

**Powder / Tongue Basin Advisory Group
Meeting Record
Fire Station Meeting Room – Kaycee, WY
December 13, 2000**

Welcome

The facilitators opened the meeting at approximately 6:10 pm and reviewed the agenda to set the expectations for the meeting. Participants introduced themselves by stating their name, affiliation, and place of residence. The facilitators sent a sign-in sheet around the room.

The facilitators stated the next two BAG meetings, as selected by the BAG members, will be held February 7, 2001, in Ucross, and April 11, 2001 in Buffalo. The BAG then scheduled the subsequent meeting for June 13, 2001 in Dayton.

Planning Team Issues

Jodie Jackson asked any BAG members who did not have a reference notebook, and would like to receive one, should contact her after the meeting.

Jon Wade gave a status report of the other basin plans. The Green River BAG met on December 12, 2000 in Rock Springs and worked on the ranking of future water use opportunities. The final results presentation meeting for this BAG will be held January 9 in Rock Springs at the White Mountain Library at 1 p.m. The Bear River BAG had a similar final results presentation meeting last November and the consultant is busy finalizing the planning report for that basin. Jon also reported that the Water Development Commission authorized a request to the legislature for funding of two new river basin planning studies: 1) the Salt and Snake River Basins; and, 2) the Wind and Bighorn River Basins. Open houses for these two studies are being arranged for the last week of January.

BAG Question: Will the river basin planning Geographic Information Systems (GIS) information and reports be available on the web?

Response: Yes, the water plan website will be the primary method for distributing the planning information.

Consultant Update – HKM Engineering

Wade Irion of HKM Engineering presented a status report of the activities of the consulting team. Wade reminded participants that the Scope of Work consists of seven tasks and the consulting team is currently working on Task 2 which is the inventorying of water use by the various sectors, i.e. agricultural, municipal, industrial, etc. After information has been collected on current water use the consulting team will proceed to Task 3 where the current uses will be compared to available water supplies to identify areas of surplus water and water shortages.

Wade then explained the process of mapping irrigated lands. Sample work products were used in the presentation. The process uses stereo aerial photography to define irrigated lands and to identify the irrigation systems serving the lands. The lands are transferred by projection to a standard USGS topographical quadrangle base map. In addition to the irrigated lands polygons, irrigation ditches and laterals are also projected to the quadrangle maps.

The irrigated lands polygons are classified according to the type of irrigation observed for that polygon. Wade explained the classifications of irrigated lands as follows: Class A includes full service lands which receive a full or very good supply of water; Class B lands receive a partial supply and are not as consumptive as the Class A lands; Class C are incidental lands which do not receive a direct supply but are lands, for example, under a ditch that receive an incidental supply through ditch seepage. Two additional classifications were used for the Northeast basins: Type S lands denote spreader dike systems and Type H lands are irrigated from small tributaries with a very undependable water supply.

Wade explained the importance of classifying the polygons by irrigation type. The intent of the mapping process is to make a determination of actual water use by irrigation. Therefore it is important to define classes of irrigation since each class of irrigation will use different amounts of water.

Irrigated lands are then digitized and superimposed onto vectorized digital quadrangle maps. Such maps that will be available on the web when the project is completed. There are over 300 digital quad maps in the basin that have some degree of irrigation. Irrigated lands are also displayed on digital orthophoto quarter quadrangles (DOQQ) available from the Spatial Data Visualization Center (SDVC). These DOQQs are scanned images of one quarter of a standard USGS quadrangle map and provide a good backdrop for presenting the irrigated lands information.

Wade reported on other activities of the consulting team. He explained the team is compiling diversion records for all of the key ditches in the basins. They are also working with personnel of the State Engineer's Office (SEO) in collecting operations information about the diversions to develop a good understanding of how the various ditches operate.

The consulting team has received the SEO groundwater database of all permitted wells in the basins. This database will be used to develop the various GIS data themes by use type, i.e. domestic wells, stock wells, irrigation wells, etc.

A public water system survey has been mailed to system managers to collect information to verify and update the Year 2000 Water System Survey Report completed by the Wyoming Water Development Commission. This survey information will be used to prepare the analysis of municipal water use. Water right attribution is underway and will be the subject of a report at the next BAG meeting.

BAG Question: When were the stereo aerial photos taken?

Response: The date of the photography varies with the location in the basins. The photos were taken in the 1994-1996 timeframe.

BAG Question: Were the photos satellite?

Response: No, conventional aerial photos were used. The possibility of using satellite imagery was investigated and determined to be too expensive for the level of resolution required for this study.

BAG Question: What time of year were the photos taken?

Response: Typically the photos are taken during periods of active irrigation, depending on the scheduling of the agency taking the photography.

BAG Question: How is the natural flow estimated for tributaries where CBM reservoirs have been constructed since 1996 on the tributaries of the Powder River?

Response: Virgin natural flow will be estimated in Task 3 using USGS records, which predate CBM development.

Wyoming Water Law and Compacts

Sue Lowry of the State Engineer's Office (SEO) gave a presentation on water law and administration, and water compacts. Copies of her presentation slides were distributed. A description of the SEO was followed by a description of the process followed to acquire a water right. The Board of Control (BOC) was described along with its functions. Sue then discussed contemporary uses and demands for water. Salvage water and leasing options were also discussed relative to incentives for water conservation. An example of water administration was presented and discussed. This example included a discussion and explanation of surplus water rights, excess water rights, and instream flow water rights.

BAG Question: Can an upstream user transfer their right to an instream flow?

Response: Yes, water rights can be transferred to the State of Wyoming for use as an instream flow. The change in use would be approved by the BOC.

BAG Question: How do SEO personnel determine what rights are to be regulated?

Response: Rights are only regulated if regulating that right will actually benefit the earlier priority right.

BAG Question: Towns have water rights in excess of their current needs, with the assumption they are reserving the remainder for future growth. Is this a valid assumption?

Response: Sue explained the Statutes as they relate to the abandonment of water rights. However, as a practical matter municipalities are allowed to hold rights in anticipation of future growth.

BAG Question: What about current conflicts between water rights and the Endangered Species Act (ESA)?

Response: Sue described a current situation in Colorado and New Mexico regarding the Rio Grande River. Sue explained Wyoming is interested in this issue as it could set a precedence requiring releases to keep a stream alive.

BAG Question: How does the State regulate shallow groundwater next to a stream?

Response: Kevin Boyce responded that if the groundwater is determined to be tributary it is regulated as surface water.

Sue explained that Wyoming is involved in several compacts and court decrees with neighboring states. She provided a brief description of the compacts and court decrees outside of Northeast Wyoming and provided a more detailed discussion of the Yellowstone River Compact that directly impacts the Powder and Tongue River Basins. Sue indicated current issues being addressed by the Yellowstone River Compact Commission include coalbed methane development, the difficulties associated with compact administration, and tribal reserved water rights.

Compacts in the Northeast Wyoming river basins, the Belle Fourche and Upper Niobrara River Compacts, were also described along with the current issues associated with those compacts. Sue explained there are currently no compacts on the Little Missouri and Cheyenne River Basins.

Sue concluded her presentation with a description of Wyoming's participation in the Missouri River Basin Association, an organization of eight states with Tribal representation through Mni Sose. She explained this association annually reviews the operating plan for the Missouri River, and is also involved in biological opinions being prepared by the U.S. Fish and Wildlife Service for species in the Missouri River drainage.

Issues Identification Process

The facilitators explained that as of the last meeting the BAG identified sub-issues under general headings and began the process of combining and rearranging the sub-issues prior to ranking. BAG members continued the process and completed the **Future Use Projection** heading.

Issue: Future Use Projections

Sub-issues:

1. Population Projections/Pressures on Infrastructure
2. Aesthetic/Visual Use/Recreation/Tourism
3. Government Use (Forest Service, BLM, State, etc.)
4. Carrying Capacity – Sustainability
5. Agriculture/Technology
6. Technology, Industry – Energy Use

The facilitators explained the process of combining and rearranging sub-issues under the main issues will continue at the next meeting. After this process has been completed the sub-issues will be prioritized under each main topic.

The meeting was adjourned at approximately 9:00 pm.