



# Frequently Asked Questions about TMDLs and Drought - 2005

From Ecology's Water quality Program, Watershed Management Section

## Water Temperature Total Maximum Daily Loads

**Q:** *How can I get current information about drought conditions in Washington?*

**A:** The Department of Ecology has launched a 2005 Drought Web site at:  
<http://www.washingtondrought.org>

**Q:** *How bad is the drought? Could it be the worst on record?*

**A:** Unlike other natural disasters — like earthquakes and severe storms — droughts unfold slowly and affect different areas, in different ways, at different times. It is too early to predict how this drought will compare with past droughts.

**Q:** *Why is it too early to tell how bad this drought will be?*

**A:** It is still spring, so it is possible that cool temperatures and lots of wet weather might reduce the severity of drought conditions in some parts of the state. However, because the weather in mid-November 2004 through mid-March 2005 was so abnormally dry and warm, Washington did not get anywhere near its usual rain and mountain snowpack accumulations, which is why a state drought emergency has been declared.

**Q:** *Where are the effects of the drought being felt right now?*

**A:** Right now, drought conditions are particularly acute in eastern Washington, especially the Yakima River basin area. However, western Washington also will feel the effects of drought later this summer. In a normal year, melting mountain snow combines with spring rains to keep water flowing in rivers and creeks. But with the usual snowpack "bank account" nearly empty already, many Washington river systems are expected to face low to record-low levels from now through fall. Low flows can threaten fish survival, reduce recreational uses, and allow water pollution to concentrate to unhealthy levels.

**Q:** *Why measure water temperatures for TMDL studies in the summer?*

**A:** Stream temperatures are generally highest in July and August. This is the time of year when temperatures can exceed standards. In the case of a temperature TMDL, the study typically figures out how much temperature needs to be reduced to achieve water quality standards all year long.

Analysis and modeling is also done for the lowest seven-day flow that is expected to occur every other year and at the one in ten-year level. This average condition modeling is done to help define an expected range of summer high temperatures.

**Q:** *Why measure water temperatures during a drought?*

**A:** TMDL study calculations are generally used to find the worst case scenario for the stream, and so are based on a low seven-day flow condition that is expected to occur one out of every ten years. A drought illustrates the worst case scenario. If resulting flows for this summer are at the

one in ten-year level, then the stream temperature analysis will have more real time data and need to make fewer assumptions. If practices are implemented that will insure the stream temperature meets the TMDL targets during the worst case scenario, then it can meet the TMDL targets most all the time.

**Q: *What if streams go dry this summer or are too low to measure?***

**A:** If resulting flows ultimately are far lower than usual this summer (e.g., a one in fifty-year condition), then data collection may need to occur a second year. Data collected in 2003 and 2004 by others in the basin can also be analyzed to allow a view of temperature conditions that have occurred under other flow conditions.

Ecology expects to collect a large amount of stream flow data in July, in the case that later August in stream flows are much lower than a one in ten-year condition.

**Q: *Why are low stream flows bad?***

**A:** Low levels of flowing water in our streams and rivers can:

- Restrict fish passage and degrade habitat.
- Raise water temperatures.
- Degrade water quality by concentrating pollutants.
- Affect recreational activities like fishing and boating.
- Impact farmers and other people who rely on taking water directly from a river or stream for irrigating crops and other uses.
- Indicate that underground (ground) water levels could be dropping, too.

**Q: *What can I do right now to conserve water at my home?***

**A:** There are many things you can do to use water wisely. For example, here are some things you can do outside to save water around your home.

- Consider converting to low-water landscaping.
- Select the right plants for the right place and choose plants, shrubs, and trees that need minimal water.
- Consider drip irrigation for plants, shrubs, and trees.
- Water your lawn early in the morning or later in the evening, and be mindful when it's windy. The water you're using may not be getting to your plants and garden.
- Limit the water you use to approximately one inch per week, including rainfall. For best results, moisten the soil between 4 and 6 inches deep with each watering.

Here are some things you can do inside your home.

- Take shorter showers.
- Don't let the water run when you are shaving, brushing your teeth, or hand washing dishes.
- Turn on the tap only when you need it.
- Don't use faucets at full pressure.
- Make sure you have a full load before running your washing machine or dishwasher.
- Convert to water-efficient toilets, faucets, and showerheads. Check with your local utility; some offer free water-efficient shower heads and faucet aerators or give out rebates towards the purchase.

*If you need this information in an alternate format, please contact us at 360-407-6480. If you are a person with a speech or hearing impairment, call 711 or 800-833-6388 for TTY.*