

**TESTIMONY FOR THE
Senate Committee on Indian Affairs
April 20, 2011
Central Wyoming College
Robert A. Peck Auditorium
submitted by
Wesley L. Martel – Co-Chairman
Eastern Shoshone Business Council**

Honorable Sen. Barasso, distinguished guests and Committee Staff and Counsel, it gives me pleasure to come before you today to offer comments relating to the Wind River Irrigation Project (“Project”) and other management problems. Let me begin by noting that for all things living on this Great Earth water is our lifeblood. As, Tribes we strive to maintain our culture, tradition and spiritual beliefs, and water is that special resource that sustains us and allows us to take our place destined to provide a positive future and hope and energy to our people.

Governmental beginnings began with the signing of the Treaty of 1863, whereby the Shoshone Tribe was designated over 44,000,000 acres of land. This Treaty was followed by subsequent Treaty’s which narrowed our land base to the present day acreage of approximately 2.2 million acres. The problems started with Congress’ passage of the Reclamation Act of 1902 whereby well over a million acres of this Reservation were opened up to homesteading. This brought a morass of issues, challenges and affronts to tribal sovereignty which we now confront on almost a daily basis!

From 1905 to the present Bureau of Reclamation’s attention and resources were devoted mainly to the homesteaders. Since 1905, over \$77,000,000 has been put into irrigation works and structures north of the Big Wind River while a paltry \$6,000,000 has been put into the BIA Project! Indian moneys that were earmarked for Indian Irrigation Improvements were diverted to the Reclamation Fund thus the huge disparity. In addition, Bureau of Reclamation exploited tribal resources without proper consent and approval and the Tribes just recently were awarded \$33,000,000 for partial compensation of this misdeed. Another affront to the Federal/Tribal trust relationship is the Bureau of Reclamation’s stance that Section 8 of the 1905 Act requires them

to administer tribal trust resources according to State Law! Virtually all Tribes in this country would oppose this infringement upon a valuable trust resource.

Based on the history surrounding the BIA and Reclamation Projects, the Joint Business Council and the Wind River Water Resources Control Board have four major consequences of federal and state management in the Wind River Basin that will require extensive research and investigation. These are:

1. Federal appropriation (condemnation) of Tribal reserved water rights to serve non-Indian irrigation and hydropower interests.
2. Use of Tribal funds to construct major federal and non-federal irrigation, storage and hydropower facilities in the Wind River basin (1906-1942).
3. Diversion of Tribal revenues into the US Treasury for use in repaying costs of the irrigation project, O&M on existing canals and surveying costs of the Riverton Reclamation Project from 1906-1942.
4. Diversion of Tribal water by the State of Wyoming based on use of Wyoming water law to declare surplus conditions, depriving the Tribes of the use of their water resources from 1989 until the present.

The federal and state use of tribal water and tribally-funded irrigation and power facilities has deprived the Tribes of the exercise of their rights to manage and use the water for their economic development and community well-being. In addition, these actions and the diversion of tribal funds have resulted in environmental damage, economic damage and lost opportunities for Tribal economic development. Research indicates that the users have overpaid O&M fees for the Wind River irrigation project. Initial legislation authorizing the Riverton Project (1905, formerly the 'Wind River Irrigation Project', no relation to the Tribal system) specified that the Tribes were only to pay \$150,000 – in a one-time payment - for O&M fees for the Tribal system. This could mean the Tribes have overpaid - the O&M fees for the Wind River Irrigation Project by millions of dollars.

My initial stint as an elected official of the Shoshone Tribe began in 1979, not too long after the State of Wyoming filed the Big Horn Adjudication in 1977. These water wars made us realize the extreme importance of exercising tribal sovereignty wisely to protect our people and their

future. Essentially, there are two major activities that must begin immediately in order to fully pursue the diversion of Tribal water and funds:

1. Research and strategy development on headwaters issues, including economic, environmental, legal, social, cultural and political impacts of the diversion of Tribal water.
2. Continued strengthening and reorganization of the Tribal water management function, including the Office of the Tribal Water Engineer and Wind River Water Resources Control Board.
3. Inclusion of the Federal government in these endeavors.

We have been building our technical and administrative capabilities to make stronger our tribal government and strengthen families and communities to bring progress and positive economic impact to our Reservation and our region. As you well know, sir, Wind River is a smaller version of Wyoming. Energy development, agriculture and livestock, recreation and tourism, and governmental sector jobs are the bulk of our economy. The further development of non-renewable resources and renewables - wind, solar, geothermal, biomass and hydropower - allows us a major role to play in the energy security of this nation as well as reducing our dependence on foreign energy sources. The most important resource in future growth and advancement is water!

Our purpose today is to bring respect and dignity to the trust obligation. When our forefathers signed the treaties asserting our homelands it was not a grant of rights to us, but a grant of rights from us! The permanent homelands established by treaty were meant to uphold the intent of allowing tribal life to evolve over time and embark on a path assuring livelihood and ability to advance in civilization.

The General Accounting Office's Reports of July 3, 1996 and February 2006 address various issues surrounding the allocation and repayment of the costs of constructing federal water projects, including the allocation of these costs among the projects' various purposes and irrigator's repayment of their share of costs. We have testified over the decades at many sessions

of the Senate Select Committee on Indian Affairs and now the Senate Committee on Indian Affairs, all to no avail. It is my solemn wish that this distinguished Committee, with leadership and foresight, begin a deliberative process to, not only ensure that the sovereign Indian Nations of this country have reliable sources of clean water, but to also acknowledge the trust obligations that exist in relation to the most critical of resources – water!

Attachments: -Letter from Bureau of Indian Affairs acknowledging Wind River Water Code of the Shoshone and Arapaho Tribes
-Wind River Water Code
-Water Management Plan of the Eastern Shoshone & Northern Arapaho Tribes

BIA Letter Acknowledging Water Code



United States Department of the Interior

BUREAU OF INDIAN AFFAIRS

Rocky Mountain Regional Office
316 North 26th Street
Billings, Montana 59101



MAR 28 2007

IN REPLY REFER TO:
Water Resources
Code 461

Richard B. Brannan, Chairman
Northern Arapaho Business Council
P.O. Box 396
Fort Washakie, Wyoming 82514

Ivan D. Posey, Chairman
Eastern Shoshone Business Council
P.O. Box 217
Fort Washakie, Wyoming 82514

Dear Chairmen Brannan and Posey:

The Bureau of Indian Affairs fully acknowledges the Wind River Water Code and the Shoshone and Arapaho Tribes' right to enact and maintain it for administration of water on the Wind River Indian Reservation.

In all matters related to administration of water within the exterior boundaries of the reservation, the Bureau of Indian Affairs will recognize the Wind River Water Code as enacted by the Shoshone and Arapaho Tribes by Joint Tribal Resolution No. 6681 on March 28, 1991.

The Bureau of Indian Affairs requests that any modifications or amendments that have occurred since enactment of the Wind River Water Code, and any amendments or modifications that may occur in the future be provided to the Agency Superintendent by the Shoshone and Arapaho Tribes.

If you have any questions regarding the content of this letter, contact this office at (406) 247-7943.

Sincerely,

Regional Director

cc: Superintendent, Wind River Agency

Water Code

CHAPTER 8

WIND RIVER WATER CODE

Section 11-8-1 Part 1 - Findings and General Provisions

Section 11-8-1(A) Findings

(1) The Tribes find that all Reservation natural resources are interconnected, and that the water resource has cultural, spiritual and economic values that guide the appropriate use, management and protection of that resource, and that condition all water and land use activities in the watersheds and drainage basins of the Reservation.

(2) The Tribes find that surface and groundwater are directly interconnected by the hydrologic cycle of the region of and the Reservation, and therefore water is a unitary resource, whether occurring as groundwater, springs, mineral water, soil moisture, precipitation, percolating water, recharge, drainage waters, surface water, or otherwise.

(3) The Tribes recognize that clean water is vital to the health and welfare of Reservation residents and to the vitality of the Reservation economy. Because resource uses may contribute to the degradation of water supply and quality, it is necessary to protect the environmental quality and integrity of all surface and groundwater.

(4) The Tribes find that all waters reserved by treaty are held by them in trust for the benefit of the Reservation public and for certain inalienable public uses and that, as an essential attribute of sovereignty, the power to determine the proper uses of said waters and the management thereof is the Tribes' alone.

Section 11-8-1(B) Definitions

For the purposes of this Code:

(1) "Board" shall mean the Water Resources Control Board of the Wind River Reservation.

(2) "JBC" shall mean the Joint Business Council of the Shoshone and Northern Arapaho Tribes of the Wind River Reservation.

(3) "Person" shall mean any individual or group or combination thereof acting as a unit, however associated; any organization of any kind, whether organized for profit or not, and regardless of the manner of form in which it does business, whether as a sole proprietorship, receiver, partnership, joint venture, trust, estate, firm, unincorporated association, corporation, or government, including but not limited to, any part, subdivision, or agency of any of the foregoing; and any combination of individuals or organizations in whatever form, and the plural as well as the singular number.

(4) "Reservation lands" shall mean all lands within the Wind River Reservation, which Reservation is defined to include:

a) All lands within the limits or exterior bounds of the reservation as delimited in the Treaty of July 3, 1868, 15 Stat. 673, less the portions ceded under the Acts of December 15, 1874, 18 Stat. 291, and June 7, 1897, 30 Stat. 93, notwithstanding the issuance of any patent, and including rights-of-way running through the Reservation; and

b) All lands which may hereafter be added to or made a part of the Reservation.

(5) "Tribal Court" shall mean the Shoshone and Northern Arapaho Tribal Court of the Wind River Reservation.

(6) "Tribes" shall mean the Shoshone and Northern Arapaho Tribes of the Wind River Reservation.

(7) "Tribal water rights" shall mean those rights to divert or affect Reservation water which are granted pursuant to the provisions of this Code.

(8) "Reservation water" shall mean any and all waters underlying, flowing through or otherwise occurring or contained within the Reservation.

(9) "General Adjudication" shall mean the proceeding entitled In re: The General Adjudication of All Rights to Use Water in the Big Horn River System, 753 P. 2d 76 (Wyo. 1988), affirmed 492 U.S. 406 (1989).

(10) "1868 tribal water" shall mean that water reserved by treaty and adjudicated in the General Adjudication and bearing a priority date of 1868.

(11) "1868 allottee derivative water" shall mean that water adjudicated to the use of a successor in interest to an Indian allottee, the right to appropriate and the amount thereof which was determined by the General Adjudication and bearing a priority date of 1868, popularly referred to as "Walton rights."

(12) "General Councils" shall mean the General Council of the Shoshone Tribe and the General Council of the Northern Arapaho Tribe of the Wind River Reservation.

(13) "Mean annual flow" shall mean that flow which is calculated using historical average annual flow data for the period 1940-1989.

(14) "Treaty-based water" shall mean 1868 tribal water and 1868 allottee derivative water.

(15) "State-held water right" shall mean a water right held pursuant to Wyoming state water law.

Section 11-8-1(C) Purposes

The purposes of the Wind River Water Code are:

(1) To provide an orderly system for the use and management of all 1868 tribal water and 1868 allottee derivative water.

(2) To provide effective guidelines and a mechanism for the administration and protection of tribal and allottee reserved rights, and State-held water rights to Reservation water.

(3) To ensure that Reservation residents have sufficient water for cultural, domestic, agricultural, stock, instream, and other uses, and that the Tribes have sufficient water for Reservation economic development.

(4) To conserve, manage and protect reservation water for future uses by generations to come.

(5) To protect Reservation water from over-appropriation, degradation, contamination, exploitation, and any acts injurious to the quantity, quality or integrity of the water.

(6) Within the limits of the Tribes' public trust obligations, to encourage optimal development and multiple use of the water resource, to promote stability of investment in water use and delivery systems, and to permit all reasonable uses.

(7) To maintain minimum perennial stream flows and to promote optimal recharge of aquifers to supply beneficial uses.

(8) To protect the health and welfare of Reservation residents, the political integrity of the Tribes, and the economic security of the Reservation through the effective management and protection of the Reservation's water supply and water quality.

Section 11-8-1(D) Scope

This Code applies to all persons desiring to use or using or undertaking activities on Reservation lands which affect Reservation water.

Section 11-8-1(E) Beneficial Uses of Water

(1) The uses to which water on the Reservation may beneficially be applied include but are not limited to:

- a) Domestic use;
- b) Municipal use;
- c) Agricultural use;
- d) Stock water use;
- e) Industrial use;
- f) Instream flow use, including instream flow for fisheries, wildlife, and pollution control, aesthetic and cultural purposes;
- g) Mineral resource development;
- h) Water storage, marketing and transfer;
- i) Groundwater recharge and supply enhancement;
- j) Recreational use;
- k) Cultural use;

- l) Religious use;
- m) Hydropower generation;
- n) Pollution control; and
- o) Resource development.

No presumption of preference of use shall be given to the order in which beneficial uses are listed above.

Section 11-8-1(F) Policies

The following general policies shall guide the use and management of water on the Reservation:

- (1) Existing uses, established duties of water, and relative priorities concerning the use of Reservation water are to be protected and preserved, subject to the Tribes' public trust obligations to protect tribal and allottee derivative water.
- (2) Surface water use will be adjusted for the varying water conditions each year, and overall water use allocation decisions will be guided by the declaration of drought, normal, and surplus hydrologic conditions that require different water management strategies. Water development decisions will recognize hydrologic variability and will consider alternative sources of supply, should dry conditions prevail.
- (3) Groundwater use will be guided by the overall condition of each aquifer system, the expected long-term yields, and the cumulative impacts of existing and proposed uses on ground and surface water supply and quality.
- (4) The planning and development of water and land resources will safeguard against surface and groundwater degradation.
- (5) For long-term or carry-over storage, multipurpose impoundment structures are preferred over single purpose structures.
- (6) Land use decisions involving or significantly affecting a stream bank, bed or channel, or water storage facility shall seek to maintain and enhance the fishery and wildlife resource.
- (7) Drainage strategies will be developed with due consideration for the conjunctive or integrated use of surface and groundwater.
- (8) All land, water or other resource strategies, decisions, or regulations shall consider the potential effect on all Reservation natural resources.
- (9) Allocation decisions are subject to periodic consideration and review for their net effect on trust resources and values and may require adjustment of existing uses to protect trust purposes where appropriate.

Section 11-8-2 Part 2 - Establishment of the Water Resources Control Board, and the Office of the Tribal Water Engineer

Section 11-8-2 (A) Establishment of the Water Resources Control Board

(1) There is hereby established the Wind River Water Resources Control Board ("Board") as the primary enforcement and management agency responsible for controlling water resources on the Reservation. The Shoshone and Arapaho Tribes each shall appoint six (6) members of the Board. Each Tribe shall designate three (3) members of the initial Board to serve for a term of two (2) years and three (3) members of the initial Board to serve for a term of one (1) year. Each Board member appointed, or reappointed after serving the initial term, shall serve for a term of two (2) years and until his successor is duly appointed and qualified. The Tribe who appointed the Board member whose term has or is expiring also shall appoint such member's successor. No Board member shall vote on a decision which could have a material financial effect personally or directly upon such member or his business. A member shall disclose to the Board any such financial effect at the time of such vote and may participate in the discussion of the matter without voting upon it. Eight (8) members of the Board shall constitute a quorum, provided at least four (4) members from each Tribe are present.

(2) The duties and authority of the Board are to:

- a) Oversee the development of water resource management plans and supervise the execution and enforcement of Code provisions and regulations thereunder;
- b) Approve or disapprove of water use permits in accordance with the principles and procedures set forth in this Code;
- c) Conduct hearings regarding water permit applications and hear disputes regarding the actions of the Tribal Water Engineer and/or water development/ management staff in accordance with the procedures adopted pursuant to Board regulations;
- d) Compel production of documents or other things and compel attendance of witnesses before the Board;
- e) Adopt such rules, regulations, permit forms, and additional materials, and propose amendments to the Code, as necessary to interpret and execute its authority and to implement the objectives and purposes of this Code;
- f) Establish and maintain a technical staff qualified by training and experience to enforce and administer this Code;
- g) Research and define, based on the best available data, the most effective ways of managing, conserving, and protecting Reservation water;
- h) Hire and supervise the Tribal Water Engineer;
- i) Advise the General Councils of the Tribes on all aspects of the Code and Reservation water; and
- j) Organize and operate its offices in order to discharge its duties and responsibilities effectively.

Section 11-8-2 (B) Establishment of the Office of the Tribal Water Engineer

(1) There is hereby created the office and the position of Tribal Water Engineer ("TWE"). The TWE is the executive arm of the Board, is responsible directly to the Board, and has the authority to administer the water laws of the Tribes according to this Code, its regulations, and the general instructions of the Board. The Board may delegate any of its duties and authority to the TWE except the duty and authority:

- a) To hire and supervise the TWE;
- b) To hear disputes regarding the actions of the TWE and/or water development/management staff in accordance with the procedures set forth in this Code;
- c) To approve or disapprove of water use permits in accordance with the principles and procedures set forth in this Code; and
- d) To adopt regulations.

(2) The TWE shall be a qualified hydrologist and water resource manager, with a minimum educational level of a Master's degree in a water-related field, or with a Bachelor's degree and not less than four (4) years' experience or water resource management, water rights administration, or water development or engineering. The TWE will be hired by the JBC.

(3) Regulation of Reservation water being the lifeblood of the community and critical to the conservation and enhancement of its resources, the TWE shall evenhandedly guard all the interests involved in carrying out the duties and authorities of his office.

(4) The TWE shall have the following duties and authorities:

a) Administrative and Enforcement Functions

- i) to administer Reservation water rights, and ensure maximum compliance with the Code and with the conditions of all permits, determinations, orders, regulations, plans, policies, guidelines, and other actions taken by the Board;
- ii) to enter upon Reservation lands to inspect methods of diversion, withdrawal, and other activities affecting water quality and quantity, to install measuring devices for the purpose of enforcing and administering this Code, and to monitor water use, water quality, and diversions;
- iii) in an emergency, to remove, render inoperative, shut down, close, seal, cap, modify, or otherwise control methods of diversion and withdrawal, obstructions to the flow of water, and activities adversely affecting water quality and quantity, subject to expedited appeal to the Board by the affected person, as provided in Part IV of this Code; and
- iv) to initiate, by citation and other means, enforcement proceedings before the Board, or in Tribal Court or other court of competent jurisdiction for violations of this Code, including injunctive relief.

b) Advisory Functions

- i) to hire, supervise, and fire office and technical staff, provided that all hiring and firing decisions are subject to the approval of the JBC;
- ii) to advise the Tribes on all water resource related development planning issues, provide the Board with a semiannual report on water quality and quantity and the status of water use on the Reservation, and provide suggestions, alternatives, and recommendations for water quality management;
- iii) to recommend to the Board changes to this Code and to its regulations;
- iv) to develop and submit an office budget, and office policies and procedures to the Board for approval;
- v) to recommend certain land areas and waters on the Reservation to the Board as suitable for dedication to certain beneficial uses; and
- vi) to recommend designation of surface and groundwater regions on the Reservation as "critical management areas" and to propose specialized provisions for management within those regions.

c) Fact-Finding and Information Functions

- i) to research and determine water supply and quality characteristics and development possibilities;
- ii) to collect, maintain, and analyze, on a continuing basis, information regarding Reservation- and basin-wide water resources and quality, including data on water, land, air quality, rangeland, and other factors actually or potentially affecting Reservation water or tribal water rights;
- iii) to organize and develop a computerized database of Reservation water resource information, organized in a form useful to tribal decision makers and Reservation residents, and provide periodic reports describing the overall structure, use, and application of the database;
- iv) to perform regular research regarding the overall carrying capacity of the Reservation's water system, with a view in particular to discovering and reporting the levels above or below which specific water use impairs or injures overall water availability and use;
- v) to conduct public educational programs and develop educational material regarding Reservation water rights and administration, irrigation management, water quality, environmental issues, water conservation, and any other pertinent issues as the latter may be determined by the Board;
- vi) to declare "surplus" or "drought" water supply conditions, such determination to be made on the basis of hydrologic analysis and other substantial evidence and in consideration of existing demands for water; and to prepare, at the Board's request, alternative scenarios for water supply given different climatic

trends and conditions for the use of the Board in setting priorities and preferred uses during drought;

vii) to determine the extent of potential effects on existing water users, given hydrologic conditions, from proposed uses of Reservation water; and

viii) to assist all applicants for permits or licenses in assembling and analyzing all hydrologic and environmental data required to be submitted with the application and otherwise to assist in the preparation of the application.

d) Research and Development Functions

i) to initiate and undertake research and development activities directed toward identifying financial support for water management and development;

ii) to identify new or analyze existing uses and means of developing, managing, conserving, and otherwise protecting tribal water resources;

iii) to identify promising research areas regarding tribal water resources and to solicit research proposals by government, university, or private sources;

iv) to develop the internal tribal technical and managerial capabilities to promote the direct involvement of tribal staff in the development and construction of water resource supply, distribution, and management facilities and devices.

v) to conduct hydrologic investigations to determine water needs; and

vi) to study the feasibility of and make recommendations concerning a Reservation-based water quality laboratory.

Section 11-8-3 Part 3 - Permit System for Water Use on the Wind River Reservation

Section 11-8-3 (A) Permit or License Required

(1) No person shall divert Treaty-based water or undertake an activity affecting or involving such water without first obtaining a permit or license under this Part. Except when such diversion or activity is preemptively allowed by federal law, a permit or license is required for any of the following activities:

a) Diversion of water from any stream course, spring or well;

b) Drilling of any new well or modification of any existing well, including domestic, irrigation, industrial, municipal, or oil and gas development-related wells;

c) Discharging, injecting, or depositing any waste, wastewater, or other contaminant into Reservation water;

d) Changing the point of water diversion, whether of surface or groundwater;

e) Changing the use of waters, or the place of use or the method of diversion or application of waters;

- f) Transferring Reservation water outside the watershed of origin;
- g) Altering any stream course or stream bank for any purpose, including but not limited to road construction and repair;
- h) Developing groundwater recharge projects;
- i) Generating hydropower;
- j) Storing or impounding water; and
- k) Dedicating water to instream flow.

(2) The issuance of a permit or license allows the activity therein described and constitutes an undertaking by the permittee or licensee to comply with the conditions therein stated and all tribal laws and regulations of general application covering such activity.

(3) For purposes of this Code, any person possessing appropriative rights under Wyoming law may receive a General Water Permit. Proof of appropriative rights under Wyoming law shall be submitted to the TWE in accordance with regulations of the Board.

(4) Any person proposing to undertake an activity which may affect Reservation water may apply to the TWE for a Statement of No Permit Required, and the TWE may issue such a Statement if he finds the activity will have a minimal impact on Reservation water or that the activity or diversion is preemptively allowed by federal law. The Statement shall be limited to the facts represented by the applicant. No fee shall be required for such application.

(5) All permits and licenses issued under this Code are provisional and shall not be construed to create an entitlement in the user beyond the provisional period nor to allow reliance thereon by any other person.

Section 11-8-3 (B) Permit System

The Permit System recognizes six (6) categories of permits. Any two (2) or more categories may be combined into a single permit, as appropriate. Any permit may be made subject to such conditions and stipulations as the Board may deem necessary in the public interest.

Categories of Permits

(1) 1868 Water Permit. Grants or confirms a right to use a share of 1868 tribal water or 1868 allottee derivative water to a user, and guides the present and future use and appropriation of the 1868 water right. The permit applies to surface water and groundwater. There shall be three (3) types of 1868 Water Permit, as follows:

- a) Type I. 1868 tribal water permit, granted to a tribal member, Indian allottee, or tribal entity, enterprise or political subdivision;
- b) Type II. 1868 allottee derivative water permit, granted to a successor in interest of an allottee; and

c) Type III. 1868 tribal water lease permit, granted to a person to use 1868 tribal water, upon payment to the Tribes at rates to be established by the JBC, in addition to any applicable O&M charges.

(2) Permit for Changing Place of Method of Use, or Method of Application, or Point of Diversion. Grants the right to change the location or purpose of water use, method of application, or method or point of diversion.

(3) Instream Flow Permit. Grants the right to the Tribes to maintain specified instream flows and/or lake levels in reaches of or for entire streams or reservoirs on the Reservation.

(4) Watershed Transfer Permit. Grants the right to transfer treaty-based water outside the watershed of origin.

(5) Storage Permit. Grants the right to impound surface or groundwater for a beneficial use.

(6) General Water Permit. Grants or recognizes rights of use, appropriation, or development of water not otherwise covered by another permit.

Section 11-8-3 (C) License System

The License System recognizes four (4) categories of licenses. Any two (2) or more categories may be combined into single license, as appropriate. Any license may be made subject to such conditions and stipulations as the Board may deem necessary in the public interest.

Categories of Licenses

(1) Driller's License. Grants a license to drill or cause to be drilled a well within the Reservation to persons meeting tribal requirements for technical capability and bonding. The issuance of a Driller's License is contingent upon the applicant's providing a satisfactory description of his technical competence and financial stability, including a description of relevant training and experience, procedures and equipment, current financial condition, and disclosure of prior or existing claims; upon the posting of a bond in favor of the Tribes in an amount, established pursuant to Board regulations, conditioned upon the faithful performance and completion of all conditions and stipulations of the license; and upon the applicant's written undertaking to comply with tribal laws and regulations regarding record-keeping, logging, well development, supervision and inspection by the TWE.

(2) Stream Zone Alteration License. Grants the right to alter the streambed or banks. A Stream Zone Alteration License is required for all persons engaging in activity that affects the bed or banks of Reservation streams, including but not limited to construction of temporary diversion structures, road and culvert construction and repair, logging operations, grazing activities on the stream bank, and other activities affecting the stability of the stream channel.

(3) Discharge License. Grants the right to discharge waste, wastewater, or other contaminant into the surface or groundwater of the Reservation, through the point discharge of any substance, through the non-point discharge through landfills, septic tanks, or disposal pits, or

through injection into groundwater.

(4) Well Construction License. Grants the right to construct a new well or modify an existing well, and requires the submission of specific technical data, including construction plans, effects on aquifer level and water quality, well pump test data, and lithologic logs.

Section 11-8-3 (D) Application Procedure

(1) Applications for any license or permit under this Part shall be made on forms developed by the TWE, including particular information of facts that in the judgment of the TWE are required for the proper processing of such applications.

(2) An application fee for permits and licenses shall be established in the regulations promulgated hereunder and shall be paid in advance to and collected by the Office of the TWE. The fee may be waived by the Board in the case of financial hardship. Such fees shall be used in part to defray the cost of reviewing the application and conducting a hearing.

(3) The TWE shall provide public notice of the requirements of this Part and shall allow continued historic water uses pending processing of the applications.

(4) For purposes of this Code, any existing water use which was proven in the General Adjudication and which formed the basis for a quantification of reserved water under the General Adjudication shall presumptively entitle the applicant to a permit under this Part.

(5) The TWE shall assist each applicant in the collection of data and the preparation of the application to the extent the applicant, through lack of resources or technical knowledge, requires such assistance.

(6) Within sixty (60) days of receipt of the application, the TWE shall review each permit application; perform investigations; prepare a report on each application; and recommend approval or denial to the Board, which shall have the authority to grant or deny the permit. Every decision of the Board must include factual findings which justify the decision, and must be consistent with tribal water and land use laws, and Wyoming state water law when applicable.

(7) The Board shall review all applications to determine whether the proposed use or activity adversely affects tribal resources or other tribal interests, whether the proposed use or activity is technically feasible, and whether the proposed use or activity is consistent with the policies, purposes, and procedures described by this Code, and Wyoming state water law when applicable.

(8) All applicants shall on request receive a hearing before the Board to provide an opportunity for a full factual presentation and for public comment and testimony on the proposed use or activity.

a) Notice of such hearing will be published at the Board's expense in a newspaper of general circulation within the Reservation at least one (1) week prior to the date of hearing. Notice shall also be posted in the tribal and BIA offices and such other areas as may be deemed appropriate by the TWE;

b) After the hearing, the Board shall promptly render a written decision on the application:

- i) approving the permit without conditions;
 - ii) approving the permit with conditions;
 - iii) denying the permit; or
 - iv) tabling action pending receipt of additional data or information; and
- c) All proceedings of the hearing shall be recorded, and, if an appeal is sought, a transcript of the hearing may be requested by the applicant or any other affected party at his sole cost and expense.

(9) If the Board approves the application, the TWE shall issue the appropriate permit or license in conformity with the Board's decision.

Section 11-8-3 (E) Relinquishment of Tribal Water Rights: Sole Method of Acquisition

(1) Voluntary Relinquishment of Claims or Rights. Any holder or claimant of any right in or to the waters of the Reservation may voluntarily relinquish all or a portion of such right to the Tribes by any affirmative act indicating an intent to relinquish.

(2) No Loss by Adverse Possession, Prescription, Estoppel, or Acquiescence; Nontransferability

- a) No right to use or otherwise affect the quantity, level, flow, pressure, quality, or temperature of water may be acquired by adverse possession, prescription, estoppel, or acquiescence; and
- b) No right granted under this Code may be transferred, exchanged, sold, or otherwise conveyed except as provided in this Code.

Section 11-8-3 (F) Prohibited Acts; Violation of Permit Conditions or Code

(1) Prohibited Acts

- a) No person shall:
 - i) forcibly, or by bribery, attempted bribery, threat, or other corrupt practice, obstruct or impede the due administration of this Code;
 - ii) commit fraud, or knowingly assist another in the commission of fraud, with the intent to evade or defeat the administration of this Code or costs imposed or assessed;
 - iii) falsely verify by written declaration any permit, form, or other document, or to intentionally withhold data required to be submitted by law;
 - iv) violate the conditions or stipulations of his permit or license including taking more water than is allowed by permit; or
 - v) wilfully take, alter or damage treaty-based water quality or water rights;

b) Any Indian who commits any of the above prohibited acts, upon conviction thereof, shall be sentenced to a term of imprisonment not to exceed six (6) months, or be ordered to pay a fine not to exceed \$1,000.00, or both;

c) Any person who commits any of the above-prohibited acts, or whose employees or agents in the course of their employment or agency commit any of the above-prohibited acts, shall be subject to civil proceedings before the Board on citation by the TWE. On a finding of violation, the Board may impose any of the following sanctions, or any combination thereof:

- i) money damages;
- ii) restitution;
- iii) cancellation of the holder's lease, if the lands to which the permit applies or on which the violation occurred are tribal lands;
- iv) injunctive relief;
- v) affirmative remedial action;
- vi) additional conditions or limitations upon the holder's permit or license, including limitation of the amount of water permitted to be diverted;
- vii) suspension of the permit or license for a certain term;
- viii) exclusion from the territory of the Reservation, if the violator is subject to exclusion under federal law;
- ix) forfeiture of any permit or license;
- x) temporary or permanent disqualification from eligibility for any permit or license; and
- xi) costs.

(2) Appeal from a decision of the Board may be had by the affected person to Tribal Court or Wyoming courts, in accordance with the provisions of Part 6. The interest of the Tribes shall be represented by the TWE or legal counsel of the Tribes.

(3) In the case of criminal prosecutions of any Indian, proceedings for penalties under this Section 11-8-3 (F) shall be brought in the name of the Shoshone and Northern Arapaho Tribes in the Tribal Court, by the tribal prosecutor.

Section 11-8-4 Part 4 - Proceedings on Exercise of TWE's Emergency Enforcement Powers

When in the exercise of his authority under Section 11-8-2 (B)(4)(a)(iii), the TWE removes, renders inoperative, shuts down, closes, seals, caps or otherwise controls any method of diversion or withdrawal, any obstruction to the flow of water, or any activities adversely affecting the quality or quantity of treaty-based or tribally permitted water, the affected person

shall have the following appeal rights:

Section 11-8-4 (A)

Upon petition, filed with the Board not later than fourteen (14) days from the date of the TWE's action, the Board, within three (3) days of filing such petition, will conduct a hearing to receive evidence from the person affected adversely by the TWE's action. The TWE shall provide to the Board on its request certified copies of all documents, things or other information which formed the basis for his action. The Board may modify or reverse such action of the TWE only where such action is not supported by hydrologic fact, tribal policy, or law, or is clearly arbitrary and capricious. The Board shall within forty-eight (48) hours issue a written decision stating the grounds therefor.

Section 11-8-4 (B)

If the Board affirms the TWE's action, the affected person may appeal the decision of the Board to the Tribal Court or Wyoming courts pursuant to Part 6 of this Code.

Section 11-8-5 Part 5 - Water Management Procedures

Section 11-8-5 (A) Water Supply Management

(1) Declaration of Hydrologic Conditions. At the beginning of each irrigation season, the TWE shall prepare a water supply forecast, and shall declare the existence of surplus, normal, and drought conditions, and the approximate extent of time in which each condition will exist each year. As a result of widely varying hydrologic conditions, the TWE may designate one portion of the Reservation in surplus and another in drought condition. These designations shall be based on hydrologic evidence, in consideration of total demand, as follows:

a) Normal Condition. A condition in which the mean annual flow for the watershed is achieved;

b) Surplus Condition. A condition in which the mean annual flow of the watershed is exceeded and there is excess water above demand on an entire stream or a specific reach of stream including the needs of downstream users. For purposes of determining demand under this paragraph, appropriative rights under state permits shall be limited to 2 cfs/70 acres; and

c) Drought Condition. A condition in which the mean annual flow of the watershed is not achieved and insufficient water exists to satisfy the demand on an entire stream or a specified reach of stream, including the needs of downstream users. For purposes of determining demand under this paragraph, appropriative rights under state permits shall be limited to 1 cfs/ 70 acres.

(2) Water Allocation

a) Guidelines

i) water is to be allocated according to priority date and in accordance with historic practices of rotation and scheduling; and

- ii) water delivery systems on the reservation shall divert only that quantity of water to which they are legally entitled except during surplus and drought conditions as specified in this Part;
- b) Surplus. Surplus water that may be used beneficially and efficiently will be allocated by the Board, based on the recommendation of the TWE, ratably among 1868 users first; later priorities are then allocated a proportionate share of the remainder; and
- c) Drought. In drought conditions, water will be allocated on a priority basis, unless special agreements between the Tribes and other entities provide for a temporary change of water allocation formulas:
 - i) 1868 water rights will receive first priority for water, with all later rights honored as supply is available;
 - ii) all rights later than 1868 are then satisfied; and
 - iii) if a drought condition prevails such that not enough water exists to satisfy even 1868 claims, all 1868 water users will have water claims met, but at a lesser diversion rate than that specified in the 1868 Water Permit. The diversion rate shall be set according to the specific demands in relation to overall supply. The Board may set temporary use priorities during periods of drought after notice and hearing.

Section 11-8-5 (B) Public Safety Emergencies

To prevent or to cope with an emergency involving water quality, water supply, drought, flood or potentially dangerous environmental conditions, the Board is authorized to take any steps necessary to secure prompt and effective assistance and corrective action to protect the health and welfare of the Tribes and Reservation natural resources. Such action includes, but is not limited to:

- (1) Seeking assistance from federal and state emergency management agencies for contamination clean-up, flood, or other emergency situations involving public safety;
- (2) Developing the internal tribal capabilities for emergency response teams, including training and equipment purchases;
- (3) Developing an emergency communications network for Reservation lands and people for the purpose of flood or other emergency warnings; and
- (4) Developing additional groundwater or authorizing additional storage facilities for Reservation residents and activities and establishing specific waste-prevention or conservation incentives for Reservation water users.

Section 11-8-6 (A) Review of TWE Decisions

- (1) Request for Hearing. Unless sooner required by other provisions of this Code, within thirty (30) days after issuance of a decision of the TWE, any affected person may file a written request for a hearing before the Board, which shall review and hear the matter.
- (2) Finality of TWE Decision. If no request for a hearing before the Board is made

with the time allowed, the decision of the TWE shall be final and not be subject to appeal to the Board or to any court.

(3) Hearing Before Board. Upon the proper and timely filing of an appeal, the Board will conduct a recorded hearing to receive evidence from the appellant and the TWE. The Board will issue a written final decision. Appeals from final decisions of the Board shall be made only to the Tribal Court pursuant to Section 11-8-6 (B) of this Part.

(4) Finality of Board Decision. If no appeal to the Tribal Court is filed within the time allowed, any decision or ruling of the Board shall be binding and enforceable and is not subject to review by any court.

Section 11-8-6 (B) Court Appeals

(1) Tribal Court Review. The Tribal Court is empowered to hear appeals from any final decisions or ruling of the Board.

(2) Filing of Appeal. Appeals of Board decisions or rulings shall be filed with the Tribal Court no later than thirty (30) days from issuance of such decision or ruling of the Board.

(3) Exhaustion. No person may seek review by the Tribal Court of a decision or ruling of the TWE or Board unless such person has first exhausted his administrative appeal rights provided by this Code.

(4) Standard of Review. Unless otherwise provided by this Code, appeals to the Tribal Court shall be limited to review of the record of the Board's administrative decision or ruling. The Tribal Court may modify, reverse, or remand a decision or ruling of the Board only where such decision or ruling is without substantial basis in fact, is contrary to tribal policy or tribal law, or is clearly arbitrary or capricious.

(5) Administrative Record. Upon receipt by the Board of notice that an appeal has been filed with the Tribal Court, the Board shall certify and transmit to the Clerk of Tribal Court the administrative record, including all documents, things, transcripts and other information, which formed the basis for the decision or ruling being appealed.

(6) Wyoming Court Review. Decisions of the Board on a State-held water right may, in addition to other remedies provided herein, be appealed to the Wyoming courts pursuant to applicable provisions of Title 41 of the Wyoming statutes.

Section 11-8-7 Part 7 - Miscellaneous Provisions

Section 11-8-7 (A)

The Tribes, through the JBC, will appropriate from available funds sufficient resources to administer the provisions of this Code.

Section 11-8-7 (B)

The General Councils of both Tribes and the JBC hereby waive any sovereign immunity from suit which may inure to the benefit of the Board, or the TWE, provided that any suit against the Board and the TWE must be brought in Tribal Court, or in the case of State-held water rights to the Wyoming courts, and further provided that such waiver is limited to the extent necessary

to subject the Board and the TWE to suit for the sole purposes of declaring, adjudicating, and enforcing the parties' rights and duties as more fully described in this Code and any regulations promulgated hereunder. The waiver specifically does not waive the Board's or the TWE's immunity from suits for monetary damages, and specifically does not waive the sovereign immunity of the JBC, of either of the Tribes, or their General Councils.

Section 11-8-7 (C)

Before formal adoption of a proposed regulation, the Board shall publish proposed regulations in order to provide interested parties an opportunity to comment. The notice will invite written comments and give a deadline for their submission of not less than seven (7) days after publication of notice. The Board may, but is not obligated to, hold a public hearing; in that event, it will announce the time and place at which oral testimony will be heard.

- (1) A regulation will become effective immediately after the closing date for comments or on the date otherwise specified therein.
- (2) A copy of the regulations will be filed and made available for public inspection at the TWE office.

Section 11-8-7 (D)

Any pronoun used herein shall refer to any gender and to any number as the context requires or permits.

Section 11-8-7 (E)

All records required or allowed to be maintained by the TWE or the Board shall be public records, provided however, that the TWE shall deny the right of public inspection of the following records, unless otherwise provided by law, on the ground that disclosure would be contrary to the public interest:

- (1) Investigatory files compiled for any law enforcement or prosecution purposes.
- (2) Interagency or interagency memoranda or letters which would not be available by law to a private party in litigation with the agency.
- (3) Medical, psychological, and sociological data on individual persons, exclusive of autopsy reports.
- (4) Records that are protected from disclosure by court order or federal or tribal law.
- (5) Personnel files and letters of reference, except those files shall be available to the duly elected and appointed officials who supervise the work of the person in interest.
- (6) Trade secrets, privileged information and proprietary commercial, financial, geological, or geophysical data furnished by or obtained from any person.

Any persons denied the right to inspect any record described above may apply to the Tribal Court for an order directing the custodian of the record to show cause why he should not permit the inspection. Notwithstanding the fact that the record might otherwise be available to

public inspection, any persons, including the TWE, may apply to the Board for an order restricting disclosure of the particular record, and the Board, after hearing, may issue such an order upon a finding that disclosure would cause substantial injury to the public interest. The Board's decision shall be reviewable de novo by the Tribal Court.

Section 11-8-7 (F)

In the event any provision of this Code or the application thereof to any person or circumstances is held invalid, the remainder of this Code shall not be affected thereby and to this end the provisions of this Code are declared to be severable.

Section 11-8-8 Part 8 - Effective Date

The provisions of this Code shall be effective as of March 18, 1991, and shall remain in effect until repealed or amended.

Adopted by the Shoshone General Council on March 16, 1991, Resolution No. 6680.

Adopted by the Northern Arapaho General Council on March 18, 1991, Resolution No. 6675.

Joint Business Council Resolution No. 6681.

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Fort Washakie, WY 82514

Water Plan

**THE WIND RIVER WATER PLAN
EASTERN SHOSHONE & NORTHERN ARAPAHO TRIBES**

**Northern Arapaho & Eastern Shoshone
Joint Business Council**

July 2007

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CHAPTER ONE

OVERVIEW OF AND CONTEXT FOR DEVELOPMENT OF THE WIND RIVER WATER PLAN

1. Introduction

The water of the Wind River Indian Reservation is the *central* Tribal natural resource that 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 (Figure 1.1). The reservation is blessed with many other additional 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.

The *Wind River Water Plan* is developed for consideration by the people of the Wind River Indian Reservation, and is prepared by the Northern Arapaho and Eastern Shoshone Joint Business Council, in cooperation with 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, and numerous other Tribal organizations and individuals. The development of the Wind River Water Plan development is authorized by the Wind River Water Code (1990), and proposes a reservation-wide plan for the wise stewardship, management and development of the water resources of the Eastern Shoshone and Northern Arapaho Tribes.

The need for a plan for the reservation's water resources came about because of the experiences of Tribal members and both Tribal governments with the disposition of and issues affecting Tribal water:

- Increasingly, opportunities to meet the needs of the current and expected reservation population have been hampered 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, households and community drinking water supplies.
- Since the affirmation of the Big Horn Decree in 1989, non-Tribal water users have been appropriating, or using, Tribal water resources under the banner of state law.

All of these issues are currently made worse by the on-going drought which has gripped the Wind River basin and the region since 1999.

Thus, the continuing importance of water to the present conditions and future growth and security of Tribal community initiated the development of this document, **"The Wind River Water Plan" (Water Plan)**.

1.1 Tribal Water Rights Background

"Tribal water", as referred to in this document, means that amount of water to which the Eastern Shoshone and Northern Arapaho Tribes have *federally-reserved water rights*. That is, when the reservation was set aside by the United States (the *federal* government) in 1868, an amount of water was automatically, impliedly, *reserved* for the Tribes. The amount of water which the *federal* government *reserved* for the Tribes was determined by the legal case known as the *Big Horn Decree*. The water rights of the Tribes were affirmed by the United States Supreme Court in 1989. The Tribes' water rights are thus *federal* water rights with an 1868 priority date.

There are important aspects of the Tribal water right that make it different than a state water right:

- Although the Tribal water right has the earliest priority date (1868) in the entire state of Wyoming within the state system, the Big Horn Decree specified that the

Tribal water right is based on a volume of water in each stream (e.g., acre-feet per stream) and not based on the state premise of a rate of delivery (e.g. cubic feet per second per 70 acres).

- Second, the Tribal water right is not tied to, or “attached” to the land—it can be used for any purpose, at any location within the Wind River Indian Reservation, subject to certain guidelines specified in the Decree.
- Third, as a *federal* reserved water right, the right *cannot be lost for non-use*, and is *not subject to appropriation (or diversion) under state law*.
- Finally, the Big Horn Decree clearly makes it a *Tribal* priority to determine the use and management of Tribal water, including storage, and requires the Wyoming State Engineer only to manage *state water rights* so as to protect the priority of the Tribes’ 1868 water right. Additionally, the Big Horn Decree specifies that:
 - The Tribes may use their water for any purpose they deem advisable and
 - The Tribes may lease or sell Tribal water provided consumptive use is not increased

1.1.1 The Wind River Water Code—1990

To protect and manage this federally-reserved Tribal water, the Tribes developed the ***Wind River Water Code*** in 1990, which was codified as Chapter 9 of the Law and Order Code of the Eastern Shoshone and Northern Arapaho Tribes. The Water Code is the Tribal law which governs the use, management and protection of water on the Wind River Indian Reservation. The Water Code is *Tribal water law* for the management of Tribal water rights; the state of Wyoming manages its water rights under *state water law*. The two systems are different, yet have some common characteristics.

The two Tribes have the inherent legal authority to pass laws, make regulations and perform other actions as required to protect the resources of the reservation and the health and welfare of the Tribal community. Tribes that were not organized under the 1934 Indian Reorganization Act, to which the Eastern Shoshone and Northern Arapaho belong,

do not require “permission” to protect themselves and their natural resources, and in this case, “approval” of a law designed to manage water resource assets. The Wind River Water Code was developed under this inherent legal authority, and is an exercise of sovereignty in proactively protecting and managing natural resources.

The Water Code is founded in large part on the guidance of the Big Horn Decree, and matches the physical distribution and characteristics of water with the law required to guide its protection, management, and use. The policy guidance of the Water Code comes from Tribal law, generally, and the Tribal communities themselves, and is based upon what the Tribal community values as appropriate for the use of water.

The Water Code recognizes thirteen (13) beneficial uses, including cultural uses,¹ fisheries enhancement, recreation, aesthetic, recharge, hydropower, storage, municipal, and industrial uses. Under the Water Code, the Tribal Water Engineer (TWE) determines the water supply conditions each year as a first guide to the disposition of water on the reservation. Based on whether normal, surplus, or drought conditions exist, the TWE is authorized to make delivery adjustments, store water, or to take any other action required to protect the use of Tribal 1868 water rights in accordance with the priorities, guidelines and policies contained in the Water Code. The Water Code, when passed in 1990, automatically authorized the use of water by existing Tribal 1868 water users.²

Similar to state law, the Water Code requires the delivery of water according to priority date and requires permits to change the use, diversion point, or source of water; to develop new water sources, and to store Tribal water.

Overall, the Water Code provides a sound physically-based tool for the management of water and a policy vehicle for the Tribes to exercise their interest in the use and

¹ For example, stream flow needs to protect riparian vegetation that is important to cultural ceremonies practiced by the Tribes.

² Individuals whose lands and uses were used as a basis for determination of Tribal water rights in the *Big Horn* adjudication.

management of Tribal water. In 2007, the Wind River Water Code was formally recognized by the Bureau of Indian Affairs.

1.1.2. Volume, Location, and Use of Tribal Water

The amount of water reserved for the Tribes by the federal government in the Big Horn Decree is 500,000 acre feet of water each year, and this water is divided among every stream on the Wind River Indian Reservation. For example, the Tribes have water rights in Dinwoody Creek, the Wind River, the Little Wind River, Trout Creek, and so on, for most streams and rivers on the reservation. The Tribes also have water rights in the Owl Creek watershed, which forms a part of the northern boundary of the reservation.

An acre foot of water is equal to approximately 325,000 gallons, and is that amount of water that would cover an acre of land one foot in depth. Thus, the amount of Tribal water could cover 500,000 acres of land one foot in depth with water each year, and is about 161 *billion* gallons of water per year. The volume of water to which the Tribes are entitled is also equal to³:

- 3 ½ full Bull Lakes, each year
- 300,000 football fields
- 30% of Los Angeles, California's water supply

As shown in Figure 2, Tribal water can be found in every stream on the reservation. The largest amount of water is located in the Wind, Little Wind, Dinwoody, and North Fork Popo Agie river basins. Primary uses of Tribal water on the Wind River Indian Reservation include domestic, municipal, agricultural, stock, and limited commercial and industrial development. The primary use of ground water is for oil and gas development and production.

³ "Our Water, Our Future"; video produced on water rights on the WRIR, 2006, © 2006 Northern Arapaho Tribe

In 2003, a “water accounting” model was developed to track Tribal water in the Wind River.⁴ The water accounting tool traced the use of Tribal water in the Wind River from the period 1989 to 2003, and determined that of the 2.4 million acre feet of Tribal water that flowed in the Wind River during this period, nearly 90% was diverted for non-Tribal uses and eventually stored in Boysen and Pilot Butte Reservoirs.

Thus, a considerable amount of Tribal water remains un-used by the Tribes in the Wind River Basin as of 2007. Given the latitude in uses granted by the Big Horn Decree, many opportunities exist for the use of Tribal water. This Water Plan provides just one set of possible scenarios for the use of Tribal water on the Wind River Indian Reservation.

1.1.3. Big Horn Additional Legal Activity

Once the rights of the Tribes were determined in the Big Horn Decree, various other legal activities commenced to determine the water rights of non-Tribal entities, including a class of water rights known as “Walton Rights”. Additional legal activity involved the 1990 use of Tribal water for instream flow purposes between Diversion Dam and Riverton.⁵ While these additional legal issues were lengthy and detailed, none of the actions have fundamentally altered the original tenets, principles and findings of the Big Horn Decree affirmed by the U.S. Supreme Court. Each of these legal activities are described briefly below.

Walton Rights. Walton water rights are a class of water rights granted to successors in interest to or heirs of allotted Indian lands. The total volume of Walton Rights, estimated at 30,000 acre feet, does not come out of the Tribal water right---it is in addition to the Tribal water right—and carries an 1868 priority date. The major difference between a Walton water right and a Tribal water right is that the Walton right is tied to the land and thus must be used on lands for irrigation purposes. Because a Walton right is based on the federal reserved water right, and has an 1868 priority date, it

⁴ “Draining the Reserve: Tribal Water in the Wind River Basin”, Northern Arapaho Tribe, 2003.

⁵ Permit 90-003, Office of the Tribal Water Engineer, 1990, granted to the Eastern Shoshone and Northern Arapaho Tribes under the Wind River Water Code

is subject to Tribal water law. But because the Walton Right is tied to the land, it also has characteristics of a state water right. However, the state is still limited to acting to manage state water rights so as to protect the 1868 priority date. Any change in diversion point, source of water, or change of use of a Walton Right would in all likelihood comply with both state and Tribal water law procedures.

1992 Instream Flow Decision. After the U.S. Supreme Court decision in 1989, the Tribes' first use of water under the Wind River Water Code was to issue a permit to keep water in the Wind River for fisheries, recharge, cultural, aesthetic, water quality, and recreational purposes. A fractured decision by the Wyoming Supreme Court with much dissention left in tact the primary rulings of the U.S. Supreme Court in affirming the Big Horn Decree.⁶

Cancellation of Overlapping 1905 Water Rights. Some Tribal lands on the Wind River Indian Reservation were awarded 1868 water rights for the volume of water that they were using. In some instances, these lands also carried 1905 rights which had been permitted by the state after the BIA applied for the right on behalf of the Tribes during that time period, thus producing a situation of overlapping water rights. Announcements of these cancellations are important for the individual landowner and the Tribal Water Engineer to examine for accuracy and to assure that this does not result in the loss of 1868 water rights in the process.

Final Proceedings of Big Horn and Tribal Water. Nothing in the final wind-down of nearly 30 years of litigation involved in the Big Horn Decree has pointed toward anything other than continued Tribal management, administration and development of 1868 water rights as deemed advisable in the context of federal and Tribal law, and cognizant of state water law as Tribal water is managed.

⁶ A single footnote in the decision has been used by some to erroneously insist that (a) the Tribes cannot use water for anything other than agriculture, and (b) the Tribes must divert water first for agriculture before it can use it for any other purpose. Indeed, the holdings of the Big Horn Decree still persist.

1.2 Development of the Wind River Water Plan

Since 1989, the two major Tribal organizations charged to address water resources—the Tribal Water Engineer office (water supply), and the Wind River Environmental Quality Commission (water quality)—have been engaged in a number of activities on different aspects of water resources management. In June 2001, the TWE and WREQC jointly sponsored a series of water seminars designed to identify a set of next steps in managing Tribal water resources and the environment. One of these sessions produced a list of twenty seven (27) planning issues involving water, specific actions required to resolve or act on the issue, and a timeline of actions covering a period of 2 to 5 years.

These planning issues, attached in the Appendix to this report, formed the outline of major actions to be included in the Wind River Water Plan., shown in Table 1.1. The 2003 Tribal water issues required evaluation of drought at Wind River, irrigation management, accounting for Tribal unused water resources, and identification of water development ideas in conjunction with extensive community education.

1.3 Goals, Priorities, and Desired Outcomes

The project elements outlined in Table 1.1 required that specific research on the water resources of the Wind River reservation be accomplished primarily through analysis of existing information. The table also provides a general description of what was involved in each category of work. The entire Water Plan effort was designed to supplement the on-going activities of the TWE and WREQC, and to provide the Tribes with decision-making tools for and information on the water resource.

The outcome desired by Tribal leaders and the community for research on each of the key issues was in all cases “tools to move forward” with the issue. For example, in the evaluation of drought at Wind River, the Tribes sought not just the development of criteria for deciding when there is a drought, but procedures to follow during a drought. Ground water development information summarized the development of ground water,

areas of critical concern, and procedures for advancing ground water development at Wind River.

The list of project activities in Table 1.1 also reflects specific concerns of the Tribes in addressing water management issues. For example, a specific water management plan for the Arapaho Ranch and other matters in the Owl Creek watershed was required as a means of protecting the Tribal use of water in this area where state law also applies to the management of scarce water supplies in this basin. A proposed plan for the management of water in reservation-wide private ditches and the evaluation of water management in the BIA irrigation project were used to evaluate the ability of Tribal law to effectively manage 1868 Tribal water. A heavy emphasis on community education and youth involvement characterized this effort.

1.4 Major Conclusions

While there are many specific conclusions presented in and evident from this report, the major finding of this study is that *there is nothing preventing the Tribes from developing their water resources now and into the future*. 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 the 1992 instream flow case. 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 concern 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 development.

While not to overlook the significant funding obstacles in developing water, the primary barrier to water development and protection at Wind River lies in the political arena, both internal and external to the reservation. These are barriers that can be overcome with collective strategic thinking, continued community education, planning, and empowering

dialogue around the resource that binds the Tribes: water. The Water Plan identifies such a course of action.

1.5 Summary: A Call to Action

The Water Plan recommends that the Tribes take bold, 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.

Simply stated, the children of the Wind River Indian Reservation can no longer wait for action to be taken on the Tribal control, management and development of the water resources and economy of the reservation. Today is the day, and "we are the people we've been waiting for".

CHAPTER TWO
SUMMARY OF WATER RESOURCE RESEARCH AND ACTIVITIES
WIND RIVER WATER PLAN 2003-2006

2. Introduction

During the development of the Wind River Water Plan, a considerable amount of research was undertaken to determine the status of the Tribes' water resources, impediments to Tribal water development, and opportunities for Tribal water use and development in the future. A compilation of these reports is presented as an Appendix to this report.

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 second type of studies involved examination of *administrative systems*, and examined the use and effectiveness of the Wind River Water Code, the structure and function of the Tribal Water Engineers Office, the ability of the Tribes to use their water as set out in the Big Horn Decree, and the tracking of Tribal "futures" 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. These studies are available in the appendix and are further summarized in Table 2.1

2.1 Technical Reports: Wind River Water Resources 2003-2005

The major technical reports developed during this time period involved:

- Drought and drought management at Wind River
- Water management at Arapahoe Ranch & the Owl Creek Basin
- Water management procedures on private ditches
- Management of the BIA Project

The content, findings and significance of each of these reports are described below.

2.1.1. Drought and Drought Management at Wind River

The Wind River Drought Report, produced in May 2003, was developed as the Tribes entered their 4th consecutive year of drought, parching agricultural fields, limiting drinking water supplies, disturbing cultural resources, and threatening vegetation, fish and wildlife survival. Evidence by western climatologists from tree-ring data indicate that this on-going drought may become the *normal* situation now, demonstrating that historically, western droughts are lengthy. Regional and world-wide climate change in this context can only exacerbate extremes.

This study collected information on the impacts of and indicators for drought at Wind River, identified key drought planning tools and strategies, recommended potential 2003 drought-related water management actions, and identified a series of next steps in drought planning and management.

A few key elements of this report are presented here to illustrate the substance of drought management possibilities at Wind River. First, the primary reason to develop drought management tools is to assist people who rely on water for a living in a time of deep distress. While States have procedures that enable the delivery of drought aid to state agriculturalists—which can range from cash to food to emergency well drilling—no such mechanism exists for Tribes except the development of their own appeal to both the state and federal governments. To enable the assistance to drought-stressed agriculturalists a series of mechanisms were identified to address drought impacts and to enable drought aid to be accessible to reservation residents:

- Identification of drought indicators
- Identification of procedures to manage water supplies during a drought
- Development of a decision-making protocol to declare drought so as to institute drought measures, to collect information for purposes of drought aid identification,

and to disseminate information on drought to the Tribal community based on drought indicators.

- Develop water management tools and administrative mechanisms within the Water Code that allow a water user to forego the use of water in exchange for the ability to lease water for instream flow, agricultural uses, or storage.

The Table of Contents for the report, Wind River Drought Criteria, sample procedures for water management during a drought, and a proposed drought decision-making procedure are attached as Tables 2.2, 2.3, and 2.4 respectively.

The report showed that the Tribes can use existing agencies to enable drought management and tracking—the Wind River Water Resources Control Board, Tribal Water Engineer's Office and the Joint Business Council. This drought management procedure is designed to involve all three entities with the Tribal community in the management of drought at Wind River.

2.1.2 Arapahoe Ranch and Owl Creek Basin Water Management

The management of water on the Arapahoe Ranch, and in general, Tribal lands in the Owl Creek Basin, is required to assure that Tribal water rights holders are allotted their full amount of water rights in this water-short basin. While water issues in the Owl Creek Basin have not received the attention that Tribal rights have in the Wind River basin and upper portions of the reservation, these issues are critically important as they test the *operation* of the Water Code within the context of 1868 rights, Walton Rights holders, territorial and other state water rights. The Table of Contents for this report is shown in Table 2.5.

The development of the 1868 water management plan for the Arapahoe Ranch and Owl Creek Basin was focused on the delivery of 1868 water to Tribal water rights holders, including non-Tribal "Walton Rights" holders who were awarded 1868 water rights. Since these water rights are the most senior water right in the basin, the key technical

question for the study focused on how low the flow in each stream had to be before the *only* water in the river was 1868 water and belonged to the Tribes. At this point all state water users had to cease using water. The streamflow values below which only Tribal water exists for streams in the Owl Creek Basin are shown in Table 2.6

Because of the natural shortage of water in the Owl Creek basin, even 1868 water users at times will need to adjust delivery rates to spread the water around when there are drought stream flow conditions. Several options for managing drought flows and 1868 agricultural deliveries in the Owl Creek basin were identified and discussed with basin water users, including rotation of diversions, pro-rata sharing, and other arrangements. Monitoring and head gate management operations were also identified in the report.

2.1.3. Private Ditch Water Management, Wind River Indian Reservation

In a substantial way, the development of the Arapahoe Ranch/Owl Creek Basin 1868 water management plan laid the foundation for the development of specific procedures for private ditches throughout the reservation. While water management on private ditches can be organized in many different ways (e.g., irrigation districts, conservation districts, and ditch associations, formal, informal) the basic elements of water management on private ditches involve:

- Determination of water supply conditions for each main stream system
- Determination of 1868 water demand and delivery rates
- Determination of alternatives for water delivery in case of drought conditions or other factors
- Collaboration with private ditch users in identifying appropriate solutions

While the Tribal Water Engineers Office provides an important function in determining and measuring water supply conditions, identifying 1868 water rights holders, and providing informational resources on water delivery alternatives, the private ditch holders can also organize and identify their own delivery options and apply for and receive on-

farm and ditch improvement funds from several external agencies, lessening the burden on Tribal government resources.

2.1.4. Managing the BIA Irrigation Project, WRIR

Of considerable concern to all reservation leaders and residents is the rehabilitation and management of the BIA irrigation system and the effective delivery of 1868 water to Tribal water users. Given the need for irrigation system rehabilitation, the overall goal of this research effort was to compare how Tribal 1868 water is managed under the BIA system (25CFR Part 171) versus the Wind River Water Code (Chapter 9, Law & Order Code of the Eastern Shoshone & Northern Arapaho Tribes).

Given the recent 2007 approval of the Water Code by the BIA, the report on the BIA's management of the irrigation project provides an excellent starting point as to how to begin to manage the project according to the Water Code.

Among the many technical and administrative findings of this report are:

- The Tribes are not receiving their full allotment of Tribal 1868 water under BIA system in 25 CFR; the Tribes receive only 40%-80% of their 1868 water rights awarded under the Big Horn Decree, as shown in Table 10. The Tribal water Code would deliver the full amount of 1868 water.
- The BIA is not following its own procedures in implementing 25 CFR Part 171, specifically:
 - The basis for assessing and application of Operation and Maintenance (O&M) fees;
 - Delivery of a quantified water right, in this case Tribal 1868 water
 - Maintenance of irrigation delivery systems
 - Operation of the project for maximum Tribal benefit
 - Prevention of waste

- The BIA system of cards and payment of O&M fees as prerequisites for water delivery is physically inefficient and legally insufficient in delivering 1868 water to 1868 water rights holders.

While it may not yet be beneficial to contract the BIA irrigation project under Public Law 93-638 given the enormous system liabilities, there are ways to exert greater Tribal and local control over the system through Tribal organizational options like irrigation or conservation districts. These organizational units can attract outside funds or other resources and permit system-wide and on-farm improvements in irrigation water delivery and management.

2.2. Administrative Research & Reports: Wind River Water Management 2003-2006

A major portion of research under the Wind River Water Plan involved an analysis of the management and administration of the Tribes' water resources under the Wind River Water Code, and the function of the Water Board and Tribal Water Engineer in its implementation. In addition, and from a water administration standpoint, project work involved tracking the use of the Tribes' undeveloped water in the Wind River. The major administrative reports produced during this time include:

- A Budget and Fundraising Plan for the Office of the Tribal Water Engineer
- Draining the Reserve: Tribal Water in the Wind River Basin
- Strategies for the Protection of Indian Federal Reserved Water Rights, Wind River Indian Reservation
- Development of a Tribal Natural Resource Asset Protection Program on the WRIR
- Development of Tribal Water Control Regulations

Each of these efforts spawned other research, some of which is on-going, and all of which has produced subsequent memoranda, notes, and papers.

2.2.1. Budget and Fund-Raising Plan for the Office of the Tribal Engineer

At the front lines of the protection of Tribal water at Wind River is the Wind River Water Code as administered by the TWE. The purpose of this research was to identify the basic requirements for staffing an office to manage and keep track of 500,000 acre feet of water and to identify a fund-raising plan to fully implement Tribal water management at Wind River. The salient conclusions include:

- It is essential to the protection of the Tribes' sovereignty, and to the economic health and well-being of the reservation population, to exert authority and control over water through effective Tribal water administration.
- In order to more effectively administer Tribal water at Wind River, the reorganization, expansion and professionalization of the TWE office is recommended. A proposed reorganization is shown in Figure 2.1.
- An annual cost for a fully operational and professional TWE Office ranges from \$650,000 to \$1,000,000 per year, including salaries for a staff of 20, and equipment upgrades, purchases and maintenance on an annual basis.
- Annual funding for this office can be derived from private foundation grants, federal sources, Tribal water leases, and joint Tribal funds. One goal would be to have the TWE become a self-sustaining entity.

To fully protect Tribal water rights, an operational TWE office with an effective Tribal Water Code supported by regulations is required. Recently there has been increased focus on the development of Tribal water control regulations within the framework of the Water Board, TWE and Joint Business Council.

2.2.2. Draining the Reserve: Tribal Water in the Wind River Basin

The purpose of this research was to track the use of 2.7 million acre feet (maf) of the undeveloped portion of the Tribes' 1868 water in the Wind River from 1989 until 2003. This work involved the construction of a computer spreadsheet and use of publicly-

available stream gauge records to calculate the volume and location of Tribal water diverted during this period. This is known as the "Tribal Water Accounting Project".

The research showed that over 2.3 million acre feet of Tribal water has been diverted by the major non-Tribal irrigation districts in the amounts shown in Table 2.7. The use of Tribal water has enhanced the value of irrigation crops produced in the region by millions of dollars. The diversion of Tribal water has been facilitated by the federal Bureau of Reclamation and the Bureau of Indian Affairs.

The dominant role of the Federal government in water management in the Wind River Basin, specifically the Bureau of Reclamation, required an evaluation of the federal impact on the Tribes' federal reserved water rights in the Wind River Basin. The federal system serves to divert a significant portion of the Tribes' federal reserved water rights for the benefit of non-Tribal and downstream users..

Project research indicates that the Eastern Shoshone and Northern Arapaho Tribes were significant financial contributors to the construction of the federal water management system in the basin during the period 1905-1942, including such features as Diversion Dam, the Wyoming Canal, several lateral systems, and Pilot Butte Reservoir & hydropower facility. This is a key salient fact because if it were not for the construction of Diversion Dam and other facilities using Tribal funds, it would not have been possible to irrigate at all on the scale of the Riverton Reclamation Project.

2.2.3. Strategies for the Protection of Indian Federal Reserved Water Rights Wind River Indian Reservation

The significance of the documents developed as the basis of the Wind River Water Plan is that they have developed key information which may assist the Tribes in the use and protection of Tribal water. The value of Tribal water, in addition to the Tribal investment in construction of regional water projects, makes the Tribes important partners in the management of all water in the Wind River basin. Tribal use of Tribal water would

engage the region in a more constructive approach to the recognition and management of all water rights in the basin.

2.3. Other Activities Associated with Development of the Water Plan

An informed community is one of the fundamental requirements for effect development planning and decision-making, especially with a resource as important as water. In addition, each Tribe's Council needs the support of its community in actions taken with respect to water. In cases where water rights are being compromised, such as Wind River, how do you inform the people of that injustice, and collectively develop actions to remedy it, when the community does not know it even has water rights?

The development of the Water Plan recognized and emphasized the guidance received from the Northern Arapaho Council of Elders and other ceremonial leaders of the Tribes to conduct community education with a focus on Tribal youth. A Tribal Elder-Youth Conference on Water was held in May 2005 and a video on water produced in December 2005 with considerable community assistance, elder guidance, and youth participation.

2.4 The Wind River Water Plan

The plan for the management and development of Tribal water resources put forth in the next chapter of this report is the culmination of both research and community education conducted over the period 2003-2006 and briefly described here.

The following pages contain a first look at a comprehensive and phased set of water development options based on project work and community input in the last three years. There are clearly many more options that may not have even been raised here. However, this document can be seen as a starting point for water development discussions within the Tribal community.

Thus, this "Final" Water Plan invites the reader's serious examination, consideration, input, and change.

CHAPTER THREE THE WIND RIVER WATER PLAN

3. Introduction

The following plan for the orderly development of Tribal water resources on the Wind River Indian Reservation is proposed to the Wind River Tribal community and the general public for review and consideration. This is the culmination and result of the work produced during 2003-2006 on the development of a plan for the use of water on the Wind River Indian Reservation.

The development of this water plan was based on the following general areas of work:

- Research on the status and use of Tribal water resources
- Community Education on water resources and water rights, including the development of a video on water
- Informal and formal surveys, water meeting discussions, and formal meetings discussing peoples' preferences for water use

The many ideas generated for water use during this three-year period have a strong foundation in existing engineering studies conducted on the reservation since the late 1980s. But other ideas—such as bottled water, recapturing Tribal water, community gardening, recreational development, and rangeland or wildlife water development—have not been fully studied from an engineering or economic viewpoint. Thus, there is much to work with in planning for water use on the Wind River Indian Reservation.

3.1. Components of Water Development: Physical Development of the Resource and the Development of Tribal Infrastructure

There are two aspects of this Water Plan: (1) the *physical* plan for the use of Tribal water, and (2) the *administrative infrastructure plan* for the development of Tribal expertise, rules and regulations, Tribal economic institutions and capability, and the legal and business foundation for the management of water. An interim plan is proposed in Chapter Four to begin immediately to move on a long term physical plan for using Tribal water while taking the time required to build the Tribal infrastructure.

The major *physical elements* of water development for the Wind River Water Plan involve the diversion of surface water for various water uses and the use of ground water resources in a phased plan:

- Protection of cultural resources and uses of water
- Development of bottled water. Phased development consists of:
 - Meet reservation demand (demand study underway)
 - Provide local/regional water supply
 - Specialized marketing of Tribal Water
- Development of community gardens, parks, and recreational facilities (demand study underway)
- Development and improvement of water systems for rangeland water resources for stock, wildlife, and wildland water supply
- Development of water supplies for housing expansion, including fire protection
- Improvement of on-farm and system wide irrigation facilities and water delivery, integrated with the development of small-scale storage facilities
- Power generation using low-head hydropower and existing canals, and diversions
 - As part of a longer plan, retrofit existing facilities (i.e., Bull Lake Dam) with hydropower generation facilities
- Off-stream storage for recreation, fisheries, hydropower, agriculture, storage of futures water
- Irrigation rehabilitation integrated with storage development and modifications of existing facilities
- Development of Tribal greenhouse, irrigation project, recreational, or industrial feature at Riverton East, Big Horn Flats

The major *administrative institutional elements* of water development in the Wind River Water Plan are as follows:

- Develop regulations for storage, water leasing, and irrigation management and other tools for the Wind River Water Code and existing water use facilities.
- Form a "Wind River Conservation Corps" of youth and community members to build and maintain parks, recreational facilities, and wind breaks throughout the reservation.
- Reorganize the natural resource management function by combining TWE, WREQC with other functions such as forestry, agriculture, wildlands, fisheries and range management to provide a comprehensive framework for water and land management at Wind River.
- Invest in a Wind River Tribal Water Development Office which directs a specific 5-year skill development program for Tribal members in all aspects of water development, including finance & economics; directs, manages and in cooperation with both Business Councils, Tribal agencies, and the reservation community, assists the Councils in issuing contracts for water development activities at Wind River; secures permits and works with other Tribal agencies,

and keeps the community and decision-makers apprised of all activities in water development.

These are described in the following pages.

3.2. Water Resource Development

The Wind River Water Plan calls for the phased development of Tribal water resources, beginning on a small scale while simultaneously laying the ground work for and building up to larger uses. A phased program for water development allows the entire community ample time to discuss the full benefits and implications of every option, as well as to prepare for and contribute to the implementation of that water development vision.

At this writing, there are literally dozens of studies on just about every option to be discussed and presented below. Some of these studies are very specific from an engineering and feasibility standpoint. The Tribes are in the position of literally just choosing what combination of options for water, all of which will already be at an advanced stage of analysis already.

3.2.1. Phase I Water Development: Securing the Homeland

A first Phase of water development is proposed which starts with small-scale efforts that protect and preserve cultural resources and resource uses dependent upon water, and that provide multiple recreational and water use opportunities for the Tribal community. This can be translated into actions that primarily protect streams, river corridors, vegetation, wildlife regions, and soils. This can be integrated with reservation-wide efforts to plant windbreaks and to develop water supplies for rangeland and wildlife resources, community gardens, and municipal parks. All of these efforts act to secure and stabilize the environment at Wind River by enhancing moisture retention on reservation lands and providing more opportunities for Tribal people to use Tribal water and the land base.

This first phase of water development is also accompanied by bottled water development to meet Tribal community needs. It may also be a community imperative that reservation residents begin drinking their own water. Because of the large demand for bottled water nation and world-wide, Tribal bottled water development in this first phase of development could be capable of expansion into larger markets in later phases of water development. The proposed location of each of these potential components of water development and the elements of bottled water are shown in Table 3.1.

Securing the homeland also includes a number of tasks related to the development of the Tribal administrative and institutional infrastructure for water management and development. This involves regulation development, economic infrastructure growth, and the development of a permanent professional and multi-disciplinary Tribal water management staff.

Opting initially for low-key water development also provides multiple opportunities for jobs for Tribal members in designing, constructing and maintaining these facilities. Thus a further idea is to develop a Wind River Conservation Corps, or Municipal Parks Association, with paid staff and membership to perform vital functions of maintaining facilities. Training could be integrated with the Wind River Tribal College and Chief's Technical Center course offerings so as to offer a year round application and training opportunity for reservation youth and residents. The point is to enable and empower the Tribal community to now take charge of its water resources.

This phase for water development is not without its costs, nor without its requirement for commitment to its completion and maintenance, the full engagement of the Tribal government and community, and the commitment to the long-term vision for Tribal development. However, the benefits of community employment in the care and small-scale development of reservation lands are far-reaching, and make more extensive water development in later stages possible from a community skill-base perspective and by generating support for further water development.

A general overview of Phase I water development is presented in Table 3.1 and described in the following pages.

Table 3.1. PHASE I WATER DEVELOPMENT --WIND RIVER WATER PLAN

Development	Location	Water Sources	Description of Activities or Facilities Developed	Estimated Cost Range (multiple years)	What is Needed to Implement Activity
Team courses ; where Tribal or use ultural monies, and ; 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
unded living round the dividual using projects; pal youth and to picnic, play er throughout	Little Wind River, several locations; upper, mid and lower Wind River; Dinwoody Creek; upper Little Wind watershed	North & South Fork Little Wind River; Trout Creek;	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
er across ease soil vegetation	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
ility to bottle ons of water ibility to er production long-term development ie Tribal ontinued of Tribal	Multiple near Ft. Washakie, Red Rocks area.	North Fork, Popo Agie; Dinwoody; Crow Creek; North Fork Little Wind River	Diversion and distribution; treatment facilities if needed; bottled water facilities; distribution point(s); roads as needed; Tribal water control regulations; training programs in multiple aspects of resource development and management; policy development; staff development & additional hiring	\$2 million - \$5 mill. \$1 million	Stable funding source Stable workforce Training Community participation Stable funding source Stable workforce Training Community participation

DESCRIPTION OF PHASE I WATER DEVELOPMENT WIND RIVER WATER PLAN

SECURING THE HOMELAND

Protect Cultural Areas and Uses of Water-Related Resources. This water development area involves the protection of stream corridors, wetlands, marshes and other areas that are important ceremonially, for gatherings, and for the water-related resources used for cultural and subsistence purposes, such as trees, wildlife, shrubs, berries, and grasses. By physically protecting these areas, the reservation land base and environment is also stabilized, and a future with access to culturally significant resources is secured.

Develop community parks, gardens and recreational areas. This development component "beautifies" the reservation environment, and makes it more accessible by the Tribal community through parks, small recreational sites, and through community or individual gardens. At the same time, it is a small way to use water for purposes that provide immediate benefit to Tribal people.

Secure water supplies for rangelands and wildlife; plant wind breaks and green strips. This water development effort preserves the quality of reservation rangelands and improves the survival of reservation wildlife and stock by distributing water across reservation lands. Wildlife and stock have a chance to disperse and not concentrate around water sources, thereby preserving stream banks and water courses, vegetation, and rangeland soils. Wind breaks and green strips provide relief from strong winds welcome shade for every living creature. They also assist in capturing snow and thus moisture management on reservation rangelands in winter, conserving moisture for summer use. Green strips are both pleasant and aid in soil conservation.

Develop bottled water for reservation consumption. Wind River bottled water development is consistently rated as a top idea for Tribal water use by reservation residents. It is also a relatively low-impact type of water development that could be spread throughout the reservation, and developed as small businesses or Tribal enterprises. Either way, the market for bottled water regionally and nationally makes this development option suitable for expansion while providing an immediate use of Tribal water by Tribal residents. An example of the equipment used in a typical small bottled water operation is shown in Figure 3.1.

Planning for & Actions on Phase II Development. This water development component continues the work of identifying and implementing appropriate Tribal water control regulations for water leasing, water storage, and agricultural water use. In addition, developing a cadre of Tribal professionals in water management, development, economics, administration and other fields is essential to assuring that Tribal expertise is available for the next phase of water development. Strengthening Tribal government and community knowledge and participation is fundamental to this effort.

3.2.2. Phase II Water Development: Strengthening the Foundation

Water development under Phase II of the Water Plan gradually increases in scope and size and touches many other areas of reservation life, including housing, Tribal infrastructure, and agriculture. The overall goal of this phase is to enhance the use of Tribal water for housing, agricultural, and domestic water needs as a means of strengthening Tribal people and the Tribal infrastructure for even further water development work ahead. This phase is also accompanied by continued public education and skill development.

Knowledge of the available water resources and needs enables the match of supply and demand throughout the reservation. Building from this existing knowledge base, water development under this phase utilizes both surface water and ground water resources, with treatment as required, for domestic consumption and fire protection for existing and expanded housing areas, rural systems, and tribal government office and commercial development. Developed water can be stored in strategically-located tanks or in storage reservoirs and distributed as needed.

Improvement of on-farm water delivery and storage systems on reservation irrigated lands is also part of Phase II water development. Pursuant to strategically-formed organizations of Tribal irrigators, funds for both on farm water delivery improvements and major canal improvements can be secured and used to increase the application of Tribal water to Tribal lands. Small off stream storage systems can be developed for both agriculture and recreational purposes.

Finally, Phase II water development begins the small-scale use of existing Tribal water facilities to generate power for local uses. Installing low-head hydropower devices in such structures as the Dinwoody Canal or in perennial stream systems could provide important local sources of power to run wood shops, small businesses, or even clusters of homes. This leads naturally to the larger efforts to install larger hydropower facilities into existing structures, for example, Bull Lake Creek or Diversion Dam.

Table 3.2. Phase II Water Development, Wind River Water Plan

Development	Location	Water Sources	Description of Activities or Facilities Developed	Estimated Cost Range	What is Needed to Implement Activity
water supply housing structure	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
strengthen the irrigation system for improving tribal water and -farm yields	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
sting water generate power businesses, homes nal 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 million	Stable funding source Stable workforce Training Community participation
to develop ilities to manage pment and ms; construction nent expertise , housing and e development.	-----	-----	-----	\$1 million	Stable funding source Stable workforce Training Community participation

**DESCRIPTION OF PHASE II WATER DEVELOPMENT
WIND RIVER WATER PLAN
STRENGTHENING THE FOUNDATION**

Water Supplies for Housing and Infrastructure Development. There is a critical need for the development of housing to meet the needs of the growing reservation population. Existing housing developments are also in need of basic fire protection and water storage. Existing and new business development would benefit from additional water supplies. This water development component matches new and existing water supplies with planned housing and other Tribal infrastructure development. Water treatment facilities, as well as wastewater treatment plants will be needed. This effort would be to build the water distribution infrastructure to meet the housing needs of the Tribal community for the next 25 years and provide the infrastructure needed for small business development on the reservation. Storage for the water system could be in the form of small reservoirs or tanks.

Improve on-farm and system-wide water delivery in irrigation. In order to improve the productivity of Tribal agricultural lands, and to enable more people or the Tribes as an enterprise to choose farming either individually or collectively, on-farm and system-wide distribution of water is needed. This is not the same as "irrigation system rehabilitation", but is a subset of that activity that makes improvements now in the system while waiting for funds to complete a system-wide renovation of all irrigation systems on the reservation. This water development activity would provide benefits almost immediately and again make Tribal water accessible to Tribal people. While there are obviously *structural features* associated with this water development option, *the major feature is organization*: the organization of the Tribal farming community into appropriate geographic and structural units that enable the delivery of water and financial resources to accomplish on-farm productivity improvements.

Initiate small-scale hydropower development. Small scale hydropower development is known as "low-head" hydropower, and produces small amounts of electricity that can be used to power various activities from small shops, to sprinkler or storage systems, to home electricity needs. The advantage of low-head hydropower at Wind River is that there are many places where this could be developed all over the reservation, including all major irrigation canals, small facilities tapping stream flow in major streams, and springs in combination with elevation changes. Such small sources of electricity could be enough to power homes, water pumps, light manufacturing operations, and small businesses.

Preparing for Phase III Water Development. This component of Phase II involves the continued community education and participation in water resource planning, development of Tribal staff, improvement of Tribal administrative infrastructure, and development of Tribal professional capability to manage both water and income derived from the next large-scale phase of water development.

3.2.3. Phase III Water Development: Building the Future

The work on Phase III water development really begins now, and is on-going throughout Phases I and II of water development activities. The physical activities contemplated under Phase III of the Wind River Water Plan involve large-scale water development actions that are chosen by the Tribal community in consultation with Tribal leadership. The vision proposed here is only one of many possible futures and combinations of water uses, and is derived from what has been suggested in the last three years of Water Plan activities.

It is important to note the large number of studies that have been completed on possible uses for Tribal water, including:

- The study of 77 storage sites on the WRIR
- Transfer of water off the reservation to Casper, Denver and the Green River Basin
- Large agricultural projects
- Large-scale oil, coal and gas development projects involving large volumes of Tribal water

Some or all of these options may be chosen by the Tribal community as the information becomes available for their consideration.

For the simple purposes of proposing one vision for the Wind River Water Plan, Phase III water development includes development of at least four off-stream storage reservoirs, all with hydropower generation capability; the retrofit of existing storage facilities with hydropower generation capability, the generation of significant hydropower from the North Fork Little Wind River (without the need for storage construction); the complete rehabilitation of the BIA irrigation project complete with integrated storage components; the expansion of bottled water capability; and the development of one major Tribal irrigation, industrial, or large-scale recreational facility near Riverton. Tribal water that is surplus to the Tribes' immediate needs is either stored in existing or new reservoirs, dedicated to some other purpose, or is leased for non-Tribal consumption. The elements of this vision are shown in Table 3.3.

**Table 3.3. Phase III Water Development—Building the Future
Wind River Water Plan**

Development	Location	Water Sources	Description of Activities or Facilities Developed	Estimated Cost Range	What is Needed to Implement Activity
for all scale eries and eneration; to used future	2 locations Upper Wind River; 1 location near Riverton	Wind River, Little Wind River	Diversion and storage facilities, hydropower storage and distribution facilities; recreational facilities; down stream flow enhancement	-----	Stable funding source Stable workforce Training Community participation
ower for Tribal using existing	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
ll reservation ds in an lly benign	North Fork, Little Wind River; Dinwoody Creek; South Fork, Little Wind River	North and South Forks LWR Dinwoody Creek;	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
and e BIA em to provide : of the system t of the Tribes rs on the	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
isting bottled ity to reach nternational	Existing and New facilities	NF Popo Agie; LWR, Dinwoody, Bull Lake Creek, Crow Creek, Wind River	Expanded existing or new facilities	-----	Stable funding source Stable workforce Training Community participation
major ecreation, other near Riverton	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

DESCRIPTION OF PHASE III WATER DEVELOPMENT WIND RIVER WATER PLAN

BUILDING THE FUTURE

Construction of Off-Stream Reservoirs for Multiple Purposes. Construction of reservoirs off the main stream course is smart building this day and age because of the likely consequences of climate change, which will affect the timing and volume of spring runoff and the ultimate physical structure of the reservoirs. Small reservoir construction can be designed to store only Tribal water, with a margin for wet water years can also be constructed to recapture used Tribal water through storage or a "pump-back" strategy. Small storage serves recreational interests through fishing, picnicking, swimming, and float craft. In the winter these areas can serve for ice fishing or skating. These reservoir sites can serve housing needs, agricultural interests, as well as wildlife, fish and other streamflow needs, and can be designed to have minimal impact on the environment. Each of these facilities could be equipped with low head hydropower generation facilities to power whatever electrical needs there might be with development surrounding the small reservoir sites.

Retrofit existing facilities with hydropower generation equipment. Considerable Tribal water flows through Diversion Dam, Pilot Butte Reservoir, Boysen Reservoir, and Bull Lake Dam that can be used to generate power for Wind River residents. The existing power facilities on Pilot Butte could be rehabilitated since Tribal water is routinely stored in Pilot Butte Reservoir. Revenue can be generated from the volume of Tribal water that spins the turbines in Boysen Reservoir.

Complete rehabilitation of irrigation system integrated with storage. A reorganization of the irrigation system and its rehabilitation is essential to restoration of the productive capacity of Tribal lands. Integrating storage with irrigation rehabilitation that is capable of capturing and re-using irrigation runoff and storing Tribal water for later use, combined with rehabilitation of irrigation delivery systems will restore the productivity of Tribal agricultural lands and provide new irrigation opportunities.

Development of Two-Stage Hydropower Facility: North Fork Little Wind River. The goal of this effort is to generate all of the reservation's electricity needs without destroying the environment. The North Fork, Little Wind River has two major elements that fit this requirement: elevation change and a steady stream flow. By developing small diversions and generating power through the "fall", or elevation change, two units could be developed and power distributed to the entire reservation. Enough power could be generated to sell back to the power grid for Tribal profit as necessary.

Expansion of Bottled Water Operations. This water development option expands the capability of reservation bottled water operations to serve national and international markets. Taking advantage of the Buy Indian Act, for example, the Tribes could sell the

United States water for its needs (e.g., military, disaster assistance) and also have that water transported to various locations at little or no cost.

Development of "Riverton East." This project area is near Riverton and was originally designated as a "future" irrigation project. Development of any water use facility near Riverton keeps the Big Wind River full of water year round as opposed to barely flowing in the summer. Many ideas have been generated for this site, including Tribal or individual high-value irrigation projects; diversion points for water transfers; industrial developments, ethanol or biofuels production, and recreational developments. Given the ability of the Tribes to use the water for whatever purpose they want to, development of some project at Riverton East is recommended.

Institutionalizing Water Management as a Business & Profession. This is the long term goal of the training and staff development over all three phases of the Wind River Water Plan. It should not stop with the completion of water development projects, for continued prosperity relies on the continued growth of Tribal expertise and capability.

3.3 Institutional, Social, Economic and Cultural Components of Water Development at Wind River

3.3.1 Introduction

The development of water, like any other natural resource asset, does not occur in a vacuum: there are social, economic, cultural, and institutional considerations that form a web in which water is but one component, although a very key component. The task of building community capacity to take advantage of water development and to grow freely and totally as Arapaho people with all components in tact is the most difficult. The physical and engineering components of water development are among the *easiest* things to do.

The Water Plan has revealed the extent to which the health, political integrity and economic security of the Wind River reservation depends on the wise stewardship and development of water resources. This can and must be a long-term venture which can begin now, and the reservation's population must be fully engaged in and in control of this development in order to assure the long-term economic security of families on the reservation. The institutional components of the stewardship and development of water involve the following elements:

- The development of core Tribal government capacity to regulate, manage, control and develop Tribal water resources;
- The development of Tribal capacity in finance, administration, construction, water development and management, business development, engineering, and numerous other areas, to support overall Tribal development over the long term.
- The continued development of community communication mechanism and capacity to highlight key reservation issues and development aspirations that are important to the community, so that any development of water can be cognizant of those needs as programs are designed and revenues are distributed.

These components of water development are discussed below. These findings are integrated into the Water Plan under the general category of "Preparation for Phases I, II and III of Water Development".

3.3.2 Develop core Tribal government capacity to regulate, manage, control and develop Tribal water resources

The development of the Tribe's core capacity to track, regulate, manage, control and develop water is an essential element of Tribal sovereignty. The economic losses to and constraints on current and future generations from not regulating or developing water are significant, and foreclose a lot of future opportunities.

The Tribes have a perfectly usable legal framework for managing Tribal natural resources—the Wind River Water Code—but lack the regulations and core staffing to implement the Tribal law. While there are many reasons why the Tribes are at this point, the key question is what happens from here on? A modest set of suggestions include

- Change the Representation of the Water Board to Watersheds. To achieve more land and community based representation, it is recommended that the members of the water board be drawn from the reservation's watersheds and in proportion to population within the watershed. This will ensure that all reservation water issues are represented in deliberations on water.
- Issue Regulations for Water. Through the authority vested in the Business Councils, assist with and continue the support of the TWE's development of regulations for domestic water use protection, storage, water leasing, and agricultural water management.

- Immediately and fully fund the operations and staffing of the Office of the TWE and the Water Board and exercise JBC oversight over operations over a four-year period. To administer Tribal water, an annual budget is imperative; guidelines are presented in the Water Plan report on the funding of the TWE office.
- Initiate a Wind River Water Development Organization. To fully focus on water resource development activities, including contracts, develop a Wind River Water Development organization with the authority to raise funds and manage and finance the development of water at Wind River.

These activities will require a significant investment of funding, a concentrated, leadership, a directed and managed effort, and Tribal government commitment.

3.3.3 Development of Tribal Capacity

The development of Tribal capacity in finance, administration, construction, water development and management, business development, engineering, investment banking, and numerous other areas is required to assure the long-term sustained development of the Tribal community based in part on water development.

While local, state and regional colleges and universities offer degrees and specific programs, a more concentrated effort may be required that would involve Tribal investment in 30-50 of the most promising reservation individuals who could be rapidly trained in various skill areas within a period of 3-5 years so as to come back to the reservation and build a water future, and train others. This could be a concentrated training program over the next decade, eventually integrated with the Wind River Tribal College, so as to assure generations of highly trained Tribal individuals.

Over the short and long-term this will empower reservation residents, produce good reservation jobs, and minimize the need for consultants to perform functions for which the Tribes are capable.

3.3.4 Continued Development of Community Communication Capacities

The continued development of community communication capacities to highlight key reservation issues and development aspirations is important to the entire process of

development, so that any development of natural resources can be cognizant of those needs as programs are designed and revenues are distributed.

In the development of the Water Plan, communication was critical in assuring that the Tribal community was aware of its water rights and responsibilities, factors that are central to determining a community course of action on water. During the course of water plan work, a Tribal Elder-Youth Conference on Water was conducted, a 58-minute documentary produced on water resources and Tribal community knowledge of and aspirations for Tribal water and development, and several community meetings, newspaper articles, and workshops were implemented.

In conducting these activities, many members of the Tribal community came forward, and numerous opportunities for cooperation were created with Tribal agencies, the High School, the Tribal radio station, Council of Elders, the Tribal College, and several other entities.. These community resources can be tapped through the continued development of communication opportunities that can include good jobs in radio or video technology at the service of community needs. The sheer size of the reservation land base requires a continued community participation and communication activities.

3.4. Summary and Recommendations of the Wind River Water Plan

The entire purpose of the effort to construct the Wind River Water Plan has been to identify a plan that empowers the Tribal government and community to achieve greater control over the use of Tribal water for Tribal purposes. Increasing Tribal control over the resource is a fundamental component of Tribal water development, and is powered by the community's understanding and participation in water decision-making. The tools for this effort now exist and the foundation for further water development is in place at Wind River. The next sets of actions are up to the Tribes.

The three major recommendations for moving forward with water on the WRIR are:

- Begin immediately to implement small-scale water development actions in discussed as part of the Phase I water development;

- Invest in the development of the Tribal community's skill base in all aspects of water management
- Immediately begin the planning and engineering for the construction of four (4) small reservoirs to store Tribal water

Under all scenarios of organizing this effort, some type of dedicated Tribal, private, or community organization, or some combination thereof, will need to be formed to carry water development forward at Wind River. The investment in the Tribal community can begin now. Funding strategies for this effort are numerous.

CHAPTER FOUR IMPLEMENTATION

4. Introduction

The implementation of this, or any plan for water on the WRIR, must be based on significant benefit to the Tribal community in terms of its access to water resources, jobs with living wages, business opportunities, improved living conditions, and improved opportunities for Tribal youth both in terms of jobs and recreational opportunities. The benefits of the use of water must result in tangible improvements to Tribal infrastructure, including roads, communications, and power and lead to more educational and increased job opportunities for reservation citizens. These are the criteria: the Tribes need only to choose, and then choose to act.

The Wind River Water Plan boldly suggests that intensive investment in water development and in the expansion of Tribal expertise to manage that development begin immediately. Simultaneous action is required on many fronts in order for the water resource to begin to truly benefit Tribal people and future generations. Political will, community engagement and cohesion around a common goal, investment—these are the jewels that will power this water engine of development at Wind River for many years to come. This call is the equivalent to the development of a “Marshall Plan” for water on the Wind River Indian Reservation.

Water development actions include the small-scale activities that improve the living environment and increase the Tribal community’s access to and use of Tribal water, and those immediate engineering studies for the design and construction of four (4) Tribal storage reservoirs. All of this work must be backed by the development of long-term Tribal expertise in water management, development, financing, and business development. And a committed and engaged community.

4.1 Strategic Elements of Water Plan Implementation

Implementation of the Wind River Water Plan in the climate of federal government deficits and on-going legal struggles suggests that several long-term strategic components must be operating to effectively guide water development into the future. One strategic element is that of the physical placement, purpose, and size of water development facilities, particularly storage, as described below.

Construction of Storage Reservoirs on the WRIR. There are two major strategic issues that affect the location of storage reservoirs at Wind River. The first issue involves climate change, and the likely change in runoff patterns, precipitation and runoff extremes, and drought on stream flows. The size, shape and location of storage are key deciding factors, as well as the timing of water storage and diversion. A strategic approach to water storage would favor multiple small off-stream storage facilities. Placement of these facilities should be close to the source of major runoff, and captures downstream runoff for later use and storage within the basin.

One possible strategic approach is to design the Tribal reservoirs to hold only Tribal water, and to use these reservoirs to develop Tribal agricultural projects, housing projects, power supplies, and associated vegetation, wind breaks, green strips, and other small agricultural projects. The Tribes could also make Tribal water for downstream agriculturalists. The funding for such an approach may rest in discussions with the United States, private bankers and/or investors, and others in leveraging funds for water development.

The implementation of small-scale water projects is another element of strategic water development. These projects use small volumes of water and are for people's benefit. Many of these projects could use excess Tribal water now being diverted in the BIA project or unused Tribal water for idle lands.

Implementation of Small Scale Water Projects. These projects would best be served if located, designed, and constructed by the Tribal community, serving an organization dedicated to the construction and maintenance of these projects. A vehicle to realize this effort is required, and could include a Tribal Works Program, a Municipal Parks Association, or Water Development Organization.

The last element of strategic thinking in water development involves the continuous development of the Tribal community and Tribal youth expertise in leadership, resource management, and financing . This is simply the required investment in a cadre of Tribal people to manage, direct, fund and manage revenues from water development at Wind River. Whether this occurs in the Wind River Tribal College, through a private non-profit organization, or as a Tribally-directed effort, this investment will yield huge benefits for the present and future generations of Tribal people and will enhance and enable the sustainability of the Wind River Indian Reservation.

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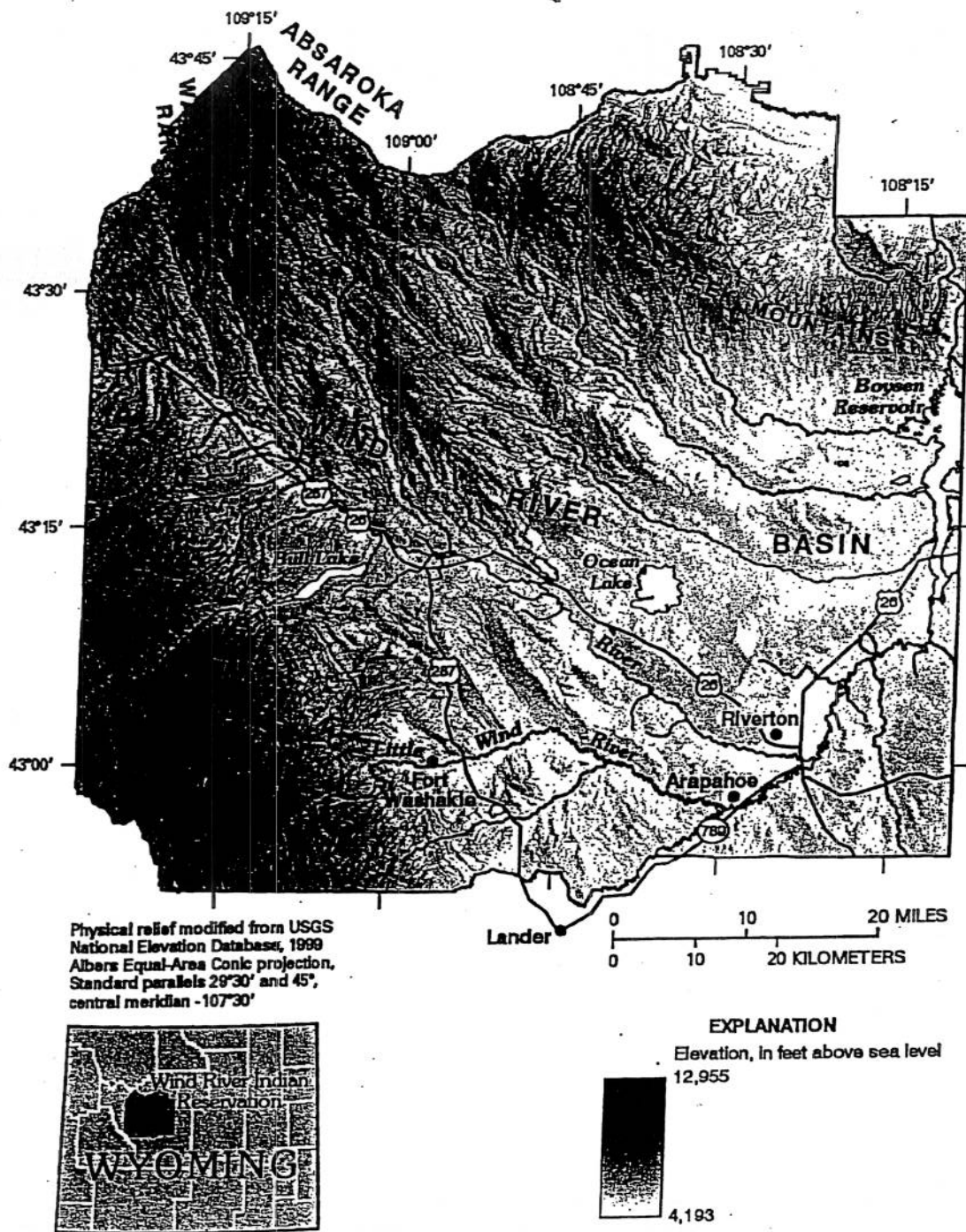


Figure 1. Location and physical relief of the Wind River Indian Reservation, Wyoming.

TABLE 1-1
EXHIBIT A
SCOPE OF SERVICES

WIND RIVER WATER PLAN PROJECT COMPONENTS [1]			
Task	Reference[2]	Description[3]	Product
1. Monitor tribal water supply and use	1,4,25,27	Collect and display all data showing how much tribal water is available, where and how it is being used. Identify information gaps	a. Manual of Wind River Tribal Water Supply-; b. water use report.
2. Management of Irrigation Water BIA Irrigation Project Arapaho Ranch Private Ditches	1, 2,3,26,19	Monitoring and analyze current irrigation water delivery with emphasis on tracking water; develop alternative irrigation water management plan based on deliveries required under the Water Code; specialized planning for Arapaho Ranch	a. Report on management and delivery of tribal irrigation water in BIA projects according to 25 CFR; b. Irrigation water management plan according to Wind River Water Code; c. review of private ditch tribal water management.
3. Boysen Reservoir and Tribal Water	1,3,17,24	Analysis of diversions and exchanges of tribal water and contribution to Boysen Reservoir	a. Report on annual volume of tribal water contributed to Boysen Reservoir
4. Drought Emergency Criteria and Plan	6,9,18	Analysis of historic and current reservation streamflow for drought declaration purposes.	a. Criteria and procedures for drought declaration and plans for addressing drought
5. Water Supply and Water Quality Management	8,10,17,25,27	Estimation of instream flow requirements to meet tribal water quality standards	a. Estimation of and report on instream flow requirements to meet tribal water quality standards
6. Ground Water	1,3,4,5,26,27	Collect, map and display all current information on ground water supply, quality, use and special protection areas	a. Report on ground water supply, quality, monitoring and issues
7. TWE Annual Budget and funding strategy	8,12	Development of annual monitoring, reporting and evaluation activities of TWE office for routine implementation of the Water Code. Identify and discuss potential funding strategies	a. Development of annual TWE budget for "nuts and bolts" operations and potential funding sources

Table 1.1, cont

WIND RIVER WATER PLAN PROJECT COMPONENTS [1]			
Task	Reference[2]	Description[3]	Product
8. Tribal Vision for Water at Wind River	1,7,10,11,13,16,23,24,25	Conduct community workshops and meetings to discuss reservation water and community objectives	a. Report documenting results of tribal workshops identifying preferred uses for water
9. Conceptual Outline for Implementing Tribal Vision	1,7,10,11,13,16,23,24,25	Continued community discussion to identify possible scenarios and timelines	a. Preliminary outline of engineering and other measures to implement tribal vision

[1] The elements of the tribal water plan are derived from (a) discussions with the NABC, relating the substance of the Northern Arapahoe General Council resolution on development of a water plan; (b) a planning session of the Tribal Water Board held in June 2001 which identified water planning questions and (c) the Wind River Water Code requirements.

[2] Reference to the June 2001 Water Board planning session and the specific question that this project task addresses.

[3] A detailed breakdown of each task's specific activities is on file with the consultant and available for review.

Table 2.1.
List of Water Plan Technical Reports
and Related Products

Drought criteria and procedures
Arapaho Ranch Water Management Plan & Related Ditch Issues
Little Wind Ditch # 5 and Private Ditch Management Plan
Tribal Water Accounting Project: "Draining the Reserve" (Headwaters Effort)
TWE Reorganization & Funding Plan
Ground Water Report & Memorandum
Managing the BIA Irrigation Project
8 Community Meetings
4 Articles
Resolution establishing Arapaho Water Trust
Resolution establishing Conservation Districts
Strategy Paper, meetings & coordination for Headwaters Effort
Development of 4 proposals to advance Tribal water management/protection efforts
2004 TWE Budget & Operating Plan
Report: "Our Water, Our Future: The Wind River Water Plan" Interim Report
"Our Water, Our Future" 58-minute DVD on water at Wind River

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APPENDIX I: Sample Drought Declaration Letter

APPENDIX II: Graphical Representation of Current Drought Conditions
For the Wind River Basin

**TABLE 2-3(c)
DROUGHT INDICATORS
WIND RIVER WATER PLAN**

Indicator	Description	Where Measured	Methods and Tools
Surface Water Flows	Surface water flows are compared to long term averages on annual and seasonal basis, and simultaneously compared to the Tribal water right award on each stream system.	Dinwoody and Bull Lake Creeks; South Fork Little Wind River ab Washakie Dam; LWR near Riverton; Big Wind River at Dubois, ab Bull Lake Creek, and Riverton; Owl Creek below Anchor Dam	Existing gauging stations for each system, many with remote satellite and real time data; measurement frequency is daily during irrigation season.
Snow Pack	Snow water equivalent (SWE), percent of normal snowpack are continuously monitored and compared to long-term averages.	Wind River and Owl Creek Mountains	Existing stations and data analysis provided by NRCS; additional stations or spot monitoring would be helpful. Key dates are March, April and May 1 of each year.
Precipitation via the Standardized Precipitation Index (SPI)	The percent of normal precipitation and precipitation deficit over multiple time scales	Basin-wide measurement	Calculations available through National Weather Service products for any time scale; additional stations would be helpful
Reservoir Storage	The percent of capacity is compared to long term averages for annual and seasonal analysis	Bull Lake Creek; Washakie Reservoir; Pilot Butte, Boysen	Existing monitoring tools and stations currently available
Reclamation Drought Index (RDI) with Surface Water Supply Index (SWSI)	Incorporates snowpack, reservoir storage, precipitation, streamflow and temperature	Wind River Basin; Owl Creek Basin;	Existing analyses available through Bureau of Reclamation
Palmer Drought Severity Index (PDSI)	Evaluates soil moisture departure from normal	Wind River Basin	Existing calculations and maps available though NRCS.
Ground Water Levels	Water levels in key aquifers	Initially, shallow wells located near major stream courses. Others TBD	Field measurement of water well levels, with frequency increased during major water use season.
River Basin Forecasts	Streamflow forecasts for May through September based on snow pack, SWE	Wind River Basin and key tributaries; Owl Creek Drainage	Existing forecasts available from NRCS

SECTION THREE: Potential 2003 Drought-Related Water Management Actions

3.1 Introduction

As this document has demonstrated, responding to drought emergencies requires considerable planning and that a system be in place in advance to address drought-related water management requirements. While some of these systems are in place at Wind River, or have the potential to be in place, many key programs are not. And there is considerable community education that must be undertaken in preparation of any drought-related activities. Hence, comprehensive drought management may not be fully possible during this year's drought.

In anticipation of this reality, information was gathered from Tribal and federal natural resources staff, Tribal agencies and Tribal community members to identify a list of drought-related activities that could be accomplished during 2003. In addition, information was gathered on the potential costs and consequences of such activities for the purpose of identifying actions that could be funded through drought relief or other emergency fund programs in 2003. While the list presented below is not comprehensive and itself requires more discussion, it is a starting point in looking at the potential variety of activities as well as drought-related needs at Wind River.

Table 4. Potential 2003 Drought-Related Actions

Proposed Action	Purpose	Description	Cost Components
LWR base streamflow, May-October	Emergency protection of drinking water and water treatment needs;	minimum instream flow of 27 cfs for 153 days. Approximately 8,400 acre feet.	Results in loss of 3.4 af/ac to BIA irrigation project. Potential crop losses, per/acre value of crop
Rest Trout Creek Watershed	Allow streambank and riparian vegetation recovery; maintain aquatic resources and fishery	No irrigation during 2003 season. No riparian stock grazing during summer season.	Payment for value of crop, stock grown; cost of alternative stock feed arrangements.
Deep Well Development	Provide long-term reliable community water supplies	Minimum 4 deep wells and related infrastructure	Estimated cost \$5 million (@ \$1 m per well), plus infrastructure.
Explore alternative surface water supplies	Increase community water supplies and supply alternatives	Investigate North Fork Popo Agie River	Modification of existing consultant's work; estimated \$10,000; construction costs
Minimum streamflows in the Big Wind River, LWR, Trout Creek, Sage Creek and Crow Creek	Protect fisheries, aquatic life and water quality	minimum instream flow values for each for duration of irrigation season	Variable. Potential crop loss on smaller creeks. Use of future water on Big Wind if implemented.
Rest Certain Rangelands	Allow rangeland recovery	moving stock to better quality range and supplying emergency water supply	Cost per acre for grazing deferment; costs of alternative arrangements—feed and water

WIND RIVER DROUGHT REPORT

FIGURE 3. Drought Decision-Making

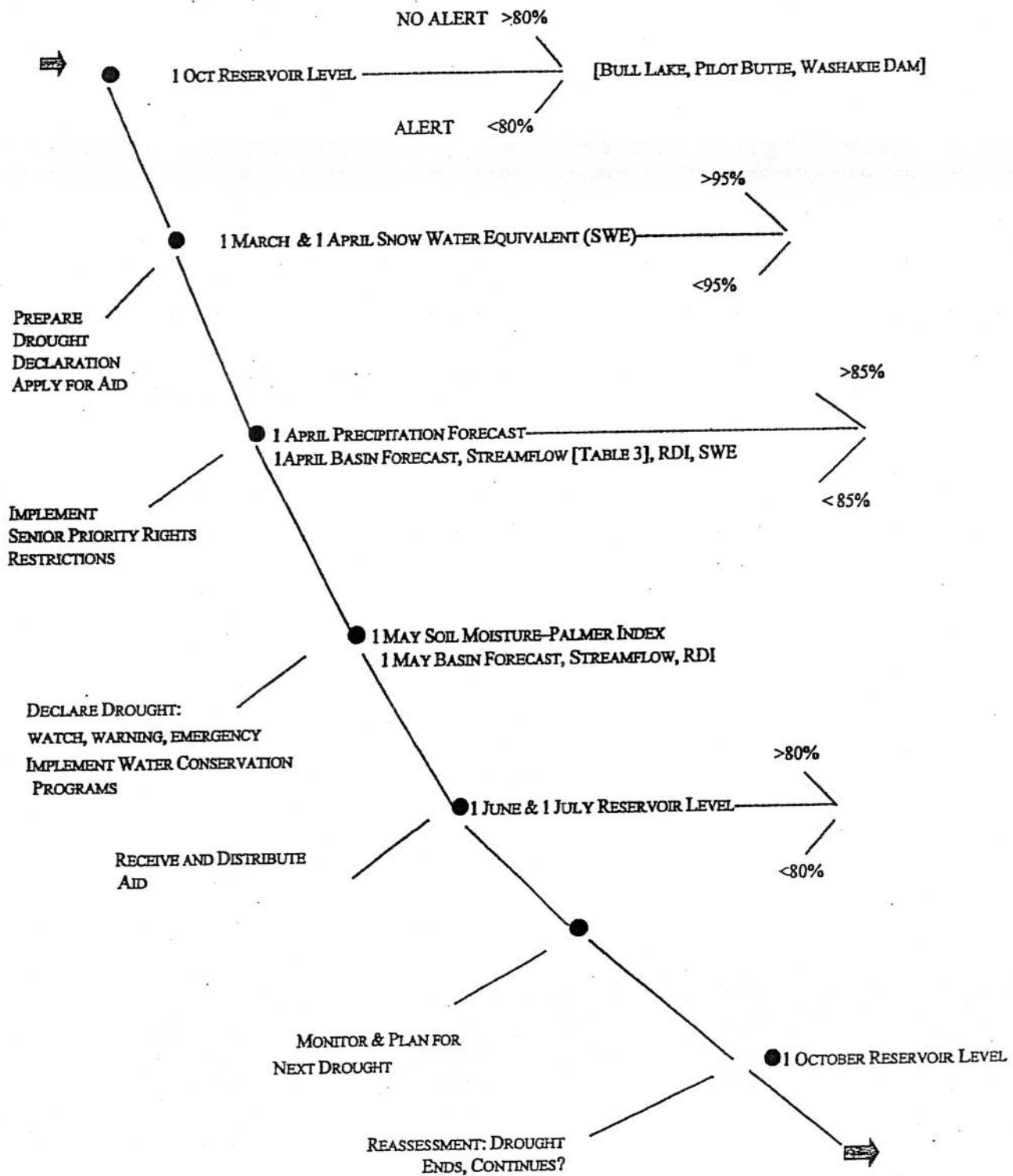


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years, the irrigation season is approximately 153 days, which results in a lesser instantaneous delivery rate. However, during drought, the length of the irrigation season could range from 90 to 120 days. This results in a greater delivery rate over a shorter number of days. Table 1 shows the instantaneous delivery rate required for each ditch system given a 60, 90, 120 and 153 day irrigation period.

In combination with the water supply information, Table 1 suggests that the "trigger point" for regulation of the South Fork of Owl Creek to meet 1868 uses depends on the length of the irrigation season, and ranges from 25 cfs (153 days) to 52 cfs (60 days). This means that if the river approaches these flow levels, the only water in the river is 1868 water—no junior users, including Territorial water rights, can appropriate water. It will be at this point that the Arapaho Ranch will utilize its 1868 water rights only.

Importantly, low flow conditions that require regulation to the 1868 water right occur in the early spring, or very early in the irrigation season. Therefore, the "trigger streamflows" for 1868 water regulation must apply from March of each year and throughout the rest of the irrigation season.

One key management challenge is to deliver 1868 water to each user at the same time, because the nature of the 1868 right is that it has the same priority date—no one 1868 water user has a more senior priority over another. This is the reason why the length of the irrigation season is critical to determining the *availability* of the available of streamflow to meet 1868 demand *simultaneously* for each water user over a selected irrigation period.

3.4 Drought-Related Alternatives for 1868 Water Management

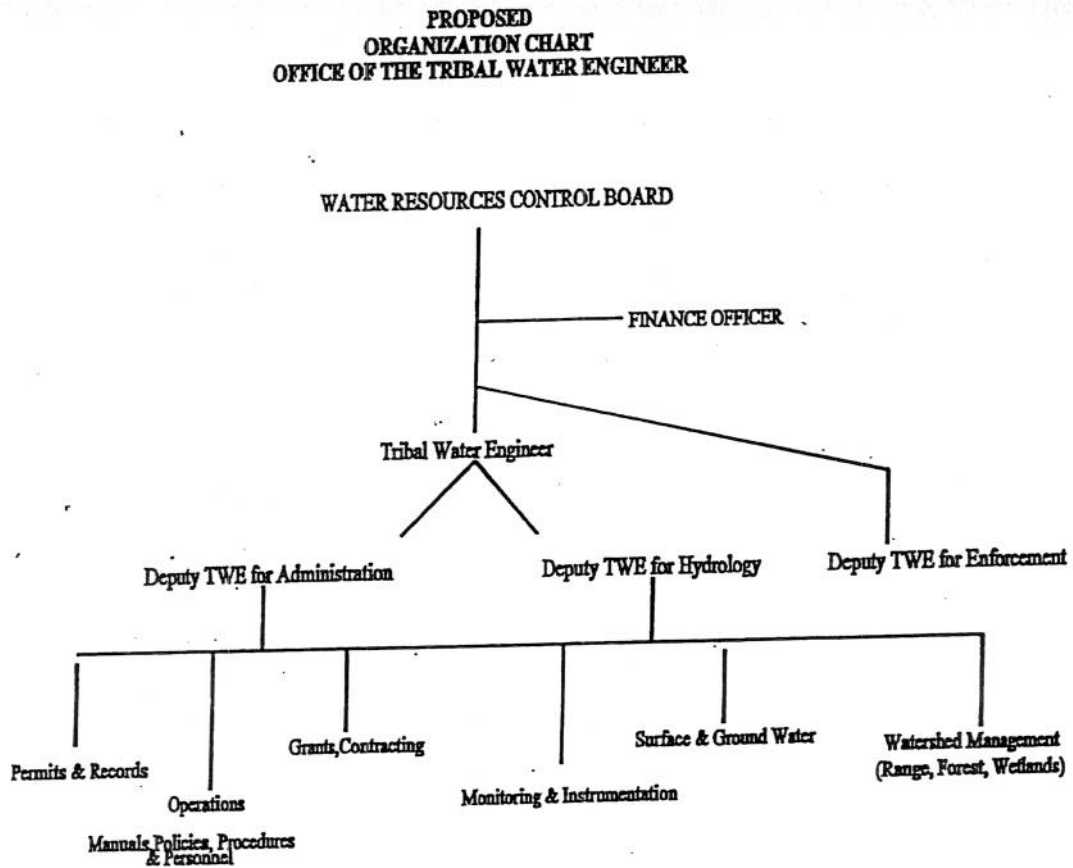
The need for alternatives for water delivery in 2003 results from the expected water shortages in the basin predicted for 2003. Very soon in the irrigation season, the Owl Creek system will only have enough water to satisfy 1868 water users. This "trigger point" streamflows for each of the major tributaries in the Owl Creek drainage is shown in Table 2, and vary according to the length of the irrigation season, which is *both a water supply issue and a preference of the water users in the basin.*⁷

Table 2.6

Table 2. Streamflow Trigger Points for 1868 Water Regulation Owl Creek Basin, 2003	
Tributary System	Streamflow Trigger Point for 1868 Water Regulation [cubic feet per second (cfs)] (varies by length of irrigation season)
Red Creek	6.7 - 17.0
Mud Creek & Tributaries	11.9 - 30.5
South Fork Owl Creek & Owl Creek	24.2 - 51.7

⁷ Part of this plan proposes a TWE/Owl Creek 1868 water user meeting to decide on length of irrigation season.

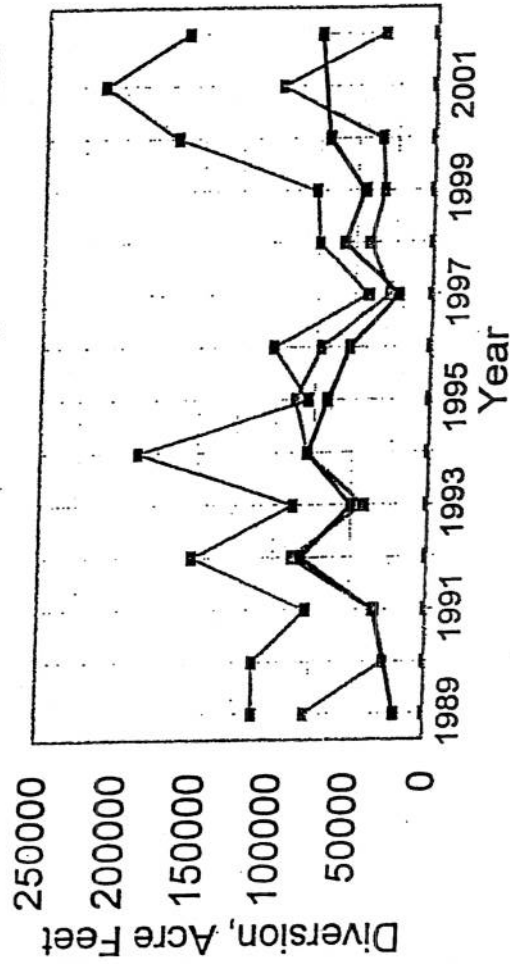
**Figure 2. Proposed Organizational Structure
Office of the Tribal Water Engineer**



**Table 2.7. Summary of Water Diversions
1989-2003**

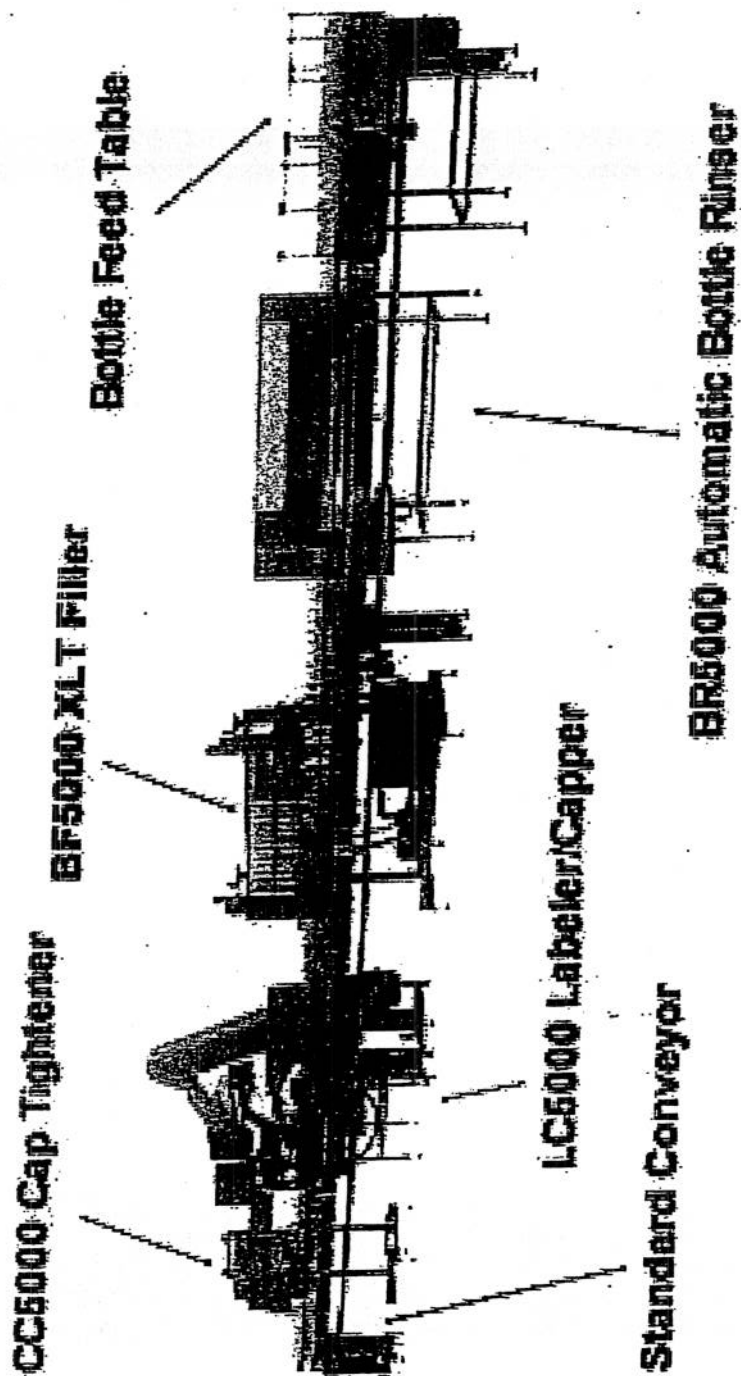
Station 2	Midvale	776,228 acre feet
Station 3	LeClair	652,478 acre feet
Station 4	RVID	1.64 million acre feet

**Wind River Future Water Diversions
at Accounting Stations, 1989-2002**

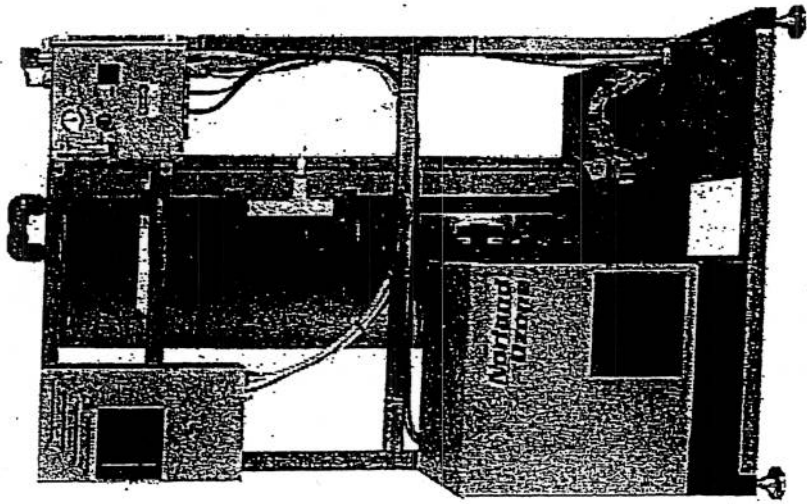


--- 1 --- 2 --- 3 --- 4

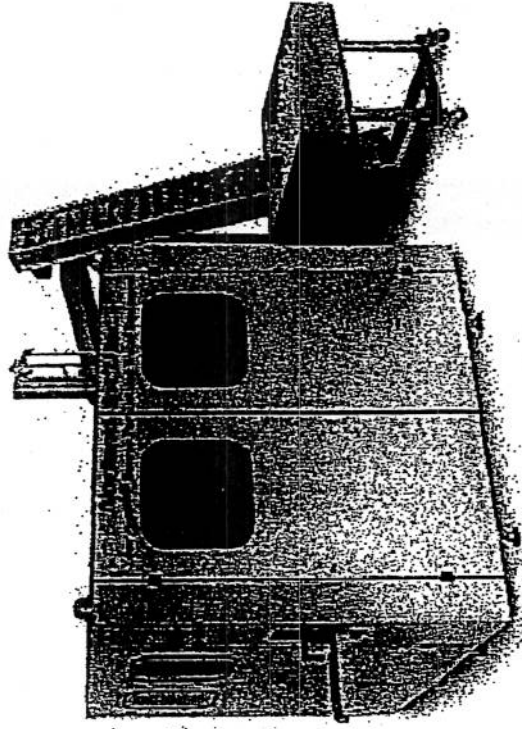
Standard Entry-Level Bottled Water Line



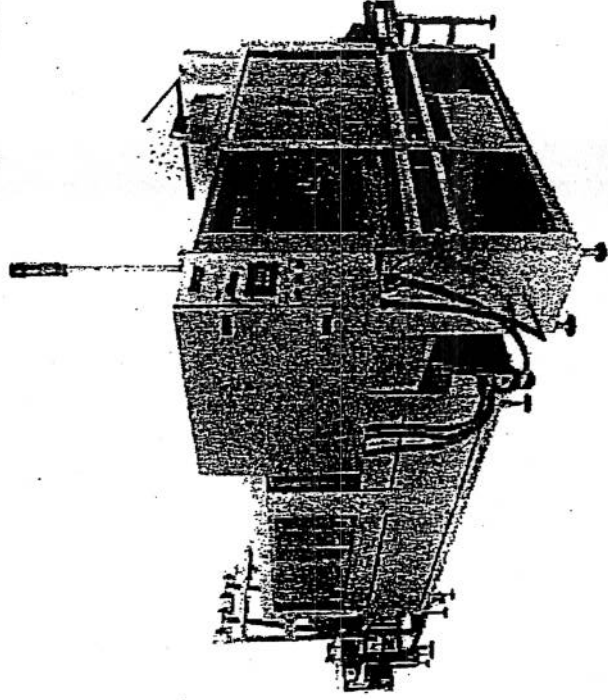
Bottled Water Facility Components



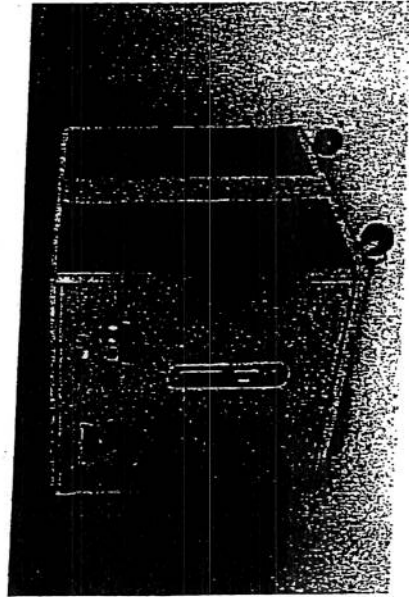
Ozone water treatment



Bottle Maker—multiple shapes & sizes



Bottle washer, filler & capper



Commercial Water Distiller