

Transboundary Flathead Research Needs Workshop
November 3, 2005
Meeting Notes

Breakout Groups: Aquatic

- Each of the two groups was asked to prioritize baseline data needs, inventory needs, long-term monitoring needs, CEA needs and three research priorities. After discussing these topics, each group presented its recommendations to the full group.

Participants: Ric Hauer, Kathy Tonnesson, Jack Potter, Billy Schweiger, Dean Sirucek, Tony Nelson, Jody Frenette, Pat Shaw, Rich Moy, Bill Dolan, Robin Steinkrauss, Clint Muhlfeld, Peter Jalkotzy, Wayne Berkas, John Lambing

Research, Monitoring & Information Priorities: Aquatic Group

- Priority: Data access and the need for a geospatially driven database that can assist with ecosystem assessments.
- Priority: Appropriate sampling plans and protocols
- Need: Both spatially distributed and site-specific monitoring (monitor all drainages associated with potential fossil fuel extraction)
- The group agreed there are two separate questions, while acknowledging there is overlap in the kinds of information needed to answer both:
 - 1) what information/data are needed to respond to a mine proposal or a series of resource extraction proposals?
 - 2) what are the components of a basin-wide monitoring assessment that would provide a thorough understanding of the ecosystem?

Research, Monitoring & Information Priorities: Aquatic Group (not listed in any particular order)

- 1) Summary of existing research and monitoring data compiled in a geospatial database
- 2) Fixed station water quality monitoring sites throughout the basin - additional sites needed in Canada
 - Increase frequency of monitoring at the border station
 - Increase # of stations
 - Increase parameters

- Tying some sampling to precipitation events
- Additional gauging stations in BC and Montana

3) Riparian corridor assessment

- Riparian vegetation map and aquatic habitat map based on river hydraulics (doppler + spectral imagery)

4) Full-scale fish population abundance and distribution to define ongoing monitoring program

- Basin-wide assessment of fisheries species distribution and abundance, then set up sampling program based on results
- Expand Montana bull trout studies (redd counts, size and age class structure) to B.C. portion of watershed
- Expand MT westslope cutthroat genetic integrity studies to BC portion of basin
- Fisheries habitat and population monitoring at various spatial scales
- Habitat quality – sediment coring
- Habitat quantity – habitat inventories
- Long-term meteorological station (2-4 throughout basin)

5) Benthic and periphyton monitoring and quantitative physical habitat (based on “strawman” proposal)

6) Groundwater quality monitoring, including coal seam water quality, and groundwater-surface water interactions

7) Amphibian monitoring

8) Baseline metal levels in biota

Initial full-scale metals monitoring, then use information to identify sites for ongoing monitoring

9) Sediment monitoring for targeted habitat types, including monitoring during precipitation events and base flows

Turbidity monitors at border station

10) Document ‘Process Drivers’