# Focus

## Teanaway Temperature TMDL

### A plan to improve stream temperatures

The Teanaway River in upper Kittitas County does not meet state temperature standards and has been placed on the Washington State 303(d) list of impaired water bodies. The federal Clean Water Act of 1972 requires states to develop plans to correct the problems found in impaired water bodies.

**What is a 'TMDL'?**

Federal law requires states to identify sources of pollution in waters that fail to meet state water quality standards and to develop Total Maximum Daily Loads (TMDLs) to address these pollutants. These TMDLs (or "Water Clean-up Plans") establish limits on pollutants a stream can receive and still meet state standards.

The Teanaway River Temperature TMDL identifies increased temperatures as the impairing pollutant to the Teanaway River system. This project seeks to develop a plan for improving stream temperatures to meet water quality standards.

**Why is temperature important?**

- Temperature has a profound effect on organisms that live or reproduce in the water.
- When water temperature becomes too high, salmon and trout suffer a variety of ill effects, ranging from decreased spawning success to death.
- Federal law requires the state to protect the "most sensitive" beneficial uses found in water bodies.

**What have we found in the Teanaway river system?**

The Teanaway River system represents some of the highest quality streams and cold-water fish spawning and rearing areas in the Yakima River Basin. In the summer, maximum daily water temperatures in the Teanaway river system range from $12^{o}$ C ($54^{o}$F) near the headwaters to $26^{o}$ C ($79^{o}$ F) near the mouth.

Under state standards, temperatures should not exceed $16^{o}$ C ($61^{o}$ F) in the upper reaches and $18^{o}$ C ($64^{o}$ F) in the lower reaches of the river. When natural conditions exceed these numeric standards, human activities are not to increase stream temperatures by more than 0.3 degrees C. Data collected during the summer of 1998 show that, except near the headwaters, temperatures throughout the basin exceeded state water quality standards. Summer temperatures in the lower basin exceeded the standard more than 75 percent of the time.



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## What human activities influence stream temperatures?

Studies have shown that lack of riparian shade, excessive sediment load, and low stream flow can increase stream temperature. Land management activities, such as forest management, grazing, and agriculture, may affect temperature adversely where they damage vegetation adjacent to streams, cause excessive erosion of stream banks, add sediment to streams, reduce instream flow, or return warmed waters to the stream.

## What do you think?

Input is being sought from local groups and the public to help develop a plan for improving stream temperatures in the Teanaway River. Information gathered will be used to develop a strategy on how, when and where restoration activities will be implemented to improve stream temperatures.

Activities that enhance stream temperatures may include those that provide more shading, increase stream flows, and reduce sedimentation.

## For more information

If you have any questions about this project, please call Pat Irle at (509) 454-7864, or you may send an email to pirl461@ecy.wa.gov or write to Department of Ecology, 15 W. Yakima Ave. Suite 200, Yakima, WA 98902.

This focus sheet can be accessed through Ecology's homepage on the Web. The address is: http://www.wa.gov/ecology/biblio/0010008.html

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