington Marine Resources Advisory Council, *2017 Addendum to Ocean Acidification: From Knowledge to Action, Washington State’s Strategic Response*. ed. EnviroIssues (Seattle, Washington: December 2017).

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- **Funding constraints.** Funding constraints cited by federal and nonfederal entities included concerns about securing funds for future restoration efforts and the administrative challenges associated with combining multiple sources of funding to carry out projects. According to Partnership officials we interviewed, many of the near-term actions called for in the CCMP are at risk of not being carried out because funding has not been secured for these actions. Discussion group participants also cited difficulties securing funds as a barrier for project implementation and stated that the challenges associated with having to cobble together funds from multiple sources can delay or threaten the success of restoration projects. The participants explained that managing the requirements of multiple funding sources can increase administrative burden and project complexity. Moreover, discussion group participants explained that the single-year funding cycles for some programs and the restrictions that are sometimes placed on how funds can be used present additional challenges, as they are not always compatible with the needs of more complex multi-year restoration projects. Participants in the discussion groups noted a critical need for predictable, consistent, multi-year funding to adequately and efficiently plan and carry out restoration activities.

The factors identified by federal and nonfederal entities as posing a risk to the success of Puget Sound restoration efforts are consistent with some of our prior work on large-scale ecosystem restoration efforts in other parts of the country. Specifically, we previously reported that similar factors—including population growth, the effects of climate change, and funding constraints—may limit restoration efforts in the Great Lakes and Chesapeake Bay.⁸⁴

Conclusions

Restoring Puget Sound is a large, complex, and potentially costly endeavor that involves many federal, state, local, tribal, and nongovernmental partners, and it faces a number of factors that may limit long-term success. Federal and nonfederal entities have made progress in coordinating the numerous restoration efforts underway by establishing the Puget Sound Management Conference and the Puget Sound Federal

⁸⁴GAO-13-797; GAO, *Chesapeake Bay: Restoration Effort Needs Common Federal and State Goals and Assessment Approach*, GAO-11-802 (Washington, D.C.: Sept. 15, 2011); and *Great Lakes: An Overall Strategy and Indicators for Measuring Progress Are Needed to Better Achieve Restoration Goals*, GAO-03-515 (Washington, D.C.: April 30, 2003). For a list of our previous work on large-scale ecosystem restoration efforts in other parts of the country, see the Related GAO Products page at the end of this report.

Task Force and by developing the CCMP and the draft Federal Action Plan. The Partnership, through its plans to develop a more complete inventory of restoration efforts and related funding, can make important information available for coordinating the management of the efforts moving forward. In addition, the Partnership has led the management conference's efforts to assess restoration progress under the framework laid out in the CCMP, reporting in 2017 that while progress had been made in some areas, many key indicators had not shown improvement. However, these assessments have been limited by insufficient data, resources, and the lack of measurable targets, which have not been established for 16 of the 47 indicators. By working with the management conference on future updates to the CCMP to help prioritize among the indicators that currently lack measurable targets and ensure that such targets are developed for the highest priority indicators where possible, EPA would better position the Partnership to assess progress toward restoration goals.

In addition, the federal task force has made progress by coordinating its actions through the Federal Action Plan and can continue to make progress as it takes steps to implement the draft plan—and, if applicable, any final version of the plan that is approved. However, the task force has limited ability to assess how the implementation of its plan contributes to overall restoration progress because neither the plan nor the tracking tool developed by EPA's Region 10 clearly link the plan's priority federal actions to the goals, vital signs, indicators, or recovery targets that make up the CCMP's framework. By working with the appropriate members of the regional implementation team to clearly link, such as through the tracking tool, the plan's priority federal actions to the CCMP's framework for assessing progress toward Puget Sound restoration, EPA would better position the federal task force to assess the impact of its efforts and the implementation of the draft—and, if applicable, final—action plan.

Recommendations for Executive Action

We are making the following two recommendations to EPA:

The EPA Region 10 Administrator should work with the management conference on future updates to the CCMP to help prioritize among the indicators that currently lack measurable targets and ensure that such targets are developed for the highest priority indicators where possible. (Recommendation 1)

The EPA Region 10 Administrator should work with the appropriate members of the federal task force regional implementation team to clearly

link, such as through the tracking tool, the Federal Action Plan's priority federal actions to the CCMP's framework for assessing progress toward Puget Sound restoration. (Recommendation 2)

Agency Comments and Third-Party Views

We provided a draft of this report for review and comment to CEQ; the Departments of Agriculture, Commerce, Defense, Homeland Security, the Interior, and Transportation; EPA; and the Puget Sound Partnership. EPA provided written comments, which are reproduced in appendix IV, and stated that it generally agrees with the conclusions and recommendations in our report. The Departments of Commerce, Defense, Homeland Security, and the Interior responded by email that they did not have comments on the draft report. CEQ, the Department of Agriculture, and the Department of Transportation provided technical comments, which we incorporated as appropriate. The Partnership also provided written comments, which are reproduced in appendix V, and stated that our report does a good job describing a complex landscape. The Partnership's comments included one technical comment, which we incorporated as appropriate, and highlighted several points that we made in the report, including the lack of targets for some indicators and other barriers to success, the importance of obtaining more comprehensive information on restoration expenditures, and the importance of linking the work of the federal task force to the CCMP.

In its written comments, EPA stated that it appreciated the work we performed to understand the scope and intricacies of restoration efforts in Puget Sound and our coordination with multiple federal and nonfederal entities in developing our report. EPA agreed with our recommendation to work with the management conference to help prioritize among the indicators that currently lack measurable targets and ensure that such targets are developed for the highest priority indicators where possible. The agency stated that it has begun working with the Partnership and other management conference partners to identify this as a priority for the next review of the CCMP, as well as to develop a clear plan for advancing this priority. EPA also stated that progress has been made to evaluate the current set of indicators and vital signs as a result of a 2017 project led by the Partnership and that recommendations from that project will inform both adjustments to the current set of indicators and future target setting.

In addition, EPA agreed with our recommendation to work with the appropriate members of the federal task force regional implementation team to clearly link the Federal Action Plan's priority federal actions to the CCMP's framework for assessing progress, and the agency highlighted

steps it will take to do so. EPA stated that it has already met with the federal task force's regional leadership and implementation teams and reached agreement to review the Federal Action Plan and specify how each action connects to the vital signs and other elements of the CCMP. EPA stated this this crosswalk process will begin in January 2019 after the updated CCMP is approved.

We are sending copies of this report to the appropriate congressional committees; the Chair of CEQ; the Secretaries of Agriculture, Commerce, Defense, Homeland Security, the Interior, and Transportation; the Administrator of EPA; the Executive Director of the Puget Sound Partnership; and other interested parties. In addition, the report is available at no charge on the GAO website at <http://www.gao.gov>.

If you or your staff have any questions about this report, please contact me at (202) 512-3841 or gomezj@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made key contributions to this report are listed in appendix VI.

A handwritten signature in black ink that reads "Alfredo Gómez". The signature is written in a cursive style with a large, stylized "G" at the end.

J. Alfredo Gómez
Director, Natural Resources and Environment

Appendix I: Objectives, Scope, and Methodology

This report examines (1) Puget Sound restoration efforts and related expenditures for fiscal years 2012 through 2016; (2) how federal and nonfederal entities coordinate their restoration efforts and their views on this coordination; (3) the framework for assessing progress toward Puget Sound restoration; and (4) key factors, if any, federal and nonfederal entities identified that may limit the success of Puget Sound restoration. To help us understand the legal framework supporting restoration efforts across these four objectives, we reviewed selected relevant federal and state laws, including the Clean Water Act, the Endangered Species Act, and Washington State law governing Puget Sound water quality protection and establishing the Puget Sound Partnership.¹

To examine Puget Sound restoration efforts and related expenditures for fiscal years 2012 through 2016, we used the first phase of a two-phase survey to identify federal and state efforts that supported Puget Sound restoration during this time frame. We selected this period to allow us to obtain information on a range of restoration efforts carried out in recent years. In addition, we used the first phase of the survey to obtain information on the availability of expenditure data for the federal and state efforts and to help determine whether any limitations existed that would affect the reliability of such data. As part of developing the first phase of the survey, we conducted a pretest with the Partnership to check that the questions were clear and used terminology correctly and to ensure that we could obtain the requested information without placing an undue burden on agency officials. We sent the first phase of the survey to 15 federal and 11 state entities in June 2017, and all of them responded. We identified the 15 federal entities based on their participation in the Puget Sound Federal Caucus, a group formed of regional federal entities in 2007 to help coordinate federal restoration efforts in Puget Sound.² The federal entities were the Bureau of Indian Affairs, Federal Emergency Management Agency, Federal Highway Administration, Federal Transit Administration, National Oceanic and Atmospheric Administration, National Park Service, Natural Resources Conservation Service, U.S. Army Corps of Engineers, U.S. Army Joint Base Lewis-McChord, U.S. Coast Guard, U.S. Environmental Protection Agency (EPA), U.S. Fish

¹See Federal Water Pollution Control Act Amendments of 1972, Pub. L. No. 92-500, § 2, 86 Stat. 816 (codified as amended at 33 U.S.C. §§ 1251-1387) (commonly referred to as the Clean Water Act); Endangered Species Act of 1973, Pub. L. No. 93-205, 87 Stat. 884 (1973) (codified as amended at 16 U.S.C. §§ 1531-1544); Wash. Rev. Code §§ 90.71.005-907.

²The federal caucus was replaced by the Puget Sound Federal Task Force in 2016.

and Wildlife Service, U.S. Forest Service, U.S. Geological Survey, and the U.S. Navy. We identified the 11 Washington State entities based on our review of the comprehensive conservation and management plan (CCMP)—called *The 2016 Action Agenda for Puget Sound*—and our discussions with federal and state officials. The state entities were the Office of Financial Management, Puget Sound Partnership, Recreation and Conservation Office, Washington State Conservation Commission, and the Washington Departments of Agriculture, Commerce, Ecology, Fish and Wildlife, Health, Natural Resources, and Transportation.

In the first phase of our survey, we requested specific information on federal and state efforts to support Puget Sound restoration. Table 2 summarizes the questions we are reporting on from the first phase of the survey. We also asked other questions that we do not specifically report on to provide additional context for the survey responses. For example, we asked the respondents whether their agency managed each effort on its own or jointly with other entities, and we asked whether their agency had provided funding from each effort to other entities.

Table 2: Selected Questions from the First Phase of the Survey

General Question
For the time period from fiscal years 2011 through 2016, please identify all of your agency's programs or initiatives that supported Puget Sound recovery activities. ^a
Program/Initiative-Specific Questions
During the time period from fiscal years 2011 through 2016, which of the following categories of Puget Sound recovery activities were supported by expenditures from this program/initiative? a. Categories of recovery activities: habitat restoration, habitat protection, water quality improvement, monitoring, research, education and outreach, and other.
Please briefly describe one or two key examples of the types of projects or activities conducted under this program/initiative that supported Puget Sound recovery.
During the time period from state fiscal years 2011 through 2016, did your agency receive funding from the following sources to support the implementation of this program/initiative? ^b b. Funding sources: federal government, state government, local government, and other.
Based on your agency's available data for fiscal years 2011 through 2016, would you be able to isolate expenditures from this program/initiative that occurred within the geographic boundaries of the Puget Sound watershed?

Source: GAO. | GAO-18-453

^aFor the purposes of this report, we decided to limit the time frame of our reporting on federal and state programs and initiatives, collectively referred to as restoration efforts, to fiscal years 2012 through 2016. Also, in this report we refer to recovery activities as restoration activities.

^bThis question was only included in the survey for state agencies.

We used the first-phase survey results in part to develop catalogs of federal and state efforts that supported Puget Sound restoration from fiscal years 2012 through 2016. To obtain additional information about the federal and state efforts identified in the survey responses, we reviewed documentation, such as agency websites and reports, and interviewed agency officials. We incorporated this additional information as appropriate in the catalogs, and we then asked each entity to verify the accuracy of the information presented in the catalogs. Appendix II presents the catalog of federal efforts, and appendix III presents the catalog of state efforts.

Based on the results of the first phase of the survey and additional follow-up interviews with agency officials, we determined that we would be unable to collect sufficiently reliable data to report on the total amount of expenditures that have supported Puget Sound restoration. In particular, we identified data limitations that would make it difficult for us to collect consistent, reliable, and comparable expenditure data across all of the federal and state entities' efforts. These limitations included difficulties isolating expenditures within the geographic boundaries of Puget Sound for some efforts, difficulties isolating expenditures that supported restoration activities as opposed to other purposes, and difficulties quantifying administrative expenses, such as staff salaries and travel expenses, associated with specific efforts.

As a result of these limitations, we limited our collection of expenditure data to a nongeneralizable sample of three federal programs and one state program to provide examples of the diversity in funding approaches used to support Puget Sound restoration. We considered the following factors in selecting these efforts: 1) their prominence in Puget Sound restoration, 2) variations in the federal and state entities involved in carrying them out, 3) variations in their size, and 4) evidence of reliable expenditure data. In addition, to help illustrate how federal and nonfederal funds are used together at the project level, we interviewed agency officials and obtained expenditure data for two recently completed restoration projects. We selected these projects because they had received funding from a variety of federal and nonfederal sources and illustrated how federal and nonfederal entities work together to carry out restoration projects. We also conducted two site visits to observe the outcomes of these projects. We assessed the reliability of the expenditure data for these program and project examples by comparing the data we obtained with data from other sources where possible, reviewing agency documentation, and interviewing knowledgeable agency officials. We found the data to be sufficiently reliable for our purposes.

To examine how federal and nonfederal entities coordinate their restoration efforts in Puget Sound and their views on this coordination, we identified two key groups that coordinate among federal, state, local, tribal, and nongovernmental entities: the state-led Puget Sound Management Conference and the Puget Sound Federal Task Force, which replaced the Puget Sound Federal Caucus in 2016. We analyzed key restoration-related documentation, including the CCMP developed by the management conference and the federal task force's draft *The Puget Sound Federal Task Force Action Plan (Fiscal Years 2017-2021)* (Federal Action Plan). We also interviewed officials from EPA and the Council on Environmental Quality about the implementation of the federal task force. In August 2017, we sent the second phase of our survey to the 15 federal and 11 state entities that had received the first phase, as well as to the Washington State Governor's Office, to obtain their views on the coordination of restoration efforts and we received responses from all of the entities. The second phase of the survey featured, among other things, a series of open-ended and closed-ended questions about the role of the management conference and the federal task force in helping to coordinate restoration efforts and about the strengths and shortcomings of the CCMP and the draft Federal Action Plan. We refined the second phase of the survey based on pretests we conducted with two federal agencies and two state agencies to ensure that the questions were clear and used terminology correctly and that we could obtain the requested information without placing an undue burden on agency officials.

Table 3 summarizes the questions we are reporting on from the second phase of the survey. We also asked other questions that we do not specifically report on to provide additional context for the survey responses. For example, we asked the respondents to identify what steps, if any, could be taken to improve the management conference and the federal task force, and we asked whether any entities were missing from these groups that should be included.

Table 3: Selected Questions from the Second Phase of the Survey

Questions on interagency groups and plans
How, if at all, has the work of the Puget Sound National Estuary Program Management Conference helped Puget Sound recovery efforts?
What do you consider to be the primary strengths of the 2016 Action Agenda?
Do you think there are any shortcomings to the 2016 Action Agenda? If yes, what are the shortcomings and why, if at all, are they important?
How, if at all, has the creation of the Puget Sound Federal Task Force helped Puget Sound recovery efforts?
What do you consider to be the primary strengths of the Action Plan created by the Puget Sound Federal Task Force?
Do you think there are any shortcomings to the Action Plan created by the Puget Sound Federal Task Force? If yes, what are the shortcomings and why, if at all, are they important?
How well aligned do you think the Federal Task Force's Action Plan is with the Puget Sound Partnership's 2016 Action Agenda?
In what ways, if any, is the Action Plan created by the Federal Task Force not well aligned with the Partnership's 2016 Action Agenda?
Questions on factors that may limit success
Thinking beyond the scope of your agency's specific activities, how much of a risk do you think the following factors pose to the long-term overall success of Puget Sound recovery efforts?
<ul style="list-style-type: none">a. Effects of climate change and ocean acidificationb. Effects of population growth and increased development in the Puget Sound watershedc. Insufficient fundingd. Insufficient coordination among recovery partnerse. Conflicting priorities among recovery partnersf. New habitat loss and water quality degradation that exceeds the gains from recovery effortsg. Inadequate infrastructure for wastewater or stormwaterh. Insufficient public awareness and supporti. Insufficient political willj. Oil spillsk. Other
Which of the factors listed above do you think poses the greatest risk to the long-term overall success of Puget Sound recovery efforts and why?

Source: GAO. | GAO-18-453

We also held six moderated discussion groups, three with tribal representatives and three with local representatives, to obtain their views on factors that have helped and hindered their ability to implement restoration projects, including factors related to coordination. We selected the tribal and local entities to participate in the discussion groups because of their involvement in implementing restoration projects. We invited all 19 federally recognized tribes in the Puget Sound basin to participate in our discussion groups, as well as two tribal consortia that support restoration

efforts. Representatives from 15 of these tribal entities participated in the tribal discussion groups.³ For the three local discussion groups, we invited all 9 local integrating organizations and all 15 salmon recovery lead entities within the Puget Sound basin to participate.⁴

Representatives from 7 of the local integrating organizations and 13 of the salmon recovery lead entities participated in the three local discussion groups.⁵

We conducted the six moderated discussion groups over the telephone in May and June 2017. During each discussion group, the GAO moderator asked participants to list factors that, in their experience, had helped their tribal or local entity implement restoration projects in Puget Sound, as

³Representatives from the following tribes and tribal consortia participated in our discussion groups: Jamestown S’Klallam Tribe, Lower Elwha Tribal Community, Makah Indian Tribe of the Makah Indian Reservation, Muckleshoot Indian Tribe, Nisqually Indian Tribe, Nooksack Indian Tribe, Point No Point Treaty Council, Port Gamble S’Klallam Tribe, Samish Indian Nation, Skagit River System Cooperative, Skokomish Indian Tribe, Snoqualmie Indian Tribe, Stillaguamish Tribe of Indians of Washington, Suquamish Indian Tribe of the Port Madison Reservation, and Tulalip Tribes of Washington. Representatives from the Lummi Tribe of the Lummi Reservation and Puyallup Tribe of the Puyallup Reservation provided written responses to our discussion group questions in lieu of participating in the discussion groups.

⁴The local integrating organizations are local groups recognized by the management conference to, among other things, guide the implementation of the CCMP’s priorities at a local scale in specific geographic areas of Puget Sound. The salmon recovery lead entities are local watershed-based organizations that develop local salmon habitat recovery strategies and manage projects to implement the strategies.

⁵Representatives from the following local integrating organizations participated in our discussion groups: San Juan Action Agenda Oversight Group, South Central Action Area Caucus Group, Alliance for a Healthy South Sound, Whatcom Local Integrating Organization, Strait Ecosystem Recovery Network, Island Local Integrating Organization, and the Snohomish/Stillaguamish Local Integrating Organization. Representatives from the following salmon recovery lead entities participated in our discussion groups: Green/Duwamish/Central Puget Sound Watershed Lead Entity, Hood Canal Coordinating Council Lead Entity, Island County Lead Entity, Lake Washington/Cedar/Sammamish Watershed Lead Entity, Nisqually River Salmon Recovery Lead Entity, North Olympic Peninsula Lead Entity for Salmon, San Juan County Community Development Lead Entity, Skagit Watershed Council Lead Entity, Snohomish Basin Lead Entity, Stillaguamish River Salmon Recovery Co-Lead Entity, Water Resource Inventory Area 13 Salmon Habitat Recovery Committee Lead Entity, Water Resource Inventory Area 14 Salmon Habitat Recovery Committee Lead Entity, and West Sound Watersheds Council Lead Entity. In addition to participating in one of our discussion groups as a lead entity, the Hood Canal Coordinating Council also provided written responses to our questions based on its separate role as the local integrating organization for the Hood Canal Action Area. One additional salmon recovery lead entity, the Pierce County Lead Entity, provided written responses to our discussion group questions in lieu of participating in the discussion groups.

well as factors that hindered their ability to do so. The moderator then asked participants to elaborate on how the factors had helped or hindered the implementation of restoration projects. When necessary, the moderator asked probing questions to further clarify participants' comments. Two or three analysts transcribed each session and combined and reconciled notes to develop transcripts for each of the discussion groups. We analyzed the transcripts from the six discussion groups using qualitative analysis software to categorize the factors that helped and hindered the implementation of restoration projects. Prominent factors identified in the discussion groups that we discuss in the body of the report include factors related to administration and management, coordination, and resources. Other factors, such as laws and regulations, public awareness, and science were also raised to a lesser extent, and we do not discuss these in the body of the report.

To obtain additional views on the coordination of Puget Sound restoration efforts, we interviewed federal and state agency officials as well as representatives from conservation, agricultural, and fishing industry organizations. We also obtained written responses from two Canadian agencies about their coordination of restoration activities with entities in the United States. We compared the information we obtained on the coordination of Puget Sound restoration efforts with selected leading collaboration practices that we previously identified and that were most relevant based on our initial audit work, such as leadership, bridging organizational cultures, and the inclusion of relevant participants.⁶ We also assessed federal entities' implementation of the memorandum of understanding that established the federal task force.

To examine the framework for assessing progress toward Puget Sound restoration, we reviewed laws, regulations, and key documents, such as the CCMP and the draft Federal Action Plan. We also reviewed the Partnership's documentation on the results of its assessments of restoration progress. We identified some limitations associated with these results and noted those in our report where appropriate. We obtained additional views on efforts to assess progress from federal and nonfederal entities through the second phase of our survey and interviews described previously. For example, in the second phase of the survey, we asked the federal and state entities about their views on

⁶GAO, *Managing for Results: Key Considerations for Implementing Interagency Collaborative Mechanisms*, [GAO-12-1022](#) (Washington, D.C.: Sept. 27, 2012).

efforts to assess progress under the CCMP and the draft Federal Action Plan and about their views on the sufficiency of monitoring efforts in Puget Sound. We compared the information obtained through these steps with EPA's National Estuary Program guidance and with leading practices for performance measurement and reporting to determine whether efforts to assess Puget Sound restoration progress have followed leading practices.⁷

To determine key factors, if any, federal and nonfederal entities identified that may limit the success of Puget Sound restoration, we used the second phase of our survey, which we described above, and our discussion groups to obtain views on factors that may pose a risk to the success of restoration efforts. We also reviewed the CCMP and other documentation and used our interviews with the federal and nonfederal entities described above to obtain views on limiting factors. In addition, we reviewed our prior work on large-scale ecosystem restoration efforts in other parts of the country, such as in the Great Lakes and Chesapeake Bay, to compare the key factors we identified in Puget Sound with factors that may limit restoration efforts that we identified in our past reports.⁸

We conducted this performance audit from October 2016 to July 2018 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

⁷See Environmental Protection Agency, *FY 2017-2019 Clean Water Act §320 National Estuary Program Funding Guidance* (2016), and GAO, *Managing for Results: Executive Branch Should More Fully Implement the GPRA Modernization Act to Address Pressing Governance Challenges*, [GAO-13-518](#) (Washington, D.C.: June 26, 2013); *Environmental Justice: EPA Needs to Take Additional Actions to Help Ensure Effective Implementation*, [GAO-12-77](#) (Washington, D.C.: Oct. 6, 2011); *Managing for Results: Enhancing Agency Use of Performance Information for Management Decision Making*, [GAO-05-927](#) (Washington, D.C.: Sept. 9, 2005); and *GPRA Performance Reports*, [GAO/GGD-96-66R](#) (Washington, D.C.: Feb. 14, 1996).

⁸GAO, *Great Lakes Restoration Initiative: Further Actions Would Result in More Useful Assessments and Help Address Factors That Limit Progress*, [GAO-13-797](#) (Washington D.C.: Sept. 27, 2013) and *Chesapeake Bay: Restoration Effort Needs Common Federal and State Goals and Assessment Approach*, [GAO-11-802](#) (Washington, D.C.: Sept. 15, 2011).

Appendix II: Catalog of Efforts Identified by Federal Entities that Supported Restoration Activities in Puget Sound

As part of our first objective to examine Puget Sound restoration efforts, we surveyed 15 federal entities and asked them to provide information about their efforts that have supported Puget Sound restoration activities.¹ Based on our research and discussions with federal and state officials, we identified six general categories of restoration activities:

- Habitat restoration – projects or other activities intended to restore degraded habitats.
- Habitat protection – projects or other activities intended to protect high-quality habitats from future degradation.
- Water quality improvement – projects or other activities intended to improve the physical, chemical, or biological characteristics of waters within the Puget Sound basin by, for example, reducing stormwater runoff and other sources of water pollution.²
- Monitoring – projects or other activities intended to monitor the physical, chemical, or biological characteristics of waters within the Puget Sound basin, including monitoring for the purposes of establishing baselines, identifying trends, and assessing the effectiveness or results of restoration activities.
- Research – research projects, studies, or other related activities intended to support Puget Sound restoration activities.
- Education and outreach – projects or other activities intended to educate the public about the state of Puget Sound and the pressures facing the basin or to elicit community support for restoration activities (e.g., by recruiting volunteers).

Table 4 presents a catalog of applicable federal efforts from federal fiscal years 2012 through 2016 based on the survey responses from each federal entity. The table includes a wide range of efforts, including some efforts that focused exclusively on restoration-related activities and other efforts that had a broader scope of work that in some cases did not center directly on restoration. We further developed some information presented in the table based on information obtained from other sources, such as agency websites and documentation, and follow-up communications with

¹Specifically, we asked survey respondents to identify all of their agency's programs or initiatives that supported Puget Sound recovery activities, which in this report we refer to as restoration activities. For the purposes of our report, we collectively refer to the programs and initiatives as restoration efforts.

²In the survey, we referred to the Puget Sound basin as the Puget Sound watershed.

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the federal entities. We did not evaluate whether each entity had included all relevant efforts in their responses.

Table 4: Federal Efforts Identified by Federal Entities that Supported Restoration Activities in Puget Sound, Fiscal Years 2012 through 2016^a

Name of effort	Description	Types of restoration activities supported by the effort					
		Habitat restoration	Habitat protection	Water quality	Monitoring	Research	Education/ outreach
Department of Agriculture							
<i>Natural Resources Conservation Service (NRCS)</i>							
Agricultural Conservation Easement Program	NRCS provides financial and technical assistance to nonfederal partners to help conserve agricultural lands and wetlands, such as by placing development easements on those types of lands.	✓	✓	✓	-	-	✓
Conservation Innovation Grants	NRCS awards grants to nonfederal entities to spur development and adoption of innovative approaches and technologies for conservation on agricultural lands.	✓	✓	✓	-	-	✓
Conservation Reserve Enhancement Program	NRCS supports this Farm Service Agency-led program by providing technical assistance to farmers and ranchers to remove environmentally sensitive land from production.	✓	✓	✓	-	-	✓
Conservation Stewardship Program	NRCS works with farmers and ranchers to promote conservation practices that, for example, reduce the amount of nutrients and fecal coliform entering waterways.	✓	✓	✓	-	-	✓
Conservation Technical Assistance Program	NRCS provides technical assistance to farmers, such as by developing conservation plans, to help conserve natural resources and improve water quality and habitat.	✓	✓	✓	-	-	✓
Environmental Quality Incentives Program	NRCS provides financial and technical assistance to farmers to carry out conservation practices on agricultural land that may, for example, improve water quality and wildlife habitat.	✓	✓	✓	-	-	✓

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Name of effort	Description	Types of restoration activities supported by the effort					
		Habitat restoration	Habitat protection	Water quality	Monitoring	Research	Education/outreach
Department of Agriculture							
<i>Natural Resources Conservation Service (NRCS)</i>							
Farm and Ranch Lands Protection Program	NRCS provided funds to help place conservation easements on agricultural and ranch lands to protect them from urban development. This program was replaced by the Agricultural Conservation Easement Program in 2014.	✓	✓	✓	-	-	✓
Grassland Reserve Program	NRCS worked with landowners to place easements to limit the future development and uses of working grasslands and to implement grazing management plans. This program was replaced by the Agricultural Conservation Easement Program in 2014.	✓	✓	✓	-	-	✓
Regional Conservation Partnership Program	NRCS works with partners, such as state and local governments, and agricultural producers to install and maintain conservation practices to increase the restoration and sustainable use of soil, water, wildlife, and related natural resources.	✓	✓	✓	-	-	✓
Wetlands Reserve Program	NRCS provided technical and financial support to help landowners protect and restore wetlands on their property, such as through the use of easements. This program was replaced by the Agricultural Conservation Easement Program in 2014.	✓	✓	✓	-	-	-
Wildlife Habitat Incentive Program	NRCS worked with landowners under this program to develop and improve wildlife habitat on agricultural land, nonindustrial private forest land, and Indian land. This program was partially incorporated into the Environmental Quality Incentives Program in 2014.	✓	✓	✓	-	-	-

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Name of effort	Description	Types of restoration activities supported by the effort					
		Habitat restoration	Habitat protection	Water quality	Monitoring	Research	Education/outreach
<i>U.S. Forest Service</i>							
Abandoned Mine Lands Program	The Forest Service's Mt. Baker-Snoqualmie National Forest seeks to minimize the human health and safety hazards, such as acid drainage, at abandoned mines while preserving the wildlife habitat resources that the mines provide.	✓	✓	-	-	-	-
Aquatic inventory and monitoring	The Forest Service works to inventory and monitor watershed and stream habitat conditions in Puget Sound, including monitoring the use of best management practices for land management activities to protect water quality.	✓	✓	✓	✓	✓	-
Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (Superfund)	The Forest Service's Mt. Baker-Snoqualmie National Forest participates in restoration and cleanup activities on National Forest lands, such as removing toxic and nontoxic hazardous waste from an abandoned mill site in the Puget Sound basin.	✓	✓	✓	✓	-	-
Environmental Compliance and Protection Program	The Forest Service prescribes best management practices to protect water quality on National Forest System lands.	-	✓	✓	✓	-	✓
Watershed and aquatic restoration	The Forest Service carries out projects to, among other things, restore fish passage and hydrologic processes at road-stream crossings and to decommission roads that are no longer needed.	✓	✓	✓	✓	✓	✓
Department of Commerce							
<i>National Oceanic and Atmospheric Administration (NOAA)</i>							
Community-based Restoration Program	NOAA provides funding for high-priority habitat restoration projects with an emphasis on multi-benefit projects, such as those that mitigate floods while enhancing agricultural and community needs.	✓	✓	✓	✓	✓	✓

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Name of effort	Description	Types of restoration activities supported by the effort					
		Habitat restoration	Habitat protection	Water quality	Monitoring	Research	Education/outreach
Department of Commerce							
<i>National Oceanic and Atmospheric Administration (NOAA)</i>							
Damage Assessment, Remediation, and Restoration Program	NOAA works with partners under the Natural Resource Damage Assessment process to assess, restore, and protect coastal environments damaged by oil spills, hazardous waste releases, and vessel groundings.	✓	✓	✓	✓	-	-
Ecotoxicology Program	NOAA conducts research and provides other scientific support on a wide range of watershed and coastal pollution issues in Puget Sound, such as oil spill risks and stormwater threats to salmon habitat.	-	✓	✓	✓	✓	✓
Endangered Species Act of 1973	NOAA oversees the implementation of recovery plans for several listed species in Puget Sound, including salmon and rockfish, and administers grants under the act to support research and monitoring activities.	✓	✓	✓	✓	✓	✓
Pacific Coastal Salmon Recovery Fund	NOAA awards funds to states, tribal commissions, and individual tribes to carry out salmon recovery actions, including habitat restoration projects.	✓	✓	✓	✓	✓	✓
Padilla Bay National Estuarine Research Reserve	NOAA promotes improved management and stewardship of estuarine ecosystems through research, monitoring, and educational activities, such as monitoring water quality and eelgrass within Padilla Bay.	✓	✓	-	✓	✓	✓
Department of Defense							
<i>Joint Base Lewis-McChord (JBLM)</i>							
Installation of Warehouse Road stormwater facilities	JBLM reported that its efforts in this location have removed over 75 acres of stormwater discharge from Clover Creek to help improve local water quality.	-	✓	✓	-	-	-

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Name of effort	Description	Types of restoration activities supported by the effort					
		Habitat restoration	Habitat protection	Water quality	Monitoring	Research	Education/outreach
Department of Defense							
<i>Joint Base Lewis-McChord (JBLM)</i>							
JBLM wastewater treatment plant	This project includes the design and construction of a wastewater treatment plant at JBLM to support a projected population of 100,000 people.	-	-	✓	✓	-	-
Natural resources management	JBLM provides riparian habitat enhancement and protection and implements measures to control non-native vegetation.	✓	✓	✓	✓	✓	✓
Participation in Chambers-Clover Creek Watershed Council	JBLM participates in this local watershed council, which has developed a management plan for a local lake and carried out a local restoration project.	✓	✓	✓	✓	✓	✓
Stormwater monitoring	JBLM provides monthly and quarterly water quality monitoring information for laboratory analysis.	-	-	✓	✓	-	-
<i>U.S. Army Corps of Engineers</i>							
Continuing Authorities Program	The Corps plans, designs, and constructs small-scale projects under existing program authorities from Congress, including projects to restore and protect aquatic ecosystems and wetland habitats.	✓	-	-	✓	-	-
Estuary Restoration Act of 2000	The Corps supports estuary restoration projects in Puget Sound under this act, such as eelgrass restoration projects.	✓	-	-	-	-	-
Green-Duwamish River Ecosystem Restoration Project	This project spans the entire Green-Duwamish river basin ecosystem and authorizes construction of restoration work at a number of different sites. Completed restoration activities include enhancing wetland habitats and replacing a culvert to improve fish passage.	✓	-	-	✓	-	-

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Name of effort	Description	Types of restoration activities supported by the effort					
		Habitat restoration	Habitat protection	Water quality	Monitoring	Research	Education/outreach
<i>U.S. Army Corps of Engineers</i>							
Howard Hanson Dam Additional Water Storage Project	This project aims to increase municipal water supply and support ecosystem restoration by, for example, constructing a facility that provides salmon and other fish passage from the upper watershed to Puget Sound.	✓	-	-	✓	-	-
Mud Mountain Dam Fish Passage Facility	This project aims to build a new fish passage facility at this dam that will help provide safe upstream passage for adult salmon, steelhead, and bull trout.	✓	-	-	-	-	-
Operation and maintenance activities	Some of the Corps' operation and maintenance activities in Puget Sound (e.g., at dams, harbors, and canals) also produce ecosystem benefits. For example, the Corps has used materials from dredging to help restore and protect aquatic habitat in Puget Sound.	✓	✓	✓	✓	-	✓
Puget Sound and Adjacent Waters Restoration Program	The Corps works with local sponsors under this program on habitat restoration projects throughout the Puget Sound basin, such as the removal of a seawall at Seahurst Park.	✓	-	-	✓	-	-
Puget Sound Nearshore Ecosystem Restoration Project	The Corps has identified three priority sites in Puget Sound for large-scale habitat restoration projects, which have received construction authorization from Congress.	✓	-	-	-	-	-
Skokomish River Basin Ecosystem Restoration Project	This project seeks to restore the aquatic ecosystem structure and function to the lower 11 miles of the Skokomish River by removing a levee, reconnecting a side channel, and restoring wetlands.	✓	-	-	-	-	-
Stillaguamish River Bank Protection Project	As part of this project, the Corps replaced a fish ladder to provide returning adult salmon and trout unimpeded upstream access.	✓	-	-	-	-	-

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Name of effort	Description	Types of restoration activities supported by the effort					
		Habitat restoration	Habitat protection	Water quality	Monitoring	Research	Education/outreach
<i>U.S. Navy</i>							
Habitat enhancement and restoration	The Navy enhances and restores degraded habitat on Naval installations in Puget Sound by taking actions such as removing invasive and noxious weeds and removing barriers to Endangered Species Act-listed fish species' passage under roads and the Navy's rail line.	✓	✓	-	-	-	-
Readiness and Environmental Protection Integration Program	The Navy works with state and local partners to promote compatible land uses and preserve habitats near Naval installations to reduce encroachment activities that could affect the Navy's mission. Such actions can also have conservation benefits, such as protecting salt marshes and eelgrass beds.	✓	✓	✓	-	-	-
Sikes Act coordination	The Navy has prepared Integrated Natural Resources Management Plans for its installations in Puget Sound in cooperation with other federal and state agencies. Among other things, these plans identify projects and management strategies to protect and enhance natural resources.	✓	✓	✓	✓	✓	✓
Species and wetlands surveys	The Navy conducts surveys at its installations and within its operating areas in Puget Sound for threatened and endangered species, forage fish, terrestrial species, wetland delineation, and vegetation mapping.	-	✓	-	✓	✓	-

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Name of effort	Description	Types of restoration activities supported by the effort					
		Habitat restoration	Habitat protection	Water quality	Monitoring	Research	Education/outreach
Department of Homeland Security							
<i>Federal Emergency Management Agency (FEMA)</i>							
Implement National Flood Insurance Program Jeopardy Biological Opinion for Puget Sound	As part of implementing this program in Puget Sound, FEMA works to reduce future flood damages by increasing incentives to move development away from high-risk areas, which can also be beneficial for salmon recovery.	-	✓	-	-	-	✓
Department of the Interior							
<i>Bureau of Indian Affairs (BIA)</i>							
Pacific Salmon Treaty	BIA funds tribal participation in the Pacific Salmon Treaty, under which tribes complete research and monitoring activities on salmon in their treaty fishing areas.	-	-	-	✓	✓	-
Rights Protection Program	BIA supports floodplain restoration and other activities in Puget Sound to help tribes protect their treaty rights related to fishing and other provisions.	✓	✓	-	✓	✓	✓
<i>National Park Service (NPS)</i>							
Elwha River Restoration Project	NPS removed two dams on the Elwha River, allowing salmon and other fish to access approximately 70 additional miles of freshwater habitat, much of which is protected in near-pristine condition within Olympic National Park.	✓	✓	✓	✓	✓	✓
Water quality monitoring	NPS monitors water quality at three national parks and one national historic reserve in Puget Sound to establish baseline information and to provide information on long-term trends.	-	-	-	✓	-	-

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Name of effort	Description	Types of restoration activities supported by the effort					
		Habitat restoration	Habitat protection	Water quality	Monitoring	Research	Education/outreach
<i>U.S. Fish and Wildlife Service (FWS)</i>							
Clean Vessel Act Grant Program	FWS provides grants to Washington State for construction and operation of pumpout stations and waste reception facilities to safely dispose of recreational boater sewage.	-	✓	✓	-	-	✓
National Coastal Wetlands Conservation Grant Program	FWS provides grants to Washington State to protect, restore, and enhance coastal wetland ecosystems and associated uplands.	✓	✓	✓	-	-	✓
Natural Resource Damage Assessment and Restoration Program	FWS works with partners on the Natural Resource Damage Assessment process in Puget Sound, including carrying out habitat restoration projects using settlement funds from parties responsible for releasing hazardous materials.	✓	✓	✓	✓	-	✓
Partners for Fish and Wildlife Program	FWS provides technical and financial assistance to private landowners, tribes, nonprofit organizations, and local governments to identify and carry out voluntary habitat restoration projects to benefit species such as salmon and bull trout.	✓	-	-	-	-	-
Puget Sound Coastal Program	FWS works with partners to protect, restore, and enhance fish, wildlife, and plant resources by carrying out habitat restoration projects, such as a project that removed derelict fishing nets from Puget Sound.	✓	✓	✓	-	-	✓
Puget Sound stormwater science team	FWS works with the Environmental Protection Agency, NOAA, and a local university to conduct research on stormwater issues, including assessing the impacts of toxic stormwater runoff on salmon and their habitats in urban watersheds in the Puget Sound region.	-	-	✓	✓	✓	✓

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Name of effort	Description	Types of restoration activities supported by the effort					
		Habitat restoration	Habitat protection	Water quality	Monitoring	Research	Education/outreach
<i>U.S. Geological Survey (USGS)</i>							
Coastal Habitats in Puget Sound	USGS provides scientific support for ecosystem restoration activities in Puget Sound, such as conducting studies focused on large river delta restoration outcomes and contaminants in forage fish.	✓	✓	-	✓	✓	✓
Environmental technical assistance to the U.S. Navy	USGS provides technical assistance to the U.S. Navy on activities such as monitoring to identify pollution sources and assess the effectiveness of groundwater remediation at Naval installations.	-	-	✓	✓	✓	-
Fish Health Research Program	USGS developed methods to detect and identify pathogens and diagnose fish diseases, including investigating how temperature, contaminants, and other human-introduced stressors influence aquatic animal diseases.	✓	✓	✓	✓	✓	-
Groundwater and instream flows availability	USGS collaborates with federal and nonfederal partners to assess the availability of groundwater and develop tools for sustainably managing groundwater and surface water resources, which helps inform planning and guidelines related to instream-flow requirements for fish.	✓	✓	✓	✓	✓	-
Juvenile salmon within an estuarine landscape	USGS collaborates with NOAA and the Tulalip Tribes to evaluate how diverse estuarine habitats influence the behavior of juvenile salmon in the Snohomish River estuary.	✓	✓	-	✓	✓	-
Pacific Northwest Stream Quality Assessment	USGS assesses the quality of Puget Sound streams by characterizing water-quality factors that are stressors to aquatic life and evaluating the relationship between these stressors and biological communities.	✓	✓	✓	✓	✓	-

**Appendix II: Catalog of Efforts Identified by
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Name of effort	Description	Types of restoration activities supported by the effort					
		Habitat restoration	Habitat protection	Water quality	Monitoring	Research	Education/outreach
Puget Sound Coastal Storm Modeling System	USGS predicts and maps the impacts of storm surge, storm-driven waves, sea-level rise, and associated river flooding to inform Puget Sound ecosystem recovery and coastal community resilience planning.	✓	✓	-	-	✓	✓
Puget Sound nutrients project	USGS developed a predictive model for nutrient attenuation in rivers to help prioritize where nutrient source reductions would most benefit Puget Sound.	✓	✓	✓	✓	✓	-
Puget Sound stream temperature mapping and modeling	USGS develops high resolution maps that show the spatial and temporal variability in stream temperature in the Puget Sound basin.	✓	✓	✓	-	✓	-
Regional Stormwater Monitoring Program	USGS monitors the status of water quality and aquatic habitat in small distributed streams throughout the Puget Sound region.	-	-	✓	✓	✓	-
Department of Transportation							
<i>Federal Highway Administration (FHWA)</i>							
Fish barrier correction on federal-aid eligible roadways	FHWA provides federal-aid highway funds to Washington State, some of which are used to help replace fish barrier culverts with fish-passable culverts or bridges on federal-aid eligible roadways.	✓	-	-	-	-	-
Stormwater treatment as part of transportation projects	FHWA provides federal-aid highway funds to Washington State to treat stormwater flowing off impervious surfaces from transportation projects. These improvements are done to comply with required permits but also contribute to Puget Sound restoration.	-	✓	✓	✓	-	-
Environmental Protection Agency (EPA)							
Clean Water Act Section 106	EPA provides grants to states and tribes to establish and implement ongoing water pollution control programs.	✓	✓	✓	✓	✓	✓

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Federal Entities that Supported Restoration
Activities in Puget Sound**

Name of effort	Description	Types of restoration activities supported by the effort					
		Habitat restoration	Habitat protection	Water quality	Monitoring	Research	Education/outreach
Environmental Protection Agency (EPA)							
Clean Water Act Section 303(d)	EPA assists states and tribes in submitting lists of impaired waters and establishing the maximum amount of a pollutant allowed in a waterbody.	-	-	✓	✓	✓	✓
Clean Water Act Section 319	EPA provides grants to states and tribes that support a wide variety of activities to enhance nonpoint source pollution efforts.	✓	✓	✓	✓	✓	✓
Clean Water State Revolving Fund	EPA provides communities with low-cost financing for a wide range of water quality infrastructure projects.	-	-	✓	✓	✓	-
Drinking Water State Revolving Fund	EPA provides financial support to water systems and state safe water programs to help ensure safe drinking water.	-	-	✓	✓	✓	-
National Estuary Program	EPA provides funds through grants and interagency agreements with state agencies and tribes to help implement the Puget Sound comprehensive conservation and management plan and fund restoration projects, among other things.	✓	✓	✓	✓	✓	✓
National Pollutant Discharge Elimination System	EPA has oversight authority over Washington State's administration of the National Pollutant Discharge Elimination System permit program to regulate point sources of pollution, such as wastewater treatment facilities and industrial facilities. EPA fully implements the program for federal facilities and tribal lands in the state.	-	✓	✓	✓	-	-
Superfund	EPA is responsible for the clean-up and recovery of the nation's most contaminated lands, including sites within Puget Sound.	✓	✓	✓	✓	✓	-

**Appendix II: Catalog of Efforts Identified by
Federal Entities that Supported Restoration
Activities in Puget Sound**

Name of effort	Description	Types of restoration activities supported by the effort					
		Habitat restoration	Habitat protection	Water quality	Monitoring	Research	Education/ outreach
Environmental Protection Agency (EPA)							
Water enforcement	EPA supports water enforcement programs in Washington State, such as watershed monitoring to better identify sources of fecal coliform bacteria.	-	-	✓	✓	✓	-

Legend: ✓ = yes, - = no.

Source: GAO analysis of federal agency survey responses and documentation. | GAO-18-453

³This table does not include entries for each entity's participation in the Puget Sound Federal Task Force or its predecessor, the Puget Sound Federal Caucus. Two federal agencies that we surveyed—the Federal Transit Administration and the U.S. Coast Guard—are not included in this table because they did not identify any applicable restoration efforts in their survey responses.

Appendix III: Catalog of Efforts Identified by State Entities that Supported Restoration Activities in Puget Sound

As part of our first objective to examine Puget Sound restoration efforts, we surveyed 11 state entities and asked them to provide information about their efforts that have supported Puget Sound restoration activities.¹ We used the same six general categories of restoration activities as in the catalog of federal efforts in appendix II:

- Habitat restoration
- Habitat protection
- Water quality improvement
- Monitoring
- Research
- Education and outreach

Table 5 presents a catalog of applicable state efforts from state fiscal years 2012 through 2016 based on the survey responses from each state entity.² The table includes a wide range of efforts, including some efforts that focused exclusively on restoration-related activities and other efforts that had a broader scope of work that in some cases did not center directly on restoration. We further developed some information presented in the table based on information obtained from other sources, such as agency websites and documentation, and follow-up communications with the state entities. We did not evaluate whether each entity had included all relevant efforts in their responses.

¹Specifically, we asked survey respondents to identify all of their agency's programs or initiatives that supported Puget Sound recovery activities, which in this report we refer to as restoration activities. For the purposes of our report, we collectively refer to the programs and initiatives as restoration efforts.

²The Washington State fiscal year is a 12-month period extending from July 1 to June 30.

**Appendix III: Catalog of Efforts Identified by
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Activities in Puget Sound**

Table 5: State Efforts Identified by State Entities that Supported Restoration Activities in Puget Sound, State Fiscal Years 2012 through 2016

Name of effort	Description (Received federal funds: Yes/No)	Types of restoration activities supported by the effort					
		Habitat restoration	Habitat protection	Water quality	Monitoring	Research	Education/ outreach
<i>Puget Sound Partnership</i>							
Lead development of overarching recovery plans	The Partnership leads the collaborative effort to develop <i>The Action Agenda for Puget Sound</i> and update the Puget Sound Salmon Recovery Plan. (Received federal funds: Yes)	✓	✓	✓	✓	✓	✓
Oversee assessment of Puget Sound restoration progress	The Partnership oversees efforts to assess restoration progress, including managing the Puget Sound Ecosystem Monitoring Program and producing progress reports. (Received federal funds: Yes)	✓	✓	✓	✓	✓	✓
Stewardship activities	The Partnership supports and coordinates communication efforts, including cultivating a network of partners and ensuring they have the tools and resources they need to implement Puget Sound recovery actions. (Received federal funds: Yes)	✓	✓	✓	✓	✓	✓
<i>Washington Department of Fish and Wildlife (WDFW)</i>							
Estuary and Salmon Restoration Program	WDFW works with the Washington State Recreation and Conservation Office on this program to provide grants to protect and restore the Puget Sound nearshore ecosystem, such as by removing shoreline armoring (e.g., seawalls). (Received federal funds: Yes)	✓	✓	✓	✓	✓	✓

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Activities in Puget Sound**

Name of effort	Description (Received federal funds: Yes/No)	Types of restoration activities supported by the effort					
		Habitat restoration	Habitat protection	Water quality	Monitoring	Research	Education/ outreach
Habitat Strategic Initiative	WDFW works with the Washington State Department of Natural Resources to lead the Habitat Strategic Initiative from <i>The Action Agenda for Puget Sound</i> , including using funds from EPA to provide grants to local entities for habitat restoration projects. (Received federal funds: Yes)	✓	✓	✓	✓	✓	✓
Hydraulic Project Approval Program	WDFW administers environmental permits to ensure that in-water construction activities, such as dredging or pier construction, do not harm salmon, forage fish, and other species. (Received federal funds: No)	✓	✓	✓	-	-	✓
Intensively Monitored Watershed Project	WDFW works with Ecology to assess the effectiveness of restoration activities on salmon production at locations in Puget Sound. (Received federal funds: Yes)	✓	-	-	✓	✓	-
Marine and Nearshore Lead Organization	WDFW funds projects that implement priorities of <i>The Action Agenda for Puget Sound</i> to protect and restore marine and nearshore habitat and ecosystem functions. (Received federal funds: Yes)	✓	✓	✓	✓	-	✓
Natural Resource Damage Assessment	WDFW works with federal and state partners to assess damage caused by historic polluters and award funding to address damage caused by historic polluting activities. (Received federal funds: No)	✓	-	✓	✓	✓	-

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Activities in Puget Sound**

Types of restoration activities supported by the effort							
Name of effort	Description (Received federal funds: Yes/No)	Habitat restoration	Habitat protection	Water quality	Monitoring	Research	Education/ outreach
Puget Sound Nearshore Ecosystem Restoration Project	WDFW partners with the U.S. Army Corps of Engineers on this large-scale habitat restoration effort. In particular, WDFW has performed initial feasibility and design work and has developed foundational science to support and prioritize restoration actions. (Received federal funds: No)	✓	-	✓	-	✓	✓
Puget Sound recovery technical assistance	WDFW provides technical assistance on restoration projects and guidance to local governments on recovery strategies and restoration activities. (Received federal funds: Yes)	✓	✓	✓	-	-	✓
Puget Sound restoration implementation	WDFW partners with federal agencies on federal funding opportunities to advance state habitat restoration priorities. (Received federal funds: Yes)	✓	✓	✓	✓	✓	✓
Regional Fisheries Enhancement Program	WDFW engages local communities in restoring salmon and steelhead populations throughout Washington and enhances, restores, and protects habitat for native stocks of fish. (Received federal funds: Yes)	✓	✓	✓	✓	-	✓
<i>Washington State Conservation Commission (WSCC)</i>							
Conservation Reserve Enhancement Program	WSCC works with the U.S. Department of Agriculture to restore riparian habitat by, for example, providing incentives for agricultural landowners to establish riparian buffers along fish-bearing streams. (Received federal funds: Yes)	✓	✓	✓	✓	-	✓

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Activities in Puget Sound**

Types of restoration activities supported by the effort							
Name of effort	Description (Received federal funds: Yes/No)	Habitat restoration	Habitat protection	Water quality	Monitoring	Research	Education/ outreach
Funding for on-farm projects and practices	WSCC funds a variety of on-farm projects, some of which support Puget Sound restoration by benefiting water quality and habitat. (Received federal funds: No)	✓	✓	✓	✓	-	✓
Funding for projects to benefit shellfish	WSCC funds projects to reduce water quality impacts to shellfish growing areas by, for example, installing livestock exclusion fencing and improving manure management. (Received federal funds: Yes)	✓	✓	✓	-	-	✓
Puget Sound Regional Conservation Partnership Program	WSCC works with the Natural Resources Conservation Service and nonfederal partners to install and maintain conservation practices, such as reducing nutrient loading through improved livestock management, in focused watersheds and sub-basins to achieve measureable resource improvements. (Received federal funds: Yes)	✓	✓	✓	✓	✓	✓
Support for conservation districts	WSCC provides funding to support conservation district staff capacity and program implementation in the Puget Sound region that benefits restoration efforts. (Received federal funds: Yes)	✓	✓	✓	✓	-	✓
Voluntary Stewardship Program	WSCC provides information to agricultural landowners on the protection of critical areas and works with them to develop stewardship plans for these areas and to obtain funds to implement projects. (Received federal funds: No)	✓	✓	✓	✓	-	✓

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Activities in Puget Sound**

Name of effort	Description (Received federal funds: Yes/No)	Types of restoration activities supported by the effort					
		Habitat restoration	Habitat protection	Water quality	Monitoring	Research	Education/ outreach
<i>Washington State Department of Agriculture (WSDA)</i>							
Dairy Nutrient Management Program	WSDA helps to protect water quality from livestock nutrient discharges by sampling to identify the sources of discharges, inspecting and investigating dairies, and by performing education and outreach to dairy farms about best management practices to protect surface and ground waters. (Received federal funds: Yes)	-	-	✓	✓	✓	✓
Natural Resources Assessment Section	WSDA addresses the impacts of agriculture chemicals on natural resources through actions such as monitoring for pesticide residues in surface waters and by educating farmers about best management practices to protect surface waters from pesticides. (Received federal funds: Yes)	-	-	✓	✓	✓	✓
<i>Washington State Department of Commerce</i>							
Community Development Block Grants	Commerce manages this federal grant program in Washington State to help rural communities by funding a wide variety of projects, including projects such as wastewater treatment plant upgrades that may benefit Puget Sound. (Received federal funds: Yes)	-	-	✓	-	-	-
Permit mapping project	Commerce produced a zoning map for all Puget Sound jurisdictions to allow for analysis of development patterns, and it produced time series maps of residential development activity to show where land conversions have occurred. (Received federal funds: Yes)	-	-	-	✓	✓	✓

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State Entities that Supported Restoration
Activities in Puget Sound**

Types of restoration activities supported by the effort							
Name of effort	Description (Received federal funds: Yes/No)	Habitat restoration	Habitat protection	Water quality	Monitoring	Research	Education/ outreach
Public Works Trust Fund	Commerce provides financial assistance in the form of low- or no-interest loans to local governments to repair, replace, or create infrastructure, such as wastewater treatment facilities. (Received federal funds: No)	-	-	✓	-	-	-
Regional Alliances Project	Commerce works with local communities to improve cross-jurisdictional land-use planning, including related to stormwater mitigation and protection and monitoring of environmentally critical areas. (Received federal funds: Yes)	-	✓	✓	✓	✓	✓
Watershed planning	Commerce works with the Washington Department of Ecology to provide financial and technical assistance to local governments and tribes around Puget Sound for planning and implementation of watershed-based approaches to protect and restore Puget Sound. (Received federal funds: Yes)	✓	✓	✓	-	✓	✓
<i>Washington State Department of Ecology</i>							
Beach Environmental Assessment, Communication and Health Program	Ecology monitors fecal indicator bacteria at high-use and high-risk saltwater beaches in Puget Sound. (Received federal funds: Yes)	-	-	✓	✓	✓	✓
Coastal Protection Fund - Terry Husseman Grants	Ecology provides grants that support locally sponsored projects to restore or enhance the natural environment, such as by removing shoreline armoring. Typical projects address water quality issues and fish and wildlife habitat protection. (Received federal funds: No)	✓	✓	✓	-	-	-

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Activities in Puget Sound**

Types of restoration activities supported by the effort							
Name of effort	Description (Received federal funds: Yes/No)	Habitat restoration	Habitat protection	Water quality	Monitoring	Research	Education/outreach
Floodplains by Design	Ecology jointly manages this program with the Partnership and The Nature Conservancy to restore natural floodplain functions, including habitat access and protection, flood storage and conveyance, and water quality improvement. (Received federal funds: No)	✓	✓	✓	-	-	✓
Freshwater Ambient Monitoring Program	Ecology monitors freshwater quality through monthly monitoring at fixed and rotating locations, as well as continuous stream flow monitoring. (Received federal funds: Yes)	-	-	✓	✓	✓	-
Freshwater Fish Contaminant Monitoring Program	Ecology analyzes fish tissue from lakes and rivers for chemicals that may harm humans or animals, including heavy metals, pesticides, and mercury. (Received federal funds: No)	-	-	✓	✓	✓	-
Local Source Control Partnership	Ecology provides free, on-site technical assistance to help small businesses manage their hazardous waste correctly and avoid contaminating stormwater. (Received federal funds: Yes)	-	-	✓	-	-	✓
Lower Duwamish Waterway Source Control Strategy	Ecology develops permit requirements and takes other actions, such as water quality sampling, to help identify and reduce toxic pollutants in the surface water and sediments of the Lower Duwamish Waterway. (Received federal funds: Yes)	-	-	✓	✓	✓	✓
Marine sediment monitoring	Ecology conducts long-term monitoring of seafloor habitat and sediment to assess changes in the ecosystem and to help prioritize restoration efforts. (Received federal funds: Yes)	-	-	✓	✓	✓	✓

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Types of restoration activities supported by the effort							
Name of effort	Description (Received federal funds: Yes/No)	Habitat restoration	Habitat protection	Water quality	Monitoring	Research	Education/outreach
Marine water column monitoring	Ecology conducts long-term water quality monitoring in Puget Sound to assess changes in the ecosystem and to help prioritize restoration efforts. (Received federal funds: Yes)	-	-	✓	✓	✓	✓
National Coastal Wetlands Conservation Grant Program	Ecology works with local and tribal entities to apply for grants from the U.S. Fish and Wildlife Service National Coastal Wetlands Conservation Grant Program for the acquisition and restoration of coastal wetland properties. (Received federal funds: Yes)	✓	✓	-	-	-	✓
National Estuary Program Toxics and Nutrients Grant Program	Ecology uses an Environmental Protection Agency (EPA) grant to fund a variety of projects, such as implementing best management practices, which address toxic and nutrient pollution sources to Puget Sound. (Received federal funds: Yes)	✓	✓	✓	✓	✓	✓
National Estuary Program Watershed Protection and Restoration Grants	Ecology uses an EPA grant to provide sub-awards to other entities, such as local governments, to implement projects, such as stormwater retrofits and riparian plantings, to protect and restore ecosystem processes and functions. (Received federal funds: Yes)	✓	✓	✓	✓	✓	✓
National Pollutant Discharge Elimination System (NPDES) Municipal Stormwater Permits	Ecology administers Clean Water Act NPDES municipal stormwater permits in Washington, which require local governments to manage and control polluted stormwater runoff. (Received federal funds: Yes)	-	✓	✓	✓	✓	✓

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Activities in Puget Sound**

Types of restoration activities supported by the effort							
Name of effort	Description (Received federal funds: Yes/No)	Habitat restoration	Habitat protection	Water quality	Monitoring	Research	Education/ outreach
NPDES Wastewater Discharge Permits and State Waste Discharge Permits	Ecology issues permits to municipalities and industries that discharge wastewater to ensure they meet water quality standards. Ecology also conducts compliance inspections and enforces compliance with permit limitations. (Received federal funds: Yes)	-	-	✓	✓	-	-
Nonpoint sources of pollution	Ecology addresses nonpoint sources of pollution by taking actions such as identifying best management practices to reduce or eliminate polluted agricultural, forestry, and stormwater runoff. (Received federal funds: Yes)	✓	✓	✓	✓	✓	✓
Persistent, Bioaccumulative, and Toxic Chemicals Monitoring Program	Ecology conducts long-term monitoring to understand levels and trends of toxic chemicals in the environment, such as mercury trends in fish tissue. (Received federal funds: No)	-	✓	✓	✓	✓	✓
Reducing persistent, bioaccumulative, and toxic chemicals	Ecology works with partners to develop chemical action plans to identify important sources of lead and other toxic chemicals and to recommend how to reduce or eliminate them. (Received federal funds: No)	-	-	✓	-	✓	✓
Reducing toxic chemicals in products	Ecology conducts chemical hazard assessments and alternatives assessments on priority toxic chemicals to identify safer chemical alternatives. (Received federal funds: Yes)	-	-	-	✓	✓	✓

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Activities in Puget Sound**

Types of restoration activities supported by the effort							
Name of effort	Description (Received federal funds: Yes/No)	Habitat restoration	Habitat protection	Water quality	Monitoring	Research	Education/outreach
Stormwater Action Monitoring Program	Ecology administers this regional monitoring program with local government stakeholders to monitor Puget Sound lowland streams, evaluate the effectiveness of stormwater best management practices, and identify and eliminate illicit discharges to stormwater. (Received federal funds: No)	-	-	✓	✓	✓	✓
Total Maximum Daily Load Process	Ecology conducts watershed studies to identify pollution sources and develop plans for source reductions, as called for in the Clean Water Act, so that impaired surface waters can be improved to meet water quality standards. (Received federal funds: Yes)	✓	✓	✓	✓	✓	✓
Toxics cleanup	Ecology manages or oversees cleanups of contaminated sites, defined as any site where there is one or more confirmed or threatened releases of hazardous substances. (Received federal funds: No)	✓	✓	✓	✓	✓	-
Water quality assessment	Ecology conducts water quality assessments of rivers, lakes, and marine waters in the state to ensure compliance with the Clean Water Act and identify waters that are impaired. (Received federal funds: Yes)	-	✓	✓	✓	✓	-
Water quality improvement funding programs	Ecology uses funding from EPA and the state to support water quality improvement projects, such as upgrading wastewater treatment facilities and stormwater management and control. (Received federal funds: Yes)	✓	✓	✓	✓	✓	✓

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Activities in Puget Sound**

Types of restoration activities supported by the effort							
Name of effort	Description (Received federal funds: Yes/No)	Habitat restoration	Habitat protection	Water quality	Monitoring	Research	Education/outreach
Water quality standards	Ecology sets water quality standards that serve as the basis for protecting and regulating the quality of surface waters in Washington State. These standards implement portions of the Clean Water Act by, for example, specifying the designated and potential uses of water bodies and by establishing criteria to protect those uses. (Received federal funds: Yes)	✓	✓	✓	✓	✓	-
<i>Washington State Department of Health</i>							
National Estuary Program: Pathogen Prevention, Reduction and Control Lead Organization	Health administers sub-awards for an EPA grant to prevent, reduce, and control pathogen pollution of marine and freshwaters by, for example, providing funds to local health jurisdictions to locate and remediate sources of bacterial pollution. (Received federal funds: Yes)	-	-	✓	✓	✓	✓
Shellfish Program	Health monitors and evaluates marine water quality in shellfish growing areas and works with partners to ensure that pollution sources are found and fixed to restore water quality. Health also licenses and certifies the shellfish industry to ensure shellfish is safe for human consumption. (Received federal funds: Yes)	-	-	✓	✓	✓	✓
Wastewater Management Program	Health provides funds to local counties and health districts in the Puget Sound basin to inventory and inspect on-site sewage systems and to ensure that any failing systems are repaired. (Received federal funds: Yes)	-	-	✓	✓	✓	✓

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Types of restoration activities supported by the effort							
Name of effort	Description (Received federal funds: Yes/No)	Habitat restoration	Habitat protection	Water quality	Monitoring	Research	Education/outreach
<i>Washington State Department of Natural Resources (DNR)</i>							
Aquatic Reserves, Natural Areas, and Natural Heritage Programs	DNR identifies habitats and species that merit higher levels of protection and management and supports them through activities such as monitoring and restoration within the boundaries of state aquatic reserves and other specially designated sites. (Received federal funds: Yes)	✓	✓	✓	✓	✓	✓
Creosote Removal	DNR removes toxic creosote-treated pilings and debris that wash onto beaches, lagoons, and estuaries of Puget Sound and removes creosote-treated structures and pilings that no longer serve a function. (Received federal funds: Yes)	✓	✓	✓	-	-	-
Derelict Vessel Removal Program	DNR removes derelict and abandoned vessels that pose ongoing risks to marine and freshwater aquatic habitat. (Received federal funds: No)	✓	✓	✓	-	-	✓
Family Forest Fish Passage Program	DNR works with the Recreation and Conservation Office to provide financial assistance to small forest landowners to remove fish passage barriers, such as culverts, on their forest roads. (Received federal funds: No)	✓	✓	✓	-	-	-
Forest Practices Habitat Conservation Plan	DNR protects aquatic and riparian-dependent species habitat on state and private forestlands. Projects completed under this effort include fish passage barrier removal. (Received federal funds: No)	✓	✓	✓	✓	✓	✓

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Activities in Puget Sound**

Types of restoration activities supported by the effort							
Name of effort	Description (Received federal funds: Yes/No)	Habitat restoration	Habitat protection	Water quality	Monitoring	Research	Education/ outreach
Forestry Riparian Easement Program	DNR protects habitat adjacent to fish-bearing streams by purchasing conservation easements from small forest landowners along riparian areas and adjacent slopes. (Received federal funds: No)	-	✓	✓	-	-	-
Land acquisitions and exchanges	DNR uses land acquisitions and exchanges to maximize the return on state lands, protect unique state uplands and aquatic areas, and produce better public access opportunities. (Received federal funds: Yes)	✓	✓	✓	-	-	-
Leasing program for State-owned Aquatic Lands	When DNR authorizes leases on lands owned and managed by the state, it may attach site-specific provisions to the lease, such as the removal of toxic materials, to protect habitat and other resources. (Received federal funds: No)	✓	✓	✓	-	-	✓
Nearshore monitoring and aquatic assessment	DNR conducts various research and monitoring activities focused on topics such as eelgrass, kelp, ocean acidification, and adaptive management. (Received federal funds: Yes)	✓	✓	-	✓	✓	✓
Puget Sound Conservation Corps	DNR provides service and training opportunities to young adults and military veterans through projects on state lands that restore and protect Puget Sound. (Received federal funds: No)	✓	✓	✓	✓	-	✓
Rivers and Habitat Open Space Program	DNR purchases conservation easements from private forest landowners to protect riparian forest lands and critical habitats for threatened and endangered species. (Received federal funds: No)	-	✓	-	-	-	-

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Activities in Puget Sound**

Types of restoration activities supported by the effort							
Name of effort	Description (Received federal funds: Yes/No)	Habitat restoration	Habitat protection	Water quality	Monitoring	Research	Education/ outreach
<i>Washington State Department of Transportation (WSDOT)</i>							
Fish passage barrier correction	WSDOT replaces culverts that act as barriers to fish passage in streams to improve access to upstream fish habitat for migrating fish. (Received federal funds: Yes)	✓	-	-	-	-	-
NPDES Municipal Stormwater Permit	WSDOT's NPDES municipal stormwater permit minimizes the discharge of stormwater pollutants into Puget Sound and its tributary watersheds by building and maintaining stormwater best management practices. (Received federal funds: Yes)	-	✓	✓	✓	✓	-
Washington State Ferries creosote piling removal & replacement	WSDOT replaces aging creosote-treated wood pilings at ferry terminals with steel, concrete, or approved treated wood pilings, which helps to improve water quality by preventing pollution from creosote. (Received federal funds: Yes)	-	✓	✓	-	-	-
Washington State Ferries ferry terminal sweeping	WSDOT uses street sweepers to sweep holding areas and other paved surfaces at its ferry terminals to remove pollutants that collect on the surface and prevent them from entering Puget Sound through stormwater runoff. (Received federal funds: No)	-	-	✓	-	-	-
<i>Washington State Office of Financial Management (OFM)</i>							
Governor's Shellfish Initiative	OFM works with federal, state, and local partners to support shellfish recovery by taking actions to improve water quality in Puget Sound, restore native Olympia oyster habitat, and address the effects of ocean acidification. (Received federal funds: No)	✓	-	✓	✓	✓	✓

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Activities in Puget Sound**

Types of restoration activities supported by the effort							
Name of effort	Description (Received federal funds: Yes/No)	Habitat restoration	Habitat protection	Water quality	Monitoring	Research	Education/ outreach
<i>Washington State Recreation and Conservation Office (RCO)</i>							
Aquatic Lands Enhancement Account	RCO manages the funding for this statewide grant program, which acquires and restores shoreline and aquatic lands adjacent to navigable waters. (Received federal funds: No)	✓	✓	-	-	-	-
Estuary and Salmon Restoration Program	RCO works with WDFW to jointly manage this program, which funds restoration projects focused on protecting and restoring the nearshore ecosystem in Puget Sound, such as by removing shoreline armoring (e.g., seawalls). (Received federal funds: Yes)	✓	✓	✓	✓	✓	✓
Family Forest Fish Passage Program	RCO manages the funding for this statewide program and works with DNR to provide financial assistance to small forest landowners to remove fish passage barriers on their forest roads. (Received federal funds: No)	✓	-	-	-	-	-
Governor's Salmon Recovery Office	RCO manages the Governor's Salmon Recovery Office, which is responsible for maintaining the state's salmon recovery strategy, advocating for funding, and coordinating the state, local, and regional implementation of approved recovery plans. (Received federal funds: Yes)	-	-	-	-	-	✓
Manage capacity funding for Puget Sound salmon recovery efforts	RCO manages the federal and state funding used to support local efforts to identify and vet salmon recovery projects, as well as to support the Partnership's efforts to ensure that these projects are consistent with the Puget Sound Chinook Recovery Plan. (Received federal funds: Yes)	✓	✓	-	-	-	✓

**Appendix III: Catalog of Efforts Identified by
State Entities that Supported Restoration
Activities in Puget Sound**

Types of restoration activities supported by the effort							
Name of effort	Description (Received federal funds: Yes/No)	Habitat restoration	Habitat protection	Water quality	Monitoring	Research	Education/outreach
Monitoring program for salmon recovery	RCO manages various monitoring activities related to salmon recovery, including monitoring the effectiveness of projects funded by the Salmon Recovery Funding Board. (Received federal funds: Yes)	-	-	-	✓	-	-
Puget Sound Acquisition and Restoration Fund	RCO jointly manages this fund with the Partnership to support habitat protection and restoration projects, such as culvert replacements, levee setbacks, and acquisition of important habitat for salmon. (Received federal funds: No)	✓	✓	✓	-	-	-
Puget Sound Critical Stock Grant Program	RCO provides grants under this program for projects to protect and restore salmon habitat. (Received federal funds: Yes)	✓	✓	-	-	-	-
Salmon Recovery Funding Board	RCO manages the funding for restoration projects and other activities approved by the Salmon Recovery Funding Board. (Received federal funds: Yes)	✓	✓	✓	✓	-	✓
Washington Invasive Species Council	RCO manages this council, which helps to coordinate the state's strategy for controlling or preventing the spread of invasive species, including aquatic nuisance species. (Received federal funds: Yes)	-	-	-	-	-	✓
Washington Wildlife and Recreation Program	RCO provides funding under this program to acquire critical riparian corridors, important natural areas, and other wildlife habitat. (Received federal funds: No)	-	✓	-	-	-	-

Legend: ✓ = yes, - = no.

Source: GAO analysis of state agency survey responses and documentation. | GAO-18-453

Appendix IV: Comments from the Environmental Protection Agency



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 10
1200 Sixth Avenue, Suite 155
Seattle, WA 98101-3123

OFFICE OF THE REGIONAL
ADMINISTRATOR

JUN 29 2018

Mr. J. Alfredo Gómez
Director, Natural Resources and Environment
Government Accountability Office
441 G Street N.W.
Washington, DC 20548

Dear Mr. Gómez:

Thank you for the opportunity to review and comment on the GAO Draft Report, *Puget Sound Restoration: Additional Activities Could Improve Assessment of Progress* (GAO-18-453). The U.S. Environmental Protection Agency appreciates the impressive undertakings of your staff to understand the scope and intricacies of this program as well as coordinating with multiple federal agencies, Tribal, state, and local partners in developing this thorough and thoughtful draft.

The EPA generally agrees with the conclusions and two recommendations contained in GAO's Draft Report, and in both cases the EPA is already taking actions that are consistent with the recommendations:

- 1) **Recommendation:** The EPA Region 10 Administrator should work with the management conference on future updates to the Comprehensive Conservation and Management Plan (CCMP) to help prioritize among the indicators that currently lack measurable targets and ensure that such targets are developed for the highest priority indicators where possible.

Response: The EPA agrees with this recommendation and have begun working with the Puget Sound Partnership and other Management Conference partners to identify this as a priority for the next review of the Action Agenda and Comprehensive Plan, as well as to develop a clear plan for advancing this priority. We also acknowledge the challenges associated with certain Vital Signs that are not necessarily conducive to quantitative measurements such as valuable social science and human centered Vital Signs but will work to identify solutions. Progress has already been made to evaluate the current set of indicators and Vital Signs through the Puget Sound Partnership led Indicators Evolution Project¹. The recommendations that have resulted from this structured and scientifically informed process will inform both adjustments to the current set of indicators and future target setting.

- 2) **Recommendation:** The EPA Region 10 Administrator should work with the appropriate members of the Federal Task Force (FTF) regional implementation team to clearly link, such as through the tracking tool, the Federal Action Plan's priority federal actions to the CMP's framework for assessing progress toward Puget Sound Restoration

Response: The EPA agrees with this recommendation and have already met with the Puget Sound Federal Task Force Regional Leadership and Implementation Teams who agree to

¹ "Evolving the portfolio of indicators to assess and report on the condition and recovery of the Puget Sound ecosystem: moving from theory from practice." (2017) Authors: S. O'Neill, C. Sullivan, S. Redman, K. Styles, H. Harguth, T. Collier

review the five-year Action Plan and specify how each of the 77 actions (and new actions) connect to the Vital Signs, Implementation Strategies, objectives/sub-objectives where appropriate, and to the Science priorities in the Action Agenda.

This crosswalk process will begin in January 2019 when the new four-year Action Agenda from the Puget Sound Partnership is approved.

The EPA would like to acknowledge and emphasize the collaborative nature of this program and the strengths of our relationships with the Puget Sound Partnership serving as the backbone organization, leadership from other state agencies, Tribal, local and federal partners including the Puget Sound Federal Task Force, as well as Non-Governmental Organizations, and other interested stakeholders. The success of this program is dependent on these coordinating partnerships.

Should you have any questions about this letter please feel free to contact me at (206) 553-1234, or Peter Murchie, Manager of the Puget Sound National Estuary Program at (206-553-1148), or by email at Murchie.Peter@epa.gov.

Sincerely,



Chris Hladick *for*
Regional Administrator

Appendix V: Comments from the Puget Sound Partnership



June 27, 2018

J. Alfredo Gómez
Director, Natural Resources and Environment
Government Accountability Office
441 G St. N.W.
Washington, DC 20548

RE: **Puget Sound Partnership Comment on GAO-18-453: Draft Report to the Committee on Transportation and Infrastructure, House on Representatives on Puget Sound Restoration (the "Report")**

Dear Mr. Gómez,

Thank you for providing us the opportunity to review and provide feedback on the Report. We appreciate the thorough and extensive work that has gone into this assessment and feel that it does a good job describing a complex landscape.

There are a few points that we would like to raise:

(1) In the interest of efficiency, the Partnership has historically used the same primary planning document, the Action Agenda, to meet both state statutory requirements as well as to serve as Puget Sound's CCMP. The state statutory framework is separate from the federal CCMP requirements. The state system is managed by the Partnership and its boards. The federal system brings into the picture the notion of the Management Conference, which does not exist as such in state law.

Because the distinction and difference between these two concurrent systems has historically been a source of confusion, and because the state system provides foundational infrastructure and leverage that we would want to be understood, please consider making the distinction explicit in the beginning of the Report.

Appendix V: Comments from the Puget Sound Partnership

Gomez
Page 2
June 27, 2018

The following is a potential revision to the text on Page 9 that would address this issue:

- From: *"The current CCMP for Puget Sound is known as The 2016 Action Agenda for Puget Sound"*
- To: *"The CCMP for Puget Sound is also known as the Action Agenda for Puget Sound, which is developed pursuant to state directives in Chapter 90.71 of the Revised Code of Washington. In the interest of efficiency, the state prepares the Action Agenda so as to comply with CCMP regulations."*

(2) It is correct, as stated in the Report, that not all of the indicators have targets. There is work with EPA and others to prioritize and explore targets for some of those indicators but, in many cases, the setting of targets is not feasible or necessarily of added value. We believe other barriers and impediments mentioned in the report have served as more significant barriers (i.e., lack of adequate resources, insufficient political will and public support).

(3) When the Report states that spending amounts are "unknown," it would be helpful to emphasize that investing in efforts to set up data collection and input systems would make it possible to report more completely on spending for Puget Sound recovery. With the right data collection infrastructure in place, these are questions we would be able to answer and which would be highly helpful for supporting optimized decisions.

(4) We absolutely agree that the Puget Sound Federal Task Force is a powerful tool for increasing alignment and efficiency and that direct ties between that work and the Action Agenda would result in a more efficient system.

Thank you again for your teams' efforts in understanding and recommending improvements to our Puget Sound recovery system. We appreciate your partnership in this effort.

Sincerely,



Sheida R. Sahandy
Executive Director

cc: Joshua Weiner, Analyst in Charge, Government Accountability Office
Laura Blackmore, Deputy Director, Puget Sound Partnership

Appendix VI: GAO Contact and Staff Acknowledgments

GAO Contact

J. Alfredo Gómez, (202) 512-3841 or gomezj@gao.gov.

Staff Acknowledgments

In addition to the individual named above, Janet Frisch (Assistant Director), Susan Iott (Assistant Director), Joshua Wiener (Analyst in Charge), Chuck Bausell, Stephen Betsock, Mark Braza, Ellen Fried, Jack Granberg, Carol Henn, Gina Hoover, Karen Howard, Vondalee Hunt, Benjamin T. Licht, Jeffery Malcolm, John Mingus, Patricia Moyer, Dan C. Royer, Sara Sullivan, Sarah Veale, and Arvin Wu made key contributions to this report.

Related GAO Products

Great Lakes Restoration Initiative: Improved Data Collection and Reporting Would Enhance Oversight. [GAO-15-526](#). Washington, D.C.: July 21, 2015.

Great Lakes Restoration Initiative: Further Actions Would Result in More Useful Assessments and Help Address Factors That Limit Progress. [GAO-13-797](#). Washington, D.C.: September 27, 2013.

Chesapeake Bay: Restoration Effort Needs Common Federal and State Goals and Assessment Approach. [GAO-11-802](#). Washington, D.C.: September 15, 2011.

Recent Actions by the Chesapeake Bay Program Are Positive Steps Toward More Effectively Guiding the Restoration Effort, but Additional Steps Are Needed. [GAO-08-1131R](#). Washington, D.C.: August 28, 2008.

Coastal Wetlands: Lessons Learned from Past Efforts in Louisiana Could Help Guide Future Restoration and Protection. [GAO-08-130](#). Washington, D.C.: December 14, 2007.

South Florida Ecosystem: Restoration Is Moving Forward but Is Facing Significant Delays, Implementation Challenges, and Rising Costs. [GAO-07-520](#). Washington, D.C.: May 31, 2007.

Chesapeake Bay Program: Improved Strategies Are Needed to Better Assess, Report, and Manage Restoration Progress. [GAO-06-96](#). Washington, D.C.: October 28, 2005.

Great Lakes: Organizational Leadership and Restoration Goals Need to Be Better Defined for Monitoring Restoration Progress. [GAO-04-1024](#). Washington, D.C.: September 28, 2004.

Great Lakes: An Overall Strategy and Indicators for Measuring Progress Are Needed to Better Achieve Restoration Goals. [GAO-03-515](#). Washington, D.C.: April 30, 2003.

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