

Bear River Basin Advisory Group
Meeting Record
Cokeville, Wyoming
March 22, 2004

Welcome

Facilitator Sherri Gregory welcomed the group and the meeting was called to order at 6:03 p.m. All attendees introduced themselves, followed by a review of the overall meeting agenda. A sign-in sheet was passed around to record attendance. The next meeting is scheduled for July 19 in Evanston.

Water Development Commission Report

Barry Lawrence updated the BAG on the status of the plans for the other basins. The BAGs for the Green and the Snake/Salt Basins will be meeting March 23 in Rock Springs and March 24 in Alpine. The BAGs for the Wind/Bighorn, Powder/Tongue and Northeast Wyoming Basins will be meeting April 6 in Lander, April 7 in Buffalo, and April 8 in Beulah. Barry discussed the status of all basin studies, and agendas for future meetings. Handouts from the prior meeting were distributed.

John Jackson indicated that 33 new projects were authorized in the Omnibus Water Bill – Planning, including the Evanston/Bear River Regional Water Supply project study. The Statewide Water Research program was appropriated an additional budget of \$200,000. The Small Water Project Program was amended to include irrigation as a purpose and to increase the monetary size of the project from \$50,000 to \$200,000. However, WWDC participation is still limited to a maximum of \$25,000. Funding for the program was increased by \$1,500,000, which is split equally between the Rehabilitation and New Development accounts. More information can be found at: <http://wwdc.state.wy.us/legreport/2004/approvals.html>

Snow Telemetry & Current Conditions

Dave Taylor indicated that the Natural Resources Conservation Service (NRCS) installs, operates, and maintains an extensive system to collect snowpack and related climatic data in the western United States called SNOTEL. Locally, the cooperative snow survey program monitors sites in Wyoming and the western half of South Dakota. Cooperators include various municipalities, the State Engineer's Office and the US Bureau of Reclamation. The first snow survey was conducted in 1906 by Dr. Church in the Lake Tahoe area. The program is in the 10 western states and Alaska, with Wyoming having 83 SNOTEL sites with automated equipment and 65 manually read sites. South Dakota has 2 sites each of the automated and manually read courses.

SNOTEL sites are designed to operate unattended and without maintenance for a year. Manually read courses are measured with a snow sampler, which takes a core and is weighed to determine the snow water equivalent. The standard SNOTEL site has a shelter for electronic equipment, a snow pillow, a storage precipitation gauge, a snow depth sensor, a temperature sensor, plus other sensors, including humidity, wind speed

and direction, soil moisture, and solar radiation. The data is transmitted to two base stations in Boise, ID and Ogden, UT via meteor burst technology, and is then transmitted via telephone to Portland, OR. Most Wyoming sites report every three hours. Discussion followed.

The snow survey data is available through the Water Resources Data System at <http://www.wrds.uwyo.edu/wrds/nrcs/nrcs.html> . Another site with snowpack information is the National Water and Climate Center at <http://www.wcc.nrcs.usda.gov/> , with specific Wyoming SNOTEL sites at <http://www.wcc.nrcs.usda.gov/snotel/Wyoming.wyoming.html> .

Wyoming's Drought Status

Jan Curtis, State Climatologist, presented an overview of the revised Climate Atlas, which is available at: http://www.wrds.uwyo.edu/wrds/wsc/climateatlas/title_page.html, particularly referencing the Drought chapter (<http://www.wrds.uwyo.edu/wrds/wsc/climateatlas/drought.html>). The current drought started in 1999, with 2000 and 2001 being the driest back-to-back years since 1895.

The greatest months for precipitation are May and June. The effectiveness of the moisture falling during this time is critical to emerging plants. Jan went on to say that precipitation in this state is a function of elevation; the lower elevations experience four times more evaporation than precipitation. Without the mountains to capture the moisture in the form of snow, Wyoming would be a virtual desert. Until March 1, this year looked favorable for improving water supplies. However, higher than usual temperatures coupled with below normal precipitation have eliminated any gain and this year's drought is expected to be extreme to exceptional across much of the state. The current forecast products are available at <http://www.wrds.uwyo.edu/wrds/wsc/df/drought.html> .

Jan distributed flyers on the Community Collaborative Rain and Hail Study (CoCoRaHS) and discussed the importance of the data and how it would be used in Wyoming. Funding for this program comes from the Colorado State Climate Office. Further information on this program can be found at <http://www.cocorahs.com/> .

Compact Restrictions for 2004

Jade Henderson, State Engineer's Office, discussed various storage facilities within the basin and the related impacts based on the elevation of Bear Lake. The upper division has some significant storage facilities, including Woodruff Narrows, Sulphur Creek Reservoir and Whitney Reservoir. When the Bear Lake level falls below elevation 5911, the upper division cannot utilize natural flow water except for original compact or pre-compact water. Jade indicated that Sulphur Creek Reservoir will fill, but Woodruff Narrows will only fill halfway. Discussion followed, including the topic of competing interest for unbuilt storage rights under the compact.

Cokeville Reservoir, Level I Study

Dave Kennington, Sunrise Engineering, indicated that a reservoir above Cokeville on the Smith's Fork River has been proposed for the past 30 years. The current study has identified six potential reservoir sites. Final reservoir site selection criteria included irrigation reliability, wetlands impacts, inundated acreage, embankment volume, construction costs, access, mitigation/recreation opportunities, flood control and material sources. The two reservoir sites recommended for conceptual design are the Smiths Fork and Upper Teichert/Bagley sites. Conceptual design considerations included material sources, spillway layout and sizing, foundation conditions, crest elevation, outlet works layout and erosion protection. The conceptual layout designs, embankment cross sections, outlet works, and spillways for the two sites were pictorially presented. Cost estimate for the Smiths Fork site is \$28,720,000 for dam construction, with a total project cost of \$44,859,000 including permitting and environmental mitigation, plans and specifications. The Upper Teichert/Bagley site totaled \$39,517,000 with dam construction being \$24,950,000. Upcoming work will include a detailed economic analysis and financing plan, as prepared by Harvey Economics. Discussion followed.

Thomas Fork Stream Bank Stabilization Project/Bear River Quality Force Update

Mitch Poulsen, Deputy Director for the Bear Lake Regional Commission, and Secretary for the Bear River Water Quality Task Force, discussed the Thomas Fork Streambank Stabilization project. The stream segment had a denuded riparian area, the banks were deeply cut, and significant sediment and nutrients were entering the stream. Implementing Best Management Practices, which included streambank shaping, revegetation, and installing riprap, rock armoring, and flow deflectors retained 10,000 linear feet of streambank. Also, there were significant reductions in sediment and nutrients entering the stream, the riparian area vegetation was enhanced, and fisheries and upland game habitat was improved. Partnerships for the project included Pacificorp, Trout Unlimited, local landowners, and the State of Idaho Department of Transportation and Department of Environmental Quality.

Mitch indicated that the Bear River Water Quality Task Force is an ad hoc water quality group to the Bear River Commission. The task force is composed of representatives from Utah, Idaho and Wyoming whose purpose is to coordinate water quality activities across state lines and eliminate standards that recognize political boundaries. The group has held small symposiums in the Bear River basin, is hosting an upcoming web page, and sponsors quarterly meetings in the basin regarding water quality issues.

The meeting adjourned at 8:59 p.m.