

**Powder / Tongue Basin Advisory Group
Meeting Record
Colonel Bozemans – Buffalo
April 11, 2001**

Welcome

Barry Lawrence, serving as the facilitator, opened the meeting at approximately 6:00 pm. He explained that representatives of the Wyoming Water Development Commission and State Engineer's Office as well as the regular facilitators, were all snowbound in Cheyenne and unable to participate in the meeting tonight. Participants introduced themselves by stating their name, affiliation, and place of residence. Barry then reviewed the agenda to set the expectations for the meeting, and sent a sign-in sheet around the room.

The facilitator stated that the next two BAG meetings, as selected by the BAG members, will be held June 13th in Dayton and August 8th in Story. The BAG then scheduled the October meeting for the 10th in Kaycee.

River Basin Planning Status Report

Barry reported that the final plan report for the Green River Basin is now complete and ready for distribution. He indicated that as a result of the high cost of reproduction of the plan documents, the Wyoming Water Development Commission is promoting online distribution through the waterplan website. Robin Gray of the Water Resources Data System reported she is now in the process of putting the final Green River plan on the website. The plan documents can also be obtained on a compact disc from the WWDC and WRDS. Barry reported the Green River BAG continues to be very active and their next meeting will be held July 10th in the Savery/Baggs area. This meeting will be held in conjunction with a tour of the future site of the High Savery Dam. He invited everyone to participate in the July 10th meeting and tour.

The first draft of the final Bear River Basin Plan is being reviewed by the planning team and comments will soon be given to the consultant. The WWDC will present the draft plan at a meeting of the Bear River Compact Commission. Barry indicated the Bear River Compact Commission is planning a tour of the Bear River Basin from the headwaters to Bear Lake on August 13th and 14th. He asked anyone interested in participating in the tour to contact him for information.

The Northeast study is continuing and the BAG will meet April 12th in Sundance. Topics for the meeting will be similar to the Powder/Tongue meeting, with the exception of an additional presentation on Keyhole Reservoir by the Bureau of Reclamation. Barry reported that a coal mine tour will be held in conjunction with the August 9th meeting of the Northeast BAG and everyone was invited to participate in that tour.

The BAG formation meetings for the two new river basin planning studies, the Wind/Big Horn Basin and the Salt/Snake Basins, will be held May 14th in Thermopolis and May 15th in Jackson, respectively. Both meetings will be at 6 pm.

Coalbed Methane Coordination Coalition (CBMCC) – Mickey Steward

Following introductory remarks explaining coalbed methane development in the Powder River Basin and in Wyoming in general, Mickey presented development statistics and projections. She listed the following limitations on CBM growth that have been identified by the Wyoming State Geologist: 1) NEPA and regulatory issues; 2) multiple coal completion technology; 3) inter-state negotiations for water quality; 4) infrastructure; and, 5) price uncertainty. She indicated this list of limitations has been revised to include: 1) infrastructure; 2) water disposal; 3) technology on recovery (improving recovery), 4) gas regeneration, and 5) citizen complaints – litigation (water trespass and diminution, compressor noise, light from compressor stations, dust, trash, general nuisance, weeds).

Mickey explained that the CBMCC is identifying issues the counties need to be thinking about in terms of their responsibilities for providing good infrastructure, for problem resolution, and for general health, safety, and environment issues. She then discussed management of well water and methods of water disposal relative to the criteria of permitting, feasibility, cost, and potential for negative impact.

Ucross Ranch Foundation CBM Research Project – Mark Gordon

Mark described the current research project to investigate the impact of CBM development on water resources. He explained that the Ucross Ranch consists of 22,000 acres located near the confluence of Piney Creek and Clear Creek. The research project uses the Ucross Ranch as a laboratory as CBM development occurs. The primary concern is what to do with the water being discharged. The components of the project include: 1) engineering and technology; 2) policy; 3) scientific and educational; and, 4) future opportunities. The project would look at irrigation techniques, membranes, etc. How the strata of Ucross could be monitored real-time would be evaluated as well. There would also be special emphasis on how the water is withdrawn, how compressors could be managed, and the possibility of dendric drilling.

Consultant Update – HKM Engineering

Wade Irion presented a status report of the activities of the consulting team. He discussed each of the tasks and subtasks included in the scope of work and presented the status of each. To date most of the effort of the consulting team has been on Task 2, which is to define the water resources of the basin. Work has now begun on Task 3. Wade explained the Northeast Basin study is proceeding on a schedule similar to the Powder/Tongue study.

Preliminary Results: Basin Water Use Profile – HKM Engineering

Irrigated Lands Mapping – Wade Irion presented the results of the irrigated lands mapping task. For the Powder and Tongue River Basins a total of 169,641 acres were mapped, compared to 136,244 acres that were mapped in 1971. He explained this significant difference does not mean there has been a large increase in irrigation; rather the current study identified irrigated land that was missed in the 1971 mapping (spreader dikes, kickouts, etc.)

Diversion Operation Memoranda – Chris Ewers explained how ditches were selected for investigation. Working with the State Engineer’s Office, a total of sixty-nine ditches were identified as significant to the drainage. Chris described what information was collected about the selected ditches, and how it was collected. He then displayed and discussed the memorandum prepared for two of the ditches as examples of the information that will be available.

Storage Operation Memoranda – Chris Ewers explained how reservoirs were selected for investigation. He explained the Safety of Dams database in the office of the State Engineer revealed there are a total of 190 reservoirs in the basins with a capacity greater than 50 acre-feet and/or a height of 20 feet or greater. Information on these reservoirs was compiled into a database. Working with the State Engineer’s Office, a total of fourteen of these reservoirs were identified as significant to the drainage. Storage operation memoranda were prepared for these fourteen facilities. All but one of the selected reservoirs have a capacity in excess of 1,000 acre-feet. Chris described what information was collected about the selected reservoirs, and how it was collected. He then displayed and discussed the memorandum prepared for one of the reservoirs as an example of the information that will be available.

Municipal Water Use – Dayton Alsaker discussed how the municipal water use profile was developed and the type of information collected for the nineteen public water systems in the basins. He then presented a summary sheet for the City of Buffalo as an example of the data that has been collected for each of the systems. Summary data of municipal water use in the Powder/Tongue basins was presented.

Domestic Water Use – Dayton Alsaker discussed how the water use profile was developed for domestic uses. The population served by individual domestic supplies was computed by subtracting the population served by public water systems from the total population of the basins. The estimated range of domestic water use was then given by multiplying this population by a per capita water use rate of 150 to 300 gallons per day.

GIS Presentation – Wade Irion and Alan Telck presented a demonstration of the GIS (Geographic Information System) work product. The irrigated lands mapping and groundwater wells data themes were presented and discussed.

Question: Is the hydrologic condition (wet year, dry year, etc.) factored into the analysis?

Response: Yes, this is accounted for in the Available Surface Water Determination Task (Task 3).

Question: How was the determination made of currently idle lands?

Response: The determination was made by a visual inspection of the aerial photographs.

Question: Does the database only include wells greater than 50 gpm?

Response: No, the 50 gpm criteria did not apply to domestic, stock, and CBM wells.

Question: Are springs included in the database?

Response: Springs are included to the extent they are permitted as groundwater.

Question: Is the well depth included in the database?

Response: Yes, to the extent the depth is included in the SEO database.

Question: How will the water budget analysis account for water produced by CBM wells?

Response: The number of CBM wells will be determined from the database for a particular drainage. An average production rate will be estimated and applied to the number of producing wells in that area to compute the amount of CBM water in the drainage.

Comment: The Oil and Gas Conservation Commission has records of actual water production from producing CBM wells.

Question: What is the date of the CBM well database?

Response: The records obtained from the SEO database are considered current through December of 2000.

Question: Is there any way, in places of significant population like Story, to identify recharge areas for a community, to determine the carrying capacity for the community?

Response: No, this study will not identify community specific groundwater recharge areas. However, if the planning process identifies a concern such as this, the Water Development Commission can be requested to investigate the issue further.

After a few brief concluding remarks, the meeting was adjourned at approximately 9:00 pm.