



DEPARTMENT OF
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State of Washington

Lake Whatcom Models Review

*Independent review performed by Tetra Tech
for the Washington State Department of Ecology*

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Subject: **Lake Whatcom Models Review**

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The Washington Department of Ecology (WDOE) is developing a nutrient TMDL for Lake Whatcom, near Bellingham, WA. WDOE requested an independent review of the models and modeling documents prepared for this project. Attached you will find a summary of Tetra Tech's review of the HSPF watershed model and CE-QUAL-W2 model developed for Lake Whatcom. The review included evaluation of model inputs and outputs, model documentation and model code (for W2). Based on the reviews, this memo provides answers to the following questions:

1. Does the model appropriately simulate the physical, chemical, and biological processes relative to the decision needs?
2. Does the model appropriately incorporate relevant and available data?
3. Does the model reasonably predict observed water quality conditions given the available information?
4. Were standard modeling procedures and protocols followed?
5. What are the model's shortcomings? What are the implications of these shortcomings on conclusions drawn from the model?

