

YELLOWSTONE RIVER COMPACT COMMISSION

WYOMING

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Honorable Mark Gordon
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Honorable Greg Gianforte
Governor of the State of Montana
Helena, Montana 59620

Honorable Doug Burgum
Governor of the State of North Dakota
Bismarck, North Dakota 58501

Dear Governors:

Pursuant to Article III of the Yellowstone River Compact, the Commission submits the following Seventieth annual report of activities for the period ending September 30, 2021.

Minutes of December 1, 2021

Members of the Yellowstone River Compact Commission convened virtually and by phone on December 1, 2021, at 8:00 a.m. In attendance were Mr. John Kilpatrick, U.S. Geological Survey (USGS), Chairman and Federal Representative; Mr. Greg Lanning, Wyoming State Engineer's Office (SEO) and Commissioner for Wyoming; and Ms. Anna Pakenham Stevenson, Montana Department of Natural Resources and Conservation (DNRC) and Commissioner for Montana. Also in attendance were Ms. Michelle Gess, Mr. Loren Smith, and Mr. David Schroeder, SEO; Mr. Mark Elison, Ms. Christine Schweigert, Ms. Laura Rennick, Mr. Paul Azevedo, Mr. John Lunzer, Mr. Jacob Mohrmann, and Mr. Brian Holling, DNRC; Mr. David Waterstreet, Wyoming Department of Environmental Quality; Mr. Chris Brown, Wyoming Attorney General's Office; Mr. Jason Whiteman and Ms. Jeanne Whiteing, Northern Cheyenne Tribe; Ms. Kimberly Fischer, North Dakota State Water Commission; Ms. Elizabeth Cresto, Ms. Annelisse Deters, Mr. Mike Follum, and Mr. Clayton Jordan, Bureau of Reclamation; Mr. Todd Chambers, National Weather Service; Mr. Brandon Gebhart and Mr. Andrew Lynch, Wyoming Water Development Commission; Mr. Christopher Morris, Bureau of Land Management; Mr. Vern

Tharp, Western States Water Partnership; Mr. David Gochis; National Center for Atmospheric Research; and Mr. Brian Loving, Mr. Scott Whiteman, Mr. Aaron Fiaschetti, Dr. Theodore Barnhart, Mr. James Betsill, and Mr. Seth Davidson, USGS.

Mr. Kilpatrick called the meeting to order and introduced Ms. Pakenham Stevenson as the new Commissioner for Montana. All attendees introduced themselves.

The proposed agenda was reviewed and approved with the following revisions: Agenda Item 4, review and approval of the 2020 Annual Meeting minutes, was removed from the agenda as the minutes were approved prior to the meeting; Agenda Item 5, the presentation of budgets for July 2022 through June 2023, will be discussed with Agenda Item 11.

Mr. Loving provided a summary report of the 2021 Water Year Streamflow Conditions. Streamflow of Clarks Fork Yellowstone River at Edgar, MT was 80% of normal, while streamflow of the Little Bighorn River near Hardin, MT and Bighorn River above Tullock Creek near Bighorn, MT were approximately 65% of normal. The Tongue River at Miles City, MT was approximately 45% of normal, and the Powder River near Locate, MT was about 38% of normal.

Mr. Davidson gave a report of reservoir contents of all reservoirs of interest to the Commission. In summary, reservoir storage across all basins was approximately 2,340,000 acre-ft which is 84,000 acre-ft less than storage for water year 2020. This level is similar to water year 2016.

Mr. Schroeder provided an update of the administration highlights for Wyoming Water Division II, Tongue River and Powder River Basins. Warm temperatures and little precipitation during the spring resulted in another year of extreme or exceptional drought for area. Streamflows were 77-81% of normal in the Tongue and 34-69% of normal in the Powder River Basin. Division II regulated most major streams in the basins due to the dry conditions. The Tongue River did not go into regulation this year and Montana did not make a call to fill Tongue River Reservoir under the Compact. Snowpack in the basins was above 100% on April 1, 2021 and allowed for the filling of all the high mountain reservoirs. Storage in these reservoirs was greater at the end of water year 2021 than at the end of 2020.

Mr. Schroeder reported that the Wyoming Water Development Commission has contracted for a Level 1 study to determine the uses of 67,000 acre-feet of water in Lake DeSmet and Healy Reservoir the state purchased. Additional infrastructure to increase availability and market interest, including the potential leasing of water to the Northern Cheyenne Tribe, are being assessed.

Mr. Smith continued with an administration activity update for Wyoming Water Division III, Bighorn River Basin. The Bighorn Basin experienced similar conditions to the Tongue and Powder Basins with good snowpack early in the spring. However, little to no precipitation for the rest of the season resulted in a dry year with Buffalo Bill Reservoir and Boysen Reservoir unable to be filled. Division III regulated nine streams this water year, which is more than in recent years but not equal to the level of regulation required in 2016. The Wind River Reservation experienced severe shortages late in the season.

Mr. Smith noted that streamflow runoff numbers from this year provided additional insight on Anchor Reservoir's storage losses. The South Fork Owl Creek streamgauge above the reservoir recorded 132% of normal streamflow for the year. However, the South Fork Owl Creek streamgauge below reservoir reported 79% of normal with Anchor Reservoir storing the same amount of water.

Ms. Pakenham Stevenson provided an update of Montana's administration highlights. Very little administration was necessary during water year 2021. There were no new surface water permits, one wastewater permit, and one change permit. A subdivision near Billings was granted two groundwater permits with two more pending. Five authorizations were granted to change a point of diversion, place of use, or add stock water tank to an existing system with another is pending. The most significant activity is the completion of small groundwater developments with 385 certificates issued in the basin.

Ms. Pakenham Stevenson reported that the Upper Yellowstone Watershed Study will monitor groundwater, surface water, and irrigation as well as develop a water balance. The model will be developed over the next two years and will be able to run climate scenarios and perform forecasts. The DNRC plans to expand this program beyond the Yellowstone River Basin to assist with Compact decision making. In addition, the DNRC is building a guideline model for determining when a call under the Compact may be made. These guidelines will add transparency to the decision-making process and will be presented to the Technical Advisory Committee during the April 2022 meeting.

Mr. Kilpatrick announced the appointment of Ms. Gess for SEO and Mr. Mohrmann for DNRC to the Technical Advisory Committee (Technical Advisory Committee).

Mr. Elison commented that the high turnover of Technical Advisory Committee membership resulted in little progress over the past year. The Technical Advisory Committee has nothing to report concerning forecasting within the basin.

Mr. Jordan provided an update of Bighorn Lake/Yellowtail operations. The transition to the Riverware reservoir modeling program occurred last year and continues in use. After decent snowpack early in the season and a lack of precipitation in the spring, the forecasts decreased in May with the April to July runoff calculated at 48% of average; the lowest since 2006.

Mr. Jordan also noted that Bureau of Reclamation has developed a publicly available forecasting program called PyForecast. This program is used for the dam's operations.

Ms. Gess reported on the progress on improving Upper Missouri River Basin climate monitoring using funding provided by the Corps of Engineers. A pilot station in Sheridan, WY and an additional station in Powell, WY have been deployed. Three other stations were scheduled for water year 2021. However, those installations have been delayed until the summer of 2022. In addition, three more stations are scheduled for installation during the summer of 2022. Eight climate stations should be operational by December next year.

Mr. Tharp gave a presentation about the Western States Water Partnership's gap filling radar program.

The attendees discussed the funding, technical details, and application of gap filling radar as it pertains to the forecasting efforts of the Commission.

Mr. Gochis presented information about the costs and value assessments of water supply forecasts.

The Commissioners requested the Technical Advisory Committee continue to investigate the application of gap filling radar for Commission forecasting efforts.

Ms. Pakenham Stevenson inquired about the expectation of legal counsel during Commission meetings.

Mr. Lanning replied that Mr. Brown is present due to his institutional knowledge relating to the Commission.

Mr. Brown continued by saying his involvement has been at the request of the Wyoming Commissioner due to his understanding of the recent litigation, the Resolutions resulting from that litigation, and how the Commission may need to proceed. Mr. Brown does not see his role as any legal posturing but solely to help the Commission do business. However, he only represents his client, Wyoming, and does not intend to represent Montana's position. If a legal discussion is required during a Commission meeting, Montana will be notified so their legal counsel can be present.

Ms. Pakenham Stevenson gave a presentation summarizing Montana's adjudication updates. An examination of additional filing exemption claims enabled by recent state legislation is underway. Summary reports for these exemption claims will be submitted to the Montana Water Court, with some basins due at the end of 2021 and the remainder due in 2023.

Mr. Smith stated that the number of adjudications in Division III was lower as more attention was needed for regulation activities during the drought in the basin.

Mr. Schroeder reported Division II also completed fewer adjudications due to the regulation activities necessary for the drought in the basins.

Mr. Smith provided an update of the Wyoming Water Development Projects in Division III. The Levitt Reservoir expansion project is out for construction bids with construction planned to begin in the winter of 2022. The Alkali Creek Reservoir project is running behind schedule as additional research was requested. Other portions of the project are moving along, and the project could begin construction as early as the winter of 2022.

Mr. Schroeder stated that Division II has heard little news concerning the Bull Creek Reservoir project due to its cost prohibitive price tag.

Mr. Loving presented the USGS's proposed operational costs in support of the Commission for fiscal year 2022 and estimated future costs through fiscal year 2026. During a re-evaluation of the streamgages operated for the Commission, it was discovered that White Horse Canal near Silesia, MT and Agency Canal Tailwaste near Hardin, MT were not being funded by the Commission. The USGS has been solely funding these sites. Starting in fiscal year 2023, the cost to operate the two canal sites will be distributed between the USGS, Wyoming, and Montana. The 2022 budget was approved.

Mr. Davidson stated that the backlog of Annual Reports has been cleared and all reports should now be available on the YRCC website. In addition, approved minutes will be distributed via email and posted to the website as soon as possible. A list of Resolutions of the Commission will be forthcoming next year.

Mr. Schroeder outlined the importance of Tongue River Reservoir in the administration of the Compact. He noted that the online availability and format of Tongue River Reservoir data is limited and requested that Montana research methods of making the information more robust and accessible.

Mr. Holling noted that DNRC is compiling all reservoir elevation and storage data from 1939 to present and plans to send that data to Wyoming next week. The reservoir elevation is retrieved via antiquated

technology; it is retrieved and published once a day and made available online. Wyoming could be added to a monthly report distribution list, but there are no plans to telemeter the reservoir data.

Ms. Pakenham Stevenson welcomed a conversation at the Technical Advisory Committee to discuss Wyoming's needs related to Tongue River Reservoir stage data and how Montana may be able to provide those data.

Dr. Barnhart reported that the USGS, in partnership with the Northern Cheyenne Tribe, has received some funding to generate future flow information for the Tongue River. An additional proposal is under review with the North Central Climate Adaptation Science Center, USGS.

Mr. Linch provided an update of Wyoming's Lake DeSmet and Healy Reservoir water use study. One goal of the study was to evaluate a low-level outlet alternative in lieu of pumping on Healy Reservoir. The other goal of the study investigated using water from Lake DeSmet to alleviate curtailment of Wyoming water users if Montana made a call under the Compact. The study has been reviewed internally and the next steps are being assessed.

There were no Resolutions of Appreciation.

Mr. Kilpatrick opened the floor for public comment.

Mr. J. Whiteman noted that the Northern Cheyenne Tribe has deployed two drought monitoring stations and would like to invite Kevin Hyde from the Montana Climate Office to the Technical Advisory Committee meeting in April 2022.

The Commissioners and attendees agreed to hold the next Technical Advisory Committee meeting on April 14, 2022, and the next Yellowstone River Compact Commission Meeting on December 1, 2022, in Montana. The meetings will be held in-person if possible.

The meeting adjourned at 11:15 am.



Brandon Gebhart
Commissioner for Wyoming

Anna Pakenham
Stevenson

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Pakenham Stevenson
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Anna Pakenham-Stevenson
Commissioner for Montana



JOHN KILPATRICK
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John M. Kilpatrick
Chairman and Federal Representative