



# State Engineer's Office

HERSCHLER BUILDING, 4-E CHEYENNE, WYOMING 82002  
(307) 777-7354 FAX (307) 777-5451

[seoleg@state.wy.us](mailto:seoleg@state.wy.us)

DAVE FREUDENTHAL  
GOVERNOR

PATRICK T. TYRRELL  
STATE ENGINEER

October 20, 2010

## MEMORANDUM

TO: Members of the State Water Forum

FROM: Patrick Tyrrell, Chairman

SUBJECT: Attached for your review and information is a copy of the October 5, 2010 Water Forum meeting minutes. Please take a few moments and pencil into your calendar the Water Forum dates for this year. The next meeting will be November 2nd in the State Engineer's Office Conference Room at 10:00 a.m.

### WATER FORUM SCHEDULE 2010-2011 1<sup>st</sup> TUESDAY OF EACH MONTH

| DATE                     | INVITED GUEST  | DISCUSSION ITEM   |
|--------------------------|--|---|
| November 2 <sup>rd</sup> | Dr. Brent Ewers – UW - Assoc.<br>Professor – Botany  | How the Bark Beetle Epidemic is Influencing Forest Hydrology                        |
| December 7 <sup>th</sup> | Dr. Ginger Paige – UW – Assoc.<br>Professor – Water Resources  | Overview of the various watershed instrumentation efforts and soil monitoring sites |
| January 4 <sup>th</sup>  | Kim Johnson – WY Office of<br>Homeland Security  | WY Flood Map Modernization Program  |
| February 1 <sup>st</sup> | Dr. Ron Surdam – UW –<br>Director – Carbon Management<br>Research Center – School of<br>Energy Resources | Carbon Sequestration  |
| March 1 <sup>st</sup>    | Tim Bartos – USGS  | High Plains Aquifer   |
| April 5 <sup>th</sup>    | Bureau of Reclamation  | Water Supply Forecast   |
| May 3 <sup>rd</sup>      |  |   |

## SPECIAL REPORT

The next meeting of the Water Forum will be November 2, 2010 at 10:00 a.m. in the State Engineer's Office conference room. We will be hearing from Brent Ewers, Associate Professor at the University of Wyoming in the Department of Botany. Dr. Ewers' presentation is titled, "How the Bark Beetle Epidemic is Influencing Forest Hydrology".

## WYOMING STATE WATER FORUM MEETING MINUTES

October 5, 2010

Sue Lowry called the two hundred and ninety-fifth meeting of the State Water Forum to order at 10:00 a.m. The following were in attendance:

| <u>Name</u>      | <u>Agency</u>       | <u>E-mail</u>               |
|------------------|---------------------|-----------------------------|
| Brian Anderson   | USBR                | bjanderson@usbr.gov (phone) |
| Liberty Blain    | LCCD                | liberty@lccdnet.org         |
| Kevin Boyce      | WWDO                | kboyce@state.wy.us          |
| Jon Cecil        | SEO                 | jcecil@seo.wyo.gov          |
| Paul Dey         | WY G&F              | paul.dey@wgf.state.wy.us    |
| Nick Dornak      | SEO                 | ddorna@seo.wyo.gov          |
| Art Hill         | USBR                | ahill@usbr.gov (phone)      |
| Bern Hinckley    | Hinckley Consulting | bhinckley@aol.com (phone)   |
| Rick Huber       | WY G&F              | rick.huber@wgf.state.wy.us  |
| Andrew Kuhlmann  | AG                  | akuhlm@state.wy.us          |
| Harry LaBonde    | SEO                 | hlabon@seo.wyo.gov          |
| Nick Leventis    | SEO                 | nleven@seo.wyo.gov          |
| Sue Lowry        | SEO                 | slowry@seo.wyo.gov          |
| David Mott       | USGS                | dmott@usgs.gov              |
| Chris Nicholson  | WRDS                | cnichol5@uwyo.edu           |
| Suzy Noeker      | WY Farm Bureau      | snoecker@wyfb.org (phone)   |
| Dave Peterson    | USGS                | dpeterson@usgs.gov (phone)  |
| Jodee Pring      | SEO                 | jpring@seo.wyo.gov          |
| Bryan Shuman     | UW – Geology        | bshuman@uwyo.edu            |
| Mike Sweat       | USGS                | mjsweat@usgs.gov (phone)    |
| Steve Wolff      | SEO                 | swolff@seo.wyo.gov          |
| Jennifer Zygmunt | WDEQ – WQD          | jzygmum@wyo.gov             |

## AGENCY REPORTS

In order to assure accurate reporting in the minutes, forms are passed out to be completed by the representative of each agency at the meeting. These minutes consist of a compilation of the written reports received. Please complete a form either at the Forum meeting or return within a couple of days to Jodee Pring, State Engineer's Office. This will increase the efficiency and accuracy of completing the minutes for the Water Forum. Reports can also be sent via e-mail to: jpring@seo.wyo.gov. For more information on the following reports, please contact the agency representative listed above.

## STATE ENGINEER'S OFFICE (SEO)

Harry LaBonde reported the following:

The SEO participated in the 75<sup>th</sup> anniversary celebration of the building of Hoover Dam. Mr. LaBonde attended the ceremony which was held on September 30<sup>th</sup>.

The SEO has been issuing a number of permits and temporary water use agreements for oil and gas drilling in Laramie, Goshen and Platte counties. Each well site needs approximately 14-15 acre-feet of water to drill, complete and frac the well and water haul firms have been contracting with drillers. The SEO will hold three informational meetings regarding the use and permitting of water for oil and gas drilling activities. The meetings are scheduled as follows:

October 12, 1:30 p.m. Room 1699, Herschler Bldg., Cheyenne

October 12, 7:00 p.m., Pine Bluffs Community Building, 215 Main Street, Pine Bluffs

October 13, 1:30 p.m., Rendezvous Center, Goshen County Fairgrounds, Torrington

Sue Lowry reported the following:

Spread Creek Dam, which is on a tributary of the Snake River, is scheduled to be removed. With the removal of this dam, approximately 30-40 miles of Spread Creek and its tributaries will be opened up to free movement of native Snake River fine-spotted cutthroat trout. The removal is scheduled to be completed in the next few months.

The Western Governors Association (WGA) received a grant from the Department of Energy (DOE) to look at the water/energy nexus in the country. WGA is contracting with National Labs to look at water demand, availability and supply.

Jodee Pring reported the following:

The 2010 update of the Wind/Bighorn Basin Water Plan is now complete. Hard copies have been sent to all of the libraries in the state and the report can also be accessed on the web at: <http://waterplan.state.wy.us/plan/bighorn/bighorn-plan.html>. The groundwater portion of this plan is nearing completion with the Wyoming State Geological Survey (WSGS) working on concluding chapters and recommendations.

The surface water portion of the update of the Green River Basin Water Plan is almost complete. The groundwater portion of this report is complete and can be found here:

<http://waterplan.state.wy.us/plan/green/green-plan.html>

The Water Planning team continues to work on the update of the Bear River Basin Plan. The team is working on updating tech memos and certain aspects of the report. The United States Geological Survey (USGS) and WSGS are ready to begin the groundwater portion of this plan.

The Water Development Office is requesting \$250,000 to begin a groundwater study in the Snake/Salt Basin. This request will be part of the upcoming omnibus water bill.

## WYOMING GAME AND FISH (WY G&F)

Rick Huber and Paul Dey reported the following:

The WY G&F is working on wind recommendations and how these operations might affect wildlife as well as working on updating the oil and gas recommendations.

Beth Bear and Mark Fouden have been hired to coordinate the Wyoming Aquatic Invasive Species (AIS) plan. A plan has been developed and signed by the Governor and now will go before the AIS committee. A report on this past summer's activities and inspections will also be given to the Travel, Recreation and Wildlife (TRW) legislative committee as G&F is looking for additional funding for this program. A handout titled "AIS Program Update – September 29, 2010" can be found [here](#).

#### UNITED STATES GEOLOGICAL SURVEY (USGS)

David Mott reported the following:

USGS will be gathering information on water quality by sampling wells in southeastern Wyoming.

John Elliott, a research hydrologist with the USGS, will be giving a presentation Wednesday, November 17<sup>th</sup> at 10:00 am at the Cottonwood Room in the Laramie County Library. Mr. Elliott's presentation is titled: "River Restoration in Colorado – How Well Is It Working and How Can We Tell?"

Kirk Miller will be giving a presentation at the Wyoming Water Association Annual meeting on the status of the monitoring network. Those meetings will be held October 27<sup>th</sup> – 29<sup>th</sup>.

#### WYOMING WATER DEVELOPMENT OFFICE (WWDO)

Kevin Boyce reported the following:

The Water Development Office will be conducting a Level I Study of the Pavilion area. There have been water quality issues in Pavilion and WWDO will be spending \$150,000 on this study.

Request for proposals (RFPs) on upcoming projects were mailed out on October 1. Proposals are due October 29<sup>th</sup>.

The application deadline for new and continuing projects has now passed. The Commission will be reviewing all applications at the November 4<sup>th</sup> and 5<sup>th</sup> meetings in Casper and again with the Select Water Committee at meetings in Cheyenne on December 15<sup>th</sup> and 16<sup>th</sup>.

#### DEPARTMENT OF ENVIRONMENTAL QUALITY – WATER QUALITY DIVISION (WDEQ – WQD)

Jennifer Zygmunt reported the following:

The Environmental Protection Agency has approved the Total Maximum Daily Loads (TMDLS) for Goose Creek, in northern Wyoming.

#### LARAMIE COUNTY CONSERVATION DISTRICT (LCCD)

Liberty Blain reported the following:

The Natural Resources Conservation Service (NRCS) and the LCCD have been working on an agriculture water enhancement program. This is a 5 year program to convert agricultural lands to dry land farming or livestock grazing. As of this date, 5 landowners have chosen to participate in this project and will be abandoning their water rights.

LCCD is currently working on collecting base flow data at seven locations above F.E. Warren Air Force Base, through town and to Carpenter for the Crow Creek TMDL.

WATER RESOURCES DATA SYSTEM (WRDS)

Chris Nicholson reported the following:

The groundwater portion of the update of the Green River Basin Water Plan is now online. The 2010 update of the Wind/Bighorn Water Plan should be online next week.

WRDS has been working on digitizing reports in the Wyoming Water Library and are about 95% complete.

A monthly climate summary has been requested from the National Oceanic and Atmospheric Administration. These reports will be hosted by NOAA and a copy of the September report can be found [here](#).

BUREAU OF RECLAMATION / WYOMING AREA OFFICE

John Lawson submitted the following:

The following is a listing of reservoir conditions on September 30, 2010:

1. Water Supply Conditions of the North Platte River Basin.

August 31, 2009 Reservoir Conditions

| <u>Reservoir</u> | <u>Elev. (Ft)</u> | <u>Content (AF)</u> | <u>% Full Conservation Storage</u> | <u>% Avg.</u> |
|------------------|-------------------|---------------------|------------------------------------|---------------|
| Seminole         | 6348.22           | 850,880             | 84                                 | 137           |
| Pathfinder       | 5836.35           | 743,616             | 73                                 | 153           |
| Alcova           | 5498.40           | 180,474             | 98                                 | 101           |
| Glendo           | 4605.60           | 240,770             | 47                                 | 214           |
| Guernsey         | 4387.91           | 1,980               | 4                                  | 28            |

September 30, 2009 Reservoir Conditions:

| <u>Reservoir</u> | <u>Elev. (Ft)</u> | <u>Content (AF)</u> | <u>30 Year Average (AF)</u> |
|------------------|-------------------|---------------------|-----------------------------|
| Seminole         | 6337.94           | 684,730             | 619,900                     |
| Pathfinder       | 5833.83           | 700,306             | 485,900                     |
| Alcova           | 5497.99           | 179,473             | 179,300                     |
| Glendo           | 4586.09           | 125,179             | 112,400                     |
| Guernsey         | 4393.61           | 4,480               | 7,200                       |

October through September Inflows

| <u>Reservoir</u>         | <u>Inflows</u> | <u>% Of Average</u> |
|--------------------------|----------------|---------------------|
| Seminoe                  | 1512.6         | 158                 |
| Pathfinder (Sweetwater)  | 94.2           | 69                  |
| Alcova to Glendo Gains   | 395.8          | 193                 |
| Glendo to Guernsey Gains | 74.4           | 204                 |

The inflows were above average for all reservoirs in the North Platte Basin except for Pathfinder Reservoir for Water Year 2010.

Kendrick ownership was 1,112,973 acre-feet (AF) on September 30, 2010 and approximately 127% of average (874,800 AF), which compares to the ownership of 1,014,700 AF last year at this date. The September 30, 2010, North Platte ownership was 695,254 AF, which was approximately 174% of average (400,600 AF), which compares to 555,400 AF of North Platte ownership on this date last year. The Glendo ownership was 175,941 AF on September 30, 2010, which was approximately 142% of average (123,600 AF), which compares to the 121,700 AF of Glendo ownership on this date last year.

Flows in the Miracle Mile below Kortes Dam are approximately 530 cubic feet per second (cfs). Releases from Gray Reef Reservoir are approximately 500 cfs. The level of Alcova Reservoir ended September at the normal summer operating range of 5498± one foot and will lower approximately 10 feet to its normal winter operating range of 5488± one foot during the month of October.

2. Water Supply Conditions of the Big Horn Basin

September 30, 2010 Reservoir Conditions

| <u>Reservoir</u> | <u>Elev. (Ft)</u> | <u>Content (AF)</u> | <u>% Full<br/>Conservation Storage</u> | <u>% Avg.</u> |
|------------------|-------------------|---------------------|--|---------------|
| Bull Lake        | 5773.61           | 65,846              | 43                                     | 87            |
| Boysen           | 4719.48           | 639,219             | 86                                     | 106           |
| Buffalo Bill     | 5372.44           | 485,526             | 75                                     | 110           |
| Pilot Butte      | 5439.28           | 17,441              | 52                                     | 97            |

September 30, 2009 Reservoir Conditions

| <u>Reservoir</u> | <u>Elev. (Ft)</u> | <u>Content (AF)</u> | <u>30 Year Average (AF)</u> |
|------------------|-------------------|---------------------|-----------------------------|
| Bull Lake        | 5779.36           | 79,758              | 75,800                      |
| Boysen           | 4720.63           | 659,577             | 600,200                     |
| Buffalo Bill     | 5372.51           | 486,016             | 440,400*                    |
| Pilot Butte      | 5441.73           | 19,101              | 18,100                      |

\* The average used for Buffalo Bill Reservoir reflects data from 1993 through 2009. In 1992, the capacity of the reservoir was increased to approximately 646,565 AF as a result of

raising the dam. A long term average cannot be calculated until several years of operation occur under the increased storage.

October through September Inflows

| <u>Reservoir</u> | <u>Inflows (KAF)</u> | <u>% Average</u> |
|------------------|----------------------|------------------|
| Bull Lake        | 194.2                | 104              |
| Boysen           | 1193.2               | 128              |
| Buffalo Bill     | 845.2                | 101              |

Inflows to Bull Lake, Boysen, and Buffalo Bill Reservoirs were above average for Water Year 2010. The release from Boysen Dam is approximately 800 cfs.

SPECIAL REPORT

Dr. Bryan Shuman, Associate Professor at the University of Wyoming in Geology and Geophysics, gave a very interesting presentation on “Multi-Century Droughts in Wyoming’s Headwaters: Evidence from Lake Sediments.”

A copy of Dr. Shuman’s PowerPoint presentation can be found **here**.

The meeting adjourned at 12:00 pm.