

A Northeast Wyoming Basin Advisory Group
Meeting Record
Newcastle, Wyoming
November 20, 2003

Welcome

Facilitator Sherri Gregory welcomed the group and the meeting was called to order at 1:00 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 April 8 in Sundance.

Water Development Commission Report

Barry Lawrence updated the BAG on the status of the plans for the other basins. Barry discussed the status of all basin studies, and agendas for future meetings. Handouts from the prior meeting were distributed.

An Overview of the State Engineer's Office (SEO)

Harry LaBonde, Deputy State Engineer, presented an organizational chart of the office and discussed the responsibilities of the six divisions. The Surface Water and Engineering Division is responsible for reviewing permit applications for any request to put surface water to beneficial use as well as operating the Safety of Dams program. The Ground Water Division is responsible for reviewing and approving water well permits and managing a statewide cooperative stream gaging program. The Board of Control is responsible for the adjudication process on each water right and any changes to the adjudicated rights. The Interstate Streams Division participates in a number of interstate river compact commissions and organizations and regional water programs. Two additional divisions include the Administrative Division, which handles the general agency administration and the Support Services Division, which manages all information technology functions for the agency. The State Engineer serves by statute as the secretary/treasurer for the Board of Registration for Professional Engineers and Land Surveyors. It was also noted that the Water Well Drilling Contractors and Water Well Pump Installation Contractors Certification Board will be fully operational in 2005.

Current issues include permitting challenges in both the surface and groundwater divisions as related to coal bed methane development, the North Platte Decree Committee and Modified North Platte activities, and weather modification permitting activities. To obtain more information on the SEO, visit the website at <http://seo.state.wy.us>

Statewide Streamflow Statistics – Current Products and Future Needs

Myron Brooks, USGS, indicated that streamflow data and statistics are needed for

1) water resources planning, management and permitting by federal, state and local agencies, 2) designing and permitting facilities such as hydropower and water supply reservoirs, and 3) designing structures such as roads, bridges, culverts and dams. He noted that the data are expensive to obtain due to frequent site visits, the measurements are labor intensive and can be hazardous, and the data quality assurance and long term storage are ongoing costs. However, the longer you collect the data at a given station, the more useful it becomes. There are 28 continuous record surface water stations in this area, of which 3 are 50-75 years of record.

A new publication, Peak-Flow Characteristics of Wyoming Streams, is available either in hard copy or at <http://pubs.water.usgs.gov/wri034107/> The publication has updated streamflow data and utilized improved statistical methods. In the regression approach, known flow characteristics are regressed to basin characteristics at gaged sites, whereas appropriate basin characteristics of ungaged sites are used to estimate unknown flow characteristics. Therefore, unique regional relations exist between flow and basin characteristics. Myron noted that northeastern Wyoming contains 3 of 6 hydrologic regions within the state, and in comparison to the 1988 equations, those regions had improved estimation errors of 3% greater to 41% less.

Issues associated with the regression equations and related streamflow statistics include:

- Used to estimate streamflow statistics for ungaged sites
- Developed by USGS on a state-by-state basis through the cooperative program
- Large efforts are needed to determine basin characteristics
- Many publications are out of date
- Labor costs for information requests are high
- Statistics are not available everywhere they are needed

STREAMSTATS is a national prototype that will work for any state. Currently it is implemented only in parts of Idaho. It is an automated process that is completely repeatable. Additional characteristics that might be estimated include peak flow timing, annual percentiles, and annual/seasonal low flow frequency and magnitude.

Community Collaborative Rain and Hail Study (CoCoRaHS)

Nolan Doesken, Colorado State Climatologist, presented an overview of CoCoRaHS, which is a low cost approach to obtaining more detailed precipitation information during the summer months. This project is an effort to get citizen involvement in the effort of studying rain and hail. Nolan displayed a typical gage, program website, and data for Colorado. He stated that 500 volunteers are needed across the state of Wyoming to gather data. This promotion will be done through the National Weather Service with the major sponsor being the National Science Foundation. All data will be made available via the internet and can be

used as a data source for basin evaluations. For more information on the CoCoRaHS program, visit the website at: <http://www.cocorahs.com/>

Adaptive Management and Planning Models for Cultural Resources in Oil/Gas Fields

Mary Hopkins, Wyoming State Historic Preservation Office, indicated that the project is a two-year effort between private business, federal agencies and state government in Wyoming and New Mexico. 79% of the budget is funding by the Department of Energy. The evolution of the project was driven by increased energy production, an increased need for timely permit processing of projects related to the National Historic Preservation Act and the need for better resource management and decision making tools for private business and federal and state government and private business.

Mary noted that one of the project products is geoarcheological data for the Powder/Tongue River basins, consisting of electronic images of documents for the study area, a Geographic Information System (GIS) of 10,000 sites and 13,000 research areas in 8 northeastern Wyoming counties, and a complete database on all cultural resources.

An overview of the National Historic Preservation Act, Section 106, was presented. The website is <http://achp.gov> Mary noted that only 20% of the Wyoming sites are actually eligible. Discussion followed.

For more information on the Wyoming State Preservation Office, see <http://wyoshpo.state.wy.us>

Watershed Characterization for Resource Management/“Microbag”

Mickey Steward, Coalbed Methane Coordination Coalition, spoke on the need to increase emphasis on watershed management. Dead Horse Creek is currently being conducted in conjunction with the Lake DeSmet Conservation District to characterize the entire watershed. The output of this project will be an interactive GIS product on all data available. This information will be available to the public and will provide useful tools for natural resource programs, business negotiations, and determining environmental change.

The meeting adjourned at 3:41 p.m.