



# Colorado River Basin Ten Tribes Partnership Tribal Water Study

## Study Report



## Mission Statements

The Department of the Interior (DOI) conserves and manages the Nation's natural resources and cultural heritage for the benefit and enjoyment of the American people, provides scientific and other information about natural resources and natural hazards to address societal challenges and create opportunities for the American people, and honors the Nation's trust responsibilities or special commitments to American Indians, Alaska Natives, and affiliated island communities to help them prosper.

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.

The mission of the Colorado River Basin Tribes Partnership is to assist in developing, protecting, and maximizing the water rights of the member Tribes. To that end, the Partnership Tribes shall:

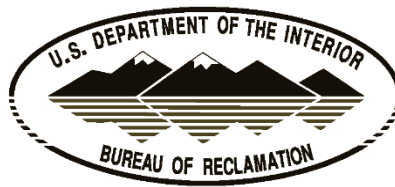
- **Consult, Collaborate, and Coordinate** with each other, the United States, and other affected governmental agencies and user groups on matters concerning Tribal water rights, including but not limited to proposed legislative, administrative, or other actions that may affect the water supplies and demands of the Colorado River Basin, its management, or the administration of Colorado River water entitlements.
- **Educate** the United States, state and local agencies, and the public as to the nature and extent of Tribal water rights and the concerns of the Partnership with respect to matters affecting such rights.

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U.S. Department of the Interior



Bureau of Reclamation



Ten Tribes Partnership





## Commissioner of Reclamation Foreword

Traveling over 1,400 miles from its headwaters in Wyoming and Colorado to the Gulf of California, the Colorado River is a lifeline to seven states within the United States, 29 Native American Reservations, and two states in northern Mexico.



Within the Colorado River Basin, ten tribes have come together to form the Ten Tribes Partnership. The Partnership Tribes<sup>1</sup> have reserved water rights, including unresolved claims, to the Colorado River and its tributaries. In many cases, these rights are senior to other uses. Recognizing the importance of furthering the understanding of tribal water (both currently and in the decades ahead), the Bureau of Reclamation and the Ten Tribes Partnership collaborated in this Study to document Partnership Tribes' water use and potential future water development to better facilitate planning and decision-making throughout the Basin.

The comprehensive, Basin-wide analysis of tribal water in the Colorado River Basin Ten Tribes Partnership Tribal Water Study builds on the 2012 Colorado River Basin Study, and allows each of the tribes to provide, from their own perspective, their views on the challenges and opportunities ahead. The Tribal Water Study strengthens a Department of the Interior commitment to address water issues facing tribes and recognizes that the Colorado River is an essential foundation for the physical, economic, and cultural sustenance of tribes in the Basin.

Today, we face a prolonged drought that represents one of the driest 20-year periods in the last 1,200 years. This Study is an important next step in understanding the Colorado River, its resources, and the demands that will likely be placed on it. In addition, this Study explores ways to provide a wide range of benefits to both Partnership Tribes and other water users. The partnerships forged and strengthened during this Study will prove to be critical as we collaboratively address the significant challenges ahead.

Brenda Burman

Commissioner, Bureau of Reclamation

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<sup>1</sup> Chemehuevi Indian Tribe, Cocopah Indian Tribe, Colorado River Indian Tribes, Fort Mojave Indian Tribe, Jicarilla Apache Nation, Navajo Nation, Quechan Indian Tribe, Southern Ute Indian Tribe, Ute Indian Tribe, Ute Mountain Ute Tribe





## Ten Tribes Partnership Foreword

The concepts and values conveyed by the well-known phrase “water is life” are neither unique to tribes, nor to this century:

In the debate leading to approval of the first congressional appropriation for irrigation of the Colorado River Indian Reservation, the delegate from the Territory of Arizona made this statement: “Irrigating canals are essential to the prosperity of these Indians. Without water, there can be no production, no life.”<sup>1</sup>



The Colorado River Basin Tribes Partnership (a.k.a. Ten Tribes Partnership) and the Bureau of Reclamation (Reclamation) initially undertook the Colorado River Basin Tribal Water Study to augment the data produced for the Colorado River Basin Supply and Demand Study of 2012. With five tribes in the Upper Basin and five tribes in the Lower Basin, and between us, holding rights to more than 2.8 million acre-feet per year of water from the Colorado River and its tributaries, the Ten Tribes Partnership was uniquely positioned to explore these issues. However, in so doing, we learned that the effort would also serve to facilitate a broader and, we hope, a better understanding of the role tribal water plays, and will play, in the Colorado River Basin over the coming decades.

In addition to producing technical information, the Tribes had other goals. First, we wanted to better understand how, at present, each of our individual water use scenarios fits into the overall scheme of Colorado River Basin management. Second, we wanted to know how future development of tribal water resources will alter Basin operations and affect other water users who are now using water to which a tribe may hold legal title, but which the title-holding tribe has not yet developed for its own use. Finally, we wanted to assess – to the extent present information allows – the role future development of tribal water rights will have on Basin operations.

Along the way, we encountered data gaps, modeling limitations, and uncertainties, but nonetheless, with the support of Reclamation, we managed to address those issues sufficiently that we now provide this Report. If there is a ‘take-away’ that was surprising, it is that, even under the most favorable of circumstances for rapid tribal water development, the amount of water that will be used by the Tribes is dramatically overshadowed by the effect of climatic conditions on the overall supply of water in the Basin. Nature is still in charge.

Challenges remain, but opportunities are in the offing. We hope this Report informs, resolves some uncertainty about how tribes perceive the future for their water uses, and establishes a baseline for discussions and development of relationships among tribes, states, the federal government, water managers, and water users throughout the Basin.

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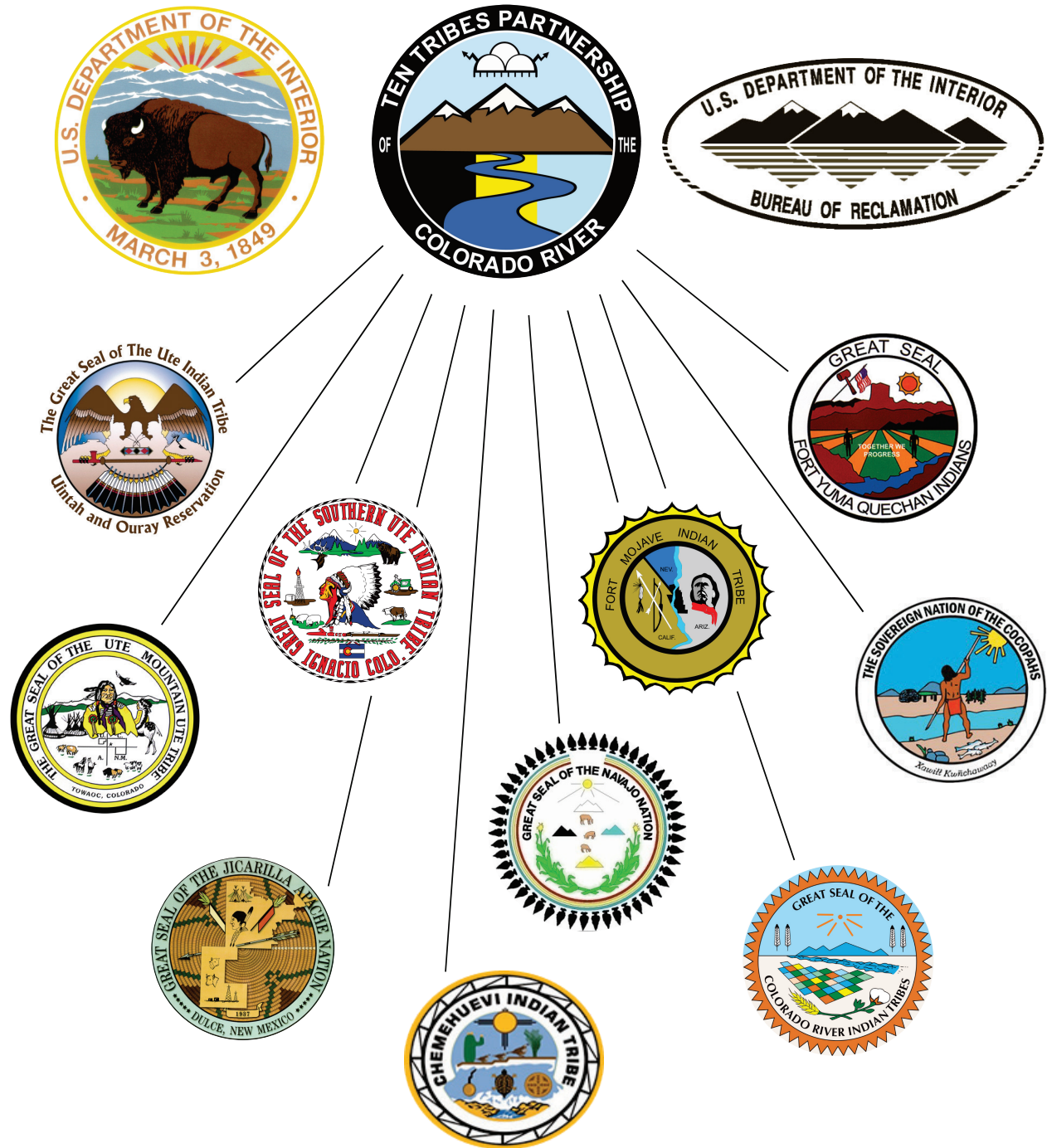
<sup>1</sup> CONG.GLOBE, 38th Cong., 2d Sess. 1321 (1865). *Arizona v. California*, 373 U.S. 546, 598-599 (1963).





# Acknowledgement

Funding, time, and expertise provided by the Department of Interior, the Bureau of Reclamation, and the member Tribes of the Ten Tribes Partnership made the Colorado River Basin Ten Tribes Partnership Tribal Water Study possible.







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**Disclaimer**

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## Acronyms and Abbreviations

ADWR	Arizona Department of Water Resources
AF	acre-foot (feet)
AFY	acre-foot (feet) per year
AG	irrigated agriculture and livestock
A-LP	Animas-La Plata
Basin	Colorado River Basin
Basin States	Colorado River Basin States
Basin Study	Colorado River Basin Water Supply and Demand Study
BIA	Bureau of Indian Affairs
cfs	cubic foot (feet) per second
CHIA	Cumulative Hydrologic Impact Assessment
CRIP	Colorado River Irrigation Project
CRIR	Colorado River Indian Reservation
CRIT	Colorado River Indian Tribes
CRSS	Colorado River Simulation System
CUP	Central Utah Project
CUPCA	Central Utah Project Completion Act
CUWCD	Central Utah Water Conservancy District
CWCB	Colorado Water Conservation Board
DCMI	domestic, commercial, municipal, and industrial
DNR	Department of Natural Resources
DOI	U.S. Department of the Interior
DWCD	Dolores Water Conservancy District
ENV	environmental, cultural, and recreational
EPA	Environmental Protection Agency
EQIP	Environmental Quality Incentives Program
ESA	U.S. Endangered Species Act
°F	degree(s) Fahrenheit

FRE	Farm and Ranch Enterprise
GCM	Global Climate Model
gpm	gallons per minute
ICS	Intentionally Created Surplus
IHS	Indian Health Service
KAF	thousand acre-feet
KAFY	thousand acre-feet per year
kWh	kilowatt-hours
LCR MSCP	Lower Colorado River Multi-Species Conservation Program
MAF	million acre-feet
MAFY	million acre-feet per year
Mexico	United Mexican States
mg/L	milligrams per liter
msl	above mean sea level
MVIC	Montezuma Valley Irrigation Company
MWD	Metropolitan Water District of Southern California
M&I	municipal and industrial
NAPI	Navajo Agricultural Products Industry
NAWMAs	Native American Water Masters Associations
NDOH	Navajo Department of Health
NDWR	Navajo Department of Water Resources
NEPA	National Environmental Policy Act
NGWSP	Navajo-Gallup Water Supply Project
NIIP	Navajo Indian Irrigation Project
NMISC	New Mexico Interstate Stream Commission
NNDA	Navajo Nation Department of Agriculture
NNEPA	Navajo Nation Environmental Protection Agency
NPS	National Park Service
NRCS	Natural Resources Conservation Service
NTUA	Navajo Tribal Utility Authority



ONF	Observed Natural Flow
O&M	operation & maintenance
Partnership	Colorado River Basin Tribes Partnership
PNM	Public Service Company of New Mexico
PPR	Present Perfected Right
PRIIP	Pine River Indian Irrigation Project
PWCC	Peabody Western Coal Company
Reclamation	Bureau of Reclamation
ROD	Record of Decision
SCADA	Supervisory Control and Data Acquisition
SCS	Soil Conservation Service
SJRBRIP	San Juan River Basin Recovery Implementation Program
TTP	Ten Tribes Partnership
TRAN	transfers, leases, and exchanges
Tribal Water Study	Colorado River Basin Ten Tribes Partnership Tribal Water Study
UCRC	Upper Colorado River Commission
UIIP	Uintah Indian Irrigation Project
USACE	U.S. Army Corps of Engineers
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey