

Setting Instream Flows in Washington State

One of the Department of Ecology's highest priorities is to help ensure there is enough water to meet the present and future needs of people and the natural environment. And protecting stream flows - that is, the naturally varying amount of water flowing in a stream or river - is one of our most important water management tools. **Specific stream flow amounts protected in a regulation are called "instream flows."**

Both the natural environment and our community water supplies rely on healthy stream flows. Yet many streams around the state are often below or quickly approaching critical low flow levels. As more streams drop to historic lows, community and instream values are impacted. And in the future the rate of declining stream flow levels will likely increase, as population growth and reduced snowpack continue to put more stress on this finite resource.

Q: What is an instream flow?

A: An instream flow is a water right for the stream and the resources that depend on it. It has a priority (effective) date like any other water right. It is the stream flow amounts that will protect and preserve instream resources and uses (see sidebar for definition).

Example of an instream flow: Instream flows set on the Kalama River in southwest Washington are measured at River Mile 2.8. The flows range from 1050 cfs in December to 900 cfs in June and 400 cfs from August 16-31. (WAC 173-527)

The term "instream flow" identifies a specific stream flow level (measured in cubic feet per second, cfs) at a specific location on a given

stream. The weather causes natural flow variations throughout the year, so an instream flow is a range (a "regime") instead of a single number.

Once an instream flow is set, people who receive new water rights (who are "junior" to the stream's water right) are required to stop using water during times of shortage. Instream flows do not affect existing (senior) water rights, rather, they protect the river from future withdrawals.

WHY IT MATTERS

The Legislature has instructed Ecology to set instream flows to "protect and preserve instream resources." Watershed planning and other groups around the state are examining local water resources and many are choosing to work with Ecology to establish or revise instream flows in their watersheds.

The intent is to set instream flows throughout the state. Washington residents will find it helpful to understand more about setting instream flows and the importance of instream flows as a water management tool.

Instream resources and values as defined in state law include fish and wildlife, aesthetics, water quality, navigation, livestock watering and recreation, all of which depend on adequate amounts of water in our rivers.

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Special accommodations:

To ask about the availability of this document in a version for the visually impaired call the Water Resources Program at 360-407-6872. Persons with hearing loss, call 711 for Washington Relay Service. Persons with a speech disability, call 877-833-6341.

Setting instream flows does not put water in streams.

In state law, the terms “base flow” and “minimum instream flow” mean the same as “instream flow.”

Q: Why are stream flows important?

A: Low stream flows put fish, wildlife and other resources at risk. Sufficient stream flows are required to support fishing, recreation, stockwatering, navigation and other uses of water. Stream flows contribute to the scenic and aesthetic qualities of natural settings. Stream flows influence ground water levels, as well as other surface water (e.g. wetlands, lakes and ponds). Flow levels are a key aspect of water quality. High flows have their own role in supporting a healthy stream. “Out of stream” water uses, including farming, industry and domestic water supplies can also be harmed by low stream flows.



Q: What is an “instream flow rule”?

A: Under state law, Ecology and other executive branch agencies may write administrative rules or regulations, to implement state law. Once adopted, these rules become part of the Washington Administrative Code (WAC).

An instream flow rule is a flow regime set in a state regulation. The Legislature has directed Ecology through state law to protect and preserve instream resources (see sidebar on page one). One of the ways Ecology fulfills this mandate is to set instream flows in rule. Refer to the map on page 3 for the status of instream flow setting around the state.

Instream flow and water management rules

The instream flow rules developed since 2000 are much more complex and comprehensive than their counterparts in the 1970’s and early 1980’s. While we still tend to refer to the more recent regulations by the shorthand “instream flow rules,” these rules are more accurately called “instream flow and water management rules,” or “water resources management programs.”

In addition to setting flows, typical instream flow rules now include broader water management strategies. Current rules strive to lay down guidelines that will protect existing water rights and instream resources, while providing water for future urban and rural needs. These rules may address how to manage permit-exempt ground water withdrawals, establish water reserves and their conditions of use, determine seasonal and year-round closures, and use other innovative and complex water management tools.

Q: How could setting instream flows affect me?

A: Instream flow/water management rules only affect water right decisions made *after* the adoption date of the rule. Therefore such rules will not affect people with:

- Existing or “senior” water rights: water rights that predate the rule’s date of adoption.

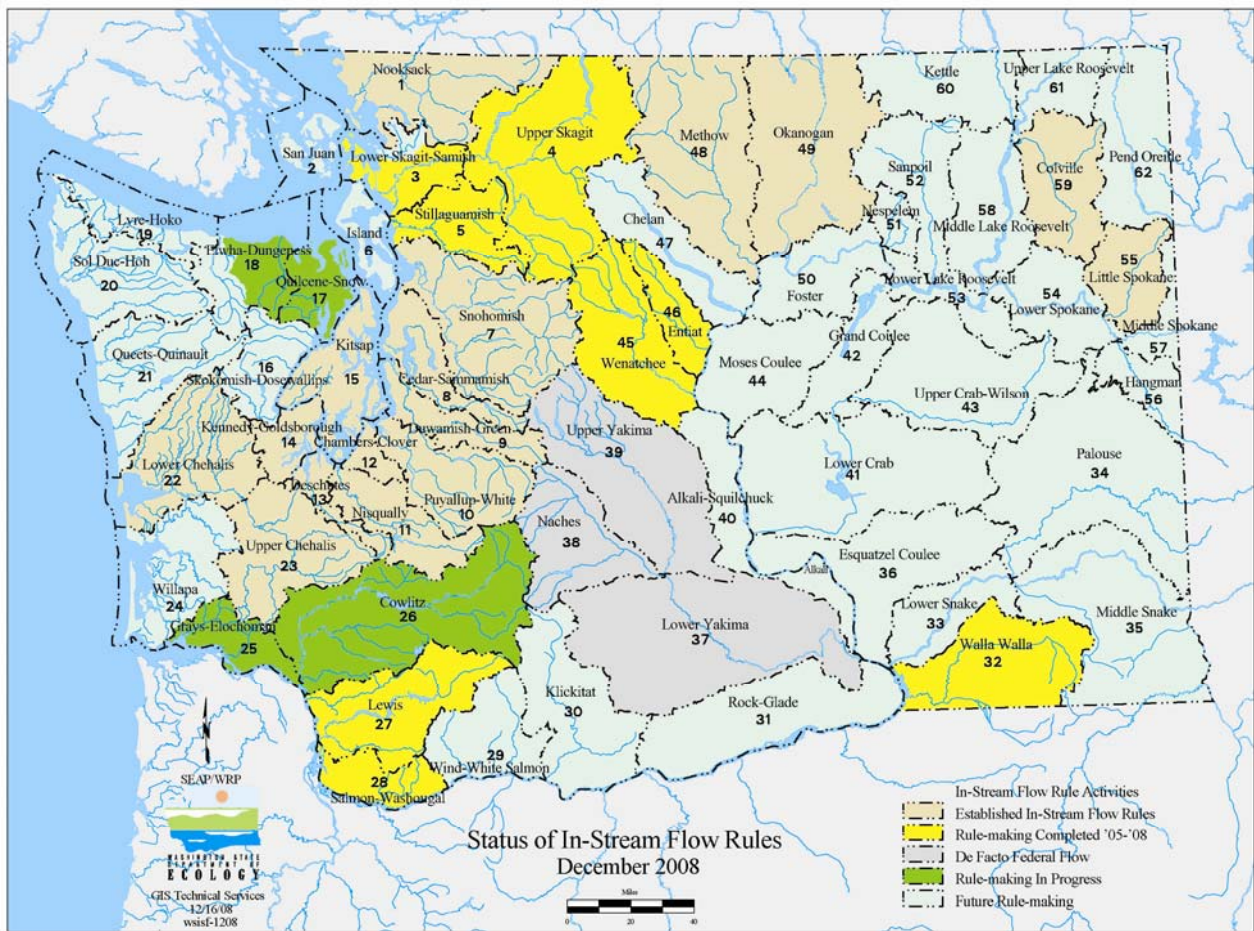
Washington State water law is based on the **prior appropriation doctrine**, often characterized as “first in time, first in right.” Water rights have an effective or “priority” date which determines one’s access to water. In times of water shortage, older (more senior) water right holders have their water needs satisfied first.

Permit-exempt wells are ground water withdrawals for certain amounts and uses which are exempt from the water right permitting process, as described in RCW 90.44.050. While exempt from the permitting process, these withdrawals are still subject to all other state water laws.

- Existing permit-exempt wells.
- Water supplied by municipal or community water systems.

Water rights secured after the rule adoption date will be “junior” to the instream flows. Water won’t be available when flows fall below the instream flow levels. And junior water users will

be subject to any other water management strategies and requirements specified in the rule. For example, water for new year-round household uses may come from a water reserve and have certain conditions of use associated with it.



Q: Are instream flows all about protecting fish? What about people?

A: Washington state law requires that instream resources, including fish (see sidebar on page 1), have adequate flow levels to protect and preserve them. When setting flows, a lot of discussion centers around fish needs because fish are considered an “indicator species” – if the fish are doing well, then generally other instream resources are too. And fish needs can be more easily quantified by existing methods than other instream values. This is why fish studies are the basis for determining instream flow levels.

Adequate stream flows are important for instream resources and values that directly impact people, including water quality, recreational activities like fishing, boating and swimming, and the scenic and aesthetic qualities of natural settings in Washington State. (See also “Why are stream flows important?” on page 2.)



When making decisions about how to distribute water, it is necessary to know how much is needed and how much is available. Adopting instream flow rules allow Ecology to determine whether there is enough water for additional out-of-stream uses and allows local communities to plan for their water needs.

Q: How are instream flow numbers determined?

A: Fish studies are the basis for determining instream flow numbers (see previous question). While everyone agrees fish need water to survive, not everyone agrees on how much. Fortunately, there are ways to answer the question scientifically. The first step is to calculate the stream flows needed to protect fish spawning and rearing: a fish habitat study. (“Habitat” simply refers to the environment that fish live in.)

The most commonly used methods by Ecology and the Washington Department of Fish and Wildlife for studying fish habitat are “Toe-width” and the “Instream Flow Incremental Methodology” (IFIM). For more information on these methods, refer to Ecology publication #09-11-019 or the Ecology website (listed under the last question, below).

But a fish habitat study cannot by itself determine the instream flow required by fish populations. Instream flows are based on the best available science in the fields of biology and hydrology, and by professional judgment. Data from the studies are integrated with an understanding of the stream flow needs of the fish and other instream values and balanced with the water needs of people.

Q: What are the laws that allow Ecology to set flows by rule?

A: The legal authority to set instream flows by rule comes from laws passed by the state legislature, including:

- Construction projects in state waters (RCW 77.57.020)
- Water code (RCW 90.03.247)
- Minimum water flows and levels (Chapter 90.22 RCW)
- Water resources act of 1971 (Chapter 90.54 RCW, particularly section 020)
- Watershed planning (RCW 90.82.080)

Q: Where can I find more information on instream flows?

A: For scientific or technical questions about setting instream flows, contact:

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Ecology website: <http://www.ecy.wa.gov/programs/wr/instream-flows/isfhtm.html>