

GAO Highlights

Highlights of [GAO-24-105687](#), a report to congressional requesters

Why GAO Did This Study

Salmon in Washington State's Puget Sound region provide food and jobs for many people and hold particular cultural significance for Tribes in the region. However, Puget Sound salmon populations have declined, in part due to the degradation of water quality.

GAO was asked to review efforts to improve water quality to help recover salmon populations in Puget Sound. This report examines (1) how impaired water quality affects the health of Puget Sound salmon; (2) the extent to which EPA has worked with Ecology to develop impaired waters lists for the Puget Sound region since 2012; and (3) the actions EPA and Ecology have taken under the Clean Water Act to address impaired water quality in the region, and the challenges they face.

GAO examined federal, state, and other documents; interviewed officials and representatives from federal and nonfederal entities; and analyzed data from Washington's most recent impaired waters list.

What GAO Recommends

GAO reiterates its recommendation from 2013 that Congress should consider revising the Clean Water Act's largely voluntary approach to restoring waters impaired by nonpoint source pollution. GAO also recommends that EPA work with Ecology to develop a plan documenting the actions the agencies will take to meet the required submission and approval deadlines for Washington's impaired waters lists. EPA agreed with this recommendation and Ecology expressed some concerns about it. GAO maintains that the recommendation is warranted, as discussed in the report.

View [GAO-24-105687](#). For more information, contact J. Alfredo Gómez or Cardell D. Johnson at (202) 512-3841, gomezj@gao.gov or johnsoncd1@gao.gov.

November 2023

PUGET SOUND

Further Actions Could Improve Efforts to Address Impaired Water Quality That Threatens Salmon

What GAO Found

Water quality impairments—such as elevated water temperatures and toxic chemicals—have a variety of harmful effects on Puget Sound salmon. For example, scientists have discovered that a chemical in tire dust that enters water bodies via stormwater runoff is extremely toxic to some salmon species (see fig.).

Puget Sound Coho Salmon That Died Following Exposure to Stormwater Runoff



A carcass of a female coho salmon affected by the toxic chemical 6PPD-quinone in stormwater runoff in Seattle's Longfellow Creek. This salmon died before spawning, retaining nearly 100 percent of its eggs.

Source: Tiffany Linbo, National Oceanic and Atmospheric Administration. | [GAO-24-105687](#)

The Environmental Protection Agency (EPA) oversees the Washington State Department of Ecology's efforts to develop statewide lists of water bodies that do not meet water quality standards. The Clean Water Act and EPA regulations require states to develop these lists—known as impaired waters lists—every 2 years. Ecology has developed two such lists since 2012, but it completed these lists several years after the deadlines for doing so and has missed subsequent deadlines. EPA also has not met deadlines for reviewing and approving the lists. Because of the agencies' missed deadlines, the most recent list covered the 2014, 2016, and 2018 assessment cycles but was not finalized until 2022.

Missed deadlines can hamper entities working to improve water quality in the Puget Sound region by preventing them from having updated information to support their decision-making. However, EPA and Ecology have not yet developed a written plan to prevent further missed deadlines. By working with Ecology to develop such a plan, EPA could better ensure that timely water quality information will be available to Congress, other decision makers, and the public.

EPA and Ecology have taken various actions to improve water quality in Puget Sound but face challenges. For example, nonpoint source pollution from diffuse sources such as agricultural runoff contributes to impaired water quality. However, under the Clean Water Act, EPA does not have direct authority to require landowners to take prescribed actions to reduce such pollution. Supported in part by EPA funding, Ecology primarily relies on voluntary actions to address nonpoint source pollution. However, officials said there are limits to the progress that can be made through voluntary actions alone. In 2013, GAO recommended that Congress consider revising the act's approach to restoring waters impaired by nonpoint source pollution, but Congress has not yet acted on this recommendation.