

Yellowstone River Compact Commission Technical Committee  
April 14, 2004  
Sheridan County Courthouse  
Sheridan, WY

Keith Kerbel chaired the meeting and called it to order at 10:00 a.m.

Attending:

<u>Name</u>	<u>Representing</u>	<u>email</u>
Mike Whitaker	Wyo. State Engineer's	<a href="mailto:mwhita@state.wy.us">mwhita@state.wy.us</a>
Carmine LoGuidice	Wyo. State Engineer's	<a href="mailto:clogui@state.wy.us">clogui@state.wy.us</a>
Wayne Berkas	USGS-MT	<a href="mailto:wrberkas@usgs.gov">wrberkas@usgs.gov</a>
Bob Swanson	USGS-WY	<a href="mailto:rswanson@usgs.gov">rswanson@usgs.gov</a>
Keith Meier	NWS-Billings	<a href="mailto:Keith.Meier@noaa.gov">Keith.Meier@noaa.gov</a>
David Taylor	NRCS-WY	<a href="mailto:david.taylor@wy.usda.gov">david.taylor@wy.usda.gov</a>
Roy Kaiser	NRCS-MT	<a href="mailto:roy.kaiser@mt.usda.gov">roy.kaiser@mt.usda.gov</a>
Art Hayes, Jr.	TRWU-Birney	<a href="mailto:browncattle@rangeweb.net">browncattle@rangeweb.net</a>
Keith Kerbel	MT DNRC	<a href="mailto:kkerbel@state.mt.us">kkerbel@state.mt.us</a>
Sue Lowry	WY State Engineer's Office	<a href="mailto:slowry@state.wy.us">slowry@state.wy.us</a>
Loren Smith	WY State Engineer's Office	<a href="mailto:smitty3@wyoming.com">smitty3@wyoming.com</a>

2. Recap of Commission meeting held December 16, 2003

Sue recapped the minutes from the Commission meeting related to the report of the Technical Committee. Jack Stults in particular is interested in the Technical Committee focusing their efforts on improving the ability to forecast the amount of water coming across the Wyoming-Montana stateline, focusing initially on the Tongue River. Keith Kerbel described his appreciation of the meeting last year which allowed him and Roy Kaiser to better understand the location of gaging stations and forecast points. We all understand there is a lot of competition for the limited water resources during these drought years and our goal is to utilize those resources as efficiently as possible.

3. Hydrologic information from various sources:

U. S. Geological Survey

Wayne passed out a handout describing the "Monitoring Surface-Water Quality in the Tongue River Watershed". The web page for the Tongue River monitoring program is <http://TongueRiverMonitoring.cr.usgs.gov/>

New real-time SAR monitoring is being developed for use in this basin at the water quality sites. The Geologic Division of the USGS is completing the new research. Tongue River at the state line will be the first location for the new device. Sen. Burns made a direct request to the USGS to get this program initiated.

Bob reported that a portion of the Tongue River project is in Wyoming. Prairie Dog station is now being funded through BLM and is being transferred to the DEQ for this year and then will be funded through the Tongue River project funds. Wyoming is posting Water Quality data as provisional on Wyoming's website. They are trying to get these data linked to the Tongue River project so those looking for data only have to go to one site. The USGS is very involved with several sites in the CBM producing areas of Wyoming, including over flights for geophysical measurements. Additional real-time Water Quality stations are being added in Powder, Tongue, Cheyenne and Belle Fourche River basins. The Wyoming Water Resources Data for 2003 is ready and CD's are being burned right now and will be available on line in a week or so. The summary report of the Yellowstone NAWQA has been published but won't be released until the other NAWQA's that started the same date are ready for distribution.

Montana's water resources data report for 2003 is not quite ready to release. They will still do a paper copy as well as a CD. Wyoming's cd next year will include historical data as well as current data. The current cd's are .pdf files which lack the ability to manipulate the data. DCP's operated by the WY State Engineer's Office are now linked to the USGS website so the data are available.

#### Natural Resources Conservation Service

Roy handed out information on the forecasts for 2003 and how the actual runoff lined up with those forecasts. Dave showed trends of how snowpack is looking a lot like 2002. Because of the high temperatures, the snow melt that has occurred so far, plus the low soil moisture, the 90% exceedence amount is about all that should be counted on as it's unlikely that average precipitation or average temperatures will be received.

#### National Weather Service

Keith M. had a handout showing the precipitation deficits facing the basin. The 30 and 90 day outlook is for equal chance of higher or lower precipitation and higher or lower temperatures. There is a chance of lower temperatures over the next 90 days, but Keith thinks it will be northwesterly flow of Canadian air that may be cooler, but won't have much moisture associated with it.

The annual water conference in Montana is scheduled for early September, 2004. Bob suggested that Julio Betancourt might be a good invited speaker to discuss drought trends.

Sue will contact the Riverton NWS office to see if Jim Fahey might be interested in attending these meetings if they are held in the future.

#### 4. Forecasts and runoff estimates

Roy makes adjustments to the forecasts made from the Portland statistical models to account for items such as early snowpack coming out, low soil moisture, reservoirs filling and ditches turning on. Roy relies on stream gages to give him a clue as to ditch diversions beginning. Dave doesn't have the staff resources to do this on the Wyoming side of the basin.

Given the bleak outlook for snowpack and precipitation the next month or so, Mike feels that the upper elevation reservoirs in Wyoming will have a difficult time filling with the low supply. This will have the affect of decreasing the peak even further. The snowpack is melting into the ground and will decrease the streamflows further at the stateline. There are no storage facilities on the mainstem Tongue in Wyoming, so Tongue River Reservoir may see a higher percentage of the runoff from the Tongue drainage versus the Goose Creek drainage. Wyoming has about 14,000 acre-feet of reservoir capacity to fill in the Goose Creek drainage.

Discussion was held on the scenarios of when irrigation might occur in Wyoming and begin to take water as the creeks rise. However, it is difficult to accurately estimate the volume of return water that will result from earlier irrigation and the impact of those activities on the stateline water supply. Roy commented that the continued drought has resulted in lowered base flow amounts and adjustments have been necessary to reflect the low flow.

Mike handed out a report listing some Wyoming reservoirs with post-1950 and pre-1950 reservoir capacities and carryover for the committee. Keith raised the issue of how the Compact could be administered if Montana made a call for the 9,369 acre feet of post -1950 water, if Montana could not fill Tongue River Reservoir this spring. It appears from all the reports that were heard today, the percentages of filling Tongue Reservoir this spring are extremely low. A discussion of how the Compact could be administered was held, and limitations of the Yellowstone Compact were discussed as well, because there is not a clear method of determining when water is to be apportioned in this compact like decrees Wyoming must deal with in other basins within their state and other states. No solution was achieved or methodology to determine if and how this water could possibly be delivered to the Tongue River Reservoir at the state line. Keith expressed that Montana would be interested in discussing with Wyoming

operating scenarios for the basin that would result in a win-win solution for both states.

5. Reservoir storage report for inclusion in Commission's annual report

The format for reporting reservoir information from the existing Yellowstone Commission Annual Report was reviewed and the Tech Committee determined to recommend listing the facilities by drainage and list its priority date (pre and post-Compact) rather than by the date of construction. The end of year carryover data will be provided to Roy and to Wayne.

6. Report of meeting highlights and recommendations to Commission meeting 4/15/04

--USGS described the Tongue River Project that resulted from a Sen. Burns add-on

--Bleak outlook for 2004 runoff—looking very similar to 2002

Total runoff into Tongue River Reservoir may be sufficient to fill the original water right in the reservoir, but may not fully fill the enlargement. The timing and low volume of runoff may make it difficult for Wyoming to fill its mountain reservoirs.

--Suggest to the Commission that it may want to send letter of support for the Snow Survey program, to first make up the O&M deficit created by the accounting changes and get an overall increase to add sites.

--Format for expanded reservoir listing in the Commission's annual report

--Set Technical meeting for same day (or afternoon previous) of the Commission meeting so the Commissioners can attend as well if they desire.

--The Commission might consider the establishment of a web page to provide a one stop with links to the various forecast and current and historical hydrologic information available for the basin.

7. Set next meeting

The Tech Committee agreed to suggest to the Commission that next spring the Technical Committee meet for a water supply meeting at 9 a.m. and then hold the formal Commission meeting during the afternoon. The Commissioners could attend the Technical meeting if they would like to hear the details. Next meeting would be April 12, 2005 in Billings. The time will be set according to the plans for the full Commission. *(post Commission meeting note: The Commission agreed to meeting December 1, 2004 in Montana with the Tech Committee meeting at 9:00 a.m. and the full Commission meeting at 1 p.m. The April 12, 2005 meeting will likely be hosted in Wyoming, perhaps Cody)*

8. Other items??

Reservoir content data—should all the various data be pulled together into a single web page with a link back to where the data reside.

Sue Lowry  
4/30/04

(Revised with edits from Keith Kerbel, Mike Whitaker and Loren Smith)  
Final distributed 8/5/04)