

Aquatic Task Group Meeting
February 6-7, 2006

Present:

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Meeting began at 1:10 p.m.

- Everyone was requested to sign-in and introduce themselves.
- Joe discussed packet contents and meeting goals/objectives:
 - Update plan with current monitoring schemes.
 - Subgroup updates and priorities.
- Discussed 2006 funding:
 - 2006 funding needs includes
 - Fish
 - Inverts
 - USGS work
 - Don Skaar's project
 - Herpetology
 - But, \$240K is needed to get matching monies.
 - BLM currently has no funding available but is hoping for future funding.
 - Since the project is energy related, the ATG will most likely receive funding.

- WY DEQ may be able to contribute some funding to the project.
 - EPA may be able to contribute \$128K to the bicarbonate research project, will know by early March.
 - Depending on what is received for 2006, priorities may need to be changed (e.g. change site locations and/or number of sites).
 - ATG should hear about funding by the end of March.
- Fact Sheet Updates:
 - FWP- Fact Sheet will be completed by Feb. 20th
 - MSU- Fact Sheet will be completed by Feb. 20th.
 - Don Skaar- Fact Sheet will be completed by Feb. 20th.
 - USGS- Draft Fact Sheet is finished.

Fact Sheets need to be **submitted to Joe by February 20th to allow one week for review by ATG members. Once completed and reviewed, Fact Sheets will be available, on-line, for public access.

- Discussed ATG Membership:
 - 8 original ATG members.
 - Additional attendees to meetings vary, but some individuals have been more committed to the ATG.
 - Joe will make list of potential new members and inform IWG.
 - Topic will be discussed further.
- Questions/Comments:
 - Q: Could committed individuals become ATG members?
 - A: Task groups were created and member appointed by IWG. Thus, it would be a good idea to ask for IWG's opinion on new members.
- Discussed Aquatic Biota Monitoring Plan (included in packet)
 - Added herptiles and periphyton to Plan.
 - Fact sheet to be completed annually.
 - Concerns regarding Interpretive Report: cost and timeline. How many years of data are needed to produce a quality Interpretive Report?
 - Vote**
 - Option 1:** Complete Report in 2007—**3 Votes**
 - Option 2:** Complete Report every year—**1 Vote**
 - Option 3:** Complete Report every 2 years—**0 Votes**
 - Option 4:** Complete Report in alternate years—**1 Vote**
 - The cost for an interpretive report is approximately \$200K. ATG will not complete a report for 2006 because funding is limited.

- ATG committed itself to have USGS complete the first interpretive report, but future reports could be completed by a different agency.
- Field work would not be dropped in 2007 (to allow for funding of the interpretive report) unless funding is not available.
 - 2005 and 2006 data would be analyzed in Report. A large portion of the report will be historical analysis.
 - After first report is completed, costs should decrease. However, it depends on the approach taken.
- Within the introductory portion of the ATG plan, changes were made regarding research, costs, and proposed locations.
 - Inverts were not collected at certain sites.
 - There are more sites on the Powder River than originally planned. There were less sites on the Belle Foursche and Cheyenne Rivers.
 - Q: Do we still want to include the sites, where no monitoring occurred.
 - A: Montana sites that were omitted should be included in plan and their exclusion should be explained.
 - A: Wyoming ATG members decided to keep sites that were omitted and explain their exclusion.
- Jeremy Zumberg gave a power point presentation: “Bugs/Periphyton: Subgroup Presentation”.
 - Discussed monitoring plan for bugs:
 - Objective: To use measures of macro invertebrate composition to assess impacts of CBM development. Base line data collection and historical data will be included. (Slight change)
 - No changes to site selection.
 - Additional data is needed for the 2005 sites.
 - Applying USGS NAWQA and EPA protocols (same as 2005).
 - Annual sampling frequency.
 - Q: Was the previous problem at the BUG Lab at Utah State resolved since last meeting?
 - A: Not sure, but believe the work will be subcontracted and paid by Washington Office BLM, who funds them.
 - Discussed monitoring plan for periphyton:
 - Objective: Same as inverts but with greater emphasis on periphyton.
 - No changes to site selection.
 - Applying USGS NAWQA/EPA protocols.
 - Annual sampling frequency.
 - Q: Who will be doing periphyton lab work?

- A: DOE funding lab work. Veteran-owned business received the contract to conduct lab work. They will be subcontracting work to Gary Luster.
- Q: Do we know the quality of work that will be produced by the contractor/subcontractor? Are voucher specimens being kept?
- A: We can describe in the contract what we want completed and how it will be done. Joe will check to see if vouchers are being kept.

- Discussed research needs for subgroup:
 - Funding available through DOE.
 - MSU could do bug/periphyton research like Windy's research in 2007. **A proposal needs to be written in ATG plan stating that research needs to be done for 2007.**

- Discussed data analysis: (For greater details please refer to Jeremy)
 - Tools available for bugs: WY & MT RIVPACS, WY & MT MMI, Metrics, Indicator taxa, other.
 - Tools available for periphyton: Metrics, Indicator taxa, other.
 - RIVPACS Model: could be used as a "trigger" to determine change and identify the potential cause of the change.
 - MMI Model: a combination of measures that summarize the community. Measures could be tracked over time.

- Discussed threshold values and tracking biological conditions at a site scale:
 - Currently insufficient amount of data to set values.
 - Limited due to variation from stream to stream, site to site, state to state.
 - Limited because RIVPAC and MMI models are not applicable at all sites in each state.
 - Limited because there are natural environmental differences per site.

- Discussed weight of evidence:
 - Data is weighed according to data and site
- Q: Should USGS be expected to perform a weight of evidence for the Interpretive Report?
- A: USGS is producing a Report at a broader scale and the weight of evidence is too specific.
- A: USGS does not have enough data to do comparison, plus, they are not funded to do this interpretation.
- Q: If the subgroup does not have a target or trigger value, how does the group know which sites to evaluate?

- Subgroups have been more efficient and productive, thus, it should be the subgroup's responsibility to evaluate the weight of evidence and present to ATG.
- Bug/Periphyton data are not available yet.
- Air photos maybe a way to gather data over larger areas.

Break at 3:40 p.m.

Resumed at 4:00 p.m.

- Joe Platz gave an update on Fish subgroup conference call:
 - No changes to objective or sampling location.
 - Did not discuss triggers during conference call.
 - Changed sample reach size to 300 meters.
 - Defined prairie stream definition to: Tongue and Powder River Drainages vs. Prairie streams (i.e. all others).
 - Sampling frequency would consist of monitoring 3 times within a year.
 - Priorities: post-runoff (July-Sept), late season period (October-November), and pre-runoff (March-June).
 - Net mesh cannot be larger than ¼'' mesh.
 - Must select a minimum of 2 habitat types within the sampling reach.
 - Bob Bramblett's protocols will be used in WY and MT surveys.
 - When sampling, the fish caught and the gear used should be labeled for analysis purposes.
 - Two research projects are funded: MSU and USGS/FWP.
 - Two additional projects have been proposed but no funding is available.
- Discussed SAR and EC research on fish:
 - Q: Should EC levels be looked at for fish?
 - A: EC field levels for specific fish species have not been set.
 - A: EC research could be focused by analyzing sulfates, bicarbonate or other ions, which are a bigger issue.
 - Main concerns are with SAR and EC effects to aquatic biota, but there is little information on overall biota except for some fish species.
 - One approach would be to look at overall water chemistry and focus tests with respect to peaks (what appears to be toxic in the water).
 - Fish subgroup needs to clarify this subject and research needs. Don Skaar will assist in the next conference call.
- Discussed ephemeral streams and effects on fish:
 - Q: Do we know how the changes in flow in ephemeral streams affect aquatic habitat and biotic life?
 - A: There is an MSU student looking at the effects under natural conditions.

- Good topic for subgroup to be discussing but it is a long way from becoming a research project for the group.
- Monitoring is still a good way to get data.
- Some of Windy's research relates to this topic.
- Not much is known about the ecology of prairie fish, thus, it is hard to define a starting point.
- Discussed other fish concerns:
 - Everyone agreed to update or replace the three current research projects (Herptiles, MSU research on fish assemblages, developing fish matrix), with the current research being conducted and/or needed.
 - Q: Why were fish matrixes needed?
 - A: The concern was between states. We thought that the MT IBI would not be adequate for WY.
 - Windy will be looking at this topic for both states but it will not be in-depth.
 - Q: Are the fish species used in Don Skaar's research representative of prairie streams?
 - A: Fathead minnows were selected because they are ubiquitous and easy to culture. Selections of other fish species are limited due to hatchery requirements. Since funding is not complete for this project, discussion of fish species selection is still open.
 - Longnose dace could be another choice. However, this species prefers rocky habitats. Other choices could be shiners or catfish.

Meeting adjourned at 5:00 p.m.

Meeting resumed February 7, 2006 at 8:00 a.m.

- Joe Platz gave an update on Herptile subgroup conference call:
 - Topic is new to ATG and monitoring details are still being discussed.
 - Objectives are similar to fish.
- Discussed sampling locations:
 - Sampling locations have not been selected yet. Originally, small watersheds were selected, but due to private landownership issues, clusters of land will be used for monitoring purposes. The cluster of land may include 2 or 3 watersheds (e.g. a public land or private ranch). The limiting factor will be access to private lands. The size of sampling site will be determined once access is granted.
 - Q: Could we include a statement that grants us private land access in written lease/contracts?
 - A: Do not know, but may receive better results by asking landowner.
 - Discuss sampling with consultants/contractors currently working in the area to receive feedback on potential sampling sites/clusters.

- Q: What percent of the cluster will be surveyed?
- A: Do not know.
- Need to survey areas that are important to herptiles and make the research systematic.
- The Herptile subgroup will look at maps and previous surveys to assess potential locations, during the next subgroup meeting.
- Discussed sampling methods:
 - Observational data collection would be beneficial. This could be completed by excavators, fire crews, contractors, and seasonals/techs in the field. Field offices could collect observational data this summer.
 - Gathering observational data would be difficult unless there is a person in charge of the project.
 - ATG could produce posters/brochures of herptiles to promote observations at field offices.
 - Windy is doing incidental work, also.
 - Three options for sampling methods:
 - 1-Road mortality.
 - 2-Calling surveys at night.
 - 3-Proportion area occupied.
 - WY has completed some road kill observations in the past.
- Discussed sampling period:
 - Sampling occurred for 3 consecutive years to obtain species composition and distribution. However, monitoring may occur over a longer period, if drought persists.
 - Road mortality would be completed, yearly.
 - Begin monitoring in 2007.
 - Monitoring costs for MT and WY would be approx. \$135K.
- Discussed priorities and funding:
 - Herptiles may be a lesser priority due to funding limitations.
 - Potential funding from other sources are possible; but requires greater effort and time.
 - DOE could fund a toxicity research project because it would be an energy related project.
 - Still working on receiving funding from industries.
 - Herptiles are a low priority with BLM, due to the lack of herptile specialists. As a result, herptiles could be greatly affected by CBNG. Thus, funding should be CBNG related.
 - Shawn Sartorius from FWS, was appointed to be the lead herptile Subgroup leader.

Break at 9:20 a.m.

Resumed at 9:40 a.m.

- Andy Bobst gave a power point presentation via phone, “ CBNG Surface Water Monitoring Overview”.
 - Location: Powder River Geologic Basin in MT and WY (Watersheds: Rosebud Creek, Tongue River, Cheyenne, Belle Fourche, and Powder River).
 - For more information please visit: <http://pubs.usgs.gov/fs/2005/3137/pdf/fs2005-3137.pdf>
 - Measures:
 - Stream flow
 - pH, dissolved oxygen, specific conductance, and temperature
 - Major ions-dissolved calcium, magnesium, potassium, sodium, alkalinity, chloride, fluoride, sulfate, and silica: dissolved solids; and sodium-adsorption ratio
 - Nutrients-total and dissolved nitrogen and phosphorus species
 - Trace elements-primary and secondary
 - Suspended sediment
 - Funding provided by:
 - BLM, USGS, MT DEQ, MT DNRC, Northern Cheyenne Tribe, EPA, WY DEQ, WY State Engineer’s Office, and industry.
 - Issues and Concerns:
 - Availability of personnel.
 - Coordination of Federal and states’ budgets.
 - Not all stations funded.
 - Not all sites completed.
 - Results:
 - Salinity and SAR are anticipated to change by CBNG discharge. To date, noticeable increases in parameters have not been observed.
 - An Interpretive Report will be completed.
 - Data available for viewing at:
 - <http://waterdata.usgs.gov/nwis/>
 - <http://mt.water.usgs.gov/>
 - <http://tonguerivermonitoring.cr.usgs.gov/>
 - <http://wy.water.usgs.gov/>
 - Questions/Comments:
 - Q: What are the sites that will be monitored in 2006 compared to 2005?
 - A: The Water task group plans to discuss this in the next meeting. Hopefully, more sites will be funded.
 - Q: Have you noticed increases of other ion concentrations at gauge stations?
 - A: No one has looked at introduced ion concentrations, closely, but no big changes have been noticed. We will

analyze changes in concentration within the interpretive report (2007).

- Larry Gerard gave update on Riparian/Instream Habitat subgroup conference call:
 - Updates to plan with the appropriate sampling protocol, sample site selection, and costs:
 - A GPS unit should be used to measure sinuosity.
 - Take cross sections every 2 feet.
 - List riparian plant species.
 - Plots should show under- and overstory vegetation.
 - Include water quality in protocol.
 - Subgroup will have costs for habitat surveys after USGS provides the information.
 - Pebble counts
 - Updates to subgroup's purpose and objectives:
 - Group will establish priorities for site selection and protocols after reviewing results of surveys in the 2007 interpretive report.
 - Frequency of monitoring and reports:
 - The more data, the better. However, it might be best to sample every other year.
 - Some of the basic information could still be collected during fish surveys.
 - Research Needs:
 - Aerial photos are needed to look at the project areas in a larger scale.
 - Limitations are: funding (even though it is relatively inexpensive) and access to helicopter with technology to take photos.
 - Other organization/agencies like the idea of aerial photos taken with respect to CBNG.
 - Photos could be a good tool for data analysis.
 - Need to discuss where to store data and how to make it available.
 - U of M, through sage grouse monitoring research, is already conducting satellite imagery.
 - Focus funding to what is already in the ATG plan and in the future discuss the aerial photo project.
 - Larry Gerard will contact offices for technology available
 - Steve will provide cost estimates to the group and continue discussion @ the next meeting.
 - Historical data:
 - Need to know what is available.
 - Historical analysis is difficult, because data is limited.

- Update plan to indicate that USGS will analyze historical data.

- Triggers:

ATG should track changes and evaluate water quality, shift in Rosgen classification, shift in parameters associated with Rosgen, stream substrate shifts, shift in residual pool depth, shift in bank stability, stream flows, shift in detritus, and plant species inventory.

- ATG could use “weight of evidence” approach and/or “predictive models”.

- Costs:

- 2006

- Total costs needed \$428K
- USGS matching (not confirmed) \$60K
- EPA matching (not confirmed) \$128K
- Total needed if matches are confirmed \$240K

- 2007

- Total costs needed \$885K
 - \$200K for Interpretive Report (costs can change depending on historical data analysis).
- Financially, there have been some reasons to go with USGS, sue to matching monies. However, other matching monies are available when matching with the state or private consulting firms.
- DOE funding can not be allotted to Federal salaries, but this does not apply to state salaries. Monitoring completed by the state of MT and WY could be an option to receive additional funding.
- ATG has committed to finding funding sources for 2007.
- Joe will provide a spreadsheet breakdown of costs for 2007 to discuss costs during next meeting.

- Potential Research:

- Freshwater mussel project

- Great bio indicators.
- In Tongue River and Pumpkin Creek.
- Easy ID.
- MSU professor will ID for free (for now).
- Information/data on mussels will be sent to ATG members from FWP.

- ATG will be doing some incidental data collection on herptiles and other species (ID to Genus).

- Bob got contacted by the Conservation Alliance to conduct additional work with fish surveys in the Cheyenne River Basin, relative to CBNG (which may be incorporated into Windy’s work).

- Joe and Bob will talk to Al Zale on how to circumvent competitive bids for contracted work.

Summary:

- (1) Next ATG meeting will be on March 30th at the BLM office in Buffalo, WY. It will be a one day meeting from 10:00 AM - 3:00 PM. Part of this meeting may be out in the field, looking at some active CBNG development.**
- (2) Subgroup leaders need to have their portion of the ATG plan completed by March 30th. Please email your plan to myself a few days before March 30th.**
- (3) Funding is needed for the USGS monitoring (\$240,00). There is a good potential that some of this funding will be available through the BLM.**
- (4) Other funding through DEQ (Dave Feldman (approx. \$60,000), Steve Regele (approx. \$25,000, Jeremy Zumberg (?)) may become available.**
- (5) Don Skaar funding needs include \$128,000 for bicarbonate research. He has submitted a proposal to EPA. There is a good chance that a portion of the funding will be met through EPA.**
- (6) Fact Sheets should have been completed by 2/20. After that time, the ATG would have one week to review (2/27). To date, FWP, USGS and MSU have completed draft fact sheets and have been made available for review. They are currently working on their final fact sheets. Don Skaar is still working on a fact sheet for the bicarbonate research. After the fact sheets have been through the review process, please have the final fact sheets completed by March 20th and send via email to the ATG. Paul and Dave, I assume you will then post these on the web. Thanks**
- (7) Joe will make a list of potential new members for the IWG to review.**
- (8) The first Interpretive monitoring report will be completed by USGS in 2007.**
- (9) Need to make sure that the Buglab is paying for the chironomid I.D. Jeremy could you check on this? Thanks**
- (10) Contract has been awarded for periphyton work. Joe is currently working on a contract for the fish I.D.**
- (11) Fish and herptile subgroups will have conference calls on March 13th and 20th, respectively.**
- (12) Budget in the ATG plan will be updated to include more specifics.**
- (13) Sampling locations will be updated. Larry, Jeremy and Dave Peterson will decide which sampling locations will be dropped in Wyoming. This needs to be completed before the next meeting. ***** They have decided to keep all of the monitoring sites within the ATG Plan. ******
- (14) Shawn Satorius volunteered to lead the Herptile Subgroup.**

(15) Steve Regele was going to provide more information on aerial photography. Joe will try to bring an example that was completed on the Milk River. Larry Gerard will provide information on current technology available.

Thanks everyone for your hard work. We are making progress. And I appreciate your commitment to the group. Thanks again.

- **Next Meeting:**
 - **Date: March 30, 2006**
 - **Time: 10:00 a.m.**
 - **Location: Buffalo, WY BLM**