

**Northeastern Wyoming Basin Advisory Group
Meeting Record
Town Hall – Newcastle, WY
December 14, 2000**

Welcome

The facilitators opened the meeting at approximately 6:05 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, would be held February 8, 2001, in Moorcroft, and April 12, 2001 in Sundance. The BAG then scheduled the next meeting for June 14, 2001 in Lusk.

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.

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 explained the process of mapping irrigated lands. Sample work products were used in the presentation. He explained HKM has completed all of the mapping in the Powder and Tongue River basins, and about 70% of the mapping in the Northeast basins. 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 drawn on the quadrangle maps.

The irrigated lands polygons are classified by HKM 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. Class E lands designate currently idle lands that could be brought back into production.

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 consume different amounts of water.

Irrigated lands are then digitized and superimposed onto vectorized digital quadrangle maps. These are the maps that will be available on the web. Irrigated lands can also be 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 from the State Engineer's Office (SEO) hydrographers annual reports for all of the key ditches in the basins. The diversion records will be used in conjunction with the irrigated lands mapping to determine actual water use for irrigation. They are also working with SEO personnel collecting operations information about the diversions to develop a good understanding of how the ditches operate.

A public water system survey has been mailed to the 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 rights data is being collected from SEO records in Cheyenne for the irrigated lands. Also, the consulting team has received the SEO groundwater database of all 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.

Under Task 4, Gary Watts, the economics subconsultant, has begun developing population projections.

BAG Question: How are Class E lands identified from aerial photos?

Response: The aerial photos allow inspection of the ditches and the lands under the ditches to determine if the irrigation ditches have been active recently.

BAG Question: How are crop types determined?

Response: Water Commissioners and others familiar with irrigation practices provide information on cropping patterns. In addition, aerial photos provide an indication of crop types.

BAG Question: How are diversion records developed for the Belle Fourche River? Most of the diversions are made by pump.

Response: There are not many diversion records for the ditches therefore estimates of actual water use will need to be made.

BAG Question: Will lands irrigated by groundwater be identified?

Response: Yes, the water rights attribution process will identify lands irrigated from wells.

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.

BAG Question: Are the Division Superintendents located in Cheyenne?

Response: No, Superintendents work out of offices within their division. The Division One Office is in Torrington, Division Two is in Sheridan, Division Three is in Riverton, and Division Four is in Cokeville. In addition, other offices are located throughout the divisions as required to meet the demands for regulation.

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: If water rights are set by priority, why does an irrigator need to call for regulation to keep someone from taking more than their water right allows?

Response: The law dictates that the SEO can't regulate diversions unless someone is being injured.

BAG Question: Can irrigation water rights be severed from the lands and changed to another use?

Response: Yes, the Statutes allow for changes in use although there has not been a large number of these transfers because most streams have unappropriated 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 Belle Fourche and Upper Niobrara River Compacts. She also discussed recent compact activities related to Keyhole Reservoir. Sue explained there are currently no compacts on the Little Missouri and Cheyenne River Basins. A compact was negotiated for the Cheyenne River, but the Wyoming Legislature never ratified it.

BAG Comment: Under the Belle Fourche River Compact Wyoming is entitled to unlimited stock and domestic use. As a consequence, a large number of stock reservoirs have been constructed upstream of Keyhole Reservoir.

BAG Question: How close can wells be drilled?

Response: There is nothing in the law that states how close wells can be drilled next to each other. All formations are different relative to how close wells can be spaced without causing a substantial impact. In areas where there is a regional problem, the SEO can establish control areas and then dictate criteria like well spacing.

Sue then described the Yellowstone River Compact. Sue reported on current issues being addressed by the Yellowstone River Compact Commission including coalbed methane development, the difficulties of compact administration, and tribal reserved water rights.

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 review 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 at the last meeting BAG members were prioritizing sub-issues by sub-basin under each of the main headings. Before continuing on with other issues, the BAG wanted to complete the previous meeting's issues for the Niobrara River Basin. [*Due to a lack of representation by individuals living within the Niobrara River Basin at the October meeting, it was decided to table that activity until the December meeting.*] The process was then continued with a revisiting of the issues of **Underground Water, Conservation, Water Rights, and Quantity** for the Niobrara River basin. Prioritization of the sub-issues under these main general headings follow:

Issue: Underground Water	Niobrara River
<u>Sub-issues:</u>	
Industrial	3
Urban	2
Agricultural	1

Issue: Conservation	Niobrara River
<u>Sub-issues:</u>	
Surface Water	3
Ground Water	1
Recycling	4
Research	2

Issue: Water Rights	Niobrara River
<u>Sub-issues:</u>	
Water Quantity: adjudicated rights vs. normal streamflow	2
Current use, adjudicated & historical - private property, State law, protect existing water rights	1
Compact issues: Belle Fourche	X
Keep "Wyoming" water in Wyoming	X

Issue: Quantity	Niobrara River
<u>Sub-issues:</u>	
Wasting water – discharge without beneficial uses	3
Adjudicated rights vs. normal streamflow	3
Instream flows	3
Draft on aquifers, all uses/underground irrigation wells	1
Timber, mining, oil & gas	X
Flood control	2

Responding to a request from the previous BAG meeting, the Wyoming Water Development Commission (WWDC) staff prepared a map of the Northeast Wyoming River Basin study area.

BAG Question: Is it possible to get a smaller copy of the map for the reference notebook?

Response: The WWDC will provide copies of the map in the next mailing.

BAG members then combined and rearranged sub-issues under the **Water Use** heading and completed the sub-issue prioritization process for that heading as follows:

Issue: Water Uses	Niobrara River	Little Missouri	Cheyenne River	Upper Belle Fourche	Lower Belle Fourche
				Sub-issues:	
Urban	2	x	1	2	1
Coal bed methane water impacts down river, quantity and quality	x	x	3	1	2
Flood control	3	2	3	2	2
Develop for maximum recreational use	x	3	3	1	3
Fisheries, wildlife	4	3	2	3	2
Timber, mining, oil & gas	x	1	2	3	3
Agricultural	1	1	1	1	1

The meeting was adjourned at approximately 9:00 pm.