



DEPARTMENT OF
ECOLOGY
State of Washington

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Project Update for the *Lower Yakima River Suspended Sediment TMDL*

In 1998, the Washington State Department of Ecology (Ecology) developed a total maximum daily load (TMDL) project (also called a water quality improvement project) to clean up suspended sediment and DDT in the lower Yakima River valley. The accompanying technical assessment report was titled *A Suspended Sediment and DDT Total Maximum Daily Load Evaluation Report for the Yakima River* (Joy and Patterson, 1997). The United States Environmental Protection Agency (EPA) approved this TMDL for protection of chronic aquatic life criteria in 1998.

The TMDL and the evaluation report contain specific load allocations for the first ten years. These documents clearly protected aquatic species, but were less precise about the levels of DDT that would be required to protect human health. The TMDL noted that the relationship between turbidity, suspended sediment, and DDT would likely change significantly after most of the suspended sediment was removed from the river. Therefore, the TMDL intended to identify specific human health load allocations for DDT starting in 2007.

After a second review of the TMDL in 2004, EPA made the following statement in a letter to Ecology:

“As explained in the 1997 Lower Yakima TMDL, the pesticide targets developed in this TMDL are derived from the chronic aquatic life criteria, and not the more stringent human health criteria. EPA's approval letter (11/25/98) specifically approves the Lower Yakima TMDL for chronic aquatic life (not human health). Because the TMDL was not written to meet the more stringent human health criterion, those waters for which data exists showing that human health standards are not being met need to remain in Category 5 until a TMDL is developed to meet a human health target. This comment applies to DDT, DDE and DDE listings on the Yakima River, Snipes Creek, Spring Creek, Granger Creek, Sulphur Creek, Side Hollow Creek [*sic*] and Moxee Drain.”

Note: instead of “Side Hollow Creek”, the correct name is “Wide Hollow Creek”.

Based on EPA's 2004 determination, Ecology initiated the following actions:

1. In 2005, all of the entries for DDT in WRIA 37 on Washington State's list of impaired water bodies [the 303(d) list] were moved from Category 4a (has a TMDL) back to Category 5 (needs a TMDL).
2. Ecology is developing a new water quality improvement plan that includes a new evaluation of current levels of DDT in the lower Yakima River valley, sets human health clean-up targets for DDT, and lays a path to achieve these targets. To date, Ecology's Environmental Assessment Program has completed two studies that evaluate pollutant levels for this new water quality improvement project (Johnson, A. et al., 2007 and Johnson, A., et al., 2010).
3. The original *Lower Yakima River Suspended Sediment TMDL* remains in place, although all new DDT-reduction work will be covered by the new water quality improvement plan.

References

Johnson, A. et al., 2010. Yakima River Pesticides and PCBs Total Maximum Daily Load: Volume 1. Water Quality Study Findings. Washington State Department of Ecology, Environmental Assessment Program. Publication No. 10-03-018. 324 pp.
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Johnson, A. et al., 2007. Chlorinated Pesticides, PCBs, and Dioxins in Yakima River Fish in 2006: Data Summary and Comparison to Human Health Criteria). Washington State Department of Ecology, Environmental Assessment Program. Publication No. 07-03-036. 76 pp.
<https://fortress.wa.gov/ecy/publications/SummaryPages/0703036.html>

Joy, J. and Patterson, B. 1997. A suspended sediment and DDT total maximum daily load evaluation report for the Yakima River. Washington State Department of Ecology, Environmental Investigations and Laboratory Services Program, Watershed Assessment Services. Publication No. 97-321. 121 pp.
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Washington State Department of Ecology. 1998. Lower Yakima River Suspended Sediment TMDL. Washington State Department of Ecology, Water Quality Program. Publication No. 98-10-202. 30 pp. <https://fortress.wa.gov/ecy/publications/SummaryPages/9810202.html>