

## **Portneuf Watershed Advisory Group June 19, 2007**

### ***Group Memory***

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Snake River Conference Room, Pocatello Regional Office  
Idaho Department of Environmental Quality

The Idaho Department of Environmental Quality Pocatello Regional Office hosted a meeting on Tuesday, June 19, 2007 in the Snake River Conference Room at the Regional Office located at 444 Hospital Way, Suite 300 in Pocatello, Idaho.

Meeting participants included the following voting members of the Portneuf Watershed Advisory Group: Kim Gower (JR Simplot Company), Jon Herrick (alternate, City of Pocatello), Brad Higginson (Caribou-Targhee National Forest), M. Keene Hueftle (Southeast Idaho Environmental Network), Jim Mende (Idaho Fish and Game), Hannah Sanger (Portneuf Greenway Foundation), John Sigler (City of Pocatello), Candon Tanaka (Shoshone-Bannock Tribes), and Roger Thompson (Southeast Idaho Flyfishers).

The following non-voting members were also in attendance: Amy Jenkins (Idaho Association of Soil Conservation Districts), Greg Mladenka (Idaho Department of Environmental Quality [DEQ]), Andrew Ray (DEQ), Sue Skinner (US Environmental Protection Agency [EPA]), and Lynn Van Every (DEQ).

Visitors included: Doug Anderson and Ken Shimada (Hoku Materials) and Christine Psyk (EPA).

Members who were absent from the meeting included: Larry Ghan (alternate, Bannock County Commission), Wilder Hatch (Caribou County Soil Conservation District), Kevin Koester (Portneuf Soil and Water Conservation District), Elliot Traher (Natural Resources Conservation Service), Louis Wasniewski (alternate, Caribou-Targhee National Forest), and Lin Whitworth (Bannock County Commission).

Wendy Green Lowe of P2 Solutions facilitated the discussion. This "group memory" documents discussion and decisions that occurred.

Before the meeting began, it was pointed out that neither agricultural representatives were in attendance. Keene said he felt that it was critical that agriculture was represented if any decisions or voting was to take place at this meeting. Wendy reminded the group that the Working Charter states that Watershed Advisory Board members should designate an alternate when it is not possible to attend and encouraged participants to identify a proxy if they planned to be absent in future meetings.

### ***Review and Approval of Previous Group Memory***

Corrections were noted to the May 15, 2007 Group Memory. Changes will be made and the final Group Memory will be posted on the Portneuf Watershed Advisory Group's website.

### ***Why are We Here?***

Participants who had not been in attendance at the May meeting were invited to share with others their reasons for participating in the Portneuf Watershed Advisory Group. The following explanations were recorded on flip chart paper:

**Amy Jenkins** - She serves to represent the Idaho Association of Soil Conservation Districts and provide technical support as needed.

**Jon Herrick** - He represents the City of Pocatello and is interested in learning more about the Portneuf Watershed. Jon also indicated that he would serve as John Sigler's alternate if John (Sigler) was absent at a future meeting.

**John Sigler** - He represents the City of Pocatello. The TMDL will affect the Watershed as well as the City of Pocatello for many years to come. John stated that he looks forward to working with others to develop a sound TMDL.

Roger Thompson - He is a fly fisherman. He seeks to protect and improve the Portneuf Watershed for fish and other important uses.

Jim Mende - As a fish biologist, Jim is interested in protecting the resources in the Portneuf Watershed. As a member of the community, he would like to see better stewardship for this valuable resource.

### ***Review of Beneficial Use Reconnaissance Program (BURP) Collections***

Lynn Van Every explained that the Beneficial Use Reconnaissance Program in the Portneuf Watershed is conducted in compliance with Section 303D of the Clean Water Act. That section mandates the identification of water quality issues which hinder a water body's ability to meet beneficial uses. A Section 303 listing triggers the need to develop a TMDL for listed reaches of a watershed.

Lynn Van Every reported that the BURP program collects and assesses data related to algal, fish, and macroinvertebrate communities in the Portneuf Watershed and other 303d listed waters in the state. DEQ has been collecting and assessing BURP data for six years (since the 2001 TMDL was approved). DEQ will soon finalize its submittal to the EPA regarding inclusion of waterbodies in the Portneuf Watershed on Idaho's revised Section 303 Listing of impaired waters.

Lynn Van Every provided a handout that lists all streams within the Portneuf Watershed that were previously determined to be impaired; the list includes all tributary reaches addressed in the 2001 TMDL. The handout included information about the frequency of sampling in the streams over the last six years. The overall goal is to sample from each stream at least once every five years. Most streams have been sampled only once or twice. Three of the least disturbed wade-able streams (Bell Marsh, West Fork Mink, and Webb) have been sampled every year in order to better characterize long term variation in "reference" streams.

Lynn provided a summary of methods employed in BURP sampling. In brief, samples are typically drawn from reaches that are at least 100 meters in length. Care is taken to choose a location for sampling that is representative of the entire stream, if possible. In some cases, multiple locations within a stream have been sampled since 2001; multiple locations may be necessary to characterize any longitudinal differences in habitat quality for a given stream.

The data from these sampling events are now being validated, analyzed, and compiled into a report that will be submitted to the Environmental Protection Agency (EPA). The EPA will use the information to update the Idaho Section 303 Listing of Impaired Waters.

In response to questions, Mr. Van Every reported that:

- The data from these sampling events is stored by DEQ in both hard copy and electronic formats.
- Sampling above Chesterfield Reservoir is done by the Shoshone-Bannock Tribes. This sampling does not include fish data.
- Chesterfield Reservoir is not sampled as part of the BURP because the requirement for sampling is limited to wade-able streams.
- The sampling protocol for lakes and reservoirs is not as rigorous as the protocol for sampling streams - in part because it is much more difficult to define reference conditions (particularly for reservoirs that are managed to deliver water for irrigators and may experience complete drawdown annually).
- Streams and water bodies are dynamic systems. It would be inappropriate to expect sampling in the same location in different years to yield the same information. The purpose of looking at data from more than one year is to develop an understanding of trends.

### ***Interpretation of the 2005 River Macroinvertebrate Assessment Results***

Greg Mladenka reported that aquatic insects were assessed at nine locations in 2005. The assessment looked at the following indicators:

- Taxa Rich Score - this score is based on a measure of number of distinct taxa found; the score ranges between 5 (for extremely diverse) to 1 (for not at all diverse)

- EPT Score - this score is based on presence of insects including mayflies, stoneflies, and caddisflies; the score ranges between 5 (high) and 1 (low)
- % Elmidae Score - this score is based on the number of Elmidae (a family of water beetle) found at the site; the score ranges between 5 (high) and 1 (low). Elmidae is a kind of beetle that is a good predictor of site conditions.
- % Dominant Taxa Score - this score is based on abundance of the dominant taxon relative to the abundance of all other taxa found at a site; the score ranges between 5 (high) and 1 (low).
- Predator Score - this score is based on the number of predator insects found; the score ranges between 3 (high) and 1 (low).
- Raw River Macroinvertebrate Index (RMI) Score - this score is a total of the five scores; the highest possible RMI score would be 23.
- RMI Score - this categorical score ranges between 0 (low) and 3 (high) based on the Raw RMI.

While this system of scores may seem confusing, Greg Mladenka noted that it is based on standard methodology. Folks responsible for collecting insect samples spend 12 days a year in training and their performance is audited each year by an auditor that covers the entire state.

Macroinvertebrate sampling generally occurs in riffles. Three samples are drawn at each site on a single day and composited. Each sample costs about \$280. There is variability - but that variability is natural. Jim Mende noted that he has been very impressed by the professional rigor he has seen in the BURP sampling process.

Christine Psyk noted that Idaho is one of the only states that looks at biological indicators of stream health in addition to chemical analysis.

Greg Mladenka pointed out that the sampling sites are presented on the handout from upstream to downstream. The RMI scores for upper two sites (Mike's Place and Lower Portneuf Access) are low and high, respectively. New Zealand mudsnails negatively affected the score at Mike's Place. Quality drops even lower before improving at Crane Creek through Cheyenne Crossing. It declines again at Kraft Road and below the Pocatello Waste Water Treatment Plant. Biological communities, like the insect communities discussed, are affected by water quality and habitat characters. Water quality is affected by pollutant sources along the watershed, the addition of water from springs and tributaries, and return from diversions.

Advisory Group members discussed macroinvertebrate sampling. It is valuable because insects are good indicators of water quality because they tend to constrain their movement within relatively narrow reaches; fish can travel long distances and therefore leave if water quality declines.

In response to a question, Jim Mende reported that the Idaho Department of Fish and Game does not sample insect communities as extensively as DEQ.

### ***Pollutants for Inclusion in the Revised TMDL***

Lynn Van Every explained that the 2001 Portneuf Watershed TMDL addressed issues identified in the Idaho Section 303d listing for reaches located in the Portneuf River subbasin. Pollutants addressed in the 2001 TMDL included sediment, nutrients (phosphorus and nitrogen), bacteria/ pathogens (E. coli), and oil and grease.

Lynn Van Every reported that water quality monitoring since the 2001 TMDL has revealed that some reaches within the subbasin are not meeting other water quality standards. He expects that DEQ will recommend to the EPA that the revised Section 303d listing include dissolved oxygen and temperature on the list of issues for the Portneuf subbasin. Still, current plans are that the Revised TMDL will not specifically address dissolved oxygen or temperature. He does expect that a future TMDL will address those issues, however. Additional data and analysis will be required at that time.

Lynn Van Every reported that the 2001 TMDL used 50 mg/L as the target concentration for total suspended solids during base flow (all periods of the year except during spring run-off March through June) conditions. He does not think that is a good target as it may not be protective of fish and other aquatic

life. Moreover, sediment levels are already lower than the target in most reaches, and he feels a lower target would be appropriate. It was noted that there is some research to indicate that 50 mg/L may have lethal or sub-lethal effects on some fish species.

He went on to suggest that:

- The target for phosphorus may be lowered from 0.075 mg/L to 0.070 mg/L.
- The target for nitrogen (0.3 mg/L) may not be attainable.
- Because phosphorus is the limiting nutrient and that target is attainable, more emphasis should be placed on phosphorus and less on nitrogen.
- The TMDL process may not be the most effective mechanism to reduce nitrogen levels.
- Achievement of reductions to the target level for nitrogen would be very expensive and difficult to accomplish (for the City of Pocatello and Simplot).

The Advisory Group discussed other pollutants, including heavy metals, pesticides, pharmaceuticals, and personal care products. All pose concerns, but there is not adequate data. In the case of personal care products, current wastewater treatment technology is not able to remove those pollutants. As a result, the Revised TMDL will not address these additional pollutants.

Lynn Van Every noted that the revised Section 303d listing for the American Falls subbasin may include mercury.

The Advisory Group discussed the list of pollutants that DEQ proposes to address in the Revised TMDL and agreed to move forward at this time in support of that proposed approach. Because not all Advisory Group members were present, it was agreed that this topic may need to be discussed again in a future meeting.

### ***Announcements***

Keene Hueftle reported that the latest issue of National Geographic has a number of articles of potential interest to the Advisory Board.

Sue Skinner reminded people about the seminar to be held the next day.

Brad Higginson noted that he had looked into the possibility of using the Category 4b TMDL process. That process is designed to allow submission of another document, like a Forest Plan for example, in lieu of complying with a TMDL for a watershed. It appears to him to be too complicated to pursue.

### ***Documents Relevant to the June 19, 2007 Meeting***

Three documents were provided to participants during the meeting. Both can be found on the project website located at:

[http://www.deq.state.id.us/about/regions/portneuf\\_river\\_tribs\\_wag/index.cfm](http://www.deq.state.id.us/about/regions/portneuf_river_tribs_wag/index.cfm)

The three documents are:

- List of streams sampled for the Beneficial Use Reconnaissance Program, 2001 through 2006
- 2005 Beneficial Use Reconnaissance Program Macroinvertebrate Assessment Results
- Article titled "Rivers of Doubt" written by Anne Underwood originally published in Newsweek June 4, 2007 (pp 58-59).

### ***Next Meeting***

The next meeting of the Portneuf Watershed Advisory Group will be on July 17, 2007 in the Snake River Conference Room at the Regional Offices located at 444 Hospital Way, Suite 300 in Pocatello, Idaho. The objectives for the meeting will include:

- Review impaired reaches of the mainstem Portneuf

- Review causes of impairment of the mainstem Portneuf.

### ***Next Steps***

The following next steps will be completed:

- 1) Wendy Lowe will prepare the draft Group Memory for review and approval at the next meeting.
- 2) Andy Ray will post the Group Memory on the project website along with copies of handouts provided at the meeting.
- 3) DEQ will provide meeting reminders via email one week and one day before each meeting.
- 4) The Shoshone-Bannock Tribes will determine who should serve on the Portneuf Watershed Advisory Group on their behalf.
- 5) The Watershed Advisory Group will consider the possibility of inviting John Wellham (Idaho Geological Survey) and/or John Carter (Western Watersheds Project) during a future meeting.

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