

APPENDIX 4

“....for as long as the rivers flow, and the grasses grow....”

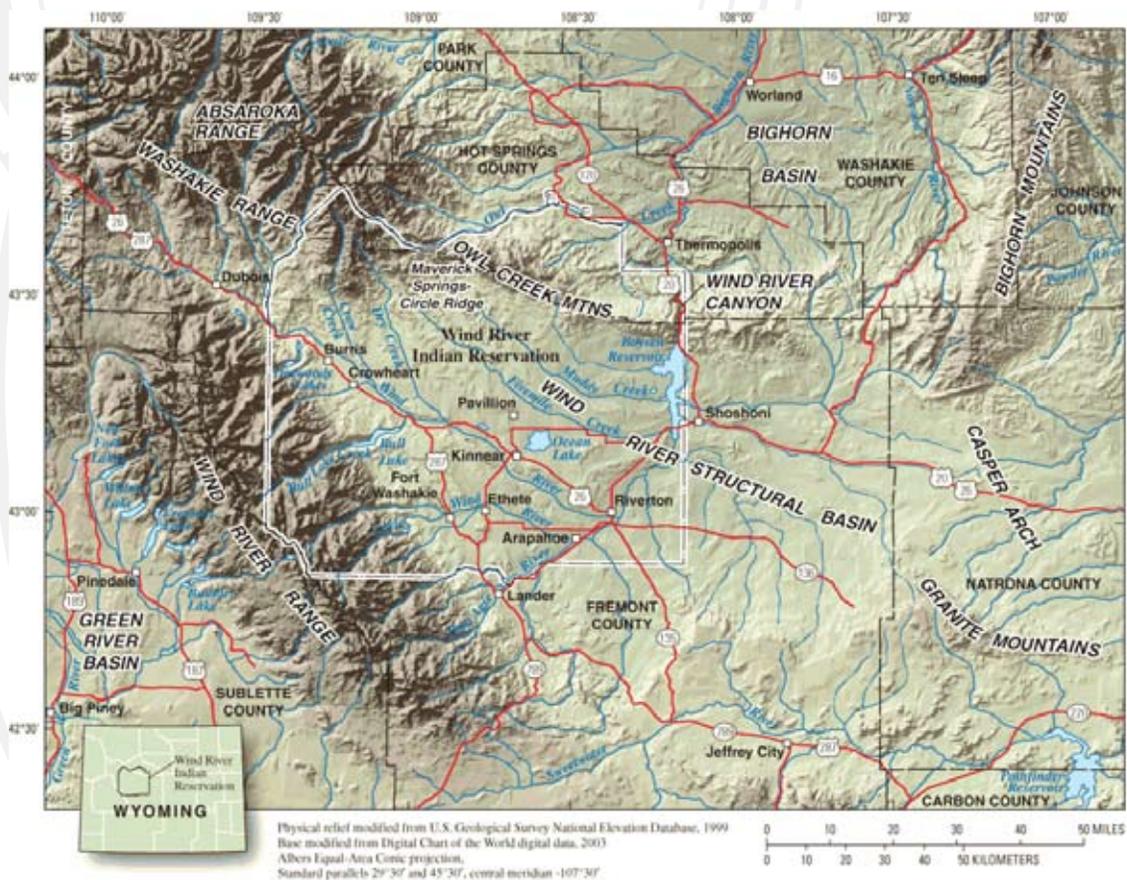
Native Water Rights and Resources: Managing The Trust Asset Wind River Indian Reservation

**A Case Study in the Management and Protection of
Tribal Water Resource Assets**

Introduction to Wind River Case Study

The water of the Wind River Indian Reservation is the *central* tribal natural resource, which will fuel the economy, dreams and future of the Eastern Shoshone and Northern Arapaho people in the 21st Century and beyond. The reservation's 2.2 million acre land base is situated at the headwaters of the Missouri River system, and tribal lands generate over 80% of the average annual flow of the Wind River as it leaves the reservation in the Wind River Canyon as shown in Figure 1. The reservation is blessed with many other natural resources—wildlife, forests, forage, fish, oil and gas, and other minerals—all of which are integrated with and dependent upon the water that flows onto, over and underneath tribal lands.

Figure 1: Map of the Wind River Indian Reservation, occupied by the Eastern Shoshone & Northern Arapaho Tribes in Wyoming



There is much to describe concerning the Eastern Shoshone's and Northern Arapaho's efforts to regain control and manage of all of their natural resource assets, but this case study will focus on the water resource and the Tribes' efforts to bring this valuable natural resource asset under full tribal control. This effort has been underway for over thirty years, yet decisions made in the next five years will determine the fate of many future generations of tribal people. How the Tribes make these decisions, and the foundation upon which they will make them, has many lessons for those involved in tribal natural resource asset control.

Historical Context for the Natural Resource Asset Loss

After the Civil War, the United States treasury did not have the money to pay its soldiers, barely having enough funds to begin reconstruction after the devastation of the war (Pisani). In addition, overcrowding in eastern United States cities was beginning to take its toll. A solution was proposed to expand the settlement of the United States westward. This solution involved the taking of Indian lands by treaty and force, and through the creation of the body of public land laws and settlement legislation to facilitate the sale of Indian lands to non-Indians. These legislative acts also promised the use of federal government funds to construct infrastructure for western state development through irrigation projects.

According to policy makers, these western lands had been “secured”—subject to the Indians aboriginal right of occupancy—through the Land Ordinance Act of 1785, the Northwest Ordinance of 1787 and the Louisiana Purchase of 1803. Lewis & Clark’s expedition in 1804-1806 up the Missouri River and to the Pacific Northwest revealed much about Indian tribes throughout the Great Plains and Northwest. The 1869 Colorado River expedition of John Wesley Powell revealed similar information regarding tribes in that region.

From the 1780s to 1890s, the United States began an aggressive campaign to drive Indians from their homelands, a disturbing period of history known as the “Indian Wars.” Aggression and war eventually gave way to treaty-making and the establishment of “permanent” homelands for hundreds of tribes in the western United States.

Even after peace was made between tribes and the United States—which typically rested on agreements to relinquish vast amounts of historically occupied tribal lands in exchange for permanent homelands and other protections—lawmakers in Congress continued to craft ways to facilitate United States’ western expansion, especially to benefit soldiers and veterans of the Civil War. Individual acts of Congress—including the Homestead Act (1862), the Desert Land Act (1877) and the Dawes Allotment Act (1887)—opened up large acreages of Indian land in the west for settlement. Because the Public Lands Office (predecessor to the Bureau of Land Management) was often behind in its geographical surveys, which marked the boundaries between public land and Indian lands, settlement often occurred on vast tracts of Indian land without any legal framework for doing so. Essentially the idea was to sell these public lands, including lands within reservations not allotted to Indians, and to use the proceeds to finance the construction of irrigation projects and other infrastructure across the west.¹

It is within this context that the Eastern Shoshone Tribe and Northern Arapaho Tribe faced an up-hill battle to both survive and to maintain control over their natural resource assets, which the Tribes had so carefully secured in their treaties.

Background on the Land Base

The original Wind River Indian Reservation was established by the Fort Bridger Treaty of 1863, and encompassed some 44 million acres of land in Idaho, Wyoming, Utah and Montana, including the current day Grand Teton and Yellowstone National Parks. In 1868 the second Fort Bridger Treaty significantly

¹ Proceeds from the sale of Indian lands were supposed to be directed to tribes, yet millions of dollars went instead into the Reclamation Fund.

reduced reservation lands and the Wind River Reservation was set aside as a permanent homeland for the Eastern Shoshone Tribe of Indians.

Since the Eastern Shoshone Tribe had been military allies of the United States, the Tribe was allowed to select its own homeland, which they called the Warm Valley, the current Wind River Basin. Although the Tribe, along with others, hunted across the entire expanse of the original 44 million acres, the Wind River basin provided shelter from the cold and wetness of the high Rocky Mountains, abundant water, wildlife, forage, trees and cottonwood groves (Kappler). Chief Washakie was said to have looked over the expanse of tribal lands and proclaimed that reservation lands would extend “for as long as the rivers flow and the grasses grow.” Warm Valley was chosen by the Tribe to be their permanent homeland based on their historical occupation and cultural association with the lands, as well as their foresight and assessment of the sustainability and abundance of natural resources.

Non-native immigrants to Wyoming would find reservation lands rich with oil, gas, uranium, coal, other mineral resources and water. Further land cessions to the United States in 1872, 1897, and 1905, secured non-native access to these resources and further reduced the Wind River Reservation to its current 2.2 million acres.

The Northern Arapaho are original inhabitants of Colorado, Wyoming, Oklahoma and parts of Nebraska. A treaty between the Northern Arapaho and the United States made in 1851 promised the Northern Arapaho reservation lands on the current Sweetwater River near present-day Laramie, Wyoming. The United States never provided those lands and the Northern Arapaho were forced to continue roaming, often subject to brutal and unprovoked attacks by non-Indians, such as the notorious 1864 Sand Creek Massacre in Colorado (Brown, Who is the Savage?).²

In 1877, arrangements were made between federal officials and tribal leaders of the Eastern Shoshone and Northern Arapaho that resulted in the entrance of the Northern Arapaho Tribe onto the Wind River Reservation. The Eastern Shoshone did not embrace the Northern Arapaho people, and much Northern Arapaho bloodshed occurred for many years (O’Gara).³ In the early 1930s, the Eastern Shoshone Tribe sued the United States for the entry of the Northern Arapaho Tribe onto the Wind River Indian Reservation and won a multi-million dollar judgment. The United States paid this settlement with funds that were supposed to have gone to the Northern Arapaho Tribe anyway. For many years, Northern Arapaho Tribal members have referred to themselves as “the only tribe that had to pay for our own reservation” (Northern Arapaho Council of Elders).

By the turn of the century, the Wind River land base had been significantly reduced. Even prior to the land base reduction, oil exploration and development was occurring on lands within and adjacent to the reservation. The Wind River Reservation has some of the oldest oil wells in the United States and all of the oil fields are in secondary or tertiary production (Aragon).⁴

² More than 300 Arapaho people, mainly unarmed women and children were slaughtered by United States armed forces lead by Colonel John Chivington.

³ There is also some speculation that the agreement presented to the Shoshone was described as a “temporary” arrangement for the Arapahos, not a permanent one. For example, see O’Gara, 2000.

⁴ Secondary and tertiary production involves the injection of fluids or gases to release previously unreleased oil in smaller or finer portions of the oil-producing unit. As well, the oil well age and status of abandonment continue to pose significant ground water quality problems on the reservation.

In 1902, Congress passed the Newlands Reclamation Act (also known as The Reclamation Act), which, among other things provided for the capitalization of a fund (the Reclamation Fund) for use by the government to construct irrigation projects throughout the western United States on public lands. Public lands were sold and the revenue deposited in the federal treasury, creating the Reclamation Fund.⁵ Many of these projects were on or near Indian reservations, and legal mechanisms were used to secure additional tribal land cessions to the United States for the economic, social and political development (Reisner).

Another federal act passed in 1905 (33 Stat. 1016) provided for the sale of portions of the Wind River Indian Reservation under homestead, town-site and allotment oriented land laws, which designated portions of the Reservation as “ceded” to the United States. This resulted in the loss of an additional 350,000 acres of reservation land, although the ceded lands that were either un-sold or un-allotted remained under tribal ownership and in trust status. Tribal research reveals that the ultimate purpose of the 1905 Act was to construct a large irrigation project that would benefit and serve primarily non-tribal individuals.⁶

Subsequent congressional acts restored the subsurface mineral ownership of the ceded lands to the Tribes. Thus, non-tribal agricultural lands in the ceded portion of the Wind River Indian Reservation are underlain by significant coal and methane resources that belong to the Tribes.⁷ A 1937 case, in which the Shoshone Tribe sought reimbursement from the United States for Arapaho entrance onto the reservation, affirmed and defined the Tribes’ natural resource assets, including fish, as trust assets subject to the protection of the United States (*Shoshone Tribe of Indians v. United States*, 299 U.S. 476).⁸

Background on Water

The water from the Wind River Mountains was known to many tribes as having a very sweet taste and is another reason many tribes migrated across these lands and to camps high up in the Wind River Mountains (Teran and Weed). Rock art, rock circles and other markers testify to the Indians very long use of these lands and resources, and a profound and deep knowledge of the resources of certain watersheds.

The water resources of the Wind River Indian Reservation—including abundant lakes, springs, and surface streams—are major reasons that Chief Washakie selected the Warm Valley as a homeland. As Figure 1 shows, the Wind River originates in three mountain ranges and drains to the Big Horn and Yellowstone rivers. The Wind River and its tributaries produce nearly 1.2 million acre feet of water in a normal year. Approximately 80% of the water in the Wind River is generated from lands of the Wind River Indian

⁵ Because of the survey did not always distinguish public lands from Indian lands, it is likely the some of the proceeds from the sale of Indian lands were also deposited in the Reclamation Fund.

⁶ This objective is apparent in even the Indian Service studies, the goal of which was to harness water for development of the ceded lands of the reservation. See also, “The Colonization of the Wind River Irrigation Project,” 1928, Bureau of Reclamation.

⁷ The legal classification of Wind River Reservation lands becomes especially important because of the fact that the 1905 Agreement did not constitute actual relinquishment of original tribal trust ownership title to the ceded portion of the Reservation. Rather, it provided authorization for and methods of actual relinquishment of tribal trust title lands through parcel-by-parcel sales under select public land entry laws.

⁸ The Supreme Court remanded the case for determination of the additional value of lands taken if the date of entry was 1878 versus 1891. The United States appealed the inclusion of timber and mineral resources and lost in the Supreme Court in 1938 (*United States v. Shoshone Tribe*, 304 U.S. 111, 58 S.Ct. 794, 82 L. ed. 1213, 1938).

Reservation. Baseline water quality for the majority of streams on the reservation is heavily dependent on the geology over which the streams flow. High elevation lakes and streams on the Wind River Indian Reservation contain some of the most pristine quality waters in the United States.⁹

Not long after the establishment of the reservation in 1868 and the mineral-related land cessions of 1872 and 1897, the government began to examine the potential of transferring water from the Wind River Mountains onto lands in the central Wind River basin.¹⁰ Early water studies completed by the “Indian Service”—predecessor to the Bureau of Indian Affairs (BIA)—were used by the Reclamation Service to justify irrigation of lands deemed “ceded” under the 1905 Act now in non-Indian hands. From 1905 until 1942, a major non-tribal irrigation project, including a hydropower facility, was constructed to transfer water from the Wind River and its tributaries to the non-Indian irrigation project. While a tribal irrigation project was also constructed on the “diminished” portion of the reservation pursuant to the 1905 Act, it was never finished and soon fell into disrepair. Power was provided to finish the non-Indian irrigation project beginning in 1926 but access was not available to tribal communities until 1940 (United States Bureau of Reclamation, Hipp).

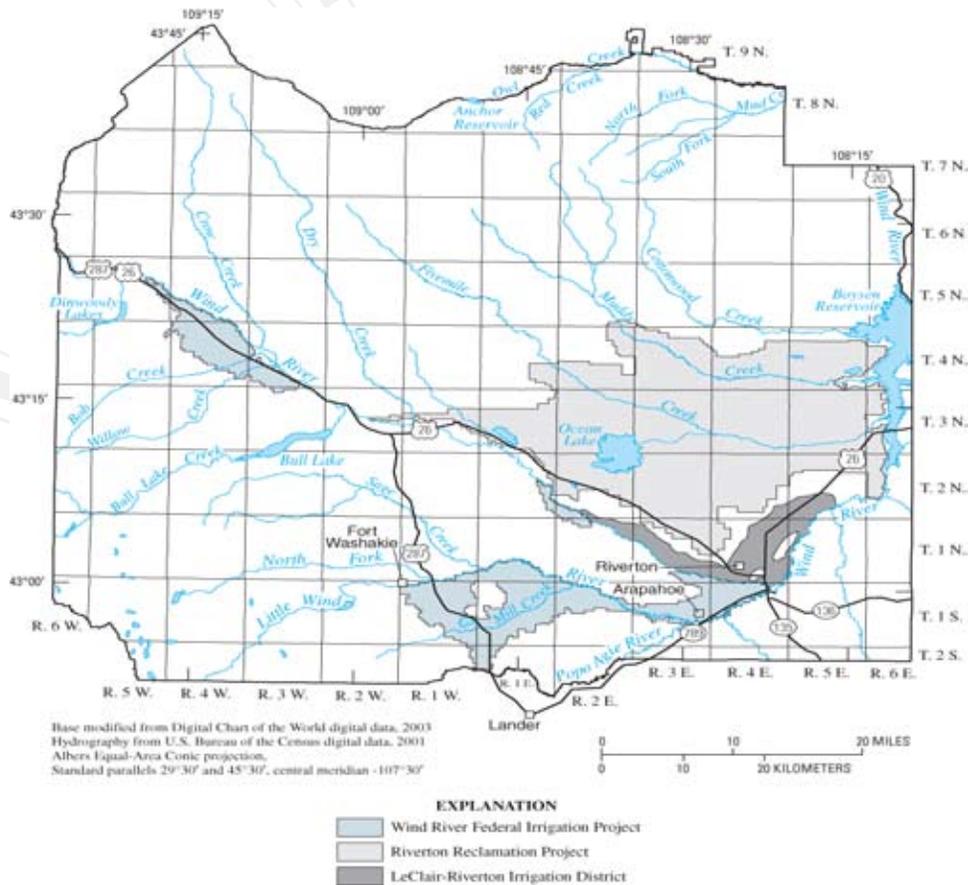
Using the justification of constructing an irrigation project on the Wind River Indian Reservation, the Bureau of Reclamation used Indian appropriations to construct diversion dams, canals and three reservoirs with hydropower generating capability. When the projects were completed in 1942, it was formally designated as the “Riverton Reclamation Project.” By 1953, three major Reclamation storage facilities had been built on the reservation, which transferred the bulk of water generated in the Wind River Mountains downstream to non-Indians and then out of the Wind River Basin to water users in Worland, Wyoming.

Three small reservoirs were constructed by the BIA for the irrigation of lands on the diminished portion of the reservation. The configuration of water resource facilities as of 1965 is shown in Figure 2.

⁹ Wind River Environmental Quality Commission drafted water quality standards approved by EPA in 2008 pursuant to 12 years of data collection and analysis.

¹⁰ United States Indian Service, 1898, Water Resources of the Wind River Reservation. Done also in cooperation with the Reclamation Service (now BOR) and Geological Service (now USGS).

Figure 2: Land and water systems configuration, Wind River Indian Reservation



The People

The centrality of water to the culture of both Tribes is easily recognizable in both the past and today in ceremonial practices, identified desired and undesirable uses, specific knowledge of plants and their association with certain quality waters and certain flow regimes, sacred sites and use of water in and around the home. There is no overestimating its importance and there are no words to adequately describe the significance of water to tribal worldviews. To this day, reservation elders remember when many more rivers and streams flowed than now, a day when the mountains were covered with more snow for longer periods of time, and other details that only those who know the stories of long ago can remember. For both tribes, the knowledge of water and ways to protect it are rooted in the language of the people, where the concepts are expressed and understood more easily.

The Eastern Shoshone and Northern Arapaho people, after having migrated through overlapping geographic regions with differing governing practices, cultural roots, occasional hostilities among each other and different relationships with the United States, found themselves on the same reservation at the turn of the century. It was a forced shared occupation, which strained relations from the start, but which did not affect the cultural practices of either Tribe.

From 1905 to around 1930, the United States provided bare minimum rations to the Tribes and relied on missionaries to provide for the education of Native people. This was a period when many Indian children were taken off the reservation to boarding schools. Missionaries and off-reservation boarding schools banned Native languages and practices and openly tried to break tribal cultural and spiritual practices. This difficult time for the people coincided with the period of major resource exploitation, when oil production, irrigation development and power generation for non-tribal people was being pursued by the United States. Native people at Wind River were still eating “rock soup,” or variations of gravy and potatoes or subsisting on wild game while towns sprang up around the reservation.¹¹ Many tribal members still had no running water or power as late as the 1960s.

The federal government’s “tribal” irrigation project provided benefits for very few tribal members and many had difficulty paying operation and maintenance fees that were later imposed on the tribal community.

The overall stress and trauma imposed upon both tribal communities are difficult to measure, as was the trauma visited upon many Native peoples in America during this time. Mutual enemies were settled on the same land base; the land base was occupied by a non-tribal people who did not have the same relationship with or knowledge of *the place* as the Native people had from time immemorial; and the most

important resource—water—was diverted away from the people. Weakened by the loss of land, water, family members and robbed of good health, it was difficult for the tribes to do much about what was happening to the tribal natural resource asset base.

One could view the loss of control over the asset as a *consequence* of the general and seemingly deliberate weakening of both peoples by settling them on the same reservation and then controlling access to basic necessities such as food, water, shelter, heat, power and sanitation.

It is also possible to view the weakening and dissolution of tribal society and health as a *result* of the loss of control over the natural resource asset. Indeed, examination of the First Nations Development Institute’s “*Elements of Development*”¹² shows that the loss of control over the tribal natural resource asset leads to the dissolution of many key components of tribal society at the community and the individual level.

For the Wind River Indian Reservation, control over the natural resource asset—water—was wrested away from the Tribes through the settling of mutual enemies on the same reservation, the simultaneous

¹¹ See note 10, Hipp. The current elementary school in Ft. Washakie is known by many as “Gravy High School,” where on good days gravy was served for lunch. Castor oil was a treat. See also, “*From Trout Creek to Gravy High*” and the Eastern Shoshone Tribe website.

¹² See Figure 2 in the main paper, “*Native American Asset Watch: Rethinking Asset-Building in Native Communities.*” The *Elements of Development* sets out 12 assets or values supported by the main axes of Control of Assets, Spirituality, Kinship and Personal Efficacy. When one of these axes is weak or missing in Native communities, the other elements and values are negatively affected; these include environmental balance, hope and future orientation, choices and vision, cultural integrity, social respect, political and civic participation, health and safety, responsibility and consequences, vibrant initiative, productivity skills, income and trade and exchange.

starvation of the population, denial of basic services and the rapid exploitation of the resource. Ultimately, the monies used to achieve the non-Indian development were diverted from funds that were meant for “Indian people and projects” (Northern Arapaho Tribe, 2003). Table 1 below provides an outline of the major events affecting the Tribes’ water and land history.

Table 1: Wind River Land and Water History

Year	Treaty/Legislation, Executive Order/ Legal Opinion	Effect	Notes
1851	Treaty with Arapaho Tribe	Promised reservation near Laramie Wyoming	Promises never kept
1863	Treaty of Ft. Bridger	Recognition of aboriginal lands	44 million acres initial agreement
1868	2 nd Treaty of Ft. Bridger	Set aside Wind River Indian Reservation for Shoshones; reduced land base	Land base reduced to 4 million acres
1872	Brunoe Land Cession	Ceded mineral lands containing gold and uranium	Reservation reduced to 2.9 million acres
1897	Thermopolis Cession	Ceded thermal areas on the northern part of reservation	Reservation reduced to 2.5 million acres
1905	The 1905 Act	350,000 surface acres ceded but Tribes retain jurisdiction over lands not sold	No reduction in reservation acreage.
1906 -1942	Appropriations for construction of Riverton Reclamation Project, hydropower plants, two reservoirs	Structures built to divert the Wind River to the ceded lands. Storage reservoir sites taken by U.S. with minimal compensation	Tribal members kept records of meetings with BIA and BOR
1937	<i>Shoshone v. US</i> case	Sought compensation for Arapaho entry onto the Wind River Indian Reservation	Shoshones received \$4 million in compensation; funds taken out of Northern Arapaho Tribe’s appropriations.
1953	Construction of Boysen Reservoir	Bureau of Reclamation withdrew approximately 350,000 acres for Boysen Reservoir	Reservation reduced to its current size of 2.2 million acres
1965	Water exchange contracts	Bureau of Reclamation entered into 40 year contract with junior water users to exchange Boysen water for Wind River diversions	Decades long exchange of water even after 1988 <i>Big Horn Decree</i> with no assessment of effect
1977	Wyoming sues U.S., <i>Big Horn</i> adjudication	Ownership, control, and administration of 1.2 million acre feet water at stake	Litigation, high costs, large water award
1988	<i>Big Horn Decree</i>	Tribes awarded 500,717 acre feet	Less than half the flow of the Wind River

1989	<i>Big Horn</i> affirmed by U.S. Supreme Court, Tribal Water Code developed and approved	Development of Water Code to control and manage federal reserved water rights	Establish tribal water organization, law, and administrative framework
1990	First use of Tribes' water rights	Tribal permit for use of water for instream flow	50 mile stretch of river has water for the first time in decades
1992	<i>Big Horn III</i>	Status of Tribes' water rights unclear	Long period of inaction
2001	Review of water management	27 Guiding Questions produced	Renewed interest in water
2004	Wind River Water Plan produced	3 phase community driven water plan	
2005	Community film production	58 minute community produced	100 tribal voices
2008	Water Quality Standards for Wind River Indian Reservation		Approved by EPA

Regaining Control of Tribal Water

The fight to regain control of the Tribes' land, mineral and water assets began almost as soon as the resource was lost. People kept records, documents, memorized tribal stories and narratives and passed them on, and kept "showing up" to witness and record the actions of the government regarding water (Willow). And when the time came, these same tribal community members stepped forward to participate in the Tribes' efforts to regain the resources, revenue from, and control over the resource base that had been theirs since time immemorial. Securing the natural resource asset base was seen then, as it is seen now, as key to the long-term survival of both Tribes.

The major challenges to the Tribes' control over water resources began in 1977, when the State of Wyoming sued the United States for an adjudication of the water rights of the Tribes. After 13 years of acrimonious litigation, a final Decree was entered in 1988. During and after this period of litigation, the Tribes organized to formulate action to assure tribal use of the water. These tribal actions include:

- Development of the Wind River Water Code and associated policy, technical and administrative infrastructure for water management (1988-1990)
- Using tribal water and implementing the Water Code (1990-2000)
- Major Reassessment, Research & Community Education (2001-2004)
- Development of the Wind River Water Plan (2003-2007)
- Understanding the federal role in the Wind River Basin and planning for strategic interaction (2008)
- Initiation of strategic discussions with federal government (2009-2010)

These key elements of tribal water control and the strategies employed by the Wind River Tribes are summarized in Table 2 at the end of this case study.

Background Experience in Natural Resource Asset Control

The Wind River Tribes' efforts to control their water spans over thirty-years and is on-going. Progress was spurred in 1988, when the Tribes' found and exposed the oil companies' theft of tribal oil and gas that occurred in the 1960s and 1970s. Wyoming is no stranger to oil and gas scandals,¹³ but little attention was paid to the theft of oil from Indian lands until the Tribes themselves discovered it.¹⁴ Tribal efforts led to significant reforms and improvement in oil and gas reporting for states as well as Tribes and resulted in increased revenue to both.

The establishment of the Wind River Environmental Quality Commission in 1988 was a key component in developing the Tribes' natural resource management infrastructure. By the time the Tribes' water rights were quantified, a technical entity and significant experience with natural resource asset control was already in place.

The Big Horn Water Rights Adjudication

In 1977, one hundred and nine years after the second Treaty of Fort Bridger, the State of Wyoming sued the United States under the McCarran Amendment for the quantification of the Eastern Shoshone and Northern Arapaho Tribes' water rights.¹⁵ The Tribes joined the lawsuit with the United States and were represented by separate counsel and the United States Justice Department as trustee. Wyoming's goals for the litigation were to limit the Tribes' water rights and to secure state jurisdiction over and administration of tribal water in the Wind River basin. The case, known as the *Big Horn* adjudication, represented another assault on tribal natural resources and served to galvanize the Tribes to formulate a collective effort to defend the reservation and secure the Tribes' remaining water resource. The Tribes' active participation in the adjudication marked the first formal action undertaken to regain and secure control over water resources. The adjudication lasted thirteen years;¹⁶ subsequent cases, further scrutiny of quantification and other unresolved issues extended the case another twelve years. Since 1977, it has cost the United States and tribes more than \$50 million dollars to quantify and refine the tribal water right.

The Wyoming Supreme Court reached a final decision, known as the *Big Horn Decree*, in 1988. The Decree was appealed by all parties to the United States Supreme Court and affirmed without comment in June 1989.¹⁷ The *Big Horn* adjudication affirmed:

¹³ For example, the Teapot Dome scandal of 1927, a bribery scandal of the administration of United States President Warren G. Harding. Teapot Dome is an oil field on public land in the U.S. state of Wyoming, so named for Teapot Rock, an outcrop resembling a teapot overlooking the field

¹⁴ CBS "60 Minutes" covered this issue in 1981.

¹⁵ The McCarran Amendment (43 U.S.C. 666a) allowed states to sue the United States in state courts for the comprehensive adjudication of water rights, including federal and Indian reserved water rights.

¹⁶ The adjudication was divided into three phases, the first being quantification of the Tribes water right, the second being the United States' water rights for federal lands and projects, and finally the state and private users water rights. Phase I was completed in 1988.

¹⁷ The *Big Horn* case was the first Indian reserved water rights case to reach the United States Supreme Court since the landmark case *Arizona v. California* in 1963 (373 U.S. 546 (1963)), which set a standard for quantification of Indian water rights, and is likely to be the last major Indian water rights litigation to reach the Court

- The Tribes' rights to 500,717 acre feet of water annually from the Wind River and its tributaries with an 1868 priority date,
- The Tribes' ability to use the water for whatever purpose deemed advisable, with certain restrictions,
- The Tribes' ability to lease or market tribal water on reservation with certain limitations, and
- The Tribes' ability to develop their own water management program and restrictions on the state engineer's role in water administration regarding the Tribes' senior water right.

In sum, the Tribes' rights amounted to about one half of the annual water produced in the Wind River Basin. The non-tribal users' and the federal water rights comprise the rest of the water in the basin; all have junior priority to the Tribes' 1868 priority water right. By many measures, the tribal water rights secured through the *Big Horn Decree* can be seen as a victory for the Tribes and the United States. Beyond having secured these rights, however, the work to actually control and use the water was just beginning. After nearly losing complete control of their water and struggling for over a decade to secure the water right in the highest court in the land, the Tribes had to initiate the process of turning their "paper water right" into "wet water", a process many tribes are undergoing today.

The Tribes had to define what "tribal control" actually means. For the Tribes, this meant establishing the internal policy, administrative and technical infrastructure to manage the resource within the constraints of the *Big Horn Decree*. The Tribes sought relevant expertise and jointly developed the Wind River Water Code (interim 1989, final 1990), the Office of the Tribal Water Engineer (technical), and the Wind River Water Resources Control Board (administrative). During this time, there was intensive effort to build tribal capacity for water resource management and administration.

The Wind River Water Code (1988-1990)

A one paragraph 1981 Order by the Secretary of the Department of the Interior, Rogers C. B. Morton, put a moratorium on tribal water code development that has not since been lifted.¹⁸ This order applied only to tribes who had formed governments under the Indian Reorganization Act of 1934 (IRA), which require Secretarial Approval for tribal codes. Fortunately, for Wind River, the Water Code Moratorium was not applicable to the Eastern Shoshone and Northern Arapaho Tribes because they did not accept the IRA. Thus, the Tribes were able to develop a water law and tailor it to the unique circumstances of their reservation, but within the constraints of the *Big Horn Decree* and the particulars of Wyoming State water law.

Another factor that made the development of a tribal administrative program essential was that the *Big Horn Decree* was silent on tribal water administration. The Decree limited the State to curtailing diversions to protect the senior (tribal) water right and required both parties to return to state court if they were unable to remedy a dispute. The large volume of water affirmed for the Tribes and the

¹⁸ A serious effort to lift the moratorium was made from 1997-1998 by various Indian tribes. However, this effort was opposed by the then Indian Solicitor Robert Anderson, Secretary of the Interior Chief of Staff Ann Shields, and Secretary of the Interior Bruce Babbitt. The Interior officials recommended that the tribes sue the Department of the Interior instead.

considerable flexibility in use specified in the *Big Horn Decree* required the development of a system for the management of federal reserved water rights. 

The system the Tribes developed was based on the location, distribution, character and amount of tribal water distributed in the tributaries throughout the reservation, the desired uses of the tribal community and a “hybrid management structure” which included federal, tribal and state law concepts for water management, all within the framework of the *Big Horn Decree*. An example of how the Wind River Water Code attempts to work with state water law is shown in how water is delivered at Wind River. Although the Tribes’ water is a *federal* reserved water right, it is delivered in priority by *tribal* law as a rate (cubic feet per second) just as water rights under *state* law are delivered.¹⁹ On the other hand, the Tribes’ Water Code identifies thirteen beneficial uses, whereas Wyoming’s has four, including instream flow, protection of cultural resources and ground water recharge. The Code establishes a management mechanism for the tribal water rights, including an Office of the Tribal Water Engineer staffed by water resource managers and a 12-member Water Resources Control Board drawn equally from the Eastern Shoshone and Northern Arapaho Tribes.

A large part of the Water Code approval process involved community education. During December 1989, twelve workshops were held in four reservation communities to discuss, modify and share information on the relevance of the Water Code and its potential impact on the community.²⁰ The role of community education in the establishment of a secure control over natural resource assets cannot be overestimated. While these intensive workshop efforts were “outside the norm”, they were proposed to be continued as a function of tribal water administration. The failure to engage the tribal people and culture more fully, especially the elders, has been cited as one of the incomplete components of the Water Code development process, and community engagement is now a *required* component of any project involving natural or environmental resource assets.

Using Tribal Water and Implementing the Wind River Water Code (1990-2000)

The large volume of water affirmed for the Tribes by the *Big Horn Decree* challenged the tribal community to determine potential uses for the relatively large portion of unused tribal water, the so called “futures water”.²¹ Although designs were ready for irrigation projects, the huge cost of the litigation virtually assured the Tribes would have no funding to implement these projects in the near term. The Tribes had one low cost critical use; because of the Tribes’ concern with the dewatering of the Wind River and its impact on declining fisheries, the Tribes jointly decided to use a portion of their water rights for instream flow purposes in a 50-mile stretch of the Wind River.

¹⁹ One of the minute complicating factors in designing a tribal water rights management program is the way in which the water is awarded to the Tribe. At Wind River, water is awarded to the Tribes by volume, while the state has rights in diversion rates (cubic feet per second) per acre.

²⁰ With the 1988 *Big Horn Decree* and its affirmation by the Supreme Court still fresh, most of the tribal citizenry were very aware of the water case, the water award and were excited about prospects for the future of their communities.

²¹ The Big Horn adjudication divided the 500,717 acre feet of awarded water into “historic” and “futures” water.

The historic water is that which was historically and is currently used; the futures water was quantified based on five future agricultural projects, although the Decree granted the Tribes’ the use of all its water for any purpose deemed advisable. 



Under the guidance of the Wind River Water Code, the tribal water engineer configured an instream flow of 252 cubic feet per second (cfs) for a 180-day period using recommendations from the United States Fish and Wildlife Service. Water Code regulations that referenced the *Big Horn Decree* also required the tribal water engineer to calculate the possible impacts of such an instream flow on junior water users in the basin in the immediate vicinity of the proposed instream flow permit. A public hearing on the proposed instream flow use was held in accordance with the Water Code, testimony taken and comments summarized. The Tribes approved the tribal instream flow permit in April 1990. At the time, the State Engineer, as well as local non-tribal water districts, used every possible format to claim the Tribes' use of tribal water would bankrupt local water users.²² The reality is that the non-tribal community had become used to using the water that had now been adjudicated to the Tribes.

During the effort to implement the instream flow permit, the Tribes sought the assistance of the United States Department of the Interior regarding the Bureau of Reclamation's obligation to support the Tribes' permit. The Solicitor of the United States Department of the Interior ultimately backed the tribal position and its right to issue an instream flow permit for its water. To help protect the instream flow against expected non-tribal diversions, the Tribes also planted 30,000 fingerling trout in the Wind River, relying on the ruling in the case, *Shoshone Tribe of Indians v. United States*, 299 U.S. 476 (1937), which required the United States to protect fish as a trust asset. The instream flow became effective on April 19, 1990.

The State of Wyoming challenged the Tribes in State District Court, however, and through a long series of decisions and appeals the Tribes' first use of their federal reserved water rights under the Wind River Water Code for instream flows was denied in a decision known as *Big Horn III*, 835 P. 2d 273 (Wyo. 1992).²³ Because the case involved the first use of a tribal federal reserved water right, and that use was denied despite clear language in the original *Big Horn Decree* supporting the use, many quickly dismissed the Tribes' continued right to use the water as having been "lost". However, nothing could have been less accurate; one of the features of a tribal reserved water right is that it cannot be "lost" by non-use as is the case under Western water law principles. The State Engineer acknowledged the nature of the Tribes' water right in a letter referring to the principles established in the *Big Horn I* decision.²⁴

The case outcome, combined with the false reports of the Tribes having lost administrative authority, however, *did* negatively impact the tribal community. In a series of community workshops in 2004-2005, for example, the tribal community expressed over and over again their belief that the Tribes' water had been lost in 1988 with the first decree or in *Big Horn III* along with the Tribes' administrative authority over that resource. Thus discouraged, from 1992 until about 2000, there was very little community

²² In the late fall of 1990, the Riverton Ranger announced that it had been a record crop year in the Wind River Basin while remaining silent on the fact that the Tribes' instream flow had not damaged or bankrupted the non-tribal farming community as was predicted by the State's water engineer.

²³ Because of the perceived climate of the Supreme Court and the local federal appeals court, this decision was not appealed. However, the Tribes had a strong technical case, the Tribes' use did not injure junior water users, the Department of the Interior supported the Tribes, as did the clear language in the *Big Horn Decree*; all this made the Tribes' case very strong at the time.

²⁴ Letter from Wyoming State Engineer, Patrick Tyrell, regarding the *Wind River Water Plan*, 2007, reaffirmed the States' acknowledgement that the governing principles for water in the Wind River basin, as stated in *Big Horn III*, refer to the principles outlined in *Big Horn I*.

interest in or knowledge of their existing water rights or ability to use their water. However, the routine of water management activities, including stream gauging, confirming permit locations and other activities continued during this period.

Implementing the Water Code

Although the Tribes' instream use was informally honored by the Bureau of Reclamation until about 1996,²⁵ the major work of the Tribes' water management agency was shifted toward mapping of awarded water rights, inspection of permit changes and developing information for permitting water uses on the reservation according to the Water Code. From 1997 through 2007, the tribal water management's focus was diverted from other water uses and issues to issues of irrigation construction, safety of dams and other grant-related projects. The shift was in part money related, as tribal funds were unavailable to fully support this vital joint tribal water management program, and in part the result of the person hired as the Tribal Water Engineer and the composition of the Water Board. While the Water Code specifications for the Tribal Water Engineer do not require an engineering degree, a professional engineer was chosen and as a result the Board membership gradually became dominated by irrigation interests and construction projects.²⁶

Major Reassessment, Research & Community Education (2001-2003)

In the summer of 2001, tribal leaders, the tribal water and environmental offices, consultants, attorneys and tribal communities began an intensive review of the state of the water resource. The Tribes invited all of the previous participants in the adjudication, from the engineers to the various attorneys representing the Tribes and the United States. This review yielded a set of 27 questions or areas that indicated a number of actions to improve tribal water management. The recommendations included suggested modifications to the Water Code and administrative procedures, including water management procedures, improvement in the relationship with state and federal government agencies, community education, increased internal tribal capability-building and improved water resource decision-making.

It had been seven years since the cessation of the "informal" recognition of the tribal instream flow use, and the Tribes had not yet exercised their right to use nearly half of the water awarded to them in the 1988 *Big Horn Decree*. There was considerable concern about the need to use the Tribes' water before it was permanently lost to other users.²⁷ Serious and piercing questions were raised on how to develop the Tribes' water and whether the water management mechanisms in place were sufficiently protecting the tribal water resources. An internal review was initiated in 2001 and culminated in critical action by the Northern Arapaho Tribe to develop a Water Plan for the Wind River Indian Reservation.

²⁵ As measured at the Riverton stream gauge.

²⁶ As of 2008, this has become a serious problem for water administration at Wind River. Currently the Tribes are contemplating changes in the organization of the reservation into water districts (watersheds) as a basis for appointment to the Water Board and other mechanisms to ensure the representation of all beneficial uses and the continuation of administrative work under the Water Code.

²⁷ Even though a federal reserved right cannot be lost for non-use, the fundamental concept conflicts with state law which allows use of "unused" water. The state's refusal to recognize both federal and tribal law and the federal government's seeming compliance with state law enabled the taking of over 2 million acre feet of federal reserved water rights belonging to the Tribes from 1990-2003.

The Development of the Wind River Water Plan (2003-2007)

After the review of water issues by the Tribes from 2001-2002, there was a collective determination that it was imperative for the Tribes to begin to use their water rights and resources. Although the 1990 Wind River Water Code had authorized the development of a water plan for the reservation's resources, most of the planning activities of the 1990s revolved around the development of plans for single projects and single uses of water. The Tribes have lacked the financial resources and the community support for these planned water projects to be put into place. Thus, the Northern Arapaho Tribe initiated the development of a water plan, a process that took over three years to complete. One interesting facet of this study was that the effort was the first to actually ask tribal people what they wanted to do with their water resources.

The *Wind River Water Plan* was initiated by resolution of the Northern Arapaho Tribe in November 2002, and was developed for consideration by the people of the Wind River Indian Reservation. Ultimately, the plan was created as a joint effort between the Northern Arapaho and Eastern Shoshone Joint Business Council, the Office of the Tribal Water Engineer, the Wind River Water Resources Control Board, the Wind River Environmental Quality Commission, the Northern Arapaho Council of Elders, several Shoshone Elders and numerous other tribal organizations and individuals. **The Wind River Water Plan proposes a reservation-wide program for the wise stewardship, management and development of the water resources of the Eastern Shoshone and Northern Arapaho Tribes.**

The experiences of tribal members and both tribal governments with the disposition of, and issues affecting, tribal water made it evident that a plan was needed for the reservation's water resources. Some of the issues are:

- Increasingly, opportunities to meet the needs of the current and expected reservation population have been hampered by the need for more specific water supply information and intra-tribal agreement on plans to move forward with the development and management of the reservation's water resources.
- Economic development is adversely affected for both Tribes because of the lack of a plan for the use and protection of the reservation's water resources.
- Real water supply problems are currently being experienced by tribal residents, including farmers and households and with community drinking water.
- Since the affirmation of the *Big Horn Decree* in 1989, non-tribal water users have been using tribal water resources under the banner of state law to the detriment of the Wind River Indian Reservation.

At the time of the development of the Water Plan, all of these issues were made worse by the on-going drought, which has gripped the Wind River basin and the region since 1999. **The development of the water plan was based on the following general areas of work:**

- **Research on the status and use of tribal water resources,**
- **Specialized research on the federal role in management of tribal water,**
- **Community education on water resources and water rights, including the development of a 58-minute video, entitled *Our Water, Our Future*, and**
- **Informal and formal surveys, water meeting discussions and formal meetings discussing peoples' preferences for water use.**

Two types of research were undertaken in completing the tasks of the Water Plan. The first were *technical studies* looking at various aspects of tribal water resources, including drought, specific water management issues in the Arapahoe Ranch, Owl Creek and the Little Wind regions and the management of the BIA irrigation project. The other studies involved examination of *administrative systems*, and evaluated the use and effectiveness of the Wind River Water Code, the structure and function of the Tribal Water Engineer's Office, the ability of the Tribes to use their water as set out in the *Big Horn Decree* and the tracking of tribal "future" water in the Wind River. This section provides a brief summary of each of these reports and the tools, information and resources now available to the Tribes for water management as a result of this research.

The many ideas that were generated for water use during this three-year period have a strong backing in existing engineering studies conducted on the reservation since the late 1980s. But other ideas—such as bottled water, recapturing tribal water, gaining control over existing reservoirs in the basin, community gardening, recreational development and rangeland or wildlife water development—have not been fully studied from an engineering or economic viewpoint. One important conclusion presented in the Wind River Water Plan, which has critical relevance today, is that *there is nothing legally preventing the Tribes from developing their water resources now and into the future.*²⁸ None of the legal decisions that have followed the *Big Horn Decree* have fundamentally altered the ability of the Tribes to use, manage, protect, lease and develop their federal reserved water, including *Big Horn III* involving the 1992 instream flow.

Importantly, much is known about existing tribal water resources and a significant number of water development options have been studied. Likewise, key areas of surface or ground water quality concerns are fairly well known on the reservation, enabling their remediation or isolation. Similarly, new areas of developing potable supplies of ground water are emerging. The water development potential is considerable for both surface and ground water resources.

The Water Plan did not overlook the *significant* funding obstacles in developing water, but concluded that the primary barrier to water development and protection at Wind River was *political will, both internal and external to the reservation*. The Water Plan analysis concluded that the barriers could be overcome with collective strategic thinking, continued community education, planning, funding and investment and engaging in dialogue around the resource that binds the Tribes with all users in the basin: water.

The Water Plan also recommended that the Tribes take bold, specific, dramatic steps to rapidly increase the *tribal community's* ability to use, manage and administer water and other natural resources, to quickly identify and undertake water development efforts and to implement strategic discussions with the United States on water development issues.

The three-year planning effort, built upon a strategic review conducted during 2001-2003, led to markedly increased community knowledge and participation in water resource issues and increased knowledge of tribal leadership of the decision making and infrastructure needs for managing water

²⁸ As discussed earlier in this text, the "misinformation" about the result of Big Horn III was a negative setback in terms of the Tribal community's will to and interest in developing water.

resources for the region. The specific projects outlined in the Wind River Indian Reservation' three phased water development program are listed in Attachment A.²⁹

The Federal Role in Tribal Water Control: The Headwaters Project (2005-2008)

The federal government, primarily through the Bureau of Reclamation, exerts the greatest control over the management and distribution of water in the Wind River Basin, including that volume of water affirmed for the Tribes in the *Big Horn Decree*. It does this primarily through its ownership of the major diversion, canal and storage works for the Riverton Reclamation Project.

As part of the Wind River Water Plan research discussed above, a critical component of natural resource asset control for Wind River involved the examination of the role of the federal government in the basin. Through this investigation, the Tribes uncovered information that now offers the greatest current hope for regaining tribal control over water to emerge in thirty years (Northern Arapaho Tribe, 2005).³⁰ What started as a simple spreadsheet tracking the Tribes' water resource assets in the Wind River led to information that suggested that the Tribes may have some ownership claim to the irrigation works of the federal government (Northern Arapaho Tribe, 2004). The research revealed that the Tribes contributed greatly to the project through monetary contribution to repayment of construction, operation and maintenance costs for the entire Riverton Reclamation Project. Moreover, the tribal asset tracking tool developed as a part of this project confirmed that over a period of 14 years, the Bureau of Reclamation had diverted over 2.7 million acre feet of tribal water resources out of the Wind River, often dewatering large stretches of the Wind River, to serve state irrigation needs on the *ceded lands*.

At the beginning of this case study, the status of the ceded lands of the Wind River Indian Reservation was highlighted so that it would be possible to discuss the significance of the Tribes' Water Plan research findings on the ownership of the Riverton Reclamation Project and the diversion of tribal water through its facilities. The Tribe's research on this issue was dubbed the "Headwaters Project." There are three major findings highlighted here:

- The 1905 Act that established the ceded portion of the Wind River Indian reservation *did not* authorize the construction of the Riverton Reclamation Project or any project on the ceded lands using federal funds.
- From 1905-1942, Indian appropriations, along with monies from the Reclamation Fund, were used to construct the Riverton Reclamation Project, formerly known, until 1921, as the Wind River Irrigation Project. In 1942, when the project was finished, it was formally designated as the Riverton Reclamation Project.
- The tribal irrigation project that was authorized on the "diminished" portion of the Wind River Indian Reservation by the 1905 Act required that the Tribes' financial obligation to the repayment of construction costs of that project was not to exceed \$150,000. The tribal water users have overpaid that amount by millions of dollars.

²⁹ The Tribes are currently seeking funding for these efforts.

³⁰ There was also additional research on the BIA, which controls large amounts of tribal water through the BIA irrigation project, showing an agency fraught with its own difficulties.

The federal government has literally diverted the Tribes' water and monetary resources through facilities it does not own and without legal authority to do so. Tribal irrigators continue to pay "Operation and Maintenance" charges to the federal government that may not be required and without securing needed improvements in the system. It would be difficult to overestimate the significance of this information for the Tribes' current chance to achieve full control over their water resource assets. In addition to the monetary damages the Tribes could claim under theories of condemnation, constructive trust, overpayment of irrigation construction and operation and maintenance charges, there are other significant implications of the government having used tribal trust funds to build an *unauthorized* non-tribal irrigation project on the ceded lands of the Wind River Indian Reservation.

The value of this information to the Tribes' water asset control opportunities lies in their ability to leverage this information to (a) press for documented monetary claims, and to (b) use the information to negotiate with the Bureau of Reclamation regarding the use, storage, leasing and management of tribal water resources. In response to this and other information associated with the Water Plan process, the Tribes formed a Joint Water Task Force in 2007 to begin the process of a final discussion with the United States that would lead to and strengthen the Tribes' control over water resources.

It has been nearly twenty years since the Tribes passed the Wind River Water Code and over thirty years since original *Big Horn* water litigation. During this time, the Tribes have made significant strides to move ahead with control over water. Yet the Tribes now face a particularly important period in which the complete sovereignty over water could be achieved with a few well-timed and strategic steps.³¹

Contemporary Significance of Natural Resource Asset Control to the Wind River Indian Reservation

This lengthy struggle for water control, described *briefly* here, testifies to the enduring significance of the water resource to the people of the Wind River Indian Reservation. The on-going policy, technical and administrative activities, the Headwaters Project information, and the formation of a Joint Water Task Force portend a collective effort that could, within the next year, catapult the Tribes into full control over their water resources. While the specifics of water control discussed here have focused on the development of the Tribes' institutional infrastructure, it is notable that the other components of natural resource asset control developed by First Nations' *Elements of Development*³² have not fully been integrated into this story of resource asset control. The Tribes have persisted in their efforts to control water, but have not yet regained all the elements of development.

Fortunately, the development of the Water Plan, which was funded by a grant from First Nations, was created using the *Elements of Development* framework and allowed for the expansion of asset control activities into other areas, specifically the spiritual and kinship arenas. Indeed, it is in the expansion of

³¹ An interesting example presented to the Tribes is the potential Crow Water Right Settlement, which guarantees the Crow Tribe 625,000 acre feet from the Big Horn system with a priority date of May 1868. The State of Wyoming is opposed to the settlement because of the water rights of Wyoming junior irrigators "sandwiched" between two senior water users – the Wind River Tribes and the Crow Tribe. Wind River has an interest in marketing water to the Bureau of Reclamation to serve junior non-Indian interests should drought conditions place strain on Wyoming water users. This could result in the leasing of Wind River water on the reservation for uses off reservation.

³² See Figure 2, in the main paper "*Native American Asset Watch: Rethinking Asset-Building in Indian Country.*"

the project into these areas—while focusing on water resource asset control—that made this project more successful, as measured by its community significance and participation. For example, the project was successful in involving the tribal elders, the development and implementation of community workshops, producing the video *Our Water, Our Future* and sponsoring the Tribal Elder Youth Conference. While these were not specific asset control activities, they were indispensable to securing community confidence in and support of tribal water control.

At Wind River, the future vibrancy of the community is related to water resource asset control decisions made today. The range of possibilities to build community and tribal use, and to gain benefits and control over water are too numerous to mention, and just one range of phased options was presented in the Wind River Water Plan.

For a quick review of the potential financial benefits to the tribal community if such a water plan would be implemented, consider the following:

- The volume of water the Tribes are entitled to annually is equal to 1/3 of Los Angeles' annual water consumption; water in Los Angeles is currently selling for over \$1,500 per acre foot.
- The market value of the 2.7 million acre feet diverted by the Bureau of Reclamation from 1990-2003 leased at a low rate of \$100 per acre foot would have been \$270 million dollars, or about \$21 million per year.
- A bottled water facility could generate over \$1 million per year.
- Numerous reservoir sites and large volumes of tribal water could satisfy power needs for the basin's residents for years to come and resolve water shortage issues in a drought.

The contemporary concern for many in the Tribes is the need to begin to use the unused portion of the tribal water resource. At the recommendation of the Joint Water Task Force in 2008, the Joint Business Council passed a resolution to dedicate 150,000 acre feet of unused water in the Wind River to multiple purposes, including leasing or storage for hydropower, agricultural or municipal uses. In combination with the information that was developed through the Headwaters Project regarding the Bureau of Reclamation's role in water management, this dedication of use will enable the Tribes to offer the Bureau of Reclamation the "first choice" in purchasing and marketing the Tribes' water for those purposes. These discussions are to begin soon.

Wind River Case Study Conclusions

As the challenges to tribal natural resource asset control have rolled towards Wind River, so the Tribes have responded to each one by employing a strategy that uses legal, policy, administrative and community education strategies as cornerstones of the effort. The work on water is underlain by the fundamental cultural foundation built upon the acknowledged sacredness of the resource.



A few of the immediate strategies the Tribes are using to secure control over their natural resource assets include:

- Linking efforts to control the water asset to the integrated web that comprises the tribal community: spirituality, kinship, economy, personal efficacy, civic duty and governance;
- Finding a way to resolve or work with any long-standing disputes between Tribes, clans or tribal affiliations on the reservation. These disputes interfere with the collective effort to address the need to maintain control over tribal natural resource assets;
- Gaining full technical understanding and tracking the water resource asset, its characteristics, quality and variations and formulating this information into decision-making tools for water and natural resource decision-makers;
- Including the community, cultural leaders and elders in all aspects of natural resource control, including systems development, issues and problems, development ideas and planning; and
- Committing to building the necessary tribal expertise and policy, administrative, financial, management and development infrastructure to insure the effective long term management of the water resource asset.



The specific elements of the Wind River strategy for resource control are shown in Table 2 below.

Table 2: Water Resource Asset Control Strategies Wind River Water Resources

Challenge	Nature and Components of Issue	Action Taken	Result	Components of Solution
1977 Wyoming suit against U.S. & Tribes to quantify water rights	Legal quantification of rights based on technical field standards, purpose of the reservation	Join U.S. and experts, hire own attorneys and experts	<i>Big Horn Decree</i> 500,717 acre feet Right to use for any purpose, market, lease.	Very expensive. Legal, technical, other experts. Coordination with US and teams of attorneys
System to manage tribal water asset	<i>Big Horn Decree</i> constraints; physical characteristics of resource base; tribal community cultural priorities and desires; community education; three readings before each Tribe's general council	Research water codes, reservation resources, and community ideas. Draft code. Community meetings on Code; approval by Joint Tribes & approval by Tribes' General Councils	Codified as Chapter 9 of the Tribes' Law and Order Code. Established Water Board and Officer of the Tribal Water Engineer	Inapplicability of the Department of the Interior's Water Code Moratorium; expertise; existing agency; community education
Build tribal capacity	Hire and train tribal technical and managerial staff	Grants, expertise hired to organize effort	Two long standing natural resource organizations	

Monitoring Program		Secure assistance from USGS and other federal agencies	Installation of 27 stream gauges between 1988-1992	Federal assistance, tribal participation, use of Tribes' technical staff
First use of tribal "futures" water	Technical, legal, administrative, managerial	Issue permit under Water Code	Legal decision against tribal action; 2008 new information and readjust technique for stream flow dedication	Federal legal support, technical, tribal administrative authority exercised, legal readiness
Water Planning		Develop Water Plan, develop water tracking tool	Wind River Water Plan	Information sharing; planning, physical tracking of the resource
Community Education	Communication about water rights and administration	Long term educational program	Film, increased tribal participation, first list of desired tribal water uses	
Ceded lands, water administration, and water quality protection	1905 Act and takings; how to assert jurisdiction and protect water quality	Headwaters research; tribal water quality standards	New information to secure jurisdiction and control	EPA water quality standards, historic research, negotiation with federal government, leverage of headwaters information

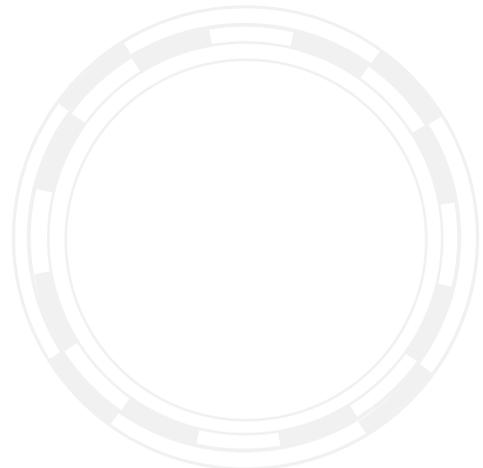
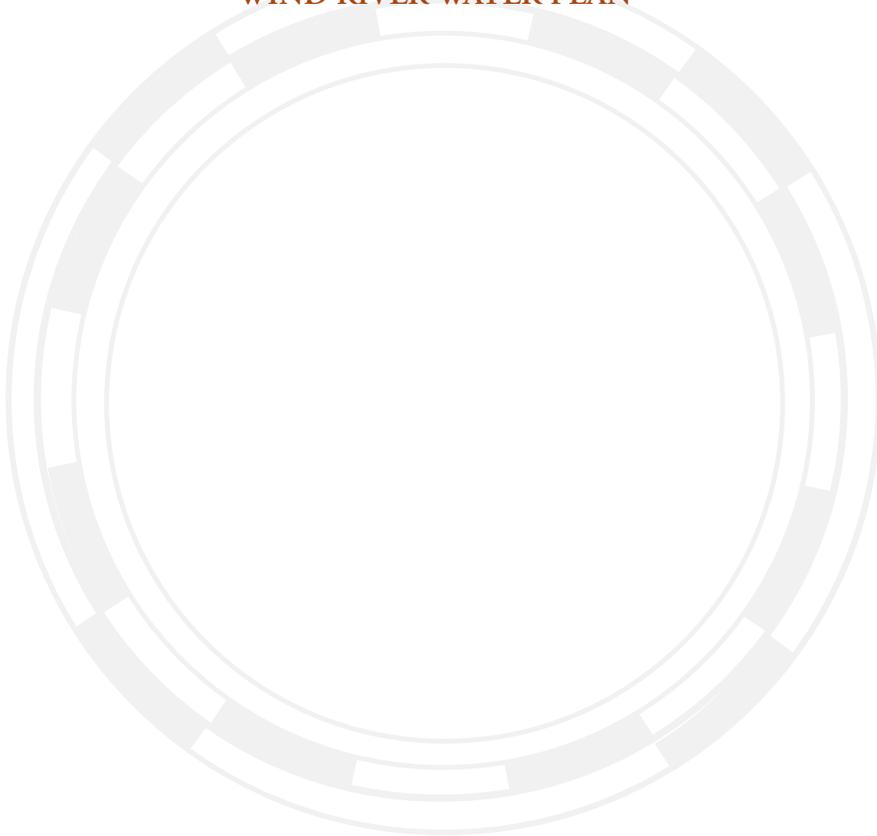
Over the long run, the Eastern Shoshone and Northern Arapaho Tribes have worked to increase their control over water through a variety of means; for example, by using their sovereign power as governments to pass legislation, creating a legal and administrative framework for water management and establishing relevant regulatory agencies (water, environment). To enable these agencies to function, the Tribes have retained internal technical, managerial expertise and will soon expand their financial expertise.

The information on the volume, location and use of the Tribes' water since the 1988 *Big Horn Decree* has helped increase the awareness by the tribal leaders and community of the value of that resource to the reservation and regional water users. The data collected under the Headwaters Project, and the Tribes' own knowledge of the resource can be leveraged with the Bureau of Reclamation to secure additional control over their water and over revenue generated from tribal water. In the meantime, the Tribes hope to build the ability of the community to use and benefit from their water resource. As the first phase of the Wind River Water Plan is implemented, the community will begin to realize tangible benefits.



ATTACHMENT A

THREE PHASES OF THE
WIND RIVER WATER PLAN



PHASE I WATER DEVELOPMENT -- WIND RIVER WATER PLAN

Water Development Component	Purpose of Development	Location	Water Sources	Description of Activities or Facilities Developed	Estimated Cost Range (multiple years)	What is Needed to Implement Activity
Protect Cultural areas and uses of water-related resources	To stabilize stream courses and other areas where tribal people gather or use resources in cultural practices, ceremonies, and for subsistence uses	General: all stream courses with riparian vegetation, marshes and wetlands; upland regions; food and medicinal sources	Multiple upland and lowland; include the Little Wind, Wind, Crow Creek; Trout Creek, Meadow and Dry Creeks;	New vegetation; stream bank stabilization; water catchment facilities; soil erosion control measures; native vegetation planting areas; re-seeding; tree planting	\$50,000 - \$800,000	Stable funding source Stable workforce Training Community participation
Develop community parks, gardens and recreational facilities	Create an expanded living environment around the reservation, individual homes, and housing projects; to provide tribal youth and families areas to picnic, play sports and gather throughout the reservation	Little Wind River, several locations; upper, mid and lower Wind River; Dinwoody Creek; upper Little Wind watershed	North & South Fork Little Wind River; Trout Creeks;	Riverside picnic & recreation areas;; community gardens, wind breaks and green belts; housing area landscaping; water systems including irrigation and small storage; pumps, distribution facilities	\$100,000 - \$450,000	Stable funding source Stable workforce Training Community participation
Secure water supplies for rangelands and wildlife; plant wind breaks and green strips	Distribute water across rangelands to ease soil erosion and vegetation competition	Reservation wide	Rainfall; ephemeral drainages; multiple mountain front streams; surface diversions, LWR, WR, North Fork WR, others	Small water catchments, storage tanks, pipes; some fencing around riparian areas; soil erosion control facilities; windbreaks around housing units and on rangelands	\$100,000 - \$400,000	Stable funding source Stable workforce Training Community participation
Develop bottled water for reservation consumption	Develop capability to bottle 1 million gallons of water per year, and ability to expand to larger production	Multiple near Ft. Washakie, Red Rocks area.	North Fork, Popo Agie; Dinwoody; Crow Creek; North Fork Little Wind River	Diversions and distribution; treatment facilities if needed; bottled water facilities; distribution point(s); roads as needed;	\$2 million - \$5 million	Stable funding source Stable workforce Training Community participation
Preparation for Phase II water development Actions	Investment in long-term professional development program for the tribal community; continued development of tribal infrastructure	-----	-----	Tribal water control regulations; training programs in multiple aspects of resource development and management; policy development; staff development & additional hiring	\$1 million	Stable funding source Stable workforce Training Community participation

Water Development Component	Purpose of Development	Location	Water Sources	Description of Activities or Facilities Developed	Estimated Cost Range	What is Needed to Implement Activity
Develop and secure water supplies for housing and tribal infrastructure development	To increase the water supply to meet expanding housing and tribal infrastructure needs	General: all stream sources and existing ground water wells, new ground water development reservation-wide	Multiple water sources matched to infrastructure needs	Diversion and distribution facilities, water treatment and storage facilities; new water wells and distribution systems; improved & enlarged existing systems	\$15-\$25 million	Stable funding source Stable workforce Training Community participation
Improve on-farm and system-wide irrigation water delivery systems in combination with small scale storage	To restore and strengthen the existing irrigation system for tribal use, improving delivery of tribal water and improving on-farm yields and economy	Little Wind River, several locations; upper, mid and lower Wind River; Dinwoody Creek; upper Little Wind watershed	Multiple sources including existing streams and canal delivery systems, both private and BIA; shallow wells; additional streamflow diversions; small storage;	Field leveling, small stock pond and irrigation storage, drainage, irrigation pipes, erosion control structures, repair of existing facilities, new facilities	\$1-\$3 million	Stable funding source Stable workforce Training Community participation
Small-Scale Hydropower Development	To utilize existing water resources to generate power for tribal businesses, homes and recreational facilities	Multiple canals on WRIR; streams	North Fork Popo Agie, Dinwoody Canal; LWR canals; Washakie reservoir; numerous others	Small diversions of water from existing canals, storage facilities, and stream systems into pipe, penstock, power generator, and return flow systems;	\$1-4 million	Stable funding source Stable workforce Training Community participation
Preparation for & Actions on Phase III Water Development	To continue to develop tribal capabilities to manage water development and income streams; engineering, construction and management expertise for reservoir, housing and infrastructure	-----	-----	-----	\$1 million	Stable funding source Stable workforce Training Community participation

Phase III Water Development—Building the Future Wind River Water Plan

Water Development Component	Purpose of Development	Location	Water Sources	Description of Activities	What is Needed to Implement Activity
Construction of 4 off-stream storage reservoirs with hydropower generation capability	To store water for recreation, small scale irrigation, fisheries and hydropower generation; to store tribal unused future water for lease	2 locations Upper Wind River; 1 location near Riverton	Wind River, Little Wind River	Diversion and storage facilities, hydropower storage and distribution facilities; down recreational facilities; down stream flow enhancement	Stable funding source Stable workforce Training Community participation
Retrofit existing facilities with hydropower generation capabilities	To produce power for tribal consumption using existing facilities	Bull Lake Dam; Pilot Butte reservoir (needs renovation); Diversion Dam; Washakie Reservoir	Bull Lake Creek; Wind River; Little Wind River	In-dam retrofit systems, diversions and turbines, power storage facilities, links to existing or new distribution lines	Stable funding source Stable workforce Training Community participation
Develop a two-stage hydropower facility that can supply all reservation needs and generate surplus electricity for sale	To generate all reservation electricity needs in an environmentally benign manner	North Fork, Little Wind River; Dinwoody Creek; South Fork, Little Wind River	North and South Forks LWR Dinwoody Creeks;	Diversion of water through pipes and turbines for electricity generation, return of water to stream; distribution grid; power storage and operation systems	Stable funding source Stable workforce Training Community participation
Complete rehabilitation of irrigation project with integrated storage	To reorganize and rehabilitate the BIA irrigation system to provide maximum use of the system for the benefit of the Tribes and water users on the system To develop a major agricultural, recreation, industrial or other development near Riverton	Entire system	Multiple	New or rehabilitated or rerouted canals, small storage, re-regulating reservoirs to capture return flow for re-use	Stable funding source Stable workforce Training Community participation
Development of “Riverton East”		Near Riverton	Wind and Little Wind Rivers	Major irrigation project, recreational development, industrial development, or combination of uses	Stable funding source Stable workforce Training Community participation

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