ENVIRONMENTAL BULLETIN

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Washington Water Quality Standards

U.S. Environmental Protection Agency, Region 10 | Washington State Department of Ecology

Ecology to revise Washington's Water Quality Standards following EPA ruling

The U.S. Environmental Protection Agency (EPA) announced that it is formally disapproving parts of Washington's water quality standards because they do not go far enough under the Clean Water Act to protect salmon and bull trout in certain streams and rivers. The Washington State Department of Ecology (Ecology) intends to propose a new set of rules to fix the deficiencies identified by EPA.

Why did EPA disapprove parts of the standards?

In 2003, Ecology revised its water quality standards and adopted three maximum temperature criteria (17.5°C, 16°C, 12°C) that apply to specific river segments to protect salmon and bull trout. At the time, Ecology planned to further analyze fish-use information and, as necessary, revise where these temperature criteria apply. Ecology also adopted special criteria to protect salmon and bull trout spawning areas (13°C and 9°C, respectively) to be applied on a case-by-case basis following the additional analysis of the fish-use information.

Under the federal Clean Water Act, EPA must review and approve or disapprove a state's water quality standards to ensure that they are protective. EPA must also make sure its approval of a state's standards does not jeopardize listed species under the Endangered Species Act (ESA) or adversely modify their critical habitat. Given these requirements for use protection, EPA was unable to accept Ecology's plans to review fish uses as assurance that the uses would be protected.

As part of its review, EPA analyzed available fish-use information to determine if the standards were protective. EPA concluded the standards for some streams and rivers were too warm to protect salmon and bull trout, and determined that it was necessary to identify the specific areas where changes to the fish-use designations and more protective temperature criteria are needed to meet federal requirements.

What areas will be impacted?

As part of its disapproval notice, EPA identified specific areas throughout the state where it has determined that the temperature criteria are not protective. For example, EPA is specifying changes for all major rivers that drain into Puget Sound, such as the Nooksack, Skagit, Stillaguamish, Snohomish, Green, Puyallup, and Nisqually Rivers. These rivers include important spawning, rearing, and migration habitat for ESA threatened species of Chinook salmon and bull trout.

Maps that show where EPA has specified more stringent temperature criteria can be found online at: www.epa.gov/r10earth/washington-wqs.htm.

Who will be affected by the revisions to the temperature criteria?

Many activities contribute to water temperature problems. Over the last century, trees that provide shade along river banks have been removed due to forestry and agricultural practices and urban development. Rivers have been altered by dams to store water and levees for flood control. And in a few cases, industrial and municipal discharges can warm a stream. Although some programs are already in place to restore temperatures and meet existing standards, the more protective water quality standards will help focus needed improvement to protect salmon and bull trout.

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Why is temperature such a critical issue?

Salmon (including steelhead) and bull trout need cold water temperatures to survive and to sustain a healthy population. Warm rivers impair the growth of salmon and bull trout, make them more susceptible to disease, and cause them to be out-competed by fish that prefer warmer temperatures. Human-caused warming of river temperatures has been identified by the National Marine Fisheries Service and the U.S. Fish and Wildlife Service as a key limiting factor in the recovery of salmon and bull trout in the State of Washington (for example, in the draft Puget Sound Recovery Plan).

What actions can be done to cool rivers and streams?

Actions to cool rivers include planting and protecting trees near streams to provide shade; reducing sediment runoff and establishing more logs in streams to create deeper channels and cool pools; removing or setting back levees to allow streams to wander more naturally, thereby increasing cool groundwater inflow; restoring summer stream flow to make streams less susceptible to warming; and minimizing hot water discharges from industrial and municipal sources. These actions, which cool rivers and restore fish habitat, have begun to be implemented in many watersheds in the state.

What are the implications for other criteria, such as dissolved oxygen?

Changing the fish-use designations for some streams will also result in more stringent dissolved oxygen criteria. Specifically, the dissolved oxygen criteria for streams that are changed to a more stringent use designation will increase from 8.0 mg/L to 9.5 mg/L. Although Ecology did not revise its dissolved oxygen criteria in 2003, the National Marine Fisheries Service and the National Fish and Wildlife Service have indicated possible concerns that the current dissolved oxygen limits, even at the more stringent use designation, may not be protective enough. Ecology has committed to further study dissolved oxygen affects on fisheries uses over the next two years. No other criteria will be affected by the changes to fish-use designations.

What happens next?

After EPA disapproves a state's water quality standards, the state has the opportunity to fix the deficiencies by adopting revisions to its standards. Ecology intends to propose a new set of rules to address the use designation and temperature issues needed to gain EPA approval. Ecology will move quickly to hold hearings and begin the administrative process required to change the water quality standards regulation. EPA, tribes and federal fish agencies have committed to help support the State as it moves forward with these corrections.

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Alternative formats are available. For reasonable accommodation, please call Charles Bert, EPA, at 360-753-8073. TTY users, please call the Federal Relay Service at 800-877-8339.