9-2021

Universal Access to Clean Water for Tribes in the Colorado River Basin

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Water & Tribes Initiative | Colorado River Basin

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About this Report

This report was produced for the Water & Tribes Initiative: Colorado River Basin by Heather Tanana (Lead Author), JD/MPH, Assistant Professor of Law (Research) & Stegner Fellow, Wallace Stegner Center – S.J. Quinney College of Law – University of Utah; Jaime Garcia, JD, Water Fellow, Getches-Wilkinson Center – University of Colorado; Ana Olaya, JD/LLM, Managing Director, CK Blueshift, LLC; Chelsea Colwyn, JD/MELP, Water Fellow, Getches-Wilkinson Center – University of Colorado; Hanna Larsen (JD expected 2022), Wallace Stegner Center – S.J. Quinney College of Law – University of Utah; Ryan Williams (JD expected 2022), Wallace Stegner Center – S.J. Quinney College of Law – University of Utah; and Jonathan King, Attorney, Squire Patton Boggs.

There is no official consensus regarding the terminology used related to Indigenous peoples or when to capitalize certain terms. In this report, Native American and American Indian/Alaska Native are used as well as general capitalization of the words Tribe and Tribal as a sign of respect.

Disclaimer: *The report is subject to ongoing data collection and may be revised as new information is received. URLs provided were operational at the time of writing but may have subsequently been changed or deactivated.*

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List of Acronyms

AI/AN	American Indian/Alaska Native
BOR	Bureau of Reclamation
CRB	Colorado River Basin
CRIT	Colorado River Indian Tribes
CWA	Clean Water Act
CWISA	EPA Clean Water Indian Set-Aside
CWSRF	EPA Clean Water State Revolving Fund
DOI	Department of the Interior
DWIG-TSA	EPA Drinking Water Infrastructure Grants – Tribal Set Aside
DWSRF	EPA Drinking Water State Revolving Fund
EPA	Environmental Protection Agency
GAP	EPA General Assistance Program
IHS	Indian Health Service
ISDEAA	Indian Self-Determination and Education Assistance Act
ISFA	Indian Sanitation Facilities Act
ITCA	Inter Tribal Council of Arizona
OITA	Office of International and Tribal Affairs
O&M	Operation and Maintenance
RCAS	Rural Community Assistance Program
SDWA	Safe Drinking Water Act
SDS	IHS Sanitation Deficiency System
SFC	IHS Sanitation Facilities Construction
TAP	USDA Native American Affairs Technical Assistance Program
TAT	USDA Water & Waste Disposal Technical Assistance & Training Grant
USDA	United States Department of Agriculture
UN	United Nations
UNDRIP	United Nations Declaration on the Rights of Indigenous People
WTI	Water & Tribes Initiative: Colorado River Basin

Foreword

Colorado River Basin Native American Tribal Leaders

This is a timely and much needed report. Clean water is fundamental to life, but many of our people have never had an opportunity to experience this basic and essential service, one that is taken for granted in most American communities. Many of our family members, our elders, and our children have lost their lives during the COVID-19 pandemic because clean and safe water was not available. The necessity and the urgency of having access to safe water sources has been starkly demonstrated during this trying time.

Helping to provide clean water to us, throughout Indian Country, benefits everyone, and its absence correspondingly jeopardizes the health of the entire United States of America. As the pandemic has made clear, any hot spot for the virus inevitably and inexorably spreads to other areas, both neighboring and far flung. With our homes in Indian Country many times more likely than homes in white communities to lack indoor plumbing, our nation's resources must be quickly focused on addressing this inequity for the protection of all.

The United States government has long promised all Native American Tribes a "permanent homeland," a "livable reservation," and a home "conducive to the health and prosperity of the Indians." But these promises are broken when we do not have clean water to drink, to cook with, and to wash as required to avoid the spread of this deadly disease. Both the Tribes and the United States envisioned our homelands as places where our people can thrive, as they had done from time immemorial. It is long past time to make that vision a reality. Access to safe and clean water must be made available now. Promises made must be kept and access provided to this most basic of human needs—clean water.

Tó éí iiná até [Water is Life],
Jonathan Nez | President, Navajo Nation

Paatuwaqatsi [Water is Life],
Timothy Nuvangyaoma | Chairman, Hopi Tribe

Payy new aakut [Water is Life],
Manuel Heart | Chairman, Ute Mountain Ute Tribe and Ten Tribes Partnership

Xa 'iipayk [Water is Life],
Jordan D. Joaquin | President, Fort Yuma Quechan Indian Tribe

Foreword

Senator Michael F. Bennet

"I believe that every American has a fundamental right to breathe clean air and drink clean water. I know that we haven't fulfilled that right yet."

—Joe Biden, Wilmington, Delaware, Sept. 14, 2020

It is unacceptable that in the 21st Century, some of our fellow Americans must travel for miles to collect water that is safe for drinking and everyday use.

Access to clean water is a human right. It is essential for people to live with dignity and foundational to virtually every other human right. Nevertheless, many American Indian and Alaska Native communities still lack access to clean water. By some estimates, 48% of households on Native American reservations do not have clean water or adequate sanitation. Native homes are 19 times more likely than white households to lack indoor plumbing. I'm told that in more remote areas of the Ute Mountain Ute reservation, it is now custom to bring bottled water as a greeting gift because water contamination is such a challenge.

When the federal government established reservations for Native American Tribes, it promised a permanent and livable homeland for those it had displaced from their ancestral lands. The continued lack of access to clean and safe water for many Native American Tribes betrays this fiduciary responsibility. The federal government can wait no longer. The lack of access to clean water on reservations is a stain on our Republic, and we must strive urgently to fulfill this unmet responsibility.

This report details challenges of clean water access for the 30 Tribes in the Colorado River Basin and provides a thoughtful path forward. Although the various treaties and laws addressing the federal government's responsibilities to Colorado River Basin Tribes are well-documented, this report is the first ever to describe the specific barriers preventing households on reservations from accessing clean water and assesses the numerous federal programs designed to correct this long-standing problem. Finally, the report offers recommendations that can help these programs achieve their intended purpose.

I commend the Water & Tribes Initiative for this vital contribution.

Michael F. Bennet
United States Senator

Executive Summary

Introduction

The coronavirus pandemic has tragically highlighted the vast and long standing inequities facing Tribal communities, including disparities in water access. The Water & Tribes Initiative (WTI) launched the Universal Access to Clean Water project to raise awareness and understanding about the lack of water security in Native American communities within the Colorado River Basin (CRB), and to engage leaders to solve the problem. As part of that initiative, WTI commissioned this report to describe current conditions among CRB Tribes, examine existing federal assistance programs, and develop policy recommendations to address Tribal community water needs. Key recommendations include adopting a whole of government approach and fully funding federal programs related to Tribal drinking water projects. A window of opportunity has opened to address water insecurity in Indian country. It is critical that action be taken before that window closes and these issues are ignored for several more generations.

According to the Centers for Disease Control and Prevention (CDC), American Indians and Alaska Natives (AI/AN) are at least 3.5 times more likely than white persons to contract COVID-19. Limited access to running water is one of the main factors contributing to this elevated rate of incidence. According to the U.S. Water Alliance, Native American households are 19 times more

"In the arid West, it is clear—no lands can be a permanent homeland without an adequate supply of water, especially potable water. . . . Safe drinking water is a basic need, and the consequences of lack of access to reliable potable water supplies can be staggering."

—Jonathan Nez, President, Navajo Nation[1]

likely than white households to lack indoor plumbing. Without a safe, reliable, affordable, and easily accessible water supply, these households are unable to meet basic personal hygiene, food preparation, domestic cleaning, and other needs required for good health.

"Water is essential to every aspect of household and community life and the economy."[2] Yet, many Tribal communities within the CRB still do not have access to clean and safe water. This lack of access reflects historical and persisting racial inequities that have resulted in health and socioeconomic disparities. "Race is the strongest predictor of water and sanitation access," with Native Americans more likely than any other group to face water access issues.[3]

This report begins by assessing the current water related needs of the 30 CRB Tribes.[4] Several factors contribute to water insecurity for Tribes, including the isolated nature of some reservations, lack of adequate infrastructure, and lack of clean water sources. Although, the exact nature and cause(s) of water insecurity vary from Tribe to Tribe, we have identified four broad challenges to water security, shared by many on-reservation communities.

Barriers to Providing Access to Clean Water for Tribes

Native American households are more likely to lack piped water services than any other racial group. The Navajo Nation, the largest and most populous reservation in the country, has significant piped water access gaps. Navajo residents are 67 times more likely than other Americans to live without access to running water. As a result, many households are required to haul water from communal wells—a costly and time-consuming burden that has put Tribal members at risk during the pandemic as they balance social distancing recommendations with the requirement to meet basic daily needs.

Inadequate water quality is pervasive in Indian country. Clean water access includes the ability to utilize the water for its intended purposes. Some Tribes may have developed the necessary infrastructure to bring piped water into all of the community households. However, for a variety of reasons, that water may not be suitable for human consumption due to quality concerns. The Hopi Tribe has struggled with arsenic contamination in its water supply since its drinking water systems were first installed in the 1960s. The Tribe estimates that approximately 75 percent of people living on Hopi land are drinking contaminated water. Such contamination poses serious health risks, including diabetes, skin discoloration, cancer, blindness, and partial paralysis.

Existing water infrastructure is deteriorating or inadequate. Native Americans are a young and growing population. However, investment in water infrastructure has not kept up with population growth and other needs. Such underinvestment harms "the social, physical, and mental wellbeing" of Tribal communities and impairs their ability to thrive.[5] "Closing the investment gap would improve the condition and performance of water systems, leading to supply-side and demand-side benefits to the economy."[6] For the Colorado River Indian Tribes (CRIT), deteriorating infrastructure has hindered their water delivery system and negatively impacted their economic development. A significant portion of CRIT's water comes through infrastructure installed over the course of many decades, beginning in the 1870s. The high costs associated with outdated technology and infrastructure repairs has limited CRIT's ability to realize the full potential value of its water and meet the growing needs of its community.

Operation and maintenance (O&M) of water systems is a critical component of ensuring long-term water security. While certain CRB Tribes have been able to initially construct suitable water infrastructure, O&M of the systems has proven to be difficult. The Jicarilla Apache Nation has experienced the challenges associated with providing ongoing support for O&M of Tribal infrastructure. Like other Tribes, the Jicarilla Apache Nation is unable to utilize traditional means of collecting revenue to support O&M—e.g., taxing Tribal lands. Infrastructure O&M, therefore, must be separately budgeted for year after year. When budgets are tight, allocations for O&M often suffer, repairs are delayed, and established infrastructure starts to degrade. The Jicarilla Apache Nation has seen this happen to its water delivery system, and water services to the community have been threatened.

The challenges described above existed prior to the pandemic. When COVID-19 spread into Indian country, many Tribal communities were hit particularly hard because of their lack of water access. A recent analysis reveals a strong association between COVID-19 incidence rates and the lack of indoor plumbing on reservations.[7] Given that one in three Navajo homes does not have running water, it is not surprising that the Navajo Nation has suffered one of the highest infection rates in the country. The White Mountain Apache Tribe has also been disproportionately impacted by the pandemic, in part due to limited water access, and all of the CRB Tribes have experienced some degree of health, economic, and other impacts that have exacerbated pre-existing challenges. Beyond water security, the pandemic has highlighted other historical inequities, such as the lack of utility services in general, underfunded and limited public health services, food deserts, housing shortages, and limited economic opportunities.

The stark and disproportionate lack of access to clean water on reservations is particularly egregious because the federal government has treaty and trust responsibilities to provide clean water to Tribes. In exchange for the cession of millions of acres of lands, Tribes received certain promises from the federal government. These promises often included the establishment of a reservation as a permanent homeland for Tribes. Based upon an underlying trust responsibility, the federal government has a duty "to protect Tribal treaty rights, lands, assets, and resources[.]"[8]

In *Winters v. United States*, the U.S. Supreme Court addressed Tribal water rights, holding that when reservations were created, the United States and Tribes reserved water rights—enough to fulfill the purposes of the reservation, from domestic to agricultural to hunting and fishing. The *Winters* decision was a moral statement as well as a legal ruling, for the heart of Indian water rights involves the United States' trust obligation to provide true homelands to Tribes. "Access to a clean, reliable supply of water is basic to human health,"[9] and clearly a necessary component to making a homeland habitable and permanent.

Several of the CRB Tribes entered into treaties with the federal government. In these treaties, the federal government promised to establish a reservation as a permanent home for the Tribe and to enact laws "as may be deemed conducive to the prosperity and happiness of [the] Indians."[10] Unfortunately, the federal government has largely failed to fulfill its duty to provide access to clean water for Tribes, and in many cases, actively undermined Tribal water rights by constructing projects and providing water principally or entirely for the benefit of non-Indians. However, in at least partial recognition and fulfillment of its treaty and trust responsibility to provide access to clean water for Tribes, various federal agencies have established programs that provide support for water related projects.

Primary Federal Agencies Involved in Water Related Projects

The Indian Health Service's (IHS) Sanitation Facilities Construction (SFC) Program has been substantially involved in building water infrastructure in Indian country. Under the SFC Program, federal funds are used to design and construct water, wastewater, and solid waste facilities. However, the significant, ongoing funding deficit has hindered the advancement of a number of infrastructure projects. As a whole, IHS has been chronically underfunded. The SFC Program is no exception, receiving only a fraction of its total needs in IHS appropriations.

The Environmental Protection Agency (EPA) plays a key role in ensuring water quality in Indian country. The EPA is responsible for enforcing federal clean water and safe drinking water standards under the Clean Water Act (CWA) and the Safe Drinking Water Act (SDWA). The EPA is also able to fund drinking water and wastewater infrastructure through Tribal set-aside programs for both the CWA and SDWA. These grants can be used to provide Tribes with access to safe drinking water and sanitation, but generally focus on improving water quality, as opposed to increasing individual delivery of water services. As a result, the EPA has limited ability to expand water access unrelated to water quality standards. The process to obtain EPA funding also varies by Region within the CRB. EPA Regions 6 (New Mexico) and 8 (Colorado, Utah, Wyoming) administer the DWIG-TSA program in conjunction with IHS, funding projects identified and prioritized by the IHS SFC Program. In contrast, EPA Region 9 (Arizona, California, Nevada) has established its own solicitation process and provides DWIG-TSA funding both directly to Tribes and through IHS.

The U.S. Department of Agriculture's (USDA) Rural Development program can help improve the quality of life in rural areas by providing financial programs to support essential public facilities and services, including water and sewer systems. Water and Waste Disposal Grants (Section 306c) provide the best opportunity for Tribes to secure grant money to build drinking water and waste disposal facilities. The USDA has a history of working with Tribes to access funding under its programs, but underwriting requirements and extensive pre-development work may deter some Tribes from applying.

The U.S. Bureau of Reclamation (BOR) has primarily been involved in water projects as a result of federal Indian water rights settlements or other specific Congressional direction. The BOR is also authorized to provide technical assistance and offers competitive funding to improve water conservation and management. However, the small amount of project funding available under the BOR's program limits the agency's role in Tribal water infrastructure projects.

While existing federal programs have made some headway in addressing the water crisis in Indian country, significant progress has remained elusive. This report identifies a number of legal and institutional barriers to providing clean water that will need to be addressed in order to advance the water needs of Tribes. Recognizing that much work remains to truly understand the many dimensions of this problem, some preliminary recommendations are identified to address these barriers.

Recommendations for Providing Access to Clean Water for Tribes

The federal government should adopt a "whole of government" approach to address the unacceptable lack of access to drinking water and sanitation for Tribal communities. The federal government's current approach to providing drinking water and sanitation to Tribes is haphazard and inefficient. Currently, at least seven different federal agencies with at least 23 different programs provide some type of drinking water or sanitation funding for Tribes. The federal government should pursue a coordinated whole of government approach to develop a strategy to address this problem quickly and effectively.

To accomplish this, the federal government must fulfill its treaty and trust responsibilities to Tribes by supporting and fully funding water access initiatives in Indian country, which requires leadership and commitment to these issues at the federal level. Additionally, pooling and optimizing federal funding will allow the Tribes to maximize the various funding programs and achieve the greatest possible uptake and usage for Tribal water projects.

The federal agencies with drinking water and sanitation programs should work in close consultation with Tribes to identify shortcomings and refine the project selection process. Revision of the criteria for prioritizing and funding water projects can ensure long-term needs are met and remedy the current patchwork approach to securing drinking water access in Tribal communities. Moreover, as sovereign entities, Tribes have inherent authority to govern their land and people. They are best suited to identify and prioritize projects to meet the needs of their community and promote the health, safety, and well-being of their citizens.

The whole of government approach should enhance Tribal capacity and promote self-governance. Increasing Tribal awareness of available agency programs and funding technical assistance for completing the applications would simplify the entire process for Tribes. Projects should provide for technical support to increase development capacity within the Tribal community. Increased capacity will promote successful completion and Tribal control of projects, and help overcome challenges to supporting O&M of those projects into the future. Additionally, the federal government should fund collaborative projects between Tribal and state and local governments, which will further advance Tribal capacity.

Executive Summary Endnotes

[1] *The Navajo Utah Water Rights Settlement Act of 2019: Hearing on H.R. 644 Before the U.S. H. Natural Resources Comm.*, 116th Cong. 3 (June 26, 2019) (testimony of Jonathan Nez, President, Navajo Nation).

[2] American Society of Civil Engineers, The Economic Benefits of Investing in Water Infrastructure at 3 (2020) [hereinafter Economic Benefits].

[3] U.S. Water Alliance and DigDeep, Closing the Water Access Gap in the United States: A National Action Plan 22 (2019).

[4] The 30 CRB Tribes include: Ak-Chin Indian Community, Chemehuevi Indian Tribe, Cocopah Indian Tribe, Colorado River Indian Tribes, Fort McDowell Yavapai Nation, Fort Mojave Indian Tribe, Gila River Indian Community, Havasupai Tribe, Hopi Tribe, Hualapai Indian Tribe, Jicarilla Apache Nation, Kaibab Band of Paiute Indians, Las Vegas Tribe of Paiute Indians, Moapa Band of Paiute Indians, White Mountain Apache, Navajo Nation, Pascua Yaqui Tribe, Quechan Indian Tribe, Salt River Pima-Maricopa Indian Community, San Carlos Apache Tribe, San Juan Southern Paiute Tribe, Shivwits Band of Paiute Indian Tribe of Utah (Constituent Band of the Paiute Indian Tribe of Utah), Southern Ute Indian Tribe, Tohono O'odham Nation, Tonto Apache Tribe, Ute Indian Tribe, Ute Mountain Ute, Yavapai-Apache Nation, Yavapai-Prescott Indian Tribe, and Pueblo of Zuni.

[5] Economic Benefits, *supra* note 2, at 3.

[6] *Id.* at 28.

[7] Desi Rodriguez-Lonebear, et al., *American Indian Reservations and COVID-19: Correlates of Early Infection Rates in the Pandemic*, J. Pub. Health Mgmt. Prac. 26(4) (2020).

[8] Bureau of Indian Affairs, *What is the Federal Indian Trust Responsibility?*, http://www.bia.gov/FAQs/index.htm.

[9] U.S. Bureau of Reclamation, Colorado River Basin Ten Tribes Partnership Tribal Water Study at 7–10 (2018).

[10] Treaty with the Navaho art. IX, Sept. 9, 1849, 9 Stat. 974.

Chapter 1
Water is Life

Water is critical to the health, socioeconomic, and cultural needs of Tribes. Yet, Tribal communities face high rates of water insecurity.[2] While the exact number is unknown, a 2016 Congressional report estimated that "[o]ver 660,000 American Indian and Alaska Native men, women, and children lack access to clean and reliable water sources or basic sanitation."[3] Using the same means of calculation, that number *increased* in 2018 to more than 710,000 individuals—a fact that is not surprising given that in 2016, Congress appropriated less than four percent of the estimated cost to provide water and sanitation services to all American Indian/Alaska Native (AI/AN) homes.[4] Tribes within the Colorado River Basin (CRB) are among the most impacted. This section discusses water access as a basic human right, and analyzes the impact that the COVID-19 pandemic has had on CRB Tribes.

"Clean water is a basic ingredient to health and prosperity, but far too many American Indian and Alaska Native households lack access to safe and reliable water sources."

—Daryl Vigil, Jicarilla Apache Nation[1]

Water is a Basic Human Right

"Water is essential to every aspect of household and community life and the economy."[5] Water insecurity is a public health crisis, contributing to a host of negative health outcomes, including pneumonia, intestinal issues, and cancer. "For decades, experts have documented how lack of access to clean water and sanitation in Indian country contributes to high rates of morbidity and mortality among American Indians and Alaska Natives."[6] For many Tribes, water also plays an

important role in cultural and spiritual activities. For the Navajo, *Tó éí iiná até* means "water is life." For the Hopi, it is *Paatuwaquatsi*. These Tribes and others view water as sacred and synonymous with life.

"Ensuring access to water and sanitation for all people is not simply a question of water resources, technology and infrastructure, but also of setting priorities, tackling poverty and inequality, addressing societal power imbalances, and above all, political will."[7] The human right to water is well established in international law. The United Nations (UN) and several countries have recognized the right to water. In early 2000, the UN reaffirmed that "the rights to food and clean water are fundamental human rights and their promotion constitutes a moral imperative for both national Governments and for the international community."[8] A decade later, the UN further declared clean drinking water and sanitation as human rights essential to the full enjoyment of life and integral to the realization of all human rights.[9] The UN Declaration on the Rights of Indigenous People (UNDRIP) explicitly recognized these rights for indigenous peoples as part of their right to the full enjoyment of all officially-recognized human rights and fundamental freedoms.[10] The UNDRIP also recognized that indigenous peoples have an equal right to the enjoyment of the highest attainable standard of physical and mental health; as well as the right to maintain and strengthen their spiritual relationship with their traditionally owned or otherwise occupied lands, territories, waters, and other resources.[11]

While the human right to water is not articulated in the Constitution, some legal scholars have argued that access to safe and affordable drinking water is nonetheless recognized in the United States as part of the right to life.[12] The responsibility to guarantee such fundamental rights falls upon the federal government. Yet despite the importance of water to individual and community survival, the United States has failed to provide access to water in a nondiscriminatory fashion. The lack of federal leadership has resulted in piecemeal attempts to address water security, with Indian country trailing behind the rest of the United States.

Impact of COVID-19 on Tribes

The COVID-19 pandemic has highlighted the dire need for universal clean water. To help minimize the risk of contracting COVID-19, the CDC recommends avoiding close contact with others, washing hands frequently for at least 20 seconds each time, and cleaning surfaces with soap and water.[13] However, these protective measures are not feasible when Tribal members must ration hauled water to two to three gallons per person per day.[14] If there is not enough water at the community source, residents must rely on other households with piped water access, further risking transmission and contraction of COVID-19.

None of the CRB Tribes has been immune to the harsh impact that the pandemic has wrought on Native Americans. Indian Health Service (IHS) has worked closely with Tribal, state, and local health officials to coordinate a comprehensive response to the pandemic. Data limitations make it difficult to know the exact number of COVID-19 cases within a given Tribal community. However, IHS has data reported from its facilities and voluntarily provided by some Tribal and urban programs. The highest number of cases have occurred in the West, including within CRB states (Arizona, California, Colorado, Nevada, New Mexico, Utah, and Wyoming) as shown in Figure 1 below.

Among the CRB Tribes, the Navajo Nation and the White Mountain Apache Tribe have been

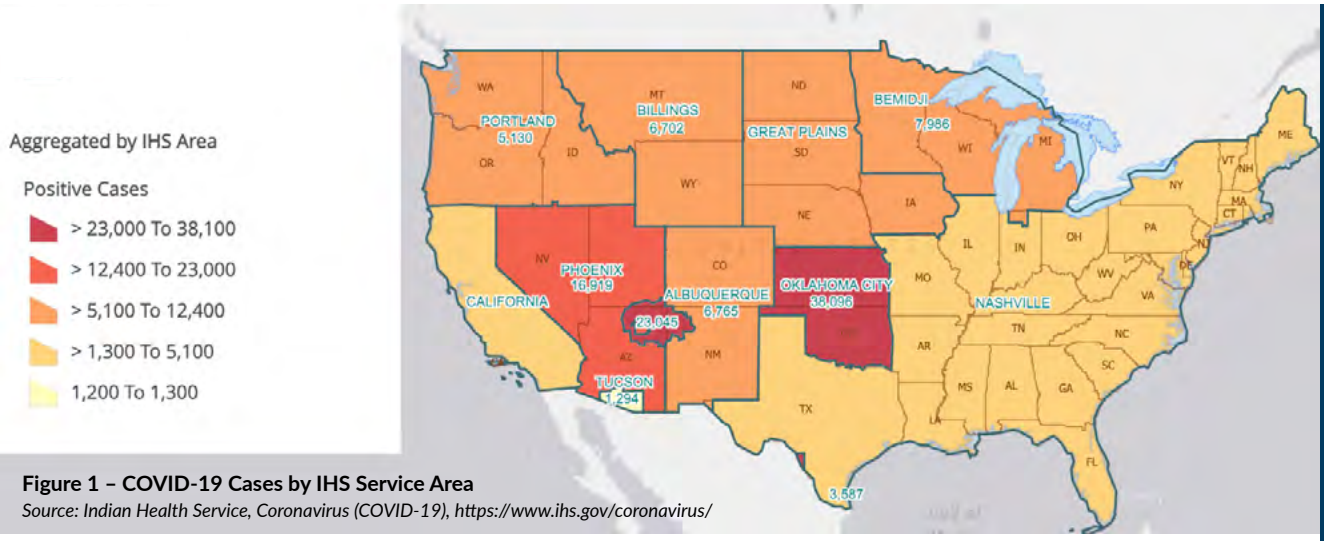

Figure 1 – COVID-19 Cases by IHS Service Area
Source: Indian Health Service, Coronavirus (COVID-19), https://www.ihs.gov/coronavirus/

particularly affected by COVID-19. In May 2020, at the peak of COVID-19 infections in New York City, the Navajo Nation exceeded New York State for the highest infection rate, with 2,304 cases per 100,000 people, compared to 1,806 cases per 100,000 in New York.[15] As of March 25, 2021, the Navajo Nation has had 30,031 confirmed cases and 1,243 deaths. With approximately 173,000 members residing on the reservation, the Navajo Nation is currently experiencing 17,359 cases per 100,000, nearly twice the national rate.[16] Testifying before the House of Representatives, President Nez stated that "[t]he outbreak of COVID-19 on the Navajo Nation has largely been attributed to lack of water in the homes of Navajo people . . . clean water is a sacred and scarce commodity."[17]

The White Mountain Apache Tribe has also been disproportionately impacted by the pandemic. In June 2020, the White Mountain Apache Tribe surpassed the Navajo Nation in total number of cases per capita. Comprised of approximately 16,000 Tribal members, their community has suffered 3,952 confirmed cases and 49 deaths. This equates to 24,700 cases per 100,000, almost three times the national rate.

Chairwoman Lee-Gatewood also attributed the virus' spread within the White Mountain Apache community, in part, to limited access to water.

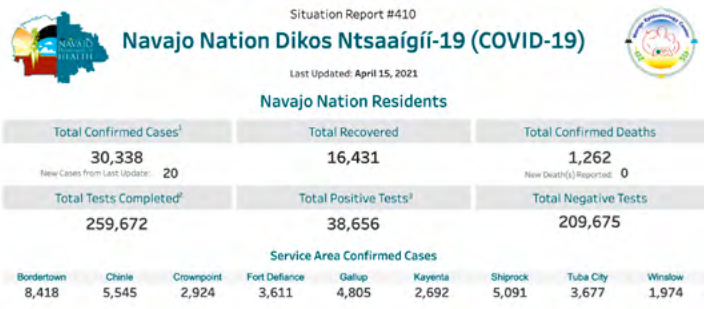

Figure 2 – Navajo Nation COVID-19 Data
Source: Navajo Nation Department of Health, Navajo Nation COVID-19 Dashboard, https://www.ndoh.navajo-nsn.gov/COVID-19/Data

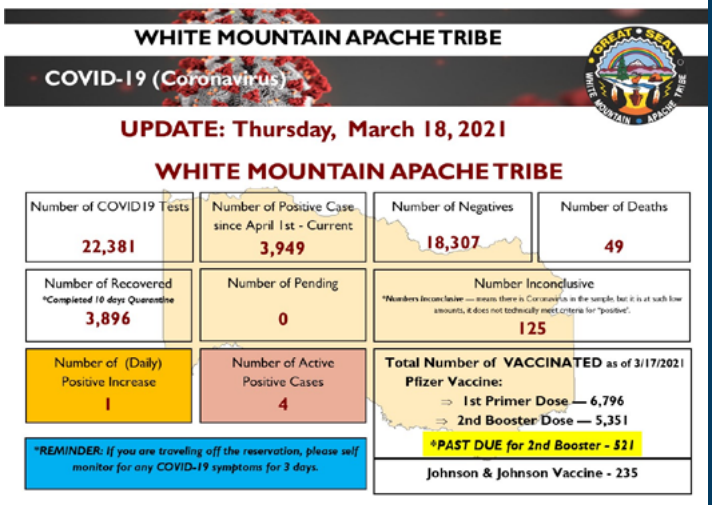

Figure 3 – White Mountain Apache COVID-19 Data
Source: White Mountain Apache Tribe, WMAT COVID Info, http://whitemountainapache.org/covid_flyers/

She noted, "We have serious water shortages during summer months. Sometimes there is no water at all for showers and basic drinking water needs. This creates a serious health and safety hazard, especially for the very young and our elders."[18]

Aside from lack of water access, the pandemic has highlighted additional inequities. For example, Tribal communities may not have other basic utilities, such as electricity or broadband internet, or have limited access to affordable and nutritious food. On the Navajo Nation, there are only 13 grocery stores serving a land area about the same size as West Virginia, which has 162 grocery stores.[19] During the pandemic, these grocery stores experienced severe supply shortages, requiring families to make multiple trips to the grocery stores to obtain food. Such limited resources deprive many Tribal members of the quality of life most Americans take for granted, stifle economic activity, and prevent Tribal growth. Housing is also a challenge, with 40 percent of on-reservation housing considered substandard (compared to six percent outside of Indian country).[20] Cost burden, or affordability, is also a problem. Almost 38 percent of Native households pay 30 percent or more of their household income for housing.[21] The lack of affordable and safe housing on reservations has contributed to overcrowding—approximately 16 percent of Tribal homes are overcrowded (compared to 2.2 percent of homes nationally).[22] Such conditions make it difficult to social distance and quarantine when necessary, and likely contribute to increased COVID impacts.

Several CRB Tribes reported significant economic ramifications from the pandemic. Some Tribes have had to shut down Tribal enterprises, such as casinos, which employ many Tribal members and may be a primary revenue producer for the Tribal government. As a result, many Tribal members became unemployed, losing their only source of income. Tribes also have less revenue to support their programs and operations.

In response to the pandemic, Tribes have exercised their sovereignty and inherent public health authority to prevent and mitigate outbreaks on their reservations. However, due to grievous federal failures, Tribes face a heavy burden. The federal government has a legal obligation to provide health care to Native Americans. This obligation was originally rooted in treaties, but has since been memorialized in federal statutes.[23] Notwithstanding this legal responsibility, the federal government has failed to fully fund IHS—the agency charged with fulfilling this responsibility. As a result, federal health care spending for AI/ANs is only one-third of what is spent on non-Indian medical care.[24]

While Tribes have been successful in implementing self-governance, Tribal action does not justify federal inaction or absolve the federal government of its obligation to uphold its treaty and trust responsibility to Tribes. Indeed, allowing the federal government to renege on its treaty and trust obligations has resulted in and perpetuated structural violence in Native communities.[25] The pandemic has brought national attention to the inequities faced by Tribal communities and calls for reform.

Chapter 1 Endnotes

[1] Water & Tribes Initiative, Universal Access to Clean and Safe Water (webinar on Dec. 16, 2020), available at https://us02web.zoom.us/rec/play/Z1XkFu07upD6b-iUc1eAyJmsubvPMYAwPZwol95radWlsvKelQHsFqeF4UdW1gQsyIM7YWE7fGOuHJQb.9YpvYaVEjCVhMila?startTime=1608145233000.

[2] Gov't Accountability Off., GAO-18-309, Drinking Water and Water Infrastructure: Opportunities Exist to Enhance Federal Agency Needs Assessment and Coordination on Tribal Projects (2018).

[3] Democratic Staff of the House Comm. on Nat. Res., Water Delayed Is Water Denied: How Congress has Blocked Access to Water for Native Families 1 (2016) [hereinafter Water Delayed Is Water Denied].

[4] According to a 2018 IHS report, 206,025 AI/AN homes were either without access to a safe water supply, sewage disposal system, or adequate sanitation facilities; or otherwise in need of some form of sanitation improvement. The U.S. Census Bureau reports that the average AI/AN household size is 3.47 people, yielding an estimate of 714,906 people lacking access to clean water or adequate sanitation. IHS, Annual Report to the Congress of the United States on Sanitation Deficiency Levels for Indian Homes and Communities FY 2018 at 12, 43 (2018).

[5] American Society of Civil Engineers, The Economic Benefits of Investing in Water Infrastructure 3 (2020).

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[7] U.N., Outcome of the International Experts' Meeting on the Right to Water, Paris, France, July 7-8, 2009, at 2.

[8] U.N., The Right to Development, G.A. Res. 54/175, art. 12 (Feb. 15, 2000).

[9] U.N., The Human Right to Water and Sanitation, G.A. Res. 64/292 (July 28, 2010).

[10] U.N., Declaration on the Rights of Indigenous Peoples, G.A. Res.61/295, art. 24 (Sept. 13, 2007).

[11] *Id*., art. 25.

[12] Sharmila Murthy, A New Constitutive Commitment to Water, 36 B.C. J.L. &. Soc. Just. 149 (2016).

[13] CDC, *How to Protect Yourself & Others* (updated Mar. 8, 2021), https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/prevention.html.

[14] In contrast, the average American uses 88 gallons per day. U.S. Water Alliance and DigDeep, Closing the Water Access Gap in the United States: A National Action Plan 38 (2019).

[15] Megan Marples, *Navajo Nation Faces Devastating Loss from COVID-19 Pandemic*, CNN (Nov. 24, 2020).

[16] Nationally, there are approximately 9,128 cases per 100,000 based on 30,137,807 cases as of March 26, 2021 and the U.S. Census Bureau's estimated population of 330,164,670. *See* Johns Hopkins University, *Coronavirus Resource Center*, https://coronavirus.jhu.edu/.

[17] *Addressing the Urgent Needs of Our Tribal Communities: Hearing Before the U.S. H. Energy and Commerce Comm*., 116th Cong. 7–8 (July 8, 2020) (testimony of Jonathan Nez, President, Navajo Nation).

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[25] Structural violence occurs "whenever people are disadvantaged by political, legal, economic, or cultural traditions." D.D. Winter & D.C. Leighton, *Structural Violence*, in Peace, Conflict, and Violence: Peace Psychology in the 21st Century (D.J. Christie, R.V. Wagner & D.D. Winter eds., New York: Prentice-Hall, 2001).

Chapter 2

Tribal Clean Water Access Deficiencies

In order to address the current drinking water related needs of the CRB Tribes, the Water & Tribes Initiative (WTI) sought information about their water access and COVID-19 impacts. There are 30 federally recognized Tribes within the CRB. In addition to the 29 Tribes identified in Figure 5, the San Juan Southern Paiute Tribe occupies parts of the Navajo Nation reservation that were set aside by Congress for both the Navajo and San Juan Southern Paiute.[1]

CRB Tribes are spread across six different states: California, Nevada, Arizona, New Mexico, Utah, and Colorado. Each Tribe is its own sovereign nation and has government-to-government relationships with the federal government, states, and other Tribes. One of the primary functions of a sovereign is to protect its people and land. While CRB Tribes vary in terms of their demographics, this responsibility is equally important to a Tribe that has 126 Tribal

Population Size	Tribes
< 1,000 (12 Tribes)	Las Vegas Tribe of Paiute Indians – 126 members residing on 4,031 acres Tonto Apache Tribe – 140 members residing on 85 acres Yavapai-Prescott Indian Tribe – 159 members residing on 1,395 acres Chemehuevi Indian Tribe – 250 members residing on 32,000 acres Kaibab Band of Paiute Indians – 253 members residing on 121,000 acres San Juan Southern Paiute – 144 members residing within lands on Navajo Reservation Moapa Band of Paiute Indians – 294 members residing on 71,954 acres Shivwits Band of Paiute Indian Tribe of Utah – 300 members residing on 28,153 acres Fort McDowell Yavapai Nation – 600 members residing on 25,600 acres Havasupai Tribe – 639 members residing on 188,077 acres Cocopah Indian Tribe – 1,000 members residing on 6,500 acres Southern Ute Indian Tribe – 1,000 members residing on 682,000 acres
1,000-5,000 (10 Tribes)	Ak-Chin Indian Community – 1,100 members residing on 22,000 acres Fort Mojave Indian Tribe – 1,120 members residing on 41,884 acres Yavapai-Apache Nation – 1,300 members residing on 1,850 acres Hualapai Indian Tribe – 1,353 members residing on 1,000,000 acres Ute Mountain Ute Tribe – 2,050 members residing on 615,000 acres Quechan Indian Tribe – 2,022 members residing on 45,000 acres Jicarilla Apache Nation – 3,254 members residing on more than 879,917 acres Ute Indian Tribe – 4,000 members residing on 4,500,000 acres Pascua Yaqui Tribe – 4,111 members residing on 2,000 acres Colorado River Indian Tribes – 4,277 members residing on 300,000 acres
5,000-10,000 (3 Tribes)	Pueblo of Zuni – 6,302 members residing on 450,000 acres Salt River Pima-Maricopa Indian Community – 7,386 members residing on 52,600 acres Hopi Tribe – 9,227 members residing on 1,542,306 acres
10,000-30,000 (4 Tribes)	San Carlos Apache Tribe – 10,443 members residing on 1,834,781 acres Gila River Indian Community – 11,150 members residing on 372,000 acres White Mountain Apache – 12,000 members residing on 1,670,000 acres Tohono O'odham Nation – 28,000 members residing on 2,800,000 acres
> 30,000 (1 Tribe)	Navajo Nation – 173,667 members residing on 17,280,000 acres

Figure 4 – CRB Tribes' Reservation Population Size

Reservation population represents the number of Tribal members residing on the reservation. See Appendix A, Tribal Data Sources.

Figure 5 – Federally Recognized Tribes in the Colorado River Basin
Source: U.S. Bureau of Reclamation, https://naturalresourcespolicy.org/images/col-river-basin/map-Tribes-crb.jpg.

ID	Tribe Name	ID	Tribe Name	ID	Tribe Name	ID	Tribe Name
1	Ute Indian Tribe of the Uintah and Ouray Reservation	9	Havasupai Tribe	15	Chemehuevi Indian Tribe	23	Salt River Pima-Maricopa Indian Community
2	Southern Ute Indian Tribe	10	Hualapai Indian Tribe	16	Colorado River Indian Tribes		
3	Ute Mountain Ute Tribe	11	Shivwits Band of Paiute Indian Tribe	17	Yavapai-Apache Nation	24	Gila River Indian Community
4	Jicarilla Apache Nation			18	Yavapai-Prescott Indian Tribe	25	Ak-Chin Indian Community
5	Navajo Nation	12	Moapa Band of Paiute Indians	19	Tonto Apache Tribe	26	Quechan Indian Tribe
6	Zuni Tribe			20	White Mountain Apache Tribe	27	Cocopah Indian Tribe
7	Hopi Tribe	13	Las Vegas Tribe of Paiute Indians	21	San Carlos Apache Tribe	28	Tohono O'odham Nation
8	Kaibab Band of Paiute Indians	14	Fort Mojave Indian Tribe	22	Fort McDowell Yavapai Nation	29	Pascua Yaqui Tribe

members residing on its reservation (e.g., Las Vegas Tribe of Paiute Indians) as it is to a Tribe with over 173,000 members on its lands (e.g., Navajo Nation).

A Request for Information was sent to CRB Tribal leaders between September 14-28, 2020.[2] In addition to the Request for Information, the WTI has engaged in individual outreach to obtain

information about the drinking water related needs of each Tribe. Recognizing the many demands facing Tribes, particularly during a pandemic, the WTI research team also reviewed publicly available information for each Tribe's demographics, COVID-19 case count, and current means and extent of water service. The Tribal Water Study was particularly useful in providing information about the member Tribes of the CRB Ten Tribes Partnership.[3]

Information collection is ongoing and the WTI intends to continue to gather data relevant to these issues. However, responses received to date have highlighted the different components of water security. "Household water security is defined as the safe and reliable access to sufficient quantity and quality of water for household consumption, production, and cleanliness[.]"[4] From a Tribal perspective, there are four interrelated aspects to ensuring and maintaining water security for their communities:

(1) **Service** – there is a piped water system connecting to the household;
(2) **Quality** – the water available to the household meets minimum acceptable quality standards;
(3) **Infrastructure** – existing water and sanitation infrastructure are sufficient and in good condition; and
(4) **Maintenance** –the operation and maintenance (O&M) needs and the associated costs of existing water and sanitation infrastructure are met.

All of the CRB Tribes have been confronted with at least one of these challenges. To further illuminate the multiple dimensions of ensuring clean water access, each of these areas are discussed below and highlight a specific CRB Tribe facing that challenge.

Water Service

"In the United States, potable water infrastructure is broadly assumed to be 'universal' in its coverage, to the point where the U.S. Census Bureau has recently considered dropping its plumbing question from the [American Community Survey] questionnaire."[5] However, despite public perception, "universalized water infrastructure remains an incomplete promise for different populations in different places across the nation[.]"[6] Several of the CRB Tribes lack piped water services and suffer from plumbing poverty, including the Navajo Nation, Hopi Tribe, White Mountain Apache Tribe, and Southern Ute Indian Tribe.

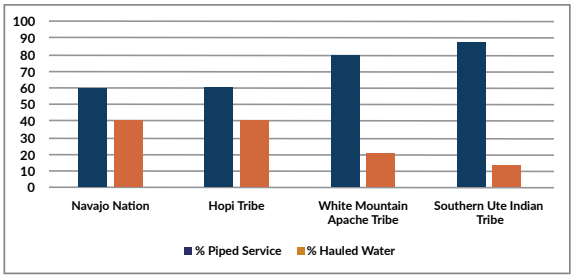


Figure 6 – Sampling of CRB Tribal Drinking Water Delivery
See Appendix A, Tribal Data Sources.

The rural location of many CRB Tribes presents unique challenges to the construction and maintenance of water systems. Connecting remote homes to a centralized piped water system results in a higher cost per connection. There are also practical design and construction concerns that must be taken into account, such as difficult terrain and short construction seasons. However, "[r]urality is not the sole or even best predictor of plumbing poverty."[7] AI/AN communities are "equally likely to lack complete plumbing whether they are high- or low- income, and whether they live in urban or rural areas."[8] Neither spatially nor socially random, plumbing poverty is clearly racialized. In fact, race is the

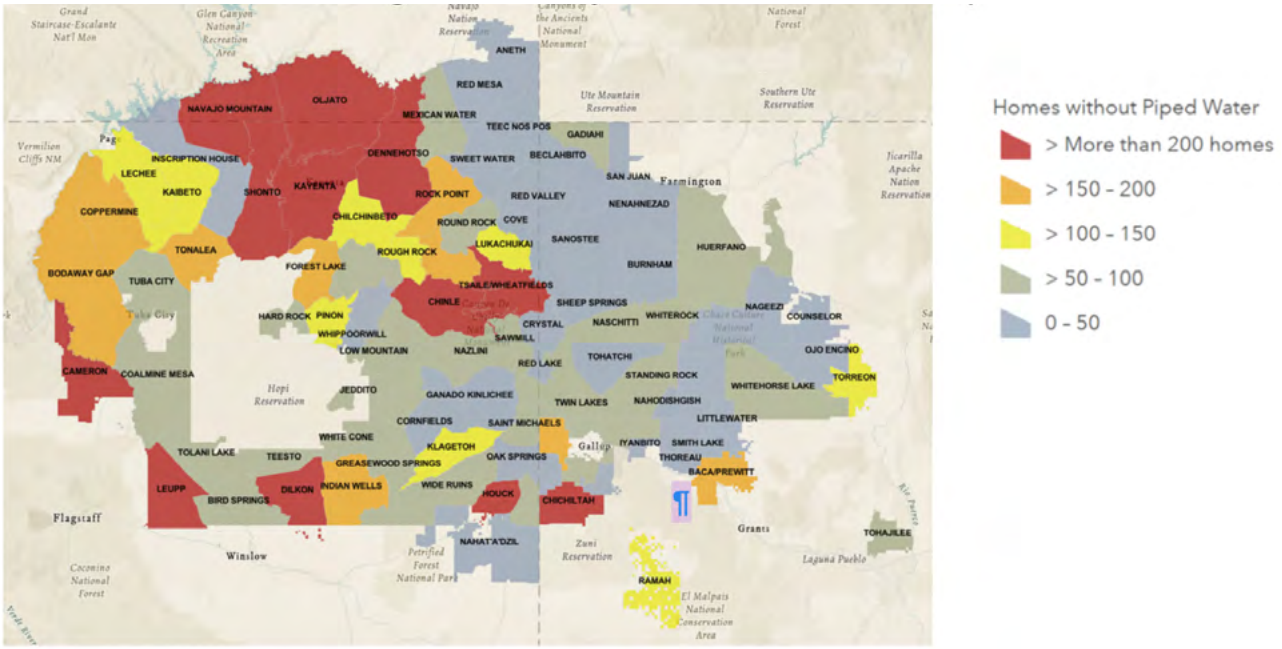


Figure 7 – Navajo Nation Water Insecurity
Source: Navajo Nation COVID-19 Water Access Coordination Group, Navajo Safe Water: Protecting You and Your Family's Health, http://www.navajosafewater.org

most significant predictor of plumbing access.[9] Living in a Native household dramatically increases the odds of being plumbing poor, with Native households being 19 times more likely than white households to lack indoor plumbing with running water.[10]

Of the CRB Tribes, the Navajo Nation has the most households without piped water access. Navajo residents are 67 times more likely than other Americans to live without access to running water.[11] That equates to roughly 30 to 40 percent of residents who lack indoor plumbing and must haul water long distances to meet basic household needs.[12] Moreover, the cost of hauled water is at least 71 times more expensive than piped water.[13] For comparison, Navajo families that need to haul water spend $43,000 per acre-foot of water, while the average American water user spends only $600 per acre-foot of water.[14]

The lack of piped water and a comprehensive delivery system has compounded the effects of COVID-19 on the Navajo Nation and contributed to other ongoing health issues as well. In order to conserve their scarce water supply, Navajo residents are often forced to make accommodations that are detrimental to their health. For example, some residents opt to eat less nutritious foods because the preparation uses less water.[15] Additionally, the Navajo Nation faces a diabetes crisis because soda and other sugary beverages are more readily available and less expensive than potable water.[16]

The Navajo Nation has long recognized the need for expanded and improved water access. Many of the projects outlined in *Water Resource Development Strategy for the Navajo Nation*—a strategic plan developed in partnership with the Bureau of Reclamation (BOR)—have helped address water access since the Strategy was adopted in 2000.[17] However, the vast and varied terrain of the Nation, along with the lack of sufficient capital to invest in adequate water infrastructure have made widespread water piping a challenge.[18] To help fill the access gap, DigDeep, a non-profit organization, initiated the Navajo Water Project to bring running water into homes without access to water and sewer lines.[19]

Through this effort, DigDeep has established new potable water sources and installed home water systems using underground tanks connected to house faucets. Trucks deliver water from potable sources to the residential tanks on a monthly basis. Since 2014, the Navajo Water Project has provided indoor plumbing to over 300 homes.

More recently, as part of the 2020 Coronavirus Aid, Relief, and Economic Security (CARES) Act, IHS received $5 million to support installation of up to 59 transitional water points, payment of water fees, purchase of water storage containers and water disinfection tablets.[20] While these efforts are commendable, a staggering need for piped water remains present on the Navajo Nation. Given the limited timeframe imposed on CARES Act funding, the Navajo Nation was unable to utilize the funding to finance critical water infrastructure projects.[21] Moreover, the amount received simply would not be enough. The Navajo Nation has estimated that $4.5 billion is needed to address the widespread lack of water access on the reservation.[22]

"Access to running water and indoor plumbing in the home, as opposed to the vicinity, is an achievable goal that is context-appropriate and culturally expected for Americans."[23] We would not accept anything less for other communities and should not accept anything less for Tribal communities. Yet, the Navajo Nation continues to face an acute water crisis that has been exacerbated by the COVID-19 pandemic. The lack of piped water impedes the daily lives of residents, negatively impacting their health and general well-being. While clean and secure water access is also dependent on other factors such as adequate water quality and infrastructure management, providing reliable, easy access to water is paramount.

Water Quality

Inadequate, unsafe water quality is another barrier to clean and secure water access. Although a home may have access to piped water and indoor plumbing, the accessibility is negated if the water is contaminated or otherwise unacceptable. The geographic profile and history of mining in the West has led to elevated levels of contaminants, such as arsenic and uranium, in groundwater sources.[24] Agricultural runoff has also caused nitrate and bacteria contamination that can be particularly troubling for Tribes that engage in commercial farming. Concentrations of these contaminants above drinking water standards in unregulated water sources pose health risks to the local community. In addition, water quality issues also exist in regulated water sources. In its first Indian Policy, the Environmental Protection Agency (EPA) recognized regulatory gaps that exist in Indian country with respect to water quality protection:

> "[W]ithout some modification, our programs, as designed, often fail to function adequately on Indian lands. This raises the serious possibility that, in the absence of some special alternative response by EPA, the environment of Indian reservations will be less effectively protected than the environment elsewhere. *Such a result is unacceptable.* The spirit of our Federal trust responsibility and the clear intent of Congress demand full and equal protection of the environment of the entire nation without exceptions or gaps." [25]

Although there have been several legislative and regulatory changes since the EPA Indian Policy was issued in 1980,[26] the water quality gap in Indian country has persisted.

Among the CRB Tribes, the Hopi Tribe has long struggled with water quality, particularly with

arsenic contamination. Arsenic is one of the most serious naturally occurring water contaminants. According to the World Health Organization, the greatest threat to public health from arsenic is through contaminated drinking water exposure. Odorless and tasteless, arsenic is a known carcinogen and long-term exposure to elevated levels can lead to arsenic poisoning, developmental defects in babies, diabetes, cardiovascular disease (including damage to blood vessels), and pulmonary disease.[27] Exposure to arsenic generally occurs by drinking contaminated water, preparing food with contaminated water, and growing crops irrigated with arsenic-laced water.

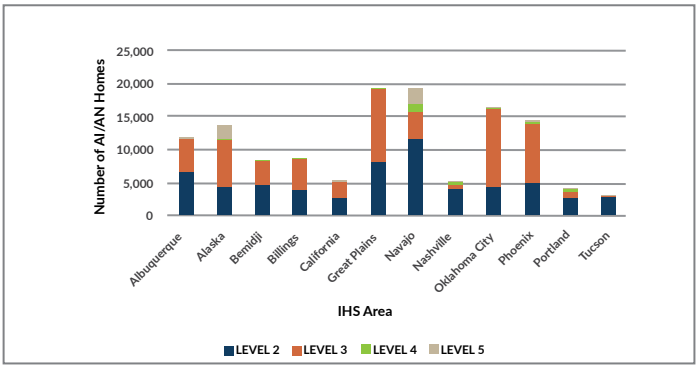
On the Hopi reservation, arsenic-tainted water has been a continuous problem since the 1960s. The Navajo Aquifer supplies the majority of the Tribe's water and contains arsenic levels ranging between two and four times the legal limit of 10 µg/L set by the EPA.[28] The Tribe estimates that approximately 75 percent of people living on Hopi land are drinking arsenic contaminated water.[29] Though the health impacts on the Hopi are not yet fully understood, a study of American Indians from Arizona found that modestly elevated exposure to arsenic in drinking water may predict type 2 diabetes in southwestern American Indians.[30] Additionally, Chairman Nuvangyaoma has noted an increase in cancer cases among Hopi people.[31] The lack of other readily-available water sources, coupled with a high poverty rate (60 percent of Hopi residents live below the poverty line) leaves many with no other option but to drink the hazardous water.[32]

The Hopi Arsenic Mitigation Project (HAMP) was established to address arsenic contamination on the reservation. As part of this effort, HAMP has identified new potable water sources, mapped a path for a regional pipeline to deliver the clean water to the villages, and drilled new wells. However, an estimated $20 million is needed to construct the pipeline and complete the project. On October 30, 2020, the Trump Administration announced that it would provide $5 million to help the Tribe begin construction and reduce arsenic levels in three communities.[33] This contribution will cover the costs of completing the first phase (delivering water to Hopi villages), but will not fund any of the second phase—i.e., delivering water to secondary facilities such as schools and healthcare facilities. To complete the second phase, the Tribe needs an additional $15 million.

Water quality can be a major barrier to clean and secure water access. Arsenic-laced water has plagued the Hopi Reservation for nearly 60 years, significantly affecting the health and welfare of Tribal members. While the Tribe has attempted to resolve water contamination issues over the past two decades, the lack of funding required to build infrastructure sourcing water from other, uncontaminated sources has been the biggest obstacle in supplying households with clean water.[34]

Water Infrastructure

Water infrastructure refers to the network of structures (e.g., pumps, pipes) and facilities (e.g., treatment plants, storage facilities) required to deliver water services. The American Society of Civil Engineers gave the United States' drinking water infrastructure a D minus rating based on condition, safety, capacity, and other factors.[35] Across the country, billions of dollars are required each year to renew and replace water infrastructure to ensure clean water delivery. A large proportion of water systems were built over a century ago and either have reached the end of their expected lifespan, or are not able to handle additional demands associated with growing populations, increased treatment requirements, and the impacts of climate change.[36] Overall, investment in water infrastructure has not kept



Level I: An Indian tribe or community with a sanitation system which complies with all applicable water supply and pollution control laws, and in which the deficiencies relate to routine replacement, repair, or maintenance needs.

Level II: An Indian tribe or community with a sanitation system with complies with all applicable water supply and pollution control laws, and in which the deficiencies relate to capital improvements that are necessary to improve the facilities in order to meet the needs of such tribe or community for domestic sanitation facilities.

Level III: An Indian tribe or community with a sanitation system which has an inadequate or partial water supply and a sewage disposal facility that does not comply with applicable water supply and pollution control laws, or that has no solid waste disposal facility.

Level IV: An Indian tribe or community with a sanitation system which lacks either a safe water supply system or a sewage disposal system.

Level V: An Indian Tribe or community that lacks a safe water supply and a sewage disposal system.

Figure 8 – Number of AI/AN Homes Requiring Sanitation Facility Improvements by IHS Service Area
Source: Indian Health Service, Annual Report to the Congress of the United States on Sanitation Deficiency Levels for Indian Homes and Communities FY 2018 (2018).

pace with need, resulting in a $81 billion gap between total capital spending and investment needs on water infrastructure in the United States.[37]

As infrastructure ages, water leaks also increase. "Drinking water systems currently lose at least six billion gallons of treated water per day, or 2.1 trillion gallons per year."[38] This water loss is particularly felt in the West where water is already a scarce resource. Additionally, as infrastructure deteriorates, risk of water contamination and non-potable water delivery increases, which can lead to increasing challenges for a historically reliable water supply.[39]

While these issues exist in many U.S. communities, Tribal communities typically face even greater challenges and woefully inadequate water infrastructure. Underlying this problem is the inability of Tribal governments to use traditional funding sources, such as property taxes, to support the construction and upkeep of water infrastructure projects.[40] While the federal government and Tribes have attempted to address these issues, current efforts are inadequate, as evidenced by an increasing need for funding to address infrastructure related to water insecurity.[41] Underinvestment in physical infrastructure harms "the social, physical, and mental wellbeing" of Tribal communities and impairs their ability to thrive.[42] Investment in aging water infrastructure "can spark a new era of job creation and economic growth while protecting public health and improving the quality of life for families[.]"[43]

As part of its Sanitation Facilities Construction (SFC) Program, IHS collects sanitation data—information about water supply and sewage disposal—for homes within its service areas.

At present, 27 CRB Tribes have been identified by IHS as having sanitation system deficiencies that require water infrastructure improvements. Appendix C contains a complete list of these Tribes and the number of reported homes requiring improvements.

Among the CRB Tribes, the Colorado River Indian Tribes' (CRIT) infrastructure challenges are primarily focused on agricultural irrigation and water delivery. The old and deteriorated condition of the Tribes' irrigation infrastructure has significantly impacted CRIT's economic development since CRIT is heavily involved in commercial farming.[44] Much of CRIT's water comes through infrastructure installed over the course of several decades under the Colorado River Irrigation Project, beginning in the 1870s. Presently, the CRIT's water delivery is limited by outdated technology and high costs necessary to repair and update infrastructure. Outdated

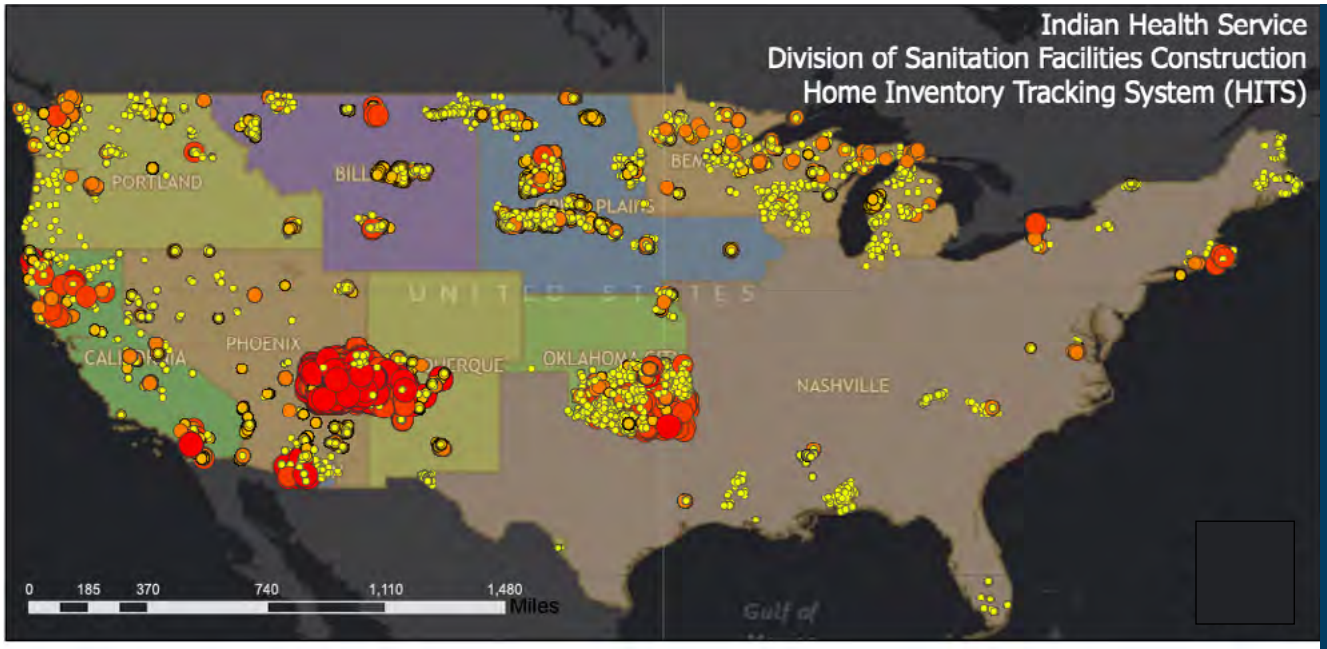


Figure 9 – Map of Lower 48 Identifying Homes Requiring Sanitation Facility Improvements by IHS Service Area

Source: Indian Health Service, Division of Sanitation Facilities Construction, Home Inventory Tracking System (HITS).

pricing models and a shortage of skilled personnel (in part due to the reservation's remoteness) have further contributed to infrastructure disrepair. These limitations have hindered the expansion of irrigation systems to other areas of the Reservation, preventing CRIT from fully utilizing their lands and allotted water.

The circumstances of CRIT exemplify how aging infrastructure has the potential to become a barrier for providing water unless it is addressed early on. It also demonstrates the interconnected relationship between the different components of clean water access. CRIT's water infrastructure issues are primarily the result of insufficient funding for maintenance and modernization. If a Tribe does not have the funds to properly maintain and upgrade old domestic water infrastructure, it will face similar and potentially more significant challenges, both economically and regarding the health and wellbeing of its Tribal members.

Operation and Maintenance

The ability to continually operate and maintain functional water delivery infrastructure is critical for providing communities with clean and safe water access. Sufficient and consistent revenue is needed to fund O&M for existing infrastructure and to help support capital expenditures required to expand this infrastructure to accommodate community growth and economic development.

Similar to water infrastructure costs, O&M costs have also increased over time and are outpacing available funding across the United States.[45] The rise in O&M costs is partly associated with aging infrastructure—it is more costly to operate and maintain systems that are near or have exceeded their expected lifespan. The shortage of trained and qualified individuals to undertake the planning and construction, and long-term O&M of infrastructure projects compounds the lack of funding available for infrastructure projects in Indian country.[46]

In a recent interview, David Harvey, Deputy Director of the Division of SFC at IHS, emphasized the need to address O&M as part of obtaining water security:

> "The historical focus of the federal government on building infrastructure and providing technical assistance to help ensure access to safe drinking water and waste disposal is not the most efficient utilization of resources in communities that lack the resources to operate and maintain the facilities provided. There are many federal programs authorized and funded to support water infrastructure construction and technical assistance, but they have limited authority or funding to support direct operation and maintenance of the facilities provided. Waiting to provide funds until a system break occurs is a typical approach of many government programs tasked with supporting American communities. As a result, these programs fall short, especially in disadvantaged communities." [47]

Ironically, both the Indian Sanitation Facilities Act (ISFA) and the Indian Health Care Improvement Act authorize IHS to provide O&M activities for existing water and sanitation facilities.[48] However, Congress has never appropriated funding to provide those services.

While many of the CRB Tribes have constructed suitable water infrastructure, provision of O&M for these systems remains an ongoing challenge. The majority of CRB Tribes have water or wastewater facilities. But, as previously mentioned, Tribes generally cannot tax their lands to raise revenue for O&M costs. Additionally, some Tribes have encountered difficulty implementing a reliable metering, billing, and enforcement system.

The circumstances on the Jicarilla Apache Nation exemplify how O&M challenges hinder clean and reliable water delivery. In 2002, the Jicarilla Apache Reservation Rural Water System Act appropriated $45 million to the BOR to help the Jicarilla Apache Nation construct water supply, delivery, and wastewater systems.[49] The initial infrastructure within Dulce, New Mexico—the primary community on the Reservation—was constructed within five years of the Act's enactment. Pursuant to the Act, upon the project completion, the Jicarilla Apache became responsible for physically and financially managing O&M for the new system. Initially, the Tribal Utility Authority was responsible for O&M, allocating its funds for necessary repairs. However, the Tribal Utility Authority dissolved after several years, leaving the Jicarilla Apache Nation without a designated water department and without earmarked O&M funds. Over time, Dulce's water system has deteriorated to the extent that the wastewater system lagoons regularly operate over capacity—over 500 percent capacity during the winter and over 100 percent capacity in the summer.[50] Because the Tribe lacks the funds to maintain and improve the existing infrastructure, and additional federal funding is not currently available, the Tribe has not been able to provide water services to the newly developed area of Mundo Ranch. Without a stable water system in place, economic development and community growth have been stifled, further complicating the Jicarilla Apache Nation's ability to source O&M funds.

Ultimately, until the Jicarilla Apache Nation has the ability to permanently fund and provide O&M, Tribal members will not have consistently reliable access to clean and safe water. Reasonable water metering and billing rates can help cover O&M costs, but without other revenue streams, it may not be enough.

Chapter 2 Endnotes

[1] The San Juan Southern Paiute does not have a reservation that is exclusively its own. In 2000, the San Juan Southern Paiute entered into a treaty with the Navajo Nation to set aside approximately 5,400 acres of land as their own reservation. Efforts for Congress to ratify and implement the terms of the treaty are ongoing. *See* An Act to define the exterior boundaries of the Navajo Indian Reservation in Arizona, and for other purposes, 73 Cong. Ch. 521, 48 Stat. 960 (1934); Masayesva v. Zah, 794 F. Supp. 899 (D. Ariz. 1992); San Juan Southern Paiute Tribe, *About the Tribe*, https://www.sanjuanpaiute-nsn.gov/about.

[2] *See infra* Appendix B, Request for Information.

[3] U.S. Bureau of Reclamation, Colorado River Basin Ten Tribes Partnership Tribal Water Study (2018) [hereinafter Tribal Water Study].

[4] Shiloh Deitz & Katie Meehan, *Plumbing Poverty: Mapping Hot Spots of Racial and Geographic Inequality in U.S. Household Water Insecurity*, 109 Annals Am. Ass'n Geographers 1, 1 (2019) [hereinafter Plumbing Poverty].

[5] *Id.* at 7.

[6] *Id.* at 8.

[7] *Id.* at 9.

[8] U.S. Water Alliance and DigDeep, Closing the Water Access Gap in the United States: A National Action Plan 22 (2019) [hereinafter Closing the Water Access Gap].

[9] *Plumbing Poverty*, *supra* note 4, at 1, 3; Closing the Water Access Gap, supra note 8, at 22.

[10] Closing the Water Access Gap, *supra* note 8, at 22.

[11] DigDeep, *About the Navajo Water Project*, https://www.navajowaterproject.org/project-specifics [hereinafter DigDeep].

[12] Tribal Water Study, *supra* note 3, § 5.5; Closing the Water Access Gap, *supra* note 8, at 38.

[13] Tribal Water Study, *supra* note 3, § 5.5.

[14] *Id.* Notably, this data is also similar for San Juan Southern Paiute Tribal members since they occupy the same geographic area.

[15] Closing the Water Access Gap, *supra* note 8, at 38.

[16] Navajos are at least twice as likely as white people to develop Type-2 diabetes. *Id.* at 39.

[17] Tribal Water Study, *supra* note 3, § 5.5.

[18] *Id.*; Closing the Water Access Gap, *supra* note 8, at 39.

[19] DigDeep, *supra* note 11.

[20] Press Release, Navajo Nation, Navajo Nation and Indian Health Service Move Forward with Water Points and Safe Water Storage Projects Using CARES Act Funds (July 17, 2020), https://www.navajo-nsn.gov/News%20Releases/OPVP/2020/Jul/FOR%20IMMEDIATE%20RELEASE%20-%20Navajo%20Nation%20and%20Indian%20Health%20Service%20move%20forward%20with%20water%20points%20and%20safe%20water%20storage%20projects%20using%20CARES%20Act%20funds_opt.pdf.

[21] Initially, CARES Act funding was required to be spent by December 31, 2020, approximately 9 months after passage of the Act and 6 months after the Nation received all of its funding. While the spending deadline has been extended to December 30, 2021, infrastructure projects generally take 3-4 years or more to complete.

[22] Ian James, *Waiting for Water: On the Navajo Nation, Long Lines, Scarce Resources, A Cry for Solutions*, Arizona Republic (July 24, 2020) (quoting Rex Kontz, deputy general manager of the Navajo Tribal Utility Authority).

[23] Closing the Water Access Gap, *supra* note 8, at 17.

[24] Jani C. Ingram, et al., *Uranium and Arsenic Unregulated Water Issues on Navajo Lands*, J. Vacuum Sci. Tech. A. 38(3) (2020).

[25] EPA, EPA Policy For Program Implementation On Indian Lands 3 (Dec. 19, 1980).

[26] E.g., Safe Drinking Water Act Amendments of 1986, Pub. L. No. 99-339, 42 U.S.C. § 300j-11(a); Clean Water Act Amendments of 1987, Pub. L. No. 100-4, 33 U.S.C. § 1377(e).

[27] World Health Organization, *Arsenic* (Feb. 15, 2018), https://www.who.int/en/news-room/fact-sheets/detail/arsenic.

[28] U.S. House of Representatives Comm. on Appropriations, Subcomm. on Interior, Environment, & Related Agencies, 116th Cong. (Mar. 7, 2019) (testimony of Timothy Nuvangyaoma, Chairman, Hopi Tribe) [hereinafter Chairman Nuvangyaoma Testimony]; Rowan Lynam, *"It Eats You." Cancer-causing Arsenic Plagues Hopi Tribe*, The Progressive (Apr. 28, 2018), https://progressive.org/dispatches/it-eats-you-cancer-causing-arsenic-plagues-hopi-Tribe-180428/ [hereinafter The Progressive]; Mary Katherine Wildeman, *Arsenic in Hopis' Water Twice the EPA Limit, and It May be Making Them Sick*, The Republic (Aug. 24, 2016).

[29] Chairman Nuvangyaoma Testimony, supra note 28.

[30] Nan Hee Kim, et al., *Arsenic Exposure and Incidence of Type 2 Diabetes in Southwestern American Indians*, 177 Am. J. of Epidemiology 962 (2013).

[31] Ian James, *"We need water to survive": Hopi Tribe pushes for solutions in long struggle for water*, AZ Central (Dec. 14, 2020).

[32] Chairman Nuvangyaoma Testimony, supra note 28; The Progressive, *supra* note 28.

[33] Press Release, Bureau of Indian Affairs, Trump Administration to Provide $5 Million for Hopi Tribe to Begin Work on Improving On-reservation Water Quality (Oct. 30, 2020), https://www.bia.gov/as-ia/opa/online-press-release/trump-administration-provide-5-million-hopi-Tribe-begin-work.

[34] Chairman Nuvangyaoma Testimony, supra note 28; The Progressive, *supra* note 28.

[35] American Society of Civil Engineers, The Economic Benefits of Investing in Water Infrastructure 4 (2020) [hereinafter Economic Benefits].

[36] *Id.* at 6.

[37] *Id.* at 12.

[38] *Id.* at 10.

[39] Deborah Vacs Renwick, et al., *Potential Public Health Impacts of Deteriorating Distribution System Infrastructure*, 111 J. Am. Water Works Ass'n 2, 42–53 (2019).

[40] Tribal Water Study, *supra* note 3, § 7.6.1. Because reservation lands are held in trust by the federal government on behalf of Tribes, Tribes lack the ability to impose property taxes on their lands. Tribes also generally do not levy income taxes on Tribal members, another potential source of support for public utilities.

[41] *Compare* EPA, 2015 Drinking Water Infrastructure Needs Survey and Assessment 43 (2018) (estimating a 2015 need of $3.8 billion), *with* EPA, 2011 Drinking Water Infrastructure Needs Survey and Assessment 31 (2013) (estimating a 2011 need of $2.7 billion).

[42] National Congress of American Indians, Tribal Infrastructure: Investing in Indian country for a Stronger America 4 (2017), https://www.ncai.org/NCAI-InfrastructureReport-FINAL.pdf [hereinafter Tribal Infrastructure].

[43] *Id.*

[44] Tribal Water Study, *supra* note 3, §§ 5.8.3-6.

[45] Economic Benefits, *supra* note 35, at 12.

[46] Tribal Infrastructure, *supra* note 42, at 28.

[47] Bloomberg American Health Initiative, *Getting Out Ahead of Water Infrastructure Challenges: Q&A with Bloomberg Fellow David Harvey* (Aug. 6, 2020), https://americanhealth.jhu.edu/news/getting-out-ahead-water-infrastructure-challenges-qa-bloomberg-fellow-david-harvey.

[48] The Indian Sanitation Facilities Act authorizes the Surgeon General "to construct, improve, extend, or otherwise provide and maintain by contract or otherwise, essential sanitation facilities[.]" Pub. L. No. 86-121, 73 Stat. 267 (1959) (codified at 42 U.S.C. § 2004a(a)). Pursuant to the Indian Health Care Improvement Act, the Secretary is authorized to provide "(A) Financial assistance to Indian Tribes and communities in the establishment, training, and equipping of utility organizations to operate and maintain Indian sanitation facilities; (B) Ongoing technical assistance and training in the management of utility organizations which operate and maintain sanitation facilities; (C) Operation and maintenance assistance for, and emergency repairs to, Tribal sanitation facilities when necessary to avoid health hazard or to protect the Federal investment in sanitation facilities" as well as "financial assistance to Indian Tribes and communities in an amount equal to the costs of operating, managing, and maintaining the facilities provided[.]" Pub. L. No. 94-437 (1976) (codified at 25 U.S.C. §§ 1632(b)(2), (e)(1)).

[49] Jicarilla Apache Reservation Rural Water System Act, Pub. L. No. 107-331, 116 Stat. 2855 (2002).

[50] Tribal Water Study, *supra* note 3, § 5.4.6.

Chapter 3

Federal Treaty and Trust Responsibilities

There are 30 federally recognized Tribes in the CRB. Each Tribe has its own unique history, traditions, and community. However, many Tribes share common experiences of forced removal from their homelands, treaty making with the federal government, and establishment of reservations.

When Tribes entered into treaties with the federal government, they agreed to be under the exclusive jurisdiction and protection of the United States. As a result, treaties often include provisions whereby the federal government agreed to establish a reservation as a permanent home for the Tribe and to enact laws "as may be deemed conducive to the prosperity and happiness of [the] Indians."[2] Treaties typically did not address the water needs of the reservation. However, *Winters v. United States*—a 1908 U.S. Supreme Court ruling—held that Tribes have a reserved right to water sufficient to fulfill the purposes of their reservation, including the residential, economic development, and governmental needs of the Tribe.[3]

Moreover, the federal government has an underlying trust responsibility to Tribes. The trust responsibility is a "fiduciary obligation . . . to protect Tribal treaty rights, lands, assets, and resources, as well as a duty to carry out the mandates of federal Indian law."[4] To be "judged by the most exacting fiduciary standards," the federal government has "charged itself with moral obligations of the highest responsibility and trust."[5] The trust responsibility is different from statutory or regulatory mandates. The U.S. Supreme Court

"When the Ute Bands signed the treaty establishing the Ute Reservation in 1868, the United States promised the Ute people that the Reservation would be a permanent home that would support our people forever. The key to carrying out that promise is water -- a fact that the Tribal leadership has always known but which the United States has sometimes forgotten."

—Clement Frost, Chairman,
Southern Ute Indian Tribe[1]

recognized this distinction when it noted that "[i]f the fiduciary duty applied to nothing more than the activities already controlled by other specific legal duties, it would serve no purpose."[6]

Courts have previously reviewed the federal government's fiduciary duties under the *Winters* doctrine related to drinking water on reservations. However, these analyses focused on drinking water quality, not access more broadly.[7] In some circumstances, the federal government is authorized to enjoin others from practices that reduce the quality of water on reservations, but the United States is not generally responsible for management of Tribal water resources.[8] Nonetheless, it is undisputed that treaties establishing reservations promised a permanent homeland for Tribes.

A permanent homeland must be habitable and provide the basic standards of living for its residents to survive. There is no substitute for water. "Access to a clean, reliable supply of water is basic to human health[.]"[9] Sustainability of a community and homeland necessarily depend on a stable water delivery system. Indeed, the average American takes for granted that their home will have utility services—potable water, electricity, and waste disposal. And yet, water security remains limited on many reservations.

The CDC has asserted that "adequate health care and public health infrastructure resources are needed to support a culturally responsive public health effort."[10] "[P]opulations in regions with a lower proportion of homes with water service, reflect significantly higher hospitalization rates for pneumonia, influenza, and respiratory syncytial virus. Researchers associated the increasing illnesses with the restricted access to clean water for hand washing and hygiene."[11] Individuals who reside in homes "without adequate sanitation facilities are at a higher risk for gastrointestinal disease, respiratory disease and other chronic diseases."[12] Compounding the issue is the fact that these homes are often located in remote areas with limited access to health care.

Notwithstanding the strong connection between clean water access and public health, the federal government has contributed to health disparities and other inequities in Tribal communities by prioritizing non-Indian water projects.

> "[I]n the water-short West, billions of dollars have been invested, much of it by the Federal Government, in water resource projects benefiting non-Indians but using water in which the Indians have a priority of right if they choose to develop water projects of their own in the future." [13]

The government's failure to fulfill its responsibility toward Tribes in the past does not absolve it of its responsibility to uphold those promises in the future. Accordingly, this report identifies the relevant treaty provisions of CRB Tribes and discusses potential implications of treaty rights and the trust responsibility in connection with the provision of clean water access for Tribes.

Relevant Treaties

The Apache Nations,[14] Ute Tribes,[15] and Navajo Nation are the only CRB Tribes that entered into treaties with the United States. All other CRB Tribes received federal recognition by Executive Order or congressional statute.

The most relevant provisions in the treaties are those: (1) requiring Congress to pass laws "conducive to the permanent prosperity and happiness" of the Tribe; and (2) requiring the liberal construction of the treaties. The potential implications of these provisions as they relate to water security are briefly discussed below within the context of a recent U.S. Supreme Court case enforcing Tribal treaty rights.

Tribe	Treaty	Relevant Provisions
Apache	Treaty with the Apache – July 1, 1852	This short treaty ensures peaceful relations between the U.S. and the Apache Nation, while giving the U.S. rights of way and military posts on the reservation. Territorial boundaries were established later by Executive Order.[16] Article 9 states that the U.S. government "shall . . . pass and execute in [the Apache's] territory such laws as may be deemed conducive to the prosperity and happiness of said Indians." Article 11 states that the treaty is to be construed liberally, and that the U.S. shall legislate in a manner that secures "the permanent prosperity and happiness of said Indians."
	Treaty with the Comanche, Kiowa, and Apache – July 27, 1853	This treaty ensures peace between the Comanche, Kiowa, and Apache Tribes, and promised an annual payment/annuity from the U.S. treasury to the Tribes for any losses they incurred being removed from their ancestral lands. Article 7 contains a promise from the U.S. government to "protect and defend the Indian Tribes, parties hereto, against the committal of any depredations upon them, and in their territories, by the people of the United States . . . and to compensate them for any injuries that may result therefrom."
	Treaty with the Apache, Cheyenne, and Arapahoe Tribes – October 17, 1865	This treaty united the Apache, Cheyenne, and Arapahoe Tribes and made their previous individual agreements with the U.S. applicable to each Tribe. No other promises or agreements are included. The Apache relinquished all rights conferred to them in this treaty by entering a subsequent treaty in confederation with the Kiowa and Comanche in 1867.
	Treaty between the Kiowa, Comanche, and Apache Tribes – October 21, 1867	This treaty confederates the Kiowa, Comanche, and Apache Tribes into one group, enjoying the promises and agreements made to each individual Tribe as if they were made directly with all the Tribes and the U.S. government. The treaty addresses annuities owed to each of the Tribes, but no other relevant promises or agreements.
Navajo Nation	Treaty with the Navajo – September 9, 1849	This treaty is between the U.S. government and the Navajo Nation. It has similar language as the 1852 Treaty with the Apache Nation. Article IX states that the United States "shall . . . pass and execute in [Navajo] territory such laws as may be deemed conducive to the prosperity and happiness of said Indians." Article X states that the "United States will grant to said Indians such donations, presents, and implements, and adopt such other liberal and humane measures, as said government may deem meet and proper." Article XI directs that this treaty is "to receive a liberal construction, at all times and in all places," and that the U.S. government should pass laws to "secure the permanent prosperity and happiness of said Indians."
	Treaty with the Navajo Tribe – June 1, 1868	This is the second treaty between the United States and the Navajo Nation. Similar to the treaty with the Ute Tribe in March of 1868, the 1868 Navajo Treaty contains an article which allows the President to order a survey of the reservation and requires Congress to "provide for protecting the rights of such Indian settlers in their improvements."
Ute	Treaty with the Ute Indians – March 2, 1868	This treaty created a federally-recognized reservation for several Tribes, including the Ute Tribes. Article II sets apart the reservation for the "absolute and undisturbed use and occupation of the Indians herein named." Article IV allots funds for the listed Tribes to build agriculture and development infrastructure, dependent on approval by the Secretary of the Interior. Article VII allows the President to order a survey of the reservation and requires Congress to "provide for protecting the rights of such Indian settlers in their improvements." This Article refers to individual members of the Tribe claiming parcels of land for themselves for farming.

Figure 10 – Summary of Treaties and Relevant Provisions
Source: Charles J. Kapplar, Indian Affairs, Law, and Treaties; see also Appendix E, Tribal Treaties.

Current Interpretations of Federal Trust and Treaty Responsibilities to Tribes

Historically, the federal government has failed to uphold its promises to Tribes. For a long period of time, courts deferred to the discretion of the United States and its actions towards Tribes. However, the U.S. Supreme Court, in *McGirt v. Oklahoma*, recently affirmed the federal government's obligation to uphold its treaty promises with Tribes.[17] "Unlawful acts, performed long enough and with sufficient vigor, are never enough to amend the law. To hold otherwise would be to elevate the most brazen and longstanding injustices over the law, both rewarding wrong and failing those in the right."[18] In *McGirt*, the Court emphasized that "[e]ach Tribe's treaties must be considered on their own terms."[19] The ruling signals that the Court is willing to enforce long-ignored terms in federal-Tribal treaties and, as such, merits a review of the promises and agreements contained in those treaties.

Under federal common law, courts have "long construed treaties between the United States and Indian Tribes in favor of the Indians."[20] In addition to this canon of Federal Indian Law, many treaties specifically state that their provisions must be liberally construed. The promises and agreements expressed in the treaties between the United States and CRB Tribes can reasonably be interpreted to require the federal government to ensure and fund access to clean water on reservations. In particular, treaty language requiring the federal government to create laws that ensure the permanent "prosperity" and "happiness" of the Tribes should be interpreted to include water security. The UN and several countries have recognized access to clean and safe water as a basic human right, necessary for survival. It is past time for the federal government to recognize the human right to water in the United States. Moreover, given the public health implications, water security must be recognized not only as a human right, but also as a Tribal treaty right, necessary for the "prosperity" of Tribal communities.

Chapter 3 Endnotes

[1] Colorado Ute Settlement Act Amendments of 1998: Hearing on H.R. 3478 Before the U.S. H. Natural Res. Comm., 105th Cong. (July 28, 1998) (testimony of Clements Frost, Chairman, Southern Ute Indian Tribe).
[2] Treaty with the Navaho, Sept. 9, 1849; Treaty with the Navajo Tribe of Indians, June 1, 1868.
[3] Winters v. U.S., 207 U.S. 564 (1908).
[4] Bureau of Indian Affairs, *What is the Federal Indian Trust Responsibility?*, http://www.bia.gov/FAQs/index.htm. See also United States v. Kagama, 118 U.S. 375, 384 (1886) ("From their very weakness and helplessness, so largely due to the course of dealing of the Federal Government with them and the treaties in which it has been promised, there arises the duty of protection, and with it the power.").
[5] Seminole Nation v. United States, 316 U.S. 286, 297 (1942).
[6] Varity Corp. v. Howe, 516 U.S. 489, 504 (1996).
[7] Hopi Tribe v. United States, 782 F.3d 662, 669–671 (Fed. Cir. 2015)
[8] *Id.* at 669.
[9] U.S. Bureau of Reclamation, Colorado River Basin Ten Tribes Partnership Tribal Water Study § 7.5.1 (2018).
[10] CDC, *COVID-19 Among American Indian and Alaska Native Persons – 23 States, January 31-July 3* (2020).
[11] IHS, Justification of Estimates for Appropriations Committees Fiscal Year 2021 at 214 (2020).
[12] *Id.* at 202–03.
[13] Nat'l Water Comm'n, Water Policies for the Future 476 (1973).
[14] Apache Nations include the Jicarilla Apache Nation, Yavapai-Apache Nation, Tonto Apache Tribe, White Mountain Apache Tribe, and San Carlos Apache Tribe.
[15] Ute Tribes include Ute Indian Tribe of the Uintah and Ouray Reservation, Southern Ute Indian Tribe, and Ute Mountain Ute Tribe.
[16] Lone Wolf v. Hitchcock, 187 U.S. 555, 565 (1903) (declining to review the federal government's allotment and disposition of reservations).
[17] McGirt v. Oklahoma, 140 S. Ct. 2452, 2459 (2020) (emphasizing that the Court will enforce treaty promises by "[holding] the government to its word").
[18] *Id.* at 2482.
[19] *Id.* at 2479.
[20] United States v. Washington, 853 F.3d 946, 963 (9th Cir. 2017), *aff'd by an equally divided court*, 138 S. Ct. 1832 (2018).

Chapter 4

Existing Efforts to Provide Clean Water to Tribes

"Clean water is foundational to everything else . . . . It's well past time we move from talking about these problems to taking action."

—Senator Michael Bennet (D-CO).[1]

In the absence of sustainable, comprehensive funding to support clean water access, Tribes rely on various federal agencies to provide piecemeal support for water related projects. In addition to limited project funding, these agencies may be able to provide other needed forms of assistance, such as technical expertise or capacity building. Appendix D provides a list of the current available federal programs. However, additional background is warranted on the federal agencies that are frequently involved in water related projects in Indian country: Indian Health Service (IHS), Environmental Protection Agency (EPA), U.S. Department of Agriculture (USDA), and Bureau of Reclamation (BOR).

Although an important source of funding for Tribes, federal programs present several challenges. Often, multiple agencies are involved, which can make it difficult for Tribes to identify all of the available sources of funding for a particular need or navigate the various agency requirements. For some programs, Tribes may lack the necessary capacity to submit competitive proposals. For example, Tribes may not have the engineering expertise to submit project plans or have an experienced grant writer capable of submitting a compelling application. Perhaps the greatest challenge is the relatively limited project funding available, compared to the overall need. As a result, projects that do receive funding may need to be constructed in stages over a long period of time.

To better understand the successes and failures of current and past efforts, the following case studies of selected government funded water projects serving Indian communities illustrate how these programs have been used in the past and identify the limitations of these programs.

Indian Health Service

Established in 1954, IHS provides health care to approximately 2.6 million AI/ANs, either directly or through facilities and programs operated by Tribes under the Indian Self-Determination and Education Assistance Act (ISDEAA). The IHS SFC Program plays a key role in building water infrastructure in Indian country. In 1959 Congress passed the ISFA,[2] which authorized the agency to take direct action in resolving the sanitation conditions on reservations by authorizing the use of federal funds to design and construct water, wastewater, and solid waste facilities. This authority is carried out by the SFC Program.

The SFC Program provides sanitation facilities and technical assistance to Tribes. The mission and goals of the SFC Program are:

> **Mission:** To raise the health status of AI/AN people to the highest possible level.
>
> **Goals:** To improve the health of AI/AN people by improving the environment in which they live. The SFC accomplishes this goal by providing safe water supplies, adequate means of waste disposal, and other essential sanitation facilities. An additional goal is to build Tribal capability to operate and maintain the facilities provided.[3]

Sanitation facilities—which include water supply and wastewater disposal systems—are provided at the request of Tribes and/or groups for homes owned and occupied by AI/ANs eligible for assistance. Four types of sanitation facilities projects are funded through the SFC Program: (1) projects to serve existing housing; (2) projects to serve new or like-new housing, such as Indian homes being constructed or rehabilitated by the Bureau of Indian Affairs-Home Improvement Program, Tribes, individual homeowners, or other nonprofit organizations; (3) special projects (e.g., studies, training or other needs related to sanitation facilities construction); and (4) emergency projects.

In Fiscal Year (FY) 2019, through the SFC Program, IHS provided sanitation services to 40,684 AI/AN homes and completed construction on 244 projects with an average project duration of 3.6 years. However, at the end of FY 2019 about 6,626 (1.6 percent) of all AI/AN homes tracked by IHS still lacked water supply or wastewater disposal facilities and about 110,552 (27 percent) of AI/AN homes were in need of some form of sanitation facilities improvement.[4] Many homes without service are very remote and may have limited access to health care which increases the importance of improving environmental conditions.

Funding has been a persistent challenge for IHS because appropriations levels have not been sufficient to fund all the services needed. Total sanitation facility needs have dwarfed appropriations for many years.

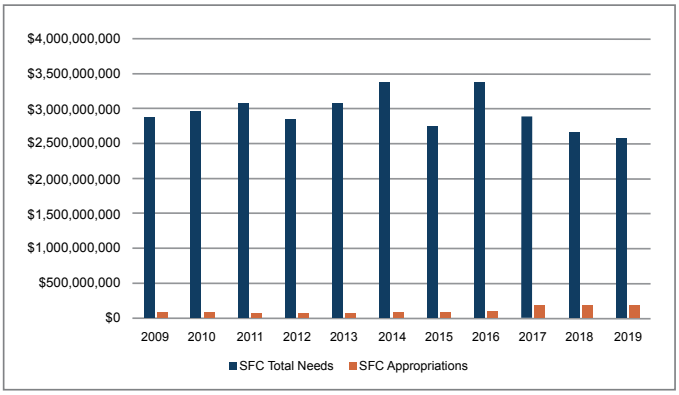


Figure 11 – IHS Sanitation Facilities Construction Needs vs. Appropriations (End of Year 2009-2019)
Source: IHS, SFC Program.

IHS Case Study:
Zuni Pueblo Community Water System

In 2017, IHS completed preliminary design on a project for improvements to the Zuni Pueblo Community Water System.[5] This project was funded through IHS's SFC Program, which provides assistance at all stages of developing sanitation facilities, including identification of projects, project planning, funding, and technical assistance for O&M. Although this project was slated to begin construction in 2018, as of February 2020, final design and construction of this project had not yet begun.[6]

IHS projects are selected based on criteria contained in the SDS list, which is also used by other government agencies to select projects. The SFC Program is helpful in that it can assist Tribal communities with all aspects of construction, from the identification of projects through operation of a constructed facility. Potentially, this large scope could help improve consultation between Tribes and IHS, an aspect of federal programs that is often lacking.[7] Additionally, while the SFC Program helps support a project from start to finish, these projects may not provide sustainable solutions if they do not also help build community capacity. For example, in addition to funding construction, IHS could train community members to effectively operate and maintain their systems long-term.

The significant, ongoing IHS funding deficit has hindered the advancement of a number of infrastructure projects in Indian country, some of which have been shovel-ready for years, if not decades. Additionally, as previously noted, although IHS is authorized by statute to provide O&M activities for existing water and sanitation facilities, Congress has not appropriated funding to provide those services.

Environmental Protection Agency

The EPA was established in 1970 to address "elevated concerns about environmental pollution" in the United States.[8] In order to bolster federal protection of the nation's waterways and peoples' access to clean water, Congress passed the Clean Water Act (CWA), 33 U.S.C. § 1251 et seq. (1972), and the Safe Drinking Water Act (SDWA), 42 U.S.C. § 300f et seq. (1974). The EPA administers these laws to protect water quality, with the authority to delegate administration of regulatory programs to states and Tribes. The EPA's fundamental role in addressing Tribal water needs is "to protect human health and the environment" through adequate water quality—protecting drinking water sources and ensuring proper sanitation and wastewater services.[9]

The EPA's Office of International and Tribal Affairs (OITA) "guides the Agency-wide effort to strengthen public health and environmental protection in Indian country, with a special emphasis on helping Tribes administer their own environmental programs."[10] Within OITA, the American Indian Environmental Office leads the EPA's efforts to protect human health and the environment on Tribal lands by supporting implementation of federal environmental laws in a manner consistent with the federal trust responsibility and the EPA's 1984 Indian Policy,

which emphasizes that the federal government will (1) pursue the principle of Indian "self-governance"; and (2) work directly with Tribal governments on a "government-to-government" basis.[11]

While the EPA promotes Tribal self-governance, the EPA directly administers the CWA in Indian country in most cases. However, the EPA may delegate certain CWA programs to Tribes themselves, and many Tribes have been approved to implement CWA programs. Thus, the EPA is largely focused on building regulatory and technical Tribal capacity to administer water quality programs in a manner that is protective of human health and the environment. To that end, the EPA provides financial assistance specifically to Tribes through two primary funding means:

Tribal capacity building – Development of Tribal regulatory and technical capacity to administer the EPA's programs through General Assistance Program funding

Infrastructure development – Design, construction, and implementation of drinking water and wastewater infrastructure through the Drinking Water Infrastructure Grant Tribal Set-Aside (DWIG-TSA) and the Clean Water Indian Set-Aside (CWISA)

EPA's General Assistance Program Funding

In 1992, Congress passed the Indian Environmental General Assistance Program (GAP) Act authorizing the EPA to provide GAP funding to Tribes for the purpose of planning, developing, and establishing environmental protection programs in Indian country under the CWA and SDWA.[12] GAP funding can only be used to fund activities closely related to planning, developing, and establishing Tribal environmental program capacity. Specifically, GAP funding cannot be used to fund planning, design, or construction of specific facilities such as wastewater treatment plants or drinking water systems. Annual GAP funding (including all environmental programs, not just water quality) to Tribal entities has remained steadily close to $60 million per year since 2003.[13]

Although only activities that develop Tribal administrative capacity are eligible for GAP funds, the EPA expressly states that "with careful planning, Tribes may initiate activities to establish water programs using GAP funds and continue to enhance their water programs using CWA or SDWA grant funds, provided the activities are consistent with and eligible under CWA or SDWA funding authorities."[14] Thus, Tribes should seek to harmonize GAP funding grants with other EPA grants under the CWA and SDWA to implement drinking water and wastewater infrastructure. Notably, each EPA region has its own nuanced process for applying for grants.[15]

EPA Drinking Water Program Funding

The 1996 SDWA amendments established the Drinking Water State Revolving Fund (DWSRF), which made federal funds available for the EPA to finance drinking water system infrastructure improvements in the United States.[16] The SDWA amendments authorized the EPA to set aside 1.5 percent of DWSRF appropriations for Tribes. With this authority, the EPA established the DWIG-TSA. Since the initiation of the SDWA amendments, the Tribal set-aside of DWSRF was increased to the greater of two percent of the DWRSF annual appropriation or $20 million. Both community water systems and non-profit, non-community water systems serving Tribes are eligible to receive DWIG-TSA funds. The DWIG-TSA program is implemented by EPA regional offices in partnership with IHS. Program allocations are based on the EPA's Drinking Water Infrastructure Needs Survey and Assessment,

EPA Case Study: Pyramid Lake Paiute Tribe Water Treatment Plant

The Pyramid Lake Paiute Tribe in Sutcliffe, Nevada received a grant in the amount of $955,000 through the EPA's DWIG-TSA. This project was prompted by the Tribe's lack of a clean source of drinking water. The wells supplying the Tribe's water system contained contaminants far in excess of the EPA's standards, including iron, magnesium, and arsenic. The DWIG-TSA grant allowed the Tribe to construct a new water treatment facility to reduce contaminants to levels safe for human consumption. Given the ability of the new water plant to reduce water contaminants, it would appear that this project was a success. However, this successful project highlights some of the limitations of the DWIG-TSA program.

First, despite conducting comprehensive surveys of Tribal water infrastructure needs, the DWIG-TSA program does not adequately capture the scope of existing water infrastructure needs. As the EPA notes, their surveys and assessments only include projects which meet certain criteria and exclude "significant water systems that are generally ineligible for DWSRF funding, such as raw water dams and reservoirs, projects related primarily to population growth, and water system operation and maintenance costs."[24] Furthermore, a water system must typically be in substantial compliance with EPA requirements, or the proposed project must be expected to bring a system back into compliance, to be eligible for EPA funding. These limitations may render some of the most pressing projects—those with no water system currently in place or failing at multiple levels to meet EPA standards—ineligible for funding under DWIG-TSA.

Additionally, the Pyramid Lake Paiute project demonstrates the sometimes short-sighted nature of infrastructure projects. The EPA estimates that drinking water source and treatment projects account for six percent and twelve percent of total infrastructure needs, respectively.[25] However, storage, transmission, and distribution needs account for a combined 80 percent of infrastructure needs. While storage tanks and pipes can be upgraded or replaced under the DWIG-TSA program, such action still remains tied to safe drinking water standards and water quality. It is important to address immediate concerns with polluted or otherwise inadequate sources of drinking water. But it remains to be seen whether the now-treated source of water can be properly stored and distributed to residents of the Pyramid Lake Paiute Tribe Reservation. As previously noted, DWIG-TSA funds cannot be used for ongoing O&M costs, another issue that could hinder the long-term success of the project. Finally, as the EPA noted, this project only rehabilitated one of the two existing wells.[26] Potentially, this could limit the Tribe's ability to expand housing on the reservation in the future.

which is conducted every four years to assess Tribal drinking water infrastructure and on the IHS SDS list.

DWIG-TSA funds are often used to provide additional sources of drinking water; construct or update treatment and storage facilities; install or upgrade transmission and distribution lines; provide initial access to drinking water; and to replace aging water systems. However, the SDWA specifically does not allow funds to be spent on O&M of drinking water and wastewater infrastructure.[17] The EPA has recognized in the past that "[m]ost agencies cannot use their available funds for long-term O&M of water or wastewater facilities," which as noted above, is problematic because Tribes often lack the technical and financial capacity to properly maintain infrastructure.[18]

EPA Wastewater Funding Program—Clean Water Indian Set-Aside

The EPA's CWISA program provides funding for Tribal wastewater infrastructure. In 1992, Congress granted the EPA authority to take a 0.5 percent Tribal set-aside from the CWA Clean Water State Revolving Fund (CWSRF) appropriation.[19] The "Water Resources Reform and Development Act (WRRDA) (P.L 113-121) permanently authorized the EPA Administrator, starting in FY 2015, to set aside for the CWISA not less than 0.5 percent and not more than 2 percent of the funds made available for the CWSRF program."[20]

All CWISA-funded projects must support wastewater related activities or projects, but CWISA funds may not be used for O&M costs. Projects eligible for funding under the CWISA program include planning and design, infrastructure construction of treatment facilities and sewer lines, as well as major rehabilitation projects. Like the DWIG-TSA program, the EPA administers the CWISA in cooperation with IHS. Tribes must identify their wastewater needs to the IHS SDS, and EPA regional offices use the IHS SDS priority list to select programs for CWISA funding. The amount of funding available to an EPA region under CWISA depends on its proportion of Tribal wastewater needs as identified in IHS's SDS lists. Every November, IHS takes a "snapshot" of Tribal wastewater needs identified in its SDS lists, and this evaluation is used to determine Tribal wastewater funding by IHS area.[21] According to the EPA, the cumulative number of AI/AN homes provided access to basic sanitation in coordination with other agencies is 111,023 homes out of 360,000 total Tribal homes.[22]

Notably, the EPA has some flexibility to increase its funding capacity for a specific project by combining available set-aside funds in CWISA and DWIG-TSA. In an effort to maximize the impact of the EPA's funding capacity, Congress authorized the EPA to "transfer funds between the DWIG-TS and CWISA programs up to an amount that is equivalent to 33 percent of a region's DWIG-TSA allotment."[23]

U.S. Department of Agriculture

The USDA is composed of 29 agencies and offices with nearly 100,000 employees, providing leadership and programs on food, agriculture, natural resources, rural development, nutrition, and related issues. Within its mission areas, the Rural Development program is committed to helping improve the economy and quality of life in all rural areas by providing financial programs to support essential public facilities and services, such as water and sewer systems, housing, health clinics, emergency service facilities, and electric and telephone service.

More specifically, the USDA's Rural Utilities Service Water and Environmental Programs provide infrastructure improvements to rural

communities including water and wastewater treatment. The vast majority of these programs are limited to rural communities of less than 10,000 people and are locally administered by the USDA's Rural Development Offices through an allocation formula based on rural population, poverty, and unemployment. The USDA also helps fund organizations that provide technical assistance and training to rural communities through Water & Waste Disposal Technical Assistance & Training Grant (TAT).[27] TAT grants can help address some of the issues that inhibit the long-term success of infrastructure and source development projects by training qualified operators within the community.[28]

Currently, the USDA administers seven main programs that can provide funding for water and sanitation.[29]

Water and Waste Disposal Loans: This program provides up to 40-year low-interest loans for projects in low-income rural areas: drinking water sourcing, treatment, storage, and distribution; sewer collection, transmission, treatment, and disposal; solid waste collection, disposal, and closure; and storm water collection, transmission, and disposal. In some cases, funding may also be used for related activities such as legal and engineering fees; land acquisition, water and land rights, permits and equipment; start-up O&M; interest incurred during construction; or purchase of facilities to improve service or prevent loss of service. If available, a grant may be combined with the loan to lower the cost, but full grants are not provided.

Water and Waste Disposal Loan Guarantees: This program provides loan guarantees for a certain percentage of the total loan amount made by third party lenders improving the overall credit profile of borrowers and providing additional security to the lender. This program is limited to rural areas with populations of 50,000 residents or less, Tribal lands in rural areas, and Colonias. The loan guarantee percentage is published annually in a Federal Register notice. For FY 2021, loans receive an 80 percent guarantee. The loan term cannot exceed 40 years.

Water and Waste Disposal Grants (Section 306c): This program provides funding to low-income communities that face significant health risks due to a lack of access to safe, reliable drinking water or use of adequate, affordable water or waste disposal facilities and services. This program is limited to federally recognized Tribal lands, Colonias, and rural areas and towns with a population of 10,000 or less. Matching funds are encouraged, but not required. A 100 percent grant may be offered in some circumstances if funds are available.

Emergency Community Water Assistance Grants: This program helps eligible communities prepare for, or recover from, an emergency that threatens the availability of safe, reliable drinking water. Events that qualify as an emergency include drought or flood; earthquake; tornado or hurricane; disease outbreak; and chemical spill, leak, or seepage. A federal disaster declaration is not required. This program is limited to rural areas and towns with populations of 10,000 or less, Tribal lands in rural areas, and Colonias. The area to be served must also have a median household income less-than the state's median household income for non-metropolitan areas.

Water and Waste Disposal Predevelopment Planning Grants: This program assists low-income communities with planning and development of applications for the USDA Rural Development Water and Waste Disposal direct loan/grant and loan guarantee programs. Grants are available to most state and local government entities, non-profit organizations, and federally recognized Tribes. Eligibility is limited to rural areas and towns with populations of 10,000 or less, federally recognized Tribal lands, and Colonias. The area must also have a median household income below the poverty line or less than 80 percent of the statewide non-metropolitan median household income. Grants are awarded for a maximum of $30,000 or 75 percent of the predevelopment planning costs, and include a cost-share component (the remaining amount of predevelopment planning costs—at least 25 percent—must come from the applicant or third-party sources, excluding in-kind contributions).

Special Evaluation Assistance for Rural Communities and Households (SEARCH): This program helps very small, financially distressed rural communities with predevelopment feasibility studies, design and technical assistance on proposed water and waste disposal projects. Funds are available to state and local governmental entities, non-profit organizations, and federally recognized Tribes. The program is limited to areas that are rural and financially distressed - with a population of 2,500 or less and a median household income below the poverty line or less than 80 percent of the statewide non-metropolitan median household income.

Grants for Rural and Native Alaskan Villages: This program helps very small, financially distressed rural communities with predevelopment feasibility studies, design and technical assistance on proposed water and waste disposal projects. Funds are available to state and local governmental entities, non-profit organizations, and federally recognized Tribes. The program is limited to Alaskan areas that are rural and financially distressed - with a population of 2,500 or less and a median household income below the poverty line or less than 80 percent of the Alaskan non-metropolitan median household income.

Of these current USDA programs, the best opportunity for Tribes to receive funding is the Water and Waste Disposal Grants (Section 306c) because this program allows for a 100 percent grant fund award. However, regardless of whether the agency has available funds under its appropriations to award a 100 percent grant to a Tribal applicant, the USDA is required by its agency regulations to complete the underwriting process of a traditional lender. During this process, the USDA reviews the Tribe's assets and debts and in instances where a Tribe has consistent cash flow, the USDA must consider the Tribe for loan dollars (which must be repaid to the federal government), separately from grant dollars (which are not repaid to the federal government). Additionally, the pre-development work to apply for Section 306c funding can be extensive. SEARCH grants can assist to some degree with the completion of a preliminary engineering, environmental, or other

report. However, it is not uncommon for the USDA to work with a Tribe for up to two years before an application is submitted to ensure that all the necessary pre-work is completed.

Although other USDA programs cover the types of projects that address water and sanitation deficiencies on Tribal lands, there are very few grant dollars available. Instead, many of these programs provide only loans or loan guarantees where borrower capacity to repay the loan is a significant consideration. This can create a barrier to funding because Tribes will often struggle to guarantee sufficient revenues for repayment. Similarly, loan guarantees are not commonly used for Tribal infrastructure because Tribes are not always able to tap into commercial credit markets given that they may be perceived as high risk and/or may be unable to provide traditional assurances to lenders such as mortgages on real property because the Tribal lands are held in trust by the federal government.

Other challenges are the ongoing funding of O&M costs and lack of Tribal capacity. Given that there is no grant funding available for O&M costs, applicants must demonstrate that the proposed

USDA Case Study: Ute Mountain Ute Project

In 2016, the USDA worked with the Ute Mountain Ute Tribe to secure approximately $9 million in direct grants to upgrade the Tribe's water and wastewater infrastructure.[30] The project remedied unsafe levels of arsenic and other contaminants in the drinking water system and provided much needed upgrades to aging water and wastewater infrastructure.

The Ute Mountain Ute project highlights the need to develop creative solutions under existing programs. Ordinarily, USDA projects are capped at $2 million. Due to the Tribe's location in both Colorado and Utah, the respective USDA state offices were able to secure the maximum amount of funding available by allocating the costs to four distinct projects: water in Colorado, wastewater in Colorado, water in Utah, and wastewater in Utah. Additionally, the project was able to benefit from additional funds that are sometimes available when a given state office does not spend all of their allotted funds.

As much as the project was a success for the Ute Mountain Ute Tribe, it demonstrates the limitations of existing programs. As previously noted, the total need for water infrastructure projects far exceeds the total available funds. The Ute Mountain Ute Tribe was fortunate that its Tribal lands span two states. For Tribes that are located entirely within one state, their opportunities to increase available funds may be limited. Similarly, the Tribe's members primarily are concentrated in one city in Colorado, and one city in Utah. For Tribes with much more dispersed populations, project costs can quickly increase, and the available funds may not be sufficient to provide clean drinking water to all, or even a majority, of the Tribe's members.

systems will be adequately maintained over time; failing to do so may cause some projects to be highly scrutinized or rejected. This is an area where technical assistance may help Tribal applicants to ensure that proposed projects are appropriate and tailored to the particular needs of a community, making the application process more successful.

The USDA currently collaborates with several organizations, such as the Rural Community Assistance Corporation (RCAC), Native American Water Association, and the Inter Tribal Council of Arizona (ITCA) to work on the ground with Tribes on these matters. The USDA could develop an initiative to increase support and funding for organizations, such as ITCA, which would allow these training organizations to expand their reach. Such a program would likely need to combine training on the O&M side of the utility, as well as training on the financial aspects of organizing and operating a water utility.

Bureau of Reclamation

Initially, under the Reclamation Act of 1902,[31] the Department of the Interior (DOI) established the Reclamation Service within the U.S. Geological Survey (USGS). The office was tasked with studying potential water development projects in each western state with federal lands. In 1907, the Secretary of the Interior separated the Reclamation Service from the USGS and created an independent bureau within the DOI, which would eventually become the current BOR.[32]

"The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public."[33] BOR's primary project types and authorities regarding water generally can be divided into the following areas:

- "Traditional" single purpose or multipurpose water supply projects;
- Federal or nonfederal water storage projects under Section 4007 of the Water Infrastructure Improvements for the Nation Act;
- Dam safety modification projects;
- Rural water projects;
- Indian water rights settlements; and
- Grants for nonfederal projects that encourage investment in alternative water supplies (e.g., water reuse and recycling [Title XVI Program], water and energy efficiency [WaterSMART grants], and desalination).[34]

The BOR has three main programs and activities intended to assist Tribes: (1) the Indian Water Rights Settlement Program; (2) the Native American Affairs Technical Assistance Program (TAP); and (3) the Public Law 93-638 Program.

Indian Water Rights Settlement Program
Tribes have pursued quantification of their water rights through both litigation and negotiated settlements. The settlements involve negotiation between Tribes, the federal government, states, water districts, and private water users, among others. Negotiated settlements have been the preferred course for some Tribes because they are often less lengthy and costly than litigation. In some cases, these negotiated agreements allow Tribes not only to quantify their water rights on paper, but also to procure access to these resources through funded infrastructure and related expenses. In addition to funding, water rights settlements can increase federal support for infrastructure projects, such as expedited regulatory approval.[35] After being congressionally authorized, federal projects associated with approved Indian water rights settlements generally have been implemented by the BOR or the Bureau of Indian Affairs (both within the DOI), pursuant to congressional directions.[36]

Water rights settlements may provide short-term funding and solutions, but may not address the Tribes' long-term ability to enforce their often senior water rights.[37] Some states have used settlement negotiations to try to pressure Tribes into waiving their future rights and other claims.[38] Access to water is a basic human right that should not be conditioned on the settlement of other unrelated issues.

Native American Affairs Technical Assistance Program (TAP)
This program provides technical assistance to Indian Tribes to develop, manage, and protect their water and related resources. The program has supported a broad range of activities such as water needs assessments, improved water management studies, water quality data collection and assessments, and water measurement studies.[39] Funding has been very limited, with $1.5 million announced in 2019, $1 million in 2020, and an estimated $1 million in 2021.

Program direction and leadership is provided by Native American and International Affairs Office within the BOR Commissioner's Office, but the program is implemented through BOR's Regional and Area Offices. The Area Office Native American Affairs Program Coordinators work with their Regional Program Managers and Tribes to develop project proposals, which are submitted for consideration for funding. Budgetary constraints limit the number of projects that can be funded each year.[40]

Work under the Native American Affairs TAP may be carried out in different ways. Sometimes the work is performed by the BOR under cooperative working relationships with Tribes, which provide the Tribes with opportunities to benefit from BOR's technical expertise and resources. Other times, the work is carried out directly by the Tribe.

Public Law 93-638 Program
The ISDEAA establishes a contracting framework that assures maximum, effective, and meaningful Tribal participation in the direction, planning, conduct, and administration of contractible programs, functions, services, and activities (PFSAs).[41] Title I of the Act directs the Secretary of the Interior[42] to contract with Tribes, at their request, for PFSAs that serve their members. PFSAs can be for construction or non-construction. Subject to the availability of appropriations, the BOR must, at the request of the benefiting Tribe(s), enter into Title I contract negotiations for any authorized and funded PFSAs. Title IV of the Act directs the Secretary to establish and carry out a program within the Department known as "Tribal Self-Governance." The primary purpose of Title IV is to reduce Federal bureaucracy and promote Tribal self-governance. Participation in the Tribal Self-Governance program provides Tribes with meaningful authority to plan, conduct, redesign, and administer PFSAs that meet the needs of their communities.[43]

In addition to the above Tribal-specific TAP and Public Law 93-638 Program, the following BOR programs, which are not Tribal-specific, are also available to Tribes for funding.

Rural Water Supply Program (P.L. 109-451)
This program authorizes the BOR to work with rural communities and Indian Tribes to identify municipal and industrial water needs and options to address such needs through appraisal investigations, and in some cases feasibility studies. Once projects are identified, the BOR makes recommendations to Congress to authorize construction. From 2006-2016, the BOR studied approximately 26 projects, but did not recommend any projects to Congress for construction and authorization due to the limited funding available to this program and the backlog of funding required for already-authorized projects. This authority

expired in 2016 and has not been reauthorized.[44] Instead, all rural water projects developed by the BOR require individual congressional authorization. Rural water supply projects are especially beneficial to small communities and Indian Tribes given that the Federal cost share ranges between 75-85 percent of total project costs for non-Tribal communities and up to 100 percent of costs for projects serving Indian populations. Two bills were introduced in the 116th Congress to reauthorize the Rural Water Supply Program through FY2026: the Water Justice Act (H.R. 4033) and the Securing Access for the Central Valley and Enhancing (SAVE) Water Resources Act (H.R. 2473).[45]

WaterSMART Programs

WaterSMART programs focus on improving water conservation and helping water resource managers make sound decisions about water use, thereby promoting collaboration and cooperation. WaterSMART remains one of the most important programs in the CRB that provides financial and technical support for conservation and reuse in the major metropolitan areas that receive Colorado River water and offers a variety of grant opportunities that can assist with improvements to agricultural water-use efficiency.

Tribal participation in WaterSMART is very limited. From 2016-2019, the number of Tribal projects that were awarded funding under these programs was very low: less than five percent of the total amount of projects awarded during this time. In addition, while the program has definitely impacted water conservation and efficiency, it is not designed to adequately address water supply issues or the clean water access challenges facing the most disadvantaged Tribal communities because of project eligibility and cost sharing requirements, and the competitiveness of the application process.

Overall, the BOR has a different role today than the one envisioned during the reclamation era with the agency's priorities shifting from construction of water diversion and storage facilities towards ensuring the adequate O&M of existing projects and affecting the prioritization and design of its programs, resources, and budgets. However, the BOR continues to prioritize and play an important role in providing Tribes with access to water through the construction of projects that were authorized outside of the Rural Water Supply Program and O&M assistance for some Tribal components.[46] Yet, several steps can be taken to increase the capacity of the agency further in supporting water supply projects. According to the Congressional Research Service, should Congress continue to support rural water projects through Reclamation, Congress may consider various options:

> "Continue to provide Reclamation annual appropriations for the agency to allocate funds to individually authorized rural water projects based on established agency criteria. Establish mandatory funding for Reclamation to allocate funds to individually authorized rural water projects based on established agency criteria. For example, the Authorized Rural Water Projects Completion Act (S. 1556) in the 115th Congress would have created a Reclamation Rural Water Construction Account to receive $80 million annually that otherwise would be deposited into the Reclamation Fund.
>
> Provide grant funding through a competitive process for nonfederal sponsors to support local projects, such as the grant program the Disadvantaged Community Drinking Water Assistance Act (H.R. 5347) would establish for communities with fewer than 60,000 residents.
>
> Direct appropriations to individually authorized rural water projects." [47]

BOR Case Study: Jicarilla Apache Reservation Rural Water System Act

The Jicarilla Apache Reservation Rural Water System Act, enacted in 2002, authorized the BOR to work with the Jicarilla Apache Nation to construct water and wastewater infrastructure on the reservation.[48] The Act outlined a cost-sharing system, where the Nation was responsible for "the costs to design and initiate construction of the wastewater treatment plant, to replace the diversion structure on the Navajo River, and to construct raw water settling ponds, a water treatment plant, water storage plants, a water transmission pipeline, and distribution pipeline," which Congress recognized the Nation had satisfied.[49] The federal government was responsible for the remaining costs. The Act appropriated $45 million to the BOR for the project,[50] and the total cost of the project was approximately $76.1 million.[51]

The construction project took approximately five years to complete. Since then, however, the Jicarilla Apache Nation has faced challenges regarding the ongoing operation and maintenance of this project, and consistent delivery of reliable water supplies to its citizens.[52]

The Jicarilla Apache Nation's experience highlights many of the challenges and barriers to successful infrastructure projects on Tribal lands, such as the level of funding needed to financially support the project and gain Congressional support, and the need for continued resources to ensure that projects, once completed, are appropriately operated and maintained.

The Jicarilla Apache Nation has resolved many of its water claims through federal settlements and New Mexico state court decrees.[53] As part of its federal settlement, the Nation has the authority to market water for off-reservation use to generate revenue.[54] The Nation leveraged that revenue to contribute funding to the infrastructure project, thus gaining Congressional support to pass the Jicarilla Apache Reservation Rural Water System Act. While this has been beneficial for the Jicarilla Apache, very few Tribes have the authority to market water for off-reservation use, potentially depriving them of a funding source for infrastructure projects. The inability of many Tribes to commit comparable funding levels could limit their ability to successfully lobby for a similar funding model and legislation.

As outlined in the Act, upon completion of the project, the Nation assumed O&M responsibility. Initially, this was accomplished by the Tribal Utility

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Authority, through which the Nation set aside funds specifically for the water and wastewater systems, as well as ensuring that properly trained individuals were hired to operate and maintain the systems. However, the Tribal Utility Authority was eventually dissolved, eliminating dedicated personnel and a consistent funding source for O&M. Since that time, the system has deteriorated from lack of consistent maintenance and improvement, causing many Tribal members to go without steady, reliable, and safe water supplies.

The Jicarilla Apache Reservation Rural Water System Act provides a potentially useful tool for developing collaborative projects between Tribal governments and the federal government. Presumably, any future Congressional acts could be tailored to meet the specific needs of participating Tribal communities, including initial funding as well as projected long-term needs. While the BOR was the primary federal agency in this case, future Congressional acts could include other agencies, such as EPA, IHS, USDA, or the Department of Housing and Urban Development. Even if not explicitly included in an act, Congress could authorize the BOR to consult with these other organizations and take advantage of the particular expertise and funding sources each agency may bring to a project.

The Act also highlights many of the challenges and barriers to successful infrastructure projects. Many Tribes do not have the same ability to leverage funds from off-reservation water leases that the Jicarilla Apache Nation was able to bring to bear in securing Congressional support to pass the Act. Without that funding commitment from Tribal communities, similar funding models and legislation will remain elusive.

Additionally, this project illustrates the scope of funding and commitment necessary to address infrastructure concerns. The Act allocated a total of $45 million over five years for this specific project. In contrast, the EPA's total annual DWIG-TSA allotment is approximately $22.5 million.[55] While this is only one funding source available to Tribes, it further demonstrates the disparity between existing need and available funding sources.

Finally, the Jicarilla Apache Reservation, like many reservations, is very rural in nature. Aside from the town of Dulce, the more rural parts of the reservation lack infrastructure.[56] While this presents challenges in and of itself, the remote location also makes it difficult to hire construction crews who must live and work in areas devoid of infrastructure for the duration of the project.

Chapter 4 Endnotes

[1] Water & Tribes Initiative, Universal Access to Clean and Safe Water (webinar on Dec. 16, 2020).
[2] Act of July 31, 1959, Pub. L. No. 86-121, 73 Stat. 267 (1959).
[3] IHS, *Criteria for the Sanitation Facilities Construction Program*, at Chap. 1-2 (1999), https://www.ihs.gov/sites/dsfc/themes/responsive2017/display_objects/documents/Criteria_March_2003.pdf.
[4] IHS, Justification of Estimates for Appropriations Committees Fiscal Year 2021 at 202 (2020). Notably, the IHS database does not—and has never been intended to—identify every AI/AN home and the status of water access to that home. Furthermore, the current database does not distinguish between homes that have no deficiency and homes that have simply not yet been assessed to identify a deficiency. IHS officials have stated that they are seeking to improve the database's accuracy and respond to other recommendations made by the U.S. Government Accountability Office in its GAO-18-309 report, Drinking Water and Water Infrastructure: Opportunities Exist to Enhance Federal Agency Needs Assessment and Coordination on Tribal Projects (2018).
[5] IHS, Public Law 86-121: Sanitation Facilities Construction Annual Report (2017).
[6] IHS, *Zuni Wastewater Treatment Improvements*, https://govTribe.com/opportunity/federal-contract-opportunity/zuni-wastewater-treatment-improvements-75h70120r00029.
[7] U.S. Gov't Accountability Off., GAO-19-22, Tribal Consultation: Additional Federal Actions Needed for Infrastructure Projects (2019).
[8] EPA, *EPA at 50: Progress for a Stronger Future*, https://www.epa.gov/50.
[9] EPA, EPA Policy for the Administration of Environmental Programs on Indian Reservations (1984) [hereinafter Policy for Environmental Programs].
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[12] Pub. L. No. 102-497, 106 Stat. 3258 (1992); EPA, Guidance on the Award and Management of General Assistance Agreements for Tribes and Inter Tribal Consortia Appendix IV (2013) [hereinafter EPA 2013 GAP Funding Guidance].
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[15] EPA, *Clean Water Resources for Tribes in Region 10*, https://www.epa.gov/r10-Tribal/clean-water-resources-Tribes-region-10#grants; EPA, *EPA Region 9 Tribal Environmental GAP Funding*, https://www.epa.gov/Tribal-pacific-sw/epa-region-9-Tribal-environmental-gap-funding.
[16] EPA, 20 Years of Protecting Public Health on Tribal Lands: EPA Drinking Water Infrastructure Grants (2018) [hereinafter Public Health on Tribal Lands].
[17] EPA, Overview of Tribal Water Infrastructure Funding Application Process and Recommended Paperwork Streamlining Opportunities, at 8 (2011).
[18] *Id.* at 29.
[19] EPA, *Clean Water Indian Set-Aside Program*, https://www.epa.gov/small-and-rural-wastewater-systems/clean-water-indianset-aside-program [hereinafter Clean Water Set-Aside Program].
[20] EPA, Clean Water Indian Set-Aside Program Guidance (2015) [hereinafter CWISA Guidance].
[21] *Id.* at 3–4.
[22] *Clean Water Set-Aside Program*, *supra* note 19.
[23] CWISA Guidance, *supra* note 20, at 5.
[24] EPA, Drinking Water Infrastructure Needs Survey and Assessment, at i (2015).
[25] *Id.* at 30, Ex. 3.2: American Indian and Alaska Native Village Needs Reported by Survey Year.
[26] Public Health on Tribal Lands, *supra* note 16.
[27] USDA, *Water & Environmental Programs*, https://www.rd.usda.gov/programs-services/all-programs/water-environmental-programs.
[28] Government Accountability Office, GAO-18-309, Drinking Water and Water Infrastructure: Opportunities Exist to Enhance Federal Agency Needs Assessment and Coordination on Tribal Projects (2018).
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[30] USDA, *Ute Mountain Ute Tribe Break Ground on Water and Wastewater Improvement Projects*, https://www.rd.usda.gov/newsroom/news-release/usda-ute-mountain-ute-tribe-break-ground-water-wastewater-improvement-projects.
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[32] BOR, A Brief History of the Bureau of Reclamation, at 3–4 (2011).
[33] CDC, COVID-19 Among American Indian and Alaska Native Persons – 23 States, January 31-July 3, 2020, at 5 (2020).

[34] Cong. Res. Serv., R46303, Bureau of Reclamation: History, Authorities, and Issues for Congress, at 10–11 (2020).
[35] *Id*.
[36] Cong. Res. Serv., R44148, Indian Water Rights Settlements (2019).
[37] Ian James, *Tensions Emerge as a Top Arizona Official Discusses Tribes' Unresolved Water Claims* (March 15, 2020), Arizona Republic.
[38] Andrew Curley, *Contested Water Settlements Inflamed the Navajo Nation's Health Crisis* (Aug. 11, 2020), HighCountry News.
[39] Funding under TAP is not intended to be used for construction activities. BOR, *Native American Affairs Program*, https://www.usbr.gov/native/programs/TAPprogram.html [hereinafter *Native American Affairs Program*].
[40] *Native American Affairs Program*, *supra* note 39.
[41] 25 U.S.C. §§ 5301–5423.
[42] The Secretary has delegated the responsibility to enter into contracts for Reclamation PFSAs to the Commissioner of Reclamation.
[43] *Native American Affairs Program*, *supra* note 39.
[44] *Id.* at 8.
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[46] Public Health on Tribal Lands, supra note 16, at 2.
[47] *Id.* at 13.
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[49] *Id.*
[50] *Id.*
[51] Anna E. Normand, Cong. Res. Serv., R46308, Bureau of Reclamation Rural Water Projects, at 5 (2020).
[52] U.S. Bureau of Reclamation, Colorado River Basin Ten Tribes Partnership Tribal Water Study §§ 5.4.7–5.4.8 (2018) [hereinafter Tribal Water Study].
[53] *Id.* § 5.4.4.
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[55] EPA, *Current Allocations for the Tribal Set-Aside Program of the Drinking Water Infrastructure Grants*, https://www.epa.gov/Tribaldrinkingwater/current-allocations-Tribal-set-aside-program-drinking-water-infrastructure.
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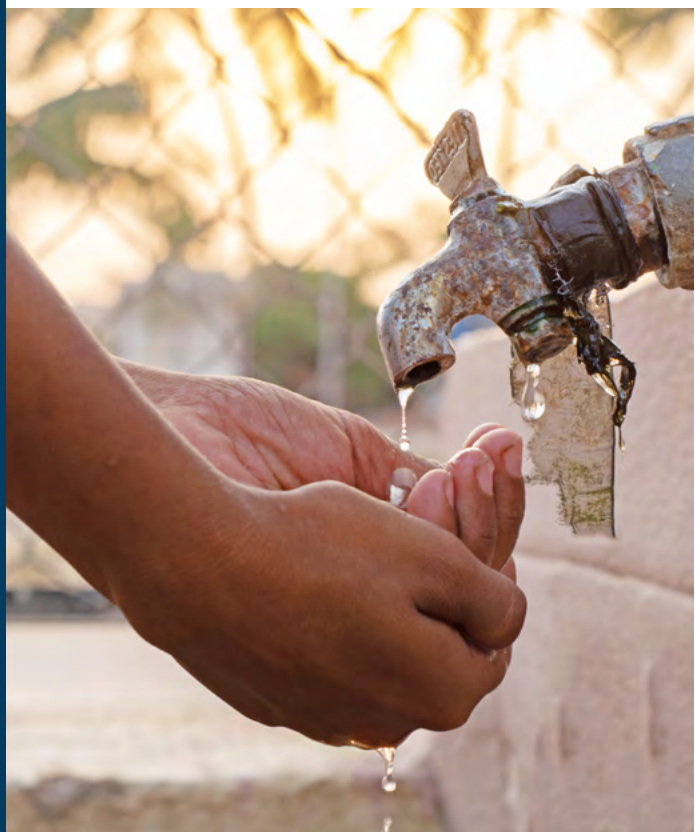
Chapter 5

Barriers to Providing Access to Clean Water for Tribes

While this report does not endeavor to present a comprehensive survey of attempts to address water insecurity in Tribal communities, the selected case studies highlight the many challenges Tribes face. Though a myriad of federal programs exist to help increase access to clean water, the needs of Tribes continue to increase as populations grow and aging systems fall into disrepair. Perhaps the most pressing issue, and the one most difficult to address, is that race is the greatest predictor of water insecurity. Put simply, the conditions common to so many Tribal communities would be unacceptable in white communities and remedied long ago.



Existing efforts to address water insecurity have often focused on short-term solutions to remedy the most pressing concerns, rather than development of an overall strategy where coordinated projects provide long-term, secure clean water access in an equitable manner. Significant and immediate investment must be provided for Tribal water infrastructure projects. Unfortunately, these projects are both time-consuming and require an initial financial commitment from the federal government and/or Tribe. Yet, completing construction is only half the solution: minimal water quality standards must be maintained and support given to Tribes to develop the necessary O&M capacity for long-term success. It is time for the federal government to fulfill its treaty and trust responsibilities to Tribes by fully supporting and funding water access initiatives in Indian country.

Lack of Tribal Consultation and Agency Coordination

The federal government has failed to implement meaningful opportunities for coordination at both the intergovernment, and interagency level. First, Tribal consultation is desperately needed to ensure sovereign to sovereign coordination with Tribes. Efforts to address Tribal needs have focused on existing programs, rather than crafting a solution tailored to the unique situation of Tribes. Many of these programs fail to acknowledge the inherent sovereignty of Tribes, instead placing Tribes on the same level

as states, local governments, or even privately-owned utilities. Additionally, the amount of funding available relative to the existing need demonstrates a failure to consult with Tribes on these programs. For example, although O&M represents a significant cost for Tribal water systems, Congress has not made appropriations to IHS to allow this agency to carry out one of its authorized missions to support O&M. Moreover, Tribal territory may not fit neatly into some programs' geographic boundaries, which may allocate funding on a state basis, even if a reservation expands across multiple states.

While interagency cooperation can help address the above issues and ensure consistency across federal-Tribal interactions, formal mandates for such action are lacking. As has been noted, different federal agencies can and do sometimes cooperate to pool their expertise and funds to complete much needed projects. However, the existence of this type of cooperation and what it looks like can vary based on the agencies involved, and can even vary by region and state. Furthermore, it appears that there are no formal directives for interagency cooperation; rather, interagency cooperation is largely motivated by the desire of federal officials to provide the best available outcome to Tribes. The lack of formal coordination not only limits the funds available per project, it also increases the burden on Tribes that are often required to submit separate applications to each agency involved on a project. Thus, even if one agency is the de facto lead agency, they can nevertheless be stalled by the requirements of another agency involved in the project.

Statutory or Regulatory Barriers to Tribal Participation

The current system for prioritizing and funding water projects on Tribal lands is not optimal. The primary method of evaluating and selecting projects is the IHS SDS list. While this list provides important data about Tribal needs, it is also indicative of the statutory and regulatory barriers which exist. The sometimes strict requirements for project selection and funding result in projects that, at best, provide a short-term fix, and rarely if ever provide much needed long-term solutions.

Though many of the programs discussed in this report are Tribal specific, they nevertheless require Tribes to comply with the same requirements as a state or private actor. These statutory or regulatory requirements often do not reflect the reality of Tribal governance. For example, a municipal utility may have the ability to increase taxes or issue bonds to secure a loan for a project or provide a cost-share, an option which is often not available to Tribes. Despite this, the USDA is mandated to require Tribes to demonstrate that commercial loans are not available before the agency may consider providing direct grants to Tribes. While Tribal set asides are important, it is equally important that the application and selection process for more general programs be tailored to Tribes' specific needs.

Additionally, project funding caps must be reconsidered. Even if Congress were to appropriate sufficient funds to address existing needs, some funding sources have a per project cap on the total cost. Again, while these cost limitations may make sense in the context of a local government or private utility project, they neglect the reality of Tribal needs. Rather than requiring Tribes to cobble together funds from several different sources, programs should allow Tribes to receive the funding necessary to complete water infrastructure upgrades, and where applicable, funds for the long-term O&M of the system.

Lack of Tribal Capacity

Tribal communities lack the capacity, training, and education that can help promote long-term access to clean water. Tribes must have the ability to identify and successfully apply for the various forms of federal funding available for water related projects. This can be difficult for Tribal governments that lack a qualified grant writer, or even sufficient staff to handle the research and application process for the various programs available. Tribes may lack the necessary legal counsel or lobbyists to navigate the legal and policy challenges to securing alternative sources of funding. While limited technical assistance is available to Tribes in the form of environmental or engineering expertise, it is not sufficient to offset Tribes' lack of qualified engineers on staff. The absence of Tribal capacity and expertise in these areas weakens the competitiveness of Tribal applications, can increase the overall length of time from funding to completion, and prevent Tribes from easily obtaining funding for "shovel-ready" projects compared to other non-Tribal applicants that can have engineering and design work completed in advance. Moreover, without individuals with engineering and design expertise working directly for the Tribe who can account for potential growth or changes there is less assurance that individual projects will be beneficial to the Tribe in the long-term.

Developing the capacity to construct water improvement projects could further help Tribes to develop long-term solutions. The rural nature of many Tribal communities presents several challenges, including the inability to attract and hire the construction crews necessary to complete infrastructure projects. Furthermore, these crews often need to be housed near the project site, potentially increasing the overall cost of the projects. The ability to hire qualified personnel from within Tribal communities could help alleviate some of these concerns, while at the same time, providing an economic boost to Tribal communities.

O&M costs present one of the most significant barriers to the long-term success of water projects, and at the same time, are one of the areas least likely to receive dedicated funding. There is a severe lack of federal attention to funding the training of local Tribal members to be able to repair and operate water systems. Projects that develop new water sources or upgrade infrastructure will be unsuccessful if the water systems fall into disrepair due to lack of preventative and regular maintenance. Similarly, increasing access to water is of little use if water systems are not adequately staffed to efficiently resolve water outages when they arise. Unattended water service disruptions result in shorter infrastructure lifespan that eventually requires further federal investment. While training and education may pose significant time and monetary costs at the outset, this investment will ultimately decrease the long-term financial impact of all interests (federal and Tribal) and help promote the long-term success of future projects.

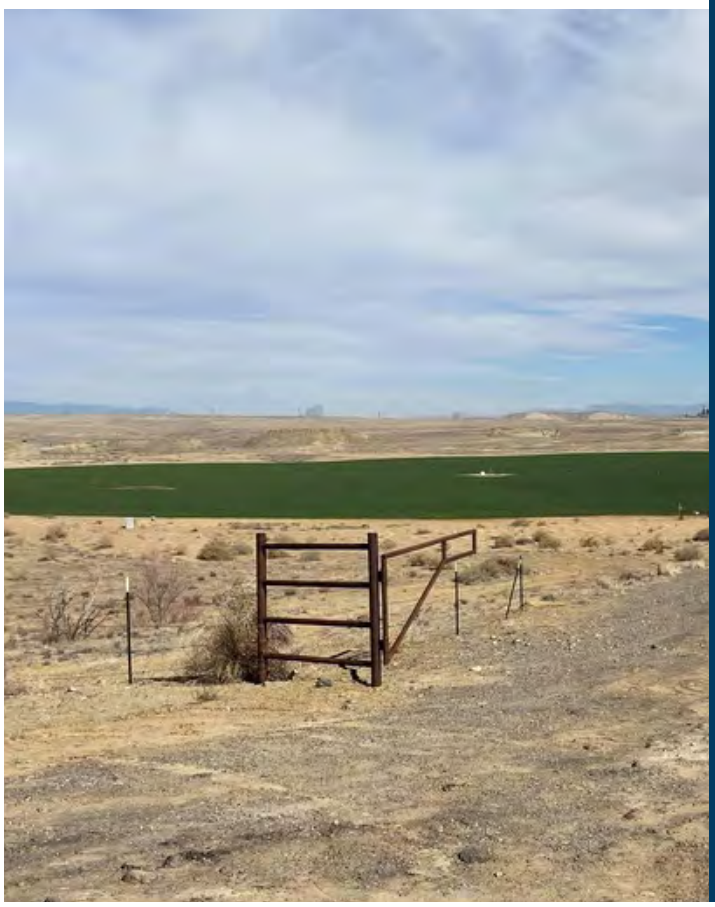
Chapter 6

Recommendations for Providing Access to Clean Water for Tribes

Employ a "Whole of Government" Approach

The federal government's current approach to providing drinking water and sanitation to Tribes is haphazard and inefficient. Currently, at least seven different federal agencies with 23 different programs provide some type of drinking water or sanitation funding for Tribes. These programs have different eligibility requirements, funding cycles, points of contact, and deadlines. Typically, Tribes do not receive significant amounts of funding under some of these programs, thus requiring large-scale projects to be broken-up into stages that ultimately results in additional cost and significantly more time to complete. Failure to provide for ongoing O&M compounds the problem. Projects that develop new water sources or upgrade infrastructure will be unsuccessful if the water systems fall into disrepair due to lack of preventative and regular maintenance. Furthermore, there are no official mechanisms for coordinating these various federal programs. Any coordination that does occur is usually the result of heroic efforts on the part of regional or local civil servants who go above and beyond their official duties to marshal various funding sources to provide Tribes with as much support as possible within regulatory and other constraints.

It is time for the federal government to pursue a coordinated whole of government approach to develop a strategy to address the shameful lack of access to clean drinking water and sanitation in Indian country quickly and effectively. The federal government knows how to do this. In 2014, Congress required the U.S. Department of State and U.S. Agency for International Development to develop a Global Water Strategy to address this same issue internationally.[1] An Interagency Water Working Group brought together all of the federal agencies working on this issue to develop and implement a coordinated, coherent



strategy to provide more people with access to drinking water and sanitation internationally. Congress should do at least as much for AI/AN communities. The following proposals should guide the development of this whole of government approach.

The federal government must fulfill its treaty and trust responsibilities to Tribes by supporting and fully funding water access initiatives in Indian country. Access to clean drinking water and sanitation is a human right; providing this access is central to the federal government's treaty and trust responsibilities to Tribes. The federal government should acknowledge this and diligently work to fulfill this most basic duty to all Tribal communities.

Federal funding should be pooled and optimized to allow the greatest possible uptake and usage for Tribal water projects. Frequently, large-scale projects are broken into stages in order to utilize funding from existing federal programs. This results in piecemeal projects that are more costly in the long run, and often have a shorter life expectancy. Federal programs may require a cost-share component: some require the cost-share funds come from non-federal source(s), and others allow the pooling of federal funds from different agencies to fulfill the cost-share requirement. To compound the problem, O&M funding is usually not included in project costs. Pooling funding to allow full funding of projects, including any cost-share requirement and O&M, will cost less money overall and ensure that water projects meet or exceed their life expectancy. While there are examples of federal agencies jointly funding large-scale projects, appointing one agency to oversee these efforts, such as IHS, would help formalize these efforts and promote greater efficiency.

Refine Project Selection Process and Provide Adequate Funding

Undoubtedly, bringing Tribes and the various federal agencies that provide drinking water and sanitation together in conversation will bring to light the shortcomings of the current patchwork approach and spark new and innovative ways to address them. To help begin that discussion, we offer the following observations and suggestions.

The federal government, in close consultation with Tribal governments, should revise the criteria for prioritizing and funding water projects to ensure long-term needs are met. The coordinated strategy should draw on the expertise and experience of the federal agencies and civil servants that implement existing programs to provide drinking water and sanitation for Tribes. Beyond that, Tribes themselves must be included in the development of the strategy, as they best understand the drinking water and sanitation challenges facing their communities. Moreover, as sovereign entities, Tribes have inherent authority to govern their land and people. They are responsible for identifying and prioritizing projects to meet the needs of their community and promote the health, safety, and well-being of their citizens. Revisions to the existing criteria for prioritization and funding should ensure that funding supports long-term, meaningful clean water access for AI/AN communities.

The whole of government approach should recognize Tribal sovereignty and promote self-governance. The federal government should meet its trust responsibility by providing access to drinking water and sanitation to Tribes in a way that promotes self-governance, and recognizes Tribal sovereignty.

Congress should appropriate the funds necessary on an annual basis to IHS, EPA, USDA, and BOR for their Tribal-specific water related projects to allow expedited and meaningful progress in addressing the lack of access to clean water in AI/AN communities:

Indian Health Service
Congress should fully fund remediation of sanitation deficiencies in Indian homes, as identified in the IHS SDS (estimated at $3.08 billion at end of year 2020). IHS's authorization to provide O&M support should be funded to the extent of the current unmet need. In order to effectively administer these programs, IHS must also expand its workforce dedicated to these services; funding for this administrative support is critical.

Environmental Protection Agency
Congress should lock in the percentage allocation of the DWSRF Tribal set-aside program at two percent. The EPA's estimate of Tribal drinking water needs, over and above the needs covered by the IHS SDS (estimated at $2.4 billion in 2013) should be funded. The EPA should direct its State Revolving Fund programs to work with the EPA's Environmental Finance Centers to leverage funding to allow for additional capital. Funding for the EPA's Tribal technical assistance programs (e.g., GAP) should also be provided.

U.S. Department of Agriculture
The underwriting requirement for Tribes to access USDA-Rural Development programs should be removed. This could be done through agency rulemaking, but a statutory mandate by Congress would be ideal. Additionally, Congress should increase the grant funding (as opposed to loans) available for Tribal water projects.

Bureau of Reclamation
Congress should appropriate funding to enable the BOR to address the unmet need for Tribal technical assistance. The BOR's Rural Water Supply Act Authority should be expanded to include all Tribal clean water access projects and the corresponding need should be fully funded.

Enhance Tribal Capacity

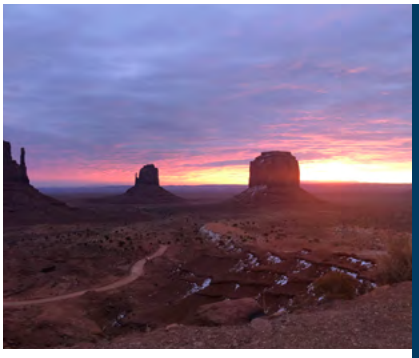
The federal government should work with Tribes to increase Tribal capacity for designing, implementing, and operating projects. The approach should allow for Tribal assumption of programs under the ISDEAA for those Tribes that are able, and should work to increase Tribal capacity wherever possible. Also, the federal government should work to increase Tribal awareness of available agency programs and technical assistance for completing applications. An annual conference or training opportunity for Tribes that identifies all available funding sources and provides technical assistance and guidance through the application process would simplify the entire process for Tribes and bring all the relevant information and assistance together in a single location. In additional to the above funding recommendations, Congress should also fund the existing authorization of these agencies to provide financial assistance for Tribal O&M costs, by providing grants and funding that can be used to directly pay for repairs, staff, and other O&M costs. Finally, Congress should provide and allocate grant funding for collaborative projects between Tribal and state and local governments.

Chapter 6 Endnotes

[1] Senator Paul Simon Water for the World Act of 2014, Pub. L. No. 113-289, 128 Stat. 3283 (2014).

Chapter 7
Conclusion

There are multiple challenges to ensuring universal access to clean water for Tribes. Some of these challenges could be addressed by more thoughtful consideration and selection of infrastructure projects aimed at increasing access to clean water. While the various programs highlighted are well intentioned, the current system does not adequately meet current needs and fails to acknowledge the stark differences between existing water access for Tribal communities and non-Tribal communities. Achieving water equity requires the delivery of clean, affordable, and reliable running water through indoor plumbing to all American homes. To be successful, the federal government must engage in meaningful consultation with Tribes and ensure that the different federal agencies coordinate with one another to pool and leverage existing federal resources. It must also be recognized that the existing need far exceeds present funding levels. An increase in federal funding to support Tribal infrastructure development and capacity—together with new solutions to address the substantial O&M challenges facing Tribal communities—is critical to allow real progress to be made.



Appendix A

Tribal Data Sources

Tribal Data Sources		
Tribe	**Source**	**Data Categories**
Ute Indian Tribe	http://www.utetribe.com/	Reservation Population; Reservation Land Size
	http://www.utetribe.com/images/PDF_Files/Covid-19UpdateNov2.pdf	COVID-19 Deaths
	https://coronavirus.utah.gov/case-counts/	COVID-19 Positive Cases
	https://www.usbr.gov/lc/region/programs/crbstudy/tws/docs/Ch.%205.1%20Ute%20Tribe%20Current-Future%20Water%20Use%2012-13-2018.pdf	Water Services
	http://www.utetribe.com/images/Departments/WaterSystems/2019CCR_WhiteRocks.pdf	Water Services
Southern Ute Indian Tribe	https://www.southernute-nsn.gov/history/	Reservation Land Size
	https://www.colorado.gov/pacific/ccia/southern-ute-indian-tribe	Reservation Population
	https://www.sudrum.com/health/2020/10/23/southern-ute-indian-tribe-confirms-first-positive-case-of-covid-19-2/	COVID-19 Positive Cases; COVID-19 Deaths
	https://www.usbr.gov/lc/region/programs/crbstudy/tws/docs/Ch.%205.1%20Ute%20Tribe%20Current-Future%20Water%20Use%2012-13-2018.pdfwater W	Water Services
	https://www.southernute-nsn.gov/2019/06/24/press-release-the-southern-ute-indian-tribe-clarifies-relationship-with-the-town-of-ignacio-and-on-going-water-and-wastewater-rate-discussion/	Water Rates
	https://www.suitutil.com/programs/	Water Services
Ute Mountain Ute	Ute Mountain Ute general counsel	
	https://www.usbr.gov/lc/region/programs/crbstudy/tws/docs/Ch.%205.3%20UMUT%20Current-Future%20Water%20Use%2012-13-2018.pdf	Reservation Population; Reservation Land Size; Water Services
	https://durangoherald.com/articles/351051	COVID-19 Positive Cases; COVID-19 Deaths
Zuni Tribe	http://www.ashiwi.org/COVID19.html	COVID-19 Positive Cases; COVID-19 Deaths
	http://www.ashiwi.org/Water%20Utility/WaterRates.html	Water Services
	https://www.census.gov/quickfacts/zunipueblocdpnewmexico	Reservation Population; Reservation Households
	http://www.ashiwi.org/#:~:text=Pueblo%20of%20Zuni%20is%20located&text=The%20main%20reservation%2C%20is%20located,acres%20encompasses%20about%20450%2C000%20acres.	Reservation Land Size
Jicarilla Apache Nation	Jicarilla Apache Nation general counsel	
	https://janofficial.com/	COVID-19 Positive Cases; COVID-19 Deaths
	https://www.census.gov/tribal/?aianihh=1700	Reservation Households
	https://www.usbr.gov/lc/region/programs/crbstudy/tws/docs/Ch.%205.4%20Jicarilla%20Current-Future%20Water%20Use%2012-13-2018.pdf	Water Services
Navajo Nation	Navajo Nation Department of Water	
	https://www.ndoh.navajo-nsn.gov/COVID-19/Data	COVID-19 Positive Cases; COVID-19 Deaths
	https://www.census.gov/tribal/?aianihh=2430	Reservation Households
	https://www.usbr.gov/lc/region/programs/crbstudy/tws/docs/Ch.%205.5%20Navajo%20Current-Future%20Water%20Use%2012-13-2018.pdf	Reservation Population; Reservation Land Size; Water Services
Hopi Tribe	https://www.hopi-nsn.gov/covid-19-response-and-resources/	COVID-19 Positive Cases
	https://www.census.gov/tribal/?aianihh=1505	Reservation Population; Reservation Households
	https://itcaonline.com/member-tribes/hopi-tribe/	Reservation Land Size
	http://www.riversimulator.org/Resources/LCR/HydrologyWaterResourcesHopiReservationAZ2013Hopi.pdf	Water Facilities
	https://deeply.thenewhumanitarian.org/water/articles/2017/06/15/water-settlement-for-navajo-and-hopi-tribes-inches-forward	Water Access
Kaibab Band of Paiute Indians	https://www.census.gov/tribal/?aianihh=1505	Reservation Population; Reservation Households
	https://www.kaibabpaiute-nsn.gov/waterresources.html	Water Facilities
	https://www.coconino.az.gov/2376/Dashboard-Data	COVID-19 Positive Cases; COVID-19 Deaths
	https://itcaonline.com/member-tribes/kaibab-paiute-tribe/	Reservation Land Size
Havasupai Tribe	https://theofficialhavasupaitribe.com/About-Supai/about-supai.html	Reservation Land Size
	https://itcaonline.com/member-tribes/havasupai-tribe/	Reservation Population
	https://www.coconino.az.gov/2376/Dashboard-Data	COVID-19 Positive Cases; COVID-19 Deaths
	http://www.tribalwateruse.org/?page_id=189	Water Services

Tribal Data Sources		
Tribe	**Source**	**Data Categories**
Hualapai Tribe	http://hualapai-nsn.gov/about-2/	Reservation Population; Reservation Land Size
	https://www.census.gov/tribal/?aianihh=1545	Reservation Households
	http://hualapai-nsn.gov/services/public-works/	Water Services
	http://hualapai-nsn.gov/	COVID-19 Positive Cases; COVID-19 Deaths
Shivwits Band of Paiute Indian Tribe of Utah (Constituent Band of the Paiute Indian Tribe of Utah)	Tribal response to Request for Information	
	https://www.utahpaiutes.org/reservation/	Reservation Land Size
	https://www.nytimes.com/interactive/2020/us/utah-coronavirus-cases.html#county	COVID-19 Positive Cases; COVID-19 Deaths
Moapa Band of Paiute Indians	https://www.census.gov/tribal/?aianihh=2315	Reservation Population; Reservation Households
	http://www.nbmg.unr.edu/nhmpc/Approved_County_and_Tribal_Hazard_Mitigation_Plans/approved_tribal/Moapa_Band_of_Paiutes_Hazard_Mitigation_Plan_04-15-2015_Final.pdf	Reservation Land Size
	https://www.moapawater.com/	Water Services
	http://www.southernnevadahealthdistrict.org/covid-19-dashboard/	COVID-19 Positive Cases; COVID-19 Deaths
Las Vegas Tribe of Paiute Indians	https://www.census.gov/tribal/?aianihh=1915	Reservation Population; Reservation Households
	http://www.southernnevadahealthdistrict.org/covid-19-dashboard/	COVID-19 Positive Cases; COVID-19 Deaths
	https://lasvegassun.com/news/2015/jul/20/las-vegas-smallest-sovereign-nation/	Reservation Land Size
Fort Mojave Indian Tribe	https://itcaonline.com/member-tribes/fort-mojave-tribe/	Reservation Population
	https://www.census.gov/tribal/?aianihh=1235	Reservation Households
	https://www.fortmojaveindiantribe.com/about-us/	Reservation Land Size
	https://sbcovid19.com/	COVID-19 Positive Cases; COVID-19 Deaths
	https://www.usbr.gov/lc/region/programs/crbstudy/tws/docs/Ch.%205.6%20Ft.%20Mojave%20Current-Future%20Water%20Use%2012-13-2018.pdf	Water Services
Chemehuevi Indian Tribe	https://www.census.gov/tribal/?aianihh=0585	Reservation Households
	https://sbcovid19.com/	COVID-19 Positive Cases; COVID-19 Deaths
	https://www.usbr.gov/lc/region/programs/crbstudy/tws/docs/Ch.%205.7%20Chemehuevi%20Current-Future%20Water%20Use%2012-13-2018.pdf	Reservation Population; Reservation Land Size; Water Services
Colorado River Indian Tribes	https://www.crit-nsn.gov/COVID-19%20Notifications/Notification%20of%20TWO%20additional%20positive%20cases_11.6.2020.pdf	COVID-19 Positive Cases; COVID-19 Deaths
	https://www.usbr.gov/lc/region/programs/crbstudy/tws/docs/Ch.%205.8%20CRIT%20Current-Future%20Water%20Use%2012-13-2018.pdf	Reservation Population; Reservation Land Size; Water Services
Yavapai-Apache Nation	Tribal response to Request for Information	
	https://yavapai-apache.org/	Reservation Population
	https://news.yavapai-apache.org/testing-results-as-of-november-12-2020/	COVID-19 Positive Cases; COVID-19 Deaths
	https://www.census.gov/tribal/?aianihh=4708	Reservation Households
	https://itcaonline.com/member-tribes/yavapai-apache-nation/	Reservation Land Size
	https://news.yavapai-apache.org/water-rights-yavapai-apache-nation-viewpoint/	Water Services
Yavapai-Prescott Indian Tribe	https://www.ypit.com/about_ypit.htm	Reservation Population; Reservation Land Size
	https://www.census.gov/tribal/?aianihh=4710	Reservation Households
	https://www.yavapai.us/chs	COVID-19 Positive Cases; COVID-19 Deaths
Tonto Apache Tribe	https://itcaonline.com/member-tribes/tonto-apache-tribe/	Reservation Population; Reservation Land Size
	https://www.census.gov/tribal/?aianihh=4235	Reservation Households
	https://www.nytimes.com/interactive/2020/us/arizona-coronavirus-cases.html#county	COVID-19 Positive Cases; COVID-19 Deaths
White Mountain Apache Tribe	Tribal response to Request for Information	
	https://whitemountainapache.org/culture/	Reservation Land Size
	https://itcaonline.com/member-tribes/white-mountain-apache-tribe/	Reservation Population
	https://www.census.gov/tribal/?aianihh=1140	Reservation Households
	https://www.facebook.com/103417867996160/photos/a.104546831216597/188117629526183	COVID-19 Positive Cases; COVID-19 Deaths
	https://www.facebook.com/White-Mountain-Apache-Tribal-Utility-Authority-653132138634497/	Water Services
San Carlos Apache Tribe	https://itcaonline.com/member-tribes/san-carlos-apache-tribe/	Reservation Land Size
	https://www.census.gov/tribal/?aianihh=3355	Reservation Population; Reservation Households
	https://www.scahealth.org/covid-19-information-2/	COVID-19 Positive Cases; COVID-19 Deaths
Fort McDowell Yavapai Nation	https://www.fmyn.org/about-fmyn/history/	Reservation Population; Reservation Land Size
	https://www.census.gov/tribal/?aianihh=1220	Reservation Households
	https://www.facebook.com/ftmcdowell/photos/a.1837684149797802/2902696723296534/	COVID-19 Positive Cases; COVID-19 Deaths
	https://www.fmyn.org/departments/	Water Facilities
Salt River Pima-Maricopa Indian Community	https://www.srpmic-nsn.gov/covid-19/	COVID-19 Positive Cases; COVID-19 Deaths
	https://itcaonline.com/member-tribes/salt-river-pima-maricopa-indian-community/	Reservation Land Size
	https://www.census.gov/tribal/?aianihh=3340	Reservation Population; Reservation Households
	https://www.srpmic-nsn.gov/economic/site-selection/	Water Facilities

Tribal Data Sources		
Tribe	**Source**	**Data Categories**
Gila River Indian Community	https://itcaonline.com/member-tribes/gila-river-indian-community/	Reservation Land Size
	http://www.gilariver.org/index.php/departments/natural--cultural-resources	Water Access
	http://www.gilariver.org/index.php/departments/tribal-development-services	Water Services
	https://www.census.gov/tribal/?aianihh=1310	Reservation Population; Reservation Households
	https://www.facebook.com/gilariver/photos/a.224735746415/10159197682636416/	COVID-19 Positive Cases; COVID-19 Deaths
Ak-Chin Indian Community	https://www.ak-chin.nsn.us/	Reservation Population; Reservation Land Size
	https://www.census.gov/tribal/?aianihh=2130	Reservation Households
	https://www.ak-chin.nsn.us/index.php/departments/community-operations	Water Services
	https://www.nytimes.com/interactive/2020/us/arizona-coronavirus-cases.html	COVID-19 Positive Cases; COVID-19 Deaths
Quechan Indian Tribe	Tribal response to Request for Information	
	https://www.yumacountyaz.gov/home/showdocument?id=44783	COVID-19 Positive Cases; COVID-19 Deaths
	https://www.usbr.gov/lc/region/programs/crbstudy/tws/docs/Ch.%205.9%20Quechan%20Current-Future%20Water%20Use%2012-13-2018.pdf	Reservation Population; Reservation Land Size
Cocopah Indian Tribe	https://www.usbr.gov/lc/region/programs/crbstudy/tws/docs/Ch.%205.10%20Cocopah%20Current-Future%20Use%20Section%2012-13-2018.pdf	Reservation Population; Reservation Land Size; Water Services
	https://www.census.gov/tribal/?aianihh=0695	Reservation Households
	https://www.yumacountyaz.gov/home/showdocument?id=44783	COVID-19 Positive Cases; COVID-19 Deaths
Tohono O'oodham Nation	http://www.tonhc.org/wp-content/uploads/2020/10/COVID-19-Leadership-Update-37-10302020.pdf	COVID-19 Positive Cases; COVID-19 Deaths
	http://www.tonation-nsn.gov/about-tohono-oodham-nation/	Reservation Population; Reservation Land Size
	http://www.tonation-nsn.gov/natural-resources/well-maintenance/	Water Services
	http://www.tonation-nsn.gov/water-resources/	Water Services
	http://www.tonation-nsn.gov/toua/	Water Services
	www.toua.net	Water Services - website down at time of publication
Pascua Yaqui Tribe	https://covid19.pascuayaqui-nsn.gov/	COVID-19 Positive Cases; COVID-19 Deaths
	https://www.census.gov/tribal/?aianihh=2680	Reservation Population; Reservation Households
	https://www.ncai.org/tribal-vawa/for-tribes/vawa-sdvcj-implementing-tribes/pascua-yaqui-tribe	Reservation Land Size
	https://www.tucsonaz.gov/sirepub/cache/2/4k3lcxdn1j4kvqr00i4f5kgf/34964751113202009284 6203.PDF	Water Services
	https://www.tucsonaz.gov/water/residential-rates-and-monthly-charges	Water Rates
San Juan Southern Paiute	Tribal response to Request for Information	
	https://www.sanjuanpaiute-nsn.gov/about	General Information
	https://web.archive.org/web/20091228083522/http://www.itcaonline.com/tribes_sanjuan.html	General Information
	https://www.ndoh.navajo-nsn.gov/COVID-19/Data	COVID-19 Positive Cases; COVID-19 Deaths
	https://new.azwater.gov/sites/default/files/20200910_GWAICC_MEETING_TRIBES.pdf	Water Services

Appendix B

Request for Information

Water & Tribes Initiative – Universal Clean Water Access
Colorado River Basin Tribes
Request for Information

The Water & Tribes Initiative has launched the Universal Clean Water Access project to raise awareness and make tangible progress on providing access to clean and safe water to the residents of Indian reservations within the Colorado River Basin. To assist in this effort, we are seeking information about existing access to clean and safe water, barriers to providing access to clean and safe water, and the impact lack of clean and safe water access has in your Tribal community. Please answer the following questions about your reservation:

Existing Water Access

1. How many households are there on your reservation?
   _____ # of households
   _____ Don't know

2. What % of households have access to clean and safe water?
   _____ %
   _____ Don't know

3. How is water provided to households?
   _____ % with indoor plumbing connected to public water service
   _____ % hauling their own water from a community water source
   _____ % obtained from local well
   _____ % hauled water provided by third party (e.g., water tank filled by a company)
   _____ % other: _____
   _____ Don't know

4. On average, how much do Tribal members pay for water?
   $_____/month: indoor plumbing connected to public water service
   $_____/month: community water source
   $_____/month: local well
   $_____/month: third party (e.g., water tank filled by a company)
   $_____/month: other: _____
   _____ Don't know

5. Do you have water or wastewater treatment facilities? If yes, please provide the name of the division/facilities.
   _____ Yes: _____
   _____ No

Efforts to Provide Water Access

6. Has providing clean and safe water access to your community been identified as a priority by your Tribal government?
_____ Yes
_____ No

7. Please identify any efforts (past and present) to provide clean and safe water access, including the number of households targeted and cost estimates:
_____
_____
_____
_____
_____

8. What are the barriers to providing clean water access, and how significant are these barriers?

	Insignificant	Significant	Very Significant
Cost/funding			
Water rights			
Water quality/ environmental degradation			
Other legal barriers			
Infrastructure			
Tribal capacity			
Competing priorities			
Other: _____			
Other: _____			
Other: _____			

9. Aside from overcoming the barriers identified above, what else would you need to provide clean water?
_____
_____
_____
_____
_____

Impacts

10. What negative impact(s) has lack of water access had, and how significant are these impacts?

	Insignificant	Significant	Very Significant
Physical health (including dental hygiene)			
Mental health			
Childhood disease			
Life expectancy			
Education and career development			
Economic development			
Food access			
Other: _____			
Other: _____			
Other: _____			

11. How has the lack of water access impacted the effects of the COVID-19 pandemic?

_____ Inability to take recommended precautions against COVID-19
_____ Higher infection rate
_____ Higher hospitalizations
_____ Higher death rate
_____ Greater economic downturn
_____ Other: _____
_____ Don't know

Information Sources

12. Please identify what sources you used to answer the above questions:
_____
_____
_____
_____
_____

Appendix C

Colorado River Basin Tribes Identified in the Indian Health Service Sanitation Deficiency System List

	Reportable Homes Deficiency Levels				
Tribe	**1**	**2**	**3**	**4**	**5**
AK CHIN INDIAN COMM. OF PAPAGO INDIANS OF MARICOPA, AK CHIN RESERVATION, AZ	17	271	-	-	-
CHEMEHUEVI TRIBE OF THE CHEMEHUEVI RESERVATION, CA	-	122	-	-	-
CO RIVER IND. TRIBES OF THE CO RIVER IND. RESERVATION, AZ AND CA	2	1,036	-	-	-
COCOPAH TRIBE OF ARIZONA	28	155	-	-	-
FORT MOJAVE INDIAN TRIBE OF ARIZONA	19	243	-	-	-
FT. MCDOWELL MOHAVE-APACHE IND. COMM., FT MCDOWELL INDIAN RESERVATION	-	306	-	-	-
GILA RIVER PIMA MARICOPA IND. COMM. OF THE GILA RIVER INDIAN RESERVATION OF ARIZONA	27	419	-	-	-
HAVASUPAI TRIBE OF THE HAVASUPAI RESERVATION, AZ	2	-	108	-	-
HOPI TRIBE OF ARIZONA	177	1,848	250	6	215
HUALAPAI TRIBE OF THE HUALAPAI INDIAN RESERVATION, AZ	218	123	-	-	-
JICARILLA APACHE TRIBE OF THE JICARILLA APACHE INDIAN RESERVATION, NM	875	198	14	-	-
KAIBAB BAND OF PAIUTE INDIANS, KAIBAB INDIAN RESERVATION, AZ	90	-	-	-	-
MOAPA BAND OF PAIUTE INDIANS OF THE MOAPA RIVER INDIAN RESERVATION, NV	40	53	-	-	-

	Reportable Homes Deficiency Levels				
NAVAJO TRIBE OF ARIZONA, NEW MEXICO AND UTAH	18,949	17,216	3,127	1,901	1,647
PASCUA YAQUI TRIBE, AZ	54	-	-	-	-
PAUITE INDIAN TRIBE OF UTAH	12	-	-	-	-
QUECHAN TRIBE OF THE FORT YUMA INDIAN RESERVATION, CA	198	-	344	-	-
SALT RIVER PIMA-MARICOPA IND. COMM., OF THE SALT RIVER RESERVATION, AZ	427	91	-	-	-
SAN CARLOS APACHE TRIBE OF THE SAN CARLOS RESERVATION OF ARIZONA	193	416	1,734	-	-
SOUTHERN UTE TRIBE OF THE SOUTHERN UTE RESERVATION, CO	237	1	384	-	-
TOHONO O'ODHAM NATION,AZ	2,283	1,066	5	4	35
TONTO APACHE TRIBE OF ARIZONA	-	45	-	-	-
UTE INDIAN TRIBE OF THE UINTAH AND OURAY RESERVATION, UT	614	196	15	-	-
UTE MOUNTAIN TRIBE OF THE UTE MOUNTAIN RESERVATION, CO, NM, & UT	1	608	-	-	-
WHITE MOUNTAIN APACHE TRIBE OF THE FORT APACHE INDIAN RESERVATION, AZ	1,679	1,872	-	-	-
YAVAPAI-APACHE IND. COMM., AZ	103	307	-	-	-
ZUNI TRIBE OF THE ZUNI RESERVATION, NM	1,857	344	5	-	-

Snapshot as of 12/2/2020

Appendix D

List of Existing Federal Programs and Authorities

Relevant Agency Programs and Tribal Specific Funding[1]

Agency	Program	Description	Type/Amt	Eligibility	Challenges and Opportunities
Indian Health Services (IHS)	**Sanitation Facilities Program Construction (SFC)**	The SFC program is a nationwide program delivering engineering services and sanitation facilities to Tribes through the allocation of available resources to the IHS's 12 area offices.[2] Project delivery types: • Direct Service • Title I • Title V	Regular fund allocations (no grant funding)	In general terms, project requests must benefit or come from a federally recognized Tribe or government. Eligibility criteria is grouped by: • Eligible Persons • Eligible Homes • Eligible Sanitation Facilities • Eligible Services Areas may also impose additional requirements.[3]	**Challenges:** Only federally recognized Tribes are eligible for funding under the program. Projects are funded in priority according to the Sanitation Deficiency System (SDS), Housing Priority System (HPS), or other criteria. Total SFC funding is not proportionate to current needs. IHS appropriated funds for sanitation facilities construction are prohibited by law from being used to provide sanitation facilities for new homes funded with grants by the housing programs of HUD. For Title I and Title V project cost estimates need to be developed by Tribes own staff or contractors creating up-front costs that some Tribes may not be able to support. **Opportunities:** Funding is available for water, wastewater, and housing projects. Does not require matching funds.
Department of Housing and Urban Development (HUD)	**Indian Community Development Block Grant Program (ICDBG)**	The ICDBG program provides direct grants for developing Indian and Alaska Native Communities, including decent housing, a suitable living environment, and economic opportunities. Must principally benefit low-and-moderate-income persons under the criteria of 24 CFR 1003.208. The ICDBG provides two categories of grants, Single Purpose Competitive Grants and Imminent Threat. Single purpose grants are awarded on a competition basis pursuant to the terms published in an annual Notice of Funding Availability (NOFA). A set side of this funding goes to Imminent threat.	**Single purpose Grants –** Grant ceilings vary by Offices of American Native Programs (ONAPs). Up to $800,000 and with special rules for Southwest up to $7 million. Approx. $61.4 million NOFA FY 2019-2020 representing 18 and 19 carryovers. Grant ceilings increased. **IT Grants –** up to $450,000 or	**Single purpose Grants –** Eligible applicants are any Indian Tribe, band, group, or nation, including Alaska Indians, Aleuts, and Eskimos, and any Alaska Native village of the United States which is considered an eligible recipient under Title I of the Indian Self -Determination and Education Assistance Act (25 U.S.C. 450) or which had been an eligible recipient under the State and Local Fiscal Assistance Act of 1972 (31 U.S.C. 1221). **IT Grants** - Tribes and Tribal organizations may apply for IT grants if they meet the definition of such entities in the ICDBG regulations at 24 CFR §1003.5. Eligible applicants are any Indian Tribe, band, group, or nation, including Alaska Indians,	**Challenges:** Single purpose grants are highly competitive. IT grants are only for serious threats and applicants must demonstrate to HUD's satisfaction that funds cannot be made available from other Tribal or federal sources to alleviate the threat including IHBG and program income. The threat must be unique, unusual and at a minimum, affect the entire community. Grant funds cannot be used for operating costs. **Opportunities:** Does not require matching funds. See sample projects.
			$900,000 for presidentially declared disasters or FEMA disaster declarations. FY 2020 NOFA $4 million.	Aleuts, and Eskimos, and any Alaska native village of the United States which is considered an eligible recipient under Title I of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450) or which had been an eligible recipient under the State and Local Fiscal Assistance Act of 1972 (31 U.S.C. 1221).	
	Indian Housing Block Grant Program (IHBG)	The IHBG is a formula grant that provides a range of affordable housing activities on Indian reservations and Indian areas. See more details (CRS report)	Between $1 million - $5 million. 2020 NOFA – $91 million available.	Eligible activities include housing development, assistance to housing developed under the Indian Housing Program, housing services to eligible families and individuals, crime prevention and safety, and model activities that provide creative approaches to solving affordable housing problems.	**Challenges:** The annual IHBG Program is insufficient to meet most Tribes'/ Tribal Government Leaders and Tribally Designated Housing Entities' (TDHE) current affordable housing needs. Pre-application activities required (e.g., Indian housing plan). This may create up-front costs that some Tribal communities are not able to support. Census data is used for formula, which may not represent population accurately. A study was authorized in 2008 to evaluate adequacy of census and alternative data sources but that study has not been conducted. **Opportunities:** Matching requirements are not required.

[1] Similar tables have been compiled by the EPA - EFC, EPA – ITF, and HUD and are available online. The information included in this document includes most of the details contained in such tables. Shaded programs are primarily directed at Tribes.

[2] IHS Criteria Document. Chap 1, 1, Available at https://www.ihs.gov/sites/dsfc/themes/responsive2017/display_objects/documents/Criteria_March_2003.pdf

[3] Id at Chap 5, 3

Agency	Program	Description	Type/Amt	Eligibility	Challenges and Opportunities
	Tribal Housing Loan Guarantee Program Title VI	The purpose of the Title VI loan guarantee is to assist IHBG recipients (borrowers) who want to finance additional grant-eligible construction. Tribes can use a variety of funding sources in combination with Title VI financing, such as low-income housing tax credits. Title VI loans may also be used to pay development costs	Loan up to five times the annual need portion of the Tribes annual IHBG. Up to 95% of total loan amount.	Only for IHBG recipients. Demonstrate administration, managerial, and financial capacity. May be used for real property acquisition, site improvements, roads and sidewalks, construction of utilities, building conversions, demolition, financing costs, planning and project administration.	**Challenges:** Most underserved Tribes are unlikely to finance their projects though loans by private lenders. **Opportunities:** A portion of the Tribe's annual IHBG and the project's income is pledged as security to HUD in exchange for a Title VI loan guarantee. The guarantee protects the lender from a payment default by the Tribe/TDHE. The guarantee enables a lender to offer loan terms that would not generally be available to a borrower.
U.S. Environmental Protection Agency (EPA)	**Drinking Water Infrastructure Grants Tribal Set-Aside (DWIG-TSA)**	The 1996 amendments to the Safe Drinking Water Act (SWDA), established the Drinking Water State Revolving Fund (DWSRF). The DWSRF makes funds available to drinking water systems to finance infrastructure improvements. The SDWA also authorized the EPA to set aside up to 1.5% of the DWSRF for grants to improve the infrastructure of drinking	Grants. Total funding is the < of 2% or $20 million of DWSRF Appropriations. In 2019 total allotments were approx. $22 million.	Any federally recognized Tribe is eligible to receive a grant. If IHS agrees, Tribes may request that IHS receive the project funds to administer the project. The DWIG-TSA program is implemented by EPA Regional Offices in partnership with the IHS and is based on allocations from the EPA Drinking Water Infrastructure Needs Survey and Assessment: a survey and assessment of drinking water	**Challenges:** Funding amount by region is small. Provides grant funding as opposed to SRF loans. In FY20 region 9 received proposals for $22 million in funding and were allocated $7.5 million in FY20 for the program. **Opportunities:** This is a good resource for Tribes that cannot access SRF loans since this is grant funding. Grants are available for training and operator certification. In FY20, the program
		water systems that serve Tribes (SDWA §1452i). Starting in 2010, Congress increased the Tribal set-aside funds to 2%.		infrastructure need conducted every four years that includes Tribal lands, and the IHS SDS list. The needs assessments of these two programs differ.	received 52 distinct project scopes and funded 28 of those.
	Clean Water Indian Set-Aside (CWISA)	The CWISA provides funding to Indian Tribes and Alaska Native Villages for wastewater infrastructure. The CWISA program is administered in cooperation with IHS.	Grants. Total funding is the < of 2% or $30 million of DWSRF Appropriations. In 2019 total allotments were approx. $32 million	To be considered for CWISA program funding, Tribes must identify their wastewater needs to the IHS SDS. The EPA uses the IHS SDS priority lists to identify and select projects for CWISA program funding.	**Challenges:** Limited to wastewater facilities. Exceptions can be made for pre-award costs. Some laterals are eligible. Funding amount by region is small. **Opportunities:** Provides grant funding as opposed to SRF loans. The 2016 Water Infrastructure Improvements for the Nation (WIIN) Act added flexibilities enabling support of operation and maintenance (O&M) training and operator certification with DWIG funds.
	Border Water Infrastructure Program (BWIP)	Provides grant funding for the planning, design, and construction of high priority water and wastewater infrastructure projects along the U.S.- Mexico border. EPA region 6 and region 9 administer the program.	Congressional allocation. Most recent was $25 million. Funding is distributed 60% to Region 6 and 40% to Region 9.	Eligible projects are limited to a certain geographical area (62 miles – 100 km) on either side of the border.	**Notes:** This program is not a broad program available to all Tribes but is included in this document as an example of a unique model. Technical assistance benefits communities lacking the technical and managerial capacity needed to complete all pre-construction requirements and increases their opportunities to receive construction funding from other programs. Systems are also required to have an O&M reserve and are audited to ensure compliance.
	Drinking Water State Revolving Fund (DWSRF)	DWSRF program is a federal-state partnership to help ensure safe drinking water. DWSRF program funding is provided at the state level.	Total amount available and financing agreement amount varies by state. However, average capitalization grant for state $17.2 million in 2018 and average assistance from DWSRF $2.6 million.[4]	Six categories of projects are eligible to receive DWSRF assistance: treatment, transmission and distribution, storage, consolidation, and creation of new systems. Eligibility is usually determined by list or intended use plan.	**Challenges** (may apply to both DWSRF and CWSRF)**:** Some Tribes may not be able to secure sources of revenues sufficient to repay SRF loans. Must meet Davis Bacon wage requirements and US produced Iron and Steel, which may be seen as a burden. O&M or future costs are usually ineligible. Some water supply projects may not be eligible for financing. Some SRFs are better funded, managed, and leveraged so situation is state specific. However, a common issue is that many states are reluctant to fully leverage federal dollars and instead rely on allocations for capitalization. Shedding light on this issue and improving the way states manage SRF funds has been a focus of the EPA Water Infrastructure and Resiliency Center and the UNC Water Finance Center, as well as some non-profit organizations. **Opportunities:** (may apply to both DWSRF and CWSRF) Low interest rates make SRF financing an attractive option. Agencies has increased collaboration and have begun efforts to streamline certain processes such as proposing a joint preliminary engineering report.
	Clean Water State Revolving Fund (CWSRF)	The CWSRF program is a federal-state partnership that provides communities low-cost financing for a wide range of water quality infrastructure projects.	Total amount available and financing agreement amount varies by state. However, average capitalization grant for state $30.1 million in 2018 and average assistance from CWSRF $4.4 million.[5]	Municipal wastewater treatment and other eligible projects and activities. Eligibility is usually determined by list or intended use plan.	**See above**
	Water Infrastructure Finance and Innovation Act (WIFIA)	The WIFIA Act of 2014 established the WIFIA program, a federal credit program administered by the EPA for eligible water and wastewater infrastructure projects.	N/A	The entity applying for WIFIA credit assistance must be: a corporation, partnership, joint venture, trust, federal, state or local government entity, agency, or instrumentality, Tribal government or consortium of Tribal governments, state infrastructure financing authority, as defined by the Clean Water Act and the SWDA. Eligible projects include DWSRF and CWSRF eligibilities and others.	**Challenges:** Financing cannot exceed more than 49% of project costs. **Opportunities:** Eligibility is broad. Would allow for private partnerships.

[4] https://fas.org/sgp/crs/misc/RL30478.pdf

Agency	Program	Description	Type/Amt	Eligibility	Challenges and Opportunities
U.S. Army Corps of Engineers (USACE)	**S. 219**	USACE Environmental Infrastructure (EI) Program – assistance to support planning, design, and construction of drinking and wastewater infrastructure. EI assistance projects are not traditional USACE water projects, and not subject to USACE planning process (no USACE feasibility study required, but subject to the National Environmental Protection Act (NEPA)).	Most EI projects are 75% federal/25% nonfederal cost-share (some are 35/65) Program is funded through appropriations for the corps	N/A	**Challenges:** The amount of funding is limited and the non-federal match is high (between 25-35%). Although the non-federal sponsor is owner and responsible for 100% of operations, the program does not seem to provide additional assistance for these activities. According to a 2019 U.S. Government Accountability Office Report the Corps use a prioritization process but have not developed criteria to rank 219 projects.
		See additional details (CRS report)	construction account out of which Section 219 and EI projects are funded. Congress provided USACE with $77 million for EI assistance projects in FY2019 and $100 million in FY2020.		
	S. 203 WRDA	Program provides investigation funding for proposed studies for broad categories of Tribal water projects to Tribes and Alaskan Native Villages S. 203 of WRDA (2000) as amended by Section 2001 of WRDA (2007) allows USACE in cooperation with Tribes and other fed. agencies to study and determine feasibility of broad array[6] of projects that will "substantially benefit Indian Tribes"[7] and must be located primarily in Indian country. On request by a Tribe, USACE shall conduct FS on water resources development project, and may (but not required to) provide recommendation. Provided federal cost-share is not above $15,000,000,[8] USACE may carry out design of project, or separable element of project, it determines to be feasible. If cost share over $15 million, then USACE may only carry out project if Congress enacts a specific law. Consultation with DOI required regardless.	$1 million per year per Tribe; First $100,000 of recon. Phase is 100% federal; FS for watershed assessment Tribe pays 25% FS for ecosystem restoration Tribe pays 50% Tribal cost share may be in the form of 100% work in kind.	Federally recognized Tribes must show the ability to pay in order to qualify. (USACE's library did not respond to a request for a copy of USACE's Ability-To-Pay Guidance)	**Challenges:** (1) cost-share after $100,000; (2) specific to study and no funds for actual implementation; (3) Tribe must demonstrate ability to pay. **Opportunities:** (1) inclusive definition of water projects; (2) funds allocated on a per Tribe basis, so possibly could get a more robust study if multiple Tribes have an interest in a project; (3) could be coupled with other funding opportunities to eliminate planning/study costs and better position Tribes to request implementation funds; Tribes may perform cost share through 100% work in kind.
		USACE determines a non-federal interest's, including Tribe's,[9] ability to pay.			
U.S. Bureau of Reclamation (BOR)	**Native American Technical Assistance Program (TAP)**	Provides financial and technical assistance to Indian Tribes and Tribal Organizations for projects and activities that develop, manage, and protect Tribal water and related resources. Award will be made through financial assistance grants or cooperative agreements, as applicable to each project.	Up to $200,000 for two year grant per applicant, per year.	Federally recognized Indian Tribe or Tribal organization in the 17 Western States identified in the Reclamation Act of June 17, 1902 as amended and supplemented: Arizona, California, Colorado, Idaho, Kansas, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oklahoma, Oregon, South Dakota, Texas, Utah, Washington, and Wyoming.	**Challenges:** Limited funding. Usually no more than $1 million per year is available under this program. Amount is too small for larger infrastructure projects. Some projects may need to comply with NEPA, which creates additional costs.* Some feasibility studies are ineligible.* **Opportunities:** The award ceiling is ample enough to cover costs needed for certain plans and assessments as opposed to other planning grants which are smaller. Includes well development. There is no cost sharing match requirement.
	Rural Water Supply Program -Not active-	The Rural Water Supply Act of 2006 (Title I of P.L. 109-451) created the Rural Water Supply Program, a structured program for developing and recommending future rural water supply projects. Assists rural communities in the Western United States with the planning and design of projects to develop and deliver potable water supplies.	**Appraisal studies:** 100% of costs up to $200,000 and 50% of costs above that amount.	Indian Tribes, and entities created under state law with water management authority can seek financial and technical assistance to undertake appraisal investigations and feasibility studies to explore potable water supply needs and options for addressing those needs. BOR makes recommendations for funding to Congress.	**Challenges:** Program does not authorize construction. Construction requires Act of Congress. BOR makes recommendation to congress. After FY2012, BOR no longer requested funding for the program and Congress did not appropriate funds for it. The authority for the Rural Water Supply Program expired at the end of FY2016 and has not been renewed **Opportunities:** Program funds large projects moving water across long distances. Although municipal and industrial portions of most Reclamation water supply facilities require 100% repayment with interest, Congress has authorized rural water projects that receive some or all costs from the federal government on a non-reimbursable basis. Congress is currently considering legislation that would reauthorize both the Rural Water Supply Program and particular projects and studies previously considered through the expired program. See CRS Report

[5] https://fas.org/sgp/crs/misc/RL30478.pdf

[6] Projects focus on: flood damage reduction; water supply; erosion or sediment control; ecosystem restoration; water quality; watershed planning; dam safety; community infrastructure; emergency management preparedness; recreation; cultural res. Protection, and envt'l res. Mgmt..

[7] https://www.spk.usace.army.mil/Portals/12/documents/Tribal_program/Section%20203%20information_SPK.pdf

[8] House proposed in WRDA 20202 that 33 U.S.C. 2269(b)(4) amended to increase limit from $12,500,000 to $15,000,000 (https://www.congress.gov/bill/116th-congress/house-bill/7575/text#toc-HF9F64FE12DF047BFA7A6F5D54EEC0B7A)

[9] USACE, Memorandum for the Director of Civil Works re: Implementation Guidance for Section 2003(b) of WDRA (2007) (Apr. 5, 2012) (WRDA 2007 amended the definition of "non-federal interest" to include Tribes and nonprofits.) (*available at*) https://usace.contentdm.oclc.org/utils/getfile/collection/p16021coll5/id/375

Agency	Program	Description	Type/Amt	Eligibility	Challenges and Opportunities
	WaterSMART Grants	WaterSMART Grants provide cost-shared funding on a competitive basis to nonfederal partners in the implementation of water and energy conservation and efficiency projects. Three types of grant funds are provided: • Water and Energy Efficiency Grants (WEEG) • Small-Scale Water Efficiency Projects (SSWEP) • Water Marketing Strategy Grants (WMSG)	Varies: WEEG -Up to $300,000-$500,000 for two year grant or $1,000,000 - $2,000,000 for three year grant. SSWEP – up to $75,000. WMSG up to $200,000 for two year grant and $400,000 for three year grant.		**Challenges:** Cost sharing of 50 % or more of the total project costs. Not all funding from WaterSMART can be used for drinking water or wastewater infrastructure construction projects. Project eligibility for WEEG is focused on conservation and hydropower projects. Excludes projects receiving other federal assistance. **Opportunities:** Under some programs project selection scoring criteria considers whether Tribes or disadvantaged communities are benefited.
	Drought Response Program (DRP)	Provides assistance for drought contingency planning and actions that build long-term resiliency to drought. Program areas include: • Contingency Planning • Resiliency Projects • Emergency Response Actions	Up to $200,000 for drought contingency projects Up to $300,000 for drought resiliency projects 50% non-federal cost share contribution is required	**Contingency and Resiliency Projects:** States, Indian Tribes, irrigation districts, water districts, or other organizations with water or power delivery authority located in the Western United States including Arizona, California, Colorado, Hawaii, Idaho, Kansas, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oklahoma, Oregon, South Dakota, Texas, Utah, Washington, and Wyoming. In addition, applicants must also participate in a BOR technical consultation prior to submission of an application. **Emergency Response:** State or Tribe that has a current declaration of drought, or which has a drought plan on file with Congress.	**Challenges:** Competitive process. Matching requirements may be hard to meet. Tribes may not have resources to develop such plans. **Opportunities:** Historically, the program focused on providing funding for emergency actions. However, since 2015 the program has been supporting a proactive approach to prepare for and respond to drought through the funding of Drought Contingency Plans and Drought Resiliency Projects as well. In limited cases, a cost-share reduction or waiver may be granted. Also, funds received by a Tribe under the Indian Self-Determination and Education Assistance Act, P.L. 93-638, may be used to meet the cost share requirement.
	Title XVI	Helps identify and investigate opportunities to reclaim and reuse wastewater and impaired ground and surface water in the 17 Western states and Hawaii. Title XVI includes funding for the planning, design, and construction of water recycling and reuse projects in partnership with local government entities. While 2009 was the last year that new Title XVI projects were authorized, funding has continued to be available for those projects on an annual basis.	25% of the total project costs, with funding generally limited to no more than $20 million per project through an annual funding opportunity to construct these projects	Projects eligible for funding under the WIIN Act include those that have a completed Feasibility Study that has been reviewed by BOR. The findings of BOR's review must also have been transmitted to Congress for the project to be eligible.	**Challenges:** Program can create some opportunities for existing systems and reuse projects but is not designed specifically for new system infrastructure or upgrades. Funding for Title XVI programs has decreased over time. Limited eligibility. **Opportunities:** May help Tribes with resilience planning and securing water supply to reuse projects.
		In December of 2016, the WIIN Act was passed. This Act included amendments to the Title XVI authority that allowed new water reclamation and reuse projects to become eligible to compete for Title XVI Program funding without a project specific authorization.			
U.S. Department of Agriculture (USDA) Rural Development		Loans are available for clean and reliable drinking water systems, sanitary sewage disposal, sanitary solid waste disposal, and storm water drainage to households and businesses in eligible rural areas. 40 year loan term. 7 CFR Part 1780.7 and 1780.9	$30,000 or 75% of predevelopment planning costs	State and local governmental entities, private non-profit organizations, federally recognized Tribes. Towns <10,000 in areas with median household income (MHI) below the poverty line or < 80%of the statewide non-metropolitan MHI.	**Challenges:** Grants may be available but it is rare for them to be available in 100% of cases. Projects require adequate sources of revenue for repayment and need to demonstrate financial sustainability. **Opportunities:** When there are grant funds, they are combined with loans making overall cost of capital very low. Loan interest rates are also very low. Making them a good option for applicants, which cannot otherwise obtain commercial financing. This program includes 7 CFR 1777 Section 306C Water and Waste Disposal Loan and Grant Program for Tribes which provides funding to areas facing significant health risks due to a lack of access to, or use of adequate, affordable water or waste disposal and be relevant to certain Tribes. Project cap varies.
	Water/ Waste Disposal Loan Guarantee	Helps private lenders provide affordable financing to qualified borrowers to improve access to clean, reliable water and waste disposal systems for households and businesses in rural areas. Funds may be used for drinking water, sanitary sewers, solid waste disposal, and storm water disposal facilities.	90% of the loan amount	Up to a 40-year payback period based on the useful life of the facilities financed.	**Challenges:** Tribes and other underserved communities with poor credit quality are unlikely to work with private lenders given that the interest rates are usually higher than federally subsidized sources. **Opportunities:** Loan guarantees are good tools to reduce capital costs for borrowers with poor credit quality. Tribes face issues in providing traditional security to lenders because they cannot mortgage properties freely. Therefore, credit guarantees can be helpful.
	Emergency Community Water Assistance Grants	Program helps eligible communities prepare, or recover from, an emergency that threatens the availability of safe, reliable drinking water.	Water transmission line projects up to $150,000. Water source grants up to $1 million.	For events such as drought or flood, earthquake, tornado or hurricane, disease outbreak, chemical spill, leak or seepage, and other disasters. A federal emergency declaration is not required.	**Challenges:** Only applies to certain events. **Opportunities*:** Matching is not required.

Agency	Program	Description	Type/Amt	Eligibility	Challenges and Opportunities
				State and local governmental entities, nonprofit organizations, federally recognized Tribes. The area to be served must also have a median household income less-than the state's median household income for non-metropolitan areas.	
	Water and Waste Disposal Predevelopment Planning SEARCH Grants	Helps with funding to get projects construction-ready. Grants may be used to pay part of the costs of developing a complete application for USDA Rural Development Water & Waste Disposal direct loan/grant and loan guarantee programs. (See above)	$30,000 or 75% of predevelopment planning costs	N/A	**Challenges:** Requires a 25% match. Amount of funding available is very small; each state has a limited amount of funding available. However, there may be flexibility to use regular grant dollars.* Amounts may be too small to cover what engineering firms or consultants actually charge for studies. **Opportunities:** Provides assistance with feasibility studies.
U.S. Department of Commerce	**Public Works**	U.S. Economic Development Administration (EDA) solicits applications to provide investments that support construction, non-construction, planning, technical assistance, and revolving loan fund projects under EDA public works program. Grants and cooperative agreements are designed to leverage existing resources. Includes a cost sharing or match requirement. Due to high interest in the Coronavirus Aid, Relief, and Economic Security (CARES) Act Recovery Assistance, there is a high volume of applicants and prospective applicants are encouraged to contact EDA Regional Office reps. (West coast offices are in Denver, Seattle, and Austin: https://www.eda.gov/contact/)	Floor - $100,000 Ceiling - $30 million Expected to give out 3,000 awards	Indian Tribes or a consortium of Indian Tribes (Section 3 of PWEDA (42 U.S.C. SS 3122) and 13 C.F.R. SS 300.3) Accepted on ongoing basis until new Programs Notice is published, program cancelled, or funds expended.	**Challenges:** high volume of applicants **Opportunities**: lots of money available; broad scope of activities.
	Economic Adjustment Grants	EDA CARES Act making $1.467 billion available to eligible grantees in communities impacted by coronavirus. CARES Act Recovery Assistance being administered under EDA's Economic Adjustment Assistance Program.	N/A	EDD and Tribes that are current EDA partnership grant recipients. Scope of Work must be related to coronavirus impacts.	**Challenges –** limited scope related to Pandemic; EDA already awarded $4 million to Tribes in August. **Opportunities** – funds a wide variety of coronavirus-related development opportunities.
		Economic Development Districts (EDD) or Eligible Tribe may apply for funding for list of pre-approved scope-of-work elements: • Short and long-term economic development planning to develop disaster recovery/resilience plan • Funding a two-year regional disaster economic recovery coordinator • Technical assistance and capacity building • Organizational capacity support			

Other Potentially Relevant Programs

Type of Funding	Program	Description	Amt	Eligibility	Challenges and Opportunities
Tribal Community Development Financial Institutes	**Affiliated Tribes of the Northwest Indian Economic Development Corporation (ATN-EDC) Financial Services**	ATNI-EDC operates a subsidiary organization, ATNI Financial Services, that is a Certified Financial Development Institution.	Loan larger than $125,000 may be negotiated on a case-by-case basis	Loans are available to Tribal governments, enterprise, Native American entrepreneurs, and other eligible entities to develop new and/ or expand existing businesses. It is expected that the loaned funds will leverage private investment, create and retain job opportunities for the benefit of low– and moderate income persons, and result in the development of wealth in Tribal communities. The area served by the ATNI Loan Program shall be the geographic area of the ATNI-member Tribes, generally the States of Washington, Oregon, Idaho and parts of Montana, California, Nevada, and Alaska.	**Challenges:** Geographically limited to certain states not all of which are in the Basin. Interest rates may be much higher that federal program loans. **Opportunities:** Provides capital to Tribes that have poor credit quality profiles. Applications are accepted throughout the year. CDFI lending often includes other services that may benefit Tribes such as assistance with application and financial guidance.
Commercial Lenders	CoBank	CoBank works with rural water and wastewater non-for-profit systems, municipalities, and investor owned utility companies to provide interim and bridge financing, refinance of existing debt, term loans for system upgrades, and lines of credit.	N/A	N/A	**Challenges:** Loan funding only. Would require good credit quality profile. Interest rates are higher that federal funding. **Opportunities:** CoBank provides competitive interest rates among private lenders and has special programs for small disadvantaged communities. It is worth exploring if this is an option for a Tribe. CoBank is familiar with USDA loan guarantee and may provide flexible terms when this credit enhancement is available.
Community Development Financial Institutions	**Rural Community Assistance Partnership / Midwest Assistance Program / Communities Unlimited**	The Rural Community Assistance Corporation (RCAC) has programs designed specifically for Tribes. Community development low interest long- and short-term loans are available for Tribes, Tribal communities and individual Native Americans in certain regions.	N/A	Regarding financing – the RCAC loan fund provides loans to create, improve, or expand the supply of safe drinking water and waste disposal systems/facilities that serve low and moderate-income communities in the West. Projects must be located in communities of <50,000 or <10,000 for long-term USDA guaranteed loans. $50,000 for feasibility; predevelopment up to $250,000; construction up to $2 million.	**Challenges:** Limited to certain regions. Funding is not large. **Opportunities:** These programs provide technical assistance support to communities and various training programs to help Tribal needs. Contacts: Ari Neumann - aneumann@rcac.org
Bonds	**Tribal Bonds**	Tax-exempt bonds that Indian Tribal Governments can issue to finance any project or activity for which State or local governments could issue tax-exempt bonds. There are two types of tax exempt or otherwise subsidized bonds that can be issued by Indian Tribal Governments: (1) Tribal bonds under Section 7871(a) of the Internal Revenue Code (IRC) through (e), (2) Tribal economic development bonds under Section 7871(f) of IRC.	Varies by allocation. Max $2 billion in aggregate. In 2020.	Tribal Economic Development (TED) Bonds could be used to finance water treatment facilities, sewage facilities, solid waste disposal facilities, and qualified residential rental projects.	**Challenges:** Tribe may not be able to identify sources of repayment for the bond and credit quality may be low. In order to issue Tribal Bonds a Tribe must be designated as a Tribal Government by the DOI and must finance activities that are considered essential government services. **Opportunities:** Tax exemption can provide incentive to investors. Tribal Economic proceeds may be used for a broad range of activities such as water facilities.
Other	**New Market Tax Credits (NMTCs)**	NMTCs are available to Community Development Entities (CDEs), which apply for NMTC through a competitive application process under the Treasury's CDFI program.	Usually for projects costing around $5-25 million	Communities located in qualified tracts	**Challenges:** In a typical transaction, structuring is usually accomplished through an investment vehicle. Sources of funds come from the tax credit investors (25%) and other sources (75%). Other sources are usually from a lender such as a large bank, but can also include grants, community resources, or others. Some Tribes may not have access to these sources. It is limited to specific census tracts and only for certain eligible projects. **Opportunities:** CDEs have experience in the space and can provide guidance. Attracts private investment.

Appendix E
Tribal Treaties

Tribal Nation	Federal Recognition	Treaty Name	Treaty Citation	Associated Statutes/Acts of Congress/Executive Orders	Description
Ute Indian Tribe of the Uintah and Ouray Reservation	(see treaty)	Treaty between the United States of America and the Tabegauche, Muache, Capote, Weeminuche, Yampa, Grand River, and Uintah Bands of Ute Indians	15 Stat. 1619 (1868)	18 Stat. 36, ch. 136 (1874)	Ratification of the 1868 Treaty with the Ute Tribe of Colorado
				25 Stat. 157, ch. 310 (1888)	Restoring part of Uintah Reservation to public domain
				30 Stat. 941, ch.324 (1899)	Granting water rights to Tribes in Uintah Reservation
				32 Stat. 263 (1902)	Allotment of irrigable land to Tribal members
Southern Ute Tribe	(see treaty)	Treaty between the United States of America and the Tabegauche, Muache, Capote, Weeminuche, Yampa, Grand River, and Uintah Bands of Ute Indians	15 Stat. 1619 (1868)	28 Stat. 677, ch. 113 (1895)	Allotment bill from Congress finally ratifying failed 1888 Treaty
		Treaty with the Utah	9 Stat. 984	30 Stat. 76, ch.3 (1897)	Water Rights for Southern Ute Tribe
				32 Stat. 266, ch. 888 (1902)	Secretary of the Interior empowered to do irrigation projects
Ute Mountain Ute Tribe	(see treaty)	Treaty between the United States of America and the Tabegauche, Muache, Capote, Weeminuche, Yampa, Grand River, and Uintah Bands of Ute Indians	15 Stat. 1619 (1868)		
Apache Nations (Jicarrilla, Yavapai, Tonto, etc.)	(see treaty)	Treaty with the Apache, 1852	10 Stat. 979 (1852)		
		Treaty with the Comanche, Kiowa, and Apache, 1853	10 Stat. 1013 (1853)		
		Treaty between the United States of America and the Apache, Cheyenne, and Arrapahoe Tribes of Indians, 1865	14 Stat. 713 (1865)		
		Treaty between the United States of America and the Kiowa, Comanche, and Apache Tribes of Indians, 1867	15 Stat. 589 (1867)		
Navajo Nation	(see treaty)	Treaty with the Navajos	9 Stat. 947 (1849)		
		Treaty between the United States of America and the Navajo Tribe of Indians	15 Stat. 667 (1868)		
Zuni Tribe	Executive Order March 16, 1877 (see p. 79)	N/A		76 Stat. 33, Pub. L. No. 87-416 (1962)	Land conveyance to the Zuni Tribe from Congress
				117 Stat. 782, Pub. L. No. 108-34 (2003)	Zuni Indian Tribe Water Rights Settlement Act of 2003
Hopi Tribe	Executive Order, December 16, 1882 (see p. 9)	N/A		December 16, 1882 Executive Order (1 Kapplar 805)	Designating lands in Arizona for the Hopi Tribe
Paiute Indians (Kaibab, Moapa, Shivwits, Las Vegas)		N/A		43 Stat. 246, ch. 217 (1924)	Congress setting apart lands for Paiute Tribes
				August 2, 1915 Executive Order (4 Kapplar 1048)	Setting aside lands for Paiute Tribes
				March 12, 1873 Executive Order (1 Kapplar 866)	Moapa River Reserve (occupied by Kaibab, Shivwits, Chemehuevi Tribes)
Shivwits (Shebits) Band	26 Stat. 1005				
Moapa Band	Recognized upon ratification of Constitution per 48 Stat. 984				
Kaibab Band	Executive Order, June 11, 1913				
Las Vegas Band	Recognized on July 22, 1970 upon ratification of Constitution per 48 Stat. 984			(The Band's Constitutional text is not available online)	

Tribal Nation	Federal Recognition	Treaty Name	Treaty Citation	Associated Statutes/Acts of Congress/Executive Orders	Description
Havasupai Tribe	Executive Order, June 8 , 1880 (see p. 14)	N/A		Executive Order March 31, 1882 (1 Kapplar 809)	Reistating an earlier EO that established lands for the Havasupai Tribe
Hualapai Tribe	Executive Order, January 4, 1883 (see p. 9)	N/A		Executive Order January 4, 1883 (1 Kapplar 804)	Establishing lands for Hualapai Tribe
Chemehuevi Tribe	Recognized upon ratification of Constitution per 48 Stat. 984	N/A		15 Stat. 559 (1865)	Creating reservation
				Executive Order Nov. 16, 1874 (1 Kapplar 803)	Expanding reservation
				Constitution of Chemehuevi Indian Tribe	Required for federal recognition
Ak-Chin Indian Community	Executive Order, May 28, 1912	N/A		92 Stat. 409, Pub. L. No. 95-328 (1978)	Ak-Chin Indian water rights settlement act of 1978
				114 Stat. 878, Pub. L. No. 106-285 (2000)	2000 Amendments 1978 Act
Quechan Indian Tribe	Executive Order, July 6, 1883 (see p. 35)	N/A		Executive Order, July 6, 1883	Establishing the Fort Yuma Reservation
Gila River Indian Community (Pima-Maricopa)	Executive Order, August 31, 1876 (see p. 11–12)	N/A		Executive Order, August 31, 1876	Establishing the Pima/Maricopa or Gila River Reserve
Jicarilla Apache Nation	Executive Order, March 25, 1874 (see p. 76)	Articles of Convention Between the United States and the Jicarilla Apache Indians		106 Stat. 2237 (1992)	Water Rights Settlement
				Executive Order, March 25, 1874	

For More Information

The Water & Tribes Initiative was catalyzed in 2017 to enhance the capacity of Tribes to advance their needs and interests with respect to water management in the Basin, and to advance sustainable water management through collaborative problem-solving. The Initiative is guided by a broad-based Leadership Team and funded through in-kind contributions of Tribes and many other organizations as well as funding from the Babbitt Center for Land and Water Policy, the Catena Foundation, and the Walton Family Foundation. For more information, please go to http://naturalresourcespolicy.org/projects/water-tribes-colorado-river-basin.php.

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