

**DEPARTMENT OF ECOLOGY**  
Environmental Assessment Program

**DATE:** January 18, 2007

**TO:** Mark Peterschmidt, TMDL Lead, Water Quality Program,  
Central Regional Office  
Jonathan Merz, Supervisor, Watershed Unit, Central Regional Office  
Denise Mills, Manager, Water Quality Program, Central Regional Office

**FROM:** Stephanie Brock, Project Manager, Nonpoint Studies Unit

**THROUGH:** Darrel Anderson, Supervisor, Nonpoint Studies Unit  
Will Kendra, Manager, Watershed Ecology Section

**SUBJECT: ADDENDUM TO QUALITY ASSURANCE PROJECT PLAN  
FOR THE NACHES RIVER TEMPERATURE  
TOTAL MAXIMUM DAILY LOAD**

**PROJECT CODE: 04-002-01**  
**PUBLICATION NO: 04-03-110add**

The Naches River Temperature Total Maximum Daily Load Study (Study) has proven to be a complex project that has extended beyond the expected time and resources allocated during initial scoping. The Study began in June 2004 with field data collection occurring between June and October. Model development started in September 2005. At this time, the Shade Model analyzing current vegetation is complete for the Naches and Tieton Rivers. The QUAL2Kw model, which analyzes the stream temperature dynamics, has been calibrated and verified for two time periods for the Tieton River. The QUAL2Kw model of the Naches River is underdevelopment but delayed because of the River's complicated flow regime. Since September 2006, Central Regional Office (CRO) Water Quality (WQ) Program staff and Environmental Assessment (EA) Program staff have been discussing options for completing/changing the scope of the Naches River Watershed Temperature Total Maximum Daily Load (TMDL).

At this time, the CRO WQ staff members are requesting that the scope of the Naches River Watershed Temperature TMDL be reduced by removing the Tieton River Watershed and the portion of the Naches River below the confluence of the Tieton River. The new project scope will include a QUAL2Kw model for the upper Naches River (United States Forest Service boundary to the confluence with the Tieton River) and estimates of potential shade generated for Cowiche Creek based on stream width and aspect.

The primary reason for reducing the scope of the TMDL in this manner is to reserve the removed portion of the watershed for inclusion in the Yakima River Mainstem Conventional TMDL. The Yakima River Mainstem TMDL will address water quality impairments on the primary river segments in the Yakima River Watershed where the large Bureau of Reclamation reservoirs control the river flows. See Attachment 1 for the full text of the Re-Scoping Memorandum.

<b>Environmental Information System (EIM) Data Set</b>	
EIM Data Engineer	Sara Livingston
EIM User Study ID	STEB0001
EIM Study Name	Naches River Temperature TMDL
EIM Completion Due	June 2007
<b>Groundwater Report</b>	
Study Tracker Code	04-002-02
Author Lead	Barb Carey
Schedule	
Final Report Due	1/31/2006
<b>Final Report</b>	
Author Lead	Stephanie Brock
Schedule	
Draft Due to Supervisor	May 2007
Draft Due to Client/Peer Reviewer	May 2007
Draft Due to External Reviewer	August 2007
Final Report Due	November 2007

SB:cn

Attachment 1: Naches River Temperature TMDL Study Re-Scoping Memorandum

cc: Ryan Anderson, TMDL Coordinator, Central Regional Office  
 Bill Kammin, Ecology Quality Assurance Officer  
 Dave Ragsdale, U.S. Environmental Protection Agency, Region 10

**Attachment 1:**  
**REQUEST FOR CHANGE OF SCOPE TO THE NACHES RIVER**  
**WATERSHED TEMPERATURE TMDL**

**To: Stephanie Brock, Darrel Anderson**  
**From: Mark Peterschmidt**

**Re: Request for change of scope to the Naches River Watershed Temperature TMDL**

The Naches River Temperature TMDL has proven to be a complex project that has extended beyond the expected time and resource allocated when the project was originally proposed. In order to complete temperature TMDLs in the Naches River Watershed, CRO WQ proposes the following scope changes to the Naches River Watershed Temperature TMDL project.

Central Regional Office Water Quality staff and Environmental Assessment Program staff have been discussing options for changing the scope of the Naches River Watershed Temperature TMDL. At this time the CRO WQ Staff are requesting that the scope of the Naches River Watershed Temperature TMDL be reduced by removing the Tieton River Watershed and the portion of the Naches River below the confluence of the Tieton River. The primary reasons for reducing the scope of the TMDL in this manner is to reserve the removed portion of the watershed for inclusion in the Yakima River Mainstem Conventional TMDL. The Yakima River Mainstem TMDL will address water quality impairments on the primary river segments in the Yakima River Watershed where the large Bureau of Reclamation reservoirs control the river flows. The Bumping River reservoir, which represents about 3% of the total controlled storage in the Yakima River Watershed, will remain in the Naches River Watershed Temperature TMDL under the reduced scope as it exerts a much less significant impact on the natural flows of the upper Naches River.

Removing the Tieton River Watershed and the lower portion Naches River from the scope of the Naches Temperature TMDL effectively divides the watershed into two remaining portions: the upper Naches River and Cowiche Creek.

CRO WQ staff would like to have the QUAL2Kw model run for the upper Naches River Watershed as the existing QAPP for the Naches Temperature TMDL called for. This will produce a river temperature model from the USFS boundary downstream to the confluence with the Tieton River.

The Cowiche Creek portion of the larger Naches River TMDL should be managed in a manner similar to the existing QAPP. The existing QAPP did not call for modeling of Cowiche Creek, but for estimates of potential shade generated for the creek based on stream width. A waste load allocation will be provided for the Cowiche Tieton Regional Wastewater Treatment Plant.

CRO WQ staffs feel that the Cowiche Creek is a good potential fit for applying Shade Curves as outlined in the October 2006 draft of the “Compendium of Tools for Addressing Stream Temperature Impairments.” The community in the Cowiche Watershed has been expecting a similar process under the Naches River Watershed Temperature TMDL QAPP. The community is already deeply involved with salmon recovery projects and many riparian restoration project designed to improve habitat will also benefit stream water temperatures. With this background the community is likely to accept Shade Curves.

In addition to potential community acceptance of Shade Curves, the Cowiche Watershed is fairly simple with a modest re-regulating reservoir on the North Fork of Cowiche Creek. The size of the Cowiche Creek watershed is also a small portion (11 % or 120 square miles) of the Naches River Watershed (1105 Sq Miles) which contributes to the sense of community that the residents of the watershed feel.

Addressing the upper Naches River and Cowiche Creek will capture all but one of the 303(d) listed segments originally planned for the Naches River TMDL. The isolated listing is on the South Fork of the Tieton River, just upstream from Tieton Dam Reservoir. This listing will be addressed separately at a later date.

The Compendium of Tools for Addressing Stream Temperature Impairments provides the following criterion for watersheds that are good candidates for Shade Curves:

- A watershed community that “buys in” to this approach, with a high likelihood of implementation.