



Pete Schade, a Senior Watershed Planner at the Montana Department of Environmental Quality, presents the results of a three year water quality study in the West Fork watershed at the BWTF annual meeting at Bucks T4 on August 25th. The draft TMDL document is available on the BWTF website (www.bluewatertaskforce.org/docs.php). Public comment is encouraged through email (TMDLComments@mt.gov) until September 13th, 2010.

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Two river otters spotted playing in the riffles of the Gallatin River by BWTF volunteers conducting a routine water quality sampling event.

Synopsis of a 3 year water quality study in the West Fork watershed

Water quality in the West Fork of the Gallatin watershed was studied over a three year period as part of the Montana Department of Environmental Quality (“MTDEQ”) Total Maximum Daily Load (“TMDL”) program. All of the individual water quality assessment reports and the draft TMDL document can be downloaded from the BWTF website (www.bluewatertaskforce.org/docs.php). Public comment on the draft TMDL document is encouraged until September 13th. TMDL comments can be emailed to CommentsTMDL@mt.gov. Below is a brief summary of the study results. For more information, including what you can do to make a difference, contact Kristin at (406) 993-2519 or visit the BWTF website (www.bluewatertaskforce.org).

E.Coli: E.coli is a bacteria that is found in the intestine of warm blooded animals and can be harmful to human health, if ingested. Potential sources of E.coli include human and animal waste. Low E.coli levels were observed in the South Fork of the West Fork of the Gallatin (“South Fork”) and the West Fork of the Gallatin (“West Fork”). High levels were recorded at four sites in the Middle Fork of the West Fork of the Gallatin (“Middle Fork”) during summer. However, at these same four sites, low levels were also observed during the summer and the winter. Because of the variability, we cannot be sure of the E.Coli source. Further study is required.

Sediment: Fine sediment can negatively impact habit required for fish spawning and aquatic insects. Sediment sources include construction without the proper Best Management Practices, road traction sand, vegetation removal, and undersized culverts. Excess fine sediment was found in the Middle Fork upstream of Lake Levinsky and in the West Fork.

Nutrients: Nutrients are required for aquatic life but too much can cause excess algae and low dissolved oxygen levels, which can adversely affect fish and their favorite food, aquatic insects. Human sources of nitrogen include human and pet waste, fertilizer, and vegetation clearing. High levels of nitrogen that exceeded state recommendations were observed in the Middle Fork upstream of Lake Levinsky and in the West Fork. Excess algae was observed in the lower portions of the South Fork.

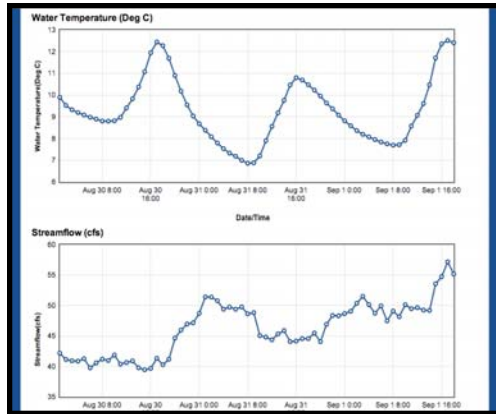
The mission of the Blue Water Task Force is to protect and preserve the health of the Gallatin River Watershed.

Got ideas to improve the health of local streams? We want to hear from you! BWTF receives grant to develop a Watershed Restoration Plan for the Upper Gallatin watershed.

▶ The Blue Water Task Force received a \$10,000 grant from the Montana Department of Environmental Quality (“MTDEQ”) to develop a Watershed Restoration Plan for the Upper Gallatin watershed. The Restoration Plan will serve as a blueprint for stream restoration projects in the area. Anyone with ideas for stream restoration projects is encouraged to contact BWTF and be on the lookout for a meeting to brainstorm ideas for potential stream restoration projects to be held this winter. Stream restoration projects that are listed in a MTDEQ approved Watershed Restoration Plan will receive priority for federal and state funding.

Real-time stream data available on the BWTF website

▶ Real-time stream data is available to view on the BWTF website. Stream data at four sites on the West Fork, Middle Fork, South Fork, and the North Fork is being streamed to Montana State University (“MSU”) and then uploaded onto the BWTF website. Also available on the BWTF website is weather data from a weather station on Big Sky Water and Sewer District property in Meadow Village. Although, the website graphs only show a three day period, all historical data can be obtained through the Watershed Hydrology Lab at MSU.



Example of real-time stream data available on the BWTF website. The upper graph is water temperature and the lower graph is streamflow, both in the West Fork of the Gallatin. Data is available for viewing at www.bluewatertaskforce.org under the “stream data” tab.



BWTF’s youngest volunteer, Elijah Harder, out doing routine maintenance on one of the real-time streamflow sensors on the Middle Fork.

Aquatic Insects as story tellers of water quality

▶ Caddisflies, Mayflies, Stoneflies...living in or even visiting Montana you have probably heard of these aquatic insects. But did you know that aquatic insects can be very useful in revealing the health of our streams and rivers? This is because some types of aquatic insects are more tolerant to water pollution than others. In a polluted stream, one would expect a greater number of pollution tolerant species and very little, if any, species that are sensitive to pollution (e.g. stoneflies are very sensitive to pollution). While, in a healthy stream, one would expect many types of aquatic insects with an abundance of species that require good water quality. Because of the differing aquatic insect populations in healthy and polluted streams, collecting and analyzing aquatic insects can reveal information about water quality. In other words, aquatic insects can be storytellers of the health of our streams and rivers.



Stoneflies prefer cool clean water and are an indicator of a healthy stream.

BWTF has been collecting aquatic insects to help evaluate the health of the streams and rivers in the Upper Gallatin watershed since 2000. Twice a year, volunteers collect aquatic insects in “bug” nets and send them to a laboratory for analysis. The laboratory analyzes the aquatic insect populations and sends BWTF a report of its findings. All aquatic insect reports are available on the BWTF website at www.bluewatertaskforce.org/docs.php.

FOR MORE INFORMATION

On any BWTF activities please contact:
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