Ute Mountain Ute Tribe
Water Conservation and Management Plan

Prepared for:

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Table of Acronyms Used in This Report

Acronym	Term
AF	Acre-Feet
ALP	Animas-La Plata
ALPWCD	Animas-La Plata Water Conservancy District
BIA	Bureau of Indian Affairs
CDPHE	Colorado Department of Public Health and Environment
CDWR	Colorado Division of Water Resources
CDOT	Colorado Department of Transportation
cfs	cubic feet per second
CO	Colorado
CWA	Clean Water Act
CWCB	Colorado Water Conservation Board
DNR	Department of Natural Resources
DPR	Definite Plan Report
DWCD	Dolores Water Conservancy District
EPA	Environmental Protection Agency
EPD	Environmental Programs Department
ESA	Endangered Species Act
FRE	Farm and Ranch Enterprise
gpcpd	gallons per capita per day
gpm	gallons per minute
IHS	Indian Health Service
ISF	Instream Flow
LPWCD	La Plata Water Conservancy District
LPWWA	La Plata West Water Authority
M&I	Municipal and Industrial
MCD	Mancos Conservation District
MVIC	Montezuma Valley Irrigation Company
NEPA	National Environmental Policy Act
NM	New Mexico
NRCS	Natural Resources Conservation Service
OM&R	Operations, Maintenance and Repairs
OTRW	Outstanding Tribal Resource Waters
PVC	Polyvinyl Chloride
SAS	Space Available Storage
SJRIP	San Juan River Basin Recovery Implementation Plan
SWCD	Southwestern Water Conservation District
THPO	Tribal Historical Preservation Office
TNC	The Nature Conservancy
UMUR	Ute Mountain Ute Reservation
USACE	United States Army Corps of Engineers
USBR	United States Bureau of Reclamation
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WCA	Weeminuche Construction Authority
WWE	Wright Water Engineers, Inc.

Ute Mountain Ute Tribe Water Conservation Plan

EXECUTIVE SUMMARY

Wright Water Engineers (WWE) has prepared this Water Conservation and Management Plan (Plan) for the Ute Mountain Ute Tribe (Tribe) to serve as a comprehensive guidance document that will assist the Tribe to accomplish its long-term water resources goals. Information provided by this Plan may also guide future land use and economic development decisions; however, this Plan is not intended to serve as a land use or economic development plan.

The Plan inventories the Settlement Agreement water rights and off-Reservation water rights in Colorado and summarizes hydrologic and geologic characteristics on the Ute Mountain Ute Reservation (UMUR) and in nearby basins. WWE reviewed existing available information on the Tribe's current and conceptual future development projects for this Plan. WWE calculated water demands associated with the Tribe's municipal, industrial, agricultural, ranching, environmental and traditional practices. The comparison of the water inventory to the water demands shows that the Tribe's agricultural uses, including the Farm and Ranch Enterprise, are water-short and dependent on a single source, the Dolores Project. The Tribe has a significant municipal and industrial (M&I) water supply source in the Animas – La Plata Project; further land use and economic development planning is needed to evaluate options for capitalizing on this water resource. Regional factors are a consideration in evaluating future Tribal water uses and play an important role in collaborative opportunities for water development.

The Tribe's primary goals for water resource conservation and management are:

- Create and maintain an ongoing strategy to meet water resources needs and opportunities based on the financial and managerial resources of the Tribe.
- Improve coordination and water resources management across Tribal departments.
- Preserve and enhance culturally significant water sources and supplies as well as ecosystem health, particularly in periods of drought.

- Develop reliable, diversified and sustainable water supplies for Tribal needs. Water supplies need to be sustainable and resilient during drought and climate change. While reducing costs to the Tribe for procurement and maintenance of the water supplies.

- Provide education to Tribal members on water resources issues relevant to the Tribe as a whole and to individual members.

- Work with regional stakeholders to develop mutually beneficial water projects.

The Plan is a “living document” that will continue to provide guidance over time through updates as the Tribe develops its water resources, land use and economic development plans and projects.

High Priority Candidate Measures

Measure Number	Candidate Measure	Description of Candidate Measure	Section
1	Create Water Resources Manager position	Create a staff position (or multiple positions) that has a primary focus and responsibility of water resource management, coordination across Tribal departments, and facilitating programs that educate and engage Tribal members on a broad range of current and long-term Tribal water issues. This position would also identify areas of competing water demands for limited supplies so that policy decisions can be made, as needed.	Overall Management
2	Continue to seek funding	Determine potential funding sources. Pursue and obtain funding, including grant sources, for implementation of candidate measures.	Overall Management
3	Develop a process for evaluation of water supply requests	Establish a decision-making process for evaluating requests to provide water supply for Tribal and non-Tribal users on the UMUR. This would identify the legal and physical supply available and legal and cost considerations in providing the water supply for different types of requests.	Overall Management
8	Municipal Water Supply System Master Plan	Develop a Water Supply System Master Plan for the Municipal Water Supply System on the Colorado portion of the UMUR to ensure the system meets current water demands, near term growth including the Casino expansion and new residential housing, and long-term water demands The Master Plan includes: • Inventory of existing infrastructure including water transmission lines, storage tanks, and distribution system for information including age, condition, capacity, etc. • Hydraulic study and engineering of existing system and assess pressure zones. • Analysis of current and future water demands with available sources and a review of water supply source alternatives. • Capital Improvement Plan to schedule and provide cost opinion for infrastructure improvement needs. • Financial plan, potentially including a rate study, to support ongoing and future operations, maintenance and replacement needs as well as needed capital improvements.	Municipal and Industrial including ALP Project Uses
9	Water Efficiency Plan	Develop a Water Efficiency Plan for the municipal water supply system. A typical Water Efficiency Plan includes a summary of infrastructure, demands, supplies, and existing management methods and develops feasible water efficiency measures as well as preliminary cost estimates for implementation. A Water Efficiency Plan would further evaluate measures identified in this plan including education and outreach, data collection and analysis, leak detection, metering, calibration, and others.	Municipal and Industrial including ALP Project Uses
15	Continue to collaborate with Dolores Water Conservancy District (DWCD)	Maintain a good working relationship with DWCD and other stakeholders to facilitate obtaining additional municipal & industrial water from the Dolores Project as needed. Work with DWCD to implement hydropower project at Energy Dissipation Structure. Public Works Team to Tour the DWCD facility and attend board meetings.	Municipal and Industrial including ALP Project Uses
21	Develop ALP Project water supply for potable water delivery with La Plata West Water Authority (LPWWA)	Coordinate with La Plata West Water Authority (LPWWA) to develop potable water supplies for the eastern part of the UMUR in Colorado.	Municipal and Industrial including ALP Project Uses
22	Identify future infrastructure needs	Evaluate water demands and ALP water delivery options associated with long-term land use and economic development plans. This may include the following steps: • Evaluate pipeline options to deliver ALP Project waters to uses in the La Plata River Basin, either on or off the UMUR. This may include a fill station, storage, or domestic service lines and may be in partnership with the LPWWA or other regional entities. • Explore the potential to bring ALP Project waters to the Mancos River Basin. This measure would evaluate the feasibility of directly delivering ALP Project water into the Mancos River, working with regional stakeholders to increase storage in the Mancos River basin, and identifying any potential exchange opportunities. For example, concepts include enlargement of Jackson Gulch Reservoir, exchanging leases for local municipal and industrial uses, and stream enhancements. • Evaluate the feasibility of "wheeling" the Tribe's ALP Project waters through the Animas River and San Juan River to be diverted by the Tribe at the Four Corners for municipal and industrial uses within the legal and legislative considerations for the Tribe's ALP waters. • Explore opportunities for a lease to exchange a portion of the Tribe's ALP Project allocation with other water users in the San Juan River in New Mexico within the legal and legislative considerations for the Tribe's ALP waters. •Collaborate with existing state and federal efforts to develop marketing opportunities within the framework of the Colorado River. This may include forbearance such as fallowing or intentionally created surplus, water banking, or leasing. The Tribe is currently working with the USBR on a study of Tribal water rights in the Colorado River. The Tribe is also working with the CWCB on Colorado River Compact evaluations.	Municipal and Industrial including ALP Project Uses
26	Develop new water supply from Dolores Project	• Continue to lease additional water from the Dolores Project, as available. • Participate in the "Optimization Study." • Work with other Dolores Project stakeholders to implement efficiency projects that would result in "saved water" that could be used by the Tribe. • Develop a voluntary water transfer bank with other Dolores Project stakeholders. • Participate in discussions with other Dolores Project stakeholders on increasing storage in the basin. • Assess with USBR contractual and regulatory constraints to implement water efficiency projects.	Agriculture - Farm and Ranch Enterprise

33	Improvements to Mancos Creek Farm Ditch	Mancos Creek Farm Ditch conveyance improvements and ongoing operation and maintenance of Mancos Creek Farm. Address chlorination issue of newly provided water to the 8 homes in the Mancos Creek Farm Ditch area.	Agriculture - Demonstration Farm and Mancos Creek Farm
38	Evaluate potential to increase forage through range management and adaptation	Evaluate the feasibility of improving existing range to provide more forage under changing climate conditions. Conduct a study of Climate Change impacts (i.e. changes in vegetation type over recent drought period) and an evaluation of adaptation methods including cross-fencing, seeding, temporary water supply during establishment of new vegetation, sustainable number of livestock, protection of cottonwood and other species and other appropriate adaptive management techniques.	Agriculture - Livestock
39	Protect off-Reservation Rights	Protect the Tribe's off-Reservation water rights by continuing to divert the water and put it to decreed beneficial use in the decreed place of use, to the full extent feasible.	Tribal Ranches
40	Pinecrest Ranch measures	• Perform regular on-farm maintenance, ditch repair, headgate replacement, improve irrigation delivery and equipment, repair and maintenance of stock ponds, distributing livestock across drier areas. • Evaluate, and if preferable, file for an Alternate Point of Diversion water right for diverting water via pump in Willow Creek to irrigate the east side of the Ranch. • Integrate the water supply requirements for the sage grouse management plan into agricultural planning.	Tribal Ranches
41	Thompson Ranch (aka Cherry Creek Ranch) measures	Includes the Covey, Pyle and Safley parcels • Perform regular on-farm maintenance of irrigation structures. • Fix the siphon on the Roach Property. • Work with other irrigators to improve diversion and delivery of the Eppich Lateral. • Continued participation in the Long Hollow Reservoir project to increase water supply availability.	Tribal Ranches
47	Inventory culturally significant water sources	Develop a confidential internal inventory of culturally significant water sources that could include parameters such as GPS location, flow, etc.	Environmental and Traditional Purposes
50	Implement projects that will protect and enhance culturally and environmentally important water resources	•Exercise water rights in a way that will increase streamflows through areas of valuable riparian habitat. •Collaborate with regional stakeholders on projects to improve streamflows in riparian areas, such as the Mancos Canyon. For example, evaluate feasibility of creating wetland banks for Tribal or non-Tribal users. •Establish a nursery for riparian species (i.e. willow and cottonwood) used for traditional purposes. •Develop and protect a water supply for spring-fed wetlands in Weber Canyon.	Environmental and Traditional Purposes
52	Develop Tribal Law and policy to implement groundwater protection measures	Based on the existing Groundwater Protection Plan, develop Tribal regulations that protect water quality. Regulations may address appropriate types of use of aquifers as well as measures to prevent impacts from specific activities.	Environmental and Traditional Purposes
55	Municipal and Industrial Water Supply System Master Plan	Develop a Water Supply System Master Plan for the Municipal Water Supply System on the Utah portion of the UMUR to ensure the system meets current demands and future growth and addresses water quality concerns. The Master Plan includes: • Inventory of existing infrastructure including water transmission lines, storage tanks, and distribution system for information including age, condition, capacity, etc. • Hydraulic study and engineering of existing system and assess pressure zones. • Analysis of current and future water demands with available sources and a review of water supply source alternatives. Alternatives include the feasibility of connecting to the City of Blanding or Recapture Reservoir M&I pipeline. • Based on inventory and sources, determine if a Certified Operator is needed for the system. • Capital Improvement Plan to schedule and provide cost opinion for infrastructure improvement needs. • Financial plan, potentially including a rate study, to support ongoing and future operations, maintenance and replacement needs as well as needed capital improvements.	New Mexico and Utah Portion of the Reservation
56	Evaluate and quantify all surface water rights and claims in Utah	Study and evaluate Utah water rights and claims to verify information on ownership and water right history, quantify water claims for future adjudication in Utah.	New Mexico and Utah Portion of the Reservation
57	Evaluate and quantify all surface water rights and claims in New Mexico	Study and evaluate New Mexico water rights and claims to surface water, tributary groundwater, and non-tributary groundwater in order to verify information on ownership and water right history, quantify claims for future adjudication in New Mexico.	New Mexico and Utah Portion of the Reservation

1.0 INTRODUCTION

This Plan was funded by the U.S. Bureau of Reclamation (USBR), the Bureau of Indian Affairs (BIA), the Colorado Water Conservation Board (CWCB) Statewide Water Supply Reserve Account, the CWCB Southwest Basin Roundtable Water Supply Reserve Account, and the Tribe.

This Plan focuses primarily on the Tribe's reserved water rights (Reserved Rights) and Federal Project water allocations associated with the portion of the Reservation located in the State of Colorado. The Tribe completed a Water Management Plan – Phase I (Wright Water Engineers, Inc, 2006) focusing on the water resources of the off-Reservation Tribal Ranches in Colorado. Tribal water claims are not adjudicated in New Mexico or Utah at the time of writing this report. Additional study is recommended to fully evaluate Tribal water resources and development in the New Mexico and Utah portions of the UMUR.

This Plan provides an overall survey of the Tribe's existing and future water demands, water resources and water management activities. Specifically, the Plan summarizes current and future water supply sources and opportunities, estimates water demands for the next 50 years based on existing information and available Tribal Planning documents, and develops Candidate Measures to address current water resource management needs and identify areas that require further planning and study. As such, this document provides information to guide future land use and economic development decisions, but is not intended to replace or serve as a land use or economic development plan.

1.1 Description of the Ute Mountain Ute Tribe

The Tribe is a federally recognized tribe with a current enrollment of 2,112 members. The Ute Mountain Ute Reservation (UMUR) is located in the Four Corners area and within the states of Colorado, New Mexico and Utah (see Map 1). Note that the boundary of the UMUR is approximate in all maps incorporated into this Plan. The Tribe has requested a cadastral survey to confirm portions of the boundary as needed.

The portion of the UMUR located in southwestern Colorado and northwestern New Mexico (CO and NM UMUR) consists of approximately 880 square miles (or approximately 565,000 acres). The population of the Colorado portion of the UMUR is 1,666 residents, most of whom are Tribal

members (Indian Health Service, 2013). Towaoc, CO is the main Tribal population center and location of the Tribal headquarters. There are many trust lands and allotment parcels in Utah totaling approximately 22 square miles (or approximately 14,000 acres). These lands include the Tribal community of White Mesa, which has approximately 350 residents. The Tribe also owns lands outside the UMUR, referred to as Tribal Ranches, in Colorado and Utah. All of the Tribe's lands with approximate boundaries are shown on Map 1.

1.2 Objectives of Plan

WWE and the Tribe prepared this Plan with input from Tribal Council, Tribal staff, and Tribal Members at-large as well as regional stakeholders. The Plan integrates a range of Tribal water needs and identifies existing and potential water conservation and management measures resources in order to provide comprehensive planning guidance. The Plan also works to identify conservation and management measures that provide an opportunity for partnering with other stakeholders in the region. While the Plan includes basic information on the Tribe's water resources and demands in New Mexico and Utah, the main focus of the Plan is the Tribe's opportunities within Colorado.

This Plan builds upon several existing studies and dozens of references including, but not limited to, the 2006 Water Management Plan – Phase I, the 2013 Indian Health Service Report, and the 2012 Harris Water Engineering Draft Report. A complete list of reference documents is provided in the References Consulted of this document.

2.0 INVENTORY OF TRIBAL WATER RESOURCES

The Tribe's water resources are influenced by water rights, federal project allocations and operations, and the hydrologic, geographic, and geologic characteristics of the region.

2.1 Physical Characteristics of Tribal Lands

2.1.1 Colorado and New Mexico Reservation

The CO and NM UMUR, located in southwest Colorado and northwest New Mexico, is characterized by open arid lands with increasingly deep canyons and mesas in its eastern and southern portion. Sleeping Ute Mountain is located in the northwest portion of the CO and NM

UMUR. The elevation on the CO and NM UMUR ranges from 5,000 feet near the San Juan River at the Four Corners to almost 10,000 feet at the summit of Sleeping Ute Mountain.

Precipitation ranges from 25 inches per year at the highest elevation (summit of Sleeping Ute Mountain) to approximately 8 inches per year at the lowest point on the CO and NM UMUR near the Four Corners. Similarly, evaporation rate ranges from less than 55 inches per year at Sleeping Ute Mountain to over 60 inches per year near the Four Corners (See Map 2).

The CO and NM UMUR is located in the Upper San Juan River Basin, and includes portions of the Mancos River, La Plata River, McElmo Creek, and Navajo Wash watersheds (See Map 2). The Tribe derives significant portions of its water resources from river basins located off-Reservation, specifically the Animas River and the Dolores River as discussed in Section 2.2. Table 1 summarizes the average, maximum, and minimum streamflow in these rivers.

Groundwater currently provides a limited but important water supply for Tribal purposes. Most wells are associated with livestock use while a limited number are associated with domestic use. The majority of wells on the UMUR are completed in the Dakota Sandstone, as the Dakota Sandstone Formation in areas south of Sleeping Ute Mountain is the primary regional aquifer for the CO and NM UMUR (see Map 3).

Locally, the Dakota Aquifer is recharged by precipitation occurring at the outcrop on Sleeping Ute Mountain, which receives approximately 20-25 inches of precipitation annually. From this mountainous recharge area of approximately 7,000 feet in elevation, the groundwater flows slowly through the confined Dakota Aquifer down-dip, generally south-southwest, to the San Juan River near Four Corners where the Dakota Formation outcrops at an elevation of approximately 4,800 feet and small seeps drain from the formation. Due to the difference in elevation in the confined aquifer between the recharge zone and the southern outcrop, the Dakota Aquifer has the potential for artesian pressure (i.e. adequate pressure to bring water to surface) in the area south of Sleeping Ute Mountain.

Where the Dakota Formation is composed of fine grained sand that is firmly cemented, the formation may only produce 2-3 gallons per minute (gpm) of water. The coarser grained areas are more likely to produce larger yields of up to 20 gpm (Irwin, 1966). It is difficult to determine

where coarser grained areas are located within the Dakota Aquifer due to the heterogeneous nature of the Dakota Formation. The Mancos Shale caps the Dakota Formation, creating a regional confining unit. The positional relationship to adjacent confining units, structural geometry and geologic composition of the Dakota Aquifer make it the most practical aquifer for groundwater development within the Colorado portion of the UMUR.

2.1.2 Utah Lands

The Tribe's land around White Mesa is a flat table land surrounded by canyon country. The Tribe also holds lands at the mouth of Allen Canyon and its tributary, which have typical large canyon topography (see Map 4). The Tribe's lands in Utah are mostly characterized by pinyon-juniper woodlands, sagebrush shrublands, and bedrock canyons, though in a few areas forest vegetation types are present. The annual precipitation on the Tribe's Utah lands is approximately 13 inches per year.

According to the well log for the existing water supply well in White Mesa, the water-bearing formations present in White Mesa include the Bluff Formation, Entrada Sandstone and the Navajo Sandstone. Based on information from Tribal staff, this water supply source has water quality issues, including arsenic, sulfides, iron and manganese at levels that are close to requiring treatment before potable use.

2.2 Tribal Water Rights and Project Allocations in Colorado

In Colorado, the Tribe has federally Reserved Rights pursuant to the Colorado Ute Indian Water Rights Final Settlement Agreement 1986 (Settlement Agreement). The Settlement Agreement of the federal Reserved Rights claims includes allocations from the Dolores Project and the Animas-La Plata (ALP) Project. The Tribe's Reserved Rights in New Mexico and Utah have not yet been adjudicated. The Tribe also holds off-Reservation water rights in Utah and Colorado associated with its Tribal Ranches.

2.2.1 Tribal Reserved Rights

The Tribe's Reserved Rights for surface water and tributary groundwater for the UMUR in Colorado were decreed in the Settlement Agreement and the associated Consent Decrees. The

Tribe's Reserved Rights generally (with some exceptions) have a priority date of March 2, 1868, which is associated with the creation of the UMUR and is senior to most off-Reservation water rights. The Reserved Rights are federal rights and are "permanent and cannot be lost as a result of change of use, forfeiture, abandonment, or nonuse" (Animas River Consent Decree, 1991). Some of the Reserved Rights were subordinated to existing non-Tribal users in the Consent Decrees as part of the Settlement Agreement. The Consent Decrees include all of the existing uses at the time of the decree in each watershed (Mancos River**,** La Plata River, McElmo Creek, Dolores River and the San Juan River) and specified additional water that could be developed by the Tribe for limited future uses (see Tables 2A, 2B, 2C). The existing uses are decreed to domestic wells, livestock wells, reservoirs, springs, catchment basins, and irrigation ditches. See Table 2A for a summary of the water rights by structure type in each basin. A detailed table of all the existing use structures is included in Appendix A. All of the existing Reserved Rights are shown on Map 5. The current condition and physical yield of structures may vary from what was adjudicated in the Consent Decree.

The Consent Decrees also adjudicated general diversion rights for uses on the Colorado portion of the UMUR. This includes diversions from the Mancos River, Navajo Wash, McElmo Creek and the San Juan River specifically, as well as UMUR-wide development for oil and gas development, tributary groundwater and road work. The water right for tributary groundwater was decreed for domestic and livestock wells for up to 350 acre-feet (AF) in McElmo Basin and 1,500 AF across the Colorado portion of the UMUR. All of these general diversion rights are summarized in Table 2B.

2.2.2 Tribal Federal Project Allocations

The Settlement Agreement and Consent Decrees included Tribal allocations in the Dolores Project and the ALP Project as a part of the settlement of the Tribe's water rights claims on rivers including on the Mancos River, Animas River and La Plata River, as shown in Table 2C. The ALP Project is supplied from the Animas River, which is within the Upper San Juan Basin. The Dolores Project allocation provides water to the Tribe from the Dolores River Basin, which is part of the Upper Colorado River watershed.

2.2.2.1 Dolores Project

The Dolores Project, which reached final completion in September 1998, provides water for irrigation, municipal, industrial, recreation, fish and wildlife, and other beneficial purposes in southwest Colorado, according to its decree, Civil Action No. 967. The Dolores Project water is stored in McPhee Reservoir located on the Dolores River and delivered transbasin to lands in the San Juan River Basin (see Map 5). The USBR built the Dolores Project, including McPhee Reservoir, with a total capacity of approximately 381,000 AF, of which approximately 229,000 AF is active capacity according to the USBR website (see Figure 1). The USBR retains ownership and regulation of the Dolores Project, while the Dolores Water Conservancy District (DWCD) administers the Dolores Project.

Since completion of the Definite Plan Report (DPR), the USBR and other stakeholders have made adjustments to the project allocations and project operations, including changes to the downstream water rights allocation, introduction of the Paradox Salinity Unit environmental mitigation, creation of Class B stocks, and others. The original DPR allocation and the current allocation is provided in Table 3.

The Tribe's current allocation in the Dolores Project totals 25,517 AF per year, consisting of 1,000 AF per year for municipal uses, 800 AF per year for fish and wildlife purposes, and 23,717 AF per year for irrigation. Table 3 and Figure 2 shows the Tribe's current allocation in the Dolores Project by type of use.

The Dolores Project irrigation deliveries differ from the Project allocation based on available water supply and shortage sharing in the Dolores Project. Historically, in dry years deliveries relied heavily on water storage, while in other years the Dolores Project stored more water than it released. The total annual water deliveries for irrigation from the Dolores Project for the period of 2000 through 2013 are shown in Table 4. The Tribal agricultural water deliveries average approximately 23,000 AF per year over this period. The water deliveries were drastically reduced in very dry years of 2002 to 6,290 AF and in 2013 to 9,119 AF. These water deliveries include water that the Tribe leases from other stakeholders above and beyond the Tribe's current allocation in the Dolores Project.

2.2.2.2 Animas-La Plata Project

The ALP Project includes Lake Nighthorse, an off-channel reservoir that stores water diverted from the Animas River. The reservoir has an active storage capacity of approximately 90,000 AF and a total storage capacity of approximately 120,000 AF based on USBR information, and was first filled in 2011.

The ALP Project allocations are shown in Table 5 and Figure 3 shows project allocations on an average annual depletion basis. The Tribe's Project allocation is an annual average depletion of 16,525 AF. The total ALP Project may have an average annual depletion of 57,100 AF per year, according to the Colorado Ute Settlement Act Amendments of 2000. Shortages in the ALP Project water supply are generally allocated among the ALP Project participants in proportion to their Statutory Water Allocations, taking into account the needs of all ALP Project participants and the desirability of securing a firm, reliable water supply for present and future use by ALP Project participants.

WWE has not reviewed the ALP litigation settlement document at the time of writing this report.

2.2.3 Off-Reservation Water Rights in Colorado

The Tribe has acquired off-Reservation water rights associated with its Tribal Ranches. These water rights have a priority based on their dates of state adjudication and appropriation. The 2006 Water Resource Management Plan – Phase I identified water rights appurtenant to the Tribe's Ranches. Table 6 shows the off-Reservation water rights owned by the Tribe associated with the five Tribal Ranches located in Colorado. The Tribe's Department of Natural Resources (DNR) oversees Tribal Ranch management, including the diversion and beneficial use of off-Reservation water rights.

The Tribe recently acquired rights to storage space in the new Long Hollow Reservoir Project through an agreement with the La Plata Water Conservancy District (LPWCD). Long Hollow Reservoir is located in the La Plata River basin, east of the UMUR (see Map 5). This storage space may facilitate the protection, movement, development, and use of existing Tribal water supplies. The Long Hollow Reservoir project aims to "facilitate administration of the La Plata River Compact between Colorado and New Mexico and to optimize the use of decreed irrigation water

rights by Tribal and non-Tribal parties" (Ute Mountain Ute Tribal Council, 2012). The Long Hollow Reservoir storage rights will allow the Tribe to store both off-Reservation water rights and its ALP Project allocations. Long Hollow Reservoir was completed in 2014, has a capacity of approximately 5,300 AF, and likely will take several years to fill. The Tribe's financial investment in the project and its agreement with LPWCD grants the Tribe the first 800 AF of Space Available Storage (SAS) for agricultural and M&I water in the reservoir, with limited or no operations and maintenance costs, pursuant to the terms of the agreement. The Tribe may obtain additional water storage beyond the 800 AF of SAS on an equal basis with other non-Tribal entities, with no obligation to fund additional Project construction costs. The Tribe may also pursue expansion of storage capacity in the reservoir in the future, at its own expense. Planning documents for the Long Hollow Reservoir project show a moderate increase in the availability of irrigation water supplies to participants in the project, which would include the Tribal Ranches.

2.3 Tribal Water Resources in New Mexico and Utah

The Tribe is currently litigating its Federal Reserved Rights associated with the portion of the UMUR in New Mexico. To support this process, the Tribe is preparing information for the quantification of its water rights in New Mexico.

The Tribe has not yet litigated or quantified its Federal Reserved Rights for the portion of the UMUR in Utah (see Map 4 and Table 7).

The Tribe holds several water right certificates from the State of Utah. The State of Utah is undergoing the adjudication process in most basins. The Tribe's water right number 09-197 was issued by the State of Utah for 2.0 cubic feet per second (cfs) of groundwater. This water right is associated with the groundwater wells which provide a municipal supply to the White Mesa community. Based on the sanitary survey conducted by Indian Health Service (IHS) in White Mesa in 2014, the average daily water use on the White Mesa water supply system is 12,708 gallons per day. The system relies on two wells, one that has a maximum pumping rate of 80 gpm and one with a maximum pumping rate of 98 gpm. Work to maintain and improve this water supply is underway.

In 1924, 1925, and 1933, the U.S. Indian Services filed water rights on behalf of the Ute Indians for diversions from Allen Canyon Creek, Hammond Canyon Creek, and Cottonwood Creek. These water rights total 4.62 cfs for the irrigation of approximately 144 acres (see Table 7 and Map 4). See Appendix B for all Utah State water rights permits.

The Tribe also holds shares in the Blanding Irrigation Company, which is delivered to the Tribe's Perkins Ranch lands via pipeline. The Perkins Ranch is included in the discussion of all of the Tribal Ranches in Section 4.4.

3.0 WATER DEMANDS

The Tribe's water demands include municipal uses, commercial development, industrial purposes, oil and gas development, agriculture, ranching, and Tribal goals for river system health, habitat and traditional purposes. WWE evaluated the current and potential future demands for each of these categories.

3.1 Municipal Water Demands (Towaoc Municipal Water System)

The Tribe has a municipal water supply system on the Colorado portion of the UMUR that uses the Tribe's municipal water allocation in the Dolores Project (see Section 2.2.2.1). The municipal water supply is delivered from McPhee Reservoir via the Dolores Tunnel to the City of Cortez's Water Treatment Plant (see Map 6). After treatment, the City of Cortez delivers the Tribe's water via a 21-mile ductile iron pipeline to Towaoc. The pipeline has a 12-inch diameter section that is 6.3 miles long and a 14-inch diameter section that is 14.4 miles long. Based on the maximum flow at the lower tank in Towaoc, IHS calculated that the maximum flow rate of the Cortez-Towaoc pipeline is approximately 2.9 cfs, which is consistent with USBR data (USBR, 2014). Based on this rate, WWE calculated that the pipeline could deliver a maximum of approximately 2,000 AF on a constant, year-round basis. To meet peak water demands and future growth, additional storage or improvements to delivery within the Tribe's municipal supply system may be needed.

The Tribe's current water demands from the municipal and light industrial users of its potable water supply system do not exceed the Tribe's 1,000 AF per year allocation in the Dolores Project. In recent years, the Tribe has used an average of approximately 760 AF per year of its municipal

allocation, and a maximum of 900 AF in 2011. The range in the municipal water use data is based on a difference in numbers provided by the DWCD and the City of Cortez.

Based on the data from 2006 through 2012, the peak demands occur during the summer, which corresponds with high residential and park irrigation demands. Peak month water use in July ranged from approximately 74 AF per month (24 million gallons per month) to 120 AF per month (39 million gallons per month). The lowest month of usage is November, which ranges from approximately 28 AF per month (9 million gallons per month) to 43 AF per month (14 million gallons per month). Note that the historical data may have inaccuracies due to poor meter calibration and leakage. In 2010, a major leak repair reduced losses by approximately 2.25 million gallons per year (Indian Health Service, 2013); subsequent minor repairs continue to reduce system losses and improve accuracy of residential water demand data. See Table 4 for the volume of Dolores Project water delivered to UMUT Farm and Ranch Enterprise and M&I water delivered to Towaoc, CO.

Municipal Water Use – Current Water Demands

The Tribe has studied the municipal water demands in order to provide information on the potential need for additional supplies (Harris Water Engineering, 2012). Additionally, the IHS is evaluating the Tribe's municipal water use in order to plan for necessary wastewater treatment infrastructure and capacity improvements (Indian Health Service, 2013). The IHS estimates the 2013 population on the Colorado portion of the UMUR as 1,666 people in 529 households. The calculated current indoor and outdoor municipal water use is approximately 275 gallons per day per capita (gpdpc). Using data from the wastewater treatment plant, the indoor-only water use per capita is approximately 111 gpdpc. (Indian Health Service, 2013). WWE compared these municipal water demand rates to other rates including values determined for the southwest region of Colorado (Colorado Water Conservation Board, 2010), values from the United States Geological Survey (USGS) 2005 water census, an Environmental Protection Agency (EPA) design manual, La Plata County regulations, Colorado Department of Public Health and Environment (CDPHE) guidelines, and Colorado Division of Water Resources (CDWR) well permit guidance. Overall, the Tribe's water use rate of 275 gpdpc for indoor and outdoor uses and 111 gpdpc for indoor use only are at

the high end of the range of comparable rates. The high water use rate may be related to high water use by individuals, leaky fixtures, unmetered uses, and delivery system losses.

The municipal water supply system also serves the Tribe's government offices, the Ute Mountain Casino, Hotel and Resort (Casino), and the Weeminuche Construction Authority (WCA) offices. These government and commercial users are metered and were not included in the municipal water use estimate. Irrigation of the ball fields and cemetery are not currently metered and may affect the estimated municipal water demands. The water demands for municipal, irrigation, commercial and government uses should be considered together as they rely on the same water supply source and infrastructure.

Municipal Water Use - Future Demands

The rate of 275 gpdpc and a population growth rate of 1.5 percent, which is based on census data from 1990 to 2010, are used to project future municipal water demands (Indian Health Service, 2013). Using these parameters and IHS population data, WWE estimates 3,435 residents on the UMUR in Colorado by the year 2064 with a municipal water demand of approximately 1,058 AF per year. A graph illustrating projected growth in population and associated water demand is provided in Figure 4.

The Tribe is currently working to implement at least 200 new housing units on the CO portion of the UMUR. The water demand for these units is incorporated into the current and future municipal demand projections that are based on population data, not housing units.

Municipal and Potable Industrial Water Use -Demands

The Tribe has recognized there is an existing and future need for elder care, community buildings and parks, school facilities and other administrative facilities. Currently, the Tribe is also developing an expansion of the Casino facilities which will include a new wing with approximately 100 guest rooms and potentially a conference facility, bowling alley, and other features. The Tribe may study the feasibility of using non-potable sources for Casino landscape irrigation.

The current and projected additional facilities and recreation areas will increase the municipal water demand beyond the projected municipal future water demand of approximately 1,060 AF per year.

In order to reduce future potable irrigation water demands, the Tribe may implement irrigation water efficiency measures, such as using irrigation timers and sprinkler maintenance for public parks and landscaping. Several other potential measures include installing new meters, updating billing protocol, and implementation of potential water limits per person.

3.2 Industrial Water Demands

The industrial water demands discussed in this section are for raw (non-potable) water that is not supplied from the Tribe's municipal water supply system or its Dolores Project allocation. The Tribe's current industrial demands include uses by WCA for material excavation and operations and use by oil and gas well development. Future industrial water demands are based on available data; as future project concepts are developed, they should be incorporated into this Plan.

3.2.1 Weeminuche Construction Authority Water Demands

WCA currently operates three gravel pits that are dry (i.e. do not expose groundwater) (See Map 7). Operational periods for each pit vary depending on regional demand for materials. Typically, water is used for dust suppression at any pit that is active, and material washing occurs only at the Four Corners Pit. Based on information from WCA, WWE estimates the current water demand is approximately 62 AF per year.

In the future, WCA anticipates a growth in on-Reservation water demand due to additional equipment and additional wash facilities. WWE estimates a total future water demand of approximately 141 AF per year (see Table 8A). This industrial water demand estimate does not include the periodic water demand for road maintenance and improvements, and it is reasonable to assume that industrial water demand may exceed 141 AF per year at times when major road work is also undertaken.

3.2.2 Oil and Gas Water Demand Estimates

Active and currently proposed oil and gas wells in the region are shown on Map 7. The Tribe anticipates 400 new oil and gas wells on the UMUR in the next 20 years (or 20 wells per year) (SWCA Environmental Consultants, 2012). Using the projected well development rate, a total of 1,000 wells may be added over the 50-year planning period of this study. Given the hydrocarbon resources present on the CO and NM UMUR, it is reasonable to forecast new wells to be unconventional wells that are horizontal bored in shale play(s) and hydraulically fractured as part of the well development process. The Final Environmental Impact Statement for the Final San Juan National Forest and Proposed Tres Rios Field Office Land and Resource Management Plan (USDA Forest Service, 2103) states that wells in Gothic Shale Gas Play in the Paradox Basin "would use approximately 7.9 to 13.1 acre-feet of water per well in the drilling and completion process." The total annual water demands associated with development of 20 wells per year equals approximately 158 AF per year to 262 AF per year (see Table 8B).

These water demands should be reviewed and revised as oil and gas development on the UMUR and industry technologies progress. Steps should be taken to develop and implement methods to account for water use in the oil and gas well fields. The water supply for this demand may come from Tribal and non-Tribal sources, depending on development agreements and water availability (see Section 4.2).

3.2.3 New Industrial Development

The Tribe has completed several preliminary planning studies and economic analyses for various proposed business and industry development projects on the UMUR. WWE reviewed available information on approximately thirty proposed projects ranging from small scale growth in or around existing industry to major projects in new areas of the UMUR. At this time, the new industrial water demands associated with these projects have not been quantified due to the conceptual nature of the proposed projects. Preliminary estimates that were available for approximately ten of the proposed projects have a total water demand ranging from 10,000 AF per year to over 50,000 AF per year. As projects are further defined and implemented, the Tribe's water demand projections should be updated. The water supply availability information in this

Plan (see Sections 2 and 4) may help to inform land use and economic planning and evaluation of project feasibility.

3.2.4 Industrial Water Supply and Demand

The existing 1,000 AF per year municipal supply from the Dolores Project meets the current municipal water demands of Towaoc and Mancos Creek Farm but is not adequate to meet the 50-year projected residential and municipal water demands of 1,060 AF per year or more (see Figure 4).

The calculated non-potable industrial water demands are approximately 140 AF per year for WCA, 260 AF per year for oil and gas development, and between 10,000 and 50,000 AF per year for new projects to provide economic growth and industry on the UMUR. Currently, there is not adequate infrastructure or reliable water supply to meet the WCA or oil and gas demands on the UMUR nor to support new project development. WCA and other industrial users have emphasized the need to meet existing and future industrial water demands through consistent Tribal policy and development of supplies. Additional steps should be taken to develop an inventory of the legal and physical water supply sources that are available for WCA use, including timing, access and limitations of use. Although the Tribe's current potable municipal and light industrial water demands are met by the existing water supply from the Dolores Project, the future potable water demands as well as non-potable industrial water demands will exceed the Dolores Project supply. Potential sources for future industrial water supplies include groundwater aquifers, surface water on the UMUR (i.e. Navajo Wash), and delivery of the Tribe's ALP Project waters. One such example that should be evaluated by the Tribe is "wheeling" the Tribe's ALP waters through the Animas River and San Juan River to be diverted by the Tribe at the Four Corners for municipal and industrial uses. There may also be opportunities for a lease to exchange a portion of the Tribe's ALP Project allocation with other water users in the San Juan River in New Mexico. There is also potential for using the Tribe's wastewater treatment plant effluent as a supply for industrial uses. The diversion amounts available from the ALP Project may vary from year-to-year, but water demands may be met by the ALP Project supply if infrastructure is developed and regulatory and statutory issues can be resolved (see Figure 5).

3.2.5 Municipal and Industrial Water Demands Summary

The total projected 50-year future M&I water demand, including potable and non-potable demands, is approximately 16,100 AF per year. Note that the demand may be higher, depending on the implementation of proposed development projects and other factors.

3.3 Agricultural Water Demands

The Tribe's Farm and Ranch Enterprise (FRE) is a Tribally-run agriculture and cattle operation located primarily on the Colorado portion of the UMUR. The Tribe also has irrigated lands at the Demonstration Farm and the Mancos Creek Farm.

Farm and Ranch Enterprise

The FRE lands include approximately 7,600 irrigable acres which grow a range of crops, currently including alfalfa, corn, pasture grass, winter wheat, and triticale. The FRE lands receive their water supply from the Dolores Project via the Towaoc-Highline Canal. The canal is approximately 41 miles long and is earth-lined for 32.8 miles and concrete-lined for 7.5 miles (USBR, 2014). The water delivery system has adequate elevation head to allow for gravity-fed center pivot and sprinkler irrigation on all of the FRE lands. The total water demand for FRE is affected by conveyance and system efficiencies. The analysis by USBR in the DPR for the Project calculated a 61 percent irrigation efficiency rate (USBR, 1977). The actual conveyance losses, on-farm efficiencies, and operational losses may differ from the overall 61 percent efficiency rate due to deterioration of delivery infrastructure (i.e. canals) over time, efficient on-farm technologies, changes in climate, and changes in reservoir management. Participation in an optimization of water deliveries to FRE lands from the Dolores Project is a priority.

FRE adjusts its annual crop plan based on the annual projected water supply available from the Dolores Project. For example, in 2013 when water supplies were severely shorted, FRE had to fallow hundreds of acres. FRE's 2014 crop distribution included approximately 3,600 acres of alfalfa, 600 acres of pasture grass, 200 acres of grass alfalfa mix, 2,900 acres of corn and 320 acres of winter wheat or triticale. WWE calculated the consumptive irrigation water requirement for each crop type using the StateCU tool (CDWR). Applying an overall system efficiency rate of 61 percent, the total 2014 demand is approximately 29,000 AF per year (see Table 9).

WWE estimated the future water demand for the existing FRE lands by evaluating the range of maximum and minimum acreage that may be devoted to each crop type. Based on these ranges and a total system efficiency of 61 percent, the future crop water demand ranges from approximately 24,000 AF per year to 30,000 AF per year, as shown in Table 10.

Tribal staff may expand agricultural operations in the future if an appropriate location and a viable water supply can be developed. Based on input from FRE staff and the Consent Decree, between 400 and 640 acres is a reasonable assumption for agricultural expansion. Assuming that alfalfa is grown on these acres, at an overall system efficiency rate of 61 percent, the calculated increase in total water demand is approximately 1,910 to 3,600 AF per year. Note that changes to system efficiency, crop type, and total acres under cultivation would affect the total water demands.

Demonstration Farm Water Demands

FRE and the Tribal DNR operate a "Demonstration Farm" located near Highway 160 and the Casino (see irrigated lands on Map 4). The Demonstration Farm includes a pond used for fish and 125 acres which typically grows approximately 100 acres of alfalfa and 25 acres of pasture grass. The water supply for the Demonstration Farm comes from the Tribe's 200 shares in the Montezuma Valley Irrigation Company (MVIC) according to the Consent Decree. The water is delivered via MVIC's Main Canal to the Demonstration Farm and placed into operational storage in Ismay (aka Hayfield) Reservoir before being pumped into the irrigation equipment. Irrigation methods on the farm include a center pivot and side-rolls. The total current crop demand based on a total system efficiency of 61 percent is 532 AF per year (see Table 11). The 61 percent overall system efficiency is based on the DPR (USBR, 1977); however, water is delivered through the MVIC system of canals and the operations and maintenance is managed by MVIC and may have a different efficiency rate.

The future uses of the Demonstration Farm depends on Tribal priorities and economics. For example, a solar power project may be considered for a portion of the lands (Parametrix, Inc, 2014). Ismay Reservoir also provides recreational activities to Tribal members, aesthetic values to the Casino, and a supply for watering the Pow-Wow grounds. Further work is needed to determine if the Tribe's MVIC shares could be used for non-agricultural purposes in the future.

For the purposes of this Plan, WWE used a maximum future water requirement of 532 AF per year for the MVIC shares based on the current water demands for alfalfa irrigation.

Mancos Creek Farm Water Demands

The Tribe is improving lands and irrigation delivery systems in order to resume irrigation of approximately 250 acres located near the Mancos River on the Colorado portion of the UMUR, known as the Mancos Creek Farm (see irrigated lands on Map 4). At this time, the Mancos Creek Farm Ditch cannot be used to carry irrigation water. Once ditch improvements are complete, this land will be irrigated using the Tribe's 6 cfs direct flow water rights in the Mancos River from the Consent Decree. Assuming an irrigated area of 250 acres, growing pasture grass, and assuming 50 percent irrigation efficiency, the total crop demand is approximately 1,300 AF per year. There is no projected growth of irrigated area for the Mancos Creek Farm, therefore the future water demands are the same as the current demands (see Table 11).

3.4 Livestock and Wildlife Water Demands

The DNR and other Tribal staff manage the range units on the CO and NM UMUR and the water supply for livestock.

The Tribe's cattle enterprise, The Bow and Arrow Herd, has 500 to 600 head. In the non-irrigation season, Bow and Arrow and Tribal member cattle graze on range units on the UMUR including the FRE fields, the Tribe's mesa top range unit, and other range units based on available forage and water. The cattle graze on leased rangelands or off-Reservation Tribal Ranches during the irrigation season. This Plan addresses the livestock water demand for cattle on the UMUR during the non-irrigation season and does not include off-Reservation water demands. The non-irrigation season water demand for the current 600 head of cattle is 5 AF, based on a rate of 15 gallons per cow per day. Herd sizes vary from year to year. Tribal staff indicate that the maximum future size of the Bow and Arrow herd is 1,500 head of cattle, with an estimated non-irrigation season water demand of 13 AF.

The total numbers of livestock owned by individual Tribal members varies from year-to-year. Currently, according to Tribal DNR, there are 1,000 cow-calf pairs, 50 bulls, and a few buffalo on

range units each year that are actively managed. These livestock have a water demand of 9 AF during the non-irrigation season.

Current water demands for livestock and wildlife are estimated to total 15 AF per year on average, with variation depending on the year from 10 AF per year to 30 AF per year. Future livestock and wildlife numbers are unknown; however, it is likely that the future water demands will be larger than current demands, as the Tribe would like to improve its range condition and increase sustainable livestock numbers.

The Reserved Rights on the Colorado portion of the UMUR for existing use livestock wells total approximately 244 gpm, which equals 250 AF assuming a 66% efficiency for the wells (see Table 2A). Providing a water supply in the range units requires ongoing work to maintain and improve livestock wells, reservoirs and water tanks. The physically available water may be significantly less than the decreed amount due to recent drought and disrepair of infrastructure.

3.5 Tribal Ranches Water Demands

The Tribe owns five Tribal Ranches in Colorado and one Tribal Ranch in Utah with associated water rights in nine irrigation ditches, one reservoir and one ditch company (see Table 6 and Table 7 and Map 1). The Tribal Ranches provide grazing and agricultural lands to support the Tribe's economic development as well as offering training and employment opportunities for Tribal members. The Water Management Plan – Phase I (Wright Water Engineers, Inc, 2006) evaluated the water supply and water demands for irrigated areas at each Tribal Ranch. Since 2006, agriculture and ranching activities on the properties have continued and are guided by Grazing Management Plans developed for each location.

The Tribe does not currently have specific plans to develop other uses on the Tribal Ranches, therefore the future demands are assumed to be the same as the current agricultural water demands.

Management and protection of the Tribal Ranch water supplies is critical to Tribal enterprises and Tribal member cattle operations and horse herds (which rotate grazing between the Tribal Ranches and the UMUR), to Tribal hay production, and to environmental and wildlife purposes (such as the implementation of the Tribe's new species management plan for the Gunnison Sage Grouse on the Pinecrest Ranch near Gunnison, CO). Ranch water supply management is based on the needs

of Tribal livestock owners, the Bow and Arrow herd, and the forage available. The Tribal DNR frequently partners with the Natural Resource Conservation Service (NRCS) to complete farm improvement projects on Tribal Ranches.

The Tribal Ranches are supplied by off-Reservation water rights and shares owned in reservoir companies and mutual ditch companies. Based on the 2006 study (Wright Water Engineers, Inc, 2006), the Adams Ranch, Perkins Ranch and Hesperus Ranch have adequate water rights for the irrigable acreage on the property. However, the yield of the water rights may be reduced in very dry years. For example, in recent dry years, there has been no water available from the Blanding Irrigation Company, which is the source of water supply for the Perkins Ranch in Utah. The Perkins Ranch consists of the Watkins, Poole, Comb Wash, and Frank Hurst parcels. The Thompson Park Ranch, a.k.a. Cherry Creek Ranch, which consists of the Covey, Pyle, and Safley parcels, and the Pinecrest Ranch are water short, and improvements to existing irrigation systems will help to mitigate the shortage.

The Hesperus Ranch, Hay Gulch Ranch, which consists of the Dunn and Henderson parcels, and Thompson Park Ranch, are anticipated to benefit from the Long Hollow Reservoir agreement and will be able to increase diversions in some years based on the project operations. See Table 12 for a summary of irrigable area and an irrigation water budget for each Tribal Ranch. Note that the majority of the Tribe's cattle go to the Pinecrest Ranch during the irrigation season; however, these livestock water demands on Tribal Ranches have not been quantified in this Plan.

3.5.1 Agricultural Water Supply and Demand

The current total irrigation water demand for FRE exceeds the Tribe's irrigation water allocation and annual deliveries. In a dry year, the water demand exceeds supply by 20,000 AF; in an average year, water demand exceeds supply by approximately 5,000 AF, as discussed in sections 2.2 and 3.3 and shown in Figure 6. Plans for future expansion of the FRE area and new fields in the Four Corners Area could increase the agricultural water demand by approximately 3,600 AF per year, which would increase the future dry-year shortage to approximately 24,000 AF and average year shortage to approximately 9,000 AF per year, as shown in Figure 6.

A long-term solution to the current and future irrigation water shortages is a major issue to be addressed by the Tribe. The potential areas to develop new supplies to meet the current and future FRE demands include the San Juan River, the Dolores Project, McElmo Creek and the Mancos River. A graph showing the physical water present in each of these systems is shown in Figure 7. Note that there are legal, regulatory and other considerations that also limit the amount of water that can potentially be developed from each system. Another potential water supply for agriculture is from development a voluntary water transfer bank with other Dolores Project stakeholders.

The Demonstration Farm receives water from MVIC. The Historical Use Database claims 2.5 cfs or 456 AF per year from the MVIC shares, though the water yield per year varies (see Table 11). This estimated yield is approximately 76 AF per year less than required for a full crop of alfalfa on the Demonstration Farm.

The Mancos Creek Farm derives its water supply from the Mancos River with a water right for 6 cfs, and a March 2, 1868 priority date[1]. If 6 cfs is available throughout the irrigation season, it would provide adequate water to meet the 1,300 AF per year demand for growing pasture grass at the Mancos Creek Farm (see Table 11). A step in the process is to determine the physically and legally available water for potential storage, and evaluating whether additional storage is cost effective for agricultural purposes by FRE or the Mancos Creek Farm. The Tribe should also evaluate potential reservoir sites in the Mancos River basin with the Mancos Water Conservancy District and the USBR, including potential expansion of Jackson Reservoir.

The gage data for the Mancos River near Towaoc, maintained by the USGS, indicate that in an average year, there is more than 6 cfs below the point of diversion for the Mancos Creek Farm Ditch. However, in many years, such as 2002, there was no flow, or flows less than 6 cfs at the gage. Upstream water rights may also reduce the water available to the Mancos Creek Farm Ditch.

[1] There is a discrepancy in the Existing Use exhibits on the date for administration of this water right.

3.6 Environmental and Traditional Purpose Water Demands

There are water sources as well as animals and vegetation supported by riparian habitats on the UMUR that hold cultural significance and serve traditional purposes for the Tribe. To support these cultural and environmental resources, the Tribe aims to protect the natural habitat and species present on Tribal lands, maintain water quality, support riparian habitats, and cultivate native plant species such as willow and cottonwood. While water demands have not been specifically quantified by existing programs, the Tribe's Environmental Programs Department (EPD) manages several programs and policies aimed at protecting the water quality and riparian areas.

While there are no quantified streamflows for cultural or environmental purposes, the Tribe has discussed increasing streamflows in the Mancos Canyon as a target area for improving habitat. The Tribe may pursue a broad Mancos River collaboration on water resources, which could include development of water for instream uses. The Tribe's future use of its irrigation water in the lower Mancos River also has the potential to increase flows through the Mancos Canyon.

Federal projects include allocations for fish and environmental purposes. The USBR manages the Dolores Project allocation and ALP Project allocation for mitigation of environmental impacts.

3.7 Other Water Demands on the Colorado UMUR

There are some areas on the Colorado portion of the UMUR that are not served by the municipal potable water system. The primary rural use is livestock wells, which are discussed in Section 3.4. The Consent Decree includes three domestic wells; one near the Mancos Creek community and two near McElmo Canyon. The Mancos Creek community now is served by the Towaoc municipal system instead of the well and its water demands are included in the discussion of the Towaoc municipal water system in Section 3.1. The two homesites near McElmo Creek may use domestic wells and are not anticipated to have a connection to the municipal system or additional development in those locations in the future.

The Tribe's Archaeological Park, which includes lands on the UMUR along the Mancos River canyon, does not currently have a potable water supply. Developing a potable supply for the Archaeological Park is a primary component of accommodating future tourism on the UMUR. Options for developing a potable water supply may include one or more of the following:

connecting to the potable water service from the system in Mesa Verde National Park, connecting to the Towaoc municipal system, or developing a new system to serve the Archaeological Park specifically.

3.8 Water Demands on the New Mexico and Utah Portions of the Reservation

The water demands for the New Mexico portion of the UMUR are the subject of current studies related to the adjudication process and are not available at this time.

In White Mesa, Utah, the Tribe's population is approximately 350 residents. A system of two wells provides a water supply for the community (See Section 2.3). The water demands include residential uses for the community as well as a small business and community buildings (e.g. church). WWE recommends further investigation of water demands for White Mesa as part of ongoing water conservation and management planning efforts.

4.0 LEGAL AND INSTITUTIONAL CONSIDERATIONS

Prior to the Settlement Agreement, the federal and state government did not have jurisdiction over the Tribe's water resources in Colorado. Currently, the extent of jurisdiction and the legal and institutional considerations for Tribal water resources and management in Colorado is determined on a case-by-case basis by review of all of the relevant agreements, legislation, decrees and contracts.

This section reviews CDWR's administration, institutional considerations associated with Dolores Project and ALP Project allocations, contracts with USBR and regional stakeholders, federal policies, and the Tribe's laws that may affect water resource management.

4.1 Colorado Prior Appropriation System

The CDWR and the Colorado Judicial Branch Division 7 Water Court administer Colorado's prior appropriation system. The Consent Decrees establish the limited means in which the Tribe's Reserved Rights may be administered by the CDWR. The administration by CDWR is intended to protect the Tribe's senior water from out-of-priority uses by junior water rights or undecreed water uses.

4.2 Federal Policies and Colorado River Law

Federal laws and policies pertain to the BIA and other federal agencies working with the Tribe. For example, there is a Secretarial Moratorium on tribes' adoption of water codes that was enacted in the mid-1970s and still standing (Nania and Guarino, 2014). Trust obligations also obligate federal agencies to "act in a tribe's best interest" which may play a role in the development of uses of Tribal waters in the Colorado River Basin (Nania and Guarino, 2014), (Kenney et al, 2013).

The Tribe is working with state and federal agencies to develop Tribal water resource management options that may benefit the Tribe as well as non-Tribal water users.

4.3 Reserved Rights

To meet the current and future water demands of the Tribe and to promote economic development, the Tribe may consider changing the types of use, places of use of project allocations, or pursue leasing and exchanges of its Reserved Rights.

In order to change the type of use or place of use of a non-project Reserved Right, the Tribe may have to complete a non-injury analysis (which does not include a non-expansion analysis). This may raise issues due to the differences in time of use and return flow patterns associated with different use types, such as irrigation and industrial. The change of a Consent Decree water right requires re-opening the decree for the specific basin, which may create vulnerability for the Tribe's water rights. If the Tribe pursued a change in a Consent Decree water right, it may require approval from the U.S. Department of Justice.

4.3.1 Animas-La Plata Project Limitations

At the time of writing this report WWE has not reviewed the ALP settlement documents, and upon future review information in this section of the report may change.

ALP Project water was initially decreed for "irrigation, domestic, municipal, industrial, recreation, fish and wildlife, flood control, and other beneficial uses" with specific acreage in Colorado and New Mexico identified for the use of the irrigation water. However, the Project underwent significant changes before it was finalized and constructed. The 2000 Amendments to the 1988 Settlement Act removed the irrigation component of the Project and limited all ALP Project waters

to M&I uses. According to the Final Supplemental Environmental Impact Statement for the ALP project, M&I uses refer to "water for industries and cities, as well as for livestock and wildlife uses, recreation, and tourism development" (USBR, 2008). Compliance with the National Environmental Policy Act (NEPA), particularly protection of threatened and endangered fish species in the San Juan River, resulted in a total limit for the ALP Project of an average annual depletion of 57,100 AF.

The place of use of the Tribe's ALP Project allocation is specified in the Consent Decrees as on the Tribe's UMUR in Colorado or within the Animas-La Plata Water Conservancy District (ALPWCD) boundary. However, the place of use was not specified in the 1986 Settlement Agreement, the 1988 Settlement Act, or the 2000 Amendments; these documents also include broader language regarding off-Reservation leasing. Currently, a case-by-case analysis of the governing laws and agreements is necessary to determine if there are geographic constraints on the Tribe's use of ALP project waters.

The following are additional current considerations of ALP Project operations that may affect the Tribe. The associated documents are provided in Appendix E.

- The ALP Project may not divert more water than is physically and legally available at the decreed original point of diversion (Teft Diversion Dam), located about 22 miles north of Durango on the Animas River, as described in the Final Administrative Protocol.

- The ALP Project decrees and the Consent Decrees do not address reuse of ALP Project water. The CDWR's Administration Protocol currently does not allow for reuse of ALP Project water in the Animas River Basin; however, if transported to another basin, reuse would be allowed if administrable.

- Shortages in the ALP Project water supply are anticipated to be allocated between Project participants in proportion to their Statutory Water Allocations and per the Intergovernmental Agreement.

- The Tribe is responsible for 35.5 percent of the fixed operations, maintenance and replacement (OM&R) costs and for the variable OM&R costs, associated with the amount

of Tribal water delivered, according to the Repayment Contract between the ALP OM&R Association and USBR. However, until the water is first used by the Tribe, or pursuant to a Third-Party Contract, the USBR will be responsible for the payment of the Tribe's portion of the fixed OM&R costs.

4.3.2 Dolores Project Limitations

The USBR has repayment contracts with entities that receive a water allocation from the Dolores Project including the Tribe, MVIC and DWCD (see Appendix F for the USBR – Tribe contract). The conditions in the repayment contracts as well as USBR policy may affect the feasibility of changes to operations or Candidate Measures suggested in this Plan. There are several agreements and contracts that affect operations for the Dolores Project including the DWCD and MVIC "Class B Shares" Purchase Agreement, the MVIC and DWCD 2010 Settlement Agreement, the Upstream Water Users Agreement, and MVIC operations including its "call water," the Groundhog Reservoir Exchange, and filling of Narraguinnep Reservoir.

The Dolores Project is water short in dry years and has competing demands from transbasin and downstream uses. Based on discussions with the DWCD, the total "institutional gap" for the entire Dolores Project has not been quantified but is likely more than 10,000 AF per year.

Candidate Measures that seek to modify uses of Dolores Project water likely will require cooperation between stakeholders. Any potential changes to Project operations would require approval and support from all Project stakeholders prior to consideration by the USBR.

The Dolores Project water supply is not currently adequate to meet the Tribe's agricultural needs; therefore, the Tribe is not currently contemplating projects that would require a change in type or place of use or leasing of its decreed Dolores Project allocations. Maintain a good working relationship with DWCD and other stakeholders may facilitate obtaining additional municipal and industrial water from Dolores Project as needed. Additionally, the Tribe's Public Works may want to tour the DWCD facility and attend board meetings.

4.4 Reserved Rights in New Mexico and Utah

The Tribe's Reserved Rights in New Mexico and Utah have not yet been quantified. The State of New Mexico is in the process of conducting a general stream adjudication for the San Juan River. The Tribe is participating in this litigation and anticipates its claims will be addressed in the case starting in approximately 2020.

In Utah, the Tribe has claims associated with its trust lands; however, the State of Utah does not have a process underway for quantifying the Tribe's Reserved Rights.

4.5 Instream Flows in Colorado

In the regions around the UMUR, the CWCB currently holds instream flow water rights on the Dolores River, Mancos River and its tributaries, the La Plata River and its tributaries, and other streams (see Table 13). Note that these instream flow reaches are not on Tribal lands but affect development opportunities in regional watersheds. The Dolores Project makes downstream releases to comply with environmental requirements. This release affects the availability of water to Project users, including the Tribe, for irrigation and municipal purposes.

The ALP Project has a minimum bypass flow to maintain environmental flows in the Animas River at the Durango Pumping Plant. This bypass may affect the ability of the Project to pump water into storage at times of low flows and may affect water availability and how the Project is administered.

While the instream flow rights are consistent with the Tribe's environmental goals, the instream flow rights can limit the ability to develop new water uses or change places of use of water rights in some cases. The Tribe may explore options for supporting these rights with its Reserved Rights in the future.

4.6 Tribal Institutions

The Tribe's government is based on its constitution and by-laws approved on June 6, 1940. The approval of Tribal Council is required in order to take significant actions such as filing for water rights, changing water rights, establishing policies, enacting regulations and developing projects with regional stakeholders.

The Tribe does not have a water resources department in its government. Currently, work on water management requires coordination between several different departments such as Public Works, Environmental Protection, FRE, Planning, Tribal attorneys, etc.

In 2005, the Tribe was approved by the EPA for treatment in the same manner as a state for administration of Tribal Water Quality Standards and Implementation Plans. This provides the Tribe more autonomy and enforcement authority on its own lands and affects the ability of the Tribe to work with other state governments to address water quality issues upstream of Tribal lands.

The Tribe's Environmental Programs manages several programs and oversees regulations to protect Tribal resources.

5.0 ENVIRONMENTAL AND CULTURAL RESOURCE PROTECTION SUMMARY

This section summarizes the major environmental protection programs, cultural resource protection, and Tribal programs that may affect water resource management opportunities and decisions. The Tribal environmental programs are further discussed in Section 6.3.

5.1 Threatened and Endangered Species and Species of Concern

The San Juan River is the subject of a cooperative state and federal program, the San Juan River Basin Recovery Implementation Plan (SJRIP). The purpose of the SJRIP is to promote the recovery of two endangered fish species, the Colorado Pikeminnow and the Razorback Sucker (USBR, 2012). Under the SJRIP and Section 7 of the Endangered Species Act (ESA), the U.S. Fish and Wildlife Service (USFWS) must review actions that may affect streamflows in the San Juan Basin.

The San Juan River flow recommendations (developed by the SJRIP Biology Committee) are designed to mimic a natural hydrograph by peaking in late May or early June, and are based on historical hydrology including flow magnitude and flow duration. The SJRIP flow recommendations are developed using the San Juan River Basin Hydrology Model and are dependent on participation by both the Southern Ute Indian Tribe and the Ute Mountain Ute Tribe, which have the right to assert their senior water rights (USBR, 2008). The initial baseline for the

modeling incorporated existing depletions in the San Juan River basin in Colorado, New Mexico, and Utah (USBR, 1995). Full development of Indian Reserved Rights water was not included in the original model's baseline. Only existing projects and projects with ESA and NEPA compliance are included in the baseline depletion model (including the ALP Project and the Navajo Indian Irrigation Project) (USBR, 2007). As the SJRIP is updated, the model inputs are also updated to reflect changes in water rights and existing depletions. Depletions are indicated in the model by project (i.e. ALP Project, San Juan-Chama Project) and by river (USBR, 2012). The USBR is currently working on the third generation of the SJRIP modeling, which will include quantified Tribal Reserved Rights in Colorado in the model's baseline. However, because the Tribe's Reserved Rights have not yet been quantified in New Mexico or Utah, these rights are not included in the SJRIP model update.

Suitable habitat exists in the San Juan Basin, including the San Juan River, for the Colorado Pikeminnow, the Razorback Sucker, and several other threatened or endangered species, including the Southwestern Willow Flycatcher, the Mancos Milk Vetch, and the Mesa Verde Cactus. Table 14 shows the listed threatened and endangered species and "species of concern" in the area (Natural Resource Conservation Service, 2004) (USBR, 2012). Water resource development projects may be required to include measures to protect these identified species and their habitat and to comply with the Threatened and Endangered Species Act and state regulations. The Tribe is also working with federal agencies to determine appropriate protections for the Sleeping Ute Milk Vetch which occurs on the UMUR.

5.2 Wetlands and Riparian Protections (USACE 404)

Wetlands and riparian ecosystems are an important resource in the arid environment. They are important not only for the wildlife and plant life that they support, but also for continued cultural and traditional practice and lifestyle of Tribal members. Impacts to the jurisdictional wetlands and Waters of the U.S. may be subject to the jurisdiction of the U.S. Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act (CWA). Thus, water conservation measures that may potentially impact jurisdictional wetlands and Waters of the U.S. may need to comply with the requirements of CWA.

5.3 Cultural Resources

Cultural resources are physical or other expressions of past human activity or occupation, including culturally significant landscapes, archeological sites and isolated artifacts or features, historic structures, burial and sacred sites, and areas of important cultural value to existing communities (USBR, 2009).

The UMUR lands have a long history of human settlement and significant cultural resources. While the potential for cultural resources exists across all UMUR lands, the five key areas that are of recognized cultural values are Sleeping Ute Mountain, the Ute Mountain Tribal Park, Cowboy Wash Archaeological District, Four Corners Monument, and the Barker Arroyo Group (SWCA Environmental Consultants, 2012). The widespread presence of cultural resources should be considered when evaluating the potential impacts of development projects, particularly in these recognized cultural resource areas.

The Tribe established a Tribal Historical Preservation Office (THPO) in 2009, which oversees policies for preservation and management of cultural resources that are significant to the Tribe, both on and off the Reservation.

6.0 EXISTING MEASURES AND PROGRAMS

The Tribe currently implements a range of water management measures and programs for its water resources, which are summarized by use type in this section.

6.1 Municipal and Industrial

Water Measurement Program

Meters are installed on 17 non-residential buildings and are used to track water use and refine the analysis of water use per capita by Tribal residents.

In 2010, a new meter was installed at the Cortez Water Treatment plant to measure the water delivered to the Tribe's municipal system (Harris Water Engineering, 2012). This new meter is maintained by the City of Cortez and provides improved accuracy of Tribal water deliveries and

costs. The Tribe and the city have worked together to calibrate the meter in Cortez and the meter in Towaoc to gather data on water delivery and water losses in the 21-mile transmission line.

The Tribe's municipal water supply system is managed by the Tribal Public Works Department. The IHS office provides technical assistance for system operations and design.

As part of the addition of meters throughout the community, The Public Works Department intends on developing public service announcements through videos for both water conservation measures and information on proper disposal of fats, oils, and grease.

Leak Detection

The Tribe's Public Works Department monitors meter data in order to identify leaks as soon as feasible (Indian Health Service, 2013). The Tribe has made leak repairs to the Cortez-Towaoc transmission pipeline every year since 2010, resulting in a reduction of water losses from 16 percent to approximately 6 percent.

In August 2014, Utility Technical Services, Inc., assisted by the Tribe's Public Works staff, surveyed a total of approximately 1.2 miles of asbestos concrete pipe and 4.4 miles of cast iron pipe using noise correlator technology. These sections of pipeline were selected due to their age and their compatibility with readily available leak detection technology. The results of the study found one leak of approximately 2 to 3 gpm at a hydrant on Ute Trail near the rodeo grounds, which is on the Public Works project list for repair. Following a major erosion event in 2014, Public Works immediately conducted significant work to stabilize the water transmission pipeline from Cortez.

Approximately 70 percent of the Tribe's distribution system is new and constructed of polyvinyl chloride (PVC); leak detection using standard noise correlator technology is not as effective on PVC. Detailed methods and results of the Leak Detection Study are provided in Appendix C.

Leak detection survey and recommendations are a priority and are currently underway for the Cortez-Towaoc Pipeline, and may require increase in funding for the Cortez-Towaoc Pipeline in 2017. A seepage and loss study on the Towaoc-Highline Canal to determine water losses and

recommend improvements is another priority, as well as to obtain and analyze data from DWCD on conveyance losses from McPhee Reservoir to the energy dissipation structure.

Water Efficiency Plan & Water Meter Infrastructure

In 2009, the allocation of the Towaoc's 1000 AF was approaching 90 percent. The FRE wanted to purchase additional water. At this point water conservation efforts began as a plan was developed to identify water leaks in Towaoc. Shortly thereafter, Rod Weber developed several spreadsheets that monitor water usage and track problem zones in the municipal water system.

As a requirement of the USDA-funded Towaoc Water Project, water meters must be installed at all residences, businesses, departments and enterprises in Towaoc. As of March 2017, there are 17 meters installed. There are approximately 563 unmetered residences, and 33 unmetered businesses, departments and enterprises. The unmetered residences, businesses, departments and enterprises are charged a flat rate for water usage, but businesses are charged a varying wastewater rate.

Other measures to contribute to water efficiency include replacement of old cast iron waterlines and continued mapping of pressure zones through hydraulic studies. Continuing with installation of water meters, spreadsheet analytics, and setting limits on residential water usage will help determine problem zones in the water system to conserve more water, and avoid the immediate purchase of additional water.

SCADA System Upgrades

Improvements to the SCADA system were made through an EPA grant which included an upgrade to the main control panel at Towaoc Public Works, as well as a new radio, antenna, programable controller, battery power supply, and a new computer. Further upgrades to the Upper Towaoc Water Tank include a solar panel, antenna, control panel, new SCADA equipment, battery power supply, ethernet radio, and a programable controller. The Lower Towaoc Control Vault also received upgrades of a new control panel, SCADA equipment, antenna, ethernet radio, programmable controller, and battery power supply. Stations in need of upgrades include the Cortez Vault, Middle Vault, Mancos Creek Vault, and the Lift Station.

Mancos Creek Farm Ditch Improvements

The Mancos Tank located along Mancos Creek has a capacity of 23,000 gallons and supplies eight homes in the Mancos Creek area. The water that supplies these eight houses from the Mancos Tank is now chlorinated; however, the residual chlorine concentrations have been between 0.3 and 0.2 mg/L at the end of the line, which is slightly less than the ideal 0.5 mg/L for affective disinfection of the delivery system (*Chlorine Residual Testing Fact Sheet, CDC SWS Project*). Ute Mountain Public Works would like to deliver potable water to the Mancos Creek Farm for $5.50 per 1,000 gallons, and allow them up to 1,000 gallons per day.

Unauthorized Water Use

The Public Works Department monitors uses of the water system to help to protect the system infrastructure and water quality. Tribal staff make an ongoing effort to prohibit illegal filling of water trucks out of system hydrants, although this is no easy task. Implementation of a pay-per-fill water station is one potential solution to illegal filling.

ALP Project Water Development

The Tribe is in the process of finalizing a repayment contract with the USBR which defines the amount of storage the Tribe has in the ALP Project, the terms for use and repayment, and other legal framework for operations. The Tribe is a member of the ALP Operations, Maintenance and Replacement Association which oversees the operations of the project.

Funding

As of March 2017, approximately $9.5 Million in USDA funding has been approved for funding for water projects for the UMUT. These projects include $3.5 Million for water system improvements for Towaoc, $2 Million for sewer improvements for Towaoc, and $4 Million for two Water and Wastewater projects for White Mesa. Additional USDA funding will be sought for Cortez to Towaoc waterline improvements.

6.2 Agriculture and Ranching

Irrigation Efficiency

Farm and Ranch Enterprise: The FRE uses highly efficient irrigation infrastructure to the extent feasible on the ranch lands. This includes center pivots that are gravity fed through pipelines from the Towaoc-Highline Canal. FRE employs two mobile soil moisture monitors that are linked to the irrigation supply management system. Each center pivot is tied into the main system and operates based on data from soil moisture, weather and water supply. FRE applied for funding in 2014 to continue to make on-farm efficiency improvements by changing to efficient nozzles on the center pivots and transitioning to drip irrigation in appropriate locations.

Demonstration Farm: The Demonstration Farm irrigation system consists of a center pivot and three side rolls, which significantly improve irrigation efficiency over flood irrigation methods. The Tribe is working to obtain funding to change the irrigation water delivery system to reduce energy demands. The water from the Main Canal has adequate pressure to be run directly into a side roll, which would eliminate the need to pump water from Ismay Reservoir into the side roll. However, the proposed direct connection to the Main Canal would need to maintain the ability to keep water in Ismay Reservoir for its recreational purposes and as a back-up operational reservoir for irrigation uses.

Mancos Creek Farm: The Tribe's Mancos Creek Farm is undergoing irrigation and water delivery improvements in order to improve production on the lands. The lands are equipped with gated pipe which increases irrigation efficiencies. The Tribe is currently working with the Colorado Department of Transportation (CDOT) and the USBR to repair the ditch and address stormwater flows that have historically damaged the ditch and impacted the neighboring community.

Crop Management

FRE staff closely monitor water use and manage the irrigated area and crops to maximize production within the limited water supply. FRE staff conduct inspections of all crops in order to measure soil moisture, evaluate the growth stage of the plant, and observe other factors that determine the crop's water demand before determining how much irrigation water to send to each field. FRE grows a range of crops in order to adapt to water supplies and drought conditions, as necessary. FRE is also developing value-added processing in order to increase profitability without depending solely on high-water demand crops such as alfalfa. On the Tribal Ranches, staff have developed and are implementing Grazing Management Plans for each Ranch.

Development of Water Supply

As discussed in Section 4, the Tribe has pursued leases of additional irrigation water for FRE from the Dolores Project whenever feasible. The Tribe is also working on developing additional long-term water supply for FRE and has established a productive working relationship with The Nature Conservancy (TNC) to help find non-competitive means of developing additional water supplies. In 2014, the Tribe co-sponsored a study with TNC on potential water supply development opportunities from the Dolores Project.

The Tribe is developing additional water supply for its Tribal Ranches. The Tribe is in the process of constructing a reservoir for irrigation and livestock use at the Pinecrest Ranch, and investigating the use of Long Hollow Reservoir and the Tribe's agreement for SAS for irrigation and M&I water in the Reservoir. The Tribe is continuing to assess the infrastructure needs for delivery of M&I water from these sources.

6.3 Environmental and Traditional Purposes

The Tribe is committed to conserving resources and protecting the natural environment to improve the quality of life of current and future generations of Tribal members (Ute Mountain Ute Tribe, 2014). The Tribal EPD administers the public health and environmental protection programs on Ute Mountain Ute Tribal Lands, overseeing projects and regulations aimed at protecting and improving water quality for public health and the riparian and wetland habitats on the UMUR. The Tribal EPD promotes protection and conservation of water resources through a variety of existing programs described below.

Surface Water Protection Program

The Tribe has established stream reaches designated as having Outstanding Tribal Resource Waters and has a comprehensive plan for managing surface water quality. Allen Canyon, along with two springs on Sleeping Ute Mountain (Jacob Lopez Spring and Ute Spring), have been designated as having Outstanding Tribal Resource Waters (OTRW). Future water development needs to comply with the water quality standards and, additionally, may be evaluated in terms of impacts to valued environmental and cultural resources.

In 2011, the Tribal Council adopted Water Quality Standards for Surface Waters of the Ute Mountain Ute Reservation (see Appendix D) which follow the context of the Clean Water Act and guidance from the EPA. These standards include an anti-degradation policy describing the procedure for discharge permitting and the enforcement of violations of the stated standards, and designate standards for waters of outstanding value (Ute Mountain Ute Tribe, 2011). The Tribe holds jurisdiction to administer water quality standards within the boundary of the UMUR including over the San Juan River, the Mancos River, McElmo Creek, and Navajo Wash, Recapture Creek, Cottonwood Wash, and Allen Canyon, and all tributaries of the above-stated waters, including all lakes, reservoirs, and wetlands located within the boundary of the UMUR (Ute Mountain Ute Tribe, 2011).

The Tribe is currently developing new strategies and projects to protect various watersheds (Ute Mountain Ute Tribe, 2014). The CWA Section 106 provides funding for monitoring and assessing water quality. In addition, the Tribe has an ongoing relationship with the USGS and SWCD to cost-share for a stream gage on the Mancos River on the UMUR.

Groundwater Protection Program

The Tribal Council adopted a Ground Water Protection Plan in 2004 to protect the groundwater resources on Tribal lands, ranging from the springs in the Ute Mountains to the deep aquifers. The Plan describes all aquifers on the UMUR that are used by the Tribe or by wildlife. Each aquifer is assessed according to its risk from contamination from various pollution sources and evaluated based on its use and risk to humans and wildlife. Each aquifer is assigned a level of protection priority based on those risks, and associated levels of protection strategies have been implemented (Mountaintop Associates, Inc., 2004).

Another component of the Groundwater Protection Program is well administration through a permit process. Groundwater wells on the Colorado portion of the UMUR are permitted through a dual system with the Tribe and the State of Colorado. New wells on the Reservation in Colorado are required to receive a permit from the Tribe which specifies the location, depth, annual pumping volume in AF, instantaneous pumping rate limit in gpm, and permit conditions. This permit system covers all wells on the UMUR in Colorado that are using part of the Reserved Rights from the Colorado State District Court, Water Division 7 Consent Decrees. The Tribe also requires well

completion reports and well drilling logs be provided in order to maintain a valid permit. Under the dual system, a groundwater well is also permitted by the CDWR, following standard procedures.

Weed Control Program

The EPD is currently working to control the saltcedar (tamarisk) infestation using chemical and biological controls as well as education and outreach measures (Ute Mountain Ute Tribe, 2014). Reduction of invasive tamarisk can increase water supplies, and management of appropriate weed controls benefits water quality.

Hazardous Waste Regulation

The EPD works to educate Tribal members on the proper identification, storage, disposal, and reduction of use of hazardous materials. Regulation of waste helps to maintain water quality that is approved for a variety of uses including agriculture and recreation. In 2003 the EPD implemented the Brownfields Tribal Response Program. Brownfields sites are areas affected by a hazardous substance, pollutant, or contaminant. The program focuses on redeveloping Tribal lands and waters affected by past activity where no responsible party could be identified. The Program provides technical assistance, planning, environmental assessment, and inventories. Proposed sites include the Mancos Creek Tribal farming and cattle operation, located alongside the Mancos River (Ute Mountain Ute Tribe, 2014).

Habitat Protection

The Tribe has established a wetlands irrigation area in the Mancos River basin for wetlands habitat protection. The CDWR has acknowledged the Tribe's right to use its Reserved Rights from the Consent Decrees for irrigation of wetlands. The CDWR notes that any diversions, including for wetland irrigation, are required to be measured and reported to the CDWR per the Consent Decrees.

Additionally, the Tribe has developed a species management plan for the Gunnison Sage Grouse in order to protect its habitat on the Pinecrest Tribal Ranch.

6.4 New Mexico and Utah Portions of the Reservation

As stated in Section 3.8, work related to water resources development for the New Mexico portion of the UMUR is currently ongoing.

In the Utah portion of the UMUR, the Tribe is actively working to improve the potable water supply system infrastructure and the water quality of this system. Measures for which the Tribe is actively pursuing funding or are implementing include:

- Replacing the pump in the secondary well.
- Making repairs to or a replacement of the south well storage tank, which leaks. This tank is still under warranty and the Tribe is working with the manufacturer to address the issue.
- Improving the water quality treatment system, particularly to address arsenic which is close the Maximum Contaminant Levels set by the EPA.
- Evaluating new potential municipal water supply sources, including from the City of Blanding or from Recapture Reservoir.

6.5 Identified Projects with Non-Tribal Partners

WWE met with Southwestern Water Conservation District (SWCD), Mancos Conservation District (MCD), DWCD, USBR and TNC to discuss potential projects that may mutually benefit various groups of water users and the Tribe, such as marketing of unused water downstream of McPhee Reservoir, and increasing storage in multiple basin. The nature of these discussions were primarily analyzing potential ways project partners can collaborate both now and into the future concerning water availability. Project Partners used a basin by basin approach to collaborate on water availability issues.

Animas River basin-Within the Animas River basin project partners will evaluate potential projects and collaborate on solutions concerning water delivery barriers in tribal and private land areas. Potential transbasin diversion structures will be considered that may transfer water from the Animas River basin to the La Plata River basin and other western basins. As an example,

coordination and support of LPWWA in the La Plata River basin may result in better coordination of potential water projects in the area.

La Plata River basin, as discussed above, discussions concerning the La Plata River basin focus on bringing water from the Animas River basin into the La Plata River basin. The use of the Tribal allocation within Taylor Reservoir and Long Hollow Reservoir should focus on the development of water supply for future irrigation on tribal ranches and other community needs.

Mancos River basin- WWE has collaborated with the MCD and TNC to develop additional water supplies within the Mancos River basin. Potential projects include identifying strategies to protect Instream Flow (ISF) reaches where they occur within Tribal land. Another project is for the MCD and State Engineers Office to place a call with tribal water rights that will help develop Mancos Creek Ranch Ditch and Mancos Creek land. WWE will continue to work with project partners evaluating efficient uses for viable water supply.

Dolores River basin-Project partners have identified irrigation water banking projects as a potential mutually beneficial use of water. Water banking will allow for more water available downstream for ISF and recreation purposes.

Colorado River basin- collaboration with state and federal agencies to develop potential marketing opportunities including forbearance such as fallowing or intentionally created surplus, water banking, or leasing. The Tribe is currently working with the USBR on a study of Tribal water rights in the Colorado River, and with the CWCB on Colorado River Compact evaluations.

7.0 IDENTIFY GOALS, ISSUES AND CANDIDATE MEASURES

7.1 Tribal Council Identification of Goals and Candidate Measures

WWE held several meetings with Tribal Council in 2014, 2015, and in 2017 with the Interdisciplinary team during the development of this Plan. At these meetings, WWE staff presented the information on water rights and water budget underlying this Plan and held discussions with Council on their water conservation and management issues and goals. This process culminated in a “dot exercise” whereby all identified candidate measures were listed according to water management area (i.e., municipal, agricultural, industrial, traditional purposes,

etc.). Using color-coded dots, Tribal Council and staff individually ranked the measures highest in priority. These rankings were then used as a basis for group discussion and consensus.

7.2 Tribal Member Identification of Goals and Candidate Measures

On April 3, 2015 at its General Meeting, the UMUT provided a Water Management Survey to Tribal members in order to gain input on priorities for water conservation and management. The UMUT also sent the survey to members via email and invited members to complete the survey via Channel 99 television. The survey was designed to seek input from Tribal members on priority issues and goals that should be incorporated into the Conservation and Management Plan. Fifty-four Tribal members completed the survey. Results of this survey are incorporated in the candidate measures discussed in the following section.

7.3 Identification of Goals and Candidate Measures

After reviewing the issues brought forth by the Tribal Council and Tribal members, WWE prepared a list of goals and prioritized candidate measures. It is important to note that this list may change in the future as new Tribal goals and candidate measures are identified. The goals and candidate measures are shown at the end of this section. The candidate measures list serves as the living portion of this water conservation plan, to be continually updated based on input from the Tribe.

The over-arching goals for the Tribe's water management activities are to:

- Create and maintain an ongoing strategy to meet water resources needs and opportunities based on the financial and managerial resources of the Tribe.
- Improve coordination and water resources management across Tribal departments.
- Preserve and enhance culturally significant water sources and supplies as well as ecosystem health, particularly in periods of drought.
- Develop reliable, diversified and sustainable water supplies for Tribal needs. This includes:
    - Providing a safe and reliable water supply for all of its M&I needs on the UMUR.

  - Developing infrastructure measures in a way that supports and facilitates growth of Tribal enterprises as well as Tribal member activities.

- Provide education to Tribal members on water resources issues relevant to the Tribe as a whole and to individual members.

- Work with regional stakeholders to develop mutually beneficial water projects.

7.4 Candidate Measures

Please refer to the following pages.

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TABLES

Table 1
Stream Gage Summary
Ute Mountain Ute Tribe Water Conservation and Management Plan
DRAFT

Gage No.	Gage Name	Active/ Inactive	Period of Record	Average Annual Flow (Period of Record)		Average Annual Flow (2003-2013)		Minimum Annual Flow (Period of Record)			Maximum Annual Flow (Period of Record)			Average Annual Flow During Irrigation Season (Period of Record)			Minimum Annual Flow During Irrigation Season (Period of Record)		
				Average CFS	AF/Year	Average CFS	AF/Year	CFS	AF/Year	Year	CFS	AF/Year	Year	CFS	AF/Year	Year	CFS	AF/Year	Year
9166500	DOLORES RIVER AT DOLORES, CO	Active	1895-2014	424.0	306,538	363.0	262,730	85.9	62,173	1977	848.7	614,284	1941	651.2	275,937	1928	119.9	50,864	1977
9165000	DOLORES RIVER BELOW RICO, CO	Active	1952-2013	131.0	95,064	123.4	89,330	37.8	27,359	2002	229.7	166,255	1957	207.5	87,594	1960	50.1	21,193	2002
9166950	LOST CANYON CREEK NEAR DOLORES, CO	Active	1984-2014	19.0	13,399	12.8	9,254	0.2	126	2002	50.0	36,117	1993	28.0	12,275	1994	0.1	56	2002
9365500	LA PLATA RIVER AT HESPERUS, CO	Active	1918-2012	43.0	31,242	35.9	26,013	8.6	6,239	2002	90.5	65,503	1941	66.0	28,009	1999	12.1	5,134	2002
9366500	LA PLATA RIVER AT COLORADO-NEW MEXICO STATE LINE	Active	1921-2012	33.8	24,490	21.7	15,750	4.4	3,184	1977	109.3	79,111	1973	45.9	19,420	1982	5.4	2,285	1977
9370600	MANCOS RIVER AT ANITAS FLAT BELOW MANCOS, CO	Active	2007-2014	33.6	24,319	*	*	11.8	8,541	2012	53.9	39,013	2008	36.1	15,368	2007	6.9	2,883	2012
9371000	MANCOS RIVER NEAR TOWAOC, CO	Active	1921-2014	48.0	35,280	32.8	23,740	4.3	3,112	1959	138.4	100,173	1973	63.0	26,787	1998	3.3	1,192	1959
9371010	SAN JUAN RIVER AT FOUR CORNERS, CO	Active	1978-2014	1,959.0	1,418,051	1,391.8	1,007,411	738.5	534,523	2002	4,180.0	3,025,463	1987	2,623.5	1,110,531	1994	697.4	295,083	2002
9371492	MUD CREEK AT STATE HIGHWAY 32 NEAR CORTEZ, CO	Active	1982-2013	7.4	5,364	7.1	5,170	3.8	2,750	2002	9.8	7,122	2008	12.0	5,077	2004	5.7	2,420	2002
9371520	MCELMO CREEK ABOVE TRAIL CANYON NEAR CORTEZ, CO	Active	1993-2014	54.0	39,060	49.2	35,630	23.9	17,299	2002	78.8	57,035	1997	72.7	30,859	2007	17.2	7,296	2002
9372000	MCELMO CREEK NEAR COLORADO-UTAH STATE LINE	Active	1951-2014	50.0	36,391	45.9	33,242	16.2	11,725	1977	94.6	68,471	1973	61.7	26,183	2007	5.2	2,227	1977
9371002	NAVAJO WASH NEAR TOWAOC, CO	Inactive	1987-1993	9.4	6,817	*	*	6.2	4,481	1990	11.2	8,107	1987	12.8	5,437	1991	8.4	3,563	1989

Source: United States Geological Survey

Notes:
AF per year calculated as follows (annual average CFS x 1.983 AF/day x 365 days/year).
* Denotes that the date range of 2003-2013 exceeds the period of record for this gage.
Irrigation Season is considered April through October (214 days).

Table 2A
Reserved Rights of Existing Use Structures in Consent Decrees
Ute Mountain Ute Tribe Water Conservation and Management Plan
DRAFT - Internal Use Only

Basin	Colorado Case Number	Priority Date for Existing Use Structures [1]	Catchment Basin		Reservoirs		Springs		Irrigation Ditches			Domestic Wells		Livestock Wells	
			Number	AF/yr	Number	AF/yr	Number	gpm	Number	cfs	AF/yr	Number	gpm	Number	gpm
San Juan	W-1603-76B	March 2, 1868 or May 10, 1911	0	0.00	64	163.88	13	73.00	0	0.00	0.00	0	0.00	20	85.50
Mancos	W-1603-76G	March 2, 1868 or May 10, 1911	1	0.03	120	261.37	40	135.75	1	6.00	556.00 [2]	1	5.00	19	138.00
Dolores	W-1603-76H	No Existing Use Structures	0	0.00	0	0.00	0	0.00	0	0.00	0.00	0	0.00	0	0.00
McElmo	W-1603-76I	March 2, 1868 or May 10, 1911	0	0.00	19	65.07	17	121.50	0	0.00	0.00	2	10.00	2	10.00
La Plata	W-1603-76J	March 2, 1868	0	0.00	8	17.35	0	0.00	0	0.00	0.00	0	0.00	2	10.00
Total			**1**	**0.03**	**211**	**507.67**	**70**	**330.25**	**1**	**6.00**	**556.00**	**3**	**15.00**	**43**	**243.50**

Source: Consent Decrees, Wright Water Engineers, Inc. and Colorado Division of Water Resources based on Keller-Bliesner exhibits to the Colorado Consent Decrees.

[1] Existing Use Section within each Consent Decree reports a March 2, 1868 Priority Date. Within the exhibits to the Consent Decrees individual structures may also report a May 5, 1911 Priority Date.

[2] No AF value given in Exhibit 7 for Mancos Basin. Value Derived from Keller-Bliesner Historical Use Data base.

Note: For a detailed list of individual existing use structures see Appendix A.

Table 2B
Reserved Water Rights in the Colorado Consent Decrees
Ute Mountain Ute Tribe Water Conservation and Management Plan
DRAFT- For Internal Use Only

Stream	Colorado Case Number	Priority Date	Rate (cfs)	Allocation (AF/yr)	Decreed Uses
Mancos River	W-1603-76G	A reserved water right with a March 2, 1868 priority date, which may be subordinated to all rights with an adjudication date prior to 1985		21,000 AF	For irrigation of 7,200 acres within the Reservation.
Navajo Wash	W-1603-76G	A reserved water right from the Navajo Wash drainage with a March 2, 1868 priority date, subordinated to all rights with an adjudication date prior to 1985	15 cfs	4,800 AF	For irrigation of 1,200 acres of Tribal lands within Navajo Wash. See also Case No. 81CW126 stipulation.
San Juan River	W-1603-76B	A reserved water right with a July 25, 1868 priority date	10 cfs	1,600 AF	For irrigation of 640 acres of Tribal lands within the San Juan River mainstem drainage.
McElmo Creek	W-1603-76I	A reserved water right with a February 8, 1904 priority date	1.04		For Irrigation of 26 acres of land by Wilson Ditch
Future Diversions - All Drainages within Reservation	W-1603-76 B, G, I, J	A reserved water right with a March 2, 1868 priority date		2 AF	Oil and Gas Development, 6,000 barrels per site.
Future Diversions - All Drainages within Reservation	W-1603-76 B, G, I, J	A reserved water right with a March 2, 1868 priority date		1 AF	Road construction and maintenance.
Future Diversions - Tributary Groundwater	W-1603-76 B, G, I, J	A reserved water right with a March 2, 1868 priority date		1,850 AF	For domestic and livestock wells. 350 AF within McElmo Creek basin, 1,500 AF within all other basins on the Reservation.

Source: Colorado Consent Decrees

Table 2C
Federal Project Water Allocations in Consent Decrees
Ute Mountain Ute Tribe Water Conservation and Management Plan
DRAFT - Internal Use Only

Project	Colorado Case Number	Priority Date	Volume (AF per year)	Notes
Dolores Project	W-1603-76H	This water shall have an 1868 priority date, shall for all time be subordinated to all water rights decreed and senior to the Dolores Project, and shall share for all time on a pro rata basis the priority of the Dolores Project, which has an adjudication date of March 22, 1963, and an appropriation date of September 10, 1940.	25,100 AF per year of diversions	Diversion of 23,300 AF for Irrigation, 1,000 AF for Municipal and Industrial, 800 AF for fish/wildlife.
Animas - La Plata Project	W-1603-76F	This water shall have a March 2, 1868 priority date, shall be subordinated to all water rights decreed and senior to the Animas-La Plata Project, and shall share on a pro rata basis the priority of the Animas-La Plata Project, which has an adjudication date of March 21, 1966 and an appropriation date of September 2, 1938.	16,525 AF per year of average annual depletions	Value shown is average annual depletions that can be used for Municipal and Industrial uses only. Diversion amount basis may vary.

Source: Consent Decrees

Table 3
Dolores Project Allocations
Ute Mountain Ute Tribe Water Conservation and Management Plan
DRAFT
(All Values in Acre-Feet)

Allocation Holder	Original Allocations by USBR (DPR)	Adjustment to Allocations	Current Total Allocations	Notes
Dolores Water Conservancy District (DWCD) (Full Service Farmers)	55,282	6,985	62,267	Adjustments include 985 AF re-allocated from downstream water rights plus 6000 AF from Class B Stock.
Farm and Ranch Enterprise and Wildlife (Ute Mountain Ute Tribe)	23,300	1,217	24,517	The adjustment includes 417 AF from downstream water rights re-allocation plus 800 AF in San Juan Basin F&W water. Not counted in the adjustment is past Farm and Ranch leases which have recently averaged 4,000 AF/YR.
Downstream Fishery	29,300	2,498	31,798	Adjustment includes 1,274 in senior downstream water rights, plus 524 AF from downstream water rights re-allocation and 700 AF in Paradox Salinity Unit augmentation, released with fish pool.
Montezuma Valley Irrigation Company (MVIC)	Variable			MVIC Project water allocation is variable. MVIC has 26,300 acres of land defined in USBR contracts as irrigable and therefore eligible for Project water. MVIC Project water is calculated by totaling the MVIC non-Project supply (i.e. adjudicated water rights supply), applying this supply toward the full 37,500 acres irrigated by MVIC, then making up the difference so the 26,300 irrigable acres receive a full supply of 4.01 AF/Acre. If MVIC does not take its full adjudicated water rights, it can be stored in McPhee Reservoir at a ratio of 0.7 of forgone diversions to 1 for stored water, referred to as "call water." Call water stored in McPhee Reservoir is the first water spilled since Project water gets priority. The active capacity of Groundhog and Narraguinnep Reservoirs is counted as non-Project supply. By contract MVIC must limit their total non-Project water use to 150,400 AF for all irrigable and Class 6 lands (totaling 37,500 acres), but Project water can only be applied to the 26,300 irrigable acres. Average Project water by contract was estimated at 13,700 AF, which is the basis for a flat share of O&M charges, regardless of annual use. An additional 3,000 AF of non-Project stock water is available to MVIC under their adjudicated water rights.
Municipal and Industrial (M&I) Ute Mountain Tribe	1,000		1,000	
M&I City of Cortez	2,300		2,300	
M&I Town of Dove Creek	280		280	
M&I DWCD	5,120		5,120	
Totals	**116,582**	**10,700**	**127,282**	**Neither MVIC non-Project or Project Water is included in these totals.**

Source:
Table provided by Ken Curtis, DWCD. Modifications for clarification by WWE.
Last updated April 2011

Table 4

Dolores Project Deliveries to Ute Mountain Ute Tribe

Ute Mountain Ute Tribe Water Conservation and Management Plan

Draft-For Internal Use Only

Year	Total Water Delivered to UMUT Farm and Ranch Enterprise	Municipal and Industrial Water Delivered to Towaoc, CO
	(AF)	(AF)
	(1)	(2)
2000	24,279	731.9
2001	24,897	684.1
2002	6,290	814.5
2003	12,588	848.2
2004	24,496	734.4
2005	24,868	846.4
2006	27,941	878.0
2007	27,050	803.1
2008	28,476	685.3
2009	28,467	827.9
2010	28,520	665.6
2011	27,623	892.9
2012	28,213	643.0
2013	9,119	576.6
Average	23,059	759.4

Notes

(1) Source: Dolores Water Conservancy District approved year end accounting sheets. Water deliveries include leased water from the Dolores Water Conservancy District, agricultural allocations, wildlife allocations, and other allocations for downstream senior water rights.

(2) Source: 2000 - 2009 City of Cortez meter data from City of Cortez Water Conservation Plan.
Source: 2010 - 2013 Dolores Water Conservancy District Records.

Table 5
Animas-La Plata Project Water Allocation Owners
Ute Mountain Ute Tribe Water Conservation and Management Plan
Draft- Internal Use Only

Entity	Depletion Amount (AF/yr)[1]
Ute Mountain Ute Tribe	16,525
Southern Ute Indian Tribe	16,525
CWRPDA[2]	700
City of Durango [3]	1,900
State of Colorado	5,230
Navajo Nation	2,340
San Juan Water Commission (NM)	10,400
La Plata Conservancy District (NM)	780

Notes:

(1) Depletions from the Colorado Department of Water Resources Final Administration Signed Protocol.

(2) The Colorado Water Resources and Power Development Authority (CWRPDA) purchased the Animas La Plata Water Conservancy District's (ALPWCD) interest in the project.

(3) The City of Durango has purchased 1900 AF of the depletions in the project from this allocation.

Sources:

Source: U.S. Bureau of Reclamation: http://www.usbr.gov/uc/progact/animas (accessed 02/05/13)

Intergovernmental Agreement establishing the ANLPOM&R Association (3/4/2009)

http://www.waterinfo.org/node/5675 (accessed 02/05/13)

Table 6

Off-Reservation Water Rights Associated With Tribal Ranches

Ute Mountain Ute Tribe Water Conservation and Management Plan

DRAFT - Internal Use Only

Stream	Tribal Ranch Name	Parcel within Tribal Ranch	County, State	Water Right	Administrative Number	Number of Shares		Decreed Amount (cfs unless otherwise noted)	
						Total	Ute Mtn Ute	Total	Ute Mtn Ute
Lost Canyon Creek (tributary to Dolores River at McPhee Reservoir)	Adams	Adams	Montezuma, CO	Big Pine Reservoir (aka Joe Moore Reservoir) delivered via Turkey Creek Ditch	20954.00000	26	10	459.19 AF	177 AF
Cherry Creek, Tributary to La Plata River	Thompson Park (Cherry Creek Ranch)	Covey	La Plata, CO	La Plata & Cherry Creek Ditch Co.	14763.00000	1 share = 2 cfs per Ditch Company	1	37.50	2.00
		Pyle					2		4.00
		Safley					1		2.00
				Caviness Ditch	14063.00000	Not Applicable		2.50	2.50
				Dick Ditch - transferred to Caviness Ditch	17136.00000	Not Applicable		1.50	1.50
La Plata River	Hay Gulch	Dunn	La Plata, CO	Hay Gulch Ditch	13918.00000 (Class A)	168	14	10.50	0.88
					17554.00000 (Class B)	60	10.18	3.75	0.64
		Henderson			17554.00000 (Class B)	60	20.353	3.75	1.27
La Plata River	Hesperus	Neilson	La Plata, CO	La Plata Irrigating Ditch	11110.00000	Not Applicable		1.25	1.25
					14386.00000	Not Applicable		4.00	2.00
San Juan River in Utah	Perkins	Watkins	San Juan, UT	Blanding Irrigation Co.	Not Applicable	264,000	29,772	2640.00	297.72
		Poole		None					
		Comb Wash		None					
		Frank Hurst		None					
Pine Creek, Willow Creek, Tributary to the Gunnison River	Pinecrest	Elizondo	Gunnison, CO	Big Willow Springs Ditch	20393.19844	Not Applicable		5.99	5.99
				Pine Creek Ditch	20393.19844	Not Applicable		26.61	26.61

Notes:
1) Information from 2006 Water Conservation Plan - Phase I and Colorado Decision Support System.
2) Physical yield of water depends on water availability and stream administration in a given year.

Table 7

Tribal Water Rights in Utah

Ute Mountain Ute Tribe Water Conservation and Management Plan

Water Right No.	Application No.	Certificate No.	Amount (cfs)	Source	Priority Date	Action Date	Uses	Period of Use	Notes
09-197	A28161	8439	2.00	Groundwater Well	5/12/1956	10/18/1957	Domestic and Stock (95 stock units and 62 domestic units)	Year Round	White Mesa Community's Well
09-32	A9486	3007	1.18	Cottonwood Creek	3/12/1924	12/12/1924	Irrigation of 28.6 acres	April 1 - November 15	
09-33	A9487	3008	0.64	Hammond Canyon Creek	3/17/1924	12/12/1924	Irrigation of 21.12 acres	April 1 - November 15	
09-34	A9491	3009	0.74	Cottonwood Creek	3/24/1924	12/12/1924	Irrigation of 20.89 acres	April 1 - November 15	
09-35	A9492	3010	0.30	Cottonwood Creek	3/24/1924	12/12/1924	Irrigation of 15.3 acres	April 1 - November 15	
09-36	A9506	3011	1.06	Allen Canyon Creek	4/18/1924	12/9/1925	Irrigation of 38.38 acres	April 1 - November 15	
09-82	A11348	2233	0.70	Hammond Canyon Creek	2/27/1933	10/23/1933	Irrigation of 19.55 acres	April 1 - November 15	
Total Surface Water Rights:			**4.62**			**Total Irrigated Acres:**	**143.84**		

Source: Utah State Engineers Office website: http://www.waterrights.utah.gov

Notes:
All water rights are located in San Juan County, UT.

Table 8A

Future Industrial Water Demands for Weeminuche Construction Authority

Ute Mountain Ute Tribe Water Conservation and Management Plan

DRAFT - Internal Use Only

Time Period	Water Demands (AF)				
	Wash Plant	Dust Control	Evaporation	Road Maintenance	Total
(1)	(2)	(3)	(4)	(5)	(6)
Current	39.6	15.8	6.7	Varies by project, not estimated	**62.1**
Future	118.8	15.8	6.7		**141.3**

Sources:

Based on information from Weeminuche Construction Authority (WCA), discussion on March 5, 2014.

Evaporation contours from Colorado Decision Support System data.

Notes:

(1) Current and 20-year projections provided by WCA. No 50-year projections were available, therefore 20-year projections were used for this Plan

(2) Wash plant uses approximately 125 gallons per minute, 8 hours per day, 215 days per year (non-winter months) according to WCA staff. In 2014, WCA operates one wash plant. In 2035, WCA anticipates operating 3 wash plants.

(3) Dust Control for material crusher uses 10 gallons per minute, 8 hours per day, 215 days per year according to WCA staff. WCA does not anticipate operating additional crushers on the Ute Mountain Ute Reservation in the future.

(4) Evaporation contour for the location of the Four Corners Pit is approximately 62 inches per year. The wash ponds total surface area is 1.3 acres. No growth in wash pond size is anticipated.

(5) WCA conducts road maintenance on the reservation. Demands vary annually and by project therefore no estimate could be provided for this summary. No growth in road maintenance demands is anticipated.

(6) Equals sum of Columns 2 through 4.

Note: All demands are assumed to be 100% consumptive.

Note: 1 Acre-Foot = 325,851 gallons.

Note: One-time demands associated with maintenance, repairs, improvements or building of new roads is not included.

Table 8B
Estimated Future Water Demands for Oil and Gas Well Development
Ute Mountain Ute Tribe Water Conservation and Management Plan
DRAFT

Type of Well	Annual Number of Wells Developed	Annual Water Requirement		Total Water Requirement for 1,000 Wells	
		Low Estimate	High Estimate	Low Estimate	High Estimate
	(Wells/yr)	(AF/yr)	(AF/yr)	(AF)	(AF)
	(1)	(2)	(3)	(4)	(5)
Unconventional/Recompletes*	20	158	262	7,900	13,100

Notes:

(1) The total estimated additional wells on the Reservation in 20 years is 400 wells (average 20 wells developed per year) based on the draft Reasonable Foreseeable Development scenario developed by the Tribe in conjunction with the BLM, BIA and area producers.

Well development and water requirement information is from BLM, BIA, UMUT EPD, and GIS well data and FEIS for the San Juan National Forest and Proposed Tres Rios Field Office Land and Resource Management Plan (USDA/USDI 2013). Annual water requirement (AF) = Number of wells developed x AF/well requirement (7.9 AF per well as low estimate, and 13.1 AF per well as high estimate).

(2) Equals 20 wells x 7.9 AF/yr/well

(3) Equals 20 wells x 13.1 AF/yr/well

(4) Equals 1,000 total wells x 7.9 AF/yr/well

(5) Equals 1,000 total wells x 13.1 AF/yr/well

* This estimate does not differentiate between types of wells. Therefore, WWE estimated all new wells would have water demands for drilling and completion typical of an unconventional shale gas well in the Gothic Shale Play, with some annual well development including recompletes.

Table 8B
Estimated Future Water Demands for Oil and Gas Well Development
Ute Mountain Ute Tribe Water Conservation and Management Plan
DRAFT - Confidential Internal Use Only

Type of Well	Annual Number of Wells Developed	Annual Water Requirement		Total Water Requirement for 1,000 Wells	
		Low Estimate	High Estimate	Low Estimate	High Estimate
	(Wells/yr)	(AF/yr)	(AF/yr)	(AF)	(AF)
	(1)	(2)	(3)	(4)	(5)
Unconventional/Recompletes*	20	158	262	7,900	13,100

Notes:

(1) The total estimated additional wells on the Reservation in 20 years is 400 wells (average 20 wells developed per year) based on the draft Reasonable Foreseeable Development scenario developed by the Tribe in conjunction with the BLM, BIA and area producers.

(2) Well development and water requirement information is from BLM, BIA, UMUT EPD, and GIS well data and FEIS for the San Juan National Forest and Proposed Tres Rios Field Office Land and Resource Management Plan (USDA/USDI 2013). Annual water requirement (AF) = Number of wells developed x AF/well requirement (7.9 AF per well as low estimate, and 13.1 AF per well as high estimate).

(3) Equals 1,000 total wells divided by (1) x (2).

(4) Equals 1,000 total wells divided by (1) x (3).

* This estimate does not differentiate between types of wells. Therefore, WWE estimated all new wells would have water demands for drilling and completion typical of an unconventional shale gas well in the Gothic Shale Play, with some annual well development including recompletes.

Table 9

Farm and Ranch 2014 Farm Plan - Consumptive Use, Acres, Total Irrigation Water Demand

Ute Mountain Ute Tribe Water Conservation and Management Plan

DRAFT - Internal Use Only

Crop	Number of Acres per Crop Type based on 2014 Farm Plan (acres)	Unit Irrigation Water Requirement (Acre-Feet per acre)	Total Irrigation Water Requirement (Acre-Feet per year)	Diversion Requirement at 61% Efficiency (Acre-Feet per year)
	(1)	(2)	(3)	(4)
Alfalfa	3,625	2.92	10,578	17,341
Various corn	2,896	1.71	4,941	8,099
Winter wheat	321	0.37	118	193
Pasture grass	592	2.56	1,513	2,480
Grass/alfalfa mix	191	2.74	523	857
Total	**7,625**	**NA**	**17,671**	**28,969**

Notes

(1) From the 2014 Crop Plan provided by FRE staff. Version dated 05/06/2014, subject to revisions. Note that the Demonstration Farm area is not included.

(2) Calculated for the Farm and Ranch lands location using the StateCU tool for the period of record of available climate data of 1931-2012, with some years missing.

(3) Equals Column 1 x Column 2.

(4) Equals Column 3 / 61%. The 61% system irrigation efficiency is from Table 22 of the Definite Plan Report. Appendix B has an overall system efficiency of 61% (which includes on-farm efficiency for sprinkler system, credits for effective precipitation, calculation of conveyance losses, and operational losses).

Table 10

Farm and Ranch Enterprise Future Crop and Diversion Requirement Scenarios

Ute Mountain Ute Tribe Water Conservation and Management Plan

DRAFT - Internal Use Only

Crop	Crop Distribution in Water Requirement Scenarios (Acres)			Irrigation Water Requirement (Acre-Feet per year)			Diversion Requirement at 61% Efficiency (Acre-Feet per year)		
	Minimum	Average	Maximum	Minimum	Average	Maximum	Minimum	Average	Maximum
Alfalfa	2,000	3,600	3,800	5,836	10,505	11,088	9,567	17,221	18,178
Corn	3,500	3,000	2,600	5,971	5,118	4,436	9,789	8,390	7,271
Pasture	1,000	600	1,000	2,555	1,533	2,555	4,189	2,513	4,189
Winter Wheat or Triticale	1,000	300	100	367	110	37	602	180	60
Total	7,500	7,500	7,500	**14,729**	**17,266**	**18,116**	**24,146**	**28,305**	**29,698**

Notes:

1) Information on minimum, average and maximum acres provided by Eric Whyte and WWE estimates based on the current crop distribution.

2) Based on mean Irrigation Water Requirement calculated in StateCU (see Table 9) for crops over period of record and assumes a 61% efficiency based on 1977 DPR for the Dolores Project by USBR.

3) Assumes triticale has the same Irrigation Water Requirement as winter wheat.

4) Does not account for multiple plantings in a single year.

Table 11

Demonstration Farm and Mancos Creek Farm Agricultural Water Sources and Calculated Water Demands

Ute Mountain Ute Tribe Water Conservation and Management Plan

DRAFT - Internal Use Only

		Based on Settlement Agreement					Based on Current Consumptive Use and Acreage Analysis				
Lands	Crop	Consumptive Use (Acre-Feet (AF) per acre)	Efficiency (%)	Total Demand (AF per acre)	Total Acres (acres)	Total Project Supply (AF per year)	Crop	Consumptive Use (AF per acre)	Efficiency (%)	Total Acres (acres)	Total Demand (AF per year)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Demonstration Farm	hay	No Data		0.00	0.00	0.00	alfalfa	2.693	61%	100	532
							hay	2.197	61%	25	
Mancos Creek Farm	hay			3.00	185.3	556	hay	2.628	50%	250	1,314

Notes:

(1) Tribal lands receiving irrigation water.

(2) From the Consent Decree.

(3) No data provided in the consent decree

(4) No data provided in the consent decree

(5) Based on the total acres and annual demands in the Consent Decree.

(6) From the Consent Decree.

(7) From the Consent Decree.

(8) Crop used in StateCU analysis based on the 2014 crop plan for the Demonstration Farm and historical practices for the Mancos Creek Farm.

(9) As calculated by StateCU for adjusted climate station in Cortez (1914-2013), StateCU's Irrigation Water Requirement does account for effective precipitation.

(10) No current data readily available, therefore WWE continued to use the 61% efficiency calculation based on net CU and net diversion requirement from Table 22 of the Definite Plan Report for the Demonstration Farm and FRE. For the Mancos Creek Farm, which will use an unlined ditch and gated pipe, therefore an efficiency of 50% was used.

(11) For Demonstration Farm and Mancos Creek Farm, based on consent decree; for Farm and Ranch Enterprise based on information from Tribal staff and estimated losses from conveyance in MVIC canal system.

(12) Equals CU divided by Efficiency.

Table 12

Tribal Ranches Water Supply, Demand, and Shortages

Ute Mountain Ute Tribe Water Conservation and Management Plan

DRAFT - Internal Use Only

Tribal Ranch	Water Rights Yield (AF per year)	Irrigable Area per Ranch (Acres)	Irrigation Demand (AF per year)	Shortage (AF per year)
Adams	153	189	150	(3)
Thompson	657	466	1,695	1,039
Hay Gulch	374	79	284	(90)
Hesperus	660	195	705	45
Perkins	298	75	227	(71)
Pinecrest	920	1,461	4,909	3,990

Source: Ute Mountain Ute Tribe - Water Management Plan - Phase I (WWE, 2006), modified in 2014.

Notes:

1) Negative shortage represents a surplus.

2) Water Rights Yield is based on water rights and CDSS diversion data, as analyzed in the 2006 Plan. The yield is preliminary and subject to change.

3) More information is needed on the Zwicker Ranch in order to add this ranch to the water budget.

Table 13
Summary of Regional Instream Flows
Ute Mountain Ute Tribe Water Conservation and Management Plan
DRAFT

Watershed	Stream	Reach	Length (mi)	Amount (date) CFS	Appropriation Date
Mancos	East Mancos River	Headwaters - confluence Mancos River	11.7	2 (1/1 - 12/31)	7/13/1984
	North Fork West Mancos River	Headwaters - confluence W Mancos River	4.3	2 (1/1 - 12/31)	7/13/1984
	West Mancos River	Confluence N Fork and S Fork Mancos River - Jackson Ditch diversion headgate	6.4	4 (1/1 - 12/31)	7/13/1984
Middle San Juan	Basin Creek	Headwaters - confluence La Plata River	2	4 (1/1 - 12/31)	7/30/1976
	Columbus Creek	Headwaters - confluence La Plata River	2	3 (1/1 - 12/31)	7/30/1976
	La Plata River	Outlet of Upper Lake - Hay Gulch Irrigation Ditch headgate	13.8	5 (11/1 - 3/31) 9 (4/1 - 10/31)	7/13/1984
	Lewis Creek	Headwaters - confluence La Plata River	2	2 (1/1 - 12/31)	7/30/1976
	Madden Creek	Headwaters - confluence La Plata River	2	1 (1/1 - 12/31)	7/30/1976
	Tirbircio Creek	Headwaters - confluence La Plata River	1	2 (1/1 - 12/31)	7/30/1976
McElmo Creek	Yellow Jacket Canyon Creek	Dawson Draw - confluence Sandstone Canyon	12.58	2.5 (11/1 - 5/15) 3.2 (5/16 - 10/31)	1/25/2006
		Sandstone Canyon - Ismay Ditch headgate	10.64	2.1 (1/1 - 12/31)	
Upper Dolores Lower Dolores	Dolores River	McPhee Reservoir Dam - confluence San Miguel River	105	78 (1/1 - 12/31)	5/1/1975
Upper Dolores		Headwaters - confluence Snow Spur Creek	6	6 (1/1 - 12/31)	5/5/1983
		Snow Spur Creek - confluence Fill Gulch	12.8	20 (1/1 - 12/31)	7/13/1984
		Fill Gulch - confluence Bear Creek	10.6	25 (11/1 - 2/29) 35 (3/1 - 10/31)	
		Bear Creek - confluence West Fork Dolores River	10.8	30 (11/1 - 2/29) 50 (3/1 - 10/31)	
Upper San Juan	Los Pinos River	Lake Creek - confluence Vallecito Reservoir	9.3	32 (1/1 - 12/31)	7/13/1984

Table 14
Summary of Threatened and Endangered Species
Ute Mountain Ute Tribe Water Conservation and Management Plan
DRAFT

Scientific Name	Common Name	State Status	Federal Status	Occurrence
Haliaeetus leucocephalus	Bald Eagle	Species of Special Concern	Bald and Golden Eagle Protection Act (1999) Birds of Conservation Concern (2008)	Winter residence
Empidonaz traillii extimus	Southwestern Willow Flycatcher	Endangered	Endangered	Migrate through
Coccyzus americanus	Yellow-billed Cuckoo	Species of Special Concern	Candidate	Found in dense riparian habitat associated with watercourses and mature cottonwood stands
Ptychocheilus lucius	Colorado Pikeminnow	Threatened	Endangered	Present in the Mancos and San Juan Rivers
Xyrauchen texanus	Razorback Sucker	Endangered	Endangered	Present in the Mancos and San Juan Rivers
Catostomus latipinnis	Flannelmouth Sucker	Species of Special Concern		Abundant and generally distributed in San Juan River Basin
Catostomus discobolus	Bluehead Sucker	Species of Special Concern		Abundant and generally distributed in San Juan River Basin
Oncorhynchus clarki pleuritisuc	Colorado River Cutthroat Trout	Sensitive Species		Survives in isolated headwater tributaries
Gila robusta	Roundtail Chub	Species of Special Concern		Extremely rare in the San Juan and Animas; may be more common in the La Plata and Mancos rivers
Astragalus humillimus	Mancos Milkvetch		Endangered	Found on sandstone ledges in pinyon/ juniper woodlands
Sclerocactus mesae-verdae	Mesa Verde Cactus		Endangered	Found on sparsely vegetated shale or adobe clay badlands
Rana pipiens	Northern Leopard Frog	Species of Special Concern		Found in wetland habitats with adequate cover
Thomomys spp.	Pocket Gopher	Species of Special Concern		Habitat includes pasture land and agricultural fields; affected primarily through damage to burrows by earthmoving equipment
Buteo regalis	Ferruginous Hawk	Species of Special Concern		Use watershed area for foraging
Falco peregrinus anatum	American Peregrine Falcon	Species of Special Concern		Use cliffs and forested areas for breeding habitat; use riparian forested areas, grasslands and agricultural fields for foraging
Lontra canadensis	River Otter	Species of Special Concern		Use riparian habitats with fish and crustaceans; require good water quality and adequate flow volumes

Sources:

USBR. (2012). *San Juan River Basin Recovery Implementation Program.* Retrieved 2014, from http://www.fws.gov/southwest/sjrip/pdf/DOC_SJRRIP_Final_Program_Document_2012.pdf
Natural Resource Conservation Service. (2004). *Mancos Valley Salinity Control Project Plan and Environmental Assessment.* Lakewood, CO.

Candidate Measures

Section 8.4
Water Management Candidate Measures
Ute Mountain Ute Tribe Water Conservation and Management Plan
Overall Management
Draft - Internal Use Only

Measure #	Candidate Measure	Description of Candidate Measure	Ranking (Hi-Med)	Start Date	Status (1-5)	Status Date
1	Create Water Resources Manager position	Create a staff position (or multiple positions) that has a primary focus and responsibility of water resource management, coordination across Tribal departments, and facilitating programs that educate and engage Tribal members on a broad range of current and long-term Tribal water issues. This position would also identify areas of competing water demands for limited supplies so that policy decisions can be made, as needed.	High			
2	Continue to seek funding	Determine potential funding sources. Pursue and obtain funding, including grant sources, for implementation of candidate measures.	High			
3	Develop a process for evaluation of water supply requests	Establish a decision-making process for evaluating requests to provide water supply for Tribal and non-Tribal users on the UMUR. This would identify the legal and physical supply available and legal and cost considerations in providing the water supply for different types of requests.	High			
4	Evaluate marketing of ALP Project Water Supplies	Develop appropriate mechanisms and identify opportunities for marketing Tribal water within the framework of the Colorado River. This may include forbearance such as fallowing or intentionally created surplus, water banking, leasing, or using Tribal water for Colorado River Compacts compliance.	Medium			
5	Plan for long-term land use and economic development on the UMUR	Conduct long-term land use and economic development planning to identify, refine and expand long-term land use and economic development plans for the UMUR in order to improve the basis of future water demand needs and location of conceptual future uses.				
6	Develop an education and outreach campaign	• Education and outreach campaign to inform Tribal members on water use and water costs, to focus on effect of water conservation on individual members, and to promote and incentivize water conservation amongst Tribal members and municipal and industrial water users. • Public Service Announcements: water conservation measures, disposal of fats, oils, and grease, and unauthorized use of municipal water such as filling stock tanks from spigots or hydrants.	Medium			
7	Incorporate climate change impacts in water planning	Incorporate climate change impacts on water supply and water demands into future water resources planning and development.				

Note: Status of "1" indicates just started, "5" indicates finished.

Section 8.4
Water Management Candidate Measures
Ute Mountain Ute Tribe Water Conservation and Management Plan
Municipal and Industrial including ALP Project Uses

Draft - Internal Use Only

Measure #	Candidate Measure	Description of Candidate Measure	Ranking (Hi-Med)	Start Date	Status (1-5)	Status Date
8	Municipal Water Supply System Master Plan	Develop a Water Supply System Master Plan for the Municipal Water Supply System on the Colorado portion of the UMUR to ensure the system meets current water demands, near term growth including the Casino expansion and new residential housing, and long-term water demands The Master Plan includes: • Inventory of existing infrastructure including water transmission lines, storage tanks, and distribution system for information including age, condition, capacity, etc. • Hydraulic study and engineering of existing system and assess pressure zones. • Analysis of current and future water demands with available sources and a review of water supply source alternatives. • Capital Improvement Plan to schedule and provide cost opinion for infrastructure improvement needs. • Financial plan in the works, potentially including a rate study to support ongoing and future operations, maintenance and replacement needs as well as needed capital improvements.	High			
9	Water Efficiency Plan	Develop a Water Efficiency Plan for the municipal water supply system. A typical Water Efficiency Plan includes a summary of infrastructure, demands, supplies, and existing management methods and develops feasible water efficiency measures as well as preliminary cost estimates for implementation. A Water Efficiency Plan would further evaluate measures identified in this plan including education and outreach, data collection and analysis, leak detection, metering, calibration, and others. • Data entry into a water usage/monitoring spreadsheet. • Metering of all residences and businesses to better determine use and problem areas in water system. • Public Service Announcements: water conservation measures and disposal of fats, oils, and grease.	High			
10	Cortez-Towaoc Pipeline leak detection	• Preliminary Engineer Report and recommendations underway for leak detection on Cortez-Towaoc Pipeline. • Potentially increase funding for improvements to the Cortez-Towaoc section of pipeline in 2017.				
11	Meter water system infrastructure	• USDA funding requirement: Install meters on all residences, businesses and enterprises. • Meter largest water user businesses and enterprises first. •Currently 17 meters, leaving 536 residences and ~33 business/enterprises unmetered.				
12	Improve and expand the SCADA system to monitor water delivery lines	• Ongoing maintenance and upgrades to the Tribe's SCADA system. Regular reading and analysis of SCADA reports to help to identify losses, changes and areas for potential conservation measures. • Improvements made to Public Works equipment, Upper Water Tank, and Lower Control Vault. • Improvements needed at Cortez Vault, Middle Vault, Mancos Creek Vault, and Lift Station.	Medium			
13	Reduce potable irrigation water demands	• Implement irrigation water efficiency measures, such as irrigation timers and sprinkler maintenance for public parks and landscaping as well as the Casino landscape. The Tribe may also study feasibility of using non-potable sources for park and Casino landscape irrigation. • New meters, billing, and potential water limits per person.	Medium			
14	Monitor unauthorized uses of the municipal water supply system	• Protect and monitor system access points to reduce unauthorized uses from hydrants or flush valves. • Potential pay-per-fill water station. • Increase public awareness on unauthorized use issue.				
15	Continue to collaborate with Dolores Water Conservancy District (DWCD)	• Maintain a good working relationship with DWCD and other stakeholders to facilitate obtaining additional municipal & industrial water from the Dolores Project as needed. • Work with DWCD to implement hydropower project at Energy Dissipation Structure. • Public Works Team to Tour the DWCD facility and attend board meetings.	High			

Section 8.4
Water Management Candidate Measures
Ute Mountain Ute Tribe Water Conservation and Management Plan
Municipal and Industrial including ALP Project Uses

Draft - Internal Use Only

Measure #	Candidate Measure	Description of Candidate Measure	Ranking (Hi-Med)	Start Date	Status (1-5)	Status Date
16	Inventory water sources for Weeminuche Construction Authority (WCA) use	Develop a summary of the legal and physical water supply sources that are available for WCA use, including the timing, access and limitations on their uses.				
17	Evaluate feasibility of using existing Navajo Wash water rights for industrial uses	Evaluate the feasibility of using a water right on Navajo Wash to provide for industrial purposes. This may include installing a stream gage to determine available flows in Navajo Wash.				
18	Industrial use of wastewater treatment plant effluent	Evaluate feasibility of using the Tribe's wastewater treatment plant effluent as a supply for industrial uses, potentially including use by Weeminuche Construction Authority.				
19	Oil and Gas groundwater well field accounting	Develop and implement methods to account for water use in the oil and gas well field.				
20	Investigate M&I uses of Long Hollow Reservoir	Evaluate means of delivering municipal and industrial water to Long Hollow Reservoir and potential demands that could be supplied from the reservoir.				
21	Develop ALP Project Water Supply for potable water delivery with La Plata West Water Authority (LPWWA)	Coordinate with LPWWA to develop potable water supplies for the eastern part of the UMUR in Colorado.	High			
22	Identify future infrastructure needs	Evaluate water demands and ALP water delivery options associated with long-term land use and economic development plans. This may include the following steps: • Evaluate pipeline options to deliver ALP Project waters to uses in the La Plata River Basin, either on or off the UMUR. This may include a fill station, storage, or domestic service lines and may be in partnership with the LPWWA or other regional entities. • Explore the potential to bring ALP Project waters to the Mancos River Basin. This measure would evaluate the feasibility of directly delivering ALP Project water into the Mancos River, working with regional stakeholders to increase storage in the Mancos River basin, and identifying any potential exchange opportunities. For example, concepts include enlargement of Jackson Gulch Reservoir, exchanging leases for local municipal and industrial uses, and stream enhancements. • Evaluate water supply for energy projects by the Tribe. • Evaluate the feasibility of "wheeling" the Tribe's ALP Project waters through the Animas River and San Juan River to be diverted by the Tribe at the Four Corners for municipal and industrial uses within the legal and legislative considerations for the Tribe's ALP waters. • Explore opportunities for a lease to exchange a portion of the Tribe's ALP Project allocation with other water users in the San Juan River in New Mexico within the legal and legislative considerations for the Tribe's ALP waters. • Collaborate with existing state and federal efforts to develop marketing opportunities within the framework of the Colorado River. This may include forbearance such as fallowing or intentionally created surplus, water banking, or leasing. The Tribe is currently working with the USBR on a study of Tribal water rights in the Colorado River. The Tribe is also working with the CWCB on Colorado River Compact evaluations.	High			

Section 8.4
Water Management Candidate Measures
Ute Mountain Ute Tribe Water Conservation and Management Plan
Agriculture

Draft - Internal Use Only

Measure #	Candidate Measure	Description of Candidate Measure	Ranking (Hi-Med)	Start Date	Status (1-5)	Status Date
Farm and Ranch Enterprise						
23	Improve efficiency of Towaoc-Highline Canal	Conduct a seepage and loss study on the Towaoc-Highline Canal in order to determine water losses and recommend improvements. Obtain and analyze data from DWCD in order to determine the conveyance losses from McPhee to the energy dissipation structure.				
24	Evaluate on-site storage	Evaluate on-site storage of irrigation water supplies to determine if storage could increase system efficiencies, improve operational flexibility, and increase the yield of the canal to meet crop water demands.				
25	Evaluate groundwater resources	Evaluate the feasibility and yield of developing groundwater sources to supplement irrigation needs to include installing a data recorder in the Farm and Ranch Enterprise well.				
26	Develop new water supply from Dolores Project	• Continue to lease additional water from the Dolores Project, as available. • Participate in the "Optimization Study." • Work with other Dolores Project stakeholders to implement efficiency projects that would result in "saved water" that could be used by the Tribe. • Develop a voluntary water transfer bank with other Dolores Project stakeholders. • Work with DWCD and USBR for contract to market unused water downstream of McPhee Reservoir. • Participate in discussions with other Dolores Project stakeholders on increasing storage in the basin. • Assess with USBR contractual and regulatory constraints to implement water efficiency projects.	High			
27	Develop new water supply from San Juan River	• Conduct a feasibility study of developing infrastructure and newly irrigated lands that can be served by San Juan River diversions. • Evaluate the timing and yield of physical water supply as well as the water quality conditions in the San Juan River at the Four Corners. • Evaluate regulatory issues, particularly the effects of the San Juan River Basin Recovery Implementation Plan, that would affect the use of Consent Decree rights as well as new water rights on the San Juan River.				
28	Develop new water supply from McElmo Creek	• Evaluate the legal and physical water supply available below Hartman Draw and at the State line for diversion by the Tribe. • Preliminary engineering review of pipeline alternatives from McElmo Creek, potential use of storage in Totten Reservoir, permitting issues including environmental constraints, and obtaining rights-of-way.				
29	Develop new water supply from Mancos River	• Evaluate potential reservoir sites in the basin including discussions with Mancos Water Conservancy District on the expansion of Jackson Gulch Reservoir and review of previous studies completed by the USBR on storage sites. • Evaluate the physically and legally available water supply to determine if additional storage is cost effective for agricultural purposes, including by FRE or the Mancos Creek Farm.	Medium			
30	Ute Farm and Ranch Infrastructure	• Develop long term Capital Plan to repair and replace irrigation system infrastructure. • Evaluate Micro-Hydroelectric Power Plant installation on irrigation delivery system. • Work with DWCD to implement hydropower project at Energy Dissipation Structure.				

Section 8.4
Water Management Candidate Measures
Ute Mountain Ute Tribe Water Conservation and Management Plan
Agriculture

Draft - Internal Use Only

Measure #	Candidate Measure	Description of Candidate Measure	Ranking (Hi-Med)	Start Date	Status (1-5)	Status Date
Demonstration Farm and Mancos Creek Farm						
31	Evaluate Montezuma Valley Irrigation Company (MVIC) shares	Evaluate water yield of the MVIC shares owned by the Tribe for use on the Demonstration Farm and define any limitations in the delivery options, type of use, or place of use associated with these shares.				
32	Develop Strategic Plan for Demonstration Farm	Work through an Inter-Disciplinary Team to develop a long-term plan and estimated water demands for future uses of the Farm area. In the future, uses may include developing a cottonwood tree farm for traditional Tribal purposes, developing solar energy, developing a community garden and orchard, or a combination of these and other uses.	Medium			
33	Improvements to Mancos Creek Farm Ditch	• Mancos Creek Farm Ditch conveyance improvements and ongoing operation and maintenance of Mancos Creek Farm. • Address chlorination issue of newly provided water to the 8 homes in the Mancos Creek Farm Ditch area.	High			
Livestock						
34	Compile existing data on water supply inventory and update, and evaluate groundwater resources	Compile existing information on the livestock water supply inventory and update. The inventory will serve as a tool to track livestock water use on the UMUR and plan for well improvements or new wells. The inventory may be expanded to include test holes and monitoring wells in addition to the developed wells and stock ponds/tanks on the UMUR. Data parameters may include access conditions, flow or capacity estimates, head of livestock using structure, or other parameters. Groundwater evaluations based on the inventory may include analyzing data on well pumping, water level, and sustainable yield as well as conducting new aquifer tests.	Medium			
35	Implement well improvement projects	Maintenance and improvements for 17 wells based on Tribal Department of Natural Resources' existing projects list including seeking funding for solar panel replacement of windmill generated power for well pumps. Prepare cost estimates for equipment needs and for transitioning to solar power supply and deepening wells, as feasible.				
36	Continued maintenance of stock ponds	Maintenance of stock ponds and watering tanks across range units.				
37	Improve current stock supply of well maintenance equipment and define further needs	Improve and increase Tribal DNR's inventory of equipment, parts, tools, vehicles to repair and maintain wells, stock ponds and watering tanks.				
38	Evaluate potential to increase forage through range management and adaptation	Evaluate the feasibility of improving existing range to provide more forage under changing climate conditions. Conduct a study of Climate Change impacts (i.e. changes in vegetation type over recent drought period) and an evaluation of adaptation methods including cross-fencing, seeding, temporary water supply during establishment of new vegetation, sustainable number of livestock, protection of cottonwood and other species and other appropriate adaptive management techniques.	High			

Section 8.4
Water Management Candidate Measures
Ute Mountain Ute Tribe Water Conservation and Management Plan
Tribal Ranches

Draft - Internal Use Only

Measure #	Candidate Measure	Description of Candidate Measure	Ranking (Hi-Med)	Start Date	Status (1-5)	Status Date
39	Protect off-Reservation Rights	Protect the Tribe's off-Reservation water rights by continuing to divert the water and put it to decreed beneficial use in the decreed place of use, to the fullest extent feasible.	High			
40	Pinecrest Ranch measures	• Perform regular on-farm maintenance, ditch repair, headgate replacement, improve irrigation delivery and equipment, maintenance and repair of stock ponds, distributing livestock across drier areas. • Evaluate, and if preferable, file for an Alternate Point of Diversion water right for diverting water via pump in Willow Creek to irrigate the east side of the Ranch. • Integrate the water supply requirements for the sage grouse management plan into agricultural planning.	High			
41	Thompson Ranch (aka Cherry Creek Ranch) measures	Includes the Covey, Pyle and Safley parcels • Perform regular on-farm maintenance of irrigation structures. • Fix the siphon on the Roach Property. • Work with other irrigators to improve diversion and delivery of the Eppich Lateral. • Continued participation in the Long Hollow Reservoir project to increase water supply availability.	High			
42	Hesperus Ranch measures	(This ranch includes the Neilson parcel) • Perform regular on-farm maintenance of irrigation structures. • Continued participation in the Long Hollow Reservoir project to increase water supply availability.				
43	Hay Gulch Ranch	(This Ranch includes the Dunn and Henderson parcels) • Perform regular on-farm maintenance of irrigation structures. • Continued participation in the Long Hollow Reservoir project to increase water supply availability.				
44	Adams Ranch measures	• Improve information on water rights associated with the Ranch • Perform regular on-farm maintenance of irrigation structures. • Increase irrigation efficiency through installation of sprinklers or other equipment. • Increase on-ranch storage to maximize the available water supply. • Purchase additional shares in Big Pine Reservoir, if available.	Medium			
45	Zwicker Ranch measures	• Determine the goals for development of this land.				
46	Perkins Ranch measures	Includes the Watkins, Poole, Comb Wash and Hurst parcels • Perform regular on-farm maintenance. • Evaluate agricultural activity on the Watkins parcel using water from the White Mesa Pipeline.				

Section 8.4
Water Management Candidate Measures
Ute Mountain Ute Tribe Water Conservation and Management Plan
Environmental and Traditional Purposes

Draft - Internal Use Only

Measure #	Candidate Measure	Description of Candidate Measure	Ranking (Hi-Med)	Start Date	Status (1-5)	Status Date
47	Inventory culturally significant water sources	Develop a **confidential** internal inventory of culturally significant water sources that could include parameters such as GPS location, flow, etc.	High			
48	Create Culturally Significant Water Sources Management Plan	Design a process for managing cultural water sources based on the inventory and tribal values, and ensure that cultural use of waters gets highest priority when there are competing demands for a limited supply.	Medium			
49	Designate Outstanding Tribal Resource Waters	Engage Tribal members in an outreach process to nominate additional waters for Outstanding Tribal Resource Waters (OTRW) designation while maintaining other compatible Tribal uses of the water resource.	Medium			
50	Implement projects that will protect and enhance culturally and environmentally important water resources	•Exercise water rights in a way that will increase streamflows through areas of valuable riparian habitat. •Collaborate with regional stakeholders on projects to improve streamflows in riparian areas, such as the Mancos Canyon. For example, evaluate feasibility of creating wetland banks for Tribal or non-Tribal users. •Establish a nursery for riparian species (i.e. willow and cottonwood) used for traditional purposes. •Develop and protect a water supply for spring-fed wetlands in Weber Canyon.	High			
51	Work with CDPHE to address Water Quality issues in Navajo Wash	Using the Tribe's Treatment-as-a-State status, coordinate with the Colorado Department of Public Health and Environment to address water quality concerns on Navajo Wash upstream of the UMUR.				
52	Develop Tribal Law and policy to implement Groundwater Protection measures	Based on the existing Groundwater Protection Plan, develop Tribal regulations that protect water quality. Regulations may address appropriate types of use of aquifers as well as measures to prevent impacts from specific activities.	High			

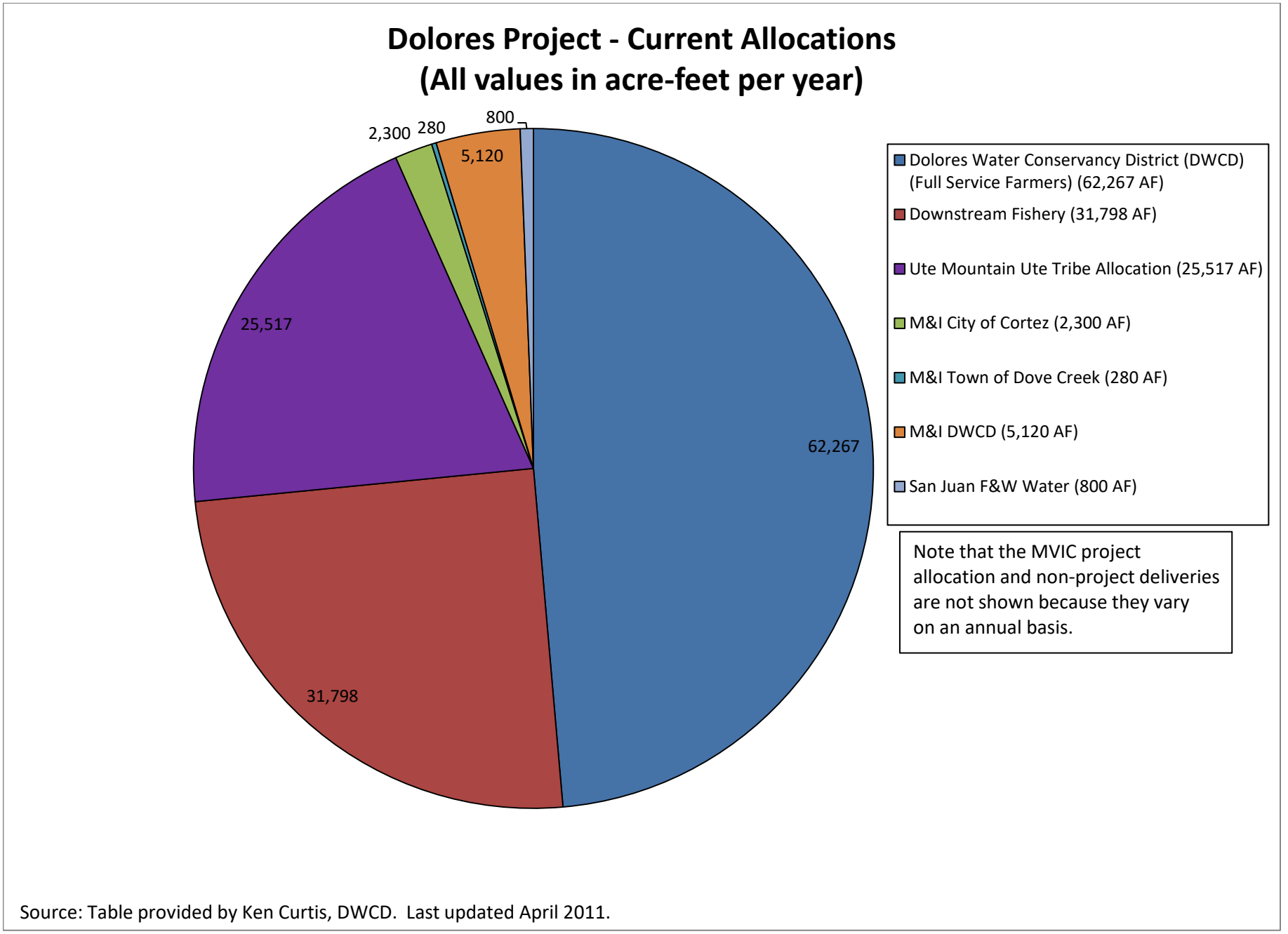
Section 8.4
Water Management Candidate Measures
Ute Mountain Ute Tribe Water Conservation and Management Plan
New Mexico and Utah Portion of the Reservation

Draft - Internal Use Only

Measure #	Candidate Measure	Description of Candidate Measure	Ranking (Hi-Med)	Start Date	Status (1-5)	Status Date
53	Improve Ranching infrastructure in Allen Canyon	Rehabilitate or construct new water delivery and storage structures in order to support ranching in Allen Canyon by Tribal members.				
54	Evaluate Recapture Reservoir as a water source for White Mesa	Further evaluate a connection to the City of Blanding, Recapture Reservoir, or other source to provided municipal water supplies.	Medium			
55	Municipal and Industrial Water Supply System Master Plan	• Develop a Water Supply System Master Plan for the Municipal Water Supply System on the Utah portion of the UMUR to ensure the system meets current demands and future growth and addresses water quality concerns. The Master Plan includes: • Inventory of existing infrastructure including water transmission lines, storage tanks, and distribution system for information including age, condition, capacity, etc. • Hydraulic study and engineering of existing system and assess pressure zones. • Analysis of current and future water demands with available sources and a review of water supply source alternatives. Alternatives include the feasibility of connecting to the City of Blanding or Recapture Reservoir M&I pipeline. • Based on inventory and sources, determine if a Certified Operator is needed for the system. • Capital Improvement Plan to schedule and provide cost opinion for infrastructure improvement needs. • Financial plan, potentially including a rate study to support ongoing and future operations, maintenance and replacement needs as well as needed capital improvements. • Continue to evaluate water needs for industrial projects in Utah and New Mexico	High			
56	Evaluate and quantify all surface water rights and claims in Utah	Study and evaluate Utah water rights and claims to verify information on ownership and water right history, quantify water claims for future adjudication in Utah.	High			
57	Evaluate and quantify all surface water rights and claims in New Mexico	Study and evaluate New Mexico water rights and claims to surface water, tributary groundwater, and non-tributary groundwater in order to verify information on ownership and water right history, and quantify claims for future adjudication in New Mexico.	High			

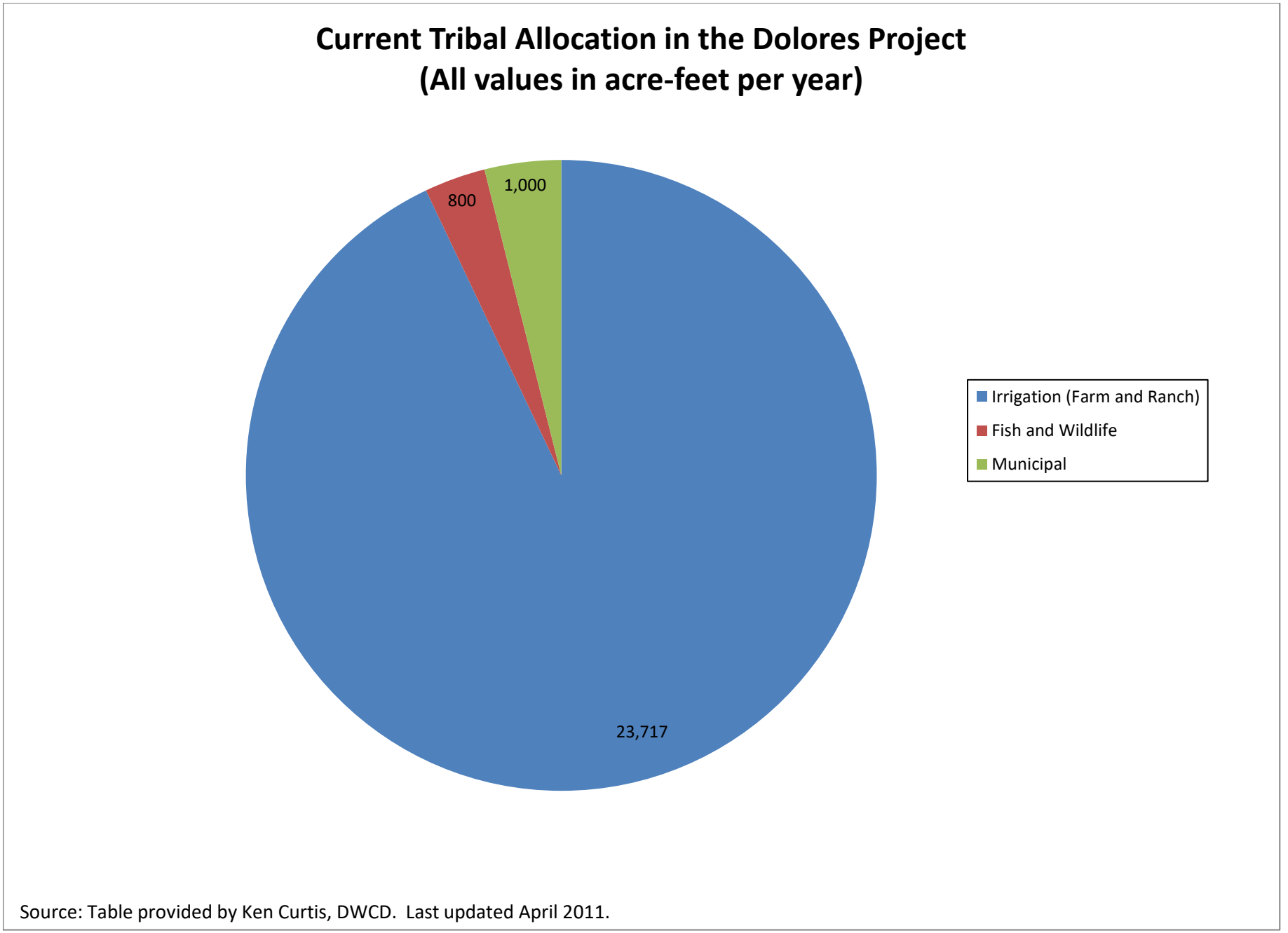
FIGURES

Figure 1



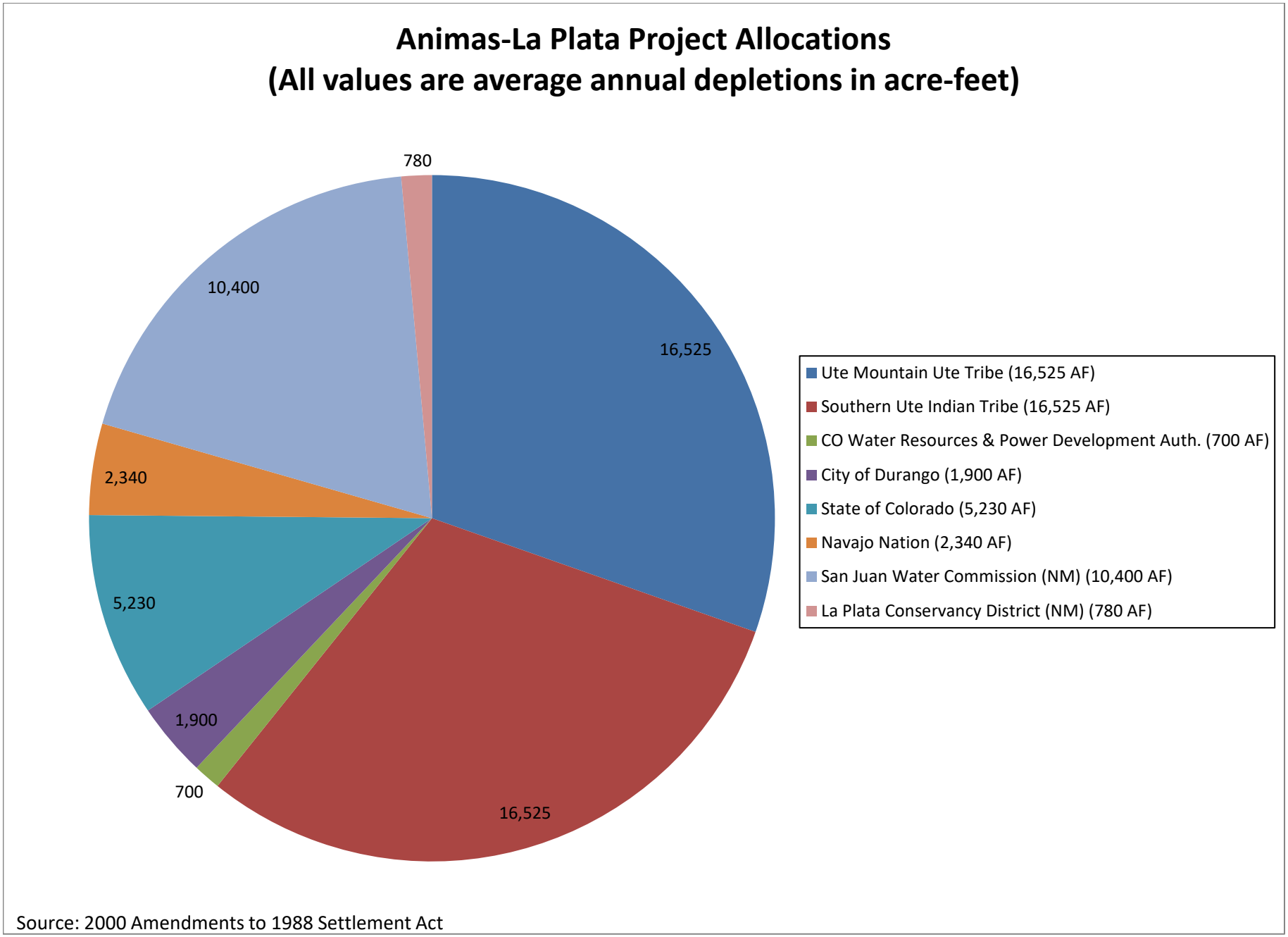
Source: Table provided by Ken Curtis, DWCD. Last updated April 2011.

Figure 2



Source: Table provided by Ken Curtis, DWCD. Last updated April 2011.

Figure 3

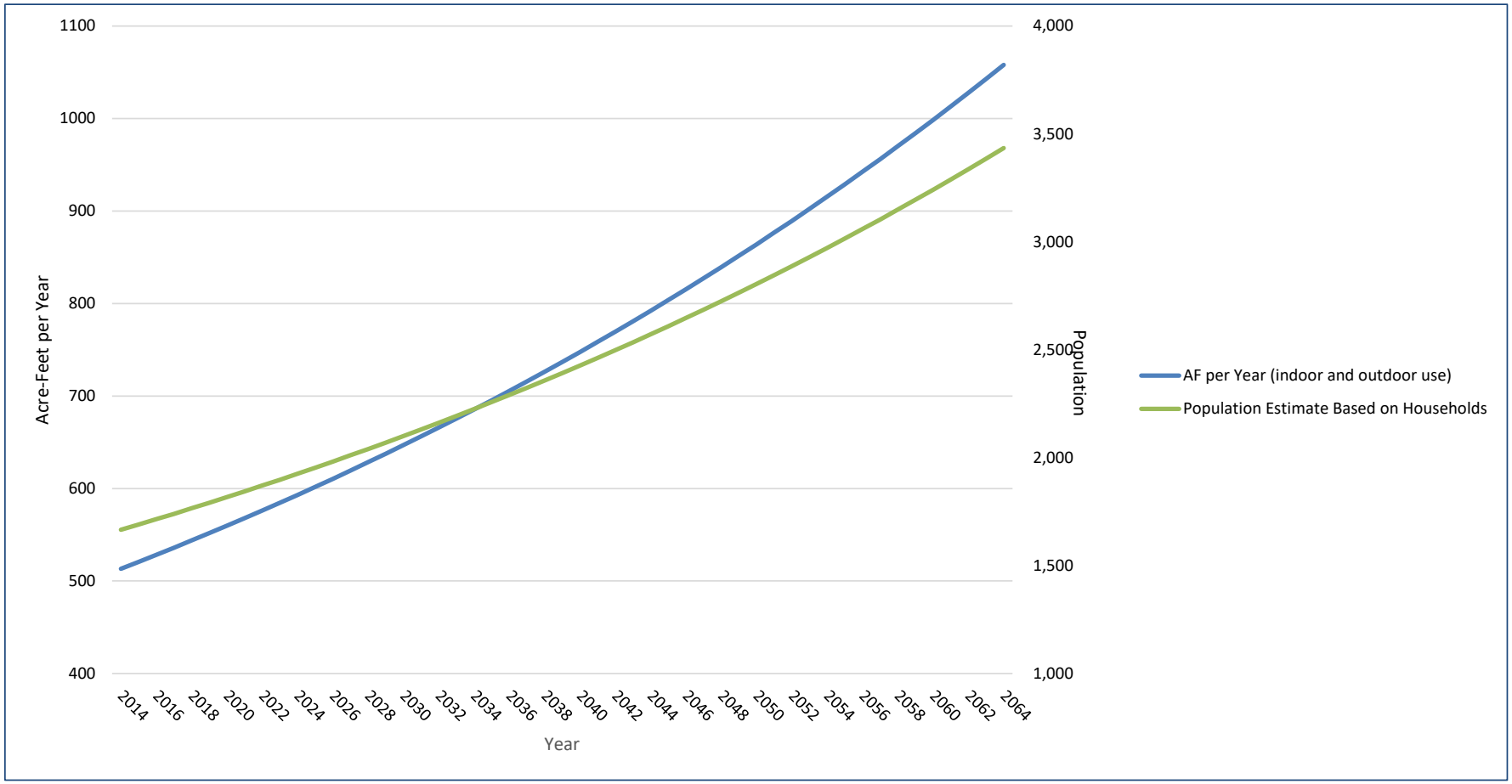


Source: 2000 Amendments to 1988 Settlement Act

Figure 4

Projected Growth in Population and Municipal Water Demand
Ute Mountain Ute Tribe Water Conservation and Management Plan

Draft - Internal Use Only



Notes :

Current population and average per capita residential water use information provided by Indian Health Services (IHS).

Average household size of 3.15 people based on data from 2010 census.

Number of homes were updated based on IHS Housing Inventory Tracking System (HITS) data, 01/13/2014.

Used average annual growth rate of 1.5% based on 1990-2010 US Census data.

Figure 5

Municipal and Industrial (M&I) Water Supplies and Demands
Ute Mountain Ute Tribe Water Conservation and Management Plan
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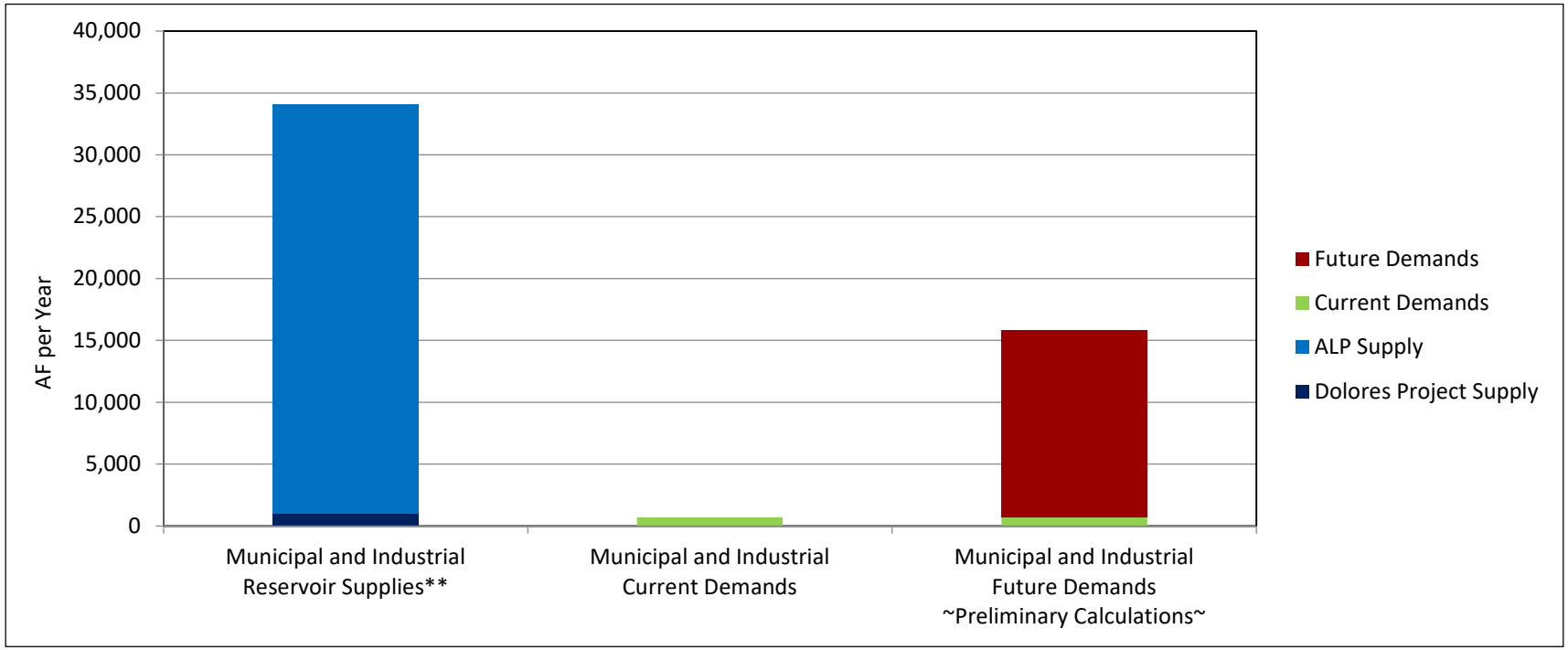
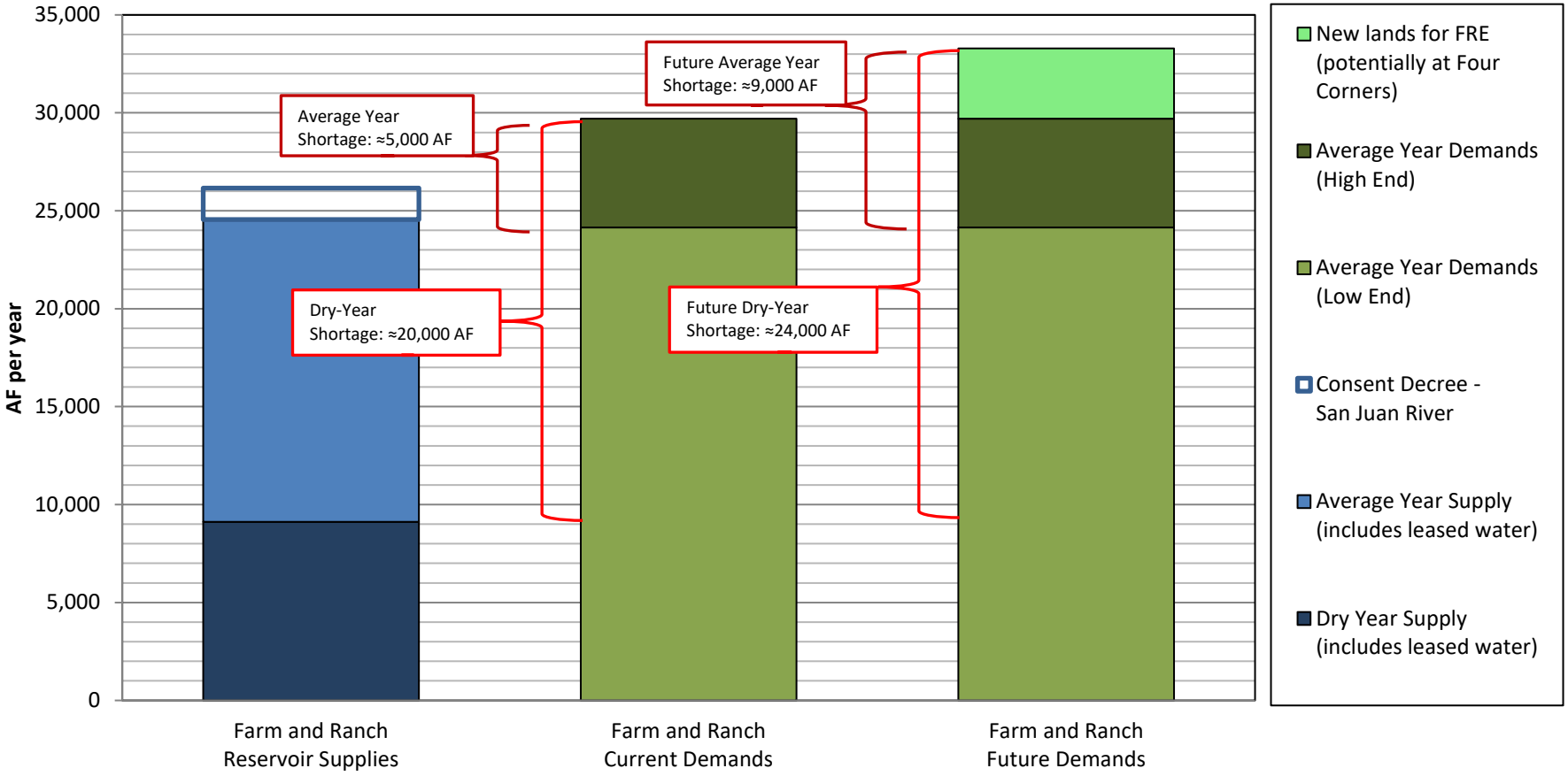


- **The ALP Reservoir supplies shown are estimated based on the USBR's non-binding analysis from the NEPA process. The actual amount of water available on an annual basis could be less or significantly more.
- Dolores Project Supply is based on the Tribe's municipal water allocation in the Dolores Project per Consent Decree
- Current Demands based on the average municipal system deliveries from 2010 through 2013, based on data from DWCD
- Future Demands are based on available development studies. Not all proposed development projects have a water demand estimate at this time, and therefore this number is not inclusive of all proposed projects

Figure 6

Agricultural Water Supplies and Demands
Ute Mountain Ute Tribe Water Conservation and Management Plan
DRAFT - Internal Use Only



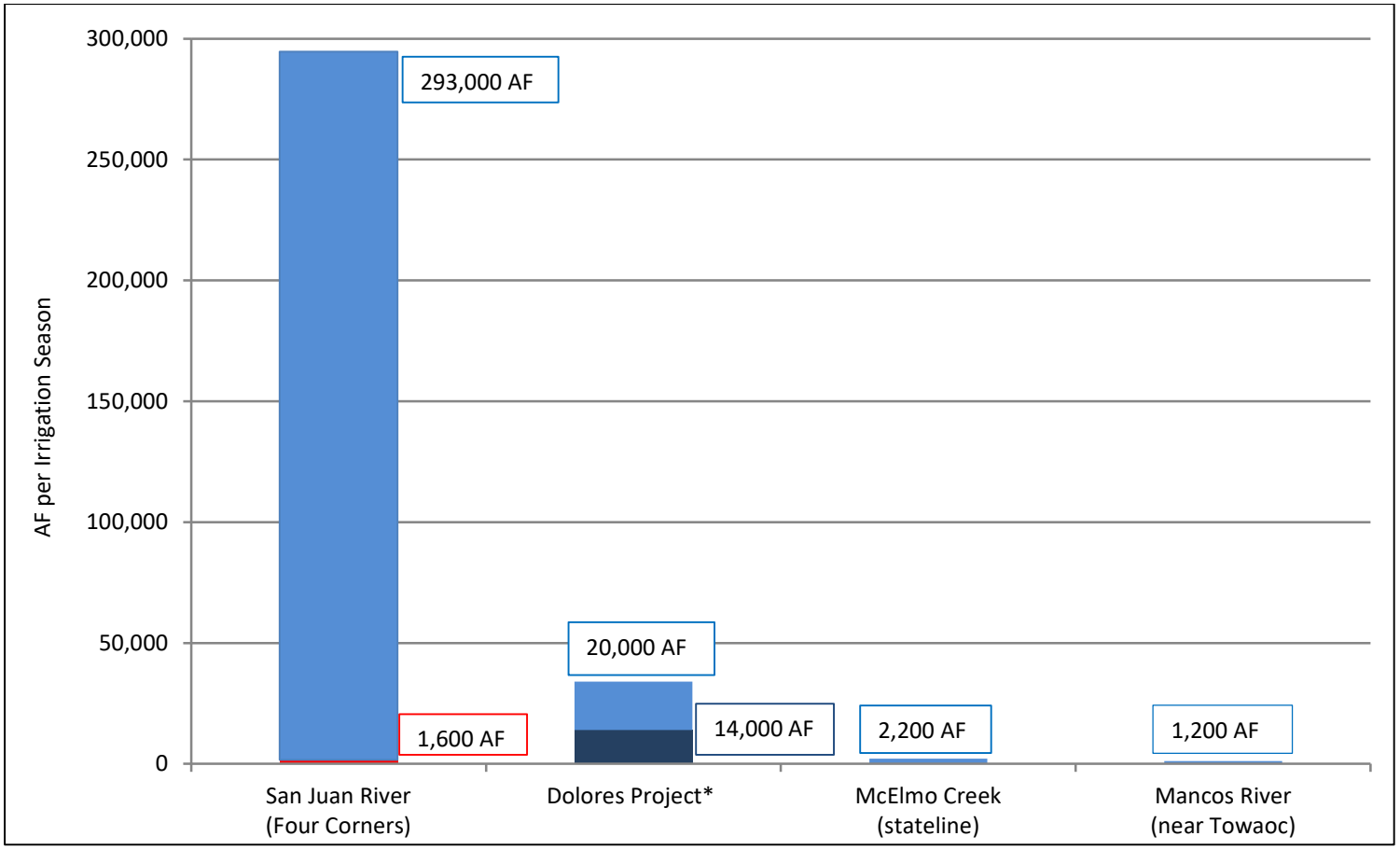
- Farm and Ranch Reservoir Supplies dry year from 2013, average year supply is from 2008 through 2014, based on data from DWCD. Note that the reservoir supplies include leased water from the Dolores Project
- The Range of current Farm and Ranch demands are based on different crop types and the system efficiency, see Table 7
- Future demands based on an estimated an additional 400 acres of alfalfa and an additional 400 acres of pasture grass. This new land may be developed at the Four Corners area.

P:\121-059 Ute Mountain Ute Tribe\030 Water Conservation and Management Plan\Tables\
data for presentation and figures.xlsx
Figure 6 Ag Chart

Wright Water Engineers, Inc.
March 2015

Figure 7

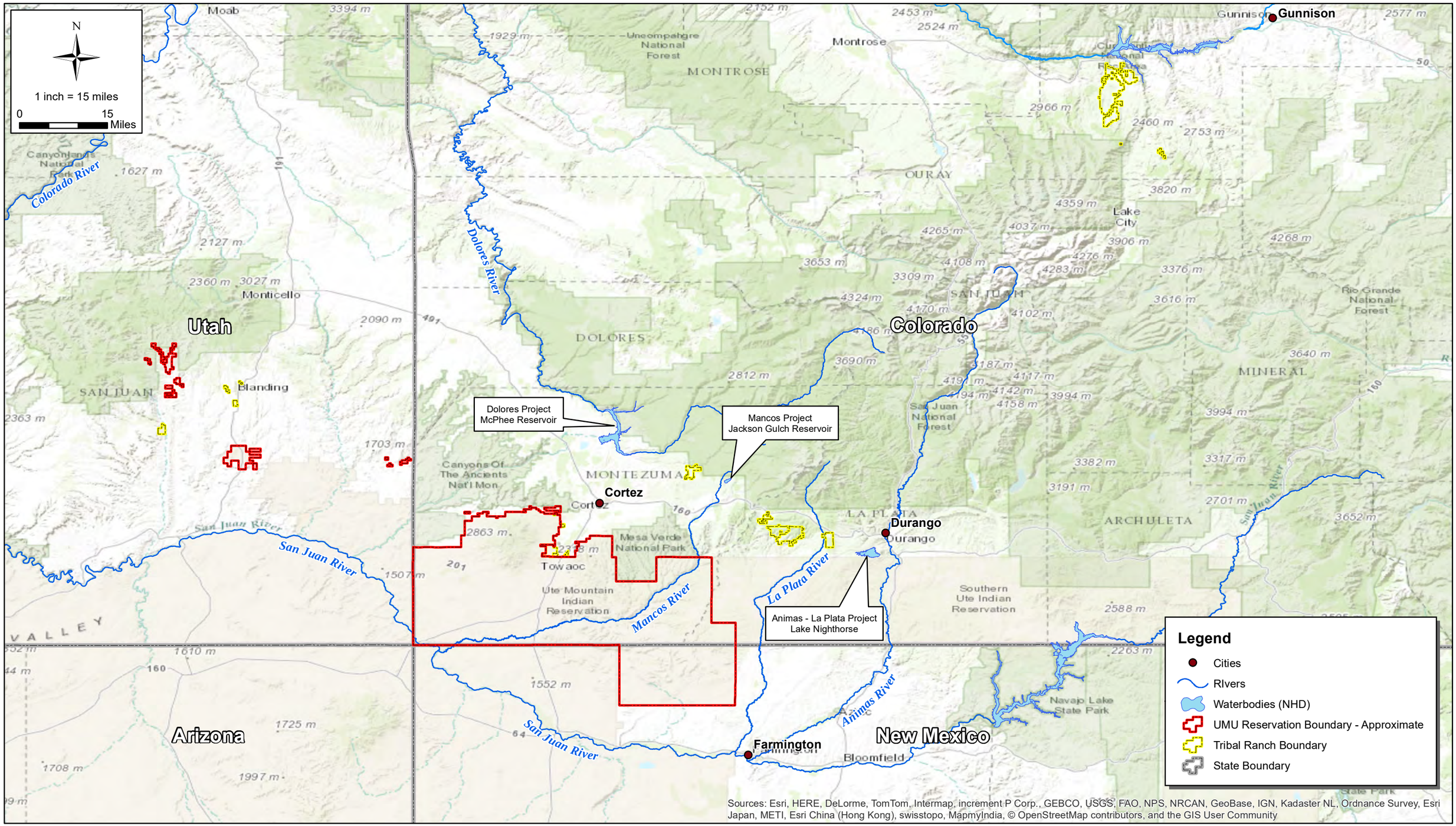
Potential Sources to Develop Additional Agricultural Water Supplies
Ute Mountain Ute Tribe Water Conservation and Management Plan
Draft – Internal Use Only



Dry-Year Irrigation Season Streamflow

- Streamflow estimates from stream gage stations, see Table 1.
- *Estimated range of water available from efficiency improvements to irrigation facilities using Dolores Project water

MAPS



P:\121-059 Ute Mountain Ute Tribe\030 Water Conservation and Management Plan\Mapping\MXD\Figure 1 - Ute Mountain Ute Reservation and Tribal Ranches.mxd Creation Date: 11-7-2014

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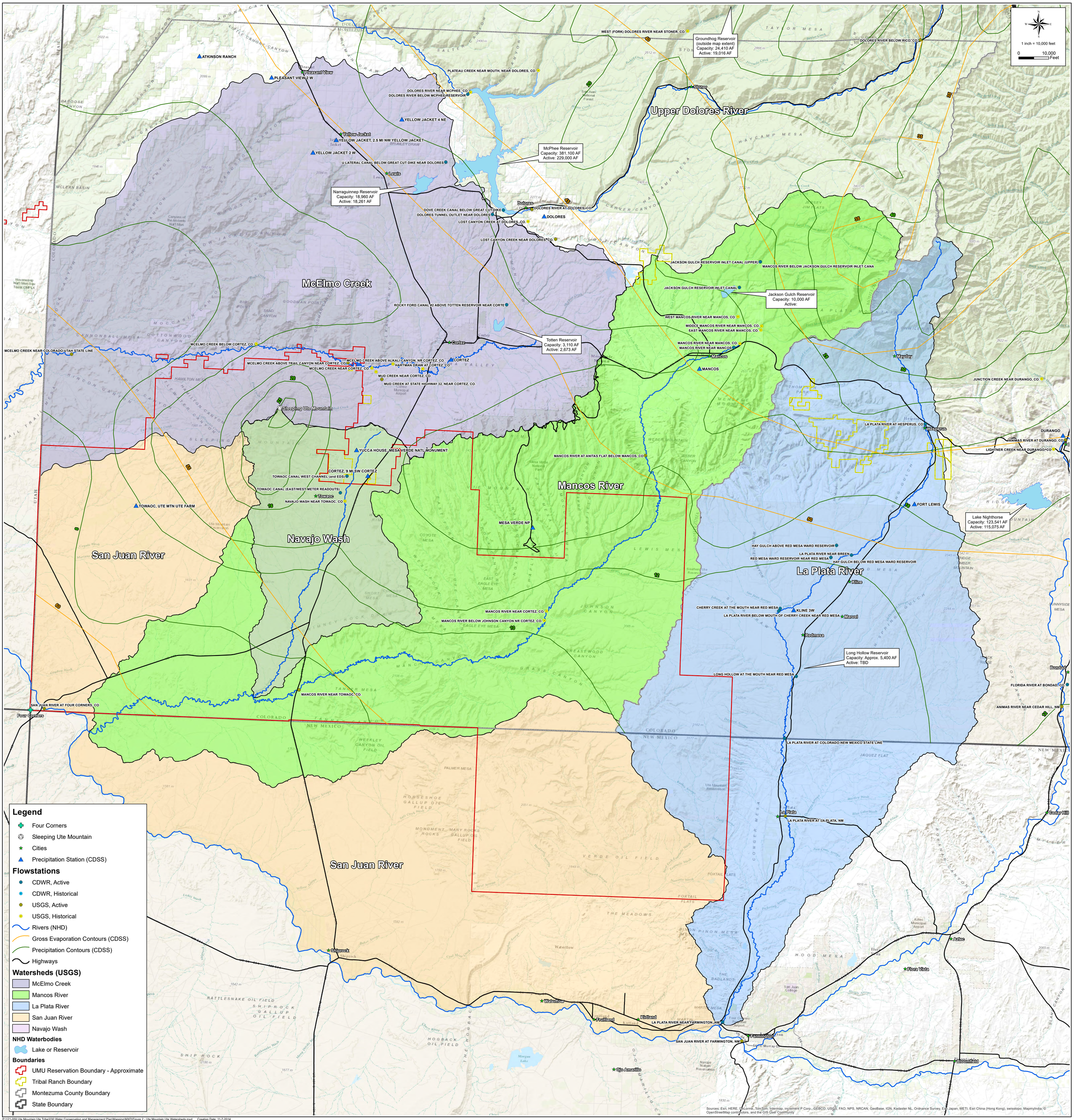
Ute Mountain Ute Reservation and Tribal Ranches

UTE MOUNTAIN UTE WATER CONSERVATION AND MANAGEMENT PLAN

PROJECT NO. 121-059.030

DRAFT MAP 1



P:\121-059 Ute Mountain Ute Tribe\030 Water Conservation and Management Plan\Mapping\MXD\Figure 2 - Ute Mountain Ute Watersheds.mxd Creation Date: 11-7-2014

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UTE MOUNTAIN UTE - WATERSHEDS

PRIVILEGED AND CONFIDENTIAL INFORMATION

UTE MOUNTAIN UTE WATER CONSERVATION AND MANAGEMENT PLAN

PROJECT NO. 121-059.030

DRAFT MAP 2

1 inch = 10,000 feet
0 10,000 Feet

Pleasant View
Yellow Jacket
Lewis
Dolores
Stoner
Cortez
Mancos
Mayday
Hesperus
Durango
Towaoc
Sleeping Ute Mountain Intrusion
Shiprock
Waterflow
Fruitland
Kirtland
Ojo Amarillo
Kline
Marvel
Redmesa
La Plata
Cedar Hill
Bondad
San Juan Basin

Legend

- Cities
- Highways
- Rivers (NHD)

Boundaries

- UMU Reservation Boundary - Approximate
- Tribal Ranch Boundary
- Montezuma County Boundary
- State Boundary

New Mexico Geologic Units

- Qa - Alluvium
- Tsj - San Jose Fm.
- Tn - Nacimiento Fm.
- Toa - Ojo Alamo Fm.
- Ti - Intrusive Rocks
- TKa - Animas Fm.
- Kkf - Fruitland Fm.
- Kpc, Kls - Pictured Cliffs Sandstone and Lewis Shale
- Kmv - Mesaverde Group
- Kch - Cliff House Sandstone
- Kmf, Kpl - Menefee and Point Lookout Fm.
- Km, Kml, Kmu - Mancos Shale
- Kd - Dakota Sandstone
- Jm - Morrison Fm.
- Jsr - San Rafael Group

Colorado Geologic Units

- Qa, Qg, Qgo - Gravels and Alluvium
- Ql - Landslide Deposits
- Qe - Eolian Deposits
- Qd, Qdo - Glacial Drift
- Tsj - San Jose Fm.
- Tn - Nacimiento Fm.
- Tmi - Middle Tertiary Intrusive Rocks
- TKi - Laramide Intrusive Rocks
- TKa - Animas Fm.
- Kkf - Kirtland Shale and Fruitland Fm.
- Kpcl - Pictured Cliffs and Lewis Shale
- Kmv - Mesaverde Group
- Kch - Cliff House Sandstone
- Kmp - Menefee and Point Lookout Fm.
- Km, Kmj - Mancos Shale
- Kdb - Dakota Sandstone
- Jm - Morrison Fm.
- J@gc - Glen Canyon Group
- @d - Dolores Fm.
- Pc - Cutler Fm.
- &rh - Rico and Hermosa Fm.

Era	System	Stratigraphic Unit	Unit Thickness (feet)	Physical Characteristics	Hydrogeologic Units	Hydrologic Characteristics
Cenozoic	Quaternary	Alluvium	120	Clay, silt, sand, gravel, and boulders; generally poorly sorted and confined to present-day stream valleys	Alluvial aquifer	Reported well yields average 16 gpm; water quality is variable; total dissolved solids (TDS) concentration ranges from 137 to 350 mg/L in the Durango area
		Terrace deposits	60	Clay, silt, sand, gravel, and boulders; remnants of alluvial fans and higher level stream valleys		Saturated only in the lower part; transmits water to underlying aquifers
	Tertiary	Animas Fm — Unnamed Member	2,700	Varicolored shale, with interbedded breccia, conglomerate, and tuffaceous sandstone; the sandstones vary from light to dusty brown, and contain abundant silicified wood and clay spheres	Animas aquifer	Well yields of 1–10 gpm are common; important source of water in areas southeast of Durango; TDS concentration ranges from 310 to 1,360 mg/L; hydraulic conductivity of fractured shale range from 0.2 to 0.3 ft/day
		Animas Fm — McDermott Member		Predominantly coarse-grained, tuffaceous sandstone and thick beds of massive, fine- to coarse-grained tuff, with interbedded shale, breccia, and volcanic conglomerate		Little data available to differentiate from the Unnamed member; probable aquifer near its outcrop
Mesozoic	Cretaceous	Kirtland Shale	1,500	Interbedded sandstone, shale, and siltstone; the shales are olive to medium gray; the Farmington Sandstone Member is thick to massive, with crossbedding being characteristic		Yields up to 10 gpm reported; water can be calcium carbonate type; usable yields probably limited to Farmington Sandstone Member
		Fruitland Formation	500	Varying proportions of interbedded sandstone, shale, and coal; the fine- to medium-grained sandstone beds are grey brown; and drive in color		Little data available to differentiate from Kirtland Shale; target formation for coal mining and coalbed methane development; typically poor quality water due to coals
		Pictured Cliffs Sandstone	400	Sandstone, light-olive-gray, to grayish-orange and orange, well-sorted, fine- to medium-grained, medium- to thick-bedded, and cliff-forming		Local aquifer in outcrop areas; yields of less than 10 gpm along southern perimeter of basin
		Lewis Shale	1,800	Interbedded shale, light- to dark-gray and black; marine origin	Confining layer	Is a confining unit that separates the Pictured Cliffs and Cliff House Sandstones
		Mesaverde Group — Cliff House Sandstone	350	Gray calcareous marine sandstone, shaly sandstone, and silty shale; crossbedded and massive in places	Mesaverde aquifer	Well yields average 8.5 gpm; can be an important source of water west of Durango; water quality varies from a sodium bicarbonate type to a calcium sulfate type; TDS concentrations ranges from 190 to 2,930 mg/L
		Menefee Formation	1,000	Light-gray sandstone, siltstone, and shale with several interbedded coal seams; thickness decreases to the north where it pinches out		Well yields average 10 gpm; presence of coal beds often determines water quality; TDS concentrations range from 210 to 3,350 mg/L; widely used regional aquifer where water quality is acceptable
		Point Lookout Sandstone	350	Light-gray to brown marine sandstone, massive and cliff-forming; contains interbedded siltstone and shale in the lower part		Water is a sodium bicarbonate type; TDS concentration ranges from 950 to 15,344 mg/L; not a good aquifer
		Mancos Shale	1,900	Dark-gray, silty and sandy marine shale; contains some interbedded sandstones and limestones	Confining layer	Wells yield as much as 10 gpm; highest well yields are developed in landslides and slump blocks; water is predominantly a sodium bicarbonate type; TDS concentration ranges from 227 to 4,830 mg/L; water may contain excessive chloride, iron and sulfate
		Dakota Sandstone	300	Sandstone, light-gray to yellowish-brown, with interbedded siltstone and black carbonaceous shale	Dakota aquifer	Well yields are typically less than 10 gpm; wells may be flowing where sandstone is overlain by the Morrison; water is predominantly a calcium bicarbonate type; TDS concentration ranges from 275-442 mg/L
		Burro Canyon Fm	100	Interbedded conglomerate and grayish-green shale, with light-brown sandstone lenses		No information
		Morrison Formation	800	Varying amounts of sandstone and shale with some limestone; the sandstones are thin bedded, fine- to medium-grained and white to grayish-orange in color	Morrison aquifer	Yields are as much as 25 gpm; water is a calcium bicarbonate type; TDS concentration ranges from 211 to 795 mg/L; water may contain excessive iron; a primary aquifer in New Mexico

Hydrogeologic Unit Overview

Table Source: Colorado Geologic Survey

P:\121-059 Ute Mountain Ute Tribe\030 Water Conservation and Management Plan\Mapping\MXD\Figure 3 - Ute Mountain Ute Hydrogeology.mxd Creation Date: 11-7-2014

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UTE MOUNTAIN UTE - HYDROGEOLOGY

PRIVILEGED AND CONFIDENTIAL INFORMATION

UTE MOUNTAIN UTE WATER CONSERVATION AND MANAGEMENT PLAN

PROJECT NO. 121-059.030

DRAFT MAP 3

N

1 inch = 4 miles

0 4 Miles

Table 5
Tribal Water Rights in Utah
Ute Mountain Ute Tribe Water Conservation and Management Plan

Water Right No.	Application No.	Certificate No.	Amount (cfs)	Source	Priority Date	Action Date	Uses	Period of Use	Notes
09-197	A28161	8439	2.00	Groundwater Well	5/12/1956	10/18/1957	Domestic and Stock (95 stock units and 62 domestic units)	Year Round	White Mesa Community's Well
09-32	A9486	3007	1.18	Cottonwood Creek	3/12/1924	12/12/1924	Irrigation of 28.6 acres	April 1 - November 15	
09-33	A9487	3008	0.64	Hammond Canyon Creek	3/17/1924	12/12/1924	Irrigation of 21.12 acres	April 1 - November 15	
09-34	A9491	3009	0.74	Cottonwood Creek	3/24/1924	12/12/1924	Irrigation of 20.89 acres	April 1 - November 15	
09-35	A9492	3010	0.30	Cottonwood Creek	3/24/1924	12/12/1924	Irrigation of 15.3 acres	April 1 - November 15	
09-36	A9506	3011	1.06	Allen Canyon Creek	4/18/1924	12/9/1925	Irrigation of 38.38 acres	April 1 - November 15	
09-82	A11348	2233	0.70	Hammond Canyon Creek	2/27/1933	10/23/1933	Irrigation of 19.55 acres	April 1 - November 15	
		Total Surface Water Rights:	4.62			Total Irrigated Acres:	143.84		

Source: Utah State Engineers Office website: http://www.waterrights.utah.gov

Notes:
All water rights are located in San Juan County, UT.

09-33
09-36
Allen Canyon
09-34
09-35
09-82
09-32
Milk Ranch Point
Reservoir No. 3
Reservoir No. 4
Recapture Reservoir
Blanding
Little Baullie Mesa
CHEESE AND RAISINS HILLS
WHITE MESA
Baullies
Utah
White Mesa
09-197
BLACK MESA
Big Bench
BLUFF BENCH
TANK MESA
MCCRACKEN MESA
CAJON MESA
Bluff
San Juan River
US-191
Montezuma Creek
Colorado
Papoose Canyon

Legend

- Tribal Ranch Water Right
- Tribal Water Right
- Cities
- RIvers
- UMU Tribal Ranch Boundary
- UMU Reservation Boundary - Approximate
- State Boundary

P:\121-059 Ute Mountain Ute Tribe\030 Water Conservation and Management Plan\Mapping\MXD\Figure 4 - Ute Mountain Ute Tribal Lands in Utah.mxd Creation Date: 2-6-2015

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SAN JUAN COUNTY, UTAH

Ute Mountain Ute Reservation, Water Rights and Tribal Ranches in Utah

UTE MOUNTAIN UTE WATER CONSERVATION AND MANAGEMENT PLAN

PROJECT NO. 121-059.030

DRAFT MAP 4

The UMUR lands in Utah are comprised of lands held in trust for the UMUT and for individual UMUT members. The UMUT federal reserved rights claims associated with the UMU lands in Utah are currently unquantified, and there is currently no process (litigation or otherwise) engaged for quantifying those claims.

The UMUT currently holds a State of Utah permit with a 1956 priority date for a 2 cfs groundwater well. 09-197. The UMUT also holds State of Utah water rights associated with off-reservation restricted fee ranch properties

Groundhog Reservoir (outside map extent)
Capacity: 24,410 AF
Active: 19,016 AF

1 inch = 10,000 feet
0 10,000 Feet

McPhee Reservoir
Capacity: 381,100 AF
Active: 229,000 AF

Narraguinnep Reservoir
Capacity: 18,960 AF
Active: 18,261 AF

Summit Reservoir

Jackson Gulch Reservoir
Capacity: 10,000
Active:

Totten Reservoir
Capacity: 3,110 AF
Active: 2,673 AF

SP-0607, SP-0608, SP-0609, SP-0610, SP-0611

SP-0402, SP-0403, SP-0404, SP-0405

Diversion Reach for San Juan River Consent Decree Right (See Table 1)

Lake Nighthorse
Capacity: 123,541 AF
Active: 115,075 AF

Long Hollow Reservoir
Capacity: approx. 5,400 AF
Active: TBD

The UMUT is currently participating in the San Juan River general stream adjudication to quantify its reserved water rights on the portion of the UMU Reservation located within the State of New Mexico. State of New Mexico v. United States of America, CV 75-184. The current scheduling order in that case anticipates addressing the UMUT claims starting in 2020, which means that the UMUT federal reserved water rights in New Mexico are currently unquantified.

At this point in the litigation, both the United States and the UMUT have entered separate federal reserved rights claims on behalf of the UMUT. The United States has entered a claim for a federal reserved right to divert and deplete 10,950 AF per year from groundwater resources. United States' Amended Supplemental Answer with Respect to Claims on Behalf of the Ute Mountain Ute Tribe (Oct. 1, 2007). That claim includes diversion of 470 AF per year (with depletion of 141 AF per year) for domestic purposes, 610 AF per year (with a depletion of 61 AF per year) for commercial purposes; and 9,870 AF per year (depletion and diversion) for industrial purposes. Id. The UMUT has entered a claim for the right to divert between 7,300 AF and 9,300 AF per year from surface water resources. Statement of the Claim of the Ute Mountain Ute Tribe (May 25, 2005).

Legend

- City

Reserved Rights - Existing Uses from Consent Decrees

- Wells
- Irrigation Ditch
- Springs
- Reservoir
- Catchbasin
- Irrigation Ditch

Water Features

- Towaoc-Highline Canal
- Pipeline
- Lake, Pond or Reservoir (NHD)

Irrigated Lands

- Farm and Ranch Enterprise (From DWCD 7,500 acres)

Boundaries

- UMU Reservation Boundary -
- Montezuma County Boundary
- State Boundary

Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

Date: 4/7/2016 Document Path: P:\121-059 Ute Mountain Ute Tribe\030 Water Conservation and Management Plan\Mapping\MXD\Figure 5 - Ute Mountain Ute Water Rights, Flowstations and Structures in Colorado based on CCD.mxd

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UTE MOUNTAIN UTE - WATER RIGHTS, FLOWSTATIONS AND STRUCTURES IN COLORADO

PRIVILEGED AND CONFIDENTIAL INFORMATION

UTE MOUNTAIN UTE WATER CONSERVATION AND MANAGEMENT PLAN

PROJECT NO. 121-059.030

DRAFT MAP 5

Legend

Towaoc Water System Features

- Water Tap Meter
- Water System Meter
- Wastewater System Meter
- Water Storage Tank
- Flush Valve
- Cortez-Towaoc Water Line
- Municipal Water Line
- Rivers (NHD)
- UMU Reservation Boundary - Approximate
- State Boundary

N W E S

1 inch = 10,000 feet
0 10,000 Feet

Cortez WTP
Cortez
US-160
Cortez Municipal Airport
Redistribution Building
Mancos Creek Tank
Flush Valve
Ute Mountain Reservation
ALKALI CANYON
MONTEZUMA VALLEY
MESA VERDE DIVIDE
SLEEPING UTE MOUNTAIN
NORTH RIM
UTE MOUNTAIN
WEST RIM
COYOTE MESA
EAST FORK ROCK CANYON
SHORT MESA
COWBOY MESA
WEST FORK UTE CANYON
WEST UTE MESA
EAST EAGLE EYE MESA
EAGLE EYE MESA
CHIMNEY ROCK DRAW
MANCOS CANYON
TANNER MESA
TANNER CANYON
COLORADO
NEW MEXICO
WEEKLEY CANYON OIL FIELD
PALMER MESA
MISSIONARY RIDGE
MESA

Upper Tank
Middle Tank
Lower Tank
Rechlorination Building
Health Center
Tribal Complex
Public Safety
Motor Pool
Headstart
Detention
RV Park
Hotel
Casino 2
Casino 1
Travel Center
Community Sewer
WCA

1 inch = 1,000 feet
0 500 1,000 Feet

Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Sources: Esri, HERE, DeLorme, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

P:\121-059 Ute Mountain Ute Tribe\030 Water Conservation and Management Plan\Mapping\MXD\Figure 6 - Ute Mountain Ute Municipal Water System.mxd Creation Date: 11-7-2014

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MONTEZUMA COUNTY, CO

UTE MOUNTAIN UTE MUNICIPAL WATER SUPPLY SYSTEM

UTE MOUNTAIN UTE WATER CONSERVANCY AND MANAGEMENT PLAN

PROJECT NO. 121-059.030

DRAFT
MAP 6

1 inch = 10,000 feet
0 10,000 Feet

McElmo Dome

Greater Aneth Oil Field

Flodine Park, Cache Units, Marble Wash, etc.

Barker Dome

Aztec Wash

Horseshoe Gallup

San Juan Basin

Table Source: Colorado Geological Survey

Sources: Esri, HERE, DeLorme, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

Legend

- Cities
- WCA Gravel Pits

Oil and Gas Wells

- Active Wells (From Tribal Data)
- New Wells (Not drilled, From Tribal Data)
- Regional Oil and Gas Wells (From State Agency Data, active and producing)
- Highways

Boundaries

- UMU Reservation Boundary - Approximate
- Tribal Ranch Boundary
- Montezuma County Boundary
- State Boundary

Oil and Gas well location data sources:
The Colorado Oil and Gas Conservation Commission,
The Utah Division of Oil, Gas and Mining
and The New Mexico Oil Conservation Division,
The Ute Moutain Ute Environmental Programs.

P:\121-059 Ute Mountain Ute Tribe\030 Water Conservation and Management Plan\Mapping\MXD\Figure 7 - Industrial Uses.mxd Creation Date: 11-7-2014

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UTE MOUNTAIN UTE - REGIONAL OIL AND GAS WELLS AND WCA GRAVEL PITS ON THE RESERVATION

PRIVILEGED AND CONFIDENTIAL INFORMATION

UTE MOUNTAIN UTE WATER CONSERVATION AND MANAGEMENT PLAN

PROJECT NO. 121-059.030

DRAFT MAP 7

APPENDICES

Appendix A
Summary Tables of Existing Use Structures in the Colorado Consent Decrees

Appendix A
Catch Basin
Existing Use Structures from the CO Consent Decrees
Ute Mountain Ute Tribe Water Conservation and Management Plan

Name	State WDID	Volume	Basin
CB-1101	3400638	0.03 AF	Mancos

Appendix A
Irrigation Ditch
Existing Use Structures from the CO Consent Decrees
Ute Mountain Ute Tribe Water Conservation and Management Plan

Name	Rate (cfs)	Basin
D-1101	6	Mancos

Appendix A

Reservoirs

Existing Use Structures from the CO Consent Decrees

Ute Mountain Ute Tribe Water Conservation and Management Plan

Name	State WDID	Volume (AF)	Basin
R-1809	3304366	3.75	La Plata
R-1813	3304367	2.00	La Plata
R-1814	3304368	0.50	La Plata
R-1815	3304369	2.00	La Plata
R-1816	3304370	2.00	La Plata
R-1817	3304371	1.00	La Plata
R-1818	3304372	1.10	La Plata
R-1819	3304373	5.00	La Plata
R-0506	3404377	0.50	Mancos
R-0604	3404378	1.00	Mancos
R-0605	3404379	2.00	Mancos
R-0701	3404380	0.75	Mancos
R-0702	3404381	3.00	Mancos
R-0716	3404382	1.00	Mancos
R-0717	3404383	3.50	Mancos
R-0718	3404384	3.75	Mancos
R-0719	3404385	3.00	Mancos
R-0720	3404386	8.36	Mancos
R-0721	3404387	1.00	Mancos
R-0722	3404388	2.00	Mancos
R-0723	3404389	2.50	Mancos
R-0724	3404390	1.50	Mancos
R-0725	3404391	12.00	Mancos
R-0726	3404392	2.00	Mancos
R-0727	3404393	1.50	Mancos
R-0731	3404394	7.99	Mancos
R-0732	3404395	0.50	Mancos
R-0733	3404396	0.33	Mancos
R-0801	3404397	1.50	Mancos
R-0802	3404398	3.00	Mancos
R-0803	3404399	2.00	Mancos
R-0804	3404400	0.50	Mancos
R-0805	3404401	0.50	Mancos
R-0806	3404402	27.25	Mancos
R-0807	3404403	1.50	Mancos
R-0808	3404404	1.50	Mancos
R-0809	3404405	1.50	Mancos
R-0810	3404406	1.00	Mancos
R-0811	3404407	1.00	Mancos
R-0812	3404408	2.00	Mancos
R-0813	3404409	3.00	Mancos
R-0814	3404410	2.00	Mancos
R-0815	3404411	1.50	Mancos
R-0816	3404412	10.00	Mancos
R-0910	3404413	2.00	Mancos
R-1003	3404414	7.68	Mancos
R-1004	3404415	1.00	Mancos
R-1005	3403898	0.50	Mancos
R-1006	3404416	2.00	Mancos
R-1007	3403899	3.15	Mancos
R-1008	3404000	1.50	Mancos
R-1009	3404417	2.00	Mancos
R-1010	3404418	1.50	Mancos
R-1011	3404419	1.00	Mancos
R-1012	3404420	2.00	Mancos
R-1013	3404421	1.00	Mancos
R-1014	3404422	5.37	Mancos
R-1015	3404423	1.50	Mancos
R-1016	3404424	1.50	Mancos
R-1017	3404425	2.00	Mancos
R-1018	3404426	1.00	Mancos
R-1019	3404427	2.00	Mancos
R-1101	3404428	3.25	Mancos
R-1102	3404001	7.95	Mancos
R-1103	3404002	3.48	Mancos
R-1104	3404429	2.00	Mancos
R-1105	3404003	1.50	Mancos
R-1106	3404430	0.50	Mancos
R-1107	3404431	1.50	Mancos
R-1108	3404432	1.50	Mancos
R-1109	3404433	2.50	Mancos
R-1110	3404434	1.00	Mancos
R-1111	3404435	1.25	Mancos
R-1112	3404436	1.25	Mancos
R-1113	3404437	1.00	Mancos
R-1114	3404438	2.00	Mancos
R-1115	3404439	0.70	Mancos
R-1116	3404440	0.47	Mancos
R-1117	3404441	2.50	Mancos
R-1301	3404442	1.50	Mancos
R-1401	3404443	0.50	Mancos
R-1402	3404444	1.00	Mancos
R-1403	3404445	0.50	Mancos
R-1404	3404446	1.00	Mancos
R-1405	3404447	2.00	Mancos
R-1406	3404448	1.00	Mancos
R-1407	3404449	0.50	Mancos
R-1501	3404450	1.50	Mancos
R-1502	3404451	1.00	Mancos
R-1601	3404490	0.50	Mancos
R-1602	3404491	1.00	Mancos
R-1603	3403319	0.50	Mancos
R-1604	3404492	0.50	Mancos
R-1605	3404493	0.50	Mancos
R-1606	3404494	0.50	Mancos
R-1607	3404452	2.00	Mancos
R-1608	3404453	0.50	Mancos
R-1609	3404454	1.00	Mancos
R-1610	3404455	0.50	Mancos
R-1611	3404456	0.50	Mancos
R-1612	3404457	3.00	Mancos
R-1613	3404458	1.00	Mancos
R-1614	3404459	2.50	Mancos
R-1615	3404460	1.00	Mancos
R-1616	3404461	1.00	Mancos
R-1617	3404462	1.50	Mancos
R-1618	3404463	0.50	Mancos
R-1622	3404464	2.50	Mancos
R-1623	3404465	1.00	Mancos
R-1626	3404480	1.00	Mancos
R-1701	3403320	1.50	Mancos
R-1702	3403321	0.10	Mancos
R-1703	3404466	1.00	Mancos
R-1704	3403322	2.50	Mancos
R-1705	3403323	2.00	Mancos
R-1706	3403324	1.00	Mancos
R-1707	3403325	8.90	Mancos
R-1801	3403326	1.00	Mancos
R-1802	3403327	1.00	Mancos
R-1803	3403328	1.00	Mancos
R-1804	3404467	2.50	Mancos
R-1805	3404468	5.50	Mancos
R-1806	3404469	1.00	Mancos
R-1807	3404470	1.25	Mancos
R-1808	3404471	2.00	Mancos
R-1810	3404472	1.00	Mancos
R-1811	3404473	2.50	Mancos
R-1812	3404474	1.14	Mancos
R-0101	3204189	1.00	McElmo
R-0102	3204190	1.63	McElmo
R-0301	3204191	2.25	McElmo
R-0302	3204192	1.50	McElmo
R-0303	3204193	3.00	McElmo
R-0304	3204194	1.25	McElmo
R-0403	3204196	1.00	McElmo
R-0601	3204197	1.00	McElmo
R-0602	3204198	36.94	McElmo
R-0603	3204199	4.00	McElmo
R-0901	3204200	1.00	McElmo
R-0902	3204201	1.50	McElmo
R-0903	3204202	2.00	McElmo
R-0904	3204203	3.00	McElmo
R-0905	3204204	0.50	McElmo
R-0906	3204205	1.00	McElmo
R-0907	3204206	0.50	McElmo
R-0908	3204207	1.00	McElmo
R-0909	3204208	1.00	McElmo
R-1619	3404475	7.10	San Juan
R-1620	3404476	1.00	San Juan
R-1621	3404477	1.50	San Juan
R-1624	3404478	1.00	San Juan
R-1625	3404479	0.50	San Juan
R-1627	3404481	2.00	San Juan
R-1628	3404482	0.50	San Juan
R-0103	3204209	0.50	San Juan
R-0104	3204210	25.34	San Juan
R-0105	3204211	0.50	San Juan
R-0106	3204212	2.00	San Juan
R-0107	3204213	0.50	San Juan
R-0108	3204214	2.00	San Juan
R-0201	3204215	3.00	San Juan
R-0202	3204216	4.95	San Juan
R-0203	3204217	2.00	San Juan
R-0204	3204218	3.00	San Juan
R-0305	3204195	2.00	San Juan
R-0401	3204219	0.50	San Juan
R-0402	3204220	0.50	San Juan
R-0404	3204221	1.25	San Juan
R-0405	3204222	0.72	San Juan
R-0406	3204223	3.00	San Juan
R-0407	3204224	8.36	San Juan
R-0408	3204225	2.50	San Juan
R-0409	3204226	1.00	San Juan
R-0410	3204227	1.00	San Juan
R-0411	3204228	1.00	San Juan
R-0412	3204229	0.50	San Juan
R-0413	3204230	28.92	San Juan
R-0414	3204231	4.32	San Juan
R-0415	3204232	0.31	San Juan
R-0416	3204233	2.50	San Juan
R-0417	3204234	1.70	San Juan
R-0418	3204235	3.00	San Juan
R-0419	3204236	3.00	San Juan
R-0420	3204237	1.00	San Juan
R-0421	3204238	1.25	San Juan
R-0501	3204239	0.50	San Juan
R-0502	3204240	1.00	San Juan
R-0503	3204241	1.00	San Juan
R-0504	3204242	1.50	San Juan
R-0505	3204243	2.00	San Juan
R-0507	3204244	6.86	San Juan
R-0508	3204245	1.00	San Juan
R-0509	3204246	1.00	San Juan
R-0510	3204247	1.00	San Juan
R-0511	3204248	2.00	San Juan
R-0703	3204249	1.00	San Juan
R-0704	3204250	1.00	San Juan
R-0705	3204251	1.00	San Juan
R-0706	3204252	1.00	San Juan
R-0707	3204253	0.50	San Juan
R-0708	3204254	0.50	San Juan
R-0709	3204255	1.00	San Juan
R-0710	3204256	1.00	San Juan
R-0711	3204257	1.00	San Juan
R-0712	3204258	2.50	San Juan
R-0713	3204259	2.00	San Juan
R-0714	3204260	1.50	San Juan
R-0715	3204261	1.00	San Juan
R-0728	3204262	3.00	San Juan
R-0729	3204263	1.00	San Juan
R-0730	3204264	1.30	San Juan

Appendix A

Springs

Existing Use Structures from the CO Consent Decrees

Ute Mountain Ute Tribe Water Conservation and Management Plan

Name	State WDID	Rate (gpm)	Basin
SP-0607	3400640	1.50	Mancos
SP-0608	3400641	2.00	Mancos
SP-0609	3400642	0.75	Mancos
SP-0610	3400643	2.00	Mancos
SP-0611	3400644	2.00	Mancos
SP-0618	3400645	1.00	Mancos
SP-0619	3400646	5.00	Mancos
SP-0620	3400647	3.00	Mancos
SP-0621	3400648	1.00	Mancos
SP-0622	3400649	6.00	Mancos
SP-0624	3400650	0.25	Mancos
SP-0701	3400651	2.00	Mancos
SP-0702	3400652	3.00	Mancos
SP-0706	3400653	0.50	Mancos
SP-0707	3400654	5.00	Mancos
SP-0708	3400655	1.50	Mancos
SP-0709	3400656	5.00	Mancos
SP-0711	3400657	0.50	Mancos
SP-0712	3400658	3.00	Mancos
SP-0714	3400659	0.25	Mancos
SP-0715	3400660	5.00	Mancos
SP-0716	3400661	1.00	Mancos
SP-0717	3400662	1.00	Mancos
SP-1001	3400663	1.50	Mancos
SP-1002	3400664	4.00	Mancos
SP-1003	3400665	25.00	Mancos
SP-1004	3400666	2.00	Mancos
SP-1005	3400667	2.00	Mancos
SP-1006	3400668	5.00	Mancos
SP-1007	3400669	2.00	Mancos
SP-1101	3400670	1.00	Mancos
SP-1102	3400671	5.00	Mancos
SP-1301	3400672	5.00	Mancos
SP-1302	3400673	5.00	Mancos
SP-1303	3400674	5.00	Mancos
SP-1304	3400675	5.00	Mancos

Name	State WDID	Rate (gpm)	Basin
SP-1305	3400676	5.00	Mancos
SP-1401	3400677	5.00	Mancos
SP-1601	3400679	5.00	Mancos
SP-1801	3400678	1.00	Mancos
SP-0601	3200849	6.00	McElmo
SP-0602	3200850	5.00	McElmo
SP-0603	3200851	60.00	McElmo
SP-0604	3200852	5.00	McElmo
SP-0605	3200853	2.00	McElmo
SP-0606	3200854	1.00	McElmo
SP-0612	3200855	6.00	McElmo
SP-0613	3200856	3.00	McElmo
SP-0614	3200857	5.00	McElmo
SP-0615	3200858	0.25	McElmo
SP-0616	3200859	5.00	McElmo
SP-0617	3200860	5.00	McElmo
SP-0901	3200861	0.25	McElmo
SP-0902	3200862	5.00	McElmo
SP-0903	3200863	5.00	McElmo
SP-0904	3200864	3.00	McElmo
SP-0905	3200865	5.00	McElmo
SP-0201	3200866	5.00	San Juan
SP-0401	3200867	3.00	San Juan
SP-0402	3200868	5.00	San Juan
SP-0403	3200869	5.00	San Juan
SP-0404	3200870	5.00	San Juan
SP-0405	3200871	5.00	San Juan
SP-0623	3200872	0.50	San Juan
SP-0703	3200842	15.00	San Juan
SP-0704	3200843	15.00	San Juan
SP-0705	3200873	0.50	San Juan
SP-0710	3200845	10.00	San Juan
SP-0713	3200874	2.00	San Juan
SP-0718	3200848	2.00	San Juan

Appendix A

Domestic Wells

Existing Use Structures from the CO Consent Decrees

Ute Mountain Ute Tribe Water Conservation and Management Plan

Name	State WDID	Rate (gpm)	Basin
DW-1101	3406331	5	Mancos
DW-0601	3205030	5	McElmo
DW-0901	3205031	5	McElmo

Appendix A

Livestock Wells

Existing Use Structures from the CO Consent Decrees

Ute Mountain Ute Tribe Water Conservation and Management Plan

Name	State WDID	Rate (gpm)	Basin
LW-1803	3305037	5	La Plata
LW-1804	3305038	5	La Plata
LW-0702	3405008	2	Mancos
LW-0703	3405009	3	Mancos
LW-0801	3405010	5	Mancos
LW-0802	3405011	5	Mancos
LW-0803	3405012	5	Mancos
LW-0804	3405013	5	Mancos
LW-0805	3405014	37	Mancos
LW-1001	3405015	6	Mancos
LW-1002	3405016	5	Mancos
LW-1003	3405017	20	Mancos
LW-1101	3405018	5	Mancos
LW-1501	3405019	5	Mancos
LW-1601	3405020	5	Mancos
LW-1602	3405021	5	Mancos
LW-1701	3405023	5	Mancos
LW-1702	3405024	5	Mancos
LW-1703	3405025	5	Mancos
LW-1801	3405026	5	Mancos
LW-1802	3405027	5	Mancos
LW-0101	3205032	5	McElmo
LW-0102	3205033	5	McElmo
LW-0103	3205034	5	San Juan
LW-0104	3205035	5	San Juan
LW-0201	3205036	5	San Juan
LW-0202	3205037	5	San Juan
LW-0401	3205038	1.5	San Juan
LW-0402	3205039	3	San Juan
LW-0403	3205040	5	San Juan
LW-0404	3205041	5	San Juan
LW-0405	3205042	5	San Juan
LW-0406	3205043	5	San Juan
LW-0407	3205044	5	San Juan
LW-0408	3205045	5	San Juan
LW-0501	3205046	5	San Juan
LW-0502	3205047	4	San Juan
LW-0503	3205048	2	San Juan
LW-0504	3205049	4	San Juan
LW-0505	3205050	5	San Juan
LW-0506	3205051	5	San Juan
LW-0701	3205029	1	San Juan
LW-1603	3405022	5	San Juan

Appendix B

Utah State Water Rights Permits

(WARNING: Water Rights makes NO claims as to the accuracy of this data.) RUN DATE: 02/27/2014

WATER RIGHT: 09-197 APPLICATION/CLAIM NO.: A28161 CERT. NO.: 8439

OWNERSHIP

NAME: Ute Mountain Ute Tribe
ADDR: Towaoc CO 81334

DATES, ETC.

LAND OWNED BY APPLICANT? Yes COUNTY TAX ID#:
FILED: 05/12/1956|PRIORITY: 05/12/1956|PUB BEGAN: |PUB ENDED: |NEWSPAPER:
ProtestEnd: |PROTESTED: [No]|HEARNG HLD: |SE ACTION: [Approved]|ActionDate:10/18/1957|PROOF DUE:
EXTENSION: |ELEC/PROOF:[ ]|ELEC/PROOF: |CERT/WUC: |LAP, ETC: |LAPS LETTER:
RUSH LETTR: |RENOVATE: |RECON REQ: |TYPE: [ ]
PD BOOK: [09-]|MAP: [ ]|PUB DATE:

*TYPE -- DOCUMENT -- STATUS

Type of Right: Application to Appropriate Source of Info: Certificate Status: Certificate

LOCATION OF WATER RIGHT***(Points of Diversion: Click on Location to access PLAT Program.)*********MAP VIEWER***GOOGLE VIEW*

FLOW: 2.0 cfs
SOURCE: UGW WELL
COUNTY: San Juan COMMON DESCRIPTION:

POINT OF DIVERSION -- UNDERGROUND: (Click Well ID# link for more well data.)
(1) N 1005 ft W 207 ft from S4 cor, Sec 23, T 38S, R 22E, SLBM
DIAMETER OF WELL: 10 ins. DEPTH: 1739 to ft. YEAR DRILLED: WELL LOG? No WELL ID#: 20238

USES OF WATER RIGHT******** ELU -- Equivalent Livestock Unit (cow, horse, etc.) ******** EDU -- Equivalent Domestic Unit or 1 Family

SUPPLEMENTAL GROUP NO.: 3953.

STOCKWATER: 95.0000 Stock Units PERIOD OF USE: 01/01 TO 12/31

DOMESTIC: 62.0000 EDUs PERIOD OF USE: 01/01 TO 12/31

###PLACE OF USE:	NORTH WEST QUARTER				NORTH EAST QUARTER				SOUTH WEST QUARTER				SOUTH EAST QUARTER			
	NW	NE	SW	SE	NW	NE	SW	SE	NW	NE	SW	SE	NW	NE	SW	SE
Sec 14 T 38S R 22E SLBM	X		X					X			X		X		X	
Sec 15 T 38S R 22E SLBM						X		X								
Sec 23 T 38S R 22E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 25 T 38S R 22E SLBM	X															
Sec 26 T 38S R 22E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 35 T 38S R 22E SLBM					X	X	X									

PLACE OF USE for STOCKWATERING

	NORTH-WEST¼				NORTH-EAST¼				SOUTH-WEST¼				SOUTH-EAST¼			
	NW	NE	SW	SE	NW	NE	SW	SE	NW	NE	SW	SE	NW	NE	SW	SE
Sec 14 T 38S R 22E SLBM	X	X	X	X					X	X	X	X	X	X	X	X
Sec 15 T 38S R 22E SLBM						X		X								
Sec 23 T 38S R 22E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 25 T 38S R 22E SLBM	X															
Sec 26 T 38S R 22E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 35 T 38S R 22E SLBM					X	X	X	X								

END OF DATA

(WARNING: Water Rights makes NO claims as to the accuracy of this data.) RUN DATE: 04/01/2014

WATER RIGHT: **09-32** APPLICATION/CLAIM NO.: **A9486** CERT. NO.: 3007

OWNERSHIP

NAME: USA Indian Service
ADDR: Ignacio CO
INTEREST: 100%

DATES, ETC.

LAND OWNED BY APPLICANT? Yes COUNTY TAX ID#:

FILED: 03/17/1924	PRIORITY: 03/12/1924	PUB BEGAN:	PUB ENDED:	NEWSPAPER:
ProtestEnd:	PROTESTED: [No]	HEARNG HLD:	SE ACTION: [Approved]	ActionDate:12/12/1924
PROOF DUE:	EXTENSION:	ELEC/PROOF:[ ]	ELEC/PROOF:	CERT/WUC:
LAP, ETC:	LAPS LETTER:	RUSH LETTR:	RENOVATE:	RECON REQ:
TYPE: [ ]	PD BOOK: [09-]	MAP: [ ]	PUB DATE:	

***TYPE -- DOCUMENT -- STATUS**

Type of Right: Application to Appropriate Source of Info: Certificate **Status: Certificate**

LOCATION OF WATER RIGHT***(Points of Diversion: Click on Location to access PLAT Program.)********MAP VIEWER*****GOOGLE VIEW***

FLOW: 1.18 cfs
SOURCE: Cottonwood Creek
COUNTY: San Juan COMMON DESCRIPTION:

POINT OF DIVERSION -- SURFACE:
(1) N 736 ft W 2110 ft from E4 cor, Sec 07, T 36S, R 21E, SLBM
Diverting Works: Source:

Stream Alt Required?: No

USES OF WATER RIGHT****** *ELU -- Equivalent Livestock Unit (cow, horse, etc.) ******** EDU -- Equivalent Domestic Unit or 1 Family*

SUPPLEMENTAL GROUP NO.: 4254.

IRRIGATION: 28.6 acres PERIOD OF USE: 04/01 TO 11/15

###PLACE OF USE:	NORTH WEST QUARTER				NORTH EAST QUARTER				SOUTH WEST QUARTER				SOUTH EAST QUARTER			
	NW	NE	SW	SE	NW	NE	SW	SE	NW	NE	SW	SE	NW	NE	SW	SE
Sec 07 T 36S R 21E SLBM														X		X
Sec 17 T 36S R 21E SLBM									X	X					X	

END OF DATA

Utah Division of Water Rights

Select Related Information

(WARNING: Water Rights makes NO claims as to the accuracy of this data.) RUN DATE: 04/01/2014

WATER RIGHT: **09-33** APPLICATION/CLAIM NO.: **A9487** CERT. NO.: 3008

OWNERSHIP

NAME: USA Indian Service
ADDR: Ignacio CO
INTEREST: 100%

DATES, ETC.

LAND OWNED BY APPLICANT? Yes COUNTY TAX ID#:
FILED: 03/17/1924 | PRIORITY: 03/17/1924 | PUB BEGAN: | PUB ENDED: | NEWSPAPER:
ProtestEnd: | PROTESTED: [No] | HEARNG HLD: | SE ACTION: [Approved] | ActionDate:12/12/1924 | PROOF DUE:
EXTENSION: | ELEC/PROOF:[ ] | ELEC/PROOF: | CERT/WUC: | LAP, ETC: | LAPS LETTER:
RUSH LETTR: | RENOVATE: | RECON REQ: | TYPE: [ ]
PD BOOK: [09-] | MAP: [ ] | PUB DATE:

***TYPE -- DOCUMENT -- STATUS**

Type of Right: Application to Appropriate Source of Info: Certificate **Status: Certificate**

LOCATION OF WATER RIGHT***(Points of Diversion: Click on Location to access PLAT Program.)*********MAP VIEWER***GOOGLE VIEW*

FLOW: 0.64 cfs
SOURCE: Hammond Canyon Creek
COUNTY: San Juan COMMON DESCRIPTION:

POINT OF DIVERSION -- SURFACE:
(1) S 307 ft W 1187 ft from E4 cor, Sec 27, T 35S, R 20E, SLBM
Diverting Works: Source:

Stream Alt Required?: No

USES OF WATER RIGHT******** *ELU -- Equivalent Livestock Unit (cow, horse, etc.)* ******** *EDU -- Equivalent Domestic Unit or 1 Family*

SUPPLEMENTAL GROUP NO.: 4260.

IRRIGATION: 21.12 acres PERIOD OF USE: 04/01 TO 11/15

###PLACE OF USE:	NORTH WEST QUARTER				NORTH EAST QUARTER				SOUTH WEST QUARTER				SOUTH EAST QUARTER			
	NW	NE	SW	SE	NW	NE	SW	SE	NW	NE	SW	SE	NW	NE	SW	SE
Sec 26 T 35S R 20E SLBM									X	X	X	X				
Sec 27 T 35S R 20E SLBM														X		

E N D O F D A T A

(WARNING: Water Rights makes NO claims as to the accuracy of this data.) RUN DATE: 03/27/2014

WATER RIGHT: 09-34 APPLICATION/CLAIM NO.: A9491 CERT. NO.: 3009

OWNERSHIP

NAME: USA Indian Service
ADDR: Ignacio CO
INTEREST: 100%

DATES, ETC.

LAND OWNED BY APPLICANT? Yes COUNTY TAX ID#:
FILED: 03/24/1924|PRIORITY: 03/24/1924|PUB BEGAN: |PUB ENDED: |NEWSPAPER:
ProtestEnd: |PROTESTED: [No]|HEARNG HLD: |SE ACTION: [Approved]|ActionDate:12/12/1924|PROOF DUE:
EXTENSION: |ELEC/PROOF:[ ]|ELEC/PROOF: |CERT/WUC: |LAP, ETC: |LAPS LETTER:
RUSH LETTR: |RENOVATE: |RECON REQ: |TYPE: [ ]
PD BOOK: [09-]|MAP: [ ]|PUB DATE:

*TYPE -- DOCUMENT -- STATUS

Type of Right: Application to Appropriate Source of Info: Certificate Status: Certificate

LOCATION OF WATER RIGHT***(Points of Diversion: Click on Location to access PLAT Program.)*********MAP VIEWER***GOOGLE VIEW*

FLOW: 0.738 cfs
SOURCE: Cottonwood Creek
COUNTY: San Juan COMMON DESCRIPTION:

POINT OF DIVERSION -- SURFACE:
(1) S 1540 ft W 384 ft from N4 cor, Sec 31, T 35S, R 21E, SLBM
Diverting Works: Source:

Stream Alt Required?: No

USES OF WATER RIGHT******** ELU -- Equivalent Livestock Unit (cow, horse, etc.) ******** EDU -- Equivalent Domestic Unit or 1 Family

SUPPLEMENTAL GROUP NO.: 4268.

IRRIGATION: 20.89 acres PERIOD OF USE: 04/01 TO 11/15

###PLACE OF USE:	NORTH WEST QUARTER				NORTH EAST QUARTER				SOUTH WEST QUARTER				SOUTH EAST QUARTER			
	NW	NE	SW	SE	NW	NE	SW	SE	NW	NE	SW	SE	NW	NE	SW	SE
Sec 31 T 35S R 21E SLBM													X	X	X	X

**********E N D O F D A T A**********

(WARNING: Water Rights makes NO claims as to the accuracy of this data.) RUN DATE: 04/01/2014

WATER RIGHT: **09-35** APPLICATION/CLAIM NO.: **A9492** CERT. NO.: 3010

OWNERSHIP

NAME: USA Indian Service
ADDR: Ignacio CO
INTEREST: 100%

DATES, ETC.

LAND OWNED BY APPLICANT? Yes COUNTY TAX ID#:

FILED: 03/24/1924	PRIORITY: 03/24/1924	PUB BEGAN:	PUB ENDED:	NEWSPAPER:
ProtestEnd:	PROTESTED: [No]	HEARNG HLD:	SE ACTION: [Approved]	ActionDate:12/12/1924
PROOF DUE:	EXTENSION:	ELEC/PROOF:[ ]	ELEC/PROOF:	CERT/WUC:
LAP, ETC:	LAPS LETTER:	RUSH LETTR:	RENOVATE:	RECON REQ:
TYPE: [ ]	PD BOOK: [09-]	MAP: [ ]	PUB DATE:	

***TYPE -- DOCUMENT -- STATUS**

Type of Right: Application to Appropriate Source of Info: Certificate **Status: Certificate**

LOCATION OF WATER RIGHT(Points of Diversion: Click on Location to access PLAT Program.)********MAP VIEWER*GOOGLE VIEW***

FLOW: 0.298 cfs
SOURCE: Cottonwood Creek
COUNTY: San Juan COMMON DESCRIPTION:

POINT OF DIVERSION -- SURFACE:
(1) N 486 ft W 697 ft from S4 cor, Sec 06, T 36S, R 21E, SLBM
Diverting Works: Source:

Stream Alt Required?: No

USES OF WATER RIGHT****** *ELU -- Equivalent Livestock Unit (cow, horse, etc.) ******** EDU -- Equivalent Domestic Unit or 1 Family*

SUPPLEMENTAL GROUP NO.: 4275.

IRRIGATION: 15.3 acres PERIOD OF USE: 04/01 TO 11/15

###PLACE OF USE:	NORTH WEST QUARTER				NORTH EAST QUARTER				SOUTH WEST QUARTER				SOUTH EAST QUARTER			
	NW	NE	SW	SE	NW	NE	SW	SE	NW	NE	SW	SE	NW	NE	SW	SE
Sec 07 T 36S R 21E SLBM				X			X					X				

END OF DATA

(WARNING: Water Rights makes NO claims as to the accuracy of this data.) RUN DATE: 03/27/2014

WATER RIGHT: 09-36 APPLICATION/CLAIM NO.: A9506 CERT. NO.: 3011

OWNERSHIP

NAME: USA Indian Service
ADDR: Ignacio CO
INTEREST: 100%

DATES, ETC.

LAND OWNED BY APPLICANT? Yes COUNTY TAX ID#:
FILED: 04/18/1924|PRIORITY: 04/18/1924|PUB BEGAN: |PUB ENDED: |NEWSPAPER:
ProtestEnd: |PROTESTED: [No]|HEARNG HLD: |SE ACTION: [Approved]|ActionDate:12/09/1925|PROOF DUE:
EXTENSION: |ELEC/PROOF:[ ]|ELEC/PROOF: |CERT/WUC: |LAP, ETC: |LAPS LETTER:
RUSH LETTR: |RENOVATE: |RECON REQ: |TYPE: [ ]
PD BOOK: [09-]|MAP: [ ]|PUB DATE:

*TYPE -- DOCUMENT -- STATUS

Type of Right: Application to Appropriate Source of Info: Certificate Status: Certificate

LOCATION OF WATER RIGHT***(Points of Diversion: Click on Location to access PLAT Program.)*********MAP VIEWER***GOOGLE VIEW*

FLOW: 1.06 cfs
SOURCE: Allen Canyon Creek
COUNTY: San Juan COMMON DESCRIPTION:

POINT OF DIVERSION -- SURFACE:
(1) N 1499 ft W 739 ft from S4 cor, Sec 20, T 35S, R 21E, SLBM
Diverting Works: Source:

Stream Alt Required?: No

USES OF WATER RIGHT******** ELU -- Equivalent Livestock Unit (cow, horse, etc.) ******** EDU -- Equivalent Domestic Unit or 1 Family

SUPPLEMENTAL GROUP NO.: 4283.

IRRIGATION: 38.38 acres PERIOD OF USE: 04/01 TO 11/15

###PLACE OF USE:	NORTH WEST QUARTER				NORTH EAST QUARTER				SOUTH WEST QUARTER				SOUTH EAST QUARTER			
	NW	NE	SW	SE	NW	NE	SW	SE	NW	NE	SW	SE	NW	NE	SW	SE
Sec 29 T 35S R 21E SLBM		X		X						X		X				
Sec 31 T 35S R 21E SLBM														X		X
Sec 32 T 35S R 21E SLBM								X		X						

END OF DATA

(WARNING: Water Rights makes NO claims as to the accuracy of this data.) RUN DATE: 04/01/2014

WATER RIGHT: **09-82** APPLICATION/CLAIM NO.: **A11348** CERT. NO.: 2233

OWNERSHIP

NAME: USA Ute Agency
ADDR: Ignacio CO
INTEREST: 100%

DATES, ETC.

```
LAND OWNED BY APPLICANT? Yes               COUNTY TAX ID#:
FILED:     02/27/1933|PRIORITY:  02/27/1933|PUB BEGAN:          |PUB ENDED:           |NEWSPAPER:
ProtestEnd:          |PROTESTED: [No      ]|HEARNG HLD:         |SE ACTION: [Approved]|ActionDate:10/23/1933|PROOF DUE:
EXTENSION:           |ELEC/PROOF:[        ]|ELEC/PROOF:         |CERT/WUC:            |LAP, ETC:            |LAPS LETTER:
RUSH LETTR:          |RENOVATE:            |RECON REQ:          |TYPE: [             ]
PD BOOK: [  09-     ]|MAP:  [             ]|PUB DATE:
```

TYPE -- DOCUMENT -- STATUS

Type of Right: Application to Appropriate Source of Info: Certificate **Status: Certificate**

LOCATION OF WATER RIGHT*(Points of Diversion: Click on Location to access PLAT Program.)** MAP VIEWER *** GOOGLE VIEW

FLOW: 0.7 cfs
SOURCE: Hammond Canyon Creek
COUNTY: San Juan COMMON DESCRIPTION:

POINT OF DIVERSION -- SURFACE:
(1) N 963 ft E 203 ft from W4 cor, Sec 07, T 36S, R 21E, SLBM
Diverting Works: Source:

Stream Alt Required?: No

USES OF WATER RIGHT ******** *ELU -- Equivalent Livestock Unit (cow, horse, etc.)* ******** *EDU -- Equivalent Domestic Unit or 1 Family*

SUPPLEMENTAL GROUP NO.: 4719.

IRRIGATION: 19.55 acres PERIOD OF USE: 04/01 TO 11/15

###PLACE OF USE:	NORTH WEST QUARTER				NORTH EAST QUARTER				SOUTH WEST QUARTER				SOUTH EAST QUARTER			
	NW	NE	SW	SE	NW	NE	SW	SE	NW	NE	SW	SE	NW	NE	SW	SE
Sec 07 T 36S R 21E SLBM				X						X			X			X

E N D O F D A T A

Appendix C
Leak Detection Survey

UTILITY Technical Services, Inc.

PO Box 3613, Englewood, CO 80155
Phone: 303-773-2808 Fax: 303-799-3436

WATER SYSTEM
LEAK SURVEY REPORT

for

Wright Water Engineers
Ute Mountain Towaoc
July 2014

Prepared By

UTILITY TECHNICAL SERVICES, INC.

P.O. BOX 3613

ENGLEWOOD, COLORADO 80155

303.773.2808

UTILITY Technical Services, Inc.

PO Box 3613, Englewood, CO 80155
Phone: 303-773-2808 Fax: 303-799-3436

August 12, 2014

Ryan Huggins
Wright Water Engineers
2490 W. 26th Ave Ste 100A
Denver, CO 80211

Dear Ryan:

On July 30, 2014, **UTILITY TECHNICAL SERVICES, INC.** conducted a waterline leak survey for Wright Water Engineers, location at Ute Mountain, Towaoc. The purpose of this survey was to detect and locate any leaks in the water distribution system.

This leak survey was carried out by the use of a noise correlator. The noise correlator determines the time difference between similar sounds (vibrations) or noise patterns reaching sensors positioned at opposite ends of the section of pipeline being tested. By measuring this time difference, based on the velocity of sound and the distance between sensors, the instrument computes the location of any continuous noise (i.e., leaks).

At the conclusion of the survey, one (1) possible leak noise had been observed as described in this report. Leak noises are classified as follows:

VS - very slight, less than 2 gallons per minute
S - slight, 2-3 gallons per minute
S-M - slight to moderate, 4-6 gallons per minute
M - moderate, 8-10 gallons per minute
M-H - moderate to heavy, 12-18 gallons per minute
H - heavy, 18-26 gallons per minute

Leak noises are classified based on the frequency in which they best responded. The one (1) leak noise was classified as slight. **The estimated water saved by repairing this leak could amount to between 2 and 3 gallons per minute. This would represent a daily savings of approximately 2,880 to 4,320 gallons.**

If we can be of further assistance, or if there are any questions regarding this report, please do not hesitate to contact our office. Thank you for the opportunity to be of service to you.

Sincerely,

David B. Anderson
UTILITY TECHNICAL SERVICES, INC.

DBA/ca

UTILITY Technical Services, Inc.
PO Box 3613, Englewood, CO 80155
Phone: 303-773-2808 Fax: 303-799-3436

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UTILITY Technical Services, Inc.

PO Box 3613, Englewood, CO 80155
Phone: 303-773-2808 Fax: 303-799-3436

LEAK SURVEY DAILY REPORT

CLIENT: Wright Water Engineers **DATE: July 30, 2014**

SYSTEM NAME/LOCATION: Ute Mountain Towaoc

SYSTEM SURVEY ☒ **LEAK LOCATION** ☐ **CONTRACTOR SERVICE** ☐

UTILITY TECHNICAL SERVICES CREW: David Anderson

CLIENT CREW AND ACTIVITIES (assistance, repairs, etc.)

Aldo Hammond, Lee and Aaron

NUMBER OF LEAKS REPAIRED: 0 **NUMBER OF EXCAVATIONS: 0**

POSSIBLE LEAK NOISES LOCATED: 1 **TOTAL L.F. SURVEYED: N/A**

DIARY AND COMMENTS:

Arrived at 8:00 a.m. and met with Aldo at 8:25

Proceeded with survey.

Stopped for lunch.

Continued with survey.

Noises located within the system were homeowners irrigating.

Finished approximately 4:00 p.m.

UTILITY Technical Services, Inc.
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Phone: 303-773-2808 Fax: 303-799-3436

LEAK SURVEY LOCATE

PREPARED FOR: wright Water Engineers **DATE:** July 30, 2014

LOCATION: Ute Mountain **CITY:** Towoac **STATE:** CO

UTS PERSONNEL: David Anderson

OWNERSHIP: PUBLIC ☐ PRIVATE ☐ COMMERCIAL ☐ OTHER ☐

INDICATION OF LEAK: CORRELATOR ☒ SONIC ☐ OTHER ☐

ESTIMATED LEAK SIZE: S **TYPE & SIZE OF MAIN:** 6" DIP **SERVICE:** N/A

SET-UP # 35 **(NOT TO SCALE)** **DETAIL # 1**

SYMBOLS: r = LEAK NOISE = FIRE HYDRANT = CURB STOP = GATE VALVE g = METER PIT

Last fire hydrant south on Ute Trail is leaking.

FOR CUSTOMER USE:

DATE REPAIRED: _____ **BY:** _____ **EST. LEAK SIZE:** _____ **GPM** _____

REMARKS: _____

UTILITY
Technical Services, Inc.
PO Box 3613, Englewood, CO 80155
Phone: 303-773-2808 Fax: 303-799-3436

SURVEY SET-UP RECORD

Client: UTE MTN Tower Date: 7-30-14 Technician: David Anderson

SET-UP	BLUE LOCATION	RED LOCATION	RESULTS/COMMENTS	NOISE
1	FH N. UTE & Reservoir	FH MTN Sage North Ute		
2	"	FH N UTE & N Ute cr.		
3	Flush hyd end of line	"	Long Run	
4	FH N Star Chief House	GV N. Star MTN Sage		
5	"	FH Chief House & Little Red		
6	"	GV N Star Cottonwood		
7	FH Cottonwood & Oak Lane	"		
8	FH N. Star & Bear Dance	"	R 1/2	Q
9	"	FH Bear Dance		
10	FH Bear Dance @ Fire Dept	"	R 1/2 D- 965 dr-284	K
11	"	GV Cottonwood & Rustling Willow		
12	FH Cottonwood Oak Lane	"		
13	"	FH Chief House & Little Road		
14	FH Chief House Rustling Willow	"		
15	FH ~~N. Ute~~ Little Red MTN Sage	"		
16				
17	FH Mike Walsh	GV END Mike Wash center		Q

UTILITY
Technical Services, Inc.
PO Box 3613, Englewood, CO 80155
Phone: 303-773-2808 Fax: 303-799-3436

SURVEY SET-UP RECORD

Client: Ute Mtn Towaoc Date: 7-30-14 Technician: DA

SET-UP	BLUE LOCATION	RED LOCATION	RESULTS/COMMENTS	NOISE
18	FH Mike Wash	FH @ Fleet Bldg		
19	GV Sec. office	"		
20				
21	FH So. END Chief Green	~~FH~~ GV Chief Green		
22				
23	FH Dry Creek	FH Red Horse & Dry Creek irrig.		C
24	" Mike Wash	FH Dry Creek		
25	FH Ute Trail	"		
26	"	FH Bear Dance @ Fire Dept	PRV?	
27				
28	FH Whispering Wind	FH Dry Creek		
29	"	FH Whispering Wind	IRRIG	C
30	FH War Eagle	"		
31	"	FH WAR EAGLE & Ute Trail C		
32	FH Mike Wash & ute trail	"		
33	FH Ute trail	"		
34	"	FH Ute Trail		
35	FH Ute Trail	"	FH b	C
36	"	FH Rodeo Grounds		

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END SURVEY

Appendix D

Water Quality Standards for Surface Waters of the Ute Mountain Ute Indian Reservation

Ute Mountain Ute Tribe

Water Quality Standards
For Surface Waters
of the
Ute Mountain Ute Indian Reservation

Adopted by
Ute Mountain Ute Tribal Council

January 20, 2011
Resolution # 2011-010

Prepared by:
Colin Larrick
Water Quality Specialist
Scott Clow
Environmental Programs Director
Ute Mountain Ute Tribe

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Appendices:

Water Quality Standards

For Surface Waters of the Ute Mountain Ute Indian Reservation

Colorado, New Mexico, Utah

1. Purpose and Authority

The Ute Mountain Ute Tribe (the Tribe), as a sovereign nation and a Federally recognized Indian Tribe, is establishing water quality standards for the protection of its surface water resources. Ute Mountain Ute Tribal Council Resolution No. 99-123, approved August 12, 1999, documents the decision of the Ute Mountain Ute Tribal Council to use their authority, when approved by the U.S. Environmental Protection Agency as described in Section 518 of the Federal Water Pollution Control Act (hereafter referred to as the "Clean Water Act"), to administer a water quality standards program.

Purpose. The purposes for these standards are threefold: assessment, regulatory controls, and protection of all uses including habitat for aquatic and wildlife species.

Assessment. One purpose of these standards is to provide references for the assessment of surface water quality. These standards represent the water quality goals of the Tribe for surface waters, and will be used in assessing potential impacts to that quality.
Regulatory Controls. Both point and nonpoint source regulatory pollution controls to be established by the Tribe or the Federal Government will be developed to ensure a level of water quality that will satisfy these water quality standards. Regulatory pollution controls established for point source discharges shall also be consistent with applicable sections of the federal Clean Water Act. Tribal programs to control nonpoint sources, whether regulatory or voluntary, shall be designed to meet these water quality standards.
Protection of aquatic and wildlife species. It is the intention of the Tribe that the designated uses and criteria assigned to Tribal waters will provide a level of water quality fully protective of aquatic and wildlife species dependent on it, including federally listed threatened or endangered species. Consultation with the U.S. Fish and Wildlife Service during the public review of these standards will ensure, to the extent practicable, adequate protection for listed species.

Authority. Specific waters over which the Ute Mountain Ute Tribe has jurisdiction to administer water quality standards within the exterior boundaries of the Ute Mountain Ute Reservation, are the following:

In Colorado:
San Juan River and all tributaries, Mancos River and all tributaries, McElmo Creek and all tributaries, Navajo Wash and all tributaries, all lakes, reservoirs, and wetlands;
In New Mexico:
All tributaries to the San Juan River, including all lakes, reservoirs, and wetlands;

In Utah:
Recapture Creek and all tributaries, Cottonwood Wash and all tributaries, Allen Canyon Creek and all tributaries, and all lakes, reservoirs, and wetlands.

Also see the related document, "Descriptive Statement of the Ute Mountain Tribe's Authority to Regulate Water Quality." (Maynes, Bradford, Shipps and Sheftel, as revised by William Johnson, Associate General Counsel, Ute Mountain Ute Tribe, 2005.)

2. Triennial Review

Water Quality standards shall be reviewed on a triennial basis for the purpose of determining what revisions are necessary to comply with applicable federal regulations and to meet Tribal water quality goals. This process shall meet the requirements of Clean Water Act Section 303(c). For example, any water body segment with water quality standards that do not include the goal uses specified in CWA Section 101(a)(2) shall be reexamined every three years to determine if any new information has become available. If such new information indicates the CWA goal uses are attainable, the Tribe shall revise the standards accordingly. Proposed revisions to the Tribe's water quality standards and the supporting information and analyses will be made available to the public prior to a public hearing. Public hearings will be held in accordance with Tribal laws and EPA requirements. The triennial review process will be ongoing, and public hearings will be held at least every three years following Ute Mountain Ute Tribal Council adoption of these standards.

3. Definitions

Acute toxicity The ability of a substance to cause poisonous effects resulting in severe biological harm or death soon after a single exposure or dose. Also, any severe poisonous health effects resulting from a single short-term exposure to a toxic substance.

Anti-degradation (clause) A provision of the Tribe's water quality standards that protects existing uses and waters where the existing quality is better than necessary to support Clean Water Act Section 101 (a)(2) goal uses, as required by federal regulations at 40 CFR 131.12.

Assemblage An association of aquatic organisms of similar taxonomic classification living in the same area. Examples of assemblages include, but are not limited to, fish, macroinvertebrates, algae, and vascular plants.

Aquatic Organism Any plant or animal which lives at least part of its life cycle in water.

Attainment To meet the goal or standard. Attainment means that the water body is of sufficient quality chemically, biologically, and physically, to support the uses for which it is designated and to otherwise achieve the applicable water quality standards.

Bioaccumulative Substances that increase in concentration in living organisms (that are very slowly metabolized or excreted) as they breathe contaminated air, drink contaminated water, or eat contaminated food.

Best Management Practices (BMP) Methods that have been determined to be the most effective, practical means of preventing or reducing pollution from non-point sources.

Best Available Treatment Economically Achievable (BATEA) As identified by EPA, the most effective treatment technology that is available to effluent discharge permittees that does not cause widespread and substantial economic harm.

Biological condition The taxonomic composition, richness, and functional organization of an assemblage of aquatic organisms at a site or within a water body.

Chronic toxicity The capacity of a substance to cause long-term poisonous health effects.

Conveyance A route of transfer, for example, a pipe.

Criteria Elements of State or Tribal water quality standards, expressed as constituent concentrations, levels, or narrative statements, representing a quality of water that supports a particular use. When criteria are met, water quality will generally protect the designated use.

CWA Clean Water Act, the common name for the Federal Water Pollution Control Act.

Designated Uses Those water uses identified in the Tribe's water quality standards for each water body, whether or not they are being attained.

Ecology The relationship of living things to one another and their environment, or the study of such relationships

Effluent Wastewater, treated or untreated, that flows out of a treatment plant, sewer, or industrial outfall. Generally refers to wastes discharged into surface waters.

Environment The sum of all external conditions affecting the life, development, and survival of an organism.

Ephemeral Water(s) A stream or wetland that flows or contains water only in direct response to precipitation in the immediate watershed or in response to the melting of a cover of snow or ice. The stream channel of such a water body is always above the adjacent water table.

Existing Use A water use attained for a given water body that exists under present conditions, or which existed on or after November 28, 1975. Some existing uses may not be included in these standards at this time.

Food Chain A sequence of organisms, each of which uses the next, lower member of the sequence as a food source.

Functional Organization The number of species or abundance of organisms within an assemblage which perform the same or similar ecological functions.

Impaired A physical, biological or chemical condition, in which a water body is not attaining the applicable water quality standards, including the uses for which it is designated.

Implementation The act of giving practical effect to and ensuring of actual fulfillment by concrete measures.

Intermittent Water(s) A stream or wetland that flows or contains water in response to both surface run-off and groundwater discharge with at least part of its channel or wetland bottom below the adjacent water table for some part of the year, which does not have a perennial flow or contain water perennially.

Lentic A still or slow moving aquatic environment, such as a lake, a reservoir or a wetland.

Lotic An aquatic environment consisting of moving water, such as a river or stream.

Metric An expression of biological community composition, richness, or function that displays a predictable, measurable change in value along a gradient of pollution or other anthropogenic disturbance.

Mixing Zone A designated area or location of a receiving water where waste waters and receiving waters mix and certain ambient water quality criteria do not need to be met.

NPDES National Pollutant Discharge Elimination System

NPS Nonpoint source (pollution)

Nonpoint source pollution Pollution caused by a source or sources that is not carried by a direct conveyance.

Non-attainment To not meet the goal or standard assigned to a water body or segment. Non-attainment means that the water body is not of sufficient quality either chemically, biologically, or physically, to support the uses for which it is designated or to otherwise fail to achieve the applicable water quality standards.

Nuisance (species) Non-indigenous or undesired species that negatively affect an ecosystem. Some introduced species may be non-indigenous, but may be desirable and therefore protected by these standards..

Objectionable Undesirable, offensive.

Organoleptic Pertaining to taste and odor, as opposed to health effects.

Outstanding Tribal Resource Water A tribal water body designated for protection under Tier 3 of the Tribe's antidegradation policy---See Section 4, Antidegradation.

PAH Polynuclear Aromatic Hydrocarbon

Priority Pollutant Those toxic pollutants listed by the Administrator of the U.S. Environmental Protection Agency as required in section 307(a) of the Clean Water Act.

Reference site A site or water body which is determined by the Tribe to be representative of sites or waterbodies of similar type, and are least impaired with respect to habitat, water quality, watershed land use, and riparian and biological condition.

Reference condition A physical, biological and chemical condition that is determined by the Tribe to be characteristic of minimally impaired conditions with respect to habitat, water quality, watershed land use, and riparian and biological condition in lieu of an unimpaired reference site.

Richness The absolute number of taxa in an assemblage at a site or within a water body.

Stream Descriptor A descriptive identifier for a water body used to distinguish conditions in addition to its designated use. For example-- an ephemeral water body.

Stream Segment Any part, portion or subsection of a lotic surface water body. Stream segments include the entire width of a stream from one specified point at its upstream end to one specific point at its downstream end, unless specifically defined otherwise.

Surface Water Body Any river, stream, lake, reservoir, spring, wetland or other natural conveyance that holds a quantity of water at some time.

Taxonomic Composition The identity and abundance of species or taxonomic groupings within an assemblage of aquatic organisms at a site or within a water body.

Toxic Harmful to living organisms.

Toxic Pollutant Those pollutants, or combination of pollutants, including disease-causing agents, which after discharge and upon exposure, ingestion, inhalation, or assimilation into any organism, either directly from the environment or indirectly by ingestion through food chains, will, or on the basis of information available to the Administrator of the U.S. Environmental Protection Agency, cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions (including malfunctions in reproduction) or physical deformations, in such organisms or their offspring. (See also, "priority pollutant(s)," a subset of "toxic pollutant(s)")

Tribal Waters (or *Water Bodies*) All waters over which the Tribe has jurisdiction and that satisfy the federal definition of "waters of the U.S." found at 40 CFR 122.2. **See Section 1, Purpose and Authority**.

Use Attainability Analysis (UAA) A structured scientific assessment of the factors affecting the attainment of the use, which may include physical, chemical, biological, or economic factors as described in 40 CFR Part 131.10(g).

Violation (of water quality standards) An action, or negligent lack thereof, by an individual, business or government that causes water pollution of Tribal Waters in excess of the criteria set forth in these standards, including damaging effects on the biological criteria of these standards.

Waterfowl A swimming bird or a bird that frequents water.

Watershed The land area that drains into a stream, lake or wetland.

Water Quality Standards (WQS) Provisions of State, Tribal, or Federal law that primarily consist of a designated use or uses for specific Tribal waters or waters of the United States, and water quality criteria for those waters based upon such uses. Water quality standards also provide policies for the prevention of degradation of quality, mixing zone policies, and site–specific requirements. Ultimately, water quality standards are to protect public health or welfare, enhance the quality of the water and serve the purposes of the Clean Water Act.

Wetland(s) An area that is inundated or saturated by surface or ground water at a frequency and duration to support, and that under normal conditions does support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands are considered Tribal Waters and generally include swamps, bogs, marshes, and similar areas.

Wildlife Living things and especially mammals, birds, and fishes that are neither human nor domesticated.

4. Antidegradation Policy

The Ute Mountain Ute antidegradation policy set forth below is based on the three-tiered Federal policy in 40 CFR 131.12. It applies to all Reservation surface waters.

Tier 1. Existing in-stream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected.

Tier 2. Where the quality of waters exceed the level necessary to support the propagation of fish, shellfish, and wildlife and recreation in and on the water, that quality shall be maintained and protected unless the Tribe finds, after appropriate intergovernmental coordination and public participation, that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located. In allowing such degradation or lower water quality, the Tribe shall assure water quality adequate to protect existing uses fully. Further, the Tribe shall assure that there shall be achieved the highest statutory and regulatory requirements for all new and existing point sources and all cost-effective and reasonable best management practices for nonpoint source control.

Tier 3. Where high quality waters constitute such a designation, an Outstanding Tribal Resource Water (OTRW) designation may be adopted. The level of water quality of these waters shall be maintained and protected. These may include, but not be limited to, waters that have outstanding water quality, unique aquatic ecology, or recreational, ceremonial, or aesthetic characteristics that qualify them for such a designation by the Tribe.
See definition of *Outstanding Tribal Resource Water* above. See Section 11 and Appendix C for more information regarding OTRW designation.

In those cases where a potential impairment of water quality associated with a thermal discharge is involved, the antidegradation policy and implementing method shall be consistent with Section 316 of the Clean Water Act.

See Appendix C, *Anti-degradation Implementation Procedures,* for specific procedures to determine the course of action in the event of a potential for degradation or necessary enforcement action.

5. Narrative Water Quality Criteria

a. All Reservation surface waters shall be free from substances, from any pollution source, that:

(1) Settle to form objectionable deposits;
(2) Float as debris, scum, oil, or other matter forming nuisances;
(3) Produce objectionable color, odor, taste, or turbidity;
(4) Cause injury to, or are toxic to, or produce adverse physiological responses in humans, animals, or plants; or
(5) Produce undesirable or nuisance aquatic life.

b. For substances that lack numeric water quality criteria or for which numeric criteria are not protective or representative of clean water goals, these narrative water quality criteria shall be implemented. Implementation of these narrative criteria shall take into consideration appropriate EPA technical guidance concerning the development of water quality based controls. For example, narrative water quality criteria shall be implemented considering any criteria guidance issued by EPA under CWA Section 304(a), and other relevant, technically-defensible criteria for pollutants of concern may also be considered. Any Safe Drinking Water Act provisions and health advisories will be considered for implementation of these criteria for substances that lack numeric criteria for public water supply use. For purposes of point source discharges 5.a.(4) shall be implemented by including appropriate Whole Effluent Toxicity (WET) limitations in the NPDES permit, as specified in the latest edition of the document "Region 8 NPDES Whole Effluent Toxicity Program Document".

6. Narrative Biological Criterion

The overall goal of the biological criterion of the Tribe is to maintain and support the structure and function of aquatic communities in conditions similar to reference sites or reference conditions that are determined by the Tribe.

Assessment of biological conditions will include monitoring of the benthic macroinvertebrates, fish, and/or plant communities, as appropriate. Community metrics will be determined by the Tribe, relative to reference sites. A reference condition may be assigned as a goal for the biological community if there is an insufficient number of reference sites or if those sites become impaired. Data for a reference condition will be treated in the same manner as if it were a reference site.

Implementation of narrative biological criterion:

The intent of the Tribe in adopting a narrative biological criterion is primarily to provide an additional assessment method for the identification of impaired waters. The Tribe recognizes an inherent difference between biological criteria and numeric chemical-specific criteria. A major difference is the manner in which the two types of criteria can be applied effectively in determining water quality-based effluent limits for point source discharges. Chemical-specific criteria typically are expressed as a concentration of a given parameter, with provisions that describe an averaging period and an allowable frequency of exceedence. Biological criteria describe a desired biological condition, and are expressed and interpreted using information about aquatic organisms. Biological criteria, therefore, are not ideally suited for directly calculating effluent limits for point source discharges. The Tribe does believe that biological criteria are useful because there can be physical and biological changes in aquatic ecosystems that may impair a water's health that are unrelated to chemical constituents in the water column.

Although the Tribe does not envision that it will always be necessary to establish effluent limits for point source discharges based on biological criteria, the Tribe intends that the biological criteria are to be used as required by Section 301(b)(1)(C) of the Clean Water Act and 40 CFR Section 122.44(d) in determining appropriate effluent limits for point source discharges. For example, where the biological criteria are not satisfied, that information can be used by the permitting authority to reevaluate any NPDES permit(s) for upstream discharges to determine if all appropriate chemical-specific and whole effluent toxicity limits are included in the permits. If any of the biological criteria were exceeded in any water, then the permit(s) for any upstream discharger(s) would need to be revised as needed to include appropriate effluent limits on whatever pollutant or pollutant parameters are or may be discharged that will cause, have the reasonable potential to cause, or contribute to any excursion above the biological criterion. This may involve examining whether the relevant permit(s) contain limits for all substances present in the discharge.

7. Mixing Zones and Dilution Policy

This policy establishes how mixing and dilution of point source discharges with receiving waters will be addressed in developing chemical-specific and whole effluent toxicity discharge limitations. Depending on site-specific mixing patterns and environmental concerns, some pollutants may be allowed a mixing zone for dilution and others may not. In all cases, mixing zone and dilution allowances shall be limited as necessary to protect designated uses and the integrity of the receiving water ecosystem as a whole. This policy shall be implemented consistent with the procedures in the *EPA Region VIII Mixing Zones and Dilution Policy*.

Where dilution is available at critical conditions and the discharge does not completely mix at a near instantaneous rate, an appropriate mixing zone may be designated if:

a. meeting water quality standards at the end-of-pipe is not practicable;
b. allowing a mixing zone will not pose unacceptable risks to designated or existing uses in the water body as a whole, considering factors such as:
   (1) bioaccumulation in fish tissues or wildlife,
   (2) biologically important areas such as fish spawning or nursery areas,
   (3) presence of federally-listed or proposed threatened or endangered species,
   (4) low acute to chronic ratio,
   (5) potential human exposure to pollutants via drinking water or recreational activities,
   (6) attraction of aquatic species to effluent plume,
   (7) toxicity or persistence of the substance discharged,
   (8) zone of passage for migrating fish or other species (including access to tributaries), and
   (9) cumulative effects of multiple discharges and mixing zones; and
c. narrative criteria will be achieved within the mixing zone, provided that the "free from toxicity" narrative shall be deemed satisfied where there is an absence of acutely-toxic conditions for swimming, drifting, and sessile organisms.

Mixing zone size shall generally be limited as follows, provided that individual chronic mixing zones may be further limited or denied as needed to protect designated and existing uses based on the factors listed in the preceding paragraph:

a. No acute mixing zone shall be allowed;
b. The size of chronic mixing zones for streams and rivers shall not exceed one-half the cross-sectional area or a length 10 times the stream width at critical low flow, whichever is more limiting; and
c. The size of chronic mixing zones for lakes shall not exceed 5% of lake surface area or 200 feet in radius, whichever is more limiting.

Where the discharge is to a river or stream, dilution is available at critical conditions, and available information is sufficient to reasonably conclude that the discharge exhibits near instantaneous and complete mixing, an appropriate dilution allowance may be provided for the purposes of establishing discharge limitations. The following critical flows may be assumed to dilute the effluent:

a. Stream Flows

Chronic Aquatic Life	4-day, 3-year flow (biologically based)
Acute Aquatic Life	1-day, 3-year flow (biologically based)
Human Health (carcinogens)	harmonic mean flow
Human Health (non- carcinogens)	4-day, 3-year flow (biologically based), Or 1-day, 3-year flow (biologically based)

b. Effluent Flows

Chronic Aquatic Life	Mean daily flow
Acute Aquatic Life	Maximum daily flow
Human Health (all)	Mean daily flow

Where dilution flow is not available at critical conditions, the discharge limits will be based on achieving water quality criteria at the end-of-pipe. In addition, discharge limits for all point source discharges to a wetland will be based on achieving water quality criteria at the end-of-pipe.

All mixing zone-dilution assumptions are subject to review and revision as information on the nature and impacts of the discharge becomes available. At a minimum, mixing zone and dilution decisions are subject to review and revision along with all other aspects of the discharge permit upon expiration of the permit.

8. Water Quality Standards for Wetlands

The Tribe recognizes that the natural water quality of wetlands may differ from that of associated streams. Existing water quality, uses and functions of wetlands will be protected.

a. For wetlands specifically listed in **Section 11. Use Designations**, designated uses cited in that section and numeric criteria assigned to those uses will apply. Those wetlands will also be subject to narrative criteria, antidegradation provisions, and the narrative biological criteria of the Tribe.

b. Wetlands not specifically listed in **Section 11**. are considered to be "Tribal waters," and will be subject to narrative criteria, applicable antidegradation provisions, and the narrative biological criteria of the Tribe. It shall also be a goal of the Tribe to maintain the water quality of wetlands at naturally occurring levels, within the natural range of variability for the individual wetland.

c. Wetlands that are seasonally dry shall be considered to be "ephemeral waters" or "intermittent waters," or both.

d. Wetlands shall not be considered as repositories or treatment systems for wastes from human sources.

e. Constructed wetlands are those that are specifically designed for the purpose of wastewater or storm water treatment, and those are not considered "Tribal waters."

9. Ephemeral Waters and Intermittent Waters

a. *Ephemeral* waters shall be required to meet the criteria established to support existing and designated uses when there is an existing surface stream flow from any source, however minimal. All stream segments of *intermittent* waters shall meet the criteria established for segments of that water body that have a stream flow, however minimal.

b. Ephemeral waters that receive a continuous discharge that enhances habitat by causing a perennial flow shall be protected in the same manner as other perennial waters. In these cases, designated uses and criteria shall be evaluated for revision to a more stringent standard, unless a Use Attainability Analysis has been performed and approved by the Tribe and the U.S. Environmental Protection Agency, Region VIII.

10. Variances from Water Quality Criteria

Tribal waters where it is not feasible to achieve these water quality standards may be granted a temporary variance from specific criteria in these standards. Such a variance temporarily modifies the water quality standard for a stream or stream segment and includes an expiration date, a water quality goal, and an interim standard that is effective for the duration of the variance. All other standards, including designated uses, other criteria applicable to those designations, and other requirements not modified by the variance shall remain in effect. Variances are noted in the tables in **Section 12. Designated Uses, Criteria, and Variances for Stream Segments**, and are described in detail in **Table 12.1**.

a. Types of Variances

(1) *Discharger-specific variances* may be adopted where the conditions precluding the attainment of designated uses are shown to be applicable to specific discharges.
(2) *Temporary Standards*, applicable to all pollution sources located on a stream, stream segment, or a portion thereof, may be adopted where the conditions precluding attainment of designated uses are characteristic of the entire stream or stream segment.

b. All variances must be supported by a use attainment demonstration (showing attainment of the use is not feasible); must provide for protection of the highest attainable use that can be met and criteria necessary to protect that use; and must be approved by the Tribe and EPA. A variance may be authorized where existing uses are protected and one or more of the following causes for non-attainment of a designated use are justified:

(1) naturally-occurring pollutant concentrations prevent the attainment of the use;
(2) ephemeral, intermittent, or low-flow conditions or water levels prevent attainment of the use unless these conditions may be compensated for by the discharge of sufficient volume of effluent discharges to enable uses to be met;

(3) human-caused conditions or sources of pollutants prevent attainment of a designated use and cannot be corrected or correction would cause more environmental damage than to leave uncorrected;
(4) dams, diversions or other structures prevent the attainment of a use, and it is not feasible to restore the water body to its original condition or to operate the structure in a way that would result in attainment of that use;
(5) natural physical conditions such as substrate, cover, flow, etc. unrelated to water quality, prevent the attainment of an aquatic life use;
(6) more stringent controls than those required by sections 301(b) and 306 of the Clean Water Act would result in substantial and wide spread economic and social impact.

c. The written justification for a variance, in addition to explaining why one or a combination of the factors in paragraph (b) preclude the attainment of designated uses, must include documentation that controls have been evaluated and there is no reasonable control available that can be employed to attain the designated uses in the short term. Also, the justification must include a plan to gather additional information and/or conduct projects to remedy the conditions that preclude the attainment of designated uses, including a TMDL analysis where one is required. For temporary standards, the justification must also show that the conditions precluding the attainment of designated uses are representative of the water body segment, rather than one or more individual discharges.

d. All variances shall have a specific expiration date. The date shall be based upon the amount of time it is reasonably expected will be needed to remedy the water quality problem precluding the attainment of designated uses. Variances shall be reviewed every 3 years, and a variance may be extended only if the conditions for granting the variance still apply. Upon expiration, the general numeric water quality standards apply.

e. All variances shall identify interim water quality standards. Variances that are pollutant-specific shall have pollutant-specific interim standards. In no case shall interim standards be set at levels that would impair or otherwise have a negative impact on existing water quality.

f. For variances applicable to facilities with NPDES permits, such permits must include two sets of permit limits. One set shall be at a level sufficient to achieve the interim standards, and one set shall be at a level to achieve the underlying standards upon expiration of the variance. Permit limits for facilities for which a variance has been obtained must also be set to achieve all applicable technology-based controls.

11. Use Designations

a. Use Designation Codes:

AG	Agriculture, irrigation and/or livestock watering
CWAL	Cold Water Aquatic Life

DW	Drinking Water Source
FSH	Fish Consumption
IND	Industrial Use
REC1	Recreation, primary contact
REC2	Recreation, secondary contact
T	Tribal Cultural Use
WWAL	Warm Water Aquatic Life

Definitions of designated use codes:

AG Waters that are used for agricultural purposes such as irrigation and livestock watering.

CWAL Waters that support salmonid fish species or other cold water species of aquatic life, including associated benthic macroinvertebrate communities. Waters supporting such an aquatic ecosystem have a natural temperature regime that does not routinely exceed 20 degrees C.

DW Waters that are used, or have the potential to be used, as a public or private human drinking water source.

FSH Waters from which fish are, or may be, extracted and consumed by humans.

IND Waters that are used for industrial purposes, including construction activities.

T Waters that are used for Tribal ceremonial purposes and traditional activities. Examples of water contact that may be associated with Tribal use include ingestion and body contact. The preservation of the quality of these waters is important in the preservation of Ute Culture.

REC1 Waters that are, or may be, used for recreation such as swimming and boating, during which it is expected that small quantities of water may be ingested.

REC2 Waters that are, or may be, used for recreation such as wading and fishing, during which it is unreasonable to expect the ingestion of small quantities of water, but during which it is expected that skin contact with water may occur.

WWAL Waters that support warm water species of aquatic life, including associated benthic macroinvertebrate communities, that can survive temperatures greater than 20 degrees C for extended periods of time.

Designated uses for Tribal waters are determined by the Tribe, in accordance with Sections 101(a)(2) and 303 of the Clean Water Act and the implementing federal regulation at 40 CFR Part 131.10. Existing uses are uses that were in existence on a specific stream, lake, or wetland on November 28, 1975, or that have been attained thereafter. Some uses may be designated that are not currently attained, but for which there is a reasonable expectation that those uses can be attained using point and nonpoint source controls of limiting pollutants. Section 101(a)(2) of the Clean Water Act requires that waters be designated as “fishable and swimmable” (supporting protection and propagation of fish, shellfish, and wildlife, and providing for recreation in and on the water) unless a use attainability analysis has been approved supporting a less stringent use designation. Those waters that do not support a REC1 use designation have

been identified in **Section 14. Tribal Waters with Use Attainability Analyses**, and are identified in **Section 12**; in the center column of Tables 12.1 and 12.2.

b. Outstanding Tribal Resource Water Designation

Any Tribal Water or segment thereof can be designated an "Outstanding Tribal Resource Water" (OTRW), following an informal recommendation by a member of the public at large, appropriate consideration and documentation of the reasons for the recommendation by Tribal staff and Tribal Council, and official designation as part of a triennial revision of these standards.

(2010 Proposed) Designations:
Two OTRW designations are being recommended in these standards, nominated by the Tribe's Water Quality Specialist:

1. Ute Spring and unnamed creek from Ute Spring downstream within Section 12, TWP35N R18W (Colorado).
2. Allen Canyon Creek, Sections 17, 20, 29, 30, 31, TWP 35S, R21E (Utah)
3. "Lopez" Spring and unnamed creek tributary to and downstream from the spring, within Section 35, TWP 34N, R18W

12. Designated Uses, Criteria, and Variances for Stream Segments

The following tables summarize designated uses, types of narrative and numeric water quality criteria, and any temporary variances for water bodies determined to be "Tribal waters" in **Section 1.** of this document:

Table 12.1 Designated Uses for Tribal Waters, Colorado and New Mexico

Stream Segment	Type of Criteria, Variances, applicable UAA	Designated Use
Mancos River, segments and tributaries: (USGS HUC 14080107)		
Mancos above Weber Creek	Narrative and Numeric	WWAL, AG, REC1
Weber Creek	Narrative and Numeric	WWAL, AG, REC1
Mancos below Weber Cr. to Farm's diversion dam:	Narrative and Numeric	WWAL, AG, REC1
Tributaries to Mancos on segment above: Soda, Grass, Johnson, Ute and Moqui Canyons, and all other tributaries	Narrative and Numeric, UAA, Ute Canyon: site-specific, E. Coli = 126 cfu/ 100ml	WWAL, AG, REC2
Mancos below diversion dam to Navajo Wash confluence	Narrative and Numeric	WWAL, AG, REC1
Navajo Wash (primary tributary to the Mancos River on Reservation)	Narrative and Numeric,	WWAL, AG, REC1, IND

Cottonwood Wash, CO (tributary to Navajo Wash)	Numeric	WWAL, AG, REC1, FSH
Unnamed tributaries to Cottonwood Wash, Lopez Spring, unnamed springs	Numeric	WWAL, AG, T
Aztec Wash	Numeric, UAA	WWAL, AG, REC2
Mancos River downstream of Navajo Wash to the CO/NM, Ute/Navajo Border	Numeric	WWAL, AG, REC1
Lower San Juan River, segments and tributaries:		
McElmo Creek	Numeric	WWAL, AG, REC1
Tributaries to McElmo Creek on Ute Mountain Indian Reservation (Mud Creek, Ute Creek, Pine Creek, Berry Creek, Finley Creek, Echo Canyon Creek, Hamilton Canyon Creek, Littlewater Creek, and unnamed tributaries)	Numeric, UAA	WWAL, AG, REC2
Ute Spring, Hanna Spring, unnamed springs	Numeric	AG, T, WWAL
Cowboy Wash, Marble Wash, Mariano Wash, Coyote Wash, East McElmo Creek and other, and unnamed tributaries to lower San Juan River	Numeric, UAA	WWAL, AG, REC2
Lower San Juan River (USGS HUC 14080201)	Numeric	DW, WWAL, AG, REC1, FSH
Tributaries to Middle San Juan River (USGS HUC 14080105): (surface waters of Ute Canyon, Pickett Canyon, Navajo Canyon, Cholla Canyon, Purgatory Canyon, Barker Canyon, Thomas Canyon, Jones Canyon, Buzan Canyon, Oak Springs Canyon, Trail Canyon, Pump Canyon, Craig Canyon, and all other tributaries to the La Plata River and middle San Juan River) in New Mexico	Numeric, UAA	WWAL, REC2, AG
East Lake, Jones Lake, Blue Lake, and all other lakes, reservoirs and wetlands in Middle San Juan watershed	Numeric	WWAL, AG, REC1
Lakes, Reservoirs, and Wetlands in Mancos and McElmo watersheds:		
1st Lake (Cottonwood Wash watershed)	Numeric	CWAL, REC1, AG, FSH
2nd Lake (Pine Creek watershed)	Numeric	CWAL, REC1, AG, FSH
Horseshoe Reservoir, “Last Lake” (McElmo watershed)	Numeric	CWAL, REC1, AG, FSH
Hayfield Reservoir (Navajo Wash watershed)	Numeric	CWAL, REC1, AG, FSH
Ute Canal	Numeric, UAA	AG

Table 12.2. Designated Uses for Tribal Waters, Utah

Stream Segment	Type of Criteria, Variances	Designated Use
Right Hand Fork and tributaries (tributary to Cottonwood Wash)	Narrative and Numeric	WWAL, AG, REC1, T
Westwater Creek and all tributaries,	Numeric	WWAL, AG, REC1
Cottonwood Wash and all tributaries	Numeric	WWAL, AG, REC1, T
Allen Canyon Creek and all tributaries	Numeric	WWAL, AG, REC1, T
Whiskers Spring, Hammond Spring, unnamed springs	Numeric	AG, T, WWAL
Recapture Creek and Tributaries	Numeric	WWAL, AG, REC1, T

Criteria:
The following numeric criteria shall not be exceeded for any Tribal water, beyond the limits of averaging periods and allowable frequencies of exceedance. Two types of criteria are presented here, general numeric criteria and site specific numeric criteria.

> *Numeric* criteria are levels of pollutants beyond which impairment of a water body, resulting in non-attainment of a designated use, may be expected. These are also referred to as use-protected standards. Therefore, these criteria are specific to the designated uses that are to be protected. These numeric criteria are summarized in Tables 12.3 to 12.7, below. **For a water body with multiple use designations, the most stringent criteria will be the goal of its water quality standard.**
>
> *Site specific* criteria are set for individual waters or segments thereof for which the numeric criteria are not appropriate due to natural background conditions, historical pollution impairment, or conditions that may otherwise prevent the attainment of specific designated uses.

Note: Capital letters refer to references in Section 15. Numbers refer to footnotes in this section.

Table 12.3. Physical Parameters

Parameter:	**pH** (1) (K)	**Temperature** (2) (K)	**Salinity** (3), (4) (W,JJ)
Uses Protected:			
WWAL, CWAL	6.5-9.0 s.u. (range)	WWAL: <30C with maximum 3 degree C increase, CWAL: <20C with maximum 3 degree C increase	
REC1, REC2	6.5-9.0 s.u. (range)	<50 C	
AG	6.5-9.0 s.u. (range)	<50 C	Livestock consumption: TDS<or= 5,000 mg/L; Irrigation: <2250 mg/L when SAR is <or= 4.00, <1500 when SAR is 4.01-10.00; 750 mg/L if SAR> 10.00
DW & T	6.6-8.5 s.u. (range)		TDS <or= 500 mg/L
IND (5)	Boilers: 8.0-8.5 at 150-250 psi		Construction Watering: TDS<8,510 mg/L Boilers: TDS < 2500 at 150-250 psi pressure

Footnotes for Table 12.3:

(1) pH criteria are instantaneous measurements for the purpose of regulating effluent limits.

(2) Temperature shall maintain a natural pattern of seasonal fluctuation with no abrupt changes, and shall have no increase of a magnitude, rate or duration that negatively impacts aquatic life. Generally a maximum increase of less than 3 degrees C over a minimum of 4 hours, and lasting for no more than 12 hours is deemed acceptable for discharges that fluctuate in volume and/or temperature. Where temperature increases cannot be maintained within this limit by Best Management Practices and Best Available Treatment Economically Achievable, the Tribe will determine whether temperature increases impact the attainment of an aquatic life use.

(3) Waters in the 7,000-10,000 mg/L range of total soluble salts are unfit for poultry and swine, and present a significant risk for pregnant and lactating cows, horses, sheep, and the young of these species. Consumption of waters at this level of salinity also presents a risk for livestock subjected to heavy heat stress or water loss. 5,000 mg/L is therefore a threshold value to prevent adverse effects on livestock.
(4) SAR, or Sodium Adsorption Ratio: $Na/(1/2(Ca+Mg))^{1/2}$ The combination of sodium adsorption ratio (SAR) and total dissolved solids is used to assess the risk of sodium hazard in the application of water to crops of different sensitivities to sodium. These standards are not to be exceeded by more than 3 consecutive samples in a 30-day period or 20% of the samples in a growing season, for protection of long-term soil productivity.
(5) Use of untreated surface waters from local geology in boilers is most likely limited by hardness, which is not a specifically regulated water quality parameter, and industrial use of this type should be considered carefully with correspondence with Water Pollution Prevention Program staff and site-specific sampling for a suite of water quality parameters.

Table 12.3.a Dissolved Oxygen Criteria (mg/L) [(1) (A)]

	CWAL, Early Life Stages [(2) (3)]	CWAL, Other Life Stages	WWAL, Early Life Stages [(3)]	WWAL, Other Life Stages
30 Day mean	NA [(4)]	6.5	NA	5.5
7 Day mean	9.5 (6.5)	NA	6	NA
7 Day mean minimum [(7)]	NA	5.0	NA	4.0
1 Day mean minimum [(5), (6)]	8.0 (5.0)	4.0	5.0	3.0

Footnotes for Table 12.3.a:

(1) The dissolved oxygen criteria apply to all non-thermally stratified lentic waters, and to all lotic waters. Dissolved oxygen levels may be lowered by natural causes in the hypolimnion (bottom layer) of a thermally-stratified lentic water body. Dissolved oxygen criteria apply to the epilimnion (upper layer) and metalimnion (middle layer or thermocline) of any thermally-stratified lentic water. This hypolimnion exclusion of the dissolved oxygen criteria may occur only where the Tribe determines that: 1) the lentic water body is thermally stratified and 2) dissolved oxygen levels are responding to natural cycles and are not significantly influenced by anthropogenic activities. Alternatively, the Tribe may set site-specific dissolved oxygen criteria in accordance with Section 12. Designated Uses, Criteria and Variances for Stream Segments.

(2) These are water column concentrations required to achieve the intergravel concentrations shown in parentheses. For species that have early life stages directly exposed to the water column, the concentrations in parentheses apply.

(3) "Early life stages" includes all embryonic and larval stages and all juvenile forms to 30-days following hatching.

(4) "NA" means not applicable

(5) Discharges that are easily manipulated may have further restrictions requiring higher one-day mean minimum concentrations, to be determined on a site-specific basis.

(6) All minima should be considered to be instantaneous concentrations to be achieved at all times.

(7) The 7-day mean minimum is the mean value of the daily minimums.

Table 12.4 Bacteriological Criteria (# of colonies/100ml) [(1), (2) (D, N, PP)]

Parameter	E. Coli geometric mean (g.m.); single sample maximum (s.m.) [(2)]
Uses Protected:	
REC 1	126/100mL (g.m.); 235/100mL (s.m.)
REC 2	1152/100mL (s.m.)
T (human health)	0 (absent)

Footnotes for Table 12.4

(1) Fecal Coliform has been removed from the standards as an indicator of potential human pathogen pollution. With EPA"s approval of modern E.Coli analytical procedures and only a limited amount of historical Tribal fecal coliform data, it is now more practical to use E.Coli as an indicator exclusively, unless a pathogen-specific procedure is required to determine illness rates as part of a more in-depth epidemiological study.

(2) The Tribal Ceremonial Use criterion of total absence of E.Coli bacteria is meant to be protective of those small stream segments directly downstream of springs and seeps of traditional Tribal use. It is a goal that has been documented to be achievable on such stream segments where protective best management practices have been implemented. Where flowing surface waters have a Tribal Ceremonial Use ("T") designation, this criterion should be perceived as an interim value where a site-specific value will be calculated in the future, and also a goal for the minimization of fecal pollution.

12.5. Inorganic Chemical Parameters, Cyanide and Asbestos (mg/L, unless noted otherwise) (6), (7)

Parameter	**Ammonia, NH3** (1), (2) (V, II, NN)	
Acute/Chronic Descriptor	**acute (1-hour)**	**chronic (30-day)**
Uses Protected:		
WWAL/CWAL	$[0.411/(1+10^{7.204-pH})]+[58.4/(1+10^{pH-7.204})]$	$[0.0577/(1+10^{7.688-pH})+(2.487/\ 1+10^{pH-7.688})]*(1.45*10^{0.028*MAX(25-T,\ 7)})$
WWAL/CWAL with salmonid fish for acute criteria, with early life stages for chronic criteria	$[0.275/(1+10^{7.204-pH})]+[39.0/(1+10^{pH-7.204})]$	$[0.0577/(1+10^{7.688-pH})+(2.487/1+10^{pH-7.688})]*MIN(2.85,\ 1.45*10^{0.028*(25-MAX(T,7)})$
T&DW (human health)		0.5 (30-day)
Acute/Chronic Descriptor	**acute (1-day)**	**chronic (30-day)**
Parameter	**Chlorine, Cl_2** (Y)	
WWAL	19 ug/L	11 ug/L
CWAL	same as WWAL	same as WWAL
T&DW (human health)	4,000 (1-Day) (4)	
Parameter	**Nitrite/Nitrate - Nitrogen NO_2/ NO_3-N** (V, W, CC)	
WWAL (CC)	0.20(2.00[Cl^-]+0.73) mg/L NO_2-N	0.10(2.00[Cl^-]+0.73) mg/L NO_2-N
	[Cl^-] = chloride ion concentration, upper Cl^- limit = 22 mg/L	
CWAL (8) (CC)	0.10(0.59[Cl^-]+3.90) mg/L NO_2-N	0.10(0.29[Cl^-]+0.53) mg/L NO_2-N
	[Cl^-] = chloride ion concentration, upper Cl^- limit = 22 mg/L	
AG	10 mg/L (1-Day) (as NO_2-N only)	100 mg/L (30-Day) (as NO_3-N + NO_2-N)
T&DW (human health)	1.0 mg/L (1-Day) (as NO_2-N only)	10 mg/L (1-Day) (as NO_3-N + NO_2-N)
Parameter	**Cyanide, CN** (3) (I, M, T, W)	
WWAL	22 ug/L	5.2 ug/L
CWAL	Same as WWAL	Same as WWAL
AG	200 ug/L (1-Day)	
T&DW (human health)	200 ug/L (1-Day)	
Parameter	**Boron, B** (EE, JJ)	**Sulfide, as undissociated H_2S** (4) (U)
WWAL	NA	2 ug/L (30-Day)
CWAL	NA	2 ug/L (30-Day)
AG	750 ug/L (sensitive crops, long-term) (30-Day)	NA
T&DW (human health)	NA	50 ug/L (30-Day)
Parameter		**Asbestos** (5) (T)
WWAL		NA

CWAL		NA
AG		NA
T&DW (human health)		7,000,000 fiber/L

Footnotes for Table 12.5:

(1) These criteria apply to unionized ammonia. The applicable criteria shall not be exceeded more than one time every three years on the average.

(2) The highest four-day average within the 30-day chronic criteria averaging period should not exceed 2.5 times the chronic criterion.

(3) This water quality criterion is expressed as ug free cyanide (as mg CN)/L.

(4) Organoleptic criterion for taste and odor.

(5) Asbestos criterion applies to fibers equal to or longer than 10 micrometers. There is no averaging period for this criterion. Any detection of asbestos at this level will warrant immediate remedial action.

(6) "NA" means "not applicable".

(7) Averaging periods are in parentheses following descriptors or criteria. No concentration shall exceed criteria more than once every three years.

12.6 Standards for Metallic Inorganics and Selenium (ug/L) [(2), (3), (11)]

Parameter	**Ag, Silver [(1) (T)]**
WWAL acute criteria	e^(1.72[In(hardness)]-6.52)(0.85)
WWAL chronic criteria	e^(1.72[In(hardness)]-9.06)(0.85)
CWAL acute criteria	same as WWAL acute
CWAL chronic criteria	e^(1.72[(In(hardness)]-10.51)(0.8)
Agriculture (total recoverable)	na
T & DW, Water+Organisms (ug/L) [(3)]	100 (1-Day)
FSH, Organisms Only (ug/L)	110,000
Parameter	**Al, Aluminum [(U, 12)]**
WWAL acute criteria	750
WWAL chronic criteria	87
CWAL acute criteria	same as WWAL
CWAL chronic criteria	same as WWAL
Agriculture (total recoverable)	na
T & DW, Water+Organisms (ug/L) [(3)]	200 [(10)]
FSH, Organisms Only (ug/L)	na
Parameter	**As, Arsenic [(C, T, W, JJ)]**
WWAL acute criteria	340
WWAL chronic criteria	150

CWAL acute criteria	same as WWAL
CWAL chronic criteria	same as WWAL
Agriculture (total recoverable)	100 (30-Day)
T & DW, Water+Organisms (ug/L) [3]	0.018 (1-Day)
FSH, Organisms Only (ug/L)	0.014
Parameter	**Ba, Barium [U]**
WWAL acute criteria	na
WWAL chronic criteria	na
CWAL acute criteria	na
CWAL chronic criteria	na
Agriculture (total recoverable)	na
T & DW, Water+Organisms (ug/L) [3]	1,000 (1-Day)
FSH, Organisms Only (ug/L)	na
Parameter	**Cd, Cadmium [1] (E, T, W, JJ)**
WWAL acute criteria	e^(1.0166[ln(hardness)]-3.924)*(1.136672](ln hardness)(.041838)]
WWAL chronic criteria	e^(0.7409[ln(hardness)]-4.719)*(1.101672-[(ln harness)(.041838)]
CWAL acute criteria	same as WWAL
CWAL chronic criteria	
Agriculture (total recoverable)	10 (30-Day)
T & DW, Water+Organisms (ug/L) [3]	5 (1-Day) (4)
FSH, Organisms Only (ug/L)	84
Parameter	**Cr (III), Chromium [1], [5] (F, T, W, JJ)**
WWAL acute criteria	e^(0.819*Ln(hardness)+3.7256)(0.316)
WWAL chronic criteria	e^(0.819*Ln(hardness)+0.6848)(0.860)
CWAL acute criteria	same as WWAL
CWAL chronic criteria	
Agriculture (total recoverable)	100 (30-Day)
T & DW, Water+Organisms (ug/L) [3]	160 (1-Day)
FSH, Organisms Only (ug/L)	670,000
Parameter	**Cr (VI), Chromium [F, T, W, JJ]**
WWAL acute criteria	16
WWAL chronic criteria	11
CWAL acute criteria	same as WWAL
CWAL chronic criteria	
Agriculture (total recoverable)	100 (30-Day)
T & DW, Water+Organisms (ug/L) [3]	50 (1-Day)
FSH, Organisms Only (ug/L)	3,400

Parameter	**Cu, Copper** [1) (T, W, JJ)]
WWAL acute criteria	e^(0.9422[ln(hardness)]-1.700)(.960)
WWAL chronic criteria	e^(0.8545[ln(hardness)]-1.702)(.960)
CWAL acute criteria	same as WWAL
CWAL chronic criteria	
Agriculture (total recoverable)	200 (30-Day)
T & DW, Water+Organisms (ug/L) [3]	1000 (30-Day)
FSH, Organisms Only (ug/L)	na
Parameter	**Hg, Mercury** [6)(S,T,W,DD,JJ)]
WWAL acute criteria	1.4
WWAL chronic criteria	0.012
CWAL acute criteria	same as WWAL
CWAL chronic criteria	same as WWAL
Agriculture (total recoverable)	**10 (30-day)**
T & DW, Water+Organisms (ug/L) [3]	**0.05 (1-day)**
FSH, Organisms Only (ug/L)	**0.051**
Parameter	**MeHg, Methylmercury** [13,QQ]
FSH, Organisms Only	0.3 mg MeHg/kg fish
Parameter	**Ni, Nickel** [1) (T, W, JJ)]
WWAL acute criteria	e^(0.8460[ln(hardness)]+2.255)(.998)
WWAL chronic criteria	e^(0.8460[ln(hardness)]+0.0584)(.997)
CWAL acute criteria	same as WWAL
CWAL chronic criteria	
Agriculture (total recoverable)	200 (30-Day)
T & DW, Water+Organisms (ug/L) [3]	100 (30-Day)
FSH, Organisms Only (ug/L)	4,600
Parameter	**Pb, Lead** [1) (P, T, W, JJ)]
WWAL acute criteria	e^(1.273[ln(hardness)]-1.460)*(1.46203-[ln hardness)(0.145712)]
WWAL chronic criteria	e^(1.273[ln(hardness)]-4.705)*(1.46203-[ln hardness)(0.145712)]
CWAL acute criteria	same as WWAL
CWAL chronic criteria	
Agriculture (total recoverable)	100 (30-Day)
T & DW, Water+Organisms (ug/L) [3]	50 (1-Day)

FSH, Organisms Only (ug/L)	na
Parameter	**Se, Selenium (7) (T, W, DD, EE, GG, HH, JJ)**
WWAL acute criteria	20
WWAL chronic criteria	5
CWAL acute criteria	same as WWAL
CWAL chronic criteria	
Agriculture (total recoverable)	20 (30-Day)
T & DW, Water+Organisms (ug/L) (3)	50 (30-Day) (9)
FSH, Organisms Only (ug/L)	4200
Parameter	**Sb, Antimony (T)**
WWAL acute criteria	na
WWAL chronic criteria	na
CWAL acute criteria	na
CWAL chronic criteria	na
Agriculture (total recoverable)	na
T & DW, Water+Organisms (ug/L) (3)	5.6 (30-Day)
FSH, Organisms Only (ug/L)	640
Parameter	**Zn, Zinc (1) (T, NN, DD, W, JJ)**
WWAL acute criteria	e^(0.8473[(ln(hardness)]+0.884)(.978)
WWAL chronic criteria	e^(0.8473[(ln(hardness)]+0.884)(.986)
CWAL acute criteria	same as WWAL
CWAL chronic criteria	
Agriculture (total recoverable)	2,000 (30-Day)
T & DW, Water+Organisms (ug/L) (3)	5,000 (30-Day) (10)
FSH, Organisms Only (ug/L)	26,000
Parameter	**U, Uranium (elemental) (12)**
WWAL acute criteria	na
WWAL chronic criteria	na
CWAL acute criteria	na
CWAL chronic criteria	na
Agriculture (total recoverable)	na
T & DW, Water+Organisms (ug/L) (3)	30 ug/L(8)
FSH, Organisms Only (ug/L)	na

Footnotes for Table 12.6

(1) Hardness dependent criteria are based on hardness expressed as mg/L CaCO3. For waters with a hardness value greater than 400 mg/L as CaCo3, the criterion should be calculated using a hardness value of 400 m/L, unless a water effects ration calculation is to be used.

(2) Both acute and chronic numeric aquatic life and fish consumption metals criteria are not be exceeded more than once every three years on the average. The acute criteria have a 1-hour averaging period, and the chronic criteria have an averaging period of 4 days. Agricultural and domestic water supply criteria differ in the length of an averaging period for allowable exceeding. These averaging periods are included in Table 12.6 in parentheses directly after criteria.

(3) Aquatic life criteria for metals are expressed as *dissolved* metals, except for aluminum, arsenic, selenium and mercury. Agriculture, Drinking Water, and Fish Consumption numeric criteria are expressed as total recoverable metals. Metals criteria in Table 12.6 can be converted to total recoverable metals for assessment purposes. Conversion factors for each parameter in Table 12.6 are included as Appendix A of this document.

(4) Drinking Water MCL

(5) Cr (III) criteria are applicable to the total of all valance states if specific valance state data are unavailable.

(6) Mercury criteria are ug/L of **total** mercury. EPA's current recommended CWA section 304(a) water quality criterion for methylmercury is expressed as a fish tissue concentration value (0.3 milligram methylmercury per kilogram of wet-weight fish tissue, or 0.3 mg/kg). With the publication of the fish tissue criterion, EPA withdrew the previous human health water quality criterion for mercury as the recommended section 304(a) water quality criterion for states and authorized tribes to use as guidance in adopting water quality standards (USEPA 2001). These water column criteria will be temporarily part of revised mercury criteria until the triennial review that follows the criterion adoption to help the transition in implementing the fish tissue criterion.

(7) Nationally recommended numeric aquatic life criteria for selenium are currently undergoing revision by EPA. Until further research indicates it is insufficient, the acute aquatic life criterion for selenium is 20 ug/L total recoverable selenium; chronic aquatic life criterion for selenium is 5 ug/L total recoverable selenium.

(8) EPA drinking water standard for Uranium designated for potential Tribal use.

(9) 50 ug/L Se is a drinking water MCL

(10) Organoleptic criteria for taste
(11) "na" means that insufficient research has been performed to develop numeric criteria for this parameter and designated use. Narrative criteria of Section 5, page 7 of these standards apply.
(12) The aluminum criteria are expressed as total recoverable metal in the water column. The 87 ug/l chronic criterion for aluminum is based on information showing chronic effects on brook trout and striped bass. The studies underlying the 87 ug/l chronic value, however, were conducted at low pH (6.5 – 6.6) and low hardness (< 10 ppm CaCO3), conditions uncommon in Reservation surface waters. A water effect ratio toxicity study in West Virginia indicated that aluminum is substantially less toxic at higher pH and hardness (although this relationship is not well quantified at this time). Further, EPA is aware of field data indicating that many high quality waters in the U.S. contain more than 87 ug/l aluminum when either the total recoverable or dissolved aluminum is measured. Based on this information and considering the available toxicological information in Tables 1 and 2 of EPA's Aluminum Criteria Document (EPA 440/5-86-008), the Tribe will implement the 87 ug/l chronic criteria for aluminum as follows: where the pH is equal to or greater than 7.0 and the hardness is equal to or greater than 50 ppm as CaCO3 in the receiving water after mixing, the 87 ug/l chronic criterion will not apply, and aluminum will be regulated based on compliance with the 750 ug/l acute aluminum criterion. In situations where the 87 ug/l chronic criterion applies, a discharger may request development of a site specific chronic criterion based on a water effect ratio. Or, a discharger may request development of a permitting procedure (a translator) that would take into account less toxic forms of particulate aluminum. In either case, the Tribe may require that the discharger requesting the change provide the technical information and data needed to support such a change.
(13) Methylmercury water quality criteria have been adopted in the form of a fish tissue methylmercury concentration. This is the preferred form for the following reasons:

- A criterion expressed as a fish tissue concentration is closely tied to the "fishable" designated use goal applied to nearly all waterbodies in the United States.
- A fish tissue concentration value is expressed in the same form (fish tissue) through which humans are exposed to methylmercury.
- A fish tissue concentration value is more consistent with how fish advisories are issued
- At environmentally relevant concentrations, methylmercury is currently easier to detect in fish tissue than in water samples.

Table 12.7 Organic Compounds; ug/L unless stated otherwise (1),(2) (T)

Criteria labeled as "N" defer to narrative criteria only.

Compound	Chemical Abstract Number (CAS)	Freshwater Criteria	Human Health for the Consumption of:	
		WWAL & CWAL Criteria	DW (3) Water + Organisms	Organisms Only
Acenaphthene	83-32-9	N	670	990
Acenaphthylene (PAH)	208-96-8	N	1,200	2,700
Acrolein	107-02-8	3	6	9
Acrylonitrile	107-13-1	N	0.051	0.25
Alachlor	15972-60-8	N	2	N
Aldrin	309002	3	0.000049	0.000050
Anthracene (PAH)	120-12-7	N	8,300	40,000
Atrazine	1912-24-9	N	3	N
Benzene	71-43-2	N	2.2	51
Benzidine	92-87-5	N	0.000086	0.00020
Benzo(a)anthracene (PAH)	56-55-3	N	0.0038	0.018
Benzo(b)fluoranthene (PAH)	205-99-2	N	0.0038	0.018
Benzo(k)fluoranthene (PAH)	207-08-9	N	0.0038	0.018
Benzo(a)pyrene (PAH)	50-32-8	N	0.0038	0.018
Bis(2-chloroethyl) ether	111-44-4	N	0.030	0.53
Bis(2-chloroethoxy) methane	111-91-1	N	N	N
Bis(2-chloroisopropyl) ether	108-60-1	N	1,400	65,000
Bis(2-ethylhexyl) phthalate	117-81-7	N	1.2	2.2
Bromoform (HM)	75-25-2	N	4.3	140
4-Bromophenyl phenyl ether	101-55-3	N	N	N
Butyl benzyl phthalate	85-68-7	N	1,500	1,900
Carbon tetrachloride	56-23-5	N	0.23	1.6
Chlordane	57749	Acute: 2.4 Chronic: 0.0043	0.0008	0.00081
Chlorobenzene	108-90-7	N	130	1,600
Chlorodibromomethane (HM)	124-48-1	N	0.40	13
Chloroform (HM)	67-66-3	N	5.70	470
4-Chlorophenyl phenyl ether	7005-72-3	N	N	N
Chrysene (PAH)	218-01-9	N	0.0038	0.018
Cyanozine	21725-46-2	N	1.0 (4)	N
2-Chloroethyl vinyl ether	110-75-8	N	N	N
2-Chloronaphthalene	91-58-7	N	1,000	1,600
2-Chlorophenol	95-57-8	N	81	150
DBCP (dibromo-chloropropane)	96-12-8	N	0.2	N
DDT and metabolites	4,4 DDT: 50293 4,4 DDE: 72559	Acute: 1.1 Chronic: 0.001	0.00022	

	4,4 DDD: 72548		0.00031	
Demeton	**8065-48-3**	Chronic: 0.1	N	N
Dibenzo(a,h)anthracene (PAH)	**53-70-3**	N	0.0038	0.018
1,2-Dichlorobenzene	**95-50-1**	N	420	1,300
1,3-Dichlorobenzene	**541-73-1**	N	320	960
1,4-Dichlorobenzene	**106-46-7**	N	63	190
3,3-Dichlorobenzidine	**91-94-1**	N	0.021	0.028
Dichlorobromomethane (HM)	**75-27-4**	N	0.55	17
1,1-Dichloroethane	**75-34-3**	N	330	7,100
1,2-Dichloroethane	**107-06-2**	N	0.38	37
1,1-Dichloroethylene	**75-35-4**	N	0.057	3.2
1,2-Dichloropropane	**78-87-5**	N	0.34	15
1,2-Trans-dichloroethylene	**156-60-5**	N	140	10,000
1,3-Dichloropropene	**542-75-6**	N	0.34	21
2,4-D	**94-75-7**	100	70	N
2,4-Dichlorophenol	**120-83-2**	N	77	290
2,4-Dimethylphenol	**105-67-9**	N	380	850
2,4-Dinitrotoluene	**121-14-2**	N	0.11	3.4
2,6-Dinitrotoluene	**606-20-2**	N	N	N
1,2-Diphenylhydrazine	**122-66-7**	N	0.036	0.20
Dieldrin	**60571**	Acute: 0.24 Chronic:0.056	0.000052	0.000054
Diethyl phthalate	**84662**	N	17,000	44,000
2,4-Dinitrophenol	**51-28-5**	N	69	5,300
2-Methyl-4,6-Dinitrophenol	**534-52-1**	N	13	280
Di-n-butyl phthalate	**84-74-2**	N	2,000	4,500
Di-n-octyl phthalate	**117-84-0**	N	N	N
Dioxin (2,3,7,8-TCDD)	**1746-01-6**	Acute: 0.01 Chronic: 0.00001	5.0E-9	5.1E-9
Endosulfan (alpha)(8)	**alpha:959988**	Acute: 0.22 Chronic: 0.056	62	89
Endosulfan (beta)(8)	**beta:33213659**	Acute: 0.22 Chronic: 0.056	62	89
Endosulfan sulfate	**sulfate form:1031078**	N	62	89
EDB (Ethylene Dibromide)	**106-93-4**	N	0.05	N
Endrin	**72208**	Acute: 0.086	0.059	0.060
		Chronic: 0.036	N	N
Endrin Aldehyde	**7421934**	Acute: 0.086	0.059	0.060
		Chronic: 0.036	0.29	0.30
Ethylbenzene	**100-41-4**	N	530	2,100
Fluorene	**86737**	N	1,100	5,300
Fluoranthene	**206-44-0**	N	130	140
Heptachlor	**76448**	Acute: 0.52	0.000079	0.000079
Heptachlor Epoxide	**1024573**	Chronic: 0.0038	Epoxide only: 0.000039	Epoxide only: 0.000039
Hexachlorobenzene	**118-74-1**	N	0.00028	0.00029

Hexachlorobutadiene (c)	**87-68-3**	N	0.44	18
Hexachlorocyclopentadiene	**77-47-4**	N	40	1,100
Hexachloroethane	**67-72-1**	N	1.4	3.3
Indeno(1,2,3,-cd)pyrene (PAH)	**193-39-5**	N	0.0038	0.018
Isophorone	**78-59-1**	N	35	960
alpha-BHC	**319846**	N	0.0026	0.0049
beta-BHC	**319857**	N	0.0091	0.017
Lindane (gamma BHC)	**58899**	0.95	0.091	1.8
Malathion	**121-75-5**	0.1	N	N
Methalochlor	**51218-45-2**	N	N	N
Methoxychlor	**72-43-5**	0.03	100	N
Methyl bromide (Hm)	**74-83-9**	N	47	1,500
Methyl chloride (HM)	**74-87-3**	N	N	N
Methylene Chloride (HM)	**75-09-2**	N	4.6	590
Mirex	**2385-85-5**	0.001	N	N
Napthalene	**91-20-3**	N	N	N
Nitrobenzene	**98-95-3**	N	17	690
2-Nitrophenol	**88-75-5**	N	N	N
4-Nitrophenol	**100-02-7**	N	N	N
N-Nitrosodimethylamine	**62-75-9**	N	0.00069	3.0
N-Nitrosodiphenylamine	**86-30-6**	N	3.3	6.0
p-Chloro-m-cresol	**59-50-7**	N	N	N
Pentachlorophenol (5)	**87865**	Acute: =exp(1.005(pH)-4.869) Chronic:=exp(1.005(pH) -5.134)	0.27	3.0
Phenol	**108952**	Acute: 10.2 mg/L Chronic: 2.56 mg/L	10 mg/L (EPA organoleptic = 300 ug/L)	0.86 g/L
polychlorinated biphenyls (6,7)	**1336363 for all PCB's**	(Chronic, 24-hr. average): 0.014 ug/L	0.000064	0.000064
Pyrene (PAH)	**129-00-0**	N	830	4,000
Simazine	**122-34-9**	N	4	N
1,1,2,2-Tetrachloroethane	**79-34-5**	N	0.17	4.0
Tetrachloroethylene	**127-18-4**	N	0.69	3.3
1,2,4-Trichlorobenzene	**120-82-1**	N	35	70
1,1,1-Trichloroethane	**71-55-6**	N	200	N
1,1,2-Trichloroethane	**79-00-5**	N	0.59	16
2,4,6-Trichlorophenol	**88-06-2**	N	1.4	2.4
Toluene	**108-88-3**	N	1,300	15,000
Toxaphene	**8001352**	Acute: 0.73 Chronic: 0.0002	0.00028	0.00028
Trichloroethylene	**79-01-6**	N	2.5	30
2,4,5-TP	**93-72-1**	N	10	N
Vinyl Chloride	**75-01-4**	N	0.025	2.4

Footnotes for Table12.7:

(1) Aquatic life organics criteria are applicable to all stream segments designated as WWAL or CWAL. Fish consumption human health criteria apply only to waters that have a FSH (fish consumption) designation.

(2) Criteria listed in Table 12.7 as "N" are those for which insufficient research information has been collected to recommend criteria. For these circumstances, the narrative criteria of Section 5, of these standards apply.
(3) DW + organisms Human Health criteria values are 30-day average or chronic values. These are based on EPA's nationally recommended criteria or lifetime health advisories using a 10^{-6} incremental risk factor. These criteria apply only to waters designated as DW (drinking water source).
(4) Human Health criterion for cyanozine is based on EPA's lifetime Health Advisory.
(5) Pentachlorophenol has pH-dependent numeric aquatic life criteria.
(6) Specific PCB's CAS #'s: Arochlor 1242: 53469219; Arochlor 1254: 11097691; Arochlor 1221: 11104282; Arochlor 1232: 11141165; Arochlor 1248: 12672296; Arochlor 1260: 11096825; Arochlor 1016: 12674112
(7) PCB's criteria is for the sum of all Arochlors.
(8) Aquatic life criteria for alpha and beta forms of endosulfan apply to the sum of these forms at any one time.

13. Description of Variances and Site-Specific Criteria:

a. Site-Specific Criteria:

These waters are identified in the tables above, and the general numeric criteria that correspond to them also apply, except for the specific criteria described for each below, where a different standard is deemed necessary.

Waters	Site-Specific Criteria
1. Ute Canyon (in Mancos River Watershed)	Fecal coliform = 200 colonies/ 100 mL, E. Coli = 126 colonies / 100ml

Explanation of Site Specific Criteria:

1. Ute Canyon has a spring that maintains flow for most of the year. Although it is not entirely perennial and would be identified as intermittent by the definition in Section 9 of these standards, there is a reasonable potential for REC1 activities due to its location.

14. Tribal Waters with Use Attainability Analyses

The following Tribal Waters do not meet the requirements of “fishable and swimmable,” described in Clean Water Act, Section 101(a)(2).

In Colorado:
Soda Canyon, Grass Canyon, Johnson Canyon, Moqui Canyon;
unnamed tributaries to the Mancos River, Aztec Wash and Ute Reservoir;

Mud Creek, Ute Creek, Pine Creek, Berry Creek, Finley Creek, Echo Canyon Creek, Hamilton Canyon Creek, Littlewater Creek, and unnamed tributaries to McElmo Creek;

Ute Canal, Cowboy Wash, Marble Wash, Mariano Wash, Coyote Wash, East McElmo Creek and other unnamed tributaries to lower San Juan River;

In New Mexico:
Ute Canyon, Pickett Canyon, Navajo Canyon, Cholla Canyon, Purgatory Canyon, Barker Canyon, Thomas Canyon, Jones Canyon, Buzan Canyon, Oak Springs Canyon, Trail Canyon, Pump Canyon, Craig Canyon, and all other tributaries to the La Plata River and middle San Juan River;

Use Attainability Analyses are on file with the Ute Mountain Ute Water Pollution Prevention Program, and are included as Appendix B of the *Ute Mountain Ute Water Quality Standards Rationale Document*.

15. References

Note: For pollutant-specific criteria references, use footnote reference letters.

A. Ambient Water Quality Criteria for Dissolved Oxygen, April 1986, U.S. Environmental Protection Agency, Document EPA 440/5-86/003.

B. Ambient Aquatic Life Water Quality Criteria for Atrazine—Draft, August 2001, U.S. Environmental Protection Agency, Document EPA 822-D-01-002.

C. Arsenic Water Quality Standards criteria Summaries: A Compilation of State/Federal Criteria, September 1988, U.S. Environmental Protection Agency, Document EPA 440/5-88/018.

D. Bacteriological Ambient Water Quality Criteria for Marine and Fresh Recreational Waters, Luey et al. January 1986, U.S. Environmental Protection Agency, Document EPA 440/5-84/002.

E. Cadmium Water Quality Standards criteria Summaries: A Compilation of State/Federal Criteria, September 1988, U.S. Environmental Protection Agency, Document EPA 440/5-88/014.

F. Chromium Water Quality Standards criteria Summaries: A Compilation of State/Federal Criteria, September 1988, U.S. Environmental Protection Agency, Document EPA 440/5-88/026.

G. Federal Register, Title 40, Chapter I, Subchapter D, Part 131.

H. Copper Water Quality Standards criteria Summaries: A Compilation of State/Federal Criteria, September 1988, U.S. Environmental Protection Agency, Document EPA 440/5-88/027.

I. Cyanide Water Quality Standards criteria Summaries: A Compilation of State/Federal Criteria, September 1988, U.S. Environmental Protection Agency, Document EPA 440/5-88/016.

J. Federal Water Pollution Control Act, As Amended by the Clean Water Act of 1977. Public Law 92-500, as amended. 33 U.S.C. 1251 et seq.

K. General Provisions Water Quality Standards criteria Summaries: A Compilation of State/Federal Criteria, September 1988, U.S. Environmental Protection Agency, Document EPA 440/5-88/010.

L. Glossary of Environmental Terms And Acronym List, December 1989, U.S. Environmental Protection Agency, Document 19K-1002.

M. Handbook of Handbook of Toxic and Hazardous Chemicals and Carcinogens, Second Edition, 1985, Sittig, Marshall, Noyes Publications, Park Ridge, NJ.

N. Health Effects Criteria for Fresh Recreational Waters, Dufour, Alfred P. August 1984, U.S. Environmental Protection Agency, Document EPA 600/1-84/004.

O. Iron Water Quality Standards criteria Summaries: A Compilation of State/Federal Criteria, September 1988, U.S. Environmental Protection Agency, Document EPA 440/5-88/022.

P. Lead Water Quality Standards criteria Summaries: A Compilation of State/Federal Criteria, September 1988, U.S. Environmental Protection Agency, Document EPA 440/5-88/030.

Q. Limnology, 1983, Goldman, Horne, McGraw-Hill Publishing Company, USA.

R. Mixing Zones Water Quality Standards criteria Summaries: A Compilation of State/Federal Criteria, September 1988, U.S. Environmental Protection Agency, Document EPA 440/5-88/015.
S. Mercury Water Quality Standards criteria Summaries: A Compilation of State/Federal Criteria, September 1988, U.S. Environmental Protection Agency, Document EPA 440/5-88/005.
T. National Recommended Water Quality Criteria for Priority Toxic Pollutants, February 23, 2010 U.S. Environmental Protection Agency, Document EPA-Z-99-01.
U. National Recommended Water Quality Criteria for Non-Priority Toxic Pollutants, February 23, 2010, U.S. Environmental Protection Agency, Document EPA-Z-99-01.
V. Nitrogen-Ammonia/Nitrate/Nitrite Water Quality Standards criteria Summaries: A Compilation of State/Federal Criteria, September 1988, U.S. Environmental Protection Agency, Document EPA 440/5-88/029.
W. Nutrients and Toxic Substances in Water for Livestock and Poultry, 1974, National Academy of Sciences, Washington, D.C.
X. Organics Water Quality Standards criteria Summaries: A Compilation of State/Federal Criteria, September 1988, U.S. Environmental Protection Agency, Document EPA 440/5-88/006.
Y. Other Elements Water Quality Standards criteria Summaries: A Compilation of State/Federal Criteria, September 1988, U.S. Environmental Protection Agency, Document EPA 440/5-88/011.
Z. Questions and Answers on: Antidegradation, August 1985, U.S. Environmental Protection Agency.
AA. Reconnaissance Investigation of Water Quality, Bottom Sediment, and Biota Associated with Irrigation Drainage in the Dolores Project Area, Southwestern Colorado and Southeastern Utah, 1990, 1993, Butler, Krueger, Osmundson, and Jensen, U.S. Geologic Survey Water-Resources Investigations Report 93-XXXX, Denver, CO.
BB. Reconnaissance Investigation of Water Quality, Bottom Sediment, and Biota Associated with Irrigation Drainage in the San Juan River Area, San Juan County, Northwestern New Mexico, 1990-91, 1993, Blanchard, Roy, and O'Brien, U.S. Geologic Survey Water-Resources Investigations report 93-4065, Albuquerque, NM.
CC. Regulation NO. 31, The Basic Standards and Methodologies for Surface Water, July, 23, 1997, (Effective August 30, 1997). Colorado Department of Public Health and Environment, Water Quality Control Commission.
DD. Regulation NO. 34, Classifications and Numeric Standards for San Juan River And Dolores River Basins, July, 23, 1997, (Effective August 30, 1997). Colorado Department of Public Health and Environment, Water Quality Control Commission.
EE. San Juan River Basin Water Quality And Contaminants Review, Volume I., April 1994, Abell, Robin. Museum of Southwestern Biology, Department of Biology, University of New Mexico, Albuquerque, NM.

FF. Standard Methods For the Examination of Water and Wastewater, 17th Edition, 1989, Clesceri, Greenberg, Trussel. Port City Press, Baltimore, MD, 1989.
GG. Standards Of Quality For Waters Of The State, R317-2, Utah Administrative Code, December 19, 1997 Revision, Utah Department of Environmental Quality, Division of Water Quality.
HH. Title 20, Chapter 6, Part 1, Standards For Interstate And Intrastate Surface Waters (NMED Public Discussion Draft), April 14, 1998. Water Quality Control Commision.
II. "Understanding Colorado's ammonia standards and the Colorado Ammonia Model, Part I" Footnotes[1], A Bulletin from Rothberg, Tamburini & Winsor, Morgan, Bill, P.E. Winter 1997.
JJ. Water Quality for Agriculture, 1976, Food and Agriculture Organization of the United Nations.
KK. Water Quality Standards Academy Basic Course Participant Manual 1997 Edition, March 1997, U.S. Environmental Protection Agency, Document EPA-823-B-97-004.
LL. Water Quality Standards for the Southern Ute Indian Reservation, October 1997, Southern Ute Indian Tribe Water Quality Department, Ignacio, CO.
MM. Water Quality Standards Handbook, Second Edition, August 1994, U.S. Environmental Protection Agency, Document EPA-823-B-94-005b.
NN. Zinc Water Quality Standards criteria Summaries: A Compilation of State/Federal Criteria, September 1988, U.S. Environmental Protection Agency, Document EPA 440/5-88/019.
OO. 1999 Update of Ambient Water Quality for Ammonia, December 1999, U.S. Environmental Protection Agency, Document EPA –822-R-99-014.
PP. Implementation Guidance for Ambient Water Quality for Bacteria, May 2002 Draft, U.S. Environmental Protection Agency, Document EPA –823-B-02-003.
QQ. Guidance for Implementing the January 2001 Methylmercury Water Quality Criterion, April 2010

Appendix D
ANTIDEGRADATION REVIEW SHEET

1. Name of Reviewer:_____
   Name of Receiving Water:_____
   Watershed:_____
   Segment Location (Land Descrip):_____
   Stream Designated Uses:_____
   Other:_____

2. Brief Description of Proposed Activity:

ID Number if any:_____

3. Which tier(s) of anti-degradation apply?

_____ Tier 3 - go to question 4

_____ Tier 2 - go to question 8

_____ Tier 1- go to question 14

Tier 3 Questions

4. Will the proposed activity result in a permanent new or expanded direct point source of pollutants to an OTRW segment (***see Section 6.1.1.1 of the implementation procedure***)?

_____ yes - recommend denial of a proposed activity
_____ no

5. If the proposed activity will result in a permanent new or expanded direct point source of pollutants to a segment upstream from an OTRW segment, will the proposed activity affect OTRW water quality (***see Section 6.1.1.2 of the implementation procedure***).

_____ yes - recommend denial of proposed activity
_____ no

Basis for conclusion

6. If the proposed activity will result in a permanent new or expanded non-point source of pollutants, will the proposed activity increase pollutant loads or increase levels in a manner that affects OTRW water quality (***see Section 6.1.2 of the implementation procedure***)?

_____ yes - recommend denial of proposed activity
_____ no

Basis for conclusion

7. If the proposed activity will result in a non-permanent new or expanded source of pollutants to an OTRW segment or a segment upstream from an OTRW segment, will the proposed activity result in "temporary and limited" effects on OTRW water quality (***see Section 6.1.3 of the implementation procedure***)?

_____ yes
_____ no - recommend denial of proposed activity

Basis for conclusion:

Tier 2 Questions

8. Does the segment qualify for Tier 2 protection based on the applicable criteria (***see Section 5.2 of the implementation procedure***)?

_____ yes
_____ no

Basis for conclusion:

9. Will the proposed activity result in significant degradation (***see Section 6.2.3 of the implementation procedure***)?

_____ yes
_____ no - recommend approval of the activity
_____ significance test by-passed due to availability of a reasonable less degrading alternative

If significance test not by-passed, basis for conclusion:

10. Has the applicant completed an adequate evaluation of alternatives and demonstrated that there are not reasonable alternatives to allowing the degradation (***see Section 6.2.4 of the implementation procedure***)?

_____ yes
_____ no - recommend denial of the proposed activity

If no, basis for conclusion:

11. Has the applicant demonstrated that the proposed activity will provide important socio-economic development in the area in which the affected waters are located (***see Section 6.2.5 of the implementation procedure***)?

_____ yes
_____ no - recommend denial of the proposed activity

If no, basis for conclusion:

12. Will existing uses be fully protected consistent with the Tier 1 procedures outlined by questions 15-17 below (***see Section 6.2.6 of the implementation procedure***)? Note: questions 15-17 must be completed.

_____ yes
_____ no- recommend denial of proposed activity

13. Has compliance with required controls on point and nonpoint sources in the zone of influence been assured (***see Section 6.2.8 of the implementation procedure***)?

_____ yes
_____ no - recommend denial of the proposed activity

Basis for conclusion:

Tier 1 Questions

14. The basis for concluding that Tier 2 requirements do not apply is as follows (***see Section 5.2.3 of the implementation procedure***):

15. Are there uses that exist or have existed since November 28, 1975 that have more stringent water quality protection requirements than the currently designated uses (***see Section 6.3.2 of the implementation procedures***)?

_____ yes
_____ no

If yes, basis for conclusion:

16. If the answer to question 15 was yes, what water quality criteria requirements will ensure protection of such existing uses (***see Section 6.3.2 of the implementation procedure***)?
(Indicate parameters and applicable water quality criteria.)

17. Will existing uses be fully maintained and protected (***see Section 6.3.2 of the implementation procedure***)?

_____ yes
_____ no - recommend denial of the proposed activity

If no, basis for conclusion:

Preliminary Decision

18. Based on the above, can the proposed activity be authorized pursuant to the Tribe's Anti-degradation Policy?

_____ yes
_____ no

Basis for conclusion:

Signature:_____

Date:_____

Ute Mountain Ute Tribe

Water Quality Standards for Surface Waters of the Ute Mountain Ute Reservation

Appendix C

Anti-Degradation Implementation Policy

1. INTRODUCTION

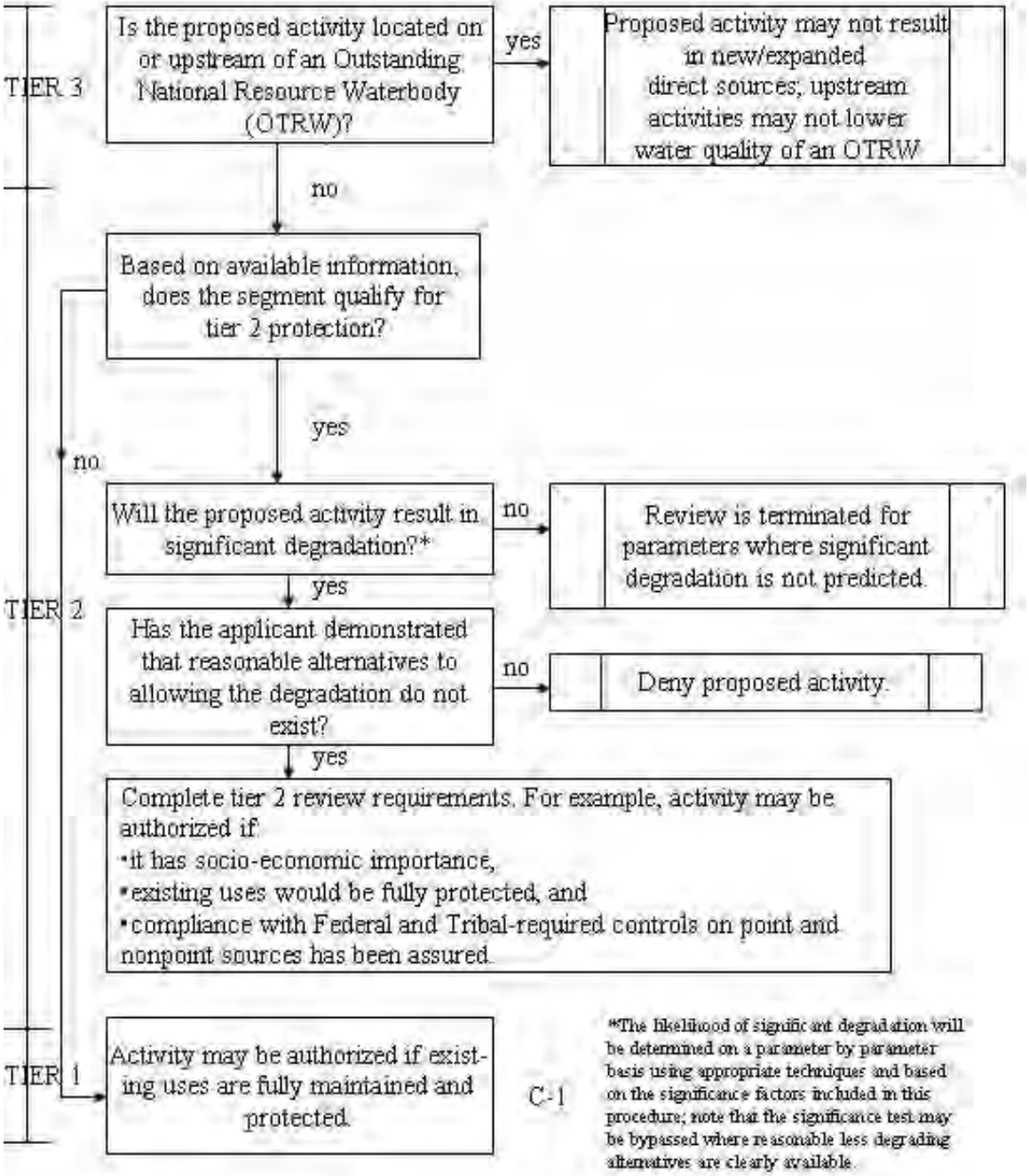
Section 301 of the Clean Water Act and subsequent Federal Register publications outline a National Pollutant Discharge Elimination System (NPDES) that regulates the amount of each pollutant that can be legally discharged into "Waters of the United States." These standards seek to limit water pollutants by requiring those activities that are likely to cause the release or discharge of pollutants into Tribal Waters to occur within a permitted and controlled system. This Appendix contains the Tribe‟s Anti-degradation Policy, which implements a permitting process for any business or entity that may discharge pollutants into tribal waters. This anti-degradation policy assures Tribal assessment of any activity that involves a point source or non-point source discharge of regulated pollutants into tribal waters, and also provides mechanism for polluters to assess the lawfulness of their activities. This Anti-Degradation Policy authorizes the Tribe‟s Water Quality Specialist, in correspondence with the Environmental Programs Director and other Tribal staff, to review and permit proposed activities that may degrade the quality of Tribal Waters. The process for reviewing proposed activities is summarized in the *Review Sheets* in Appendix D. These *Review Sheets* reflect the three-tiered anti-degradation policy described in Sections V-VI of this Appendix and Section 4 of the main body of the Standards.

The Tribe shall employ best professional judgment in its review process. The Tribe may heed economic and other implications of the Anti-Degradation policy on the Tribe, its contractors, lessees, and other entities.

Completed review sheets and all records and documentation under this process shall be retained at the Environmental Programs Department of the Ute Mountain Ute Tribe, at 520 Sunset Boulevard, Towaoc, CO 81334.

The flow chart below in Figure C-1 is a schematic of the process for reviewing activities that have the potential to pollute Tribal Waters or watersheds and for granting ***Water Pollution Prevention Permits***. It shall be the responsibility of the potentially regulated entity to apply for the permit, to conduct appropriate monitoring if necessary, to develop management plans, to implement management plans, to conduct inspections of the effectiveness of implementation procedures, to provide inspection reports, and to meet other requirements of the Ute Mountain Ute Tribe and its Environmental Programs Department.

Figure C-1
Antidegradation Implementation Flow Chart
DRAFT



2. DEFINITIONS

2.1 Point Source pollutants means pollutants discharged in a finite quantity at a specific location such as a pipe or other conveyance.

2.2 Non-Point Source pollutants means pollutants discharged or released into a watershed by dispersed activities or activities that release pollutants without a specific conveyance.

2.3 Emergency, for the purposes of this Appendix, means an imminent risk to public health and safety, impending environmental disaster, impending crop failure, or other such event that the Environmental Programs Department deems to be an emergency.

2.4 Water Pollution Prevention Permit means a permit issued by the Ute Mountain Ute Tribe, through its Environmental Programs Department, allowing potentially polluting activities to be carried out by a permittee in a manner specified by the Tribe.

3. RESPONSIBILITIES FOR OBTAINING PERMITS IN COMPLIANCE WITH THIS APPENDIX

3.1 Responsibility

It is the responsibility of any individual or business that has the potential to degrade water quality from either a point source or a non-point source to contact the Tribe‟s Environmental Programs Department and to apply for a Water Pollution Prevention Permit pursuant to this Appendix.

3.2 Potentially Regulated Activities

3.2.1 *Point Source Pollution*

Point source pollution activities likely to require a Water Pollution Prevention Permit include, but are not limited to: wastewater discharges; industrial discharges; urban storm water containment discharges; and other discharges from pipes or other discreet conveyances. Coverage under the Nationwide permit for storm water discharges from construction activities shall not remove any activity from compliance with this Appendix.

3.2.2 *Non-Point Source Pollution*

Non-point source pollution activities likely to require a non-point source permit include, but are not limited to: construction activities larger than one (1) acre (as required currently by the EPA); oil field development, including pads, roads and pipelines; road construction; forestry activities; storm water management system design; wastewater management system design; and solid waste management system design.

4. GENERAL PROCEDURES FOR WATER POLLUTION PREVENTION PERMITTING

4.1 General Procedures Applicable to All Water Pollution Prevention Permitting Pursuant to this Appendix

4.1.1 *Information Requests*

At any time during the permit review process, the Tribe may request information regarding the proposed activities, potential effluent constituents and quality, ambient water quality data, modeling, load calculations, best management practices, economic analyses, environmental benefits, mitigation of pollutants, treatment technologies, or other information not listed here from the applicant. All costs relating to this information shall be the responsibility of the applicant with the exception of telephone, email and facsimile costs at Tribal offices and staff time of Tribal employees.

4.1.2 *Public Review and Response*

The Tribe, through its Environmental Programs Department, shall conduct a public review of the application and proposed activities. Public notice shall be made using reasonably available outreach tools such as newspaper legal notices, television, radio, and web-based media. Comments shall be sought to guide a final decision. Following an appropriate public review period of not less than 15 days, the review period will close. Response to each comment shall occur prior to the granting or denial of a permit, and these responses shall be documented with the final decision.

4.1.3 *Emergency Decision-Making*

In the event that an emergency occurs, an activity may be authorized on a temporary basis by the Environmental Programs Department Director, the Tribal Chairman, or another authorized representative for the mitigation of such emergency circumstances. Following the approval of such an emergency activity, the Environmental Programs Department shall work with the entity conducting or contracting for such activities to document the activity, water pollution, appropriate absent permits, and any mitigation measures that the Tribe requires subsequent to the activity. Failure to obtain emergency authorization or failure to assist the Environmental Programs Department in its post-emergency review process shall render the entity subject to Section 7 of this Appendix.

4.1.4 *Permitting Authority and Process*

A Water Pollution Prevention Permit must be authorized by the Ute Mountain Tribe's Water Quality Specialist and Environmental Programs Director and also signed by the Chairman of the Tribe or other authorized representative, as authorized by the Resolution adopting these revised water quality standards. Any permit issued under this Appendix shall have the force of law. The permittee shall meet any and all specifications described in the permit. Failure to comply with any specifications of the permit may result in the revocation of the permit and the penalties described in Section 7 of this Appendix.

4.1.5 *Permit Location*

Signed copies of a permit will be held at the following locations: The Ute Mountain Ute Environmental Programs Department, the office of the permittee, and the office of the Tribal Chairman. Further copies may be distributed to those who request them, without limitation. Water Pollution Prevention Permits may also be made publicly available using web-based technology.

4.1.6 *Permit Fee*

A $200, non-refundable fee shall be paid to the Ute Mountain Ute Tribe to initiate processing of a "Water Pollution Prevention Permit" application. Permit applicants must address checks to "Ute Mountain Ute Tribe" and send them to: Ute Mountain Environmental Programs Dept., P.O. Box 448, Towaoc, CO 81334. Payment of this permit fee does not obligate the Tribe to any specific outcome at the end of the permit review process, nor does it relieve the applicant of further financial obligation related to the Water Pollution Prevention Permit application process. This permit fee may be increased or decreased by the Tribal Council at any time.

To minimize the burden of cost on the Ute Mountain Ute Tribe, no permit fees shall be required of the Tribe, its enterprises, government, or membership, provided that these entities are still required to obtain and adhere to permits under this Appendix.

4.2 Procedures Relevant Only to Point Source Pollutants

4.2.1 *Permitting Agency*

Point source pollutants are permitted by the EPA under the National Pollutant Discharge Elimination System (NPDES), which limits discharges based on the concentration, frequency and duration of the discharge of pollutants. When reviewing such permits, the EPA and the Tribe shall assure the attainment of the Ute Mountain Ute Tribe Water Quality Standards for Surface Waters to protect public health and environment and downstream regulatory requirements. Tribal certification of such an EPA permit shall be required, as specified in Section 401 of the Clean Water Act.

4.2.3 *Contact Information*

For activities that require a point-source NPDES permit from EPA, applicants should contact: Water Permits Unit (8P-W-WW) US Environmental Protection Agency - Region 8, 1595 Wynkoop Street, Denver, CO 80202-1129 (1-800-227-8917); copies should also be sent to the Tribe"s Water Quality Specialist at the address below (*see* Section 4.3.2).

4.3 Procedures Relevant Only to Non-Point Source Pollutants

4.3.1 *Requirement of a Non-Point Source Permit*

When a proposed activity might pollute a Tribal Water because of non-point source pollution, an application to the Tribe for a permit shall be written with specifications for how that activity will be undertaken to minimize the pollution of Tribal Waters. Those specifications shall be in the form of a „management plan," prepared by the applicant and reviewed by the Tribe for potential approval. The Tribe shall provide comments to the applicant in a timely manner. If approved and permitted by the Tribe, the management plan shall be a legally-binding requirement for the management of pollutants in a specific manner. If a permittee fails to meet any provision specified in the management plan and permit, the permittee shall be the subject of enforcement action under Section 7 of this anti-degradation implementation policy.

4.3.2 *Contact Information*

Applications for permits relating to non-point source water pollution, or activities that have the potential to cause non-point source pollution, shall be sent to: Water Quality Specialist, Ute Mountain Ute Tribe, PO Box 448, Towaoc, CO 81334; FedEx and UPS delivery to: 520 Sunset Boulevard, Towaoc, CO 81334. Telephone contact: 970-564-5431.

5. ANTIDEGRADATION LEVEL QUALIFICATION

5.1 Tier 3 Protected Tribal Waters

5.1.1 *General Designation*

A Tier 3 Tribal Water is a Tribally-designated "Outstanding Tribal Resource Water" or OTRW. The Tribe shall designate these water bodies in triennial revisions of the water quality standards. Factors that may be considered in such a designation include: location, other designations, ecological significance, existing water quality, recreational or aesthetic value, cultural value, and other factors. *See* Section 11b. of the main body of these standards for a description of Tier 3 Outstanding Tribal Resource Waters and a list of the Tribal Waters designated as such.

5.1.2 *Water Quality*

No minimum level of water quality shall be required for designation as an OTRW.

5.1.3 *Public Nomination*

Any member of the public may at any time nominate a Tribal Water for OTRW designation. Consideration of nominations will occur at the triennial review of the Tribe‟s water quality standards. Nominations should be sent to: "OTRW Nomination, ATTN: Water Quality Specialist" Ute Mountain Ute Tribe, Environmental Programs Department, PO Box 448, Towaoc, CO 81334.

5.2 Tier 2 Protected Tribal Waters

5.2.1 *General Designation*

Environmental Programs Department staff shall determine whether the Tribal Water receives Tier 2 protection. Factors for this determination include: ambient water quality conditions and concentrations; attainment of designated uses and existing uses; ecological value; assimilative capacity; data and information supplied by the applicant; new research regarding pollutants; Tribal cultural concerns; and other site-specific information.

5.2.2 *Water Quality*

At a minimum, a Tier 2 water body must be of quality that exceeds the requirements of "fishable and swimmable" of Section 101(a)(2) of the Clean Water Act and that meets the criteria for protection of existing uses and designated uses.

5.2.2.1 Existing quality shall be evaluated using data collected by the Environmental Programs Department, data and information provided by the applicant, and data collected by other agencies of surrounding states, Tribes, and the federal government. Ambient conditions for water bodies shall be evaluated for critical conditions such as low-flow or storm events, depending on the activity being proposed. Spatial and temporal variability shall also be considered.

5.2.2.2 Requests for data relating to ambient conditions can be made to, "Water Quality Specialist, Ute Mountain Ute Tribe, PO Box 448, Towaoc, CO 81334," or by calling 970-564-5431.

5.2.3 *Default Applicability*

Most Tribal Waters will qualify as Tier 2 waters. Unless the water body is not attaining the Clean Water Act Section 101(a)(2) goals, the water body has received an OTRW designation, or there is no assimilative capacity for pollutants to protect existing and designated uses, it is likely that the water body will receive Tier 2 protection.

5.2.4 *Applicability in Instances of Water Quality Standards Violations*

The violation of water quality standards criteria will likely preclude Tier 2 protection. The Tribe shall, following review of information provided by the applicant and the public, provide a judgment on whether the exceedences will be exacerbated by the proposed activity and whether any assimilative capacity exists.

5.3 Tier 1 Protected Tribal Waters

5.3.1 *Minimum Protection*

All Tribal Waters receive at a minimum Tier 1 protection.

5.3.2 *Water Quality*

Waters that do not meet the "fishable/swimmable" goals of the Clean Water Act or that do not have any assimilative capacity to dilute pollutant loads without exceeding the criteria in these standards shall only be evaluated under Tier 1 protection.

6. ANTIDEGRADATION PROTECTIONS

6.1 Tier 3 Protected Tribal Waters

6.1.1 *Point Sources of Pollution to OTRWs*

6.1.1.1 Direct Point Sources

No new direct point sources of pollution shall be permitted for OTRWs except as provided in Section 6.1.3 of this Appendix. Expansion of existing sources, including discharges that maintain current pollutant loads and current treatment of pollutants, shall also be prohibited except as provided in Section 6.1.3 of this Appendix.

6.1.1.2 Upstream Point Sources

No new upstream point sources of pollution shall be permitted for OTRWs except where such source would have no effect on the existing quality of the downstream OTRW and except as provided in Section 6.1.3 of this Appendix. Such effect on water quality shall be determined by the Tribe and its Environmental Programs Department staff. Factors to be considered include: percent change in ambient concentrations during critical conditions, percent change in pollutant loads, reduction in assimilative capacity, persistent or toxic effects of pollutant constituents, cumulative effects, and confidence in modeling by applicant.

6.1.2 *Non-Point Sources of Pollution to OTRWs*

Water quality shall be maintained at or above current levels for all parameters in an OTRW. Proposed non-point source pollution activities that will increase pollutant loads, and/or create and/or expand pollutant levels shall be prohibited, except where those pollutants would have no effect on existing water quality. Such effects on water quality shall be determined by the Tribe and its Environmental Programs Department staff. Factors to be considered include: percent change in ambient concentrations during critical conditions, percent change in pollutant loads, reduction in assimilative capacity, persistent or toxic effects of pollutant constituents, cumulative effects, and confidence in modeling by applicant.

6.1.3 *Temporary and Limited Effects Exception*

In cases where the Tribe determines that the effects of a proposed activity on an OTRW are deemed to be only temporary and limited in nature, the Tribe may permit the activity. Determination of "temporary and limited effects" will entail a case-by-case evaluation by the Tribe, through its Environmental Programs Department, of ambient conditions and potential effects of the proposed activity. A change of greater than five percent (5%) of any water quality parameter in an OTRW will generally result in a denial of the proposed activity. Factors that may influence such decisions include: duration of lowering of water quality; percent change in ambient concentrations; specific parameters affected; potential for long-term benefits to the OTRW; effect on water quality standards violations; short-term and long-term effects on existing uses or water quality goals.

6.2 Tier 2 Protected Tribal Waters

6.2.1 *Point Source and Non-Point Source Regulation*

Point sources and non-point sources of pollution shall be evaluated in the same manner for Tier 2 protected waters.

6.2.2 *General Prohibition of Significant Degradation*

Where a water body qualifies as a Tier 2 Protected Tribal Water, no significant water quality degradation will be allowed unless the Environmental Programs Department finds, after public participation, that:

6.2.2.1 Such degradation is necessary to provide for an important tribal socio-economic value in an area where the waters are located.

6.2.2.2 Water quality adequate to protect existing uses is fully protected and all new and existing point sources will meet the highest statutory and regulatory requirements.

6.2.2.3 All cost-effective and reasonable best management practices shall be achieved for non-point source polluters.

6.2.3 *Determination of Significant Degradation*

6.2.3.1 Once it is determined that Tier 2 protection applies to a water body, the next step in the Tribe‟s review process is for the Environmental Programs Department to determine whether the proposed activity would cause significant degradation that would warrant further review (such as consideration of alternatives, permit limits, and specifications for a non-point source pollution management plan). The significant degradation review shall be performed using the factors outlined as follows:

6.2.3.1.1 Parameter by parameter analyses of the potential effects of activity on ambient concentrations;

6.2.3.1.2 Percent change in ambient concentrations predicted at critical conditions (low-flow, storm event);

6.2.3.1.3 The difference between existing ambient quality and predicted ambient water quality during permitted loading from all point sources and the proposed activity;

6.2.3.1.4 Percent changes in pollutant loads, from existing loads to potentially permitted new loads;

6.2.3.1.5 Percent reduction in assimilative capacity;

6.2.3.1.6 Nature, extent, and persistence of specific pollutants;

6.2.3.1.7 Cumulative effects of pollutants;

6.2.3.1.8 Impacts to aquatic biota;

6.2.3.1.9 Degree of confidence in any modeling techniques used by applicant or the Tribe;

6.2.3.1.10 Duration and quality of proposed pollutant effluent; and

6.2.3.1.11 Effects on Tribal culture and traditions.

6.2.3.2 Five Percent (5%) Significance Threshold

If the proposed activity will cause more than a five percent (5%) degradation in ambient water quality or assimilative capacity for any parameter or a five percent (5%) increase pollutant loadings for any parameter, the Tribe shall find that the proposed activity causes significant degradation.

6.2.3.3 Ten Percent (10%) Cumulative Cap

If the cumulative degradation in ambient water quality or assimilative capacity from all sources (including the proposed activity) for any parameter exceeds ten percent (10%) or if the cumulative pollutant loading of all sources (including the proposed activity) for any parameter increases more than ten percent (10%), the Tribe shall find that the proposed activity causes significant degradation.

6.2.3.4 Where the Tribe, through its Environmental Programs Department, determines that non-degrading or less polluting alternatives to the proposed activity exist and are reasonable, a test of significance may be delayed or by-passed. The applicant in such a case shall be directed to demonstrate why the proposed degradation is necessary.

6.2.3.5 Because there is a low threshold for determination of significance, these procedures are not intended to cause an undue burden on the applicant to collect or research applicable water quality data. Data that is of critical importance to the appropriate significance determination may be requested of the applicant.

6.2.3.6 If the Tribe, through its Environmental Programs Department, determines that the proposed activity will not result in "significant degradation" pursuant to this Appendix, and all technology-based and water quality-based controls are to be implemented in accordance with the Tribe"s specifications, then no further Tier 2 review is required.

6.2.4 *Alternatives Analysis*

6.2.4.1 All entities that propose a degradation of Tier 2 protected waters must submit proposed alternatives to the water quality degradation.

6.2.4.2 The Tribe‟s Environmental Programs Department shall evaluate whether the alternatives proposed by the applicant are comprehensive. If the Department determines that alternatives exist that would result in less water quality degradation, the Environmental Programs Department will assist the applicant in its own alternatives assessment to promote the broadest understanding of alternatives to be submitted in the permit application. Further alternatives may include, but are not limited to, additional pollution prevention measures; reduction in scale of project; water reuse or recycle; industrial process changes; various treatment technology; seasonal stipulations; operational or maintenance changes; or alternative discharge locations.

6.2.4.3 Economic Reasonability of Alternatives

Alternatives that are determined by the Tribe‟s Environmental Programs Department to incur an additional cost of less than 120 percent of the proposed alternative shall be considered reasonable. Alternatives that incur costs greater than 120 percent of the proposed alternative may also be required by the Tribe, but shall be determined on a case-by-case basis.

6.2.4.4 If the Tribe‟s Environmental Programs Department determines that reasonable alternatives to the proposed activity do not exist, then Tier 2 review will continue.

6.2.5 *Determination of Socio-Economic Importance*

An evaluation of the socio-economic consequences of the proposed activity shall be performed during the permitting process. The applicant shall provide such information in its application. The Tribe shall consider at least the following factors, but may consider others: employment opportunities; increased production for greater Tribal economic gain; housing; and correction of environmental or public health concern. If no socio-economic value can be attributed to the proposed activity, it shall not be permitted. If the Tribe deems that the socio-economic value is not of sufficient value to warrant a degradation of water quality, it shall not be permitted. If, after review and response to public comments regarding the proposed activity, the level of degradation of water quality is not considered significant enough to the Tribe to overrule the proposed activity‟s socio-economic value, then a permit may be granted for the proposed activity, with specifications to protect water quality at the most-achievable level.

6.2.6 *Existing Uses Protected*

Prior to authorizing any proposed activity on a Tier 2 water body, the Environmental Programs Department shall ensure that water quality sufficient to protect existing uses will be achieved. A “designated use” does not preclude an existing use, and the Tribe‟s Environmental Programs Department will assess the assigned designated uses and determine whether those designations and relative criteria associated with them are protective of existing uses. If designated uses and their relative criteria are not protective of existing uses, then those use designations must be revised promptly. Some activities

may impair the existing use or uses without degrading water quality. These activities may be denied a permit; these activities may be conditionally permitted; or the water quality standards may need to be revised to protect for uses and provide for appropriate water quality conditions for activities not recognized at the time of the approval of the standards.

6.2.7 *Permit Conditions*

Permit conditions under Tier 2 protection may require compliance with more stringent criteria and appropriate maximum pollutant loads than specified for the designated uses in order to protect the existing uses.

If a Total Maximum Daily Load has been calculated for specific pollutants for a water body, and the applicant is proposing to discharge those pollutants, the applicant may be required to meet end-of-pipe concentrations of pollutants or undertake non-point source controls upstream to mitigate those additional pollutants.

6.2.8 *Ensure Implementation of Required Point and Non-Point Source Controls*

Prior to authorizing any proposed activity, the Environmental Programs Department shall determine that compliance with applicable controls on all point sources and non-point sources has been assured.

6.3 Tier 1 Protected Tribal Waters

6.3.1 Point sources and non-point sources of pollution shall be evaluated in a similar manner for Tier 1 protected waters.

6.3.2 *Existing Uses Protected*

Prior to authorizing any proposed activity on a Tier 1 water body, the Environmental Programs Department shall ensure that water quality sufficient to protect existing uses will be achieved. A “designated use” does not preclude an existing use, and the Tribe‟s Environmental Programs Department will assess the assigned designated uses and determine whether those designations and relative criteria associated with them are protective of existing uses. If designated uses and their relative criteria are not protective of existing uses, then those use designations must be revised promptly. Some activities may impair the existing use or uses without degrading water quality. These activities may be denied a permit; these activities may be conditionally permitted; or the water quality standards may need to be revised to protect for uses and provide for appropriate water quality conditions for activities not recognized at the time of the approval of the standards.

6.3.3 *Permit Conditions*

Permit conditions under Tier 1 protection may require compliance with more stringent criteria and appropriate maximum pollutant loads than specified for the designated uses in order to protect the existing uses.

If a Total Maximum Daily Load has been calculated for specific pollutants for a water body, and the applicant is proposing to discharge those pollutants, the applicant may be required to meet end-of-pipe concentrations of pollutants or undertake non-point source controls upstream to mitigate those additional pollutants.

6.3.4 *Likelihood of Obtaining Permits Where Existing Uses are Protected*

Activities affecting Tier 1 Tribal waters that would not preclude the quality and conditions necessary to maintain existing uses will likely be permitted.

7. PENALTIES

7.1 Enforcement

Enforcement activities for: (a) violations of the anti-degradation policy and permitting program; and (b) violations of water quality standards as defined in Section 3 of the main body shall be determined by the Tribe through its Environmental Programs Department on a case-by-case basis, as approved by the Tribal Council through Resolution signed by the Tribal Chairman.

7.2 Goals

The primary goal of requirements under this Policy will be the restoration and clean up of pollutants. Ramifications of pollution of Tribal Waters or watersheds may include: fines, mitigation projects, remediation projects, termination of leases or contracts with the Tribe, and other penalties.

7.3 Failure to Meet Permit Requirement

Failure to obtain or adhere to a Water Pollution Prevention Permit shall be considered to be willful negligence and breach of contract.

Appendix A Conversion Factors for Metals Criteria

The following conversion factors are to be multiplied by total recoverable criteria to obtain dissolved fraction criteria. Dissolved metals are those which will pass through a 0.45 micron filter, immediately following sample collection and before preservation.

Metal:	Arsenic	Cadmium	Chromium (III)	Chromium (VI)	Copper
Acute Criterion Factor	1.000	1.136672-[(ln hardness) (0.041 838)]	0.316	0.982	0.960
Chronic Criterion Factor	1.000	1.101672-[(ln hardness) (0.041838)]	0.860	0.962	0.960

Metal:	Lead	Mercury	Nickel	Selenium
Acute Criterion Factor	1.46203-[(ln hardness) (0.145712)]	0.85	0.998	0.922
Chronic Criterion Factor	1.46203-[(ln hardness) (0.145712)]	0.85	0.997	0.922

Metal:	Silver	Zinc
Acute Criterion Factor	0.85	0.978
Chronic Criterion Factor	Not available	0.986

Conversion factors from Nationally Recommended Water Quality Criteria for Priority Toxic Pollutants, U.S. EPA, 1999, Appendix A.

Appendix E
Animas-La Plata Project
Documents

Appendix E-1

Animas-La Plata Project Intergovernmental Agreement

INTERGOVERNMENTAL AGREEMENT

ESTABLISHING THE ANIMAS-LA PLATA OPERATIONS AND MAINTENANCE ASSOCIATION

This Intergovernmental Agreement ("Agreement") is entered into effective on this 4th day of March, 2009 by and among: the Colorado Water Resources and Power Development Authority; the San Juan Water Commission, a political subdivision of the State of New Mexico, the La Plata Water Conservancy District, a political subdivision of the State of New Mexico; the Southern Ute Indian Tribe, a federally recognized Indian tribe; the Navajo Nation, a federally recognized Indian tribe; and the Ute Mountain Ute Tribe, a federally recognized Indian tribe (collectively "the Parties").

1 RECITALS

1.1 The Animas La Plata Water Project ("ALP") provides for the delivery of water from the Animas River by direct flow and reservoir storage and release. The ALP includes the physical structures of a dam, reservoir, pumping plant, inlet conduit, and other appurtenant facilities to divert and store water from the Animas River. The ALP was authorized by statutory enactments, including the Colorado River Storage Project Act of 1956, the Colorado River Basin Project Act of 1968, the Colorado Ute Indian Water Rights Settlement Act of 1988, and the Colorado Ute Settlement Act Amendments of 2000 (collectively the "Enabling Law"). Construction of the ALP by the United States began in 2001, and the ALP is anticipated to be operational beginning in 2012.

1.2 The Parties are each governments or governmental subdivisions entitled, pursuant to statutes, court decrees, permits, and/or contracts, to receive and use water from the ALP, who have elected to participate in and be responsible for the operation, maintenance and replacement of the ALP. Further, the Parties are empowered pursuant to law to cooperate or contract with one another and third parties to provide certain functions and services with regard to the operation, maintenance and replacement of the ALP.

1.3 The Animas La Plata Water Conservancy District ("ALPWCD") assigned its interest in the ALP under the Enabling Law ("ALPWCD Interest") to the Colorado Water Resources and Power Development Authority ("CWRPDA") in 2001. In 2005, the ALPWCD and the CWRPDA entered into a contract whereby ALPWCD may purchase back a portion of the ALPWCD Interest.

1.4 The Parties, who have legal duties and obligations under the Enabling Law, desire to create an association, as a separate legal entity, to enter into appropriate agreements and to operate, maintain and replace or cause the operation, maintenance and replacement of the ALP. The Parties intend that the Association will enter into appropriate agreements with the

United States Bureau of Reclamation ("Reclamation") to transfer operation, maintenance and replacement of the ALP to the Association (defined below).

Now therefore, the Parties hereto, for and in consideration of the mutual promises and covenants hereafter set forth, agree as follows:

2. THE ASSOCIATION

2.1 Establishment and General Purpose of the Association. The Parties hereby establish the Animas-La Plata Operation, Maintenance and Replacement Association ("Association") to carry out the operation, maintenance and replacement ("OM&R") activities and responsibilities of the Parties for the ALP in accordance with the provisions of this Agreement, the Enabling Law, and the Colorado Uniform Unincorporated Nonprofit Association Act, 7-30-101 et seq. CRS (2006) (the "Act"). The Association is a legal entity separate from the Parties and its Members and formed for the purposes of determining and enforcing rights and duties, and assuming liabilities in contract and tort. It is anticipated that the Association will enter into an agreement or agreements with the United States and with other entities for the OM&R of the ALP.

2.2 Status and Powers of the Association. The Association is comprised of various governmental entities, including political subdivisions of the State of Colorado and the State of New Mexico, and federally recognized Tribes, which each have a separate sovereign status. It is not the intention of the Parties to bind any other Party in a way that undermines existing governmental immunities, except to the extent such immunities are specifically waived herein. In addition, the Parties agree that the Act does not impose any liabilities or alter any immunities that would otherwise be available to the Parties as governments or governmental political subdivisions. The Association shall have the duties, privileges, immunities, rights, liabilities, and disabilities of an association under the Act, and the provisions of article 10.5 and 47 of title 11, CRS (2006) shall apply to monies of the Association. Further, the functions, services, and general powers of the Association, to the extent permitted by law, are set forth as follows:

a. To conduct its business affairs and all other legally permissible activities for the benefit of the Parties and their successors or assigns that receive and use ALP water allocated by statute or contract to the Parties.

b. To make and enter into contracts with the Parties, the United States, any State or local governmental organization, or any individual, company, association, or other entity.

c. To obtain the services of staff and outside consultants as appropriate to carry out the functions and contractual obligations of the Association.

d. To operate and maintain the ALP in accordance with and pursuant to the terms and conditions of any separate service or other agreements with the United States or others pertaining to the OM&R of the ALP.

e. To acquire, hold, lease (as lessor or lessee), sell or otherwise dispose of any real or personal property utilized for OM&R of the ALP.

f. To sue and be sued in its own name.

g. To adopt, by resolution, policies and/or procedures respecting the exercise of its powers and carrying out of its purpose.

h. To exercise any other powers that are essential to the provision of functions, services, or facilities by the Association and that are specified in this Agreement or in any separate agreement or agreements among the Association, the Parties, the United States, or others.

2.3 Membership.

There shall be six (6) Members of the Association, and the initial Members shall be the Parties to this Agreement.

2.3.1 Additional Member. At the time of execution of this Agreement, the State of Colorado has not exercised its statutory entitlement to acquire an interest in the ALP. If it acquires an interest of at least 780 acre feet of annual depletions (or 1,560 acre feet of ALP water supply) no later than when the Final Cost Allocation (as defined in the Enabling Law) has been completed, then the State entity that owns the interest shall become a Party to this Agreement and a Member of the Association, subject to the Association's acceptance of that entity's applicable contract provisions, and the number of Members shall be enlarged to seven (7).

2.3.2 Transfers of ALP Interests by Members. It is anticipated that Members may assign or otherwise transfer some or all of their interests in the ALP to third parties. All Parties and Members shall receive written notice of a transfer of any interest in the ALP or in the Association by a transferring Party/Member within 30 days of such transfer. The written notice of transfer must include the status of the transferor's and transferee's voting rights in the Association as a result of the transfer. Once a transferor divests its interest entirely in the ALP, the transferor shall no longer be a Member in the Association and its successor(s) shall hold the membership rights. A Party/Member may be released of any or all of its obligations and duties under this Agreement only upon receipt of written consent from all the then-existing Members and such consent shall not be unreasonably withheld as long as the transferee can demonstrate it is financially capable of assuming the obligations set forth in this Agreement based on the reasonable application of standards normally applied by persons operating water storage projects. The Parties agree that the City of Durango and ALPWCD meet the financial criteria of this

Section and upon the transfer of the ALPWCD Interest held by the CWRPDA to one or both of the entities, the CWRPDA shall be released from its duties and obligations under this Agreement pro rata to the interests transferred.

2.4 Association Overhead Costs. To a reasonable extent, the Members shall minimize Association administration and overhead costs for the internal operation of the Association in carrying out the purposes set forth in Section 2.2 ("Association Overhead Costs") and shall maximize in-kind services to the Association. The Association Overhead Costs shall be allocated among the Members in accordance with Paragraph 6.02 of the attached Concepts and Principles for the Operation and Allocation of the OM&R Costs of the Animas-La Plata Project, attached hereto as Exhibit A and incorporated herein ("Operation Principles").

2.5 Project Operations. The Association shall operate the ALP in accordance with the Operation Principles and will cooperate as necessary with any legally authorized entity to that end. The Association shall operate the ALP in accordance with applicable decrees, compacts (including negotiated compact accounting principles) and other law.

2.6 Participation of the Bureau of Reclamation in the Association. Reclamation, while not a Member of the Association, will be paying the fixed OM&R costs identified in the Operation Principles of the Southern Ute Indian Tribe and the Ute Mountain Ute Tribe as set forth in the Enabling Law. The Parties and Reclamation have consulted and agree to have Reclamation closely involved in the development of the annual fixed OM&R budget. The role of Reclamation shall be included in the Association's bilateral agreement with Reclamation for the transfer of OM&R to the Association (defined in Section 2.7). Reclamation's relationship with the Southern Ute Indian Tribe and the Ute Mountain Ute Tribe, and the provisions for paying the Ute Tribes' OM&R costs as set forth in the Enabling Law, will be further identified and defined in the Ute Tribes' respective water delivery contracts with Reclamation.

2.7 Transfer of OM&R. It is the purpose of the Parties that the Association carry out the operation, maintenance, and replacement of the ALP pursuant to an agreement with Reclamation transferring such operation, maintenance, and replacement to the Association ("Transfer Agreement").

3. THE MANAGEMENT COMMITTEE

3.1 General Powers. All powers of the Association shall be exercised by or under the authority of, and the business and affairs of the Association shall be managed under, the direction of its management committee ("Management Committee").

3.1.1 Management Committee Activities. On behalf of the Association, the Management Committee shall: negotiate and enter into the Transfer Agreement; negotiate and enter into other agreements as necessary for the OM&R of the ALP; hire and supervise such staff and consultants as necessary for such OM&R; prepare annual and 3-year-projected budgets for such

OM&R and Association Overhead Costs; allocate, assess, collect, and pay OM&R costs as set forth in the Operation Principles; and take such other actions as may be necessary and appropriate to effect the OM&R of the ALP.

3.2 Management Committee Operations.

3.2.1 Representatives. Each Member shall designate a representative and an alternate to serve on the Management Committee. A Member may replace its representative or alternate on the Management Committee by providing written notice to the Management Committee at any time prior to the start of a meeting of the Management Committee.

3.2.2 Voting. Each Member shall have, through its representative (or alternate) on the Management Committee, one vote on all matters coming before the Management Committee. In the event that a Member transfers its interest in the ALP pursuant to Section 2.3.2 to more than one transferee, the transferring Member and the transferees shall determine how to cast the Member's one vote and who their representative and alternate on the Management Committee shall be.

3.2.3 Meetings. Regular meetings of the Management Committee shall be held at a time and place to be determined by the Management Committee from time to time. Special meetings of the Management Committee may be called by or at the request of the Chair or three of the Members.

3.2.3.1 Notice. Notice of the date, time, and place of any meeting shall be given to each Member, representative, and alternate at least ten days prior to the meeting by written notice either personally delivered or mailed to each Member, representative, and alternate at the business address provided by such member, representative and alternate, or by notice transmitted by private courier, telegraph, telex, electronically transmitted facsimile or other form of wire or wireless communication. If mailed, such notice shall be deemed to be given and to be effective on the earlier of (i) five days after such notice is deposited in the United States mail, properly addressed, with first class postage prepaid, or (ii) the date shown on the return receipt, if mailed by registered or certified mail return receipt requested, provided that the return receipt is signed by an agent of the Member to whom the notice is addressed. If notice is given by telex, electronically transmitted facsimile, or other similar form of wire or wireless communication, such notice shall be deemed to be given and to be effective when received, and with respect to a telegram, such notice shall be deemed to be given and to be effective when the telegram is delivered to the telegraph company. If a Member, representative, or alternate, has designated in writing more than one address or facsimile number for delivery of notice, notice sent by mail, telegraph, telex, electronically transmitted facsimile, or other form of wire or wireless communication shall be deemed to have been given or to be effective when sent to one of the addresses. Notice of a meeting may be waived by a writing signed by a Member or by its representative or alternate. Such waiver shall be delivered to the Secretary for filing with the corporate records, but such delivery and filing shall not be conditions to the effectiveness of the

waiver. Further, a representative's or alternate's attendance at or participation in a meeting shall waive the any required notice to him/her or the Member of the meeting unless at the beginning of the meeting, or promptly upon his/her later arrival, the representative or alternate objects to holding the meeting or transacting business at the meeting because of lack of notice or defective notice and does not thereafter vote for or assent to action taken at the meeting. Neither the business to be transacted at, nor the purpose of, any regular or special meeting of the Management Committee need be specified in the notice or waiver of notice of such meeting.

3.2.3.2 Telephonic Meetings. The Management Committee may permit any representative (or alternate) of a Member to participate in a meeting of the Management Committee through the use of any means of communication by which all representatives(or alternates) participating in the meeting can hear each other during the meeting. A representative (or alternate) participating in a meeting in this manner is deemed to be present in person at the meeting.

3.2.3.3 Quorum and Action. A quorum shall be required for action by the Management Committee on behalf of the Association. Representatives or alternates of a majority of the Members shall constitute a quorum. Once a quorum is established at a meeting, there shall remain a quorum until all business at that meeting is complete. Action by the Management Committee shall require the affirmative vote of a majority of the Member representatives (or alternates) present, except that amendment to the Operations Principles shall be in accordance with Section 4.6. There shall be no proxies or proxy voting allowed. In the event of an emergency, the operator hired by the Management Committee shall be authorized to act on behalf of the Association to protect the safety and integrity of the ALP facilities.

3.2.3.4 Presumption of Assent. A representative (or alternate) of a Member who is present at a meeting of the Management Committee at which action is taken shall be presumed to have assented to all action taken at the meeting unless (I) the representative (or alternate) objects at the beginning of the meeting, or promptly upon his arrival, to the holding of the meeting or the transaction of business at the meeting and does not thereafter vote for or assent to any action taken at the meeting, (ii) the representative (or alternate) contemporaneously requests that his dissent or abstention as to any specific action taken be entered in the minutes of the meeting, or (iii) the representative (or alternate) causes written notice of his dissent or abstention as to any specific action to be received by the presiding officer of the meeting before its adjournment, or by the Secretary promptly after the adjournment of the meeting. A representative (or alternate) may dissent to a specific action at a meeting, while assenting to others.

3.2.4 Manner of Acting. Any action required or permitted to be taken by the Management Committee shall only be taken at a meeting of the Management Committee after proper notice. No informal action by representatives (or alternates) without a meeting shall be valid, and no such action can be subsequently ratified by the Management Committee. Action by the Management Committee pursuant to Section 3.2.3.3 shall constitute action of the

Association.

3.3 Officers. The Association shall have the following officers:

3.3.1 Chair. The Chair shall have general and active control of the Association's affairs and business as directed by the Management Committee. The Chair shall be responsible for setting and chairing Management Committee meetings, and maintaining contact with Reclamation and with any entity or entities retained to undertake day-to-day OM&R of the ALP.

3.3.2 Secretary. The Secretary shall (i) prepare and maintain as permanent records the minutes of the proceedings of the Management Committee, and a record of all actions taken by the Management Committee, and a record of all waivers of notice of meetings of the Management Committee; (ii) see that all notices are duly given in accordance with the provisions of this Agreement and as required by law; (iii) serve as custodian of the Association records; (iv) keep at the Association's registered office or principal place of business: (a) a record containing the names and addresses of all Members, successors, or assigns, (b) the originals or copies of this Agreement, the Operations Principles, the Transfer Agreement, and any other agreements of the Association, (c) minutes of all Management Committee meetings, and all written communications within the past three years to Members, (d) a list of the current representatives and alternates on the Management Committee, (e) a copy of the Association's most recent corporate report filed with the Colorado Secretary of State, and financial statements showing in reasonable detail the Association's assets and liabilities and (f) results of operations for the last three years; (v) authenticate records of the Association; and (vi) in general, perform all duties incident to the office of secretary and such other duties as from time to time may be assigned to the Secretary by the Management Committee. The Management Committee may designate a person other than the Secretary to keep the minutes of its meetings. Any books, records, or minutes of the Association may be in written form or in any form capable of being converted into written form within a reasonable time.

3.3.3 Treasurer. The Treasurer shall be the principal financial officer of the Association, shall have the care and custody of all funds, securities, evidences of indebtedness and other personal property of the Association, and shall deposit the same in accordance with the instructions of the Management Committee. Subject to the limits imposed by the Management Committee, the Treasurer shall receive and give receipts and acquittances for money paid in on account of the Association, and shall pay out of the Association's funds on hand all bills, payrolls and other just debts of the Association of whatever nature upon maturity. The Treasurer shall perform all other duties incident to the office of the Treasurer and, upon request of the Management Committee, shall make such reports to it as may be required at any time. The Treasurer shall, if required by the Management Committee, give the Association a bond in such sums and with such sureties as shall be satisfactory to the Management Committee, conditioned upon the faithful performance of his duties and for the restoration to the Association of all books, papers, vouchers, money and other property of whatever kind in his possession or under the

Treasurer's control belonging to the Association. The Treasurer shall have such other powers and perform such other duties as may from time to time be prescribed by the Management Committee. The Treasurer shall also be the principal accounting officer of the Association. The Treasurer shall prescribe and maintain the methods and systems of accounting to be followed, keep complete books and records of account as required by the Colorado Business Corporation Act, prepare and file any required local, state, and Federal tax returns, prescribe and maintain an adequate system of internal audit, and prepare and furnish to the Management Committee statements of account showing the financial position of the Association and the results of its operations.

3.3.4 Appointment of Officers. The Chair shall revolve on an annual basis. The initial Chair shall be the representative of the Ute Mountain Ute Tribe, followed, in sequential order, by the representatives of: the San Juan Water Commission; the Colorado Water Resources and Power Development Authority; the Navajo Nation; the State of Colorado (if that entity becomes a member in accordance with Section 2.3.1); the La Plata Water Conservancy District; and the Southern Ute Indian Tribe. The Secretary and Treasurer shall be appointed by the Management Committee and shall serve at the will of the Management Committee. They need not be a representative or alternate of a Member, and one person may serve in both capacities. If any officer is temporarily unable to perform his duties, the Management Committee may appoint an interim officer to act until the officer can resume his duties.

3.4 Provision of Insurance. The Association may purchase and maintain insurance, in such scope and amounts as the Management Committee deems appropriate, on behalf of any person who is or was an officer, employee, fiduciary or agent of the Association, or who, while an officer, employee, fiduciary or agent of the Association, is or was serving at the request of the Association as an officer, employee, fiduciary or agent of any other foreign or domestic profit or nonprofit corporation or of any partnership, joint venture, trust, profit or nonprofit unincorporated association, limited liability company, other enterprise or employee benefit plan, against any liability asserted against, or incurred by, him in that capacity or arising out of his status as such, whether or not the Association would have the power to indemnify him against such liability under applicable law. Any such insurance may be procured from any insurance company designated by the Management Committee, whether such insurance company is formed under the laws of Colorado or of any other jurisdiction of the United States or elsewhere.

4. MISCELLANEOUS

4.1 Effective Date. This Agreement shall become binding upon the approval by the governing bodies of each of the Parties, and shall take effect only when fully executed by authorized representatives of all Parties. It shall continue in full force and effect until mutually terminated by the Parties, their successors or assigns to this Agreement, or until terminated by a court of law. If terminated, the Parties shall continue their duties, responsibilities and obligations under this Agreement until such time as Reclamation shall assume all aspects of the ALP OM&R.

4.2 Default. In the event that any Member (or Member's transferee) defaults in paying sums due for ALP OM&R costs on account of its interest in the ALP, or in meeting its other obligations under this Agreement and such default continues for a period exceeding fifteen (15) days, the Management Committee shall provide notice of the default to the defaulting Member (or transferee) and the defaulting Member (or transferee) shall have a period of sixty (60) days from the date of the notice in which to cure the default. If the default is not cured within the sixty-day cure period, then the Management Committee, acting as set forth in Section 3.2.3.3, may provide notice to the defaulting Member (or transferee), and thereafter withhold ALP water otherwise deliverable to that Member (or transferee) until the default is resolved to the satisfaction of the majority of the non-defaulting Members that voted to withhold water. A default may be cured by the payment of all amounts past due and out-of-pocket expenses incurred by the Association as a result of the default, whereupon ALP water for the year in which the payment is made shall be delivered to the curing Member (or transferee). The withholding of ALP water as set forth herein shall be the only remedy applied by the Members or the Association against a Member (or transferee) in Default, except for (i) judicial declaratory and/or injunctive relief as set forth in Sections 4.7 and 4.9, and (ii) relief from the Secretary of the Interior. The Management Committee may lease, at its discretion, and for no more than one year, any water withheld by virtue of the uncured default to Members and/or non-Members.

4.3 Binding Effect and Assignability. The terms and obligations contained in this Agreement shall be binding upon, and shall inure to the benefit of, the Parties and their successors and assigns, and the Members and the Members' transferees of interests in the ALP.

4.4 No Third Party Beneficiaries. This Agreement is intended to describe the rights and responsibilities of the Parties hereto. This Agreement is not intended and shall not be deemed to confer any rights on any person or entity not named as a Party hereto, except as set forth in Section 2.3.

4.5 Severability. Invalidation of any of the provisions of this Agreement, including the Operation Principles, or of any paragraph, section, sentence, clause, phrase, or word herein, or the application thereof in any circumstance, shall not affect the validity of the remainder of this Agreement or the Operation Principles.

4.6 Amendment. This Agreement may be amended or modified only by an amendment in writing signed by all Members, except for the Operation Principles, which may be amended or modified by unanimous vote of the Management Committee, provided that Paragraph 7.03 of the Operation Principles may only be changed as set forth therein.

4.7 Governmental Immunity. The Parties agree that neither any provision in this Agreement nor any action undertaken by a Party/Member or its officials and employees pursuant to this Agreement shall constitute a waiver of any right, immunity, or protection provided a Party/Member under applicable tribal, state or federal law concerning governmental immunity. Notwithstanding the previous sentence, if necessary under applicable law, the Parties waive

governmental immunity to allow for judicial declaratory and/or injunctive relief to require a Party/Member to comply with its obligations under this Agreement. The waiver of governmental immunity shall be limited to claims for nonmonetary relief.

4.8 Availability of Appropriations. Financial obligations or liabilities of the Parties are contingent upon funds for that purpose being appropriated by their respective entities.

4.9 Governing Law and Proper Venue. Except as provided in Section 4.7, all provisions of this Agreement are governed by the laws of the State of Colorado. Any judicial enforcement action required to resolve a dispute arising out of this Agreement shall be an action in a court of competent jurisdiction which relief shall be limited to an action to (i) contest a decision by the Association to withhold water resulting from an uncured default by a Party/Member or (ii) seek judicial declaratory and/or injunctive relief to enforce rights and obligations arising under this Agreement.

4.10 No Assumption of Obligations. It is the intention of the Parties that in every case where liability is established against the Association, only Association assets, funds, and insurance shall be available to satisfy such liability.

4.11 Multiple Originals. This Agreement may be simultaneously executed in any number of counterparts, each of which shall be deemed an original, but all of which constitute the same Agreement.

4.12 Definitions and Interpretations. Except as otherwise provided herein, nouns, pronouns and variations thereof shall be deemed to refer to the singular or plural, and masculine or feminine, as the context may require. Any reference to a policy, procedure, law, regulation, rule or document shall mean such policy, procedure, law regulation, rule or document as it may be amended from time to time.

4.13 No Construction Against Drafter. This Agreement has been prepared by the combined efforts of the Parties and their respective legal counsel and, accordingly, the Parties agree there shall be no construction against the drafter of this Agreement should any dispute arise.

4.14 Headings for Convenience Only. Paragraph headings and titles contained herein are intended for convenience of reference only and are not intended to define, limit, or describe the scope of intent of any portion of this Agreement.

SIGNATURE BLOCKS FOR PARTIES FOLLOW ON SEPARATE PAGES

IN WITNESS WHEREOF, the Parties hereto have caused this Intergovernmental Agreement Establishing the Animas-La Plata Operations and Maintenance Association to be duly executed as of the date and year first above written.

Approved as to form:

Assistant Secretary

February 12, 2009

Date

COLORADO WATER RESOURCES & POWER DEVELOPMENT AUTHORITY

By

Daniel L. Law
Executive Director

February 12, 2009

Date

IN WITNESS WHEREOF, the Parties hereto have caused this Intergovernmental Agreement Establishing the Animas-La Plata Operations and Maintenance Association to be duly executed as of the date and year first above written.

LA PLATA CONSERVANCY DISTRICT

By Stella Montoya
Stella Montoya
President

3-4-09
Date

IN WITNESS WHEREOF, the Parties hereto have caused this Intergovernmental Agreement Establishing the Animas-La Plata Operations and Maintenance Association to be duly executed as of the date and year first above written.

Approved as to form:

Attorney General of the Navajo Nation

Jan 30, 09

Date

THE NAVAJO NATION

By

President of the Navajo Nation

JAN 0 8 2009

Date

IN WITNESS WHEREOF, the Parties hereto have caused this Intergovernmental Agreement Establishing the Animas-La Plata Operations and Maintenance Association to be duly executed as of the date and year first above written.

Approved as to form:

Elizabeth Newlin Taylor, Esq.

2-19-2009

Date

SAN JUAN WATER COMMISSION

By

L. Randy Kirkpatrick
Executive Director

2-15-2009

Date

Date: July 28th, 2008

SOUTHERN UTE INDIAN TRIBE

By: Clement J Frost
Clement J. Frost, Chairman

IN WITNESS WHEREOF, the Parties hereto have caused this Intergovernmental Agreement Establishing the Animas-La Plata Operations and Maintenance Association to be duly executed as of the date and year first above written.

Approved as to form:

Daniel H. Israel

Counsel

1/14/09

Date

UTE MOUNTAIN UTE TRIBE

By

Chairman, Ute Mountain Ute Tribe

1/12/09

Date

Exhibit A

CONCEPTS AND PRINCIPLES FOR THE OPERATION AND ALLOCATION OF THE OM&R COSTS OF THE ANIMAS-LA PLATA PROJECT

1 **Intent of the Parties.** The Parties[1] have worked together for many years in support of the Animas-La Plata Project ("ALP") that will supply water to communities and Indian Tribes in Northwestern New Mexico and Southwestern Colorado. The ALP also serves as the foundation for the settlement of the water rights claims of the Ute Mountain Ute Tribe and Southern Ute Indian Tribe (collectively "Ute Tribes") in Colorado and includes an element in the proposed Navajo Nation water rights settlement in New Mexico. The intent of these concepts and principles is to allocate fairly and appropriately the Operation, Maintenance and Replacement ("OM&R") costs of the ALP and to provide for its operation in a manner that will benefit all of the Project participants[2] to the fullest extent possible.

2 **Applicable Law.** The Association shall operate the ALP in accordance with applicable decrees, compacts (including negotiated compact accounting principles) and other law.

3 **Water Supply Optimization and Utilization.** The Project water supply shall be allocated to the Project participants on the basis of their "Statutory Water Allocations" as set forth in the Colorado Ute Settlement Act Amendments of 2000, Pub. L. No. 106-554, 114 Stat. 2763A-258 to 2763A-266, Title III, §§ 301-03 (2000) ("2000 Settlement Act Amendments"). The ALP shall be operated to optimize the Project water supply by managing the water supplies available, whether from direct flow or from storage, as a joint pool for the mutual benefit of the Project participants with the intent that Ridges Basin Reservoir, sometimes called Lake Nighthorse ("Reservoir"), remains full whenever practicable. The Project participants recognize, however, that at times it may be preferable to delay pumping water to replace the Project water supply in the Reservoir until power costs are less expensive and thus that the Reservoir may not be full at all times.

4 **Water Supply Delivery.** The Management Committee shall establish procedures for the delivery of Project water consistent with the following principles:

4.01 Project participants shall be required to advise the Management Committee of their anticipated annual, monthly, and daily water demands. The Management

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[1] In general, capitalized terms in this document have the same meaning as in the Intergovernmental Agreement ("IGA").

[2] The term "Project participants" means entities receiving water from ALP. ALP's water supply is referred to as "Project water" or "Project water supply."

Committee shall cooperate with Project participants to meet those demands whenever feasible and practical.

4.02 Whenever feasible and practical, Project participants shall take delivery of their portion of the Project water supply by direct ALP diversions ("River Water") without putting it in storage.

4.03 The Project shall be operated to maintain a Joint Storage Pool for the benefit of all Project participants. The Project water supply in the Joint Storage Pool shall be allocated among Project participants whose water supplies will not be satisfied from River Water.

4.04 Unless and until the City of Durango agrees to take its Project water in accordance with the other provisions of this document, 2,133 acre feet of the active storage capacity of the Reservoir shall be operated and accounted as the Durango Pool, and the remainder of the active storage capacity shall be operated and accounted as the Joint Storage Pool. The Durango Pool, and all water stored therein, will be available only for use by the City of Durango to supplement direct diversions available to fulfill the City of Durango's annual Project water supply. Water diverted into the Reservoir to fill or refill Project storage capacity will be allocated to the City of Durango pro rata to the share the Durango Pool represents of total active Project storage capacity; that is, of every acre foot of water diverted into storage, 2,133/ 95,030 acre feet will be allocated and accounted to the Durango Pool until Durango's 2,133-acre-foot cap is met, and the balance to the Joint Storage Pool. Evaporation and seepage from Ridges Basin Reservoir will be allocated to the Durango Pool pro rata to the share the Durango Pool represents of the total active Project storage capacity.

4.05 A Project participant's unused allocations of Project water supply in the Joint Storage Pool shall not be carried over in the month-to-month accounting.

4.06 Water otherwise available for diversion by the Project and passed by the Durango Pumping Plant to meet federal environmental requirements for ALP shall be available for direct diversion by Project participants downstream of the Durango Pumping Plant, provided that such water is identified and accounted for as Project water in accordance with Paragraphs 2 and 10.

4.07 A Project participant may elect to take delivery of less than its full Statutory Water Allocation in any year without losing the right to delivery of its full entitlement in future years. A Project participant's election to not take full delivery of its Statutory Water Allocation shall not constitute evidence of an intention to abandon the water right.

4.08 A Project participant may not take delivery of more than its Statutory Water

Allocation unless it has lawfully obtained from another Project participant the right to use all or a portion of that participant's Statutory Water Allocation for a specified time period and obtained any necessary changes to applicable decrees or project authorizations.

4.08.01 Subject to applicable law as described in Paragraph 2, a Project participant may contract to allow another entity to use all or a portion of that Project participant's Statutory Water Allocation whether or not that entity is a Project participant.

4.08.02 For purposes of this document, water delivered pursuant to such a contract shall be charged against the Statutory Water Allocation of the Project participant that allowed another entity to use its allocation of Project water.

4.09 If a Project participant requests Project water but does not use the requested supply after the requested Project water has been bypassed or released from storage, the amount of Project water requested shall be charged against that Project participant's monthly and annual water allocation.

4.010 The deliveries for each Project participant shall be measured (1) from the Animas River at the point of diversion for the Durango Pumping Plant, (2) at the point at which water is delivered to the City of Durango, (3) from the outlet works at Ridges Basin Dam, or (4) for those participants taking water directly from the Reservoir, at the points of diversion from the Reservoir. The Management Committee may require additional measurements for accounting and administrative purposes.

4.011 The Association shall not be responsible for transit losses once Project water passes the Durango Pumping Plant, is delivered to the City of Durango, is released from the Reservoir, or is taken from the Reservoir.

4.012 The Project participants shall cooperate with state and tribal water administrators to administer, protect and deliver Project water supplies.

4.013 The Project participants will cooperate with the appropriate federal agencies in accounting for the "average annual depletion" associated with the Project as a whole and with each Project participant.

4.014 Nothing in this document is intended to prohibit a Project participant from using additional non-Project water available below the measuring points described above, provided that the participant has sufficient independent water rights to make use of such water.

4.015 Allocations of Project water supply shall be based on the current water year without regard to the volume of water used by a Project participant in previous years.

5 **Water Supply Shortages.** The Management Committee shall establish procedures for the allocation of the Project water supply in times of shortage consistent with the following principles:

5.01 The Project shall be operated to deliver to all Project participants their respective Statutory Water Allocations whenever possible.

5.02 Shortages in the Project water supply shall generally be allocated among the Project participants in proportion to their Statutory Water Allocations, taking account of the needs of all Project participants and the desirability of securing a firm, reliable water supply for present and future use by Project participants.

5.03 Whenever River Water is not sufficient to satisfy the flow requirement for all the Project participants requesting the delivery of all or a portion of their Project water, the River Water shall be allocated to those Project participants that can use Project water directly from the river. In such case, the flow requirement of those Project participants that cannot use Project water directly from the river shall be satisfied from storage.

5.04 Whenever the River Water is not sufficient to satisfy the flow requirement of all of those Project participants that can use Project water directly from the river, the River Water shall be allocated by the Management Committee among those Project participants, taking account of Paragraph 5.02 and the facts and circumstances at the time in order to optimize the Project water supply to all Project participants. Any shortage may be satisfied from storage consistent with Paragraph 4.03.

5.05 The Management Committee may establish annual conservation measures in an effort to maintain carryover storage for subsequent years.

6 **Fixed OM&R Costs.** The Management Committee shall establish procedures for the assessment and collection of fixed OM&R costs consistent with the following principles:

6.01 Each Project participant shall be assessed annually its projected share of the annual fixed OM&R costs and shall pay such charges within a reasonable time period in advance of the water year.

6.02 Fixed OM&R costs shall be allocated as follows:

Southern Ute Indian Tribe	35.5%

Ute Mountain Ute Indian Tribe	35.5%
La Plata Conservancy District	1.6%
SJWC	8.7%
CWRPDA (ALPWCD)	5.7%
Navajo	2.5%
Colorado	10.5%
Total	100%

If part of a Party's Statutory Water Allocation is reallocated or relinquished, the proportionate share of the Fixed OM&R Costs shall be allocated to the entity that receives that portion of the Statutory Water Allocation.

6.03 Fixed OM&R costs include costs of labor, materials and equipment required to maintain all pumps, reservoirs and inlet conduit and other Project features.

6.04 Fixed OM&R costs include costs of Project administration and overhead, including all costs incurred by the Association to protect joint Project interests.

6.05 Fixed OM&R costs include energy consumption and that share of power demand costs attributable to the pumping of water to the Reservoir to account for evaporation and seepage losses.

6.06 The calculation of fixed costs shall include an appropriate reserve fund as determined by the Management Committee.

7 **Variable OM&R Fund.** The Ute Tribes shall each deposit, in a fund for the payment of the Project Variable OM&R costs[3] ("the Fund"), $1.5 million from that portion of its Tribal Resource Fund authorized by Congress in the 2000 Settlement Act Amendments which is to be "utilized to enhance, restore and utilize the Tribes' natural resources in partnership with adjacent non-Indian communities or entities in the area."

7.01 After the execution of the IGA establishing the Association, the Project participants shall use their best efforts to promptly secure the approvals required for the establishment of the Fund. The Fund shall be in the name of the Association and shall become the property of the Association.

7.02 Only the income earned on the principal in the Fund shall be available for payment of Variable OM&R costs. Any annual income earned on the amounts in the Fund that cannot be applied in that year to pay Variable OM&R costs for replacing water used during that year shall be used in successive year(s) to replace water used in that year, or until the Reservoir is full. Any annual income earned on the amounts

[3] "Variable OM&R costs" are defined in Paragraph 8.03.

in the Fund that is not used to pay Variable OM&R costs as set forth in this paragraph shall become part of the Fund principal.

7.03 Any funds in the Fund principal shall remain in the principal unless the Members unanimously decide otherwise.

7.04 Variable OM&R costs for all Project participants except the City of Durango shall be paid from the Fund to the extent such funds are available. In the event that the annual income earned on funds in the OM&R Fund does not cover all such Variable OM&R costs, the remaining costs shall be allocated among the Project participants in accordance with Paragraph 8.02.

7.05 Under this document, the City of Durango will take its Project water in accordance with Paragraph 4.04 and none of its costs will be covered by the Fund. In the event the City of Durango agrees to take its Project water in accordance with the other provisions of this document, i.e., to participate in the joint pool, its variable OM&R costs shall be covered by the Fund in accordance with Paragraph 7.04.

8 **Variable OM&R Costs.** The Management Committee shall establish procedures for the assessment and collection of the variable OM&R costs in excess of the costs paid pursuant to Paragraph 7, consistent with the following principles:

8.01 Each Project participant shall be assessed its share of the projected variable OM&R costs at least once a year and shall pay such charges within a reasonable time period in advance of the water year.

8.02 Each Project participant shall be responsible for the actual Variable OM&R costs for the Project water supply delivered to that Project participant.

8.03 "Variable OM&R costs" are the costs of power including energy consumption and that share of power demand costs for the pumping of water not designated as Fixed OM&R costs.

8.04 Variable OM&R costs attributable to a specific Project participant shall be paid for by that Project participant.

9 **Exclusions.** The Association shall not be responsible for the OM&R of the Navajo Nation Municipal Pipeline, the ALP Mitigation Area in the La Plata River Basin, or the costs associated with those features.

10 **Miscellaneous.** The Parties agree to pursue as a group any administrative or judicial steps required to assure that Project operations as set forth in this document are in conformity with applicable law. Each Project participant has the right to make maximum beneficial use of its respective Statutory Water Allocation so long as such use is consistent with

applicable law and does not injure other water rights or other participants' Statutory Water Allocations. The Parties agree that if the Fund is not established by December 31, 2012, they will cooperate in good faith to modify this Agreement as needed.

11 **Modifications.** These concepts and principles may be modified as provided in Section 4.6 of the IGA.

Appendix E-2
Animas-La Plata Project
Operations, Maintenance and Replacement Contract

Contract No. 10-WC-40-370

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION

ANIMAS-LA PLATA PROJECT
COLORADO RIVER STORAGE PROJECT

OPERATION, MAINTENANCE, AND REPLACEMENT CONTRACT

Contract No. 10-WC-40-370

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION

ANIMAS-LA PLATA PROJECT
COLORADO RIVER STORAGE PROJECT

OPERATION, MAINTENANCE, AND REPLACEMENT CONTRACT

THIS CONTRACT, made this 30th day of December, 2009, pursuant to the Act of Congress approved June 17, 1902 (32 Stat. 388) , and acts amendatory thereof or supplementary thereto, all of which acts are commonly known and referred to as the Federal Reclamation Laws, among the UNITED STATES OF AMERICA, hereinafter called the United States, and the Animas-La Plata Operations, Maintenance, and Replacement Association, hereinafter called the Association, with its principal place of business and office at Durango, Colorado.

EXPLANATORY RECITALS

The following statements are made in explanation:

The Act of Congress approved April 11, 1956 (70 Stat. 105), authorized the planning and investigation of the Animas-La Plata Project (Project) as a participating project of the Colorado River Storage Project; subsequently, the construction, operation, and maintenance of the Animas-La Plata Project was authorized by Title V of the Colorado River Basin Project Act of September 30, 1968 (82 Stat. 896), and the United States has investigated, planned, and is constructing said Animas-La Plata Project for the storage, diversion, and distribution of the waters of the Animas River, which Project has among its authorized purposes the storage and furnishing of water for municipal and industrial purposes including such water to settle certain federal Indian water right claims. The water rights settlement purposes of the Project were authorized by the Colorado Ute Indian Water Rights Settlement Act of 1988 (Public Law 100-585) as amended by the Colorado Ute Settlement Act Amendments of 2000 (2000 Amendments), Title III of Public Law 106-554. The operation of the Animas-La Plata Project is

also subject to the Animas-La Plata Project Compact between the States of New Mexico and Colorado, § 37-64-101, CRS, and NMSA § 72-15-1. The Southwestern Water Conservation District (District) holds Colorado water rights for the Animas La Plata Project under decrees entered in Civil Actions B-1751 and C-807, District Court, La Plata County, as changed in Case No. 80CW237, District Court, Water Division 7. The District has applied for a new water right for an additional filling source for Lake Nighthorse in Case No. 08CW81.

The Southern Ute Indian Tribe, Ute Mountain Ute Tribe, Navajo Nation, Colorado Water Resources and Power Development Authority (CWRPDA) (for the Animas-La Plata Water Conservancy District (ALPWCD), the San Juan Water Commission (SJWC), and the La Plata Conservancy District (LPCD), have entered into an Intergovernmental Agreement (IGA) establishing the Association in order to carry out the operation, maintenance and replacement ("OM&R") activities and responsibilities of the sponsors for the Project in accordance with the provisions of the IGA, the Enabling Law defined below, and this Contract.

The parties enter into this Contract to provide for the necessary OM&R activities of the Transferred Works (as defined below).

NOW THEREFORE, in consideration of the terms and conditions of this Contract, the parties agree as follows:

1. DEFINITIONS

Where used in this Contract:

(a) "Association" means the Animas-La Plata Operations, Maintenance, and Replacement Association, established by the Project sponsors who were signatory to the IGA, dated March 4, 2009, pursuant to the Colorado Uniform Unincorporated Nonprofit Association Act, 7-30-101 et seq., CRS (2006), to carry out the OM&R activities and responsibilities of the Project.

(b) "IGA" or "Intergovernmental Agreement" means that agreement dated March 4, 2009, entered into by the Colorado Water Resource and Power Development Authority, the La Plata Conservancy District, the Navajo Nation, the San Juan Water Commission, the Southern Ute Indian Tribe, and the Ute Mountain Ute Tribe to establish the Association and

provide for the terms, conditions, and concepts under which OM&R of the Transferred Works is to take place.

(c) "United States", "Secretary", "Reclamation" or "Contracting Officer" or any of them means the Secretary of the United States Department of the Interior or his/her duly authorized representative.

(d) "Four Corners Construction Office" means the Reclamation office responsible for overseeing the design and construction of the Animas-La Plata Project.

(e) "Western Colorado Area Office" means the Reclamation office responsible for overseeing the OM&R activities associated with the Animas-La Plata Project.

(f) "Regional Director" means the Regional Director of Reclamation's Upper Colorado Region.

(g) "Sponsors" means those entities that contract with the United States regarding water from this Project.

(h) "Project" means the Animas-La Plata Project, a participating Project of the Colorado River Storage Project.

(i) "Statutory Water Allocation" means the municipal and industrial (M&I) water allocation pursuant to the 2000 Amendments.

(j) "Project Storage Water" means the portion of the Statutory Water Allocation provided from storage in Lake Nighthorse (formerly Ridges Basin Reservoir), the storage component of the Project.

(k) "Transferred Works" means Ridges Basin Dam and Lake Nighthorse and their appurtenant facilities, including the downstream channel improvements on Basin Creek; Durango Pumping Plant, and its appurtenant facilities; Ridges Basin Inlet Conduit, and its appurtenant facilities; and the Operation and Maintenance Facilities which are necessary to support the operation and maintenance of the Project, and for which the OM&R responsibility is anticipated to be transferred to the Association by the United States, as further described in Article 5 herein.

(l) "Consultation" or "Consult" refers to an ongoing obligation of both parties to implement the provisions of this Contract with a full exchange of information so as to assure that each party is provided full participation in the decision making process. Consultation

shall be required of each party with respect to each section of the Contract regardless of whether the section itself sets forth a consultation requirement. The Consultation required shall be reasonable under the circumstances, and except in exigent circumstances Consultation shall be undertaken in advance of decision making. In the event that agreement cannot be reached and the United States makes a decision that is required in order to conduct operation, maintenance, and replacement for the Transferred Works, appeals are available to the extent allowed under applicable laws.

2. APPLICABLE LAW

(a) In addition to the Project authorizations cited earlier, the transfer of operation and maintenance herein is authorized pursuant to Section 6 of the Reclamation Act (Act of June 17, 1902, 32 Stat. 388); Section 5 of the Reclamation Extension Act (Act of August 13, 1914, 38 Stat. 686); and Subsection G of the Second Deficiency Appropriation Act for 1924 (Fact Finders' Act, Act of December 5, 1924, 43 Stat. 672); the Transfer Title to Movable Property to Irrigation Districts Act (Act of July 29, 1954, 68 Stat. 580), and the Amend Movable Property Title Transfer Act (Act of June 24, 1965, 79 Stat. 172).

(b) OM&R of the Project shall be consistent with the Record of Decision dated September 25, 2000, and in accordance with the Environmental Commitments in Chapters 4 and 5 of the Animas-La Plata Final Supplemental Environmental Impact Statement (FSEIS), which are attached as Exhibit A to this contract; the parties acknowledge that the IGA provides for operation of the Transferred Works in accordance with the Record of Decision.

(c) Any additions, changes to, or operation of Transferred Works different from that stated in the FSEIS dated July 2000 and subsequent Record of Decision dated September 25, 2000, may be subject to further compliance with applicable environmental statutes and must be approved by the United States.

3. TERM OF THE CONTRACT

This Contract shall become effective upon the date of execution by the Contracting Officer, and shall remain in full force and effect until terminated by mutual written agreement of the United States and the Association, unless terminated pursuant to Article 11

herein. The actual transfer of OM&R responsibility for the Transferred Works to the Association will occur as set forth in Article 5.

4. TRANSFERRED WORKS

(a) As contemplated by Article 15 below, the United States shall transfer to the Association, pursuant to the process outlined in Article 5, the responsibility for the OM&R of the Transferred Works. In addition, the United States shall also transfer to the Association certain movable property and equipment determined by the Contracting Officer, after Consultation with the Association, to be required for the OM&R of the Transferred Works. A detailed list of the movable property and equipment will be mutually agreed to and included in the Transfer Inspection Report defined below.

(b) The Association shall not be responsible for the operation, maintenance, replacement and management of the following Project features, lands, facility relocations, or appurtenant facilities:

(1) Navajo Nation Municipal Pipeline, the OM&R responsibility for which will be addressed in the water delivery contract between the Contracting Officer and the Navajo Nation;

(2) Recreation facilities at Lake Nighthorse;

(3) Mitigation Area and related lands located in the La Plata River Basin;

(4) County Road 211, gas lines, power lines;

(5) And other facilities as specified between the United States and the Association.

(c) Consultation between and approval of both the Association and the United States will be required in any instance where a Contract duty of a party may be affected by any action or program undertaken by the other party.

5. TRANSFER INSPECTION

Transfer from Reclamation construction status to Reclamation OM&R status and subsequent transfer of OM&R responsibility from Reclamation to the Association shall occur as set forth in this article. Title to all Project Works will remain with the United States unless and until the Congress of the United States provides otherwise.

(a) The transfer process will begin upon notification of substantial completion by the Four Corners Construction Office. The Western Colorado Area Office shall notify the Association upon receipt of the notification. Thereafter Reclamation shall conduct a transfer inspection in Consultation with the Association. Reclamation will then prepare a report on the inspection (the "Transfer Inspection Report"), which will contain:

(1) a detailed list of the facilities and of the movable property and equipment to be transferred, together with: (a) a description of manufacturers' warranties to be provided and/or transferred to the Association in connection with the Transferred Works and other facilities and property to be transferred; (b) pertinent design, construction, and as-built documents for the Transferred Works; and (c) maintenance protocols, equipment manuals, and other like items relating to the operation and maintenance of the Transferred Works;

(2) a list of design and construction deficiencies, if any, identified by the transfer inspection in the Transferred Works and other facilities and property to be transferred;

(3) a plan for correcting any such deficiencies, setting forth: (a) the corrective measures to be applied; (b) the entity or entities responsible for undertaking such corrective measures, including when they will be undertaken and how they will be funded; (c) anticipated completion dates for the corrective measures; and

(4) any other matters required by Reclamation Directives and Standards.

(b) Approval by the Four Corners Construction Office, the Regional Director, and the Western Colorado Area Office of the Transfer Inspection Report will conclude the transfer process from Reclamation construction status to Reclamation OM&R Status. Upon conclusion of the transfer process, Reclamation will provide written notice to the Association of substantial completion of the Project. Unless hydrologic or unforeseen conditions prevent the completion of first fill by August 1, 2012, the first fill of Lake Nighthorse will be completed prior to transfer from Reclamation construction status to Reclamation OM&R Status. The transfer to Reclamation OM&R status shall not affect Reclamation's obligation to complete the first fill of Lake Nighthorse.

(c) The transfer of OM&R responsibility from Reclamation to the Association shall be complete upon approval by the Association of the Transfer Inspection Report and any Supplemental Transfer Inspection Report, if any is required. The Association may request a Supplemental Transfer Inspection Report to address any outstanding measures or issues discovered following transfer to Reclamation OM&R Status.

6. ACCEPTANCE OF OPERATION, MAINTENANCE, AND REPLACEMENT RESPONSIBILITY

After receiving the OM&R responsibility pursuant to Article 5, the Association shall, at its own cost and expense except as provided in Article 7(c) below, carry out the OM&R of the Transferred Works. The Association shall employ a competent and suitable manager or operating entity after Consultation with the United States. In the event the United States raises material concerns about the competence or suitability of the manager or operating entity, the parties shall promptly Consult as to the future best interests of the Project. Nothing in this Contract shall prevent the Association from implementing an appropriate program of Indian preference in hiring or contracting.

7. OPERATION, MAINTENANCE, AND REPLACEMENT COSTS

(a) The OM&R costs for the Transferred Works shall consist of both fixed and variable OM&R costs as specified in Exhibit A of the IGA.

(b) In addition to fixed OM&R costs provided in Sections 6.03, 6.04, 6.05, and 6.06 of Exhibit A of the IGA, fixed OM&R costs shall include costs incurred to replace water released for required operational tests subsequent to transfer of OM&R responsibility to the Association, annual payments to an Emergency Reserve Fund defined below, and annual payments to a replacement reserve fund ("Replacement Reserve Fund"). Payments to the Emergency Reserve Fund shall be made pursuant to the provisions of Article 17 herein. The Association shall make annual payments in the amount of $45,000, as appropriately adjusted for inflation, to the Replacement Reserve Fund to ensure adequate funds are available to replace equipment when needed.

(c) The OM&R costs allocated under (a) and (b) above shall be developed by the Association. The Association will begin payment of OM&R costs when the Project has been transferred from construction status to Reclamation OM&R status.

(1) Fixed OM&R costs shall be allocated as follows:

1.	Southern Ute Indian Tribe	35.5%
2.	Ute Mountain Ute Indian Tribe	35.5%
3.	La Plata Conservancy District	1.6%
4.	SJWC	8.7%
5.	CWRPDA (ALPWCD)	5.7%
6.	Navajo	2.5%
7.	Colorado	10.5%
	Total	100%

During the time the United States is paying all or any portion of a Colorado Ute Tribe's OM&R costs, the Association may only change the foregoing fixed OM&R cost allocation with the approval of the United States. Thereafter, the allocation may be changed by the Association utilizing the processes set forth in the IGA.

(2) If part of an entity's Statutory Water Allocation is reallocated or relinquished, the proportionate share of the fixed OM&R costs shall be allocated to the entity that receives that portion of the Statutory Water Allocation. Colorado will have no obligation for OM&R costs if it does not acquire any portion of its Statutory Water Allocation, and its obligation will be reduced proportionately if it acquires less than its full allocation.

(3) Variable OM&R costs shall be calculated and paid as provided in Sections 7 and 8 of Exhibit A of the IGA.

(d) With respect to the Statutory Water Allocation of a Colorado Ute Tribe from the Animas-La Plata Project, until that water is first used by that Tribe or used pursuant to a water use contract with that Tribe, the Secretary shall pay the annual OM&R costs allocable to that Statutory Water Allocation of that Tribe. Upon either Colorado Ute Tribe's first use of any increment of its water allocation, or the Tribe's first use of such water pursuant to a water use contract, that Tribe shall bear a pro rata share of the allocable annual OM&R costs for that increment of water. The Secretary's obligation to pay OM&R costs, as set forth

herein, shall not be diminished by reason of the transfer of OM&R responsibilities to the Association. The Secretary shall pay Colorado Ute OM&R costs consistent with the procedures established by the Association, and in accordance with the 2000 Amendments.

(e) The expenditure or advance of any money or the performance of any obligation of Reclamation under this contract shall be contingent upon appropriation or allotment of funds by the Congress of the United States. The United States shall Consult with, and timely apprise the Association of, its progress in securing funds to defray its OM&R payment obligation as allowed by budgetary statutes and regulations. In the event adequate funds are not appropriated or allotted by Congress, the Association will add any unappropriated, unallotted, or non-reimbursed amount to the OM&R costs that Reclamation is responsible for pursuant to Article 7(d) in the following water year provided, however, nothing in this article shall limit the rights of the Association to commence any appropriate action necessary against Reclamation to obtain any restitution, relief or remedy available by law in the event adequate funds are not appropriated or allotted by the Congress.

(f) During any period in which the United States is performing the OM&R on the Transferred Works, the Association agrees it will pay, in advance, on the basis of annual estimates made by the Contracting Officer, in accordance with standard Reclamation procedures and Reclamation law, the OM&R costs of the Transferred Works operated by the United States and determined by the Contracting Officer to be properly chargeable to the Association. A notice of annual estimates hereinafter referred to as the operation and maintenance charge notice, shall be furnished to the Association on or before June 1 of each year, and shall contain a statement of the estimated cost of operation and maintenance to be paid by the Association for the following calendar year. The Association agrees to pay the amount specified in such operation and maintenance charge notice on or before December 31 of the year in which the notice is given. Notwithstanding the other provisions of this article, whenever funds so advanced are inadequate to pay the Association's share of operating and maintaining the works being operated by the United States, the Contracting Officer shall give a supplemental operation and maintenance charge notice stating therein the amount of additional funds required and the Association shall advance such additional funds on or before the date specified in any supplemental notice. If the funds advanced by the

Association, under this article, exceed the actual cost of operation, and maintenance, properly chargeable to the Association for the year for which advanced, an appropriate adjustment will be made in the notice issued the next succeeding year.

(g) If, during any period in which the United States is operating the Project, the Association fails to make payments pursuant to Articles 7(a) through 7(f) above, the OM&R payment provisions contained in individual Sponsors' repayment contracts with the United States will be invoked.

(h) ONE-YEAR WORK PLAN: Upon Reclamation's transfer of the OM&R responsibility of the Transferred Works to the Association, the Association will develop a one year detailed OM&R work plan. The Association will finalize and approve the work plan by October 1 of each year.

(i) THREE-YEAR WORK PLAN: Upon Reclamation's transfer of the OM&R responsibility of the Transferred Works pursuant to Article 5 herein, the Association will prepare a three year OM&R work plan and submit it to Reclamation by July 1 of each year for Reclamation's budget appropriation purposes.

(j) Consultation with Reclamation: During the period in which the United States is paying all or a portion of the two Ute Tribes' OM&R costs, the Association shall Consult with Reclamation prior to finalizing the three-year and one-year Work Plans described herein. Reclamation shall Consult with the Association regarding its progress in securing the funds needed for the United States to meet its obligations under this Contract.

(k) The payment of OM&R costs by the Association as identified in Article 7(a) through 7(f) substitutes for the OM&R payment provisions required by Sponsors under their individual repayment or water delivery contracts. Payment of the Colorado Ute Tribes' OM&R costs by the United States shall be in accordance with Section 6 of the 2000 Amendments.

8. MEASUREMENT AND DISTRIBUTION OF STATUTORY WATER ALLOCATION

(a) The United States has installed measuring devices and the Association shall measure water delivered through the main outlet works of Ridges Basin Dam and/or in the Animas River at the Durango Pumping Plant. The Association shall operate, maintain, and replace

these measuring devices and shall install, operate, maintain and replace any devices necessary to measure water delivered directly out of Lake Nighthorse at points not through the main outlet works, or diverted directly from the river.

(b) All non-project facilities and appurtenant structures required for taking water furnished under this Contract from the points of delivery and putting it to use by the Sponsors and their subcontractors will be acquired, constructed or installed, and operated and maintained by the Sponsors or their subcontractors at their sole expense. Construction of facilities on Reclamation-owned land required to deliver water directly from Lake Nighthorse shall require review and written approval by the Contracting Officer after Consultation with the Association.

(c) The United States shall not be responsible for the control, carriage, handling, use, disposal, or distribution of water furnished the Sponsors from Lake Nighthorse, the outlet works of Ridges Basin Dam, or bypassed at the Durango Pumping Plant to the place of final use. The Association will hold the United States harmless on account of damage or claim of damage of any nature whatsoever arising out of or connected with the control, carriage, handling, use, disposal, or distribution of water by the Association.

9. PROJECT WATER SUPPLY, DELIVERY, AND SHORTAGES

(a) Accounting for and delivery of Project water shall be pursuant to Article 4 of Exhibit A of the IGA.

(b) Shortages to Statutory Water Allocations. During periods of drought, there may be a time when insufficient water is available to fulfill the annual Statutory Water Allocation. In such cases, shortages shall be administered pursuant to Article 5 of Exhibit A of the IGA.

10. LIMIT OF LIABILITY

(a) The United States or any of its officers, agents, or employees shall not be liable in any manner for the failure of the Project, for any reason, to supply water to which a Sponsor is entitled, except if such failure of delivery is caused by direct action of the United States, its officers, agents or employees. Nothing in this subarticle shall protect the Association from

any claim that it negligently or intentionally operated the Project so as to injure one or more of the Sponsors.

(b) There may occur at times during any year a shortage in the quantity of water available for furnishing to the Sponsors through and by means of the Project, but in no event shall any liability accrue against the United States or any of its officers, agents, or employees for any damage, direct or indirect, arising from a shortage on account of errors in operation, drought, or any other causes.

11. REMEDIES

(a) In the event the Association is found to be operating the Transferred Works or any part thereof in violation of this Contract or failing any financial or other commitment to the United States under the terms and conditions of this Contract, then upon the election of the Contracting Officer, the United States may (1) enforce the OM&R payment provisions in the Sponsor's individual repayment or water delivery contracts, and/or (2) take over from the Association the OM&R responsibility for the Transferred Works by giving written notice to the Association of such election and the effective date thereof. Thereafter, during the period of operation by the United States, upon notification by the Contracting Officer, the Association shall pay to the United States, annually in advance, the cost of OM&R of the Transferred Works as determined by the Contracting Officer. During this period, the United States will attempt to operate the Transferred Works in accordance with the principles contained in the IGA. At such time as the Association and the United States agree that the Association can and will once again operate the Transferred Works and fulfill its financial and other obligations as required by this Contract (or any supplement or amendment thereto), then upon written notice of the Contracting Officer, OM&R responsibility for the Transferred Works will again be transferred and assumed by the Association. All costs incurred by the United States in preparing to reassume OM&R responsibilities of the Transferred Works will be reimbursable and allocated as fixed costs. If costs are allocated as provided in Article 7 and water is allocated as provided in Article 9, the income from the Variable OM&R Fund (as defined in Exhibit A to the IGA) shall be made available to the United States for the purposes set forth in Exhibit A to the IGA. Nothing in this Agreement shall be deemed to

require the Association to convey the Variable OM&R Fund to the United States.

(b) During any period in which the United States is operating the Transferred Works, the United States shall not be responsible for the control, carriage, handling, use, disposal, or distribution of water that is delivered from Lake Nighthorse or bypasses the Durango Pumping Plant to the place of final use. The Association will hold the United States harmless on account of damage or claim of damage of any nature whatsoever arising out of or connected with the control, carriage, handling, use, disposal, or distribution of water by the Association.

(c) The Contracting Officer may terminate this Contract at any time before the expiration of its term whenever the Contracting Officer determines that the Association is in breach of the Contract. Prior to the effective date of any such termination, the Contracting Officer shall notify the Association in writing of the reason for the proposed termination, including with specificity, the purported deficiencies of the Association in carrying out the terms and conditions of this Contract. Such notice of purported deficiency shall be issued only after the designated representative of the Association has met with the Contracting Officer or his designated representative to attempt in good faith and with the use of best efforts to resolve any dispute arising from the purported deficiency. It is the intent of the parties that disputes be resolved pursuant to this Article 11 as expeditiously as is reasonably possible without the necessity of other relief at law or in equity. The Association shall have at least ninety (90) days from receipt of the written notice of said reasons for termination to correct all deficiencies referred to in said written notice or submit a plan to correct said deficiencies.

(d) Upon any termination of this Contract, the Association shall transfer to the United States (1) title to all tools, vehicles, supplies, and equipment transferred under Article 4(a) (to the extent still available) or purchased by the Association for the purposes of this Contract, (2) any unexpended funds in its possession that were collected for, or allocated to the OM&R of the Transferred Works for the then-current fiscal year, (3) upon appropriate credit to the Project Sponsors, and assurances that it will be used and maintained in accordance with Article 17 below, the Emergency Reserve Fund, (4) upon appropriate credit to the Project Sponsors, and assurances that it will be used and maintained solely for replacement purposes as set forth in Article 7, the Replacement Reserve Fund, and (5) provided that costs are

allocated as provided in Article 7 and water is allocated as provided in Article 9, the income from the Variable OM&R Fund shall be made available to the United States for the purposes set forth in Exhibit A to the IGA. Nothing in this Agreement shall be deemed to require the Association to convey the Variable OM&R Fund to the United States.

(e) Nothing in this Contract shall diminish the rights of either party to pursue claims or appeals otherwise recognized under applicable law.

12. COLLECTION OF INCIDENTAL REVENUES

All revenues derived from the rental or sale of land, interests in land, or other property acquired and retained by the United States for project purposes shall belong to the United States and not be credited to the Association. Lands retained by the United States do not include that portion of the unencumbered lands retained by the ALPWCD after the permanent easement boundaries for the United States are established as required in the Assignment of Easement dated October 10, 2002, and recorded on October 30, 2002, in the La Plata County records at R. # 841681. Nothing in this Contract shall prohibit the Association from seeking reimbursement for services it provides.

13. CHARGES FOR DELINQUENT PAYMENTS

(a) The Association shall be subject to interest, administrative, and penalty charges on delinquent payments. If a payment is not received by the due date, the Association shall pay an interest charge on the delinquent payment for each day the payment is delinquent beyond the due date. If a payment becomes 60 days delinquent, in addition to the interest charge, the Association shall pay an administrative charge to cover additional costs of billing and processing the delinquent payment. If a payment is delinquent 90 days or more, in addition to the interest and administrative charges, the Association shall pay a penalty charge for each day the payment is delinquent beyond the due date, based on the remaining balance of the payment due at the rate of 6 percent per year. The Association shall also pay any fees incurred for debt collection services associated with a delinquent payment.

(b) The interest charge rate shall be the greater of either the rate prescribed quarterly in the Federal Register be the Department of the Treasury for application to overdue payments or the interest rate of 0.5 percent per month. The interest charge rate will be determined as of the due date and remain fixed for the duration of the delinquent period.

(c) When a partial payment on a delinquent account is received, the amount received

shall be applied first to the penalty charges, second to the administrative charges, third to the accrued interest, and finally to the overdue payment.

14. NOTICES

Any notice, demand, or request authorized or required by this Contract shall be deemed to have been given, on behalf of the Association, when mailed, postage prepaid, or delivered to the Regional Director, Upper Colorado Region, Bureau of Reclamation, 125 South State Street, Room 6107, Salt Lake City, Utah 84138-1102, and on behalf of the United States, when mailed, postage prepaid, or delivered to the Association, 103 Everett Street, Durango, CO 81301. The designation of the addressee or the address may be changed by notice given in the same manner as provided in this article for other notices.

15. OPERATION AND MAINTENANCE OF TRANSFERRED WORKS PAYMENT OF MISCELLANEOUS COSTS

(a) Upon substantial completion of the Project, or as otherwise determined by the Contracting Officer, and following written notification, the care, operation, and maintenance of any or all of the Project may be transferred to the Association. Title to the Transferred Works will remain in the name of the United States, unless otherwise provided by the Congress of the United States.

(b) The Association, without expense to the United States, shall care for, operate, and maintain the Transferred Works in full compliance with the terms of this Contract and in a manner that the Transferred Works remain in good and efficient condition.

(c) Necessary repairs of the Transferred Works shall be made promptly by the Association. In case of unusual conditions or serious deficiencies in the care, operation, and maintenance of the Transferred Works threatening or causing interruption of water service, the Contracting Officer may issue to the Association a special written notice of those necessary repairs. Except in the case of an emergency, the Association will be given 60 days to either make the necessary repairs or submit a plan for accomplishing the repairs acceptable to the Contracting Officer. In the case of an emergency, or if the Association fails to either make the necessary repairs or submit a plan for accomplishing the repairs acceptable to the Contracting Officer within 60 days of receipt of the notice, the Contracting Officer may cause the repairs to be made, and the cost of those repairs shall be paid by the Association as directed by the Contracting Officer.

(d) The Association shall not make any substantial changes in the Transferred Works without first obtaining written consent of the Contracting Officer. The Association shall ensure that no unauthorized encroachment occurs on project land and rights-of-way.

(e) The Association agrees to indemnify the United States for, and hold the United States and all of its representatives harmless from, all damages resulting from suits, actions, or claims of any character brought on account of any injury to any person or property arising out of any act, omission, neglect, or misconduct in the manner or method of performing any construction, care, operation, maintenance, supervision, examination, inspection, or other duties of the Association or the United States on Transferred Works required under this Contract, regardless of who performs those duties. The Contractor does not agree to indemnify the United States for any damages arising from intentional torts or malicious actions committed by employees of the United States.

(f) The Association shall cooperate with the Contracting Officer in implementing an effective safety of dam(s) program. The United States agrees to provide the Association and the appropriate agency of the State or States in which the project facilities are located with design data, designs, and an operating plan for the dam(s) and related facilities consistent with the current memorandum of understanding between the United States and the State of Colorado relating to the coordination of planning, design, construction, operation, and maintenance processes for dams and related facilities.

(g) In addition to all other payments to be made by the Association under this Contract, the Association shall reimburse to the United States, following the receipt of a statement from the Contracting Officer, all miscellaneous costs incurred by the United States for any work involved in the administration and supervision of this Contract.

16. EXAMINATION, INSPECTION, AND AUDIT OF TRANSFERRED WORKS, RECORDS, AND REPORTS FOR DETERMINING ADEQUACY OF OPERATION AND MAINTENANCE

(a) The Contracting Officer may from time to time, examine the following: the Association's books, records, and reports; the Transferred Works being operated by the Association; the adequacy of the operation, maintenance, and safety of dams programs; the reserve fund; and the water conservation program including the water conservation fund, if applicable. Notwithstanding title ownership, where the United States retains a financial, physical, or liability interest in facilities either constructed by the United States or with funds provided by the United States, the Contracting Officer may examine any or all of the Transferred Works providing such interest to the United States.

(b) The Contracting Officer may or the Association may request the Contracting Officer to, conduct special inspections of any Transferred Works being operated by the Association and special audits of the Association's books and records to ascertain the extent of any operation and maintenance deficiencies to determine the remedial measures required for their correction and to assist the Association in solving specific problems. Except in an emergency, any special inspection or audit shall be made only after written notice thereof has been delivered to the Association by the Contracting Officer.

(c) The Association shall provide access to the Transferred Works, operate any mechanical or electrical equipment, and be available to assist in the examination, inspection, or audit.

(d) The Contracting Officer shall prepare reports based on the examinations, inspections, or audits and furnish copies of such reports and any recommendations to the Association.

(e) The costs incurred by the United States in conducting operation and maintenance examinations, inspections, and audits and preparing associated reports and recommendations related to high- and significant hazard dams and associated facilities shall be nonreimbursable. Associated facilities include carriage, distribution, and drainage systems; pumping and pump-generating plants; powerplant structures; tunnels/pipelines; diversion and storage dams (low hazard); Type 2 bridges which are Reclamation-owned bridges not located on a public road; regulating reservoirs (low hazard); fish passage and protective facilities, including hatcheries; river channelization features; rural/municipal water systems; desalting and other water treatment plants; maintenance buildings and service yards; facilities constructed under Federal loan programs (until paid out); and recreation facilities (reserved works only); and any other facilities as determined by the Contracting Officer.

(f) Expenses incurred by the Association, as applicable, in participating in the operation and maintenance site examination will be borne by the Association.

(g) Requests by the Association for consultations, design services, or modification reviews, and the completion of any operation and maintenance activities identified in the formal recommendations resulting from the examination (unless otherwise noted) are to be funded as project operation and maintenance and are reimbursable by the Association to the extent of current project operation and maintenance allocations.

(h) Site visit special inspections that are beyond the regularly scheduled operation and maintenance examinations conducted to evaluate a particular concern(s) or problem(s) and provide assistance relative to any corrective action (either as a follow up to an operation and maintenance examination or when requested by the Association) shall be nonreimbursable.

(i) The Contracting Officer may provide the State of Colorado an opportunity to observe and participate in, at its own expense, the examinations and inspections. The State of Colorado may be provided copies of reports and any recommendations relating to such examinations and inspections.

17. EMERGENCY RESERVE FUND

(a) Commencing with the date of transfer, the Association shall accumulate and maintain a reserve fund or demonstrate to the satisfaction of the Contracting Officer that other funds are available for use as an Emergency Reserve Fund. The Association shall establish and maintain that Emergency Reserve Fund to meet costs incurred during periods of special stress caused by damaging droughts, storms, earthquakes, floods, or other emergencies threatening or causing interruption of water service.

(b) The Association shall accumulate the Emergency Reserve Fund with annual deposits or investments of not less than $60,000 to a Federally insured, interest- or dividend-bearing account or in securities guaranteed by the Federal Government: *Provided, That* money in the Emergency Reserve Fund, including accrued interest, shall be available within a reasonable time to meet expenses for such purposes as those identified in paragraph (d) herein. Such annual deposits and the accumulation of interest to the Emergency Reserve Fund shall continue until the basic amount of $700,000 (April 2009 price levels) during the initial stages of the Project and $1,400,000 (April 2009 price levels) once the Project is under full operation is accumulated. The above amounts will be adjusted (adjusted balance) as may be justified by reason of ordinary fluctuations in the construction, operation and maintenance costs as indicated by engineering cost indices applicable to the types of construction, operation and maintenance for which this Emergency Reserve Fund is established. Following an emergency expenditure from the fund, the annual deposits shall continue from the year following the emergency expenditure until the previous balance (or adjusted balance if an adjustment pursuant to this paragraph or paragraph (c) is made) is restored. After the initial amount is accumulated or after the previous balance is restored, the annual deposits may be discontinued, and the interest earnings shall continue to accumulate and be retained as part of the Emergency Reserve Fund.

(c) Upon mutual agreement between the Association and the Contracting Officer, the Emergency Reserve Fund may be adjusted to account for risk and uncertainty stemming from the size and complexity of the Project; the size of the annual operation and maintenance budget; additions to, deletions from, or changes in Transferred Works; cost index; and operation and maintenance costs not contemplated when this Contract was executed. Any

funds identified as in excess of the adjusted balance of the Emergency Reserve Fund shall be transferred to the Replacement Reserve Fund established pursuant to Article 7, except that the interest earnings from the Emergency Reserve Fund shall continue to accumulate and be retained as part of the Emergency Reserve Fund.

(d) The Association may make expenditures from the Emergency Reserve Fund only for meeting usual operation and maintenance costs incurred during periods of special stress, as described in paragraph (a) herein; or for meeting unforeseen extraordinary operation and maintenance costs; or for meeting unusual or extraordinary repair or replacement costs; or for meeting betterment costs (in situations where recurrence of severe problems can be eliminated) during periods of special stress. Proposed expenditures from the fund shall be submitted to the Contracting Officer in writing for review and written approval prior to disbursement. Whenever the Emergency Reserve Fund is reduced below the adjusted balance pursuant to paragraphs (b) or (c) by expenditures therefrom, the Association shall restore that balance by the accumulation of annual deposits as specified in paragraph (b) herein.

(e) During any period in which any of the Transferred Works are operated and maintained by the United States, the Association agrees the Emergency Reserve Fund shall be available for like use by the United States.

(f) On or before October 1 of each year, the Association shall provide a current statement of the principal and accumulated interest of the Emergency Reserve Fund account to the Contracting Officer.

18. CONTINGENT UPON APPROPRIATION OR ALLOTMENT OF FUNDS

The expenditure or advance of any money or the performance of any obligation of the United States under this Contract shall be contingent upon appropriation or allotment of funds. Absence of appropriation or allotment of funds shall not relieve the Association from any obligations under this Contract. No liability shall accrue to the United States in case funds are not appropriated or allotted.

19. OFFICIALS NOT TO BENEFIT

No Member of or Delegate to the Congress, Resident Commissioner, or official of the Association shall benefit from this Contract other than as a water user or landowner in the same manner as other water users and landowners.

20. CHANGES IN ASSOCIATION'S ORGANIZATION

While this Contract is in effect, no change may be made in the Association's organization, by inclusion or exclusion of lands or by any changes which may affect the respective rights, obligations, privileges, and duties of either the United States or the Association under this Contract including, but not limited to, dissolution, consolidation, or merger, except upon the Contracting Officer's written consent.

21. ASSIGNMENT LIMITED–SUCCESSORS AND ASSIGNS OBLIGATED

The provisions of this Contract shall apply to and bind the successors and assigns of the parties hereto, but no assignment or transfer of this Contract or any right or interest

therein by either party shall be valid until approved in writing by the other party.

22. BOOKS, RECORDS AND REPORTS

The Association shall establish and maintain accounts and other books and records pertaining to administration of the terms and conditions of this Contract, including the Association's financial transactions; water supply data; Project operation, maintenance, and replacement logs; Project land and rights-of-way use agreements; the water users' land-use (crop census), land ownership, land-leasing, and water-use data; and other matters that the Contracting Officer may require. Reports shall be furnished to the Contracting Officer in such form and on such date or dates as the Contracting Officer may require. Subject to applicable Federal laws and regulations, each party to this Contract shall have the right during office hours to examine and make copies of the other party's books and records relating to matters covered by this Contract.

23. RULES, REGULATIONS, AND DETERMINATIONS

(a) The parties agree that the delivery of water or the use of Federal facilities pursuant to this Contract is subject to Federal Reclamation law, as amended and supplemented, and the rules and regulations promulgated by the Secretary of the Interior under Federal Reclamation law.

(b) The Contracting Officer shall have the right to make determinations necessary to administer this Contract that are consistent with the expressed and implied provisions of this Contract, the laws of the United States and the State, and the rules and regulations promulgated by the Secretary of the Interior. Such determinations shall be made in Consultation with the Association.

24. ADMINISTRATION OF FEDERAL PROJECT LANDS

The lands and interests in lands acquired, withdrawn, or reserved and needed by the United States for the purposes of care, operation, and maintenance of the Project may be used by the Association for such purposes. The Association shall ensure that no unauthorized encroachment occurs on the Transferred Works. The Association does not have the authority to issue any land-use agreement or grant that conveys an interest in Federal real property, nor to lease or dispose of any interest of the United States.

25. PROTECTION OF WATER AND AIR QUALITY

(a) Transferred Works used to make available and deliver water to the Association shall be operated and maintained in the most practical manner to maintain the quality of the water at the highest level possible as determined by the Contracting Officer: *Provided,* That the United States does not warrant the quality of the water delivered to the Association and is under no obligation to furnish or construct water treatment facilities to maintain or improve the quality of water delivered to the Association.

(b) The Association shall comply with all applicable water and air pollution laws and regulations of the United States and the States of Colorado and New Mexico; and shall obtain all required permits or licenses from the appropriate Federal, State, Tribal or local authorities necessary for the delivery of water by the Association; and shall be responsible for compliance with all Federal, State, Tribal, and local water quality standards applicable to

surface and subsurface drainage and/or discharges generated through the use of Federal or Association facilities or project water provided by the Association within the Association's Project Water Service Area.

(c) This article shall not affect or alter any legal obligations of the United States to provide drainage or other discharge services.

26. CONTAMINATION OR POLLUTION OF FEDERAL PROPERTY

(a) The Association shall not allow contamination or pollution of Federal Project lands, Project waters, or Project works of the United States or administered by the United States and for which the Association has the responsibility for care, operation, and maintenance by its employees or agents. The Association shall also take reasonable precautions to prevent such contamination or pollution by third parties.

(b) The Association shall comply with all applicable Federal, State, and local laws and regulations and Reclamation policies and instructions existing, or hereafter enacted or promulgated, concerning any hazardous material that will be used, produced, transported, stored, released, or disposed of on or in Federal Project lands, Project waters, or Project works and for which the Association has the responsibility for care, operation, and maintenance.

(c) "Hazardous material" means (1) any substance defined as hazardous, a pollutant, or a contaminant under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 42 U.S.C. § 9601 (14) and (33); (2) oil as defined by the Clean Water Act, 33 U.S.C. § 1321 (a) and the Oil Pollution Act, 33 U.S.C. § 2701 (23); (3) thermal pollution, refuse, garbage, sewage effluent, industrial waste, mine or mill tailings, mineral salts, pesticides, and other solid waste, and (4) any other substance regulated as hazardous or toxic under Federal, State, local or Tribal law.

(d) Upon discovery of any event which may or does result in contamination or pollution of Federal Project lands, Project water, or Project works for which the Association has the responsibility for care, operation, and maintenance, the Association shall immediately undertake all measures necessary to protect public health and the environment, including measures necessary to contain or abate any such contamination or pollution and shall report such discovery with full details of the actions taken to the Contracting Officer. Reporting shall be within a reasonable time period but shall not exceed 24 hours from the time of discovery if it is an emergency and the first working day following discovery in the event of a non-emergency.

(e) The Association shall be liable for any response action or corrective measure necessary to protect public health and the environment or to restore Federal Project lands, Project waters, or Project works for which the Association has the responsibility for care, operation, and maintenance that are adversely affected as a result of such violation, and for all costs, penalties or other sanctions that are imposed for violation of any Federal, State, local or Tribal laws and regulations concerning hazardous material. At the discretion of the Contracting Officer, the United States may also terminate this Contract as a result of such violation.

(f) The contractor shall defend, indemnify, protect and save the United States harmless from and against any costs, expenses, claims, damages, demands, or other liability arising from or relating to contractor's violation of this article.

(g) The United States agrees to provide information necessary for the Association, using reasonable diligence, to comply with the provisions of this article.

27. CLEAN AIR AND WATER

(a) The Association agrees as follows:

(1) To comply with all the requirements of Section 114 of the Clean Air Act, as amended (42 U.S.C. 7414), and Section 308 of the Federal Water Pollution Control Act, as amended by Public Law 92-500 (33 U.S.C. 1318), respectively, relating to inspection, monitoring, entry, reports, and information, as well as other requirements specified in Section 114 of the Air Act and Section 308 of the Water Act, respectively, and all regulations and guidelines issued thereunder before the execution of this Contract.

(2) That no portion of the work required by this Contract will be performed in a facility listed on the Environmental Protection Agency List of Violating Facilities on the date when this Contract was executed unless and until the Environmental Protection Agency eliminates the name of such facility or facilities from such listing.

(3) To use its best efforts to comply with clean air standards and clean water standards at the facility where the contract work is being performed.

(4) To insert the substance of the provisions of this article into any nonexempt subcontract, including this paragraph (a)(4).

(b) The terms used in this article have the following meanings:

(1) The term "Air Act" means the Clean Air Act, as amended (42 U.S.C. 7401).

(2) The term "Water Act" means the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 *et seq.*).

(3) The term "clean air standards" means any enforceable rules, regulations, guidelines, standards, limitations, orders, controls, prohibitions, or other requirements which are contained in, issued under, or otherwise adopted pursuant to the Air Act or Executive Order 11738, an applicable implementation plan as described in Section 110 of the Air Act (42 U.S.C. 7410), an approved implementation procedure or plan under Section 111(c) or Section 111(d), respectively, of the Air Act (42 U.S.C. 7411(c) or(d)), or an approved implementation procedure under Section 112(d) of the Air Act (42 U.S.C. 7412(d)).

(4) The term "clean water standards" means any enforceable limitation, control, condition, prohibition, standard, or other requirement which is promulgated pursuant to the Water Act or contained in a permit issued to a discharger by the Environmental Protection Agency or by a state under an approved program, as authorized by Section 402 of the Water Act (33 U.S.C. 1342), or by local government to ensure compliance with pretreatment regulations as required by Section 307 of the Water Act (33 U.S.C. 1317).

(5) The term "comply" means compliance with clean air or water standards. Comply shall also mean compliance with a schedule or plan ordered or approved by a court of competent jurisdiction, the Environmental Protection Agency, or an air or water pollution control agency in accordance with the requirements of the Air Act or Water Act and regulations issued pursuant thereto.

(6) The term "facility" means any building, plant, installation, structure, mine, vessel or other floating craft, location, or site of operations owned, leased, or supervised by a contractor or subcontractor to be utilized in the performance of a contract or subcontract. Where a location or site of operations contains or includes more than one building, plant, installation, or structure, the entire location or site shall be deemed to be a facility except

where the Director, Office of Federal Activities, Environmental Protection Agency, determines that independent facilities are collocated in one geographical area.

28. EQUAL EMPLOYMENT OPPORTUNITY

During the performance of this Contract, the Association agrees as follows:

(a) The Association will not discriminate against any employee or applicant for employment because of race, color, religion, sex, disability, or national origin. The Association will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, disability, or national origin. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Association agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the Contracting Officer setting forth the provisions of this nondiscrimination clause.

(b) The Association will, in all solicitations or advertisements for employees placed by or on behalf of the Association, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, disability, or national origin.

(c) The Association will send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, a notice, to be provided by the Contracting Officer, advising the labor union or workers' representative of the Association's commitments under Section 202 of Executive Order 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(d) The Association will comply with all provisions of Executive Order No. 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(e) The Association will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the Contracting Agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(f) In the event of the Association's noncompliance with the nondiscrimination clauses of this Contract or with any of such rules, regulations, or orders, this Contract may be canceled, terminated or suspended in whole or in part and the Association may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965 or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(g) The Association will include the provisions of paragraphs (a) through (g) in every subcontract or purchase order unless exempted by the rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The Association will take such action with respect to any subcontract or purchase order as may be directed by the Secretary of Labor as a means of enforcing such provisions, including

sanctions for noncompliance: *Provided, however,* that in the event the Association becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction, the Association may request the United States to enter into such litigation to protect the interests of the United States.

29. COMPLIANCE WITH CIVIL RIGHTS LAWS AND REGULATIONS

(a) The Association shall comply with Title VI of the Civil Rights Act of 1964 (42 U.S.C. 2000d), Section 504 of the Rehabilitation Act of 1973 (P.L. 93-112, as amended), the Age Discrimination Act of 1975 (42 U.S.C. 6101, *et seq.*), Title II of the Americans with Disabilities Act of 1990, and any other applicable civil rights laws, as well as with their respective implementing regulations and guidelines imposed by the U.S. Department of the Interior and/or Bureau of Reclamation.

(b) These statutes require that no person in the United States shall be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity receiving financial assistance from the Bureau of Reclamation on the grounds of race, color, national origin, disability, or age. By executing this Contract, the Association agrees to immediately take any measures necessary to implement this obligation, including permitting officials of the United States to inspect premises, programs, and documents.

(c) The Association makes this Contract in consideration of and for the purpose of obtaining any and all Federal grants, loans, contracts, property discounts, or other Federal financial assistance extended after the date hereof to the Association by the Bureau of Reclamation, including installment payments after such date on account of arrangements for Federal financial assistance which were approved before such date. The Association recognizes and agrees that such Federal assistance will be extended in reliance on the representations and agreements made in this article and that the United States reserves the right to seek judicial enforcement thereof.

(d) Complaints of discrimination against the Association shall be investigated by the Contracting Officer's Office of Civil Rights.

30. CERTIFICATION OF NONSEGREGATED FACILITIES

The Association hereby certifies that it does not maintain or provide for its employees any segregated facilities at any of its establishments and that it does not permit its employees to perform their services at any location under its control where segregated facilities are maintained. It certifies further that it will not maintain or provide for its employees any segregated facilities at any of its establishments and that it will not permit its employees to perform their services at any location under its control where segregated facilities are maintained. The Association agrees that a breach of this certification is a violation of the Equal Employment Opportunity clause in this Contract. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, rest rooms and wash rooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive or are in fact segregated on the basis of race, creed, color, or national origin, because of habit, local custom, disability, or otherwise. The Association further agrees that

(except where it has obtained identical certifications from proposed subcontractors for specific time periods) it will obtain identical certifications from proposed subcontractors prior to the award of subcontracts exceeding $10,000 which are not exempt from the provisions of the Equal Employment Opportunity clause; that it will retain such certifications in its files; and that it will forward the following notice to such proposed subcontractors (except where the proposed subcontractors have submitted identical certifications for specific time periods).

31. NOTICE TO PROSPECTIVE SUBCONTRACTORS OF REQUIREMENT FOR CERTIFICATIONS OF NONSEGREGATED FACILITIES

A Certification of Nonsegregated Facilities must be submitted prior to the award of a subcontract exceeding $10,000 which is not exempt from the provisions of the Equal Employment Opportunity clause. The certification may be submitted either for each subcontract or for all subcontracts during a period (i.e., quarterly, semiannually, or annually). Note: The penalty for making false statements in offers is prescribed in 18 U.S.C. 1001.

32. RELOCATION ASSISTANCE AND REAL PROPERTY ACQUISITION

When acquiring land or an interest in land and relocating persons or personal property in connection with the construction, operation, and maintenance of Project facilities, the Association shall comply with the provisions of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (84 Stat. 1894) and Department of Transportation regulations (49 CFR Part 24).

33. PEST MANAGEMENT

The Association shall take appropriate steps to prevent the introduction and spread of, and to otherwise control undesirable plants and animals, as defined by the Contracting Officer, on Federal Project lands, Project waters, and Project works for which the Association has operation and maintenance responsibility. The Association is responsible for inspecting its vehicles and equipment for reproductive and vegetative parts, foreign soil, mud or other debris that may cause the spread of weeds, invasive species and other pests, and for removing such materials before moving its vehicles and equipment onto any Federal land or out of any area on Federal Project land where work is performed. Where decontamination is required prior to entering Federal Project land, it shall be performed at the point of prior use, or at an approved offsite facility able to process generated cleaning wastes. Upon the completion of work, decontamination shall be performed within the work area before the vehicles and equipment are removed from Federal Project lands. Programs for the control of these undesirable plants and animals on Federal Project lands, Project waters, and Project works for which the Association has operation and maintenance responsibility will incorporate Integrated Pest Management (IPM) concepts and practices. IPM refers to a systematic and environmentally compatible program to maintain pest populations within economically and environmentally tolerable levels. In implementing an IPM program, the Association will adhere to applicable Federal and State laws and regulations and Department of the Interior and Bureau of Reclamation policies, directives, guidelines, and manuals.

34. MEDIUM FOR TRANSMITTING PAYMENTS

(a) All payments from the Association to the United States under this Contract shall be

by the medium requested by the United States on or before the date payment is due. The required method of payment may include checks, wire transfers, or other types of payment specified by the United States.

(b) Upon execution of the Contract, the Association shall furnish the Contracting Officer with the Association's taxpayer's identification number (TIN). The purpose for requiring the Association's TIN is for collecting and reporting any delinquent amounts arising out of the Association's relationship with the United States.

35. CONTRACT DRAFTING CONSIDERATIONS

Articles 1 through 12 of this Contract have been drafted, negotiated, and reviewed by the parties hereto, each of whom is sophisticated in the matters to which this Contract pertains, and no one party shall be considered to have drafted the stated articles.

IN WITNESS WHEREOF, the parties hereto have signed their names this day and year first written above.

Approved:

CARTER BROWN
Solicitor's Office

UNITED STATES OF AMERICA
DEPARTMENT OF THE INTERIOR

By: _____
Regional Director
Upper Colorado Region
Bureau of Reclamation

Attest:

By: _____

ASSOCIATION

By: _____

ANIMAS-LA PLATA OPERATION, MAINTENANCE AND REPLACEMENT ASSOCIATION
103 EVERETT STREET
DURANGO, CO 81303

RESOLUTION 2009-01

A RESOLUTION AUTHORIZING THE CHAIR OF THE ANIMAS LA PLATA OPERATIONS AND MAINTENANCE ASSOCIATION TO SIGN THE ANIMAS LA PLATA PROJECT OPERATION, MAINTENANCE, AND REPLACEMENT CONTRACT WITH THE UNITED STATES DEPARTMENT OF INTERIOR BUREAU OF RECLAMATION

WHEREAS, Public Law 106-554 authorized the reduced Animas La Plata Project which is now nearing completion; and

WHEREAS, the Colorado Water Resources and Power Development Authority, the San Juan Water Commission, the La Plata Conservancy District, the Southern Ute Indian Tribe, the Navajo Nation, and the Ute Mountain Ute Tribe entered into the Intergovernmental Agreement on the 4th of March 2009; and

WHEREAS, the Intergovernmental Agreement established The Animas La Plata Operations and Maintenance Association (Association) and provided for operational procedures developed in cooperation with the United States Department of Interior Bureau of Reclamation (Bureau); and

WHEREAS, the Association and the Bureau have jointly developed an Animas La Plata Operation, Maintenance and Reclamation Contract to permit the Association to operate the project; and

WHEREAS, the Association in a properly noticed meeting September 30, 2009, in Ignacio, Colorado by a majority authorized signature by the current Chair Dan Israel, of the Animas La Plata Operation, Maintenance and Replacement Contract with the Bureau.

NOW, THEREFORE, BE IT RESOLVED BY THE MEMBERS OF THE ANIMAS LA PLATA OPERATIONS AND MAINTENACE ASSOCIATION:

That the Association directs its Chair to execute the attached Animas La Plata Project Operation, Maintenance and Replacement Contract between the Association and the Bureau for the purpose of operating the Animas La Plata Water Development Project as contemplated in the Intergovernmental Agreement.

PASSED, APPROVED AND ADOPTED THIS 5th **DAY OF** November**, 2009**

ANIMAS LA PLATA OPERATIONS AND MAINTENANCE ASSOCIATION

Dan Israel

Dan Israel, Chair

Appendix E-3
Animas-La Plata Project
Administrative Protocol

COLORADO DIVISION OF WATER RESOURCES' PROTOCOL FOR ADMINISTRATION OF ANIMAS-LA PLATA PROJECT WATER RIGHTS

DATED: August 2013

Recommending Official:

8-26-13

Rege Leach — Date:
Division Engineer, Water Division 7

Approved by:

August 26, 2013

Dick Wolfe — Date:
Colorado State Engineer
Director of Colorado Division of Water Resources

COLORADO DIVISION OF WATER RESOURCES' PROTOCOL FOR ADMINISTRATION OF ANIMAS-LA PLATA PROJECT WATER RIGHTS
August 2013

The purpose of this Protocol is to identify guidelines and provide a reference document for use by State and Division Engineers in the State of Colorado (collectively "Engineers") when administering the water rights in Colorado related to the Animas-La Plata Project ("A-LP" or "Project"). The A-LP is a federally owned and congressionally-authorized water project. Its authorized purposes include providing water to the Southern Ute Indian Tribe and Ute Mount Ute Tribe ("Colorado Ute Tribes") as part of a congressionally authorized settlement, as well as serving Project Participants by delivering municipal and industrial water for use in Colorado and New Mexico. The Bureau of Reclamation ("Reclamation") holds title to the A-LP facilities, and has currently contracted with the Animas-La Plata Operation, Maintenance and Replacement Association ("A-LP OM&R Assn."). The A-LP OM&R Assn. was created by a March 4, 2009 Intergovernmental Agreement ("IGA") among certain State and Tribal parties to operate A-LP in furtherance of its congressional authorization. In Colorado, the Southwestern Water Conservation District ("SWCD") currently holds the water rights appropriated for Project purposes.*

Among other things, this Protocol describes how the Engineers will account for uses of Project water in Colorado under the A-LP Decrees to maximize beneficial use and protect the vested water rights of others. It also identifies other relevant documents that define the Project. This Protocol is not binding on the Engineers, Project Participants, A-LP OM&R Assn., SWCD, the United States of America ("United States") or anyone else, and may be revised following consultation with water users, including, but not limited to, the A-LP OM&R Assn., SWCD, United States, the State of New Mexico, and the Project Participants, which include in Colorado the Tribes, State of Colorado, and Water Resource and Power Development Authority by separate agreement with the Animas La Plata Conservancy District, and, in New Mexico, the Navajo Nation, San Juan Water Commission ("SJWC"), and the La Plata Conservancy District ("LPCD"). This Protocol will be revised to reflect any relevant final court-approved changes to the underlying decrees or congressionally-authorized changes to A-LP, but does not amend or control any underlying decrees, compacts, federal statutes, agreements or other documents that define the A-LP water rights, define the Tribes' water rights, identify Project allocations or address A-LP operations.

This Protocol is intended only to assist the Engineers in meeting their statutory duties and is not intended to, nor does it, create any right, benefit, claim, duty or obligation, implied

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* In New Mexico, the United States Secretary of the Interior currently holds the water rights that were appropriated for Project purposes. The New Mexico State Engineer has requested the Secretary assign a portion of these rights to the San Juan Water Commission and the La Plata Conservancy District of New Mexico pursuant to Section 303 of the Colorado Ute Settlement Act Amendments of 2000 (Pub. L. No. 106-554, 114 Stat. 2763A 258 (2001), and also has requested the Secretary hold a portion of these rights in trust on behalf of the Navajo Nation.

or otherwise, enforceable at law or equity by any person, including but not limited to third parties.

Finally, this Protocol does not modify, supersede, alter or impair the obligations and entitlements of Colorado and New Mexico under the Animas-La Plata Project Compact, Section 501 of the Colorado River Basin Project Act, Pub. L. No. 90-537, 82 Stat. 885, the Upper Colorado River Basin Compact, 63 Stat. 31, ch. 48, and the Colorado River Compact of 1922 as approved by Congress in the Boulder Canyon Project Act of December 1928, 45 Stat. 1057. Moreover, this Protocol is not intended to account for the use or administration of Project water within the State of New Mexico.

I. SUMMARY OF THE ORIGINAL 1966 DECREE OF A-LP WATER RIGHTS IN THE ANIMAS RIVER (Civil Action No. 1751-B)

The conditional water rights for the A-LP were originally adjudicated in Civil Action 1751-B (Animas River) and 807-C (La Plata River), both decreed on March 21, 1966 with a 1938 appropriation date. As outlined below, this Protocol concerns only the three water "Storage Rights" and three "Direct Flow Rights" in CA 1751-B ("1966 Decree"), and their subsequent changes in Case No. 80CW237, entered on August 24, 1984 ("Change Decree")(together "A-LP Decrees"). This Protocol addresses the A-LP Decrees only to the extent they are used to serve the Project as it is defined in the Colorado Ute Settlement Act Amendments of 2000, Pub. L. No. 106-554, 114 Stat. 2763A 258 (2001), ("2000 Amendments")(see Part III, below). The administration of any remaining water rights under the A-LP Decrees is outside the scope of this document.

A. Reservoir Storage Rights

The following three Storage Rights from the 1966 A-LP Decree were each granted an alternate point of storage at Ridges Basin Reservoir, a.k.a. Lake Nighthorse in the Change Decree:

1) Howardsville Reservoir:
   93,700 acre feet ("af") initial storage. Annual storage: 90,700 af + 90,700 af refill
2) Animas Mountain Reservoir:
   17,640 af initial storage. Annual storage: 14,640 af + 14,640 af refill
3) Hay Gulch Reservoir:
   56,330 af initial storage. Annual storage: 53,730 af + 46,740 af refill

B. Direct Flow Rights

The following three Direct Flow Rights in the 1966 A-LP Decree were later each granted an alternate point of diversion at the Durango Pumping Plant ("DPP"):

1) Animas Diversion Canal – Teft Diversion Dam: 600 cfs

2) Falls Creek Diversion Dam and Canal: 60 cfs
3) Junction Creek Diversion Dam and Pipeline: 100 cfs

The 1966 Decree did not establish a filling rate for the Storage Rights independent of the rate decreed for the Direct Flow Rights. To avoid expansion of the A-LP Decree water rights, diversions to storage and diversions for direct use may not exceed the amount of water physically and legally available at the originally decreed points of diversion.

C. Place and Manner of Use

The manner of use for the water supply in the 1966 Decree includes irrigation, domestic, municipal, industrial, recreation, fish and wildlife, flood control and other beneficial uses. Other than for irrigation, the 1966 A-LP Decree is silent on place of use:

> The purpose of the Animas-La Plata Project, and the appropriation of water therefore, is to provide a full supply of water to irrigate 58,900 acres of land to be brought under cultivation, of which 44,200 acres of land are in La Plata and Montezuma Counties in Colorado, and 14,700 acres are in San Juan County, New Mexico, and to provide a supplemental supply of water to 25,600 acres of land now under cultivation, of which 20,100 acres are in Colorado and 5,500 acres are in New Mexico. In addition, the Project will supply water for domestic, municipal, industrial, recreation, fish and wildlife, flood control and other beneficial purposes.

1966 A-LP Decree at 121, para 5. A reasonable implied place of use of the A-LP Decrees for non-irrigation purposes may be within the geographical boundaries of the SWCD, if the use is in Colorado, including within the boundaries of the Colorado Ute Tribes' Reservations and within the geographical boundaries set forth in the permits issued by the New Mexico State Engineer's Office in New Mexico.

D. Anticipated Demand

The Reclamation studies prior to the 1966 A-LP Decree demonstrate that the contemplated draft under the three Storage Rights and three Direct Flow Rights was larger than the amount needed for the Project operations described herein. See A-LP Project Feasibility Report (Chapter 4 – Water Supply) (Reclamation, Feb. 1962).

II. SUMMARY OF THE CHANGE DECREE

The Change Decree authorized an alternate point of diversion for the three Direct Flow Rights at the "Durango Pumping Plant and Ridges Basin Inlet Conduit," with a flow rate of 600 cfs. Change Decree at pp. 6-7 and 12. It also authorized an alternate place of storage for the three Storage Rights in Ridges Basin Reservoir, a.k.a. Lake Nighthorse, with a capacity of 280,040 af. Change Decree at 7-9 and 12.

The Change Decree requires "that measuring devices be placed at the original points of diversion in accordance with specifications as required by the Colorado Division of Water Resources." Id. at 14, para 1(a). Diversions at the DPP are limited to "the amount of water available at the original heading in accordance with their priority, and allowances made for transportation losses, if any." Id. at 14, para 2. In addition, "the amount of water to be stored at the alternate reservoir sites [is] limited to that amount which would have been available at the original reservoir in accordance with their priority, and allowances made for transportation losses, if any." Id. at 14, para 3. These three conditions are referenced collectively in the Tribal Decrees, described in Part IV, *below*, as "the Teft Limitations." See *Findings of Fact, Conclusions of Law, and Decree,* dated November 9, 2006, (discussed below) at 15, para 38.

Regarding place of use, the Change Decree states only that, "In general, there is no change in the place of use other than some reduction in total irrigated acres." Id. at 2, para 2.

In the Change Decree, the Colorado District Court, Water Division 7 retained jurisdiction for three years from the completion of the Project pursuant to C.R.S. 37-92-304(6). Id. at 14, para 7.

III. DESCRIPTION AND CAPACITY OF PROJECT WORKS AS BUILT

In the 2000 Amendments, Congress amended Section 6 of the Colorado Ute Indian Water Rights Settlement Act of 1988 (Pub. L. No. 100-585) to authorize the Secretary of the Interior to "settle the outstanding claims of the Colorado Ute Tribes on the Animas and La Plata Rivers" by having Reclamation construct, operate and maintain:

> (i) . . . a reservoir, a pumping plant, a reservoir inlet conduit, and appurtenant facilities with sufficient capacity to divert and store water from the Animas River to provide for an average annual depletion of 57,100 acre feet of water to be used for a municipal and industrial water supply, which facilities shall . . . (IV) . . . (ii) deliver, through the use of the project components referred to in clause (i), municipal and industrial water allocations...."

Pub. L. No. 106-554 § 302 (a)(1)(A).

In the 2000 Amendments, Congress limited the use of Project water to municipal and industrial ("M&I") uses only, as discussed in *Part V* below, and provided that "[i]f constructed, the facilities described in subparagraph (A) shall constitute the Animas-La Plata Project." § 302(a)(1)(C). Absent further congressional authorization, "other [P]roject features authorized by Public Law 90-537 [i.e., the act that authorized the Colorado River Basin Project] shall not be commenced." Pub. L. No. 106-554 § 302(a)(1)(C)(i).

The authorized Project components have the following capacities:

A. DPP and Inlet Conduit

The anticipated pumping capacity of the DPP was 280 cfs. The actual maximum pumping capacity ("DPP Capacity"), which includes the DPP and Inlet Conduit and pumping for the City of Durango, will be determined by Reclamation through its testing of the A-LP facilities.

B. Ridges Basin Reservoir, a.k.a. Lake Nighthorse

Live Storage Capacity:	115,075 af	"Live Storage Pool"
Dead Storage Capacity:	8,466 af	"Dead Storage Pool"
Total Storage Capacity:	123,541 af	

The reservoir's Live Storage Capacity is 115,075 af. See Attachment A (Reclamation diagram showing actual volume of all storage pools). Live Storage Capacity indicates the volume that sits above the intake of the outlet works and can be released by gravity.

IV. SUMMARY OF THE COLORADO UTE TRIBES' DECREES CONFIRMING THEIR A-LP ALLOCATIONS

The following summary of the Colorado Ute Tribes' water rights on the Animas and La Plata Rivers is intended to assist with the overall administration of Project water allocations. This summary, as well as the entire Protocol, is not intended to, nor can it, limit the Tribes' rights under the Tribal Decrees. Moreover, nothing in this Protocol affects, amends, or otherwise alters the 1986 Settlement Agreement, 1988 Settlement Act or 2000 Amendments, identified below. In addition, this Protocol does not address the Tribes' other existing water rights or future appropriations. Finally, this Protocol does not address, control, or limit the Tribes' respective abilities to take water without a water right under free river conditions.

A. Background

The water rights of the Colorado Ute Tribes on the Animas and La Plata Rivers are the subject of Colorado court decrees, a settlement agreement, and federal legislation. A listing of these documents is provided in Attachment B.

In 1976, the United States filed claims in the Colorado District Court, Water Division 7, Case No. W-1603-76, asserting federal reserved water rights on behalf of the Colorado Ute Tribes. The case was divided into eleven separate cases, each addressing claims on a different regional river. Rather than litigate the claims, the Tribes, the State of Colorado, the United States, and other parties negotiated settlements for each river. In 1986, the negotiating parties entered into the Colorado Ute Indian Water Rights Final Settlement Agreement ("1986 Settlement Agreement"), which Congress authorized in the Colorado Ute Indian Water Rights Settlement Act of 1988, Pub. L. No.100-585 (102. Stat. 2973) ("1988 Settlement Act").

In 1991, the Tribes, the State of Colorado, the United States, and other parties entered into a Stipulation for a Consent Decree, resulting in the Colorado District Court, Water Division 7's Consent Decrees entered on December 19, 1991, in Case Nos. W-1603 and W-1603-76A through J. Each of the 1991 Consent Decrees recognized and incorporated the 1986 Settlement Agreement and the 1988 Settlement Act. This Protocol addresses only two of these Consent Decrees -- Case No. W-1603-76F (Animas River) and W-1603-76J (La Plata River). *See Stipulation for a Consent Decree* in Case No. W-1603-76F (Nov. 12, 1991) and Case No. W-1603-76J (Nov. 12, 1991) (collectively "1991 Consent Decrees"). Furthermore, although these two Consent Decrees address a variety of water rights, this Protocol addresses only those portions that concern the Tribes' surface water allocations from the A-LP Project.

Complications with endangered species, water quality and other concerns prevented implementation of the 1986 Settlement Agreement, 1988 Settlement Act, and 1991 Consent Decrees on the Animas and La Plata Rivers. To address these concerns, Congress amended the 1988 Settlement Act in the 2000 Amendments. Pursuant to Section 18 (a), the 2000 Amendments expressly provide for "the final settlement of the tribal claims to water rights on the Animas and La Plata Rivers in the State of Colorado."

Congress also directed the Attorney General of the United States to file "such instruments as may be necessary to request the [Colorado Water] court to amend the final consent decree to provide for the Amendments made to this Act under the [2000 Amendments]" *Id.* at Sec. 18(c). Ultimately, the Colorado District Court, Water Division 7 issued a Decree amending the two 1991 Consent Decrees. *See Findings of Fact, Conclusions of Law, and Decree,* dated November 9, 2006, in Case Nos. W-1603-76F and W-1603-76J, 02CW85, 02CW86 ("Nov. 9, 2006 Order"), and *Order Amending November 9, 2006 Decree,* dated February 8, 2007 ("Feb. 8, 2007 Order")(collectively "Tribal Change Decrees").

B. A-LP Allocations to the Colorado Ute Tribes

Under the 1991 Consent Decrees, as amended by the Tribal Change Decrees (collectively, "Tribal Decrees"), each of the Colorado Ute Tribes is entitled to a separate allocation of water from the Project for municipal and industrial uses. The Tribal Decrees provide:

A. Animas-La Plata Project

A water right to water supplied from the Animas-La Plata Project. This water right shall have a March 2, 1868 priority date, shall be subordinated to all water rights decreed and senior to the Animas-La Plata Project, and shall share on a pro rata basis the priority of the Animas-La Plata Project, which has an adjudication date of March 21, 1966, and an appropriation date of September 2, 1938, C.A. 1751-B, District Court, La Plata County, Colorado.

i. The water right shall entitle the Tribe to receive and beneficially use, on that part of the [Ute Mountain Ute Reservation/Southern Ute Reservation] within the State or within the boundaries of the Animas-La Plata Water Conservancy District, an allocation of water from the Animas-La Plata Project (as measured at Ridges Basin Dam and Reservoir or at the point on the Animas River where diversions are made to the Durango Pumping Plant), consistent with the [2000 Settlement Act Amendments], for present and future municipal and industrial uses with an average annual depletion not to exceed 16,525 acre-feet of water.

1991 Consent Decrees at 10, paras. 6.A and 7.A, as amended by the Nov. 9, 2006 Order at 6-7, para. I.C.27, and Feb. 8, 2007.

C. Administration of the Colorado Ute Tribes' Rights to A-LP Project Water

Administration of the Colorado Ute Tribes' reserved water rights under the Tribal Decrees is set forth in Section IV of the 1986 Settlement Agreement and in paragraph 12 of the 1991 Consent Decrees. Elements relevant to administering the Tribes' respective Project water allocations include, but are not limited to, recognizing that:

(i) The Tribal Decrees do not recognize an independent diversion right from the Animas River for the Colorado Ute Tribes. The Tribal Decrees state that diversions for the Project are controlled by the A-LP Decrees, and that the A-LP Decrees remain unchanged by the amendments made to the Tribal Change Decrees. *See, e.g.*, Feb. 8, 2007 Order at 1. As such, the A-LP Decrees control the diversions for the Tribes' shares of the Project water supply that may be taken at the DPP, as described below. *See, e.g.*, Feb. 8, 2007 Order at 1, para. 2.a;

(ii) Each Tribe's decreed place of use encompasses the entire Animas La Plata Water Conservancy District ("ALPWCD") and its respective Reservation. The Tribes may change their water rights from those set forth in the Tribal Decrees, including their place of use, under special provisions contained in paragraph 12 of the 1991 Consent Decrees. No change shall be allowed unless the Tribes and the United States file, to the same extent other project water users are required to file, an application for a change of water right in the Colorado Water District Court for Water Division No. 7 and the Court grants such change." 1991 Consent Decrees at para. 12.D; and

(iii) The Colorado Ute Tribes' reserved water rights are permanent, and cannot be lost as a result of change of use, forfeiture, abandonment, or non-use. *See, e.g.*, 1991 Consent Decrees at Section 13.

Finally, the Colorado District Court, Water Division 7, required that until the water is put to actual M&I beneficial use, the United States should file reports every six years demonstrating progress in applying the Colorado Ute Tribes' respective A-LP reserved water rights to beneficial

use. Nov. 9, 2006 Order at 35, paras. 3e, and 3f. The Feb. 8, 2007 Order *amending* the November 9, 2006 Decree clarifies at paragraph 1.b. that "notification shall be done through the resume process." Although this filing is not an application for finding of reasonable diligence, nor is it a prerequisite to making the reserved water rights absolute pursuant to C.R.S. § 37-92-301(b)(1), the Colorado District Court, Water Division 7 found it reasonable for the "[Colorado Ute] Tribes to report on their progress toward application of their water rights to a beneficial use." Nov. 9, 2006 Order at 32, para. 18 (citing U.S. v. City and County of Denver, by and through Bd. of Water Com'rs., 656, P.2d 1, 35 (Colo. 1982)).

V. SUMMARY OF THE ALLOCATIONS OF PROJECT PARTICIPANTS

In the 2000 Amendments, Congress authorized the Secretary of the Interior to "(i) complete construction of, and operate and maintain, a reservoir, a pumping plant, a reservoir inlet conduit, and appurtenant facilities with sufficient capacity to divert and store water from the Animas River to provide for an average annual depletion of 57,100 acre-feet of water to be used for a municipal and industrial water supply." Pub. L. No. 106-554, § 302(a)(1)(A)(i) (emphasis added). Congress further authorized the Secretary to "(ii) deliver, through the use of the project components referred to in clause (i), municipal and industrial water allocations" for the seven parties listed below, and identified each party's allocation of A-LP water as an "average annual depletion" not to exceed the following amounts:

Project Participant		Average Annual Depletion Limit (af)
(I)	Southern Ute Indian Tribe	16,525
(II)	Ute Mountain Ute Tribe	16,525
(III)	Navajo Nation	2,340
(IV)	SJWC	10,400
(V)	ALPWCD	2,600[†]
(VI)	State of Colorado	5,230
(VII)	La Plata (NM) Conservancy District	780

See, Pub. L. No. 106-554 § 302 (a)(1)(A) (ii)(I-VII).

The Engineers understand that Reclamation will perform the accounting of each Project Participant's average annual depletion under the A-LP Decrees to ensure compliance with the federal allocation limits in the 2000 Amendments and with the Project's overall average annual depletion limit under the 2000 Amendments. Reclamation has agreed to report the average annual depletion for each Colorado Ute Tribe to the Division Engineer's Office, for use in its record-keeping under the Tribal Decrees, by November 30 of each year, beginning in 2013.

[†] By separate agreement, the Colorado Water Resource and Power Development Authority purchased the ALPWCD's Project water allocation.

VI. ACCOUNTING FOR AND PROTECTING A-LP ALLOCATIONS NOT STORED IN RIDGES BASIN RESERVOIR, A.K.A. LAKE NIGHTHORSE

The policy of the A-LP OM&R Assn. is that "Whenever feasible and practical, Project [P]articipants shall take delivery of their portion of the Project water supply by direct A-LP diversions ('river water') without putting it in storage." See Exhibit A to March 4, 2009 IGA at para 4.02. The term "Non-stored Allocations" herein means Project water that is not diverted at the DPP and pumped to Ridges Basin Reservoir through the Ridges Basin Inlet Conduit, but instead is Project water measured at Teft, accounted for at the DPP, and shepherded, if necessary, to a point of delivery lower in the Animas River for use by a Project Participant in Colorado or to the state line, as set forth in Part X, below, for use by a Project Participant in New Mexico.

The Tribal Decrees allow the Colorado Ute Tribes' Project allocations to be measured in the Animas River at the DPP. The Engineers, therefore, can account for Non-stored Allocations to the Colorado Ute Tribes as if they had been diverted at the DPP and pumped to the Ridges Basin Reservoir, a.k.a. Lake Nighthorse and can protect deliveries of these Non-stored Allocations as if they were deliveries of reservoir releases. This means that water must be physically, legally, and operationally available for pumping at the DPP (hereafter "Storable Flow") before a Non-stored Allocation for a Ute Tribe may be accounted for under the A-LP Decrees. In the course of changing and amending the Tribal Decrees to conform to the 2000 Amendments, the District Court, Water Division 7, found that "if the bypass flows are maintained by federal law or regulation and ALP is operated consistent with the 2000 FSEIS, there is a reasonable degree of certainty that downstream conditions will be adequate to meet the needs of decreed Colorado water users and conditional water rights holders under the administration of the Division 7 Engineer." 2006 Decree at ¶ 58, page 19-20. All Non-stored Allocations delivered to a Ute Tribe will be accounted for against the Storable Flow, which may not exceed DPP Capacity. This limitation is based on the Engineers' interpretation of the Tribal Decrees and the 80CW237 Change Decree.

Each of the Colorado Ute Tribes will need to identify their points of delivery for diversions of Project water downstream of the DPP prior to diverting their Non-stored Allocations within Colorado, just as diversions of reservoir releases are required to be identified but not decreed. Unless Storable Flow is available for diversion at the DPP, the Colorado Ute Tribes' Non-stored Allocation of Project water cannot be delivered to the Tribes (other than by release from Ridges Basin Reservoir).

The A-LP Project Compact, entered in 1963 between the State of Colorado and the State of New Mexico, provides that "The right to store and divert water in Colorado and New Mexico from the La Plata and Animas River systems . . . for uses in New Mexico under the Animas-La Plata Federal Reclamation Project shall be valid and of equal priority with those rights granted by decree of the Colorado state courts for the uses of water in Colorado for that project. . . ." § 37-64-101, C.R.S. (2011). Non-stored Allocations for the Navajo Nation, the SJWC, and the

LPCD in New Mexico, therefore, may also be accounted for in the Animas River at the DPP instead of being pumped to Ridges Basin Reservoir, a.k.a. Lake Nighthorse.

Reclamation's modeling of the Project in the 2000 A-LP Final Supplemental Environmental Impact Statement ("FSEIS") reflects the equivalent of a 35 cfs delivery of Project water to the Navajo Nation and SJWC as an average continuous flow.[‡] Whenever there is Storable Flow at the DPP, Non-stored Allocation for the Navajo Nation, SJWC, and LPCD to satisfy a 35 cfs average continuous flow may be accounted for under the A-LP Decrees. The total "Project Flow Rate" will be capped at the DPP capacity plus the 35 cfs average continuous flow to account for the Navajo Nation, SJWC, and LPCD's Non-stored Allocations. The decision to account for an average of 35 cfs above the Storable Flow under the Change Decree is based on the A-LP Compact and on the 2000 FSEIS.

As plans for the Project Participants' uses of A-LP water continue to develop, the Engineers will consider any remaining questions concerning the administration of Non-stored Allocations parties. In particular, the Engineers recognize a lack of consensus concerning how to best account for Non-stored Allocation water ordered by Navajo Nation, SJWC, and LPCD. In September 2013, the Engineers will begin meeting with SWCD, SJWC, and the State of New Mexico, as well as other interested parties as appropriate to address their express concerns with the use and/or application of a 35 cfs continuous flow rate cap as described above.

All Non-stored Allocations are subject to the Teft Limitations. In order to ensure that deliveries of Non-stored Allocations do not result in injury to other water rights and can be properly accounted for, the administrative process will need to include: (1) Identification by the A-LP OM&R Association of a need for A-LP water, on behalf of one or more Project Participants; (2) Measurement of the water available in priority at Teft; (3) Accounting at the DPP of the amount available in priority at Teft and identified for delivery for direct use within the Storable Flow and Project Flow Rate, and delivered to the point where a Project Participant's allocation will be diverted and placed to beneficial use (or confirmed present at the State line for the Navajo Nation, SJWC, and LPCD, (see Part X below)); and (4) Accounting for the amount diverted for beneficial use under the A-LP Decrees.

The A-LP OM&R Assn. will need to establish an internal process for, *inter alia,* (1) allocating the Storable Flow between pumping to storage and Non-stored Allocations (as well as allocating it among the Project Participants) consistent with the limitations of this Protocol; (2) communicating to the Division Engineer's Office the request for delivery of a Non-stored

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[‡] An average continuous diversion of 35 cfs for a year provides the full combined average annual supply of Project water for Navajo Nation, SJWC and LPCD. (Assuming 50% return flows on 12,740 af/year of depletions, as contemplated in the FSEIS, the total diversion is assumed to be 25,480. That, divided by 365 days per year equals 69.23 af/day, divided by 1.98 acre feet per cfs equals 35 cfs.) *See e.g.,* FSEIS at pages 2-12, 2-17, and 2-21. Note: The 780 af depletion for LPCD is not included in the average continuous flow computation because LPCD's involvement in delivery of Non-stored Allocations is not intended to increase the 35 cfs average continuous diversion contemplated in the FSEIS modeling.

Allocation, (3) acquiring additional data necessary to determine the transportation loss, if any; (4) reporting to the Division Engineer in advance the points where Project water is to be diverted by all Project Participants in Colorado; and (5) recording and maintaining records of the amount delivered to Project Participants.

The Division Engineer's Office will require that all water accounted for under the A-LP Decrees must be put to beneficial use and that regular and reliable records be kept so that the Division Engineer can account for water use under the A-LP Decrees.

VII. HOW THE DIVISION ENGINEER WILL DETERMINE THE AMOUNT AVAILABLE UNDER THE DIRECT FLOW RIGHTS

A. Measurement

Adequate measuring structures are required at the points of diversion for the Direct Flow Rights before water may be diverted under those rights. The USGS gage on the Animas River at Tall Timbers Resort above Tacoma, Colorado (Id. No. 09359500) (hereafter "Tall Timbers Gaging Station") is close to the Teft point of diversion. There are no gages at the original points of diversion on Falls Creek or Junction Creek. Therefore, this Protocol only discusses measurement "at Teft," and "the Teft Limitations." As discussed above, the amount of flow physically available at Teft limits all uses under the Change Decree, including pumping at the DPP and Non-stored Allocations. The Division Engineer's Office will evaluate the amount physically available at Teft based on the flows at the Tall Timbers Gaging Station.

The amount bypassed at the DPP will be measured using the USGS gage on the "Animas River Below Durango Pumping Plant Near Durango, Colorado" (Id. No. 09362520) (hereafter "DPP Gage") that is approximately 1/8 mile downstream of the DPP.

The amount pumped by the DPP will be determined by the DPP's discharge meters.

The Storable Flow at the DPP will be determined by subtracting the federal Minimum Bypass Flow requirement, defined in Part IX, below, from the flow rate measured at the DPP Gage, then adding the amount being pumped at the DPP. It is also subject to the Teft Limitations.

B. Transportation Loss

When the A-LP OM&R Assn. asks the Division Engineer to identify and measure water at Teft for diversion at the DPP or for a Non-stored Allocation, the quantity may include additional water to cover transportation losses, if any, to the DPP. This will not cause injury to any other water right, will not expand use under the A-LP Decrees, and is not precluded by the A-LP Decrees. Additional transportation losses may be assessed to the Project Participant for deliveries below the DPP.

The Engineers will use best engineering judgment to estimate transportation losses and decide on a case-by-case basis whether more data or a full study are necessary to determine any transit loss.

C. Administrative Water Rights Calls

If a call for water rights under the A-LP Decrees is physically appropriate and legally allowed, the effect of a call will be to curtail juniors above Teft and ensure that water available in priority at the original decreed point(s) is available at the DPP when needed.

VIII. HOW THE DIVISION ENGINEER WILL DETERMINE THE AMOUNT AVAILABLE FOR STORAGE IN RIDGES BASIN RESERVOIR, A.K.A. LAKE NIGHTHORSE UNDER THE STORAGE RIGHTS

A. One Fill and One Refill

Because the Storage Rights are larger than the "as built" capacity of Ridges Basin Reservoir, a.k.a. Lake Nighthorse of 123,541 af, and because the Storage Rights in the A-LP Decrees expressly include refill rights, the Project is authorized for one full fill and one full refill each water year. The initial fill is up to 123,541 af. The second fill (a.k.a. "refill") is up to 115,075 af. This limit of the second fill to the Live Storage Capacity is premised on the assumption that there will be no regular pumping from the dead pool, and can be reconsidered if the Project starts regularly pumping from the dead pool.

The fill of Ridges Basin Reservoir, a.k.a. Lake Nighthorse, each water year will be calculated by determining the amount of water in storage on 1 October ("Reclamation Year"). The total capacity of the Reservoir minus the amount in storage on that date will constitute the amount of the initial fill for that Reclamation year.

The amount of water stored for a fill and refill will be determined by calculating the volume of water pumped to Ridges Basin Reservoir, a.k.a. Lake Nighthorse from the DPP, plus the volume of the natural inflow into the Reservoir from Basin Creek under the appropriation decreed in Case 08CW81.

B. Paper Fill of the Storage Rights

A paper fill is an accounting mechanism whereby storable inflow is charged against a storage water right even though it is not stored. Paper fill administration will begin for the first Reclamation Year, starting October 1, during which the Animas River is under active administration. Such administration will include a paper *re-fill* if the Ridges Basin Reservoir, a.k.a. Lake Nighthorse has storage capacity available and flows bypassing the DPP are above the Minimum Bypass Flow requirement. For example, if the Ridges Basin Reservoir, a.k.a. Lake Nighthorse has storage capacity available and flows bypassing the DPP are at the same time in excess of the Minimum Bypass Flow requirement at any time during a given administrative

water year, the paper re-fill administration would effectively reduce the *re-fill* right of 115,075 af by the cumulative amount of excess DPP bypass flows for that year. Note, the paper fill rate will be capped at the DPP Capacity.

IX. EFFECT OF THE FEDERALLY REQUIRED MINIMUM BYPASS FLOW AT THE DPP ON ADMINISTRATION OF DIRECT FLOW AND STORAGE RIGHTS

The Project may not pump all water physically available at the DPP as a result of a federally mandated bypass flow requirement ("Minimum Bypass Flow"). The Minimum Bypass Flow, set forth below, is a seasonal flow rate that must available in the Animas River at the DPP in order for pumping at the DPP to occur:

225 cfs - April 1 to Sept 30
160 cfs - Oct 1 to Nov 30
125 cfs - Dec 1 to March 31

2000 FSEIS at 3-100 - 3-101. This full amount must be bypassed at the DPP even if it will not leave enough water to meet all of the Project's pumping needs.

Non-stored Allocations taken from the Storable Flow are subject to the Minimum Bypass Flow requirement. This is consistent with the Reclamation modeling for the 2000 FSEIS, referenced in the 2000 Amendments, and with the injury analysis which supported the Tribal Decrees. See 2000 FSEIS, Technical Appendix 2; Engineering Report on Purported Injury to Water Rights from the Animas-La Plata Project, Brown & Caldwell (July 29, 2005). Reclamation has confirmed that, based on the Brown and Caldwell engineering report on purported injury to other water rights, the Project will be operated such that Non-stored Allocations bypassing the DPP will be in addition to the Minimum Bypass Flow requirements.

Non-stored Allocations for the Navajo Nation, SJWC, and LPCD will also be measured in addition to, or on top of, the Minimum Bypass Flows: they will be accounted for under the A-LP Decrees within the larger Project Flow Rate only when the Project is not precluded from pumping at the DPP due to the Minimum Bypass Flow requirement.

The amount of flow available at the DPP for both pumping and Non-stored Allocations will be determined by subtracting the Minimum Bypass Flow requirement from the flow measured at the DPP gage, and adding the amount being pumped at the DPP. It is also subject to the Teft Limitations.

In addition, the Minimum Bypass Flow will not be counted as Storable Flow during paper fill administration. See letter from Hal Simpson to John Porter, President of SWCD, dated May 21, 2007, which stated the following:

> Upon review of the decree in Case No. 80CW237, which adjudicated water rights of the Southwestern Water Conservation District in the Animas and La Plata

Rivers, and review of the historic average stream flow records, the physical location of the diversion structure in relation to Ridges Basin Reservoir, the bypass flows, and the stream flow demands of other vested water rights, it is my determination that bypass flows that are required by federal law as a condition of Animas-La Plata Project operations will not be accounted toward the storage rights, or paper fill, of Ridges Basin Reservoir. This determination is based upon the unique circumstance that there is no current or anticipated demand from senior water rights located below the pumping plant diversion from the Animas River downstream to the Colorado-New Mexico state line.

Reclamation is expected to file resume notice prior to making any change in the Minimum Bypass Flows. See Nov. 9, 2006 Order at 33, para. 22. The Division Engineer should monitor the water resumes as appropriate for notice by the United States of any change in the Minimum Bypass Flows that could influence Project operations.

X. SHEPHERDING THE NAVAJO, SJWC, AND LPCD'S ALLOCATIONS OF PROJECT WATER TO THE STATE LINE

The Engineers will protect the New Mexico A-LP allocations from diversion by Colorado users by shepherding those allocations to the state line, minus transportation losses, if they are identified as A-LP water under the A-LP Decrees. This was affirmed in a letter dated March 30, 1988 from the Colorado State Engineer to Mr. S.E. Reynolds, New Mexico Interstate Stream Commission.

Releases from Ridges Basin Reservoir, a.k.a. Lake Nighthorse, of the Navajo Nation, SJWC, and LPCD's allocations will be shepherded down Basin Creek and the Animas River to the state line, as verified at the USGS Animas River Gaging Station Near Cedar Hill, NM (Id. No. 09363500) ("Cedar Hill gage"). "Shepherding" means that no other water rights will be allowed to divert the water, regardless of their priority. Natural transit losses between Ridges Basin Reservoir, a.k.a. Lake Nighthorse and the state line, as verified at the Cedar Hill gage, will be borne by the Project Participant.

Non-stored Allocations for the Navajo Nation, SJWC, and LPCD can be shepherded down the Animas to the state line (as verified at the Cedar Hill gage) if they were measured at the DPP and accounted for under the A-LP Decrees within the Project Flow Rate.

XI. LIMITATION ON RIGHT OF PROJECT PARTICIPANTS TO REUSE PROJECT WATER

The A-LP Decrees and Tribal Decrees are all silent on reuse. Therefore, reuse of Project return flows by Project Participants in the Animas River basin in Colorado is not allowed. See, e.g., Water Supply & Storage Company v. Curtis, 733 P.2d 680, 683 (Colo. 1987). However, if A-LP water is imported into another basin in Colorado from the Animas River basin, the party that imports the water has a special statutory right to reuse it and/or put it to successive uses "to the extent that its volume can be distinguished from the volume of the streams into which it is

introduced." § 37-82-106, C.R.S. (2011). This rule applies was any intent to reuse at the time of the appropriation or of the initial importation. Thornton v. Bijou, 926 P.2d 1, 70 (1996). Therefore, if A-LP water is taken to the La Plata River Basin in Colorado, for example, its reuse may be accounted for under the A-LP Decrees.

ATTACHMENT A

STATE ENGINEER'S PROTOCOL FOR ADMINISTRATION OF
ANIMAS-LA PLATA PROJECT WATER RIGHTS ("PROTOCOL")

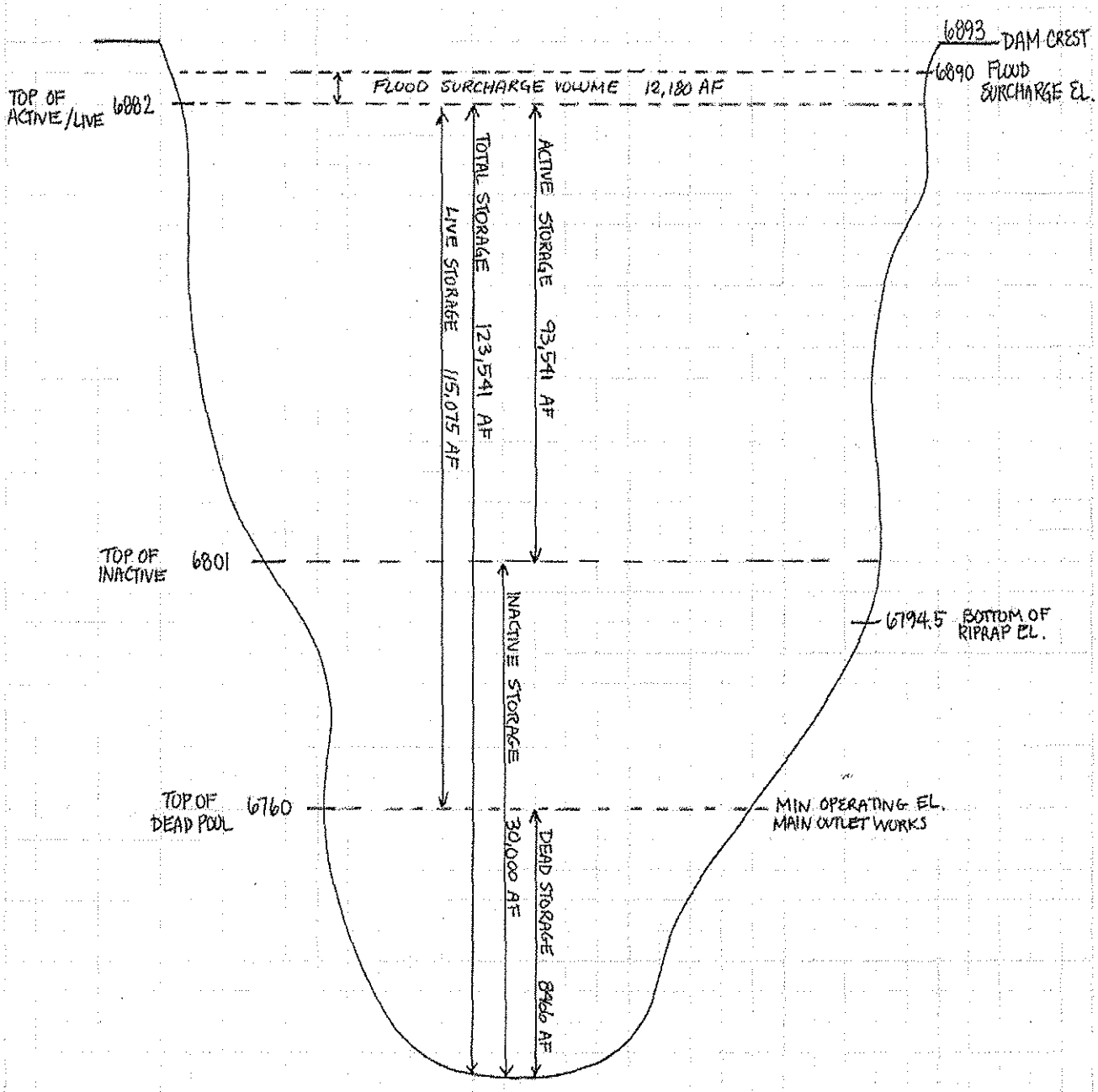
U.S. BUREAU OF RECLAMATION'S DIAGRAM OF ACTUAL STORAGE POOL VOLUMES

Dec. 2012

7-1654 (11-94)
Bureau of Reclamation

COMPUTATION SHEET

BY	DATE 12/19/12	PROJECT LAKE NIGHTHORSE	SHEET ____ OF ____
CHKD BY	DATE	FEATURE	
DETAILS			



ATTACHMENT A (TO MARCH 2013 DRAFT PROTOCOL ON A-LP WATER RIGHTS ADMINISTRATION)

ATTACHMENT B

STATE ENGINEER'S PROTOCOL FOR ADMINISTRATION OF ANIMAS-LA PLATA PROJECT WATER RIGHTS ("PROTOCOL")

TRIBAL CASES, DECREES & FEDERAL LEGISLATION REFERENCED IN SECTION IV OF PROTOCOL

	Federal Reserved Water Rights Cases Filed in Colorado District Court, Water Division 7	
1	Case No. W-1603-76	Claims re: Navajo River
2	Case No. W-1603-76A	Claims re: Blanco River
3	Case No. W-1603-76B	Claims re: San Juan River
4	Case No. W-1603-76C	Claims re: Piedra River
5	Case No. W-1603-76D	Claims re: Pine River
6	Case No. W-1603-76E	Claims re: Florida River
7	Case No. W-1603-76F	Claims re: Animas River
8	Case No. W-1603-76G	Claims re: Mancos River
9	Case No. W-1603-76H	Claims re: Dolores River
10	Case No. W-1603-76I	Claims re: McElmo River
11	Case No. W-1603-76J	Claims re: La Plata River
	Water Decrees Entered in Colorado District Court, Water Division 7	
1	Stipulation for a Consent Decree in Case No. W-1603-76F (Animas River) and Case No. W-1603-76J (La Plata River) (Nov. 12, 1991)	1991 Consent Decrees
2	Findings of Fact, Conclusions of Law, and Decree dated November 9, 2006 in Case No. W-1603-76F and 1-1603-76J, 02CW85 and 02CW86 (Nov. 9, 2006)	2006 Tribal Change Decree
3	*Order* Amending November 9, 2006 Decree (Feb. 8, 2007)	2007 Amendment to Tribal Change Decree
	Federal Legislation	
1	Colorado Ute Indian Water Rights Settlement Act of 1988, Pub. L. No. 100-585, 102 Stat. 2973 (1988)	1988 Settlement Act
2	Colorado Ute Settlement Act Amendments of 2000, Pub. L. No. 106-554, 114 Stat. 2763A 258 (2001)	2000 Amendments
	Other	
1	Colorado Ute Indian Water Rights Final Settlement Agreement (December 10, 1986)	1986 Settlement Agreement

Appendix F

Repayment Contract Between the United States and the Ute Mountain Ute Tribe for the Dolores Project

Contract No. 9-07-40-R0720

COPY

UNITED STATES
DEPARTMENT OF THE INTERIOR
DOLORES PROJECT
COLORADO RIVER STORAGE PROJECT

REPAYMENT CONTRACT BETWEEN THE UNITED STATES AND THE
UTE MOUNTAIN UTE TRIBE

INDEX

Contract No. 9-07-40-R0720

COPY

UNITED STATES
DEPARTMENT OF THE INTERIOR
DOLORES PROJECT
COLORADO RIVER STORAGE PROJECT

REPAYMENT CONTRACT BETWEEN THE UNITED STATES AND THE
UTE MOUNTAIN UTE TRIBE

THIS CONTRACT, made this 21st day of, April 1989, between the UNITED STATES OF AMERICA, acting through the Bureau of Reclamation and the Bureau of Indian Affairs, hereinafter referred to as Reclamation and BIA respectively, of the Department of the Interior, and the UTE MOUNTAIN UTE TRIBE, hereinafter called the Tribe, with its principal place of business and office at Towaoc, Colorado;

WITNESSETH, That:

WHEREAS, the following statements are made in explanation:

The Act of Congress approved April 11, 1956 (70 Stat. 105), authorized the planning and investigation of the Dolores Project as a participating project of the Colorado River Storage Project; subsequent authorization for the construction, operation, and maintenance of the Dolores Project was approved by the Colorado River Basin Project Act of September 30, 1968 (82 Stat. 896), the Colorado River Basin Salinity Control Act of June 24, 1974 (Public Law 93-320), as amended by Public Law 98-569, dated October 30, 1984, and the Colorado Ute Indian Water Rights Settlement Act of 1988 (102 Stat. 2973); and the United States has investigated, planned, and is constructing said Project for the storage, diversion, salvage, and distribution of the waters of the Dolores River and its tributaries for municipal and industrial use, irrigation of water deficient areas, flood control, enhancement of recreation opportunities, conservation and development of fish and wildlife resources, drainage of project land, hydropower, salinity control, and other purposes.

The parties hereto desire to enter into a contract in accordance with and subject to the conditions hereinafter set forth providing, among other things, for delivery of Project Water for irrigation, municipal, industrial, recreation, and other purposes, for the repayment, as required by law, of the construction costs of Project Works allocated to irrigation and municipal and industrial purposes, and for operation, maintenance, and replacement of Project Works.

NOW, THEREFORE, in consideration of the mutual and dependent stipulations herein contained, it is mutually agreed by and among the parties hereto as follows:

GENERAL DEFINITIONS

1. Where used in this contract:

(a) "Secretary" or "United States" or either of them, means the Secretary of the Department of the Interior.

(b) "Reclamation" means the Commissioner of the Bureau of Reclamation or his duly authorized representative.

(c) "Tribe" means the Ute Mountain Ute Tribe.

(d) "BIA" means the Assistant Secretary of the Bureau of Indian Affairs or his duly authorized representative.

(e) "District" means the Dolores Water Conservancy District.

(f) "Federal Reclamation Laws" means the Act of June 17, 1902 (32 Stat. 388), and all acts amendatory thereof or supplementary thereto.

(g) "Project" means the Dolores Project, a participating project of the Colorado River Storage Project.

(h) "Project Works" means all works or facilities to be constructed under the Dolores Project by Reclamation, together with lands and rights-of-way for such works.

(1) "Indian Facilities" means those Project Works constructed by Reclamation which will only benefit the Ute Mountain Ute Tribe. These Project Works will be transferred from Reclamation to the Tribe for operation, maintenance, and replacement. These Project Works are the Towaoc-Highline Canal Turnouts and Laterals, the Project Drainage Works, and the Operating Headquarters which benefit the Ute Mountain Ute Tribe.

(2) "Joint Facilities" means those Project Works which will benefit both the Tribe and the District. These facilities are McPhee Dam and Reservoir and the Great Cut Dike, the Dolores Tunnel, the Dolores Canal, and the Towaoc-Highline Canal.

(i) "Reservoir Yield" means Project Water regulated by and delivered from the active capacity of McPhee Reservoir.

(j) "Project Water" means all water made available from, through, or by means of Project Works exclusive of privately owned water carried through Project Works.

(1) "Project Irrigation Water" means Project Water made available for agricultural production on classified lands.

(2) "Project Municipal and Industrial Water" means water furnished to municipalities, industrial users, commercial recreation entities, and other water user entities not engaged in commercial agricultural production.

(3) "Project Fish and Wildlife Water" means water furnished for fish and wildlife development.

(k) "Indian Irrigable Lands" means lands classified on the Ute Mountain Ute Reservation as being capable of sustained agricultural production under irrigation in accordance with standards established by the Secretary.

(l) "Consultation" means Reclamation will confer with the Tribe regarding significant decisions that may affect the design, construction, allocation of costs, or operation and maintenance of facilities that benefit the Tribe. Reclamation will consider the Tribe's concerns in its final decision. If there is a conflict between the Tribe and Reclamation, the Secretary will make the final decision, subject to appeal under the Administrative Procedure Act.

(m) "Water Rights Settlement Agreement" refers to the "Colorado Ute Indian Water Rights Final Settlement Agreement" dated December 10, 1986, among the United States, the State of Colorado, the Ute Mountain Ute Tribe, the Southern Ute Indian Tribe, and the additional governmental and private entities signatory thereto.

(n) "Legislation" refers to Public Law 100-585, 102 Stat. 2973, the "Colorado Ute Indian Water Rights Settlement Act of 1988" which implements portions of the Water Rights Settlement Agreement.

GENERAL AGREEMENTS AND UNDERSTANDINGS

2. (a) The provisions in Section 10 of the Legislation regarding the Indian Self-Determination and Education Assistance Act (88 Stat. 2203, Public Law 93-638) will apply to Reclamation.

(b) Both parties are anxious to move forward with construction of Project Works, and are willing to work together to assure their timely completion. In addition, Reclamation will work closely with

the Tribe in their effort to obtain a loan under the Small Reclamation Project Act of 1956, as amended, (70 Stat. 1044) and/or the Distribution Systems Loan Act of 1955 (69 Stat. 244).

(c) In order to ensure a successful transition from construction to full operation of Indian Facilities by the Tribe, Reclamation is willing to supervise and assist with the operation and maintenance being performed by the Tribe. Such assistance will include, but is not limited to, all technical resources available to Reclamation.

(d) Reclamation agrees to consult with the Tribe regarding the design and construction of facilities that will benefit the Tribe regardless of who constructs the facilities. Such Consultation shall be as defined in Article 1(l).

(e) Reclamation, the District, or their agents and employees are subject to Tribal laws, ordinances, and regulations while involved in activities on the reservation.

PROJECT WORKS

3. (a) Reclamation will construct or cause to be constructed Project Works and provide certain moveable property needed for Project operation, without being limited by enumeration and within the limit of funds made available by the Congress, hereinafter described:

(1) McPhee Dam and Reservoir, a Joint Facility providing the mainstem storage on the Dolores River, formed by McPhee Dam and the Great Cut Dike. McPhee Dam is located about 10 miles below the town of Dolores on the Dolores River. The Great Cut Dike is located on a saddle on the divide between the Dolores and San Juan Rivers about 5 miles upstream from McPhee Dam. The reservoir has a total capacity of approximately 381,000 acre-feet.

(2) Dolores Tunnel, a Joint Facility, constructed to divert the water from McPhee Reservoir into the Dolores Canal. The tunnel has a capacity of about 520 cubic feet per second (cfs) and is approximately 1.3 miles in length.

(3) Dolores Canal, a Joint Facility, will extend from the Dolores Tunnel to the Dolores Terminal Structure. The canal is approximately 0.6 miles in length with a capacity of about 520 cfs.

(4) Towaoc-Highline Canal, a Joint Facility, will begin at the Towaoc-Highline Canal Powerplant location with a capacity of 420 cfs and will extend south onto the Ute Mountain Ute Reservation. At this point, it will have a capacity of 135 cfs and will end southwest of the town of Towaoc. The canal will have a total length of approximately 42 miles.

(5) Towaoc-Highline Canal Turnouts and Laterals, all Indian Facilities, will extend south from the Towaoc-Highline Canal at various locations to supply irrigation water to Indian Irrigable lands. Approximately 20 miles of pipeline laterals will be required. These facilities are also capable of delivering Project Municipal and Industrial Water and Project Fish and Wildlife Water.

(6) Project Drainage Works, an Indian Facility, consisting of approximately 49 miles of subsurface drains with the required surface outlets, will be constructed as determined necessary by Reclamation, after consultation with the Tribe.

(7) Operating Headquarters, shops, warehouses, garages, and ditchrider residences, all Indian Facilities, will be constructed as determined necessary by Reclamation, after consultation with the Tribe.

Article 3

(8) The purchase or transfer of certain Movable Property and Equipment will be determined by Reclamation, after consultation with the Tribe, to be required in the care, operation, maintenance, and replacement of Indian Facilities, at book value at the date of transfer, but not to exceed $106,000 (1987 value), as adjusted to reflect inflationary trends as indicated in the Irrigation Operation and Maintenance Cost Trends Indexes.

(b) In keeping with the purposes of the Project, Reclamation, after consultation with the Tribe, may change the location or size of Project Works, or may eliminate works or add works to those described above.

(c) Reclamation shall have the right at any time after construction to increase the capacity of the Project Works or any unit or feature thereof, for other than Project purposes without cost to the Tribe, provided that the Tribe's use of Project Water shall not be impaired thereby. The right of use of such increased capacity is reserved to the Secretary.

CONDITIONS PRECEDENT TO CONSTRUCTION

4. Reclamation shall notify the Tribe in writing of any rights-of-way or other agreements or conditions that are required prior to the construction of any project feature.

LAND AND LAND RIGHTS

5. (a) Pursuant to the Act of February 5, 1948 (62 Stat. 17), the Tribe and BIA agree to provide reasonable construction and permanent operation and maintenance rights-of-way for Project Works on the reservation to be constructed by Reclamation, as provided by the Memorandum

of Understanding between the Tribe, BIA, and Reclamation dated December 11, 1987. The District will be responsible for the operation and maintenance of the Joint Facilities on the reservation, pursuant to Article 15 herein. Reclamation agrees to file the proper right-of-way application with BIA. The Tribe agrees to pass a Tribal resolution prior to BIA conveying rights-of-way. Reclamation agrees to pay usual and typical amounts for crops and improvements damaged by construction.

(b) Subject to the Tribal permitting ordinance, the Tribe and BIA hereby permit Reclamation and the District or their agents and employees to enter Tribal and assigned lands lying within the Project boundaries for the purposes of surveying, constructing, testing, and reviewing the operation of the Project Works, including cultural resources mitigation, on Tribal and assigned lands affected by the Project Works.

APPLICABLE LAW

6. (a) The parties agree that the delivery of irrigation water or the use of Project Works pursuant to this contract is subject to the provisions of Section 4 of the Legislation.

(b) The unique status of the Tribe relative to the principles, laws, and policies pertaining to Tribal Sovereignty, Indian Self-Determination, and the Trust Responsibility of the Secretary, as well as the Water Rights Settlement Agreement and Legislation pursuant to the Settlement, shall be taken into account in the application of Reclamation Law.

POINTS OF DELIVERY, MEASUREMENT, AND USE OF PROJECT WATER

7. The Project plan provides for construction of works to deliver Project Water for irrigation, municipal, industrial, recreation, fish and wildlife, and other uses at points of delivery to be determined by

Articles 5, 6 and 7

both parties. All Project Water delivered to the Tribe pursuant to this contract shall be measured with equipment which will accurately measure the water and encourage its economical and beneficial use. The measuring equipment for Indian Facilities will be installed by Reclamation and operated, maintained, and replaced by the Tribe or its assigns in a manner satisfactory to Reclamation.

TRIBE'S SHARE OF PROJECT WATER

8. (a) The average annual use of 22,900 acre-feet of reservoir yield in McPhee Reservoir is hereby allotted to the Tribe for use as full service irrigation water for approximately 7,500 acres of Indian Irrigable Land. Also allotted is a firm annual supply of 1,000 acre-feet of capacity in McPhee Reservoir to be used as municipal and industrial water by the Tribe.

(b) The average annual use of 800 acre-feet of capacity in McPhee Reservoir is hereby allotted to the Tribe for recreation, fish, and wildlife enhancement.

(c) Excess Project Water in any year shall be retained in Project reservoirs to the extent of available capacity and shall be available for general Project use during succeeding years. No holdover rights in Project reservoirs for water not used in any year shall be granted to the Tribe, any individual or subcontractor, including irrigation districts, associations, or municipalities.

DISPOSAL OF PROJECT WATER BY RECLAMATION

9. (a) During construction and initial testing of Project Works, Project Water which is not made available to the Tribe pursuant to a

development block notice as provided in Article 12 herein, may be disposed of by Reclamation at terms and charges determined by Reclamation, after consultation with the Tribe. The charges shall be sufficient to at least cover the operation, maintenance, and replacement costs appropriate for such water delivery. The Tribe shall have the first opportunity to purchase their Project Water at the price and terms offered.

(b) Project Water made available to the Tribe for irrigation under this article will be delivered pursuant to a lease notice by Reclamation. This notice will be furnished to the Tribe by January 1 of the year in which Project Water is to be delivered under this article, and will contain the per acre-foot operation, maintenance, and replacement charge appropriate for such water delivery. Payment to Reclamation by the Tribe for such water delivery will be due on or before December 31 of the same year during which water was delivered, and such payment will be based upon the actual quantity of Project irrigation water delivered. Adjustment will be made for overpayment, if any, in the form of a credit for the following year.

(c) Project Water made available to the Tribe for municipal and industrial uses under this article, will be delivered pursuant to a lease notice by Reclamation. Payment for the use of such water shall be in advance and the proceeds shall be applied first to operation and maintenance expenses and then to reduce the associated repayment obligation.

INDIAN WATER RIGHTS SETTLEMENT AND LEGISLATION

10. (a) The Colorado Ute Indian Water Rights Final Settlement Agreement dated December 10, 1986 is attached as Exhibit "A" and hereby

made a part of this contract. The Legislation (Public Law 100-585) implementing the Water Rights Settlement Agreement provides, among other provisions, for the following:

(1) The repayment of the construction costs allocable to the Tribe's municipal and industrial water allocation from the Dolores Project shall be deferred, and interest thereon shall not accrue, until the water is used;

(2) The United States will bear the operation, maintenance, and replacement costs allocable to the Tribe's municipal and industrial water allocation from the Dolores Project until the water is used, which costs shall not be reimbursable by the Tribe; and

(3) As an increment of municipal and industrial water is first used by the Tribe or is first used pursuant to the terms of a water use contract with the Tribe, repayment of that increment's pro rata share of such allocable construction costs shall commence by the Tribe and the Tribe shall commence bearing that increment's pro rata share of the allocable annual operation, maintenance, and replacement costs.

(b) The Colorado Ute Indian Water Rights Settlement Act of 1988 is attached as Exhibit "B" and hereby made a part of this contract. If any provisions of this contract are in conflict with the Water Rights Settlement Agreement ~~or implementing~~ Legislation, which are attached as part of this contract, those documents shall take precedence over this contract. If necessary, any remaining issues will be resolved by amending this contract or through a Memorandum of Understanding.

Article 10

OBLIGATION AND TERMS OF REPAYMENT

11. (a) The irrigation repayment obligation of $5,445,000 due toward the allocated construction cost of the Tribe's share of Project Works is assigned to the Indian irrigable lands and shall be deferred under the provisions of the Leavitt Act of July 1, 1932 (45 Stat. 564). No assessments shall be made on such construction cost against such lands until the Indian title thereto is extinguished. At that time, construction costs associated with water assigned to such lands will be due in accordance with existing Federal law.

(b) Consistent with Article 10 above and Section 6 of the Legislation, the Tribe hereby agrees to pay, as required by law and standard Reclamation procedures, all of the Project construction costs allocated to the Tribe's Project municipal and industrial water when it is first used. The construction costs are presently estimated to be $1,642,000, including interest during construction. Upon completion of all Project Works, the details of said costs and their proposed allocation will be furnished to the Tribe by Reclamation, and the Tribe reserves the right to review the input to the cost allocation process including the assignment of those costs to the Project and to the Tribe's repayment obligation and the allocation thereof to municipal and industrial water use. Following review and Consultation by the Tribe, the final allocation of reimbursable costs will be prepared by Reclamation in accordance with applicable Federal Reclamation Law. The Tribe's allocated annual supply of Project municipal and industrial water is 1,000 acre-feet. A portion of this water may have construction costs and interest charges deferred under the Water Supply Act of 1958 (72 Stat. 297) or the Legislation. The relationship between the Tribe and the United States as to any payment for such charges will be

established at the time of the first block notice for municipal and industrial water. Reclamation shall issue the development block notice before January 1 of the year preceding the first year in which Project municipal and industrial water shall be made available for use. The municipal and industrial repayment obligation is payable by the Tribe in annual installments with interest, due on or before February 1 of each year and in accordance with the payment schedule included in block notices issued by Reclamation for that water.

(c) The Tribe agrees that use of Project Water shall conform to the Legislation. Any conversion of Project Water from one use to another use shall require modification of the existing repayment obligation, consistent with the Legislation, the Water Rights Settlement Agreement, and Reclamation law. Terms of such conversion will be negotiated at the time the Tribe requests such conversion.

(d) Subject to consultation with the Tribe, a default of payment on irrigation water shall not cause termination of municipal and industrial water delivery, and vice versa.

(e) All payments required under this contract are due on the specified due date and by the method mutually agreed upon between Reclamation and the Tribe. The agreed method of payment may include checks, wire transfers, or other types of payment to be determined.

ESTABLISHMENT OF DEVELOPMENT BLOCKS

12. (a) Reclamation, from time to time as Project Works are completed, tested, and the water becomes available for use by the Tribe, shall, after consultation, establish development blocks and apportion to

each block an appropriate part of the Tribe's repayment obligation based on the nature and amount of water use therein. A development block may include Indian Irrigable Land needing a full water supply, and/or municipal and industrial use areas. Reclamation shall give the Tribe written notice, referred to herein as the "development block notice," at least 12 months prior to the date when water will be first delivered to the affected block on a permanent basis. The development block notice shall contain:

(1) A description of the area included in the block.

(2) The quantity of Project Water available to the Tribe for the block.

(3) A designation of that part of the Tribe's irrigation and/or municipal and industrial repayment obligation apportioned to the block, pursuant to Article 11 herein.

(4) A payment schedule for the Project irrigation or municipal and industrial water available in such block, including a breakdown of the amount and due date of each payment.

(b) Each development block notice shall be re-examined by Reclamation at least every 5 years after water is first made available to determine if water uses or costs within the block have changed, or other changes have occurred which justify amendment of the notice. If so, Reclamation shall in consultation with the Tribe amend the notice and payment schedules to reflect such changes; Provided, however, That such Article 12 development block notice amendments shall not reduce the Project repayment obligation established in Article 11.

(c) Each development block notice and amendment hereto shall become a part of this contract.

Article 12

(d) The Tribe can receive its share of Project Water prior to Reclamation's notice of availability, by requesting the issuance of a development block notice by Reclamation.

AGRICULTURAL DEVELOPMENT PERIOD

13. If title to Indian Irrigable Land is extinguished, the development period for these irrigable lands served is hereby fixed at 7 years from and including the first year in which the Project Works are so far completed as to be available for use and the Project Water supply is available for delivery on or before June 1 of such year to substantially all of these irrigable lands within each development block.

OPERATION, MAINTENANCE AND REPLACEMENT OF INDIAN FACILITIES

14. The Tribe agrees to have the ultimate responsibility for the operation, maintenance and replacement of the Indian Facilities, as defined in Article 1(h)(1) herein. The Tribe may make arrangements with other entities to assist in the operation, maintenance and replacement of these facilities, after consultation with Reclamation. Following construction, the Tribe will operate and maintain the Indian Facilities during a testing period of not less than one irrigation season and joint inspections will be made by the Tribe and Reclamation to determine what deficiencies, if any, exist. Reclamation will reimburse the Tribe for their operation and maintenance costs incurred during the testing period and for the correction of any agreed upon deficiencies of these facilities. The Tribe will accept the operation, maintenance and replacement responsibility and related costs of the Indian Facilities pursuant to Article 26 herein. Reclamation agrees such transfer will be conducted in a

Articles 12, 13, and 14

similar manner and timetable as other Project Works were transferred to the District.

OPERATION, MAINTENANCE AND REPLACEMENT OF JOINT FACILITIES

15. (a) The District will have the ultimate responsibility for the operation, maintenance and replacement of the Joint Facilities, as defined in Article 1(h)(2) herein, pursuant to the District's repayment contract with Reclamation, hereinafter referred to as the District Contract and pursuant to the contract among Reclamation, the Tribe, the District and Montezuma Valley Irrigation Company for, among other things, the operation, maintenance and replacement of the Towaoc-Highline Canal, hereinafter referred to as the Canal Contract. The Tribe, or its assigns, agree to pay its proper proportionate share of the operation, maintenance and replacement costs associated with the delivery of all water under this contract through the Joint Facilities. Upon Reclamation's issuance of an irrigation block notice to the Tribe, the District will issue an operation, maintenance and replacement charge notice to the Tribe on or before October 10 of each year thereafter which states the estimated cost of the operation, maintenance and replacement of the Joint Facilities for the following year. The Tribe agrees to pay the amount specified in such notice on or before December 31, of the year in which the notice is issued. Whenever funds so advanced by the Tribe are inadequate to pay the Tribe's proper proportionate share, the District shall give a supplemental notice to the Tribe in a manner similar to such notice given to all other project water users. If the funds so advanced by the Tribe are in excess of the actual costs, the District will credit the Tribe on the following years charge notice.

Articles 14 and 15

(b) The Tribe agrees to take all reasonable actions to ensure adequate funds are available to pay the amounts as required in this article. If the Tribe is aware they will be unable to pay such amounts to the District by December 31, the Tribe shall notify the District. The District may then issue the appropriate charge notice to the Secretary and the Secretary, within 45 days of such notice, will pay the District, pursuant to Section 6(d) of the Legislation, for costs to be incurred on behalf of the Tribe, subject to Congressional appropriations. If, at the discretion of the District, it is necessary for the District to borrow funds to cover costs incurred on behalf of the Tribe prior to the Secretarial payment, the District may charge the interest and administrative costs of such borrowing to the Tribe's share.

(c) The District has agreed pursuant to Article 12(c) of the District Contract to operate and maintain all Project Works transferred to them in a manner assuring the delivery of the Tribe's allocated share of Project Water. If the District is unable to deliver the Tribe's share of water, Reclamation will take any necessary steps, including the operation of the Projects Works, to provide for the delivery of the Tribe's water.

(d) The responsibility for the payment of the Tribe's share of the operation, maintenance and replacement costs associated with the delivery of the Tribe's Project Water will be administered in accordance with Section 6 of the Legislation if such administration is different than outlined in subarticles (a), (b), and (e) of this article.

(e) The Tribe, or its assigns, agree to pay to the District the Tribe's proper proportionate share of the operation, maintenance and replacement costs of the Joint Facilities, independent of the amount of Project Water actually delivered to the Tribe, and any costs associated

with a change in point of delivery. Any change in point of delivery of any or all Project Water will be in accordance with the Legislation.

DISTRIBUTION AND BENEFICIAL USE OF PROJECT WATER

16. (a) When water is first delivered, the Tribe shall be responsible for the control, carriage, handling, distribution, and use of all Project Water delivered or taken herein. No liability shall accrue against the United States, and/or the District, their officers, agents, employees, and successors or assigns, for damages to persons or property direct or indirect and of whatever nature, arising out of or in any manner connected with the Tribe's control, carriage, handling, distribution, or use of such water. The Tribe shall not use or permit the use of any of the Project irrigation water taken or delivered hereunder on any lands other than those classified as irrigable lands.

(b) The Project irrigation water available for use by the Tribe will provide for full service irrigation water on approximately 7,500 acres on the Ute Mountain Ute Indian Reservation. Should the acreage certified by the Secretary as arable be inadequate to provide 7,500 acres under sprinkler systems, following an archaeological survey and agreed upon detailed sprinkler layouts, Reclamation will be responsible for classification of additional lands to serve 7,500 acres. In the event that the Project Water supply available to the Tribe can be put to beneficial use on more than approximately 7,500 acres, the Tribe may use any of the remaining land classified as arable or may request that the Secretary classify additional lands and the Tribe will share in the costs associated with such classification.

(c) Beneficial use shall be the basis, the measure, and the limit of the right to the use of Project Water.

(d) During periods of water shortage, deliveries of Project Water, or deliveries of the supply of water available under the Project priority, to the Tribe and to all others shall be as provided in Article III, Section A, Subsection 1.C. of the Water Rights Settlement Agreement.

WATER SHORTAGES, WASTE, SEEPAGE, AND RETURN FLOWS

17. (a) On account of drought or other causes, there may occur at times during any year a shortage in the quantity of water available for delivery to the Project by the United States pursuant to this contract. In no event shall any liability accrue against the United States and/or the District or any of their officers or employees for any damage, direct or indirect, arising from any such shortage.

(b) All of the waste, seepage, and return flow water derived from Project Water delivered pursuant to this contract is retained by the Tribe for beneficial use.

TITLE TO PROJECT WORKS

18. Title to Project Works constructed by the United States hall remain in the name of the United States unless otherwise provided by the Congress.

REMEDIES UNDER CONTRACT NOT EXCLUSIVE - WAIVER

19. Nothing contained in this contract shall be construed as in any manner abridging, limiting, or depriving Reclamation or the Tribe of any means of enforcing any remedy, either at law or in equity, for the breach of any of the provisions hereof which it would otherwise have. Any waiver at any time by any party to this agreement of its rights with

Articles 16, 17, 18, and 19

respect to a default, or any matter arising in connection with this agreement, shall not be deemed to be a waiver with respect to any subsequent default or matter.

COVENANT AGAINST CONTINGENT FEES

20. The Tribe warrants that no person or selling agency has been employed or retained to solicit or secure this agreement upon an understanding for a commission, percentage, brokerage, or contingent fee. For breach or violation of this warranty, Reclamation shall have the right to annul this agreement without liability or at its discretion to add to the contract repayment obligation or consideration the full amount of such commission, percentage, brokerage, or contingent fee.

OTHER COSTS TO BE PAID BY THE TRIBE

21. (a) In addition to all other payments required by this contract, the Tribe shall pay to the United States to the extent required by Reclamation Instructions, on or before March 1 of the year following that in which they have been incurred, the following costs:

(1) inspections under the provisions of Article 27(b).

(2) crop production censuses and reports to the extent not furnished as required in Article 33.

(3) land classification or reclassification to the extent that such costs are prescribed by Federal Reclamation Law to be repaid by the water users.

(4) special work requested by the Tribe.

Articles 19, 20, and 21

(b) In the event that there are no funds available to the United States with which to do the work covered by subarticle (a) hereof, the Tribe will pay in advance upon request of the United States, after consultation with the Tribe, the cost of such work as estimated by Reclamation. If such costs are less than the funds advanced, appropriate credit will be given upon the next installment on the Tribe's repayment obligation thereafter becoming due.

APPROVAL OF CONTRACTS BY THE UNITED STATES

22. (a) No contract made by the Tribe affecting the Project Works, except contracts of the usual labor, equipment, supplies, and service in connection with the operation and maintenance by the Tribe of the said works, shall be valid until approved by Reclamation.

(b) All contracts made by the Tribe relating to the delivery or distribution of water shall be in accordance with the Legislation.

SEVERABILITY

23. (a) If any provisions of Articles 24 through 40 are in conflict with Articles 1 through 23, then the provisions of Articles 1 through 23 shall take precedence.

(b) If any provision of the contract shall, for any reason be determined to be illegal or unenforceable, the parties, nevertheless, intend that the remainder of the contract shall remain in full force and effect. Furthermore, any adjustments or variations to this contract necessitated by future negotiations with other water users can be accomplished by amending this contract.

IN THE FOLLOWING STANDARD CONTRACT ARTICLES, ARTICLES 24 THROUGH 40, THE TERM "CONTRACTING OFFICER" MEANS THE "UNITED STATES," AND THE TERM "CONTRACTOR" MEANS THE "UTE MOUNTAIN UTE TRIBE."

Articles 22, and 23

CHARGES FOR DELINQUENT PAYMENTS

24. (a) The Contractor shall be subject to interest, administrative and penalty charges on delinquent installments or payments. When a payment is not received by the due date, the Contractor shall pay an interest charge for each day the payment is delinquent beyond the due date. When a payment becomes 60 days delinquent, the Contractor shall pay an administrative charge to cover additional costs of billing and processing the delinquent payment. When a payment is delinquent 90 days or more, the Contractor shall pay an additional penalty charge of 6 percent per year for each day the payment is delinquent beyond the due date. Further, the Contractor shall pay any fees incurred for debt collection services associated with a delinquent payment.

(b) The interest charge rate shall be the greater of the rate prescribed quarterly in the Federal Register by the Department of the Treasury for application to overdue payments, or the interest rate of 0.5 percent per month prescribed by Section 6 of the Reclamation Project Act of 1939 (Public Law 76-260). The interest charge rate shall be determined as of the due date and remain fixed for the duration of the delinquent period.

(c) When a partial payment on a delinquent account is received, the amount received shall be applied, first to the penalty, second to the administrative charges, third to the accrued interest, and finally to the overdue payment.

GENERAL OBLIGATION--BENEFITS CONDITIONED UPON PAYMENT

25. (a) The obligation of the Contractor to pay the United States as provided in this contract is a general obligation of the Contractor.

(b) The payment of charges becoming due hereunder is a condition precedent to receiving benefits under this contract. The Contracting Officer may not make water available to the Contractor through Project Works during any period in which the Contractor may be in arrears in the advance payment of any operation and maintenance charges due the United States or in arrears for more than 12 months in the payment of any construction charges due the United States.

Articles 24 and 25

OPERATION AND MAINTENANCE OF TRANSFERRED WORKS (INDIAN FACILITIES)-- PAYMENT OF MISCELLANEOUS COSTS

26. (a) Upon substantial completion of the project works, or as otherwise determined by the Contracting Officer, and following written notification, the care, operation, and maintenance of any or all of the project works shall be transferred to the Contractor. Title to such transferred works will remain in the name of the United States.

(b) The Contractor shall care for, operate, and maintain such transferred works in full compliance with the terms of this contract, and in such manner that said transferred works remain in good and efficient condition.

(c) Necessary repairs of the transferred works shall be made promptly by the Contractor. In case of unusual conditions or serious deficiencies in the care, operation, and maintenance of the transferred works threatening or causing interruption of water service, the Contracting Officer may issue to the Contractor a special written notice of the necessary repairs. Within 60 days or receipt of such notice, the contractor shall either make the necessary repairs or submit a plan acceptable to the Contracting Officer for accomplishing said repairs. If the Contractor fails to do either within 60 days of receipt of said notice, the Contracting Officer may cause the repairs to be made and the cost thereof shall be paid by the Contractor as directed by the Contracting Officer.

(d) The Contractor shall not make any substantial changes in the transferred works without first obtaining written consent of the Contracting Officer.

(e) The Contractor agrees to indemnify the United States and likewise, the United States would indemnify and hold the Contractor and all of its representatives harmless from, all damages resulting from suits, actions, or claims of any character brought on account of any injury to any person or property arising out of any act, omission, neglect, or misconduct in the manner or method of performing any construction, care, operation, maintenance, supervision, examination, inspection, or other duties of the Contractor required under this contract, regardless of who performs those duties.

Article 26

(f) In the event the Contractor is found to be operating the transferred works or any part thereof in violation of this contract, then, upon the election of the Contracting Officer, the United States may take over from the Contractor the care, operation, and maintenance of the transferred works by giving written notice to the Contractor of such election and the effective date thereof. Thereafter, during the period of operation by the United States, upon notification by the Contracting Officer, the Contractor shall pay to the United States, annually in advance, the cost of operation and maintenance of the works as determined by the Contracting Officer. Following written notification from the Contracting Officer, the care, operation, and maintenance of the works may be retransferred to the Contractor.

(g) In addition to all other payments to be made by the Contractor under this contract, the Contractor shall reimburse to the United States, following the receipt of a statement from the Contracting Officer, all miscellaneous costs incurred by the United States for unusual work involved in the administration and supervision of this contract.

EXAMINATION AND INSPECTION OF PROJECT WORKS FOR DETERMINING ADEQUACY OF OPERATION AND MAINTENANCE

27. (a) The Contracting Officer may, from time to time, examine the Contractor's books, records and reports, pursuant to this contract and the Project Works being operated by the Contractor to assist the Contractor in determining the condition of the Project Works, and the adequacy of the operation and maintenance program, the reserve fund, and the water conservation program. The Contracting Officer may examine any or all of the Project Works which were constructed by the United States and transferred to the Contractor, or Project Works which were constructed by the Contractor with funds advanced or reimbursed by the United States.

(b) The Contracting Officer may, or the Contractor may request the Contracting Officer to, conduct special inspections of any Project Works being operated by the Contractor and special audits of the Contractor's books and records pursuant to this contract to ascertain the extent of any operation and maintenance deficiencies, to determine the remedial measures required for their correction, and to assist the Contractor in solving specific problems. Except in an emergency, any

special inspection or audit shall be made only after written notice thereof has been delivered to the Contractor by the Contracting Officer.

(c) The Contractor shall provide access to the project works, operate any mechanical or electrical equipment, and be available to assist in the examination, inspection or audit.

(d) The Contracting Officer shall prepare reports based on the examinations, inspections or audits, and furnish copies of such reports and any recommendations to the Contractor.

(e) The Contractor shall reimburse the actual cost incurred by the United States in making operation and maintenance examinations, inspections, and audits, and preparing associated reports and recommendations.

EMERGENCY RESERVE FUND

28. (a) Commencing with the initial transfer of Indian Facilities, the Contractor shall accumulate and maintain a reserve fund, which the Contractor shall keep available to meet costs incurred during periods of special stress caused by damaging droughts, storms, earthquakes, floods, or other emergencies threatening or causing interruption of water service.

(b) The Contractor shall accumulate the reserve fund with annual deposits or investments of not less than $5200 to a federally insured interest- or dividend-bearing account, or in securities guaranteed by the Federal Government; Provided, That money in the reserve fund shall be available within a reasonable time to meet expenses for such purposes as those identified in paragraph (d). Such annual deposits and the accumulation of interest to the reserve fund shall continue until the basic amount of $78,000 is accumulated. Following an emergency expenditure from the fund, the annual deposits shall continue from the year following the emergency expenditure until the previous balance is restored. After the initial amount is accumulated or after the previous balance is restored, the annual deposits may be discontinued and the interest earnings shall continue to accumulate and be retained as part of the reserve fund.

(c) Upon mutual agreement between the Contractor and the Contracting Officer, the basic reserve fund or the accumulated reserve fund may be adjusted to account for risk and uncertainty stemming from the size and complexity of the project, the size of the annual operation and maintenance budget, additions to, deletions from, or changes in project works, and operation and maintenance costs not contemplated when this contract was executed. If the accumulated fund is adjusted downward, the

Contractor shall utilize the excess increment for annual operation and maintenance costs.

(d) The Contractor may make expenditures from such reserve fund only for meeting usual operation and maintenance costs incurred during periods of special stress as described in paragraph (a), and unforeseen extraordinary operation and maintenance costs, unusual or extraordinary repair or replacement costs, and betterment costs (in situations where recurrence of severe problems can be eliminated) during such periods of special stress. Proposed expenditures from the fund shall be submitted to the Contracting Officer in writing for review and written approval prior to disbursement. Whenever the reserve fund is reduced below the current balance by expenditures therefrom, the Contractor shall restore that balance by the accumulation of annual deposits, as specified in paragraph (b).

(e) During any period in which any of the project works are operated and maintained by the United States, the reserve fund shall be available for like use by the United States.

(f) Within 90 days after the end of each fiscal year, the Contractor shall provide an annual statement of the principal and accumulated interest of the reserve fund account to the Contracting Officer.

NOTICES

29. Any notice, demand, or request authorized or required by this contract shall be deemed to have been given, on behalf of the Contractor, when mailed, postage prepaid, or delivered to the Regional Director, Upper Colorado Region, Bureau of Reclamation, P. O. Box 11568, Salt Lake City, Utah 84147, and on behalf of the United States, when mailed, postage prepaid, or delivered to the Tribal Chairman, of the Contractor, Ute Mountain Ute Tribe, Towaoc, Colorado 81334. The designation of the addressee or the address may be changed by notice given in the same manner as provided in this article for other notices.

CONTINGENT ON APPROPRIATION OR ALLOTMENT OF FUNDS

30. The expenditure or advance of any money or the performance of any obligation of the United States under this contract shall be contingent upon appropriation or allotment of funds. No liability shall accrue to the United States in case funds are not appropriated or allotted.

OFFICIALS NOT TO BENEFIT

31. No Member of or Delegate to Congress, Resident Commissioner or official of the Contractor shall benefit from this contract other than as a water user or landowner in the same manner as other water users or landowners.

Articles 28, 29, 30, and 31

ASSIGNMENT LIMITED-SUCCESSORS AND ASSIGNS OBLIGATED

32. The provisions of this contract shall apply to and bind the successors and assigns of the parties hereto, but no assignment or transfer of this contract or any right or interest therein shall be valid until approved in writing by the Contracting Officer.

BOOKS, RECORDS AND REPORTS

33. The Contractor shall establish and maintain accounts and other books and records pertaining to administration of the terms and conditions of this contract, including: the Contractor's financial transactions, water supply data, project operation, maintenance and replacement logs, and project land and right-of-way use agreements; the water users' land-use (crop census), land-ownership, land-leasing and water-use data; and other matters that the Contracting Officer may require. Reports thereon shall be furnished to the Contracting Officer in such form and on such date or dates as the Contracting Officer may require. Subject to applicable Federal laws and regulations, each party to this contract shall have the right during office hours to examine and make copies of the other party's books and records relating to matters covered by this contract.

RULES, REGULATIONS, AND DETERMINATIONS

34. (a) The parties agree that the delivery of water or the use of Project Works pursuant to this contract is subject to the Legislation and to applicable Reclamation law, as amended and supplemented, and the rules and regulations promulgated by the Secretary of the Interior under Reclamation law.

(b) The Contracting Officer shall have the right to make determinations necessary to administer this contract that are consistent with the expressed and implied provisions of this contract, the laws of the United States and the rules and regulations promulgated by the Secretary of the Interior. Such determinations shall be made in consultation with the Contractor.

ADMINISTRATION OF RIGHTS-OF-WAY

35. The lands and rights-of-way acquired and needed by the United States or District for the purposes of care, operation, and maintenance of

Project Works may be used by the Contractor for such purposes. The Contractor shall maintain oversight on Reclamation rights-of-way and notify Reclamation of any unauthorized encroachments. The Contractor shall not approve and BIA shall not issue land rights, outgrants, leases, licenses, permits, or special use agreements involving Reclamation rights-of-way, or transferred works without prior review and concurrence of the Contracting Officer.

QUALITY OF WATER

36. The operation and maintenance of project facilities shall be performed in such manner as is practicable to maintain the quality of raw water made available through such facilities at the highest level reasonably attainable, as determined by the Contracting Officer. The United States does not warrant the quality of water and is under no obligation to construct or furnish water treatment facilities to maintain or better the quality of water.

WATER AND AIR POLLUTION CONTROL

37. The Contractor, in carrying out this contract, shall comply with all applicable water and air pollution laws and regulations of the United States.

WATER CONSERVATION

38. Prior to the delivery of water provided from or conveyed through federally constructed or federally financed facilities pursuant to this contract, the Contractor shall develop an effective water conservation program consistent with the current "Guidelines for the Development of Irrigation Water Conservation Plans" and acceptable to the Contracting Officer. The water conservation program shall contain definite water conservation objectives, appropriate economically feasible water conservation measures, and time schedules for meeting those objectives. At subsequent 5-year intervals, the Contractor shall submit a report on the results of the program to the Contracting Officer for review. Based on the conclusions of the review, the Contracting Officer and the Contractor shall consult and agree to continue or to revise the existing water conservation program.

INDIAN EMPLOYMENT - EQUAL OPPORTUNITY

39. (a) In accordance with the provisions of Title 42 U.S.C. 2000-e-2(i), the Contractor shall give preference in employment to Indian residents of the Ute Mountain Ute Reservation. The Ute Mountain Ute Tribal

Employment Rights Office shall be notified of employment opportunities 48 hours before any positions are advertised to the general public.

(b) Except as provided above, during the performance of this contract, the Contractor agrees as follows:

(1) The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, or national origin. Such action shall include, but not be limited to, the following: Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the Contracting Officer setting forth the provisions of this nondiscrimination clause.

(2) The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without discrimination because of race, color, religion, sex, or national origin.

(3) The Contractor will send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, a notice, to be provided by the Contracting Officer, advising the said labor union or workers' representative of the Contractor's commitments under Section 202 of Executive Order 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(4) The Contractor will comply with all provisions of Executive Order No. 11246 of September 24, 1965, as amended, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(5) The Contractor will furnish all information and reports required by said amended Executive Order and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to its books, records, and accounts by the Contracting Officer and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(6) In the event of the Contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the such rules, regulations, or orders, this contract may be canceled, terminated, or suspended, in whole or in part, and the Contractor may be declared ineligible for further Government contracts in accordance with procedures authorized in said amended Executive Order, and such other sanctions may be imposed and remedies invoked as provided in said Executive Order, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(7) The Contractor will include the provisions of paragraphs (1) through (7) in every subcontract or purchase order unless exempted by the rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of said amended Executive Order, so that such provisions will be binding upon each subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as may be directed by the Secretary of Labor as a means of enforcing such provisions, including sanctions for noncompliance: Provided, however, That in the event the Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

COMPLIANCE WITH CIVIL RIGHTS LAWS AND REGULATIONS

40. (a) The Contractor shall comply with Title VI of the Civil Rights Act of 1964 (42 U.S.C. 2000d), Section 504 of the Rehabilitation Act of 1975 (P.L. 93-112, as amended), the Age Discrimination Act of 1975 (42 U.S.C. 6101, et seq.) and any other applicable civil rights laws, as well as with their respective implementing regulations and guidelines imposed by the U. S. Department of the Interior and/or Bureau of Reclamation.

(b) These statutes require that no person in the United States shall, on the grounds of race, color, national origin, handicap, or age, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity receiving financial assistance from the Bureau of Reclamation. By executing this contract, the Contractor agrees to immediately take any measures necessary to implement this obligation, including permitting officials of the United States to inspect premises, programs and documents.

(c) The Contractor makes this agreement in consideration of and for the purpose of obtaining any and all Federal grants, loans, contracts, property discounts or other Federal financial assistance extended after the date hereof to the Contractor by the Bureau of Reclamation, including installment payments after such date on account of arrangements for Federal financial assistance which were approved before such date. The Contractor recognizes and agrees that such Federal assistance will be extended in reliance on the representations and agreements made in this article, and that the United States reserves the right to seek judicial enforcement thereof.

IN WITNESS WHEREOF, the parties hereto have caused this contract to be duly executed as of the day and year first above written.

UTE MOUNTAIN UTE TRIBE

By _____
Chairman

THE UNITED STATES OF AMERICA

By _____
Bureau of Reclamation

IN CONCURRENCE:

DOLORES WATER CONSERVANCY DISTRICT

By _____
President

APPROVED BY:

BUREAU OF INDIAN AFFAIRS

By _____
Area Director
Albuquerque Area Office

List of Attachments:

Exhibit A - Water Rights Settlement Agreement
Exhibit B - Water Rights Settlement Legislation

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