

Green River Basin Advisory Group
Meeting Record
Sweetwater County Library, Green River WY
October 10, 2000

Welcome

Facilitator Joe Lord welcomed the group and the meeting was opened at 5:00 p.m. The overall meeting agenda was reviewed, followed by an introduction of all attendees. A sign-in sheet was passed around to record attendance.

Planning Team Issues

Jon Wade provided a rundown of the upcoming meeting schedule:

<u>Date</u>	<u>Town</u>	<u>Time</u>	<u>Location</u>
November 14, 2000	Farson	1:00	TBA
December 12, 2000	Rock Springs	1:00	TBA
January 9 th , 2001	Rock Springs	1:00	TBA
March 20 th , 2001	Pinedale	1:00	TBA

Discussion was held on the meeting schedule that will occur after the consultant report is complete. The January meeting will be the final consultant presentation of the plan, and after that a relaxed schedule is suggested to deal with topics as they come up. Originally, the WWDC put forth a schedule of meetings in March, July and November of 2001. Some BAG attendees indicated that a more pure quarterly schedule be adopted, one that more closely resembles the old Colorado River Coordinating Council meetings, with the State Engineer in attendance to brief the group on the status of current political and institutional issues. This mechanism seemed favorable to most of the group, but the scheduling of meetings beyond March was left as a future decision.

Jon Wade then updated the group on the progress of the NE WY basin plans. Both NE Wyoming BAGs are grappling with issues identification at this time.

Consultant Update

Pat Tyrrell of States West was introduced, and gave a presentation that was a continuation of the previous meeting's discussion of draft plan results. Pat's presentation emphasized projected agricultural uses and criteria for ranking future water use opportunities.

To begin Mr. Tyrrell presented current municipal, industrial, agricultural and environmental uses. In a discussion of evaporation losses, the concept of "main stem evaporation" was explored in some depth. Main stem evaporation is Wyoming's share of evaporative losses from main stem reservoirs including Flaming Gorge, Lake Powell, Blue Mesa and Morrow Point Reservoirs. By Compact, Wyoming will bear 14 percent of

the total evaporation from these reservoirs at full development (full use of allowed depletions). Until full development, main stem evaporation is not formally attached to Wyoming's depletion, but some consideration of its effect must be made because of the size. (Editors post-meeting note: at 14 percent, Wyoming's current share of main stem evaporation is about 88,500 AF. At full development, Wyoming's share would be 72,800 AF. These quantities amount to 11 and 9 percent of Wyoming's total apportionment of 833,000 AF.)

The presentation then moved into a discussion of future agricultural uses. This is the most difficult area to project because the true "demand" for agricultural water is strongly a function of the price irrigators would have to pay for it. This is a wrinkle not typically faced by industrial or municipal users who are more able to pay and for whom the cost of water development is typically less of a factor. An additional factor in future agricultural demand is the existing condition of many irrigators being short in late summer for lands already under irrigation. In this sense, future irrigation water should be developed first to make existing operations whole before new acres can be considered for production. Even in normal years, most irrigators receive less than full supply in August and September, establishing a need for late season water for most operators in tributary basins without existing storage.

Among all the tributary basins in the Green River Basin of Wyoming, those in the northwest, from approximately Fontenelle Creek on the south to Horse and Beaver Creeks in the north, suffer most from lack of storage. This part of the basin also contains the largest assemblage of currently irrigated lands. Of the roughly 300,000 irrigated acres in the basin, over 130,000 are in this region, about 40 percent of the total. Based upon work done by the Bureau of Reclamation (in the Savery-Pot Hook Definite Plan Report) and a study by ARIX in 1983 on reservoir sites in the northwest tributaries, August and September shortages (indeed, normal years often also see shortages in July for many irrigators) are the norm. This late season lack of water is estimated to translate into a 25 to 30 percent shortage based on full CIR (consumptive irrigation requirement). For estimating the need for supplemental irrigation supply, a shortage of 27 percent (about one-half acre-foot per acre) is assumed for all lands not served by storage. Using this factor, the northwest tributary lands would require approximately 65,000 acre-feet of water annually for a full supply.

Storage is required to provide that late-season water. However, the amount of storage developed in any basin may be up to three times the supplemental need for water on the crops. That is, providing 65,000 acre-feet of water to the field for consumptive use would require up to 195,000 acre-feet of storage. The reason for this increase is to make up for losses, other uses, and inefficiencies in delivery associated with normal irrigating practices. Reservoir evaporation, minimum flow and prior rights bypasses, recreation or environmental minimum pool requirements and conveyance losses all conspire to remove water from the headgate prior to application. As a recent example, High Savery Reservoir is designed with a maximum storage of 22,400 acre-feet. When all uses and losses are considered, the amount estimated as reduction in irrigation shortage is less than 7,000 acre-feet when the reservoir is in operation.

Therefore, supplying water for late season supplemental supply and the possibility of storage are major considerations in evaluating future agricultural demand. The following discussion describes the current reasoning behind the development of low, moderate and high-growth scenarios for agriculture:

**IRRIGATION WATER USE
LOW GROWTH SCENARIO
(to 2030)**

Assumptions

- No significant changes in cattle, sheep or forage prices over the thirty-year planning horizon.
- No significant changes in crops grown in the Basin.
- No changes in WWDC funding criteria for new water projects.

Implications

- Irrigators cannot afford to develop new storage given current levels of crop and livestock prices and WWDC funding criteria for the development of new storage.
- As a result, there will be no new storage projects of any significance developed in the Basin over the planning horizon.
- Without additional storage, irrigation water use will remain roughly at current levels.

MODERATE GROWTH SCENARIO

Assumptions

- Cattle prices and irrigator's income will increase significantly over the next two decades due to overseas demand for high-quality restaurant-grade beef. (The USDA is projecting a 200 percent increase in net returns to cow-calf operations in the western U.S. by the year 2010. This increase will come about as the economies of Pacific Rim countries recover and demand for grain-fed beef increases. The U.S. is the only significant supplier of grain-fed beef in the international market place. Argentina, Australia, and Brazil all export large quantities of grass-fed beef that is used for processed foods and hamburger – even in the U.S. – but do not

have the grain production or feedlots to serve the high-end restaurant and resort market.)

- There will be no significant change in crops grown in the Basin.
- The WWDC will increase its financial commitment to new storage projects from a current level of 50 percent to 75 percent as the state solves its revenue problems and allows future water-development funds to be used for that purpose.

Implications

- The combination of higher cattle prices and increased WWDC assistance will allow irrigators to develop and fund some new storage projects with WWDC assistance in those parts of the Basin that are in the greatest need.
- Irrigators along the northwest tributaries (Cottonwood Creek, Piney Creek, etc.) have the largest water shortages in the Basin and market almost all of their hay through cattle. Thus they will have a large incentive to develop new storage if cattle prices increase as projected.
- A 1983 study by ARIX identified eight sites totaling 50,000 acre-feet of storage that potentially could be developed along the northwest tributaries, although all sites may not be financially or environmentally feasible for future development.
- The moderate growth scenario assumes that 25,000 acre-feet of new storage is developed along the northwest tributaries, along with some smaller projects in the Little Snake Basin that total 5,300 acre-feet of depletion.

HIGH GROWTH SCENARIO

Assumptions

- In addition to cattle prices increases, there will be a significant increase in forage (alfalfa and hay) prices over the planning horizon. (According to Dr. Alan Gray -- Powell Cooperative Extension Service Agronomist, University of Wyoming -- high growth areas of the west, including California and Idaho, have seen a significant reduction in forage production in recent years. This reduction has come about because irrigated land has been developed for housing and water rights transferred to municipal use. As a result dairies have been moving out of those states and relocating in other less populated states where alfalfa is more available. Timothy Hay used for horse feed has also come into short supply and is now commanding prices of \$180 per ton or more.)

- Basin producers will introduce Timothy hay production and increase alfalfa production where possible in response to higher prices.
- As with the moderate growth scenario, the WWDC will increase its financial commitment to new storage from 50 to 75 percent.

Implications

- There will be an incentive for Basin producers to increase alfalfa production (where climate and water supply allow) and introduce Timothy hay production for export from the Basin to areas with dairies and large horse populations.
- A significant increase in alfalfa production would require additional storage and may involve bringing new lands into production.
- The amount of new storage that will be developed under this scenario is difficult to estimate because it is a function of development costs.
- As a starting point, we have assumed that new storage development under this scenario would add another 25,000 acre-feet of storage to the total for the moderate growth scenario. This number should be viewed as a first approximation that can be revised in the future as sight specific cost studies are undertaken as part of an ongoing water planning process in the Basin.

Mr. Tyrrell then made presentations reviewing projected uses, for low, moderate and high growth scenarios. These uses were broken down by type, i.e. municipal, industrial, agricultural, recreational and environmental.

The next topic discussed was the criteria with which future water use opportunities would be ranked. At the September BAG meeting two possibilities were put forth. One was a draft list of six criteria prepared by Mr. Tyrrell that was derived from opinion surveys and previous work. The other consisted of reproduction of parts of a 1990 document entitled “An Analysis of Contemporary and Historical Economics Associated with Water Development Projects in Wyoming” by David Brookshire, Ronald Cummings and Gary Watts. The BAG was asked to review these sources and prepare to discuss such criteria at the October (current) meeting.

The ranking criteria prompted much discussion. Among the opinions presented were that to create any project, it must first have a sponsor and be capable of funding assistance because without a reasonable chance of construction a project should not be ranked highly. This criteria is suitable for publicly-funded projects but would not apply to privately financed projects.

At the conclusion of discussion the criteria were still not set, but Mr. Tyrrell indicated the consulting team would take the various comments into consideration and present a refined set of criteria to the BAG at the November meeting.

Additional Presentations

No additional presentations were made.

Closing

The meeting was adjourned at 8:20 p.m.