

North Fork Coeur d'Alene River Watershed Advisory Group

Draft Meeting Notes
September 14, 2017
8:30-11:30 am
Graham Creek, Shoshone County, ID

Next meeting: TBD

Please visit the WAG website:

<http://www.deq.idaho.gov/north-fork-cda-river-subbasin-wag>

Contact:

Kajsa Van de Riet at (208) 666-4633 or kajsa.vanderiet@deq.idaho.gov

Participants: Melissa Hendrickson, Fred Brackebusch, Amanda Parrish, Jim Ekins, Rebecca Stevens, Duncan Pfeifer, Kajsa Van de Riet, Craig Nelson, Todd Higen, John Ryskamp, Chantilly Higbee, Dan Redline

Meeting Purpose: To convene the Watershed Advisory Group for the purposes of water quality improvements and protection in the North Fork Coeur d'Alene River Subbasin through Total Maximum Daily Load development and implementation. This meeting was a special field trip for the WAG to see Graham Creek and get hands-on demonstrations of monitoring procedures and equipment.

If there are questions about these notes, mistakes or omissions, please contact Kajsa Van de Riet at DEQ.

As a group, we went down to Graham Creek to see demonstrations of two monitoring tools:

Environmental DNA (eDNA) - DEQ staff Craig Nelson and Todd Higen demonstrated a relatively new technology that can detect the presence of certain organisms based on their genetic material being in a sample collected from a stream. Craig and Todd followed standard protocols to pump a known volume of water from the stream across a filter. The filter is then submitted to a lab for analysis. This is a sensitive, cost-effective, simple, non-lethal (for the organisms), and safe (for the field crew) technique to detect certain organisms such as cutthroat trout, bull trout, or western pearlshell mussel.

For more information, see:

<https://www.fs.fed.us/research/genomics-center/edna/>

https://www.fs.fed.us/rm/boise/AWAE/projects/BullTrout_eDNA.html

Backpack Electrofishing - DEQ staff Craig Nelson, Todd Higen, and John Ryskamp demonstrated how to use a backpack electrofishing unit to sample fish in wadeable streams. Collecting fish samples by electrofishing is one of the important components of DEQ's Beneficial Use Reconnaissance Program (BURP) for assessment of wadeable streams. For safety, we did not turn on the electrofishing unit, but the crew demonstrated how it would be used to sample a

range of habitats, how nets would collect stunned fish, and how the fish would be identified and measured and released back into the stream.

For more information, see:
<http://www.deq.idaho.gov/burp>

The group then divided into smaller groups and rotated between two stations:

Macroinvertebrate (Bugs) & Physical Habitat Sampling - DEQ staff Craig Nelson, Todd Higen, and John Ryskamp demonstrated how to use a Hess net to sample macroinvertebrates (bugs) in wadeable streams. They collected some insects in Graham Creek and had a chance to look at what was present in the stream. These insects can be indicators of water quality and are an important component of Idaho's BURP program for wadeable streams. They also discussed some of the physical habitat assessments we do, especially related to sediment.

For more information, see:
<http://www.deq.idaho.gov/burp>

Solar Pathfinder Sampling for Shade - DEQ staff Kajsa Van de Riet and Chantilly Higbee demonstrated how DEQ uses the Solar Pathfinder tool to collect digital images and estimate stream shade. Originally developed for the solar power industry to site solar panels, the Solar Pathfinder is a small dome placed on a tripod in the middle of a stream. A grid on the device and special software are used to digitize features providing shade to the stream and estimate the shade amount. We use this tool for temperature TMDLs. This year, DEQ collected Solar Pathfinder data throughout Graham Creek for a special study. We talked about the study, looked at maps of sample sites, and had opportunities to use the device in the stream.

For more information, see:
https://www.deq.idaho.gov/media/528731-pnv_temp_tmdl_manual_revised_1009.pdf
<https://www.solarpathfinder.com/>



WAG Field trip to Graham Creek

Environmental DNA (eDNA)



Collecting sample for eDNA analysis by filtering stream water.

Backpack Electrofishing



Demonstration of backpack electrofishing unit (w/o power).



Macroinvertebrate (Bugs) & Physical Habitat Sampling



Collecting macroinvertebrates (bugs) samples using Hess sampler.

Solar Pathfinder Sampling for Shade



Shade measurements using Solar Pathfinder.