



Cocopah Colorado River Limitrophe Habitat Restoration Project

CORPORATE WATER STEWARDSHIP CASE STUDY MAY 2024

INTRODUCTION

Over the last half century, declining flows downstream of Lake Mead have significantly degraded the riparian corridor of the Lower Colorado River. The Cocopah Indian Tribe lives in the Lower Colorado River limitrophe region where the Colorado River marks the international boundary between the United States and Mexico.

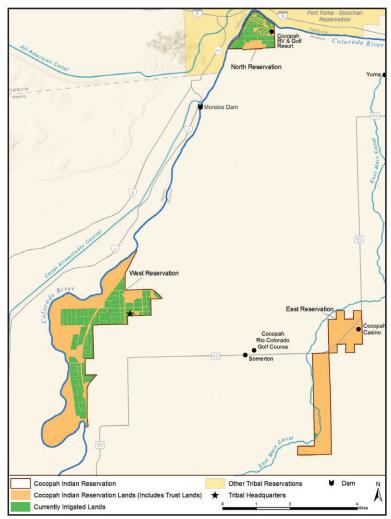
The Tribe has a rich cultural heritage rooted in their long-standing relationship with the river's natural resources. Yet, due to upstream water diversions and the impacts of climate change on the river's water supply, the river has not flowed reliably through the limitrophe for the last 50 years.

With support from the US Fish and Wildlife Service, Bonneville Environmental Foundation (BEF), and the National Fish and Wildlife Foundation, the Cocopah Tribe is developing and rerouting existing water supplies towards two sites on their reservation lands located in the floodplain.

This limitrophe habitat restoration project will support bird and other wildlife species and strengthen the Tribe's traditional connection to the river.

VOLUMETRIC WATER BENEFITS

Corporate contributions to this project were made through BEF, which enables businesses to directly fund initiatives that are in line with their own objectives for water stewardship. Corporations that have contributed to this initiative can count a portion of its achievements, such as the thousands of acre-feet (AF) of water released, towards progress on their waterrelated sustainability goals. Water-related sustainability goals are typically centered around volumetric water benefits, or the quantifiable conservation and restoration of water resources.



Cocopah Indian Reservation Map. Credit: Ten Tribes Partnership

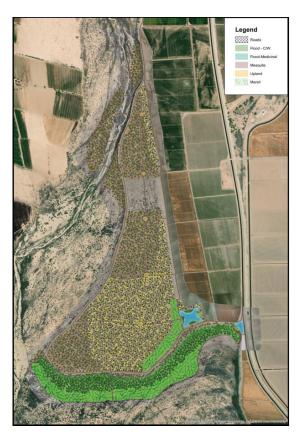
The project will deliver over 2,000 AF/year, for the first five years after each site is fully constructed, to establish the vegetation. After the first five years, the amount of irrigation to each site will decrease as deeper-rooted upland vegetation is fully established and can survive on groundwater. During this time, only the shallower-rooted cottonwoods and willows will still require active irrigation.

West Site

At the West site, the Tribe will use their Colorado River water rights to restore 390 acres of habitat. The Cocopah Tribe has rights to approximately 10,000 AF of Colorado River water every year but currently uses, on average, less than 2,000 AF/year. The Tribe will design and build a conveyance pipe to deliver some of the unused portion of their rights from a nearby irrigation canal to the West site. From 2027 to 2031, this project will deliver 2,497 AF/year to support the reestablishment of habitat. From 2032 onward, this project will deliver 2,306 AF/year to maintain the habitat.

North Site

At the North site, the Tribe will utilize its water rights to restore 41 acres of habitat on Cocopah land, creating additional aquatic, wetland, and riparian habitat. An existing stream will be rerouted to flow throughout the site via a series of constructed earthen features and ponds that will support native plant species and habitat for wildlife.



Site Design for the West Site of the Cocopah Indian Reservation. Credit: Audubon



Conceptual Site Design for the North Site of the Cocopah Indian Reservation. Credit: Audubon

CO-BENEFITS

The habitat restoration efforts are anticipated to yield significant cobenefits beyond the volumetric water enhancements. These cobenefits include the revitalization of cultural heritage and ecosystem health.

Cultural Heritage

By revitalizing native habitats, the Cocopah Tribe will have the opportunity to reinforce their traditional bonds with the river. For example, the project ensures greater availability of native vegetation that is essential for the Tribe's ceremonial practices and daily activities. This revegetation reduces the need to source these materials from outside the reservation lands.

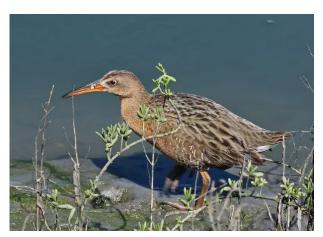
Ecosystem Health

The project will facilitate the restoration of high-quality habitats crucial for the survival of several bird species, notably the endangered, Yellow-Billed Cuckoo and Yuma Ridgway's Rail. The increase in the area and connectivity of these habitats will bolster the ecological resilience of the Lower Colorado River and its delta, offering a sanctuary for diverse wildlife species.

Additionally, at the North site, the rerouting of the existing stream will increase aquatic habitat along the riverfront. This will have a great benefit since damming of the Colorado River has greatly reduced surface waters and side channels throughout the floodplain.



Bean pods of a native screwbean mesquite tree. Screwbean mesquite trees grow along streams and are used for a range of traditional purposes. Credit: Ten Tribes Partnership



Yuma Ridgway's Rail, U.S. Fish and Wildlife Service.



Western Yellow-Billed Cuckoo, Peter Pearsall/USFWS.

TIMELINE

Construction Phase

The construction phase includes (1) building a conveyance pipe that routes from a nearby irrigation canal to the West site, and (2) building a series of earthen features and ponds that will reroute an existing stream to flow through the North site.

Establishment Phase

The establishment phase begins with the planting of the vegetation and extends for an additional four years after that. This is when the most active irrigation and maintenance is needed to ensure the successful establishment of the vegetation.

Ongoing Maintenance

After the sites are fully established, the intensity of the maintenance is expected to decline as the need for active watering is reduced for some habitat types. During this time, irrigation will continue for plants that do not have deep roots, like cottonwood and willow trees, and for wetlands and marshes. This strategic approach will facilitate the natural resilience of deeper-rooted species while ensuring the vitality of more water-dependent habitats.



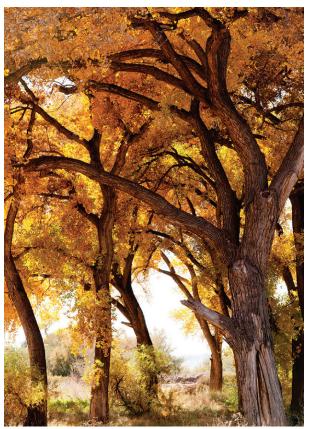
Goodding willow is a native riparian tree species that is used for a range of traditional purposes.

Credit: Ten Tribes Partnership

SUMMARY

This project began with the Tribe's vision for revitalizing the river and has now become an example of the significance of collaborative efforts in achieving water habitat restoration. The National Fish and Wildlife Foundation's America the Beautiful Challenge awarded \$5 million to the project. This project has also received \$200,000 in support from the US Fish and Wildlife Service's Tribal Wildlife grant program, with an additional \$315,000 match from corporate supporters through BEF.

From the initial year of planting, ongoing maintenance work will be imperative for the sustainability of the sites. Due to the diminished water flow below Lake Mead and a declining groundwater table, a dedicated water supply will remain essential to maintain the restoration efforts indefinitely. The Tribe is actively continuing its efforts to secure the necessary funding to carry out the restoration of each site in perpetuity. Potential collaborators and investors are encouraged to join this effort.



Native cottonwood trees grow along streams and moist areas and are used for a range of traditional purposes.

Credit: Ten Tribes Partnership

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