

Powder/Tongue River Basin Advisory Group  
Meeting Record  
Buffalo, WY  
April 2, 2003

**Welcome**

Facilitator Sherri Gregory welcomed the group and the meeting was called to order at 6:02 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 16 in Kaycee.

**Water Development Commission Report**

Barry Lawrence updated the BAG on the status of the plans for the other basins. The BAGs for the Powder/Tongue and Northeast Wyoming Basins will be meeting April 2 in Buffalo and April 3 in Newcastle. The Bear, Green, Snake/Salt and Wind/Bighorn River Basins met March 24 in Cokeville, March 25 in Rock Springs, March 26 in Alpine, and April 1 in Cody. Open houses for the Platte River Basin will be held this spring. Barry discussed the status of all basin studies, and agenda for future meetings.

John Jackson indicated that 4 new commissioners had been appointed, including Bill Bensel in Division II. Nineteen new projects were authorized in the Omnibus Water Bill – Planning, including a study for the Ranchester Master Plan. Twenty-seven projects were authorized in the Omnibus Water Bill – Construction. The projects in this basin included the following:

- Buffalo Water Storage Tank, which provides for the construction of water storage facilities, pressure reducing stations, and a transmission pipeline;
- Story Well, which will transfer the title of the new Level II groundwater well; and
- Sheridan Pipeline Rehabilitation, which provides for the construction and replacement of transmission pipelines.

The Groundwater Exploration Grant Program, which was amended in 2002, was appropriated an additional budget of \$1,500,000. Eligibility for the Small Water Project Program was amended to include the entire state.

**CBM Issues/Update**

Mickey Steward, Coalbed Methane Coordination Coalition, indicated the coalition had just received funding from the state for the upcoming year and Marilyn Conally was the new chairman. The coalition will focus more on outreach to county commissioners and individual assistance.

### **Aquifer Depletion in the Powder River Basin**

BJ Christensen, Coalbed Methane Coordination Coalition, indicated that the study was the product of a local rancher's call in September 2002. An 890 ft. depth well, which had been flowing, had dropped to a water level 27 feet below ground level. The local permitted groundwater wells were researched as well as the Wasatch and Fort Union aquifers in the basin. As of March 1999, there were 20,413 permitted water wells in the basin. Those wells have an annual permitted production of 2,382,349 acre-feet contained within 7.9M acres, and the average age of each well is 29 years. Unknowns affecting the aquifers include coalbed methane wells, unpermitted groundwater wells, aquifer characteristics, drought, and rural subdivision growth in the recharge area. It was noted that a loss of artesian flow is probably occurring statewide. A lengthy discussion followed.

### **State Engineer's Office Coalbed Methane (CBM) Reservoir Policy**

John Barnes, Surface Water Administrator, presented a history of water practices from 1930 through late 1950's. He indicated practices have changed from the use of headgates and diversion structures from flood or spring runoffs to the use of spreader dike systems. In addition, monies were made available from the federal government to build small reservoirs.

John summarized the revised interim policy, as updated in 2002, with regard to by-product water developed by CBM wells. He discussed the coordination with various agencies, including the Oil and Gas Conservation Commission, Department of Environmental Quality, Bureau of Land Management and the US Corps of Engineers. Some of the areas of concern involve permitting on-channel and off-channel impoundments, sodium absorption ratio (SAR), and safety of dams for small and large reservoirs.

2,000 CBM related applications have been received since 1999, of which half have been processed. John went on to say that within the next 3-5 years, an additional 3,000 are expected. A lengthy discussion followed.

### **Wyoming's Drought**

Jan Curtis, State Climatologist, introduced the drought website and drought related links, which included the palmer index, soil moisture and Snotel maps. Most of the state is in an exceptional drought, but due to recent snowstorms, has been upgraded to an extreme drought. He emphasized the importance of precipitation in April for the basin, which currently has slightly above normal precipitation. A brief discussion followed.

### **Overview of Yellowstone NAWAQ Results**

Dave Peterson, US Geological Survey, indicated the Yellowstone study unit is headquartered in Cheyenne and maintains 3 field offices. There are 50 study units nationwide and studies are updated on a rotational basis. Study

components include surface water quality and streamflow, groundwater quality, and aquatic ecology.

At 10 basin sites, the surface water was sampled at monthly intervals and high flow events from January 1999 through October 2001 for major ions, nutrients, DOC, suspended sediment and bacteria. Trace elements were sampled at 5 sites and pesticides were sampled at 3 intensive sites. Fecal coliform sampling was conducted at about 100 sites in 3 sub basins (Wind, Bighorn and Goose Creek).

54 wells in the Quaternary and Lower Tertiary aquifers along with 29 wells in a land use study (rural ranchettes) were sampled for major ions, nutrients, trace elements, VOCs, pesticides, etc.

Bed sediment and fish tissue sampling, habitat measurements, algae, invertebrate, fish community sampling, and an algal nutrient synoptic were all components of the aquatic ecology analyses. Some trace element concentrations in bed sediment were within range of possible effects. Trace element concentrations in fish tissue were generally less than levels of concern ie. copper, selenium, mercury. The Yellowstone River was identified as moderate to severely impacted with algae.

Many of the reports are currently in progress, and the national data may be obtained online at <http://water.usgs.gov/nawqa/> and the Yellowstone River Basin data can be obtained at <http://wy.water.usgs.gov/YELL/index.htm>

### **A Healthy Watershed: Supply and Demand from the Community**

John Chase described a healthy watershed as one having a healthy ecosystem, strong economy and a vibrant community. He indicated that we are living in a brittle environment, one in which there is a drought in both water and economics. The causes of the drought are due to the landscape, climate, land management paradigms and practices, capitalization, and resistance to change. He felt the solution was to build a market driven system that has sustainable supply and demand for resources within a healthy watershed by building healthy soils through proper land management. The key to water building in soils was carbon sequestration, which would result in cleaner streams and rivers, and an improved economy.

The meeting adjourned at 9:00 p.m.