

YELLOWSTONE RIVER COMPACT COMMISSION

WYOMING

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JAN LANGEL
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Honorable Mark Gordon
Governor of the State of Wyoming
Cheyenne, Wyoming 82002

Honorable Steve Bullock
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 sixty-seventh annual report of activities for the period ending September 30, 2018.

Minutes of December 4, 2018

Members of the Yellowstone River Compact Commission convened December 4, 2018, at 8:00 a.m. In attendance were Mr. John Kilpatrick, U.S. Geological Survey (USGS), Chairman and Federal Representative; Mr. Pat Tyrrell, Wyoming State Engineer's Office (SEO) and Commissioner for Wyoming; and Mr. Jan Langel, Montana Department of Natural Resources and Conservation (DNRC) and Commissioner for Montana. Also in attendance were Ms. Beth Callaway (via phone), Mr. Loren Smith, and Mr. David Schroeder, SEO; Mr. Mark Elison and Mr. Brian Holling (via phone), DNRC; Mr. Chris Brown, Wyoming Attorney General's Office; Mr. Bill Schuh (via phone), North Dakota State Water Commission; Mr. Art Hayes, Jr., Tongue River Water Users Association; Mr. Ronald Burns and Mr. Jason Whiteman, Northern Cheyenne Tribe; Mr. Clayton Jordan and Mr. Ryan Colloton, U.S. Bureau of Reclamation (USBR); Mr. Chris Morris (via phone), U.S. Bureau of Land Management (BLM); and Mr. Kirk Miller and Mr. Seth Davidson (via phone), USGS.

Chairman Kilpatrick called the meeting to order at 8:00 a.m.

Mr. Kilpatrick welcomed the attendees and introduced the Commissioners. Those in attendance and on the phone introduced themselves.

Mr. Kilpatrick asked if any additions to the proposed agenda were needed. Mr. Schuh requested that a report on the intake construction of the Lower Yellowstone Irrigation District be added to the agenda. Mr. Langel moved to approve the revised agenda and Mr. Tyrrell seconded the motion.

Mr. Kilpatrick requested an update on the Commission budget.

Mr. Miller distributed and presented a handout summarizing the operational budget for fiscal year (FY) 2019 and the proposed budgets for FY2020 through FY2023 (Appendix A).

Mr. Tyrrell asked why the cost to Wyoming and Montana is decreasing for fiscal year 2020.

Mr. Miller responded that the cost has dropped because the reporting costs were not included in previous years and the “catch-up” amount has been met. In addition, since the litigation between Wyoming and Montana has ended, the Commission decided the verbatim transcriptionist is no longer necessary which also reduced expenses.

Mr. Langel moved to approve the proposed budget. Mr. Tyrrell seconded the motion.

Mr. Kilpatrick requested a report on the administration for the Tongue River Judgement and Decree.

Mr. Schroeder replied that as part of the Decree, the States were to provide each other reports of existing surface water rights in the Tongue River Basin. Thereafter, the States are to report changes to existing water rights and new adjudications. In order to meet the 30-day deadline of the resolution of the Decree the report from Wyoming was submitted with the caveat that some information would need to be amended. Since the initial submission in March 2018, SEO staff verified each record and that information was distributed at the meeting.

The attendees discussed how the information of existing water rights and administration updates should be exchanged as the State’s database provides different information.

[Action Item] The Commissioners assigned the Technical Advisory Committee with the task of sorting through the administration updates and proposing/ensuring that each State provides useful information that fits each State’s needs. The two reports do not need to be consistent as each State uses different databases and has specific needs.

Mr. Brown noted that both States requested groundwater pumping information in the Tongue River Basin and Powder River Basin be reported in the administration updates and suggested that a discussion of this information take place.

Mr. Schroeder reported that Tongue River Basin and Powder River Basin groundwater is not typically regulated in Wyoming and that information is minimal.

Mr. Brown explained that Wyoming typically does not collect groundwater information unless there is a special reason to collect that data; and at this time there is no reason to collect that information in the Yellowstone River Basin.

Mr. Langel added that groundwater information collected by Montana in the Tongue River Basin or Powder River Basin is also limited.

Mr. Kilpatrick requested the streamflow conditions and reservoir contents reports.

Mr. Miller distributed handouts and presented the streamflow conditions report (Appendix B) and reservoir contents (Appendix C).

Mr. Kilpatrick requested an update on the 2018 water year administration highlights from Wyoming.

Mr. Tyrrell stated that a new governor will be elected in November. The Wyoming fiscal outlook has improved. Mr. Tyrrell then requested that Mr. Schroeder provide an update for SEO Division II

Mr. Schroeder provided highlights of the Powder River Basin and Tongue River Basin. In the Powder-Tongue Basin, peak runoff flows were 100-150% average, especially in the Tongue River and its tributaries. Streamflow volumes were average to well above average, except for the Middle and North fork of the Powder River which was below average. The Tongue River experienced well above average precipitation in the 2018 water year (106-122%) while the Powder River was between 90-105%. Every major river peaked on May 28th due to a significant precipitation event. Many districts did not go into regulation in 2018, but for those that did all occurred around middle to late July.

Mr. Smith reported that streamflows from the basin were 69% to 188% of normal in SEO Division III. Adequate reservoir storage and good spring moisture limited administration to four streams with Gooseberry Creek the only stream that went into regulation before run-off due to the lack of snowpack. Gooseberry Creek remained in regulation for the entire season. The Greybull River went into regulation on July 18. Medicine Lodge Creek and Paint Rock Creek went into regulation on July 22. The Nowood River went into regulation near the mouth on August 20. Overall, the abundance of snowpack, reservoir storage, and moisture delayed calls for regulation by 2-3 weeks and prevented calls in the Lander area as those users manage the resource themselves. The Reservation drainages only observed minor late season shortages.

Mr. Kilpatrick requested administration highlights from Montana.

Mr. Langel informed the Commission that the former Billings Regional Office manager, Keith Kerbel, passed away from cancer in October.

Mr. Langel reported that Kevin Smith moved on to the Montana Department of Environmental Quality and has been replaced by Brian Holling.

Mr. Langel continued that Montana, generally, had a quiet year for water administration. The DNRC Billings Regional Office issued two new water right permits; one in the Powder River Basin and one in the Clarks Fork River Basin. There were three water right changes; two from the Bighorn River Basin and one on the Yellowstone River. These changes were handled by the local Conservation Districts, which

have water on reserve and can change water rights to accommodate users. In addition, the Billings Regional Office issued forty new groundwater certificates.

Mr. Langel added that the Billings Regional Office has a couple of pending permits in the Yellowstone River Basin; one on the Powder River and one on the Clarks Fork. There are also two pending changes, with one on a tributary to the Little Bighorn River and one on Lodge Grass Creek.

Mr. Langel reported that DNRC is working with Montana Department of Environmental Quality to address salinity on the Tongue River. One possible approach is leasing some Tongue River Reservoir Compact water from the Northern Cheyenne to allow complete flushing flows in the spring.

Mr. Hayes clarified that in order to meet the requirement of the Special Master of 75 cubic-feet per second during low-flow years, the sodium content in the Tongue River at Miles City rises above the standard. Therefore, one proposal on the table is to lease water from the Northern Cheyenne to supplement flows during dry years. Mr. Hayes also noted that gate maintenance on Tongue River Reservoir suggested salinity levels vary by depth in the reservoir and that additional data collection is being performed in confirmation.

Mr. Langel added that this situation is still under assessment and that there is no consensus on the best method to solve the issue.

The attendants discussed the salinity issue found in the Tongue River Basin.

Mr. Hollings reported that Tongue River Reservoir held approximately 50,000 ac-ft at the beginning of the 2017 water year. This level was held until mid-March at which point the reservoir began to fill rapidly at which point flows were adjusted as needed. The reservoir peaked on June 1 and spilled until early July. Storage lasted through the irrigation season and the reservoir has been at approximately 50,000 ac-ft since on October 1. Cooney Reservoir held storage of approximately 21,000 ac-ft at the beginning of the 2017 water year. This level was held until early March at which point the reservoir was adjusted as needed. Cooney Reservoir spilled from May 28 through June and maintained storage through the irrigation season. On October 1, the storage was approximately 18,000 ac-ft. There is some damaged rip-rap at the new outlet weir structure that will be repaired this winter.

Mr. Langel said that the DNRC has made progress on restoring funding for USGS cost sharing of gages in the Yellowstone River Basin.

Mr. Kilpatrick asked for a report from the Technical Advisory Committee.

Ms. Callaway presented the Technical Advisory Committee's work on Table 10 of the Annual Report (Appendix D)

The attendees discussed table 10.

Mr. Tyrrell moved for the approval of Table 10 for the year with the following edits: 1) the removal of "Month-end usable" from the first sentence after the table title, the removal of "e-estimated" notation for years when there are no estimated values, and the removal of footnote 3 from Tie Hack, Twin Lakes and Fort Worthen Reservoirs. Mr. Langel seconded the motion.

Ms. Callaway reported that over the past few years, the Technical Advisory Committee has been investigating potential forecasting tools to assist with the administration of the Tongue River with the new decree and the terms of the Compact. The Technical Advisory Committee has been looking at forecasts of the total volume of streamflows for April through June provided by the National Weather Service (NWS) and Natural Resources Conservation Service (NRCS). New capabilities have also been identified such as a new precipitation runoff model from NRCS. The NWS established a new forecasting point at the State Line which is equivalent to the Tongue River at Decker site. That data point has been running for a year and did produce some forecast data this past spring. At this point, the Technical Advisory Committee requires more direction from the Commission.

Mr. Kilpatrick noted that forecasting science is changing rapidly and there could be more opportunities out there to help the Commission with administration.

Mr. Tyrrell believes that it is important for the Technical Advisory Committee to continue to pursue forecasting abilities for the Yellowstone River Compact Commission and would like a status report that summarizes the concerns and recommendations from the Technical Advisory Committee.

Mr. Kilpatrick agreed that a report would be useful and could help identify potential funding/resource sources.

[Action Item] The Technical Advisory Committee is to compile a summary report of forecast work identifying needs and making recommendations for next steps.

Mr. Langel noted that Mark Elison will assume Mr. Dalby's duties on the Technical Advisory Committee.

Mr. Kilpatrick requested the Montana state-wide adjudication report.

Mr. Langel reported that the DNRC adjudication staff continues to provide post-decree assistance to the Montana Water Court. In 2012 the Water Court issued a re-examination order requiring DNRC to review basins across the state decreed with a temporary preliminary decree. Ten summary reports were submitted to the Water Court in 2018 with only one of the basins reviewed being located within the Yellowstone River Basin (Basin 43-B, Bridger Creek).

Mr. Langel informed the Commission that 2017 HB110 allowed for the filing of pre-1973 water-right claims for instream stock, instream domestic, and domestic groundwater. Those had been previously exempt. Notices were sent to 350,000 unique property owners across the state. DNRC expects 15,000 new water rights will be added into the adjudication.

Mr. Kilpatrick requested the Wyoming state-wide adjudication report.

Mr. Smith reported that SEO Division III oversaw the completion of sixty surface-water and thirteen groundwater adjudications in 2018. Of the sixty surface-water adjudications, eighteen were larger reservoirs that did not meet the qualification for small stock reservoir filings. An additional small stock reservoir was adjudicated and another was endorsed as constructed within the terms of the permit. Thirty-six ditch/enlargement proofs were completed which could be adding acres, new facilities, or multiple points of use. Four instream flow permits were adjudicated. A long-term inspection (one to two

years) is needed to collect enough data for these instream adjudications. The thirteen groundwater adjudications were either for miscellaneous use or small irrigation projects were completed. Division III also completed sixty-one dam safety inspections. The Board of Control finalized 30 surface petitions and 5 groundwater petitions. Additionally, 132 water-right verifications were completed to meet NRCS requirements for project funding.

Mr. Schroeder reported that SEO Division II oversaw 121 dam safety inspections. There were 19 reservoir adjudications and 97 stock reservoir endorsements. Many these endorsements were former coal-bed methane impoundments landowners chose to take over from the operator at the conclusion of coal-bed methane production.

Mr. Schroeder continued by noting that in 2017 he recommended the reinstatement of 73 safety of dam sized reservoirs. These dams had been previously permitted with proper notices of beneficial use having been filed. For various reasons permits for these facilities were considered expired 20 years after completion, however facilities known to exist have been reinstated and are now being adjudicated. Division II completed 15 pump/pipeline adjudications and four ditch enlargement adjudications. In addition, Division II adjudicated six groundwater rights. Last year the Wyoming State Engineer issued a policy changing permitting requirements of stock water pipelines. Under the new policy, wells less than 25 gallons/minute can serve multiple points of use and do not require a certified map. Mr. Schroeder expects fewer groundwater adjudications as a result of this policy change. Mr. Schroeder concluded his report by noting that 12 surface water and one groundwater petitions were finalized in 2018.

Mr. Kilpatrick requested an update of the Wyoming Governor's Water Strategy.

Mr. Tyrrell explained that the Governor's Water Strategy is multifaceted and includes more than the "10 reservoirs in 10 years" plan. Other issues tasked for the SEO include a groundwater management plan in Laramie County, a new hydrographer manual (which was completed in 2015), and a "credible data" initiative that enabled the SEO to instrument high mountain reservoirs for data collection.

Mr. Tyrrell noted that progress has been made on the "10-in-10" plan. The State is looking to repurpose some of Glendo Reservoir's flood storage space. By releasing the water more gradually, there may be a beneficial use of water in the flood pool which is managed by the Army Corps of Engineers. The Wyoming Water Development Council and the Army Corps of Engineers are investigating the feasibility of this plan.

Mr. Tyrrell informed the Commission that Federal legislation has authorized Wyoming to work with the Bureau of Reclamation on a Fontenelle Reservoir riprap project that would make more of the storage in the Reservoir available for the Colorado River Basin.

Mr. Smith provided details on the Alkali Reservoir and Levitt Reservoir projects in SEO Division III.

Ms. Callaway noted that the projects are in an expedited NEPA process and construction could start in 2020.

The attendees discussed the reservoir projects and Mr. Tyrrell explained the Colorado River Compact.

Mr. Kilpatrick requested an update on the Wyoming Water Planning and Other Activities.

Ms. Callaway reported that the State of Wyoming will be releasing an updated water plan for the Powder/Tongue/Northeast River Basin in mid-2019.

Ms. Callaway also noted that the Wyoming Water Development Commission (WWDC) is modernizing their approach to water planning. This modernization is occurring on two fronts; 1) a GIS data model to standardize GIS data collecting and presentation for Wyoming and allow for the assessment of supplemental water supplies across the State; 2) the USGS StreamStats Application which retrieves basin characteristics and streamflow information.

Mr. Kilpatrick asked for an update on the Lower Yellowstone Irrigation Project intake structure.

Mr. Colloton reported that the contract to replace the weir and fish bypass channel was awarded, however the second lowest bidder had filed a protest with the Army Corps of Engineers. The protest is under review with U.S. Government Accountability Office and that review could take up to 100 days. If the original award is upheld, the project could start soon. If the protest is upheld, things could drag on with appeals and other actions. Once the bidding process is resolved, the construction is expected to take 900 days to complete.

Mr. Kilpatrick requested that a Resolution of Appreciation be read.

Mr. Langel announced that he would like to recognize the service of Mr. Chuck Dalby to the Yellowstone River Compact Commission as Mr. Dalby would be retiring in early 2019. Mr. Langel read a Resolution for Mr. Dalby and made a motion that the resolution be read into the minutes (Appendix E). Mr. Tyrrell seconded the motion. The resolution was approved by acclamation.

Mr. Kilpatrick moved that if a Resolution of Appreciation had not been written for Mr. Kerbel that one be completed. Mr. Tyrrell seconded the motion.

Mr. Kilpatrick opened the floor for public comment.

Mr. Hayes will continue to work with Wyoming on issues in the Tongue River Basin and expressed his appreciation of Wyoming's work in the area.

Mr. Whiteman said that he appreciated the discussion of the salinity model and the information presented in the meeting. Mr. Whiteman noted that he has gained a better understanding of the adjudication process in both States and remarked that the Northern Cheyenne Tribe has experts that are reviewing claims on the Tongue River and Rosebud Creek.

Mr. Smith announced that a commencement for construction notice has been filed for a new spillway on Bull Lake. He mentioned that operations should not change during construction during the first year of the two year project.

The Technical Advisory Committee proposed a meeting on Tuesday, April 9th, 2019 in Sheridan, WY.

The Commission decided to hold the next Yellowstone River Compact Commission Meeting on Wednesday, December 4th, 2019 in Sheridan, WY.

Mr. Kilpatrick adjourned the meeting at 10:40 a.m.


Patrick T. Tyrrell
Commissioner for Wyoming
Jan Langel
Commissioner for Montana
John M. Kilpatrick
Chairman and Federal Representative

Appendix A

FY 2019 costs

Clarks Fork Yellowstone River at Edgar	\$16,530
Little Bighorn River near Hardin	16,530
Bighorn River above Tullock Creek, near Bighorn	16,530
Tongue River at Miles City	16,530
Powder River near Locate	16,530
Report	37,450
	<hr/>
	\$120,100

WSEO	\$33,575
MDNRC	\$33,575
USGS	\$52,950

Estimated future cost

Year	WSEO	MDNRC	USGS	Total
FY 2020	\$32,675	\$32,675	\$49,950	\$115,300
FY 2021	\$33,665	\$33,665	\$49,950	\$117,280
FY 2022	\$34,655	\$34,655	\$49,950	\$119,260
FY 2023	\$35,690	\$35,690	\$49,950	\$121,330

Appendix B

Streamflows at Yellowstone River Compact streamgages, water year 2018.

1. Clarks Fork Yellowstone River at Edgar, Montana; minus diversions to White Horse Canal
 - 1,322,700 ac-ft
 - Largest during period of record (80 years)
 - 175 percent of average
 - Record low year was WY2001 with 466,660 acre-ft

2. Bighorn River near above Tullock Creek near Bighorn, Montana; minus Little Bighorn River near Hardin, Montana; plus Agency Canal Tailwaste near Hardin, Montana; and adjusted for change in contents in Bighorn Lake
 - 4,196,500 ac-ft
 - 52 year period of record
 - 165 percent of average (Bighorn streamflows)
 - Record low year (with adjustments) was WY2002 with 923,000 acre-ft

3. Tongue River at Miles City, Montana
 - 344,900 ac-ft
 - 61 year period of record
 - 113 percent of average
 - Record low year was WY1961 with about 41,400 acre-ft

4. Powder River near Locate, Montana
 - 412,200 acre-ft
 - 80 year period of record
 - 101 percent of average
 - Record low year was WY2004 with about 57,400 acre-ft

Total adjusted streamflows for the four basins in WY2018 was 6,276,300 ac-ft

Compare to 6,498,000 ac-ft in WY2017 and 2,932,000 ac-ft in WY2016

Storage in main reservoirs as of September 30, 2018

Reservoirs completed after January 1, 1950

Bighorn Lake	952,100 acre-ft	(change of -62,460 acre-ft)
Boysen Reservoir	652,970 acre-ft	(change of -64,060 acre-ft)
Anchor Reservoir	491 acre-ft	(change of -679 acre-ft)

Reservoirs existing on January 1, 1950

Bull Lake	81,660 acre-ft	(change of -38,870 acre-ft)
Pilot Butte Reservoir	16,540 acre-ft	(change of -1,420 acre-ft)
Buffalo Bill Reservoir	489,380 acre-ft	(change of -38,770 acre-ft)
Tongue River Reservoir	49,350 acre-ft	(change of -850 acre-ft)

Total WY 2018 contents of the above reservoirs was ¹2,242,490 acre-ft, compared to ¹2,449,580 acre-ft at the end of WY 2017; 2,015,000 acre-ft at the end of WY 2016; and 2,097,000 acre-ft at the end of WY 2015.

¹The WY 2018 and WY 2017 values are not a direct comparison to previous years due to the difference of reporting “contents” instead of “useable contents”.

Storage in additional reservoirs as of September 30, 2018

Total usable contents of additional reservoirs at the end of WY 2018 was 366,610 acre-ft compared to 413,920 acre-ft at the end of WY 2017.

Appendix D

Table 10. Water-Year-End Contents for Reservoirs or Lakes Located on Interstate Tributaries of the Yellowstone River.

Month-end usable contents for additional reservoirs of interest to the Yellowstone River Compact are listed in table 10; only reservoirs with contents greater than 1,000 acre-ft are included.

[Contents are in acre-feet. Reservoirs or lakes are listed in alphabetical order by drainage basin. Abbreviation: e, estimated. Symbol: --, no data or not available]						
Reservoir or lake name	Pre-compact 1950 water right	Post-compact 1950 water right	Total permitted water right	Contents on Sept. 30, 2017	Contents on Sept. 30, 2016	Change in contents ¹
Clarks Fork Yellowstone River Basin						
Cooney Reservoir ²	28,230	0	28,230	21,000	14,100	6,900
Glacier Lake ²	4,200	0	4,200	--	--	--
Bighorn River Basin						
(Lake) Adelaide Reservoir ³	1,449	3,315	4,764	1,230	428	802
Anchor Reservoir ^{4,5}	0	9,252	9,252	1,174	548	626
Bighorn Lake ⁵	0	1,116,000	1,116,000	1,014,600	942,400	72,200
Boysen Reservoir ⁵	757,851	0	757,851	717,000	624,900	92,100
Buffalo Bill Reservoir ⁵	456,640	187,940	644,580	528,200	421,300	106,900
Bull Lake ⁵	151,951	0	151,951	120,500	38,300	82,200
Christina Reservoir ³	3,860	0	3,860	3,860	260	3,600
Corral Reservoir ³	0	1,027	1,027	608	711	-103
Diamond Creek Dike Reservoir ³	0	18,378	18,378	314	237	77
Enterprise Reservoir ³	1,494	204	1,698	307	28	279
Fairview Extension Reservoir ³	791	620	1,411	1,290	1,410	-120
Greybull Valley Reservoir ³	0	33,169	33,169	21,010	9,340	11,670
Harrington Reservoir ³	315	887	1,202	800	1200	-400
Lake Cameahwait Reservoir ³	0	6,683	6,683	6,680	6,680	0
Lake Creek Reservoir ³	1,373	0	1,373	655	460	195
Lodge Grass Reservoir ⁶	22,900	0	22,900	14,100	13,900	200
Lower Sunshine Reservoir ³	0	58,748	58,748	47,640	35,700	11,940
Newton Reservoir ³	4,525	0	4,525	1,008	556	452
Perkins and Kinney Reservoir ³	1,202	0	1,202	1,097	704	393
Pilot Butte Reservoir ⁵	34,600	0	34,600	18,000	7,400	10,600
Sage Creek Reservoir ³	440	2,345	2,785	2,785	2,700	85
Shell Reservoir ³	1,949	0	1,949	1,017	269	748
Shoshone Lake Reservoir ³	4,560	5,181	9,741	9,740	0	9,740

Upper Sunshine Reservoir ³	52,988	0	52,988	46,660	29,150	17,510
Teapot Reservoir ³	1,578	0	1,578	0	0	0
Ten Sleep Reservoir ³	3,509	0	3,509	3,509	3,510	-1
Wiley Reservoir ³	689	331	1,020	920	1,020	-100
Worthen Meadow Reservoir ³	0	1,504	1,504	1,504	1,350	154

Table 10. Water-Year-End Contents for Reservoirs or Lakes Located on Interstate Tributaries of the Yellowstone River (continued).

Powder River Basin						
Reservoir or lake name	Pre-compact 1950 water right	Post-compact 1950 water right	Total permitted water right	Contents on Sept. 30, 2017	Contents on Sept. 30, 2016	Change in contents¹
Cloud Peak Reservoir ³	3,398	173	3,571	3,570	0	3,570
Dull Knife Reservoir ³	0	4,345	4,345	35	546	-511
Healy Reservoir ^{3,7}	0	5,140	5,140	3,490	2,170	1,320
Kearney Lake Reservoir ³	1,854	4,470	6,324	1,820	0	1,820
Lake DeSmet ^{3,8}	37,515	197,472	234,987	162,340	155,260	7,080
Muddy Guard Reservoirs ^{3,9}	0	2,336	2,336	924	344	580
Posy No. 1 Reservoir ³	0	1,537	1,537	1,649	745	904
Tie Hack Reservoir ³	1,647	788	2,435	656	1,464	-808
Willow Park Reservoir ³	4,457	0	4,457	1,378	1,484	-106
Tongue River Basin						
Big Horn Reservoir ³	2,749	1,875	4,624	0	210	-210
Dome Reservoirs ^{3,10}	1,843	188	2,031	923	627	296
Park Reservoir ³	7,347	3,015	10,362	3,950	2,880	1,070
Sawmill Lakes Reservoir ³	0	1,275	1,275	722	687	35
Tongue River Reservoir ²	72,500	6,571	79,071	50,200	42,400	7,800
Twin Lakes Reservoir ^{3,11}	1,180	2,232	3,412	2,811	2,826	-15

¹Change in contents is derived from subtracting the previous water year's contents from the current water year's contents.

²Reservoir managed and contents provided by the State of Montana.

³Private reservoir. Contents provided by the State of Wyoming.

⁴Anchor Reservoir was built to have a usable content of 17,410 acre-feet, but sinkholes and constructed dikes within the area contained by the dam prevent filling the reservoir to the designed volume. At present, only 9,252 acre-feet has been adjudicated with the remaining capacity having been eliminated from the permit.

⁵Reservoir managed and contents provided by the U.S. Bureau of Reclamation.

⁶Lodge Grass Reservoir (Willow Creek Dam) managed and contents provided by Bureau of Indian Affairs.

⁷Reservoir managed and contents provided by the State of Wyoming.

⁸Reservoir managed by Johnson County, Wyoming and the State of Wyoming. Contents provided by the State of Wyoming.

⁹Data are combined contents of Muddy Guard No. 1 and Muddy Guard No. 2 Reservoirs.

¹⁰Data are combined contents of Dome Lake and Dome Lake No. 1 Reservoir.

¹¹Data are combined contents of Twin Lakes No. 1 and Twin Lakes No. 2 Reservoirs.



RESOLUTION
of the
YELLOWSTONE RIVER
COMPACT COMMISSION
In Appreciation
of the
Contributions of
Chuck Dalby

WHEREAS, Chuck Dalby served on the Yellowstone River Compact Commission Technical Committee for over 10 years; and,

WHEREAS, the Yellowstone River Compact Commission was established by the Yellowstone River Compact of 1950; and,

WHEREAS, the Yellowstone River Compact was entered into by the State of North Dakota, the State of Montana, and the State of Wyoming who desired to further interstate comity and to remove all causes of present and future controversy between those states and the persons in those states with respect to the waters of the Yellowstone River and its tributaries, and to provide for an equitable division and apportionment of those waters and to encourage the beneficial use and development thereof; and,

WHEREAS, the Commissioners and advisors of the Yellowstone River Compact Commission recognize that, as a Surface Water Hydrologist with the Montana Department of Natural Resources and Conservation, Mr. Dalby's considerable hydrologic expertise and experience has contributed greatly to the sound management of water in the greater Yellowstone River Basin for over 30 years; and,

WHEREAS, Mr. Dalby has announced plans to retire in early 2019 from his position with the Montana Department of Natural Resources and Conservation; and,

NOW, THEREFORE, BE IT RESOLVED that the Yellowstone River Compact Commission, at its meeting held in Billings, Montana on December 4, 2018, does hereby express its gratitude and appreciation for Mr. Dalby's dedication to helping the Commission achieve its goals of intergovernmental cooperation during his tenure; and

BE IT FURTHER RESOLVED that the Commission wishes Mr. Dalby good health and much satisfaction and enjoyment of life in his retirement; and,

BE IT FURTHER RESOLVED that the Federal Representative and Chairman of the Yellowstone River Compact Commission is hereby directed to provide a copy of this Resolution to Mr. Dalby.

APPROVED, by unanimous action of the Yellowstone River Compact Commission this 4th day of December 2018 at Billings, Montana.

Jan Langel, Commissioner for Montana

John M. Kilpatrick, Chairman and
Federal Representative

Patrick T. Tyrrell, Commissioner for Wyoming