

TECHNICAL MEMORANDUM

TO: *WWDC* DATE: *May 16, 2010*
FROM: *MWH* REFERENCE: *Wind-Bighorn Basin Plan*
SUBJECT: *Task 3H – Water Law and Water Administration*

The purpose of this technical memorandum is to provide a general summary of water laws, adjudications and compacts that affect water administration within the Wind-Bighorn River Basin. The memorandum includes a description of general Wyoming water law, the Bighorn River adjudication, the Yellowstone River Compact and discussion of specific Division III administration protocols and issues. The document fulfills the reporting requirements for Task 3H of the consultant scope of work.

This technical memorandum contains the following sections.

Contents

Section 1 - Introduction	1
Section 2 - Wyoming Water Law Summary	2
Surface Water	2
Groundwater	4
Board of Control	4
Section 3 – Big Horn River Adjudication.....	4
Section 4 - Yellowstone River Compact.....	8
Clarks Fork.....	9
Bighorn River	9
Section 5 - Division III Administration.....	9
Section 6 - References	10

Section 1 - Introduction

As with most other western states, the State of Wyoming adopted the prior appropriation doctrine, which establishes a “first-in-time, first-in-right” method for the allocation of surface water and groundwater resources in times of limited water supply. Water rights in Wyoming are acquired by securing a permit from the state engineer and adjudicated through a state process. All unadjudicated permits within the Wind-Bighorn Basin were verified and adjudicated in a general stream adjudication process which commenced in 1977 and is known as the Big Horn River Adjudication. The Big Horn River Adjudication included an award of federal reserved water rights to the Eastern Shoshone and Northern Arapaho Tribes. The administration and allocation of water resources in the Wind-Bighorn Basin is also affected by the Yellowstone River Compact, which allocates water in the Yellowstone River Basin between the states of Wyoming, Montana and North Dakota. Each of these principles and their impacts on day-to-day water administration within Division III are discussed in this memorandum.

Section 2 - Wyoming Water Law Summary

A general overview of Wyoming Water Law is provided in the document “Wyoming Water Law, a Summary” (Jacobs, et al 2003), and is provided at <http://seo.state.wy.us/PDF/b849r.pdf>. The following is a summary of this document, specifically as it pertains to the Wind-Bighorn Basin.

Water within the State of Wyoming is administered by the State of Wyoming, State Engineer’s Office (WSEO) . To manage this water, the state is divided into four water divisions. All of the Wind-Bighorn Basin is included in Water Division III. The water division Superintendent administers water within the division with assistance from water commissioners and hydrographers. The current Division III Superintendent is Loren Smith, and his office is headquartered in Riverton. The WSEO and Superintendent administer both surface water and groundwater within each water division. The State Board of Control is made up of the four superintendents and the State Engineer. The Board of Control meets quarterly (February, May, August and November) to consider petitions and discuss matters related to water rights adjudication and administration.

Surface Water

Wyoming’s earliest water rights date back to its territorial days, prior to its statehood in 1890. During these days, water rights were established through water rights claims with the territorial officials or through Court Decrees. Since statehood, water rights are only acquired through a permit from the State Engineer. Obtaining a surface water permit requires an application process, including the preparation of a map and payment of required fees. Once the proposed project is completed and water is put to beneficial use, the water right can be adjudicated.

For irrigation purposes, water rights are adjudicated on the basis of 1 cfs per 70 acres, with an additional 1 cfs per 70 acres when water supplies permit. In addition, water rights are divided into three general categories based on the priority dates of March 1, 1945 and March 1, 1985. The pre-March 1, 1945 category is eligible to divert surplus water (an additional 1 cfs per 70 acres), when available, before the post-March 1, 1945 and pre-March 1, 1985 category is allowed to divert their first 1 cfs per 70 acre amount. The March 1, 1945 through March 1, 1985 category is eligible to divert excess water (an additional 1 cfs per 70 acres) when available before the post-March 1, 1985 is allowed to divert their first 1 cfs per 70 acres. Within each of these groups, the first 1 cfs per 70 acres is allocated on a strict priority basis, while the second 1 cfs per 70 acres is allocated on a pro-rata basis. A strict priority allocation means that a water right can only be allocated water when all water rights with a priority date earlier than the subject water right are satisfied. A graphical representation of this scheme is presented in Figure 1.

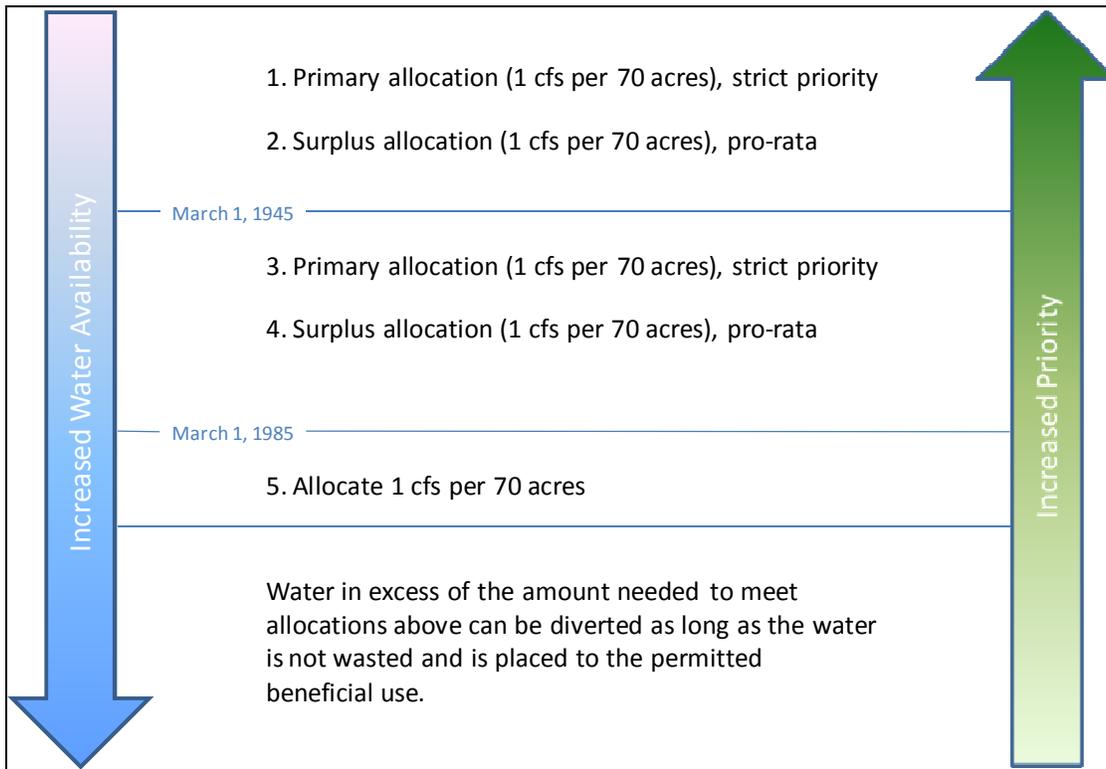


Figure 1. Schematic of Water Rights Allocation Process

For some facilities, a simplified application process is available. This includes small stock reservoirs, fishing ponds and wetlands ponds, flood detention dams, small springs, small domestic uses and cisterns.

Reservoirs are entitled to fill in priority once per year during the period October 1st through September 30th. Any water left in the reservoir at the end of the year is accounted as part of the following year's fill. In general, once stored, water is not subject to the water rights allocation scheme described in previous paragraphs. Stored water may be delivered to specific lands or places of use, or may be generally allocated to downstream water users. Specific reservoir operations within the Wind-Bighorn Basin are described in later sections of this document and in Technical Memorandum 3F- Reservoir Operations.

In 1986, the Wyoming legislature declared that instream flow for maintenance or improvement of existing stream fisheries is a beneficial use of water that can be provided either by natural streamflow or from storage. Statutes were adopted that allow the Wyoming Water Development Commission (WWDC) to apply for a permit to appropriate instream flows in streams and at streamflow rates identified by the Wyoming Game and Fish Commission. To establish an instream flow right, the WWDC prepares a feasibility study that contains a hydrologic analysis of the reach. The feasibility study is provided to the State Engineer's Office for review. The State Engineer's Office then holds public hearings before granting or denying the application. Adjudicated water rights can be changed to instream flow rights by granting of a petition by the Board of Control. If such a petition were granted, the state of Wyoming becomes the owner of the water right. A description of instream flow water rights in the Wind-Bighorn Basin are described in Tech Memo 3D/3E – Recreational and Environmental Water Use.

Groundwater

Wyoming's groundwater laws were originally enacted in 1945 and amended in 1947. These laws were replaced by new groundwater laws on March 1, 1958, which were then amended in 1969.

Groundwater is administered on a permit basis. The acquisition of groundwater rights generally follows the same permitting procedures as surface water rights, except that a map is not required at the time of permit application. Applications are submitted to and approved by the State Engineer prior to drilling a well. With the completion of the well and application of the water to a beneficial use, the appropriation can then be adjudicated. The issuance of well permits carries no guarantee of a continued water level or artesian pressure.

As with surface water rights, groundwater rights are administered on a priority basis. For all wells drilled prior to April 1, 1947, a statement of claim process was followed to determine the priority date of the well. For wells drilled between April 1, 1947 and March 1, 1958, the priority date is the date the well was registered. For wells drilled after March 1, 1958, the priority date is the date the application was received by the WSEO.

Domestic and stock wells are those wells used for non-commercial household use, including lawn and garden watering that does not exceed one acre in aerial extent, and the watering of stock. The yield from these wells cannot exceed 25 gallons per minute (gpm). Prior to the 1969 amendment, domestic and stock wells were exempt from the requirement to obtain a permit and held a preferred right over other wells. The 1969 amendment established priorities for domestic and stock wells similar to those for other wells. The Groundwater Division also issues permits for spring developments where the total yield or flow of the spring is 25 gpm or less and where the proposed use is for stock and/or domestic purposes.

Board of Control

Wyoming water law defines preferred uses for both surface water and groundwater. In general, domestic and livestock water use, municipal use, and industrial use have preferred status over non-preferred uses such as irrigation. For surface water permits, preferred status does not imply that during times of shortage, a preferred use takes priority over a non-preferred use (the water rights priority establishes this allocation). Rather, preferred status relates to how the water right use can be changed. The only way to obtain a preferred surface water right from a non-preferred right is by purchase or condemnation and petitioning the State Board of Control for the change of use. For groundwater permits, domestic and stock wells yielding less than 25 gpm have preferred rights and priority over wells for all other uses.

The point-of-diversion, location or type of use of an adjudicated water right can only be changed through a petition filed with the Board of Control. Generally, a petitioner for a change in use does not lose priority of the water right as long as no other water rights are injured (including the location and amount of return flows) and the quantity of use remains the same. The Board of Control may consider economic losses to the community and the availability of water from other sources when making its decision.

Section 3 – Big Horn River Adjudication

The Big Horn River General Adjudication entails the adjudication of all pre-1985 state water rights (both surface water and groundwater), and the quantification of Tribal reserved water rights, Walton rights and federal water rights within Division III. Information in this section was adapted from information

provided by the Wyoming Judicial Branch, the Wyoming Water Development Commission State Water Plan website, and the Wyoming State Engineer's Office (McCann, 2009).

On January 22, 1977, the Wyoming legislature enacted statute §1-37-106, which authorized the State to institute a general adjudication of water rights within the State of Wyoming. The general adjudication would determine the nature, extent, and relative water rights of all persons in any river system and all other sources. On January 24, 1977, the State filed a complaint in the Fifth Judicial District Court against the United States and other parties to adjudicate all water rights in Division III, including reserved water rights claims for the Wind River Indian Reservation. The Eastern Shoshone and Northern Arapaho Tribes intervened and joined the federal government as defendants in the Big Horn General Stream Adjudication.

The rights to water on Indian reservations were confirmed by the United States Supreme Court in the case *Winters v United States* (207 U.S. 564 (1908)). The Court ruled that when Congress set aside land for the Fort Belknap Indian Reservation, Congress also implied reserved water rights consistent with Western States' prior appropriation doctrine (commonly referred to as the Winters Doctrine; Brooks, 2005). The treaty between the U.S. government and the Bannock and Shoshone Indians established the Wind River Reservation on July 3, 1868. The Bannock later ceded land back to the U.S. and the Arapaho then moved to the reservation.

The Wyoming Supreme Court has ruled on the original complaint and six subsequent matters involving water rights on the Wind River Indian Reservation. Throughout the adjudication process, a special master was appointed. The following summarizes the major portions of the case:

- In Big Horn I (753 P.2d 76, 1988), the court examined the Second Treaty of Fort Bridger and found that Congress intended to reserve water for the Tribes' agricultural use on the reservation. The Tribes' were awarded a 499,862 acre-foot reserved water right with a treaty priority date of July 3, 1868, for the 107,976 "practicable irrigable acres" on the reservation. The Court also held that Indian and non-Indian successors of Indian allottees were entitled to treaty based water rights for the practicable irrigable acres they could prove were continuously irrigated since or within a reasonable time after the property passed out of Indian ownership ("Walton Rights"). The Wyoming Court's decision was affirmed by the U.S. Supreme Court in *Wyoming v. United States* (492 U.S. 406 (1989)).
- In Big Horn II (803 P.2d 61, 1991), the Court upheld treaty priority rights for Indian and non-Indian successors of Indian allottees ("Walton Rights") to the extent the claimants could demonstrate the amount irrigated by their Indian predecessors or within a reasonable time after passing out of Indian ownership.
- In Big Horn III (835 P.2d 273, 1992), the Court ruled that the Tribes could use their water rights solely for agricultural purposes and that the State Engineer had administrative authority over all water rights in the State, but must turn to the courts if the Tribes violate the decree.
- In Big Horn IV (Wyoming Supreme Court Docket No. 93-48, 93-49, 1993) the Court required all Walton claims to be fully adjudicated in the District Court before the Supreme Court would review an appeal on such claims.
- Big Horn V (899 P.2d 848, 1995) imposed limitations on Walton claims, holding that certain claims ("Super Waltons") were not entitled to the treaty priority date for lands originally part of the Wind River Indian Reservation whose title was derived from federal law, but not from Indian allottees.

- Big Horn VI (48 P3d 1040, 2001) provided that the Walton Right holders, like the Tribes, must seek administration by the State Engineer first, before turning to the courts for enforcement of their rights, if necessary.
- Big Horn VII (85 P3d 981, 2004) held that the court does not have authority to settle private contract disputes between water users and the Bureau of Reclamation within the scope of the general adjudication.

Because of the complexity of this case, the Special Master divided the adjudication into three phases:

- Phase I addressed the quantification of the Reserved Water Rights for the Wind River Indian Reservation. The Wyoming Supreme Court's decision concerning the tribal claims, as affirmed by the U.S. Supreme Court, awarded approximately 500,000 acre-feet of reserved water rights. Of the approximate 500,000 acre-feet award, 209,400 acre-feet was for "future" development of practicable irrigable acres within the Reservation.
- Phase II of the litigation addressed non-Indian Federal Reserved Rights. In 1982, an interlocutory decree was entered by the court to quantify the water rights held by the Forest Service, Bureau of Land Management and other federal agencies within the Big Horn Basin.
- Phase III is the determination of the status of all unadjudicated and partially adjudicated surface and groundwater permits in the Basin. This includes all State surface water and groundwater rights.

The federal reserved water rights awarded in Phase I of the Big Horn Adjudication are for agricultural purposes only. The rights have a priority date of July 3, 1868, which is the treaty date of the reservation. The reserved rights have varying water duties across the Basin and were awarded based on an annual volume (acre-feet), which is different than the 1 cfs per 70 acre duty applied to state water rights (see previous sections of this report). Except for Walton Rights, the Tribes administer the Tribal reserved water rights. The Tribes established the Water Resources Control Board and the Tribal Water Engineer's (TWE) office to oversee and perform these administration duties. The State of Wyoming monitors the use of the Tribal water rights, with any disagreement handled through the federal court system.

A summary of the tribal federal reserved water rights awarded by the court is summarized in Table 1. Water rights were established using the practicable irrigable acreage ("PIA") standard. PIA is a quantification method using a fixed calculation of water need based upon the physical capacity of the reservation land, or irrigable acreage, and was approved by the Supreme Court in *Arizona v. California* (373 U.S. 546, 601 (1963); Brooks, 2005). The method involves a scientific evaluation of all lands that are arable and can be reasonably considered for irrigation on the reservation, an engineering evaluation of an irrigation system based upon water supply and arable land base, and an economic evaluation or cropping patterns, yields, pricing and net returns (Brooks, 2005). For the lands described in Table 1, the historic award was developed by applying the PIA method to existing irrigated lands. The future award was developed by applying the PIA method to potential future projects, specifically, the North Crowheart, South Crowheart, Arapahoe, Riverton East and Big Horn Flats projects.

Table 1. Summary of Phase I Tribal Water Rights Award

Type	Irrigated Area (acres)	Water Right (acre-feet)
Federal Reserved Rights		
Historic	54,216	290,490
Futures	53,760	209,372
Sub-Total	107,976	499,862
Walton Rights		
Walton Award	14,194	79,796
Total	122,170	579,658

Historic awards shown in Table 1 include awards for certain types of land referred to as Type VII and Type VIII lands. Type VII lands are “trust lands now idle though formerly irrigated” and in many cases, are located near existing irrigation systems, lie adjacent to streams and rivers, and are small and odd shaped tracts. A total of 6,271 acres of Type VII lands were awarded reserved water rights in the original decree (Roncalio, 1982). Type VIII lands are lands within the boundaries of the Wind River Federal Irrigation Project and within the Owl Creek Unit (Arapahoe Ranch) that have “more of the attributes of the futures projects than of the land discussed immediately above as presently or previously irrigated.” A total of 1,440 acres of Type VIII lands were awarded reserved water rights in the original decree (Roncalio, 1982).

Walton Rights are a special type of water right that were adjudicated along with the Tribal Reserved Water Rights in Phase I. Walton Rights are rights for historical use of water on Indian “fee” lands (Indian or non-Indian privately held lands that were originally allotted to individual Indians). The term Walton Rights comes from the case *Colville Confederated Tribes v Walton* (647 F.2d 42, 51 (9th Cir. 1981)), in which the Ninth Circuit court ruled that an allottee’s share of a tribes’ reserved right is equal to the percentage of the entire reservation’s irrigable acreage that is located on the allottee’s land (Brooks, 2005). Thus, Walton Rights have the same priority date as Tribal reserved rights, and are appurtenant to the land that is irrigated. Because the lands are not part of the Reservation, they are administered by the State Engineer’s Office. Any state water rights that overlap Tribal reserved or Walton rights were cancelled through Phase III of the General Adjudication process.

In the Big Horn Adjudication, the Wyoming Supreme Court ruled that the Winters Doctrine does not include groundwater. Therefore, there are no federal reserved groundwater rights on the reservation. However, groundwater on the reservation is administered by the Tribes, with groundwater permits issued by the Water Resources Control Board and TWE. There are approximately 685 adjudicated groundwater wells on the reservation which were confirmed by the Court during the case.

Phase II of the Big Horn Adjudication quantified non-Indian federal reserved water rights within the Basin. This included cooperation with federal agencies such as the Bureau of Land Management, Forest Service and the National Park Service. Surface water rights were adjudicated for reservoirs, stock reservoirs, and instream flows, while groundwater rights were adjudicated for springs and wells. Uses include stock, domestic, firefighting, and public water reserves.

Phase III quantified the remaining non-Federal water rights, including all typical surface water and groundwater rights within the Basin. Approximately 4,000 permits have been adjudicated; all permits have now been inspected and reported to the court for final disposition. There remains a possibility of reinspection of several large irrigation districts within the Basin. Phase III also included the adjudication of groundwater wells. Over 7,000 stock and domestic wells were adjudicated, as well as an additional 1,000 wells for other uses.

The Wyoming Judicial Branch website (<http://bhrac.courts.state.wy.us/>) contains electronic copies of important documents in the Big Horn Adjudication, including a history of the adjudication, reports of the Special Master, court rulings, stipulations and decrees, and water rights tabulations.

Section 4 - Yellowstone River Compact

All river basins within the Wind-Bighorn Basin Plan are tributary to the Yellowstone River in Montana. The two rivers having significant water use within Wyoming, the Bighorn River and the Clarks Fork River, are governed by the Yellowstone River Compact. The Yellowstone River Compact, which was ratified in 1950 by the states of Wyoming, Montana and North Dakota, governs the allocation of the tributaries to the Yellowstone River between the states. The following is a brief summary of the rules for dividing water according to the Compact (USGS, 2009):

To all tributaries the following rules apply:

- 1) existing rights as of January 1, 1950 maintain their status quo;*
- 2) no water may be diverted from the Yellowstone River Basin without consent from all states;¹*
- 3) existing and future domestic and stock water uses including stock water reservoirs up to a capacity of 20 acre-feet are exempted from provisions of the Compact.*

The unappropriated or unused total divertible flow of each tributary, after needs for supplemental supply for existing rights are met, is allocated to Wyoming and Montana on a percentage basis.

Annual administration of the Yellowstone River Compact is carried out by the Yellowstone River Compact Commission (YRCC). The YRCC is made up of 3 commissioners: one from Wyoming, one from Montana, and a federal representative who serves as Chairman of the YRCC. While North Dakota is a party to the Compact it is not represented on the Commission. The United States Geological Survey maintains a website that serves as the repository of documents and information concerning the Yellowstone River Compact (USGS, 2009; <http://yrcc.usgs.gov/index.html>), including the Compact itself, rules and regulations for Compact administration, and other useful information.

It should be noted that the Yellowstone River Compact also covers the Powder and Tongue River Basins in northeastern Wyoming. See the Powder-Tongue River Basin Plan for more information regarding the Yellowstone River Compact within these basins (WWDC, 2002). On January 31, 2007, Montana brought suit against Wyoming in the US Supreme Court over the administration of the Compact as it pertains to post 1950 surface water and groundwater use in the Powder and Tongue River drainages. A Special Master has been appointed and this litigation is active at the time of the publication of this report.

The following sub-sections provide a summary of the percentages listed in Article V of the Compact to allocate the unused, unappropriated water between Wyoming and Montana for the Clarks Fork and Bighorn Rivers (YRCC, 2007).

¹ This clause does not have an effect on Wyoming's water use from Yellowstone River tributaries, but is included in this discussion because this section directly quote's the Compact's summary section.

Clarks Fork

The Yellowstone River Compact allocates the unused, unappropriated flows of the Clarks Fork of the Yellowstone River by the percentages shown in Table 2 (USGS, 2009).

Table 2. Yellowstone Compact Allocation Percentages for Clarks Fork

State	Percent of Unused, Unappropriated Flow Allocated to State
Wyoming	60%
Montana	40%

Bighorn River

The Yellowstone River Compact allocates the unused, unappropriated flows of the Bighorn River by the percentages shown in Table 3 (USGS, 2009).

Table 3. Yellowstone Compact Allocation Percentages for Bighorn River

State	Percent of Unused, Unappropriated Flow Allocated to State
Wyoming	80%
Montana	20%

Section 5 - Division III Administration

Water rights administration in the Wind-Big Horn River system is carried out by the State Engineer's Office staff of Water Division III. The Division office is located in Riverton with satellite offices located in Worland and Powell. Priority regulation in Water Division III is a common practice throughout many of the tributary stream systems of the Big Horn Basin. Early season regulation, prior to snow melt runoff, occurs on nearly an annual basis on some systems, others may see annual late season administration while even other drainages may see very little, if any, shortages and thus, little or no regulation by State officials.

Water administration within Water Division III can be an extremely complex issue. With the many types of water rights that exist, such as reserved rights, Walton rights, storage water, exchange water and the like, water administration is often not well understood in this area. This complexity has been the driving force behind creation of many extensive accounting systems that are currently in place to assist the hydrographers as well as irrigation districts, the public and other agencies in knowing who is using which appropriation at any one time. There still exist a few drainages in Water Division III where typical, direct flow administration is the norm, as in the Nowood and Gooseberry drainages. In contrast, there are drainages, such as the Greybull River, where the State administrators and the Greybull Valley Irrigation District work hand in hand to administer a very imaginative river leveling program while still satisfying the senior appropriators and managing the delivery of storage water throughout the system. Regardless of the complexity of the system, the goal remains to provide the most efficient and highest beneficial use of the often limited supplies of water following the guidance of the State Constitution and Title 41 of the Wyoming State Statutes. Because of the varied complexities across the Basin, it is imperative that appropriators stay in contact with their local hydrographers to not only understand

when, where and how they will get the water they are entitled to, but also why they may not be entitled to water on any given day.

Section 6 - References

Brooks, Nathan. 2005. Indian Reserved Water Rights: An Overview. CRS Report for Congress. Order Code RL32198. January 24.

Jacobs, James J., Patrick T. Tyrrell, Donald J. Brosz. 2003. Wyoming Water Law, A Summary. Respectively, Associate Dean and Director, Agricultural Experiment Station; State Engineer; Professor Emeritus. University of Wyoming Agricultural Experiment Station, B-849R. May. <http://seo.state.wy.us/PDF/b849r.pdf>

McCann, Nancy. 2009. Presentation entitled "Wyoming's Big Horn General Adjudication Over 30 Years Old" at the Wind-Bighorn Basin Planning staff meeting. February 25.

Roncalio, Teno. 1982. In Re: The General Adjudication of All Rights to Use Water in the Big Horn River System and All Other Sources, State of Wyoming. Concerning Reserved Water Rights Claims By and On Behalf of The Tribes of the Wind River Indian Reservation, Wyoming. Special Master, Civil Case No. 4993, District Court of the Fifth Judicial District, State of Wyoming. December 15.

United States Geological Survey (USGS). 2009. Yellowstone River Compact Commission website. <http://yrcc.usgs.gov/index.html>

Wyoming Judicial Branch. 2009. Summary of the Big Horn River Adjudication. <http://bhrac.courts.state.wy.us>

Wyoming Water Development Commission. 2002. Powder/Tongue River Basin Water Plan. <http://waterplan.state.wy.us/plan/powder/powder-plan.html>

Wyoming Water Development Commission. 2009. Wind/Bighorn/Clarks Fork Rivers Current Issues. <http://waterplan.state.wy.us/basins/bighorn/issues.html>

Yellowstone River Compact Commission (YRCC). 2007. Fifty-Sixth Annual Report. <http://yrcc.usgs.gov/support.docs/YRCCAnnualReport2007.pdf>