



State Engineer's Office

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PATRICK T. TYRRELL
STATE ENGINEER

May 3, 2006

MEMORANDUM

TO: Members of the State Water Forum

FROM: Patrick Tyrrell, Chairman

SUBJECT: Attached for your review and information is a copy of the May 2, 2006 Water Forum meeting minutes.

The Water Forum will take a break for the summer, but will resume in September. Please visit our website at <http://seo.state.wy.us/> for the 2006-2007 schedule. I would like to send out a big thank you to all of the Water Forum members for your support and encouragement over this last year. We will see you on September, 5th in the State Engineer's Office conference room, Herschler Bldg., 4E.

WYOMING STATE WATER FORUM MEETING MINUTES

May 2, 2006

Jodee Pring called the two hundred and fifty-seventh 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>
John Barnes	SEO	jbarne@seo.wyo.gov
Beth Bartholomew	SEO	bbarth@seo.wyo.gov
Tim Bartos	USGS	ttbartos@usgs.gov
Kevin Boyce	WWDO	kboyce@state.wy.us
Bruce Brinkman	WWDO	bbrink@state.wy.us
Myron Brooks	USGS	mhbrosks@usgs.gov
Melanie Clark	USGS	mlclark@usgs.gov
Keith Clarey	WSGS	kclarey@uwyo.edu
Jason Feltner	SEO	jfeltn@seo.wyo.gov
Jeff Geyer	SEO	jgeyer@seo.wyo.gov
Terry Gonzales	NRCS	terry.gonzales@wy.usda.gov
Lee Hackleman	NRCS	lee.hackleman@wy.usda.gov
Laura Hallberg	USGS	lhallber@usgs.gov
Scott Horgen	SEO	shorge@seo.wyo.gov
George Langstaff	SEO	glangs@seo.wyo.gov
Jeremy Manley	SEO	jmanle@seo.wyo.gov
Steve Markstrom	USGS	marstro@usgs.gov
Jon Mason	USGS	jpmason@usgs.gov
Becky Mathisen	SEO	bmathi@seo.wyo.gov
Jodee Pring	SEO	jpring@seo.wyo.gov
Mark Reid	Laramie Co. Planning	mreid@laramiecounty.com
Jack Scott	Cheyenne BOPU	jscott@cheyennebopu.org
Jim Stafford	WSGS	jstaffor@uwyo.edu
Phil Stump	SEO	pstump@seo.wyo.gov
Mike Sweat	USGS	mjsweat@usgs.gov
Mahonri Williams	USBR	mlwilliams@gp.usbr.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.

John Lawson submitted the following:

1. Water Supply Conditions of the North Platte River Basin

April 30, 2006 Reservoir Conditions

<u>Reservoir</u>	<u>Elev. (Ft)</u>	<u>Content (AF)</u>	<u>% Full Conservation Storage</u>	<u>% Avg.</u>
Seminole	6315.41	410,360	40	84
Pathfinder	5799.33	291,879	29	43
Alcova	5498.16	179,888	98	101
Glendo	4627.17	428,824	83	95
Guernsey	4410.00	24,388	53	77

April 30, 2005 Reservoir Conditions

<u>Reservoir</u>	<u>Elev. (Ft)</u>	<u>Content (AF)</u>	<u>30 Year Average (AF)</u>
Seminole	6308.36	344,869	490,100
Pathfinder	5790.64	228,150	680,400
Alcova	5498.36	180,376	178,800
Glendo	4622.30	380,015	453,200
Guernsey	4409.20	22,878	31,400

April 2006 Inflows

<u>Reservoir</u>	<u>Inflows</u>	<u>% Of Average</u>
Seminole	120.4	119
Pathfinder (Includes Sweetwater)	15.2	73
Alcova to Glendo Gains	34.1	91
Glendo to Guernsey Gains	-2.0	0

The Pathfinder Reservoir storage was the fifth lowest April storage in the last 30 years. The Glendo to Guernsey gain was tied for the second lowest April gain in the past 30 years.

Kendrick ownership was 531,444 acre-feet (AF) on April 30, 2006 and approximately 57% of average (936,700 AF), which compares to the 633,442 AF of Kendrick ownership on this date last year. The Kendrick ownership was the third lowest April ownership in the last 30 years. The April 30, 2006, North Platte ownership was 725,879 AF, which was approximately 100% of average (723,800 AF), which compares to the 434,511 AF of North Platte ownership on this date last year. The Glendo ownership was 51,571 AF on April 30, 2006, which was approximately 35% of average (148,200 AF), which compares to the 60,051 AF of Glendo ownership on this date last year. The Glendo ownership was the second lowest April ownership in the last 30 years.

Flows in the Miracle Mile below Kortes Dam are approximately 2,650 cubic feet per second (cfs). Releases from Gray Reef Reservoir are approximately 2,300 cfs but was increased to 2,500 cfs on May 1, 2006.

a. North Platte River Basin Forecast

The May 1, 2006 water supply forecast indicates above average April – July runoff for Seminoe Reservoir and for the Sweetwater River above Pathfinder Reservoir. The forecast for the North Platte River between Alcova Reservoir and Glendo Reservoir was below average.

North Platte Water Supply Forecast

Forecast Points	May 1, 2006 Forecast Of April-July Runoff			30 Yr. April-July Runoff Avg. ²	Most Probable % of Avg.	Comparative Actual April – July Runoff			
	Reasonable Maximum ¹	Most Probable	Reasonable Minimum ¹			W. Yr. 2005	W. Yr. 2004	W. Yr. 2003	W. Yr. 2002
Seminoe Reservoir	790	570 ³	350	702	81	733	277	530	118
Sweetwater River above Pathfinder Res.	80	50 ⁴	20	63	79	66	34	17	15
Alcova to Glendo	130	60 ⁵	40	123	49	39	34	93	18

¹ The probability is estimated to be 9 chances in 10 that the actual volume will fall between the reasonable minimum and reasonable maximum.

² Average is based on the 1976-2005 period.

³ The actual April inflow into Seminoe Reservoir was 120,400 AF.

⁴ The actual April inflow into Sweetwater River was 11,000 AF.

⁵ The actual April gain between Alcova and Glendo Reservoir was 34,100 AF.

2. North Platte Allocation of Storage Water

A non-binding Volunteer Allocation Process using May 1 trigger of 850,000 acre-feet or less will begin on May 1, 2006. We will be providing the districts and the State of Nebraska and Wyoming with weekly updates for the remainder of the season in order for the districts to monitor water usage throughout the irrigation season.

3. Water Supply Conditions of the Big Horn Basin

April 30, 2006 Reservoir Conditions

<u>Reservoir</u>	<u>Elev. (Ft)</u>	<u>Content (AF)</u>	<u>% Full</u> <u>Conservation Storage</u>	<u>% Avg.</u>
Bull Lake	5776.83	73,522	48	95
Boysen	4713.58	544,167	73	113
Buffalo Bill	5370.66	472,593	73	127
Pilot Butte	5449.46	24,828	74	868

April 30, 2005 Water Supply Conditions

<u>Reservoir</u>	<u>Elev. (Ft)</u>	<u>Content (AF)</u>	<u>30 Year Average (AF)</u>
Bull Lake	5789.07	105,290	77,200
Boysen	4719.02	651,241	479,700
Buffalo Bill	5372.18	483,224	371,300*
Pilot Butte	5447.70	23,460	28,700

* The average used for Buffalo Bill Reservoir reflects data from 1993 through 2005. 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.

April 2006 Inflows

Reservoir	Inflows	% Of Average
Bull Lake	3.7	103
Boysen	36.2	74
Buffalo Bill	37.0	88

The total release from Buffalo Bill Reservoir to the river is currently 1,040 cfs. With the inflow from the springs, the flow measured at the Cody river gage is 1,100 cfs. The release from Boysen Dam is approximately 900 cfs.

a. Bighorn River Basin Forecast

The May 1, 2006 water supply forecast indicates below average April – July runoff can be expected at all forecast points in the Bighorn Basin. The water supply forecasts are based on the snowpack at the Snotel stations, along with precipitation and soil moisture data.

Bighorn Water Supply Forecast

Forecast Points	May 1, 2006 Forecast of April-July Runoff			30 Yr. April-July Runoff Avg. ²	Most Probable % of Avg.	Comparative Actual April – July Runoff			
	Reasonable Maximum ¹	Most Probable	Reasonable Minimum ¹			W. Yr. 2005	W. Yr. 2004	W. Yr. 2003	W. Yr. 2002
Bull Lake Reservoir	125	110	95	139.5	79	155	117	110	99
Wind River above Bull Lake Creek	330	280	230	410.5	68	388	294	302	277
Boysen Reservoir	600	350	250	564.5	62	589	321	262	159
Buffalo Bill Reservoir	600	500	400	653.1	77	513	387	668	553

¹ The probability is estimated to be 9 chances in 10 that the actual volume will fall between the reasonable minimum and reasonable maximum.

² Average is based on the 1976-2005 period.

4. Snow Conditions (from NRCS May 1, 2006 report)

The following table shows the current and preceding weeks' percentage of average snow water equivalent amounts for Wyoming basins. Average is based on all reporting Snotel sites in the basin. The reference period for average comparison is 1971-2000. The table does not include manually read snow courses.

Snow Pack

Drainage Basin	5/01/06	4/24/06	4/17/06	4/10/06	5/01/05
Wind River	66	74	76	84	94
Bighorn Basin	65	70	70	79	63
Shoshone	66	74	75	78	57
Upper North Platte	86	95	98	107	83
Lower North Platte	76	82	8	99	78

UNITED STATES GEOLOGICAL SURVEY (USGS)

Mike Sweat and Myron Brooks reported the following:

The USGS has installed 5 gages on the reservation. 4 of the 5 are telemetered and on the web. The gages installed are 2 on the North Fork Little Wind, 2 on Willow Creek, Fivemile Creek and 1 on South Fork Little Wind River.

NATURAL RESOURCES CONSERVATION SERVICE

Lee Hackleman reported the following:

Lee handed out copies of the May 1st, Monday morning snow report. For the most recent Monday morning report, go to <http://www.wrds.uwyo.edu/wrds/nrcs/snowrept/snowrept.html>. These reports will be published until June.

SPECIAL REPORT

Steve Markstrom, who is a hydrologist with the National Research Program of the U.S. Geological Survey in Lakewood, CO was the speaker for today. For the last 13 years, Mr. Markstrom has worked with the Precipitation Runoff Modeling Project developing and applying the PRMS surface water hydrology model. His focus over the last few years has been on coupling surface water hydrology models with management and planning models as well as physical process models from related disciplines.

A copy of Mr. Markstrom's abstract can be found [here](#).

The meeting adjourned at 12:00 p.m.