

**Minutes of
Yellowstone River Compact Commission
Technical Meeting:
Beartooth Room,
Campus of MSU-Billings
Billings, MT
December 5, 2006**

1. Introductions

The meeting began at 1:30 p.m. Rich Moy (Montana DNRC) chaired the meeting, made introductions, and circulated a signup sheet (attached). Mary Sexton (Director of Montana Department of Natural Resources and Conservation and interim Montana Yellowstone Compact Commissioner), and John Tubbs, the new director of the Water Resources Division of the Montana Department of Natural Resources, were introduced. The agenda was discussed and accepted (attached).

2. Update on Coal-Bed Methane (CBM) Activities in Wyoming and Montana

Wyoming

Wyoming Compact Commissioner (and State Engineer), Pat Tyrrell provided a description of CBM activities in the Tongue, Powder, and Little Powder River drainages of Wyoming. Two handouts were provided; one showing the number of pending and permitted reservoirs in the above mentioned drainages and the other showing the total number of CBM applications received by the SEO groundwater division. He said a total of 2,993 reservoir storage permits had been issued and there were about 2300 small reservoirs (under 20 acre-feet) that were spread out over an area of about 14,000 square miles. Reservoir permit inspections are now done by a full time inspector (Dave Shroeder) from the SEO and compliance is better than it has been in the past. Permits that are granted under the name of the coalbed operator only are given a 15 year time limit. These reservoirs must be reclaimed after the CBM activity has ceased. If the land owner and the coalbed operator are listed on the permit, there is no time limit applied. Any reservoir that was used for CBM production, but will be left post-production, must be reduced to a capacity of 20 acre-feet or less.

As of December 2006 there were about 15,000 to 20,000 permitted CBM wells. Fourteen wells were recently issued cease production orders because they were not permitted. The rate of CBM well drilling depends on gas prices--if the price of gas drops, well drilling will slow down. Use of CBM water for irrigation was discussed.

Mr. Tyrrell indicated that \$200,000 had been awarded to the Wyoming State Geological Survey to develop a potentiometric (ground water level) surface map and groundwater model in the Powder-Tongue basin; the study will take two-years.

Montana

Art Compton (Montana Department of Environmental Quality) provided an update on CBM activities in Montana. In Montana there are two companies producing CBM: Fidelity Exploration and Production and Pinnacle Gas. Montana has a total of 697 producing wells, with 21 shut in and additional 134 permitted.

Mr. Compton said that in 2006, three Wyoming producers sued the Montana Board of Environmental Review over its 2003 rulemaking that adopted numeric non-degradation standards for some streams in the Powder River drainage; the State of Wyoming has also sued Montana over the numeric standards. The Northern Cheyenne Tribe has challenged the last two CBM permits: Fidelity's proposed expansion and the Pinnacle Gas water-treatment system.

3. Water Management Activities During 2006 Irrigation Season

Tongue River in Wyoming

Pat Tyrrell handed out a summary of the regulation in 2006 for the Tongue and Powder River basins. (handout attached.) The Tongue River peaked on May 11th-- about one month earlier than past years. Mr. Tyrrell said Wyoming has commissioners in each division to administer water rights in regulation. Water storage occurs mainly on Little Goose and Big Goose Creeks and storage rights were regulated by priority. There is no storage on main stem Tongue.

Powder River in Wyoming

Mr. Tyrrell said there was about 18,000 acre-feet of drawdown on Lake DeSmet (about 3.5 to 4 feet) and that about 150 acre-feet/day was released to meet irrigation demands. Priorities were regulated back to 1884 on Piney Creek. He mentioned that Mid-America Energy had acquired water rights for 67,000 acre-feet out of Lake DeSmet/Healey Reservoir for CBM development.

In response to a question regarding purchase of water from Lake DeSmet for use in Montana, Mr. Tyrrell stated that no more than 1,000 acre-feet can leave the state without an export study and approval by the legislature.

Tongue River in Montana

Kevin Smith (Montana DNRC, State Water Projects Manager) provided a graph showing inflows and outflows from the Tongue River Reservoir in Montana. The reservoir did not fill this year and was about one foot below full pool. Tongue River flows also peaked in May, and the Tongue River Reservoir delivered about 90% of its contract water. Inflows at the stateline approached zero flow in mid-July. The Tongue River was administered by water commissioners and to supplement contract water, the Water Users Association purchased 500 acre-feet to keep the stream alive.

Powder River in Montana

Mr. Smith reported that the Powder River near state line went dry for 5-6 days in mid-July, and that 1932 was the last time that happened. In addition the river was nearly dry for a much longer time period continuing through August. Keith Kerbel said that Powder River irrigators shared shortages as best they could.

Bighorn River in Montana

Ken Fraser (Montana Fish Wildlife and Parks) said that water levels on the Big Horn River, downstream of Yellowtail Dam, are maintained to try and sustain trout habitat in the mainstem and side channels. Water levels were established in the 1980's and that 2,300 cfs is necessary for good connectivity with side channels; below 2,000 cfs (an allowable threshold for dry years) significant habitat losses begin to occur and at about 1,500 cfs over 50% of the fish habitat is lost. Starting in 2001, in three of the years, flows have dropped below 1,500 cfs, but have been maintained at near that (1300 cfs) this past year.

Mr. Fraser also reported that the Lake fishery declined as well. However, Bighorn Lake bass populations have been maintained through out the drought.

Mary Sexton said that it was anticipated there would be a Compact with the Crow Tribe introduced to Congress in 2007. The state has committed \$15 million to the Compact (escrow fund), but the federal contribution was small.

Big Horn River in Wyoming

Mr. Tyrrell indicated that Wyoming recreational users were experiencing problems with low lake levels and he was concerned about the lake-level management plan under the new Compact with the Crow Tribe. He asked if he could obtain a copy of the current plan, and Keith Kerbel agreed to provide one. (Plan was provided to Pat and Sue at the Commission meeting the next day.)

Sarah Bond (Montana Attorney Generals Office) asked about Wyoming storage upstream of Bighorn Lake. Mr. Tyrrell responded that the state had about 189,000 acre-feet in Buffalo Bill Reservoir, due to the 1980 enlargement, and that about 3% of that was under contract. Ms. Bond asked if some of that could be released to improve lake levels in Bighorn Lake, and Mr. Tyrrell responded that it could not, because it would amount to meeting Montana's instream flows.

Mr. Tyrrell also said that Buffalo Bill Reservoir was increased 24 feet in 1980 and the state's share of the enlargement is 190,000 acre feet. This storage space has not been fully contracted and is generally maintained as a buffer against continuing years of drought. Boysen Reservoir has a capacity of 751,000 acre feet and presently is at 350,000 acre feet.

4. New Water Projects in Yellowstone Basin

Wyoming

Jodee Pring (Wyoming State Engineer's Office) noted that the Middle Fork Powder River Project study had been changed by the 2006 legislature to a watershed-level study; this includes a revised scope that looks at the whole watershed and not just the dam project. In addition there is a regional pipeline water supply study, Big Horn Regional Supply to look at the use of groundwater from some Madison wells in the Thermopolis to Greybull area

Montana

Mr. Smith reported that there were no new projects at this time.

5. Status of Joint Water Study

Mr. Tyrrell said that Wyoming had recently received from Montana a brief outline for a study of water uses. Wyoming had received funding from their legislature for a study, and it may be best to wait and see if Montana received funding before pursuing this further. Ms. Sexton agreed and indicated Montana had applied for funding and should know the outcome by April 2007.

6. Water Supply Outlook

Rich Moy provided a handout that showed precipitation and snowpack across Montana and revealed the general water shortages in southeastern Montana compared to the rest of the state. However he pointed out that it was too early in the snow accumulation season to make any reliable forecasts, and that was only appropriate at the spring technical committee meeting.

Wayne Berkas (Montana District, U.S. Geological Survey) and Kirk Miller (Wyoming District, U.S. Geological Survey) led a discussion of how best to portray hydrologic conditions at selected streamflow stations throughout the Yellowstone Basin. Several options were considered and the Technical Committee agreed to the use of box-plots with a logarithmic scale and the use of departure from average plots. These two formats are to be presented in the annual report. For the April meeting, Kirk and Wayne will look at 30 year average for 1971-2000 and 1977-2006 to see if they can capture the impact of the drought of the 2000s.

The meeting was adjourned at 5:00p.m.

Yellowstone River Compact Commission
Technical Meeting
Beartooth Room
Campus of MSU-Billings
Billings, MT
December 5, 2006

- I. 1:30--1:45 PM: Introduction of Mary Sexton, Director of Dept of Natural Resources and Conservation and Montana interim Commissioner to the Yellowstone River Compact.
- II. 1:45--2:30 PM: Update of CBM Activities
 - a. Wyoming
 - b. Montana
- III. 2:30--3:45 PM: Water Management activities during 2006 irrigation season
 - a. Tongue River
 - i. Wyoming
 - ii. Montana
 - b. Powder River
 - i. Wyoming
 - ii. Montana
 - c. Bighorn (Yellowtail Reservoir)
 - i. Wyoming
 - ii. Montana
- IV. 3:45--4:15 PM: New water projects in Yellowstone Basin
 - a. Wyoming
 - b. Montana
- V. 4:14--4:30 PM: Status of joint water study
- VI. 4:30--5:00 PM: Water supply outlook
- VII. 5:00PM: Adjourn

NAME	REPRESENTING	EMAIL
Mary Sexton	MT DNRC	msexton@mt.gov
John Tubbs	MT DNRC	jtubbs@mt.gov
Keith Kerbel	MT DNRC	kkerbel@mt.gov
Rich Moy	MT DNRC	rmoy@mt.gov
Chuck Dalby	MT DNRC	cdalby@mt.gov
Jim Robinson	MT DNRC	jrobinson@mt.gov
Kevin Smith	MT DNRC	ksmith@mt.gov
Sarah Bond	MT DOJ/AG	sbond@mt.gov
Art Compton	MT DEQ	acompton@mt.gov
Ken Fraser	MT DFWP	kfraser@mt.gov
Andy Brummond	MTDFWP	abrummond@mt.gov
Pat Tyrrell	WY SEO	ptyrre@seo.wyo.gov
Sue Lowry	WY SEO	slowry@seo.wyo.gov
Jodee Pring	WY SEO	jpring@seo.wyo.gov
Carmine LoGuidice	WY SEO	clogui@seo.wyo.gov
Loren Smith	Wy SEO	lsmith@seo.wyo.gov
David Willms	WY AG	dwillm@seo.wyo.gov
Bill Knapp	WY SEO	bknap@seo.wyo.gov
Bill Horak	USGS Denver	wfhorak@usgs.gov
Robert Davis	USBS Montana	rdavis@usgs.gov
Wayne Berkas	USGS Montana	wberkas@usgs.gov
Kirk Miller	USGS Wyoming	kmiller@usgs.gov
Myron Brooks	USGS Wyoming	mhbrosks@usgs.gov
Art Hayes jr.	TRWUA	browncattle@rangeweb.net
John Murdoch		