Publication no. 13-10-040

September 19, 2013

Addendum to the Colville National Forest Temperature and Bacteria Total Maximum Daily Load: Water Quality Implementation Plan

The final target date for bacteria concentrations to meet water quality standards in this total maximum daily load (TMDL) will be extended five years, from October 2013 until October 2018.

Background: The water quality implementation plan (WQIP, Ecology publication 06-10-059) for the Colville National Forest TMDL for fecal coliform bacteria was adopted in October 2006. It covers thirteen streams in the national forest where the TMDL study (published June 2005) found bacteria levels higher than Washington State's water quality standard. The time set by the WQIP to meet the state's fecal coliform standard was seven years, i.e., by October 2013.

Since the WQIP was adopted, the Colville National Forest (CNF) has monitored each of the 13 streams annually from May through October, following the procedures described in the Quality Assurance Project Plan (January 2007) for the TMDL. The CNF has also been systematically updating their grazing allotments across the national forest, including working with allotment holders, to implement best management practices (BMPs) such as off-stream watering and fencing. In addition, the CNF restored various riparian areas and stream banks, and taken measures to prevent off-highway vehicle (OHV) use near streams and wetlands.

2013 monitoring: After reviewing the monitoring results through 2012, as well as other information provided by the U.S. Forest Service (USFS) about watershed conditions and improvement projects to date, Ecology and the CNF agreed that several of the sites consistently meet the state's fecal coliform standard and no longer need to be monitored. The creeks where monitoring for fecal coliform bacteria can be discontinued are Lambert, North Fork Lone Ranch, North Fork Sanpoil, Smackout, and Winchester.

Cottonwood Creek (a tributary to the Kettle River) and West Fork Trout Creek have complied with the standard most years. The USFS installed significant water quality improvement projects in both watersheds but opportunities still exist for further restoration work, especially in West Fork Trout Creek. It was agreed that monitoring would continue through 2013 but that both sites could be dropped from the monitoring program if the standard was met in 2013.

The remaining six streams failed to meet the standard during most years. They need additional monitoring to help determine probable causes for the high readings and possible ways to decrease bacteria levels. In most of these watersheds, the CNF will establish one or more additional monitoring sites upstream of the current monitoring stations to try to pinpoint the

source of the problem. The streams/watersheds needing this focused work are: Cottonwood Creek (a tributary to the Colville River), South Fork Mill Creek including Bestrom and Green Mountain Creeks, South Fork Chewelah Creek along with Wilson Creek, Lost and South Fork Lost Creeks, and Ruby Creek.

The following table lists the monitoring locations for 2013. The sites listed in the table will be sampled for fecal coliform bacteria once every ten working days, except Friday, from May through October 2013.

Fecal coliform bacteria monitoring locations for 2013.

SITE	LOCATION	BOUNDARY or SOURCE SEARCH?
South Fork Mill Creek	T36 R40 NE NW S24	Boundary
additional Mill Creek site (Bestrom Creek)	T36 R41 S20 SESW	Source search starting 2013
additional Mill Creek site (Green Mountain Creek)	T36 R41 S20 SESW	Source search starting 2013
South Fork Chewelah Creek	T33 R41 S23 NWSW	Boundary
Wilson Creek	T33 R41 S23 NENE	Boundary
Cottonwood Creek (WRIA 59)	T32 R42 SW NW S31	Boundary
additional Cottonwood Creek site (Cottonwood Below Betts Meadow)	T32 R45 S36 SWNE	Source search starting 2013
additional Cottonwood Creek site (East Branch Cottonwood Creek)	T32 R42 NE NW S31 NENW	Source search starting 2013
Lost Creek	T36 R43 S17 NW NE	Boundary
additional Lost Creek site (Lost above Nile Lake)	T37 R42 S35 SWNW	Source search starting 2013
additional Lost Creek site (Lost below Nile Lake)	T36 R42 S02 NWNE	Source search starting 2013
South Fork Lost Creek	T36 R43 S30 SENE	Boundary
Ruby Creek	T35 R43 S10 NESW	Boundary
additional Ruby Creek site (Middle Ruby Creek)	T35 R43 S08 SENE	Source search starting 2013
Cottonwood Creek (WRIA 60)	T40 R33 S33 NWNE	Boundary
West Fork Trout Creek	T38 R32 S33 NWNW	Boundary
additional WF Trout Creek site (WF Trout @ 500)	T38 R32 S35	Source search starting 2013

Furthersteps: Based on the results from the 2013 emphasis sampling, the CNF will develop strategies for bringing the streams listed in the monitoring locations table into compliance with the state's fecal coliform standard by October 2018.

For sites that meet the standard, the CNF will continue sampling at the original (boundary) monitoring site for two more years to make sure the 2013 results indicate the trend. If the site stays in compliance through 2015, that station can be dropped from the monitoring program.

At those sites where monitoring during 2013 shows bacteria levels higher than water quality standards and the CNF believes the problem is either due to natural conditions or caused by human activities outside the forest, the CNF will write up the results and the reasons for its conclusions. Ecology will review the results and reasoning to determine if monitoring can be discontinued at the site.

For sites that don't meet the standard and the problem appears to be both human-caused and originating on forest service lands, the CNF will write up the results along with a strategy for addressing the problem. This strategy needs to include a list of possible improvement projects, a schedule for doing the work, and plans for follow-up monitoring.

The report on the 2013 monitoring results needs to be submitted to Ecology by March 2014 so that water quality monitoring and BMP implementation can proceed during the 2014 field season.

Long term: Once TMDL implementation is completed, BMPs to prevent future bacteria pollution in streams will continue to be implemented forest-wide on grazing allotments and at other places where problems could arise, such as at developed and informal recreation areas. This will help meet the CNF's ongoing commitment to meet or exceed the state's water quality laws, as described in the Memorandum of Agreement (MOA) between Ecology and Region 6 of the U.S. Forest Service (November 2000).