

Grant Application

**Voluntary Seasonal Fallowing Water Conservation Project
Quechan Indian Tribe**

Submitted to:



U.S. DEPARTMENT OF THE INTERIOR
Bureau of Reclamation
Policy and Administration
Denver, Colorado
Attn: Ms. Julie J. Hendricks

***WaterSMART: Water Marketing Strategy Grants
Funding Opportunity Announcement No. BOR-DO-19-F006***

July 31, 2019

Submitted by:

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1 TECHNICAL PROPOSAL AND EVALUATION CRITERIA

Date: July 31, 2019
Applicant: Quechan Indian Tribe
Address: Yuma, Yuma County, AZ

1.1 Executive Summary

The Quechan Indian Tribe of the Fort Yuma Reservation (Tribe) is pleased to submit this proposal to the United States Bureau of Reclamation WaterSMART Water Marketing Program. The Tribe believes that there is a clear need for it to take a prominent role in managing the water resources that sustain the culture and livelihoods of the Tribe and its members. The proposed project (Project) is expected to be completed in two years, finishing the fall of 2021. This Project involves activities to meet all the required project components outlined in the FOA. Each of these components are addressed in detail below, including the outreach plan, scoping, and development of a water marketing strategy document and final report. The proposed activity is estimated to cost \$108,178. The proposed project is located on the Yuma Project Reservation Division (YPRD), which is owned by the US Bureau of Reclamation (Reclamation) and is operated by the Bard Water District (BWD).

1.2 Background Data

The Fort Yuma Indian Reservation (Reservation) is located along the Colorado River near Yuma, Arizona. The Reservation was established by Executive Order of President Chester A. Arthur on January 9, 1884. The Reservation is approximately 45,000 acres, the majority of which is in California (see Figure 1). There are three parts of the Reservation that extend into the State of Arizona. Up to a third of the Reservation has been irrigated as agricultural land. No agricultural production is possible without irrigation in the Reservation areas. The majority of Reservation agricultural land is leased to non-Indian farmers, typically under five-year leases.

The Colorado River roughly parallels much of the eastern and southern borders of the Reservation. Flows in this reach of the River are regulated by Imperial Dam while Laguna Dam regulates sluicing flows. The Reservation is cross cut by major Colorado River distribution canals, including the All-American Canal (AAC) and the Yuma Main Canal, as well as many smaller irrigation and drainage ditches.



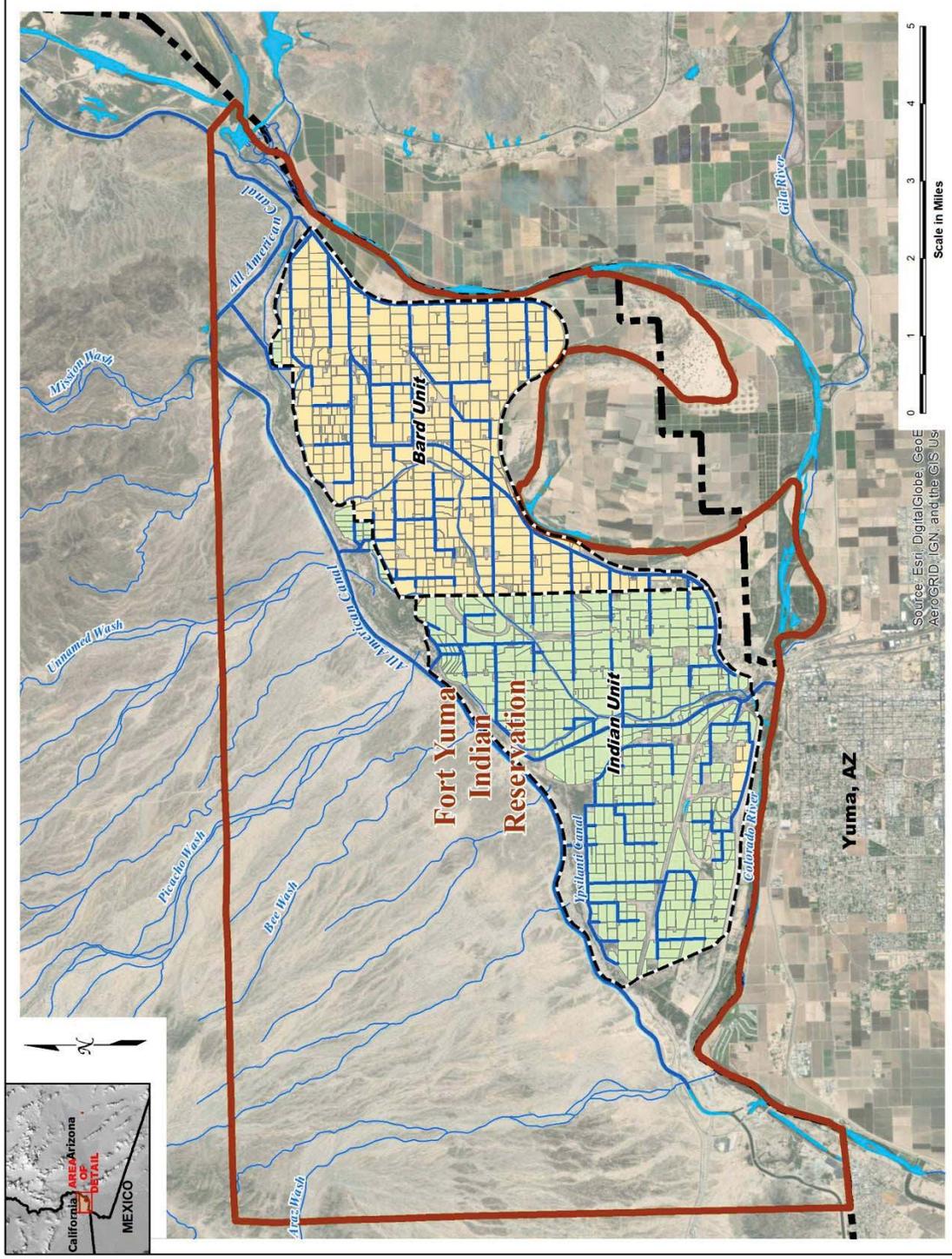


Figure 1: Fort Yuma Indian Reservation.





1.2.1 Hydrology

The Colorado River is a significant and, indeed, predominantly the only source of water for the Reservation capable of providing for irrigated agriculture. The Reservation is located in an area characterized as an arid climate with hot, dry summers, and mild winters. Table 1 presents a summary of weather data for the period 1987-2016 collected at the Arizona Meteorological Network (AZMET) climate station at Yuma, Arizona (Yuma Valley Station). Maximum air temperature averages around 106 °F in July and August, with winter minimum air temperatures averaging around 41-42 °F. Total annual grass reference evapotranspiration (*ET_o*) is estimated at 78.35 inches per year. Total annual precipitation is very low, averaging 2.55 inches per year.

Table 1. Mean monthly and annual average weather data and grass reference evapotranspiration, 1987-2016, for the Yuma Valley Station (source: AZMET, <http://ag.arizona.edu/AZMET/02.htm>).

	Max. Temp. (°F)	Min. Temp. (°F)	Precipitation (inches)	Relative Humidity (%)	Wind Speed (mph)	Solar Radiation (Langley's)	ET _o (inches)
Jan	69.50	41.98	0.39	49.78	5.60	296.43	3.37
Feb	73.49	44.97	0.28	48.76	5.53	378.13	3.85
Mar	79.57	48.77	0.28	44.43	5.53	505.35	5.69
Apr	85.40	53.35	0.13	39.55	5.92	616.70	7.14
May	93.19	59.67	0.04	36.60	5.50	682.88	8.72
Jun	102.58	66.99	0.02	30.40	5.24	707.55	9.70
Jul	105.97	76.32	0.15	37.84	5.59	643.39	10.33
Aug	105.69	77.95	0.28	41.62	5.58	589.83	9.59
Sep	101.35	72.17	0.33	39.85	5.11	523.04	7.63
Oct	90.52	60.56	0.13	43.11	4.94	425.62	5.64
Nov	77.40	48.76	0.17	46.50	5.11	320.89	3.75
Dec	67.71	41.05	0.35	51.83	5.22	268.83	2.94
Annual	87.70	57.71	2.55	42.52	5.41	496.55	78.35

Historically and currently, surface water diversions from the Colorado River comprise the primary source of irrigation water supply for the Reservation. Reclamation prepares annual water accounting reports to provide final records of diversions of water from the mainstream of the Colorado River, return flows to the mainstream, and the consumptive use of such water within the Lower Colorado River Basin States of Arizona, California, and Nevada.

Diversions for the Reservation are reported for both Arizona and California in Reclamation’s decree accounting reports (<https://www.usbr.gov/lc/region/g4000/wtracct.html>). Diversions to Reservation land served by the YPRD are made at six separate canal headings off the All American Canal (AAC). The AAC, which diverts water from the Colorado River at Imperial Dam, is roughly 80 miles long and delivers approximately 3.1 million acre-feet of water per year to nine cities and about 500,000 acres of agricultural lands. Each of the six YPRD AAC headings is equipped with a USGS gage. Other diversions to Reservation lands in California and Arizona not served by the YPRD are also reported for decree accounting purposes. Water delivery to these lands is accomplished through pumping directly out of the Colorado River or from groundwater wells. Return flows of water to the mainstem of the Colorado River are categorized





as measured and unmeasured. Measured returns have historically been recorded at the Drain 4 and Drain 8b gaging stations operated by the USGS.

1.2.2 Water Rights

The Quechan Tribe has Colorado River water rights that were finally decreed in 2006 in the United States Supreme Court’s decision in Arizona v. California, 547 U.S. 150 (2006) (commonly known as the 2006 Consolidated Decree). The Tribe’s Colorado River water rights are the lesser of: a) 77,966 acre-feet of diversions from the mainstream; or b) the quantity of mainstream water needed to supply the consumptive use for irrigation of 11,694 acres of land and satisfaction of related uses. The rights are “present perfected rights” meaning they are considered to be in existence prior to the effective date of the Boulder Canyon Project Act, and that with respect to Federal reserved water rights they are rights to use of water on Federal reserved lands under Federal law whether or not the water has historically been applied to beneficial use (Arizona v. California, 2006). The Tribe’s water rights have a priority date of January 9, 1884.

Reservation land is located in both the states of Arizona and California, and the Tribe’s water rights are accordingly partitioned for use in the two states. The Arizona and California apportionments and land areas are summarized in Table 2 below. In Arizona, the Tribe has the right to divert the lesser of 6,350 acre-feet of water from the mainstream, or, the quantity of mainstream Colorado River water needed to supply the consumptive use required for irrigation of 952 acres of land and satisfaction of related uses; and, in California, the right to divert the lesser of 71,616 acre-feet of water from the mainstream, or, the quantity of mainstream water needed to supply the consumptive use required for irrigation of 10,742 acres of land and satisfaction of related uses. Pursuant to the Consolidated Decree, a unit diversion quantity of 6.67 ac-ft/ac applies in both states.

The 2006 Consolidated Decree provided that 7,000 acre-feet per year of the Tribe’s California water rights will only become available for use starting in the year 2035. That Decree also approved the transfer of up to 13,000 acre-feet of water per year from the Tribe to the Metropolitan Water District of Southern California (MWD) under a forbearance agreement into which the Tribe and MWD had entered.

Table 2: Quechan Tribal Water Rights Summary

Water Right	Annual Allotment (ac-ft)	Area (acres)
California: 1964 decree	51,616	7,742
California: 2006 supplement	20,000	3,000
California Total	71,616	10,742
Arizona Total (2006 supplement)	6,350	952
Total	77,966	11,694

1.2.3 Current and Projected Water Uses

Water use on the Reservation, as reported by Reclamation’s Water Accounting and Verification Group for years 2011 through 2016 is summarized in Table 3Error! Reference source not found.. The average allocation of the Tribe’s water resources from years 2011 through 2016 was 77.5% for agriculture, 1.3% for domestic uses, 1.8% for wetlands, and 19.4% for forbearance to





MWD. An average of 8.0% (5,669 ac-ft/yr) of the Tribe’s water rights went unused from 2011 through 2016, the majority of which was from the Tribe’s Arizona water rights.

Table 3: Total water use on the Reservation from 2011 through 2016 in ac-ft/yr according to Reclamation’s water accounting reports.

Water Use	2016	2015	2014	2013	2012	2011	Average
Agriculture	49,641	52,429	52,131	50,460	50,627	48,436	50,621
Domestic	825	825	825	825	825	825	825
Wetlands	1,250	1,244	1,407	1,352	936	959	1,191
Total Diverted Water	64,716	66,335	66,489	65,637	65,388	63,220	65,298
Forbearance to MWD	13,000	11,837	12,126	13,000	13,000	13,000	12,661

Yuma Project Reservation Division

The YPRD serves 14,676 acres of land in California and is owned by the Reclamation and operated by BWD. Construction of the YPRD began in 1908. The overall condition of the delivery and drainage system is relatively poor due to aging infrastructure, flood damage, maintenance challenges, and other causes (USBR, 2016a).

The YPRD water conveyance system is a network of over 70 miles of pipelines, canals, and laterals. There are 4.5 miles of pipelines, 25.6 miles of lined canals/laterals, and 40 miles of unlined canals/laterals (BWD, 2015). The YPRD is divided into the 7,120-acre Bard Unit which consists of privately owned “deeded” lands, and the 7,556-acre Indian Unit which is located on the Reservation and is comprised mainly of trust lands belonging to Indian allottees. The irrigated land on the Indian Unit is leased as “Farm Units” and is administered by the US Bureau of Indian Affairs (BIA). Agricultural leases for Tribally-owned land, called “ranches”, are also administered by the BIA. Many of these ranches are served water by YPRD infrastructure. Lease contracts are typically for five years. Other Tribally-owned ranches receive water that is pumped directly from the Colorado River or from groundwater.

Water users on Tribal lands served by the YPRD are assessed fees totaling \$153.50 per acre for the delivery of five acre-feet of water per acre as of 2019. This fee is comprised of \$130 for YPRD direct O&M, \$10 for the YPRD O&M reserve fund, \$10 for the Capital Improvement Fund Component, and \$3.50 for BIA administrative fees. Additionally, water users are charged for excess water use (that is, use above five acre-feet per acre) at a rate of \$24.50 per acre-foot.

The main crops produced on Reservation lands include lettuce, spinach, crucifers, celery, kale, cilantro, wheat, sudan grass, and cotton. Double cropping is a common practice on the Reservation. Solid set sprinklers are commonly used for irrigation. On the Indian Unit, water demand is highest in April, and is generally high from March through May, July, August, October, and November (BWD, 2015).

Non-agricultural Water Use

Restoration of the riparian area now known as Yuma East Wetlands began in 2004 and was completed in 2013. Prior to restoration, the site was overrun by non-native plant species, make-shift camps, was prone to dumping, and presented numerous public safety concerns. The restored area consists of approximately 380 acres of marsh, mesquite, and cottonwood-willow land cover and spans an area owned by three separate entities: the Tribe, the City of Yuma, and the Arizona Game and Fish Department. Operation and maintenance of the site is funded by the Lower





Colorado River Multi-Species Conservation Program (70%), the Tribe (10%), the City of Yuma (10%), and the Yuma Crossing National Heritage Area Corporation (10%) (LCRMSCP, 2019).

The Tribe has committed an amount not to exceed 1,300 AFY of diverted water to the Yuma East Wetlands. The water diverted counts against the Tribe's Arizona water rights. The majority of water used to irrigate the wetlands is pumped directly from the Colorado River. Of the total 380 acres of wetlands, approximately 266 acres were irrigated in 2017 and 66% of this land is on the Reservation (LCRMSCP, 2019).

Water used for domestic, commercial, and municipal purposes is primarily pumped from groundwater. These uses are primarily for residences, municipal buildings, and the Tribe's two casinos. The two main sources are the Picacho #2 well and two wells serving the Quechan Casino Resort. Prior to 2018, Reclamation's Water Accounting and Verification Group estimated the Tribe's domestic water diversion to be 795 AFY in California and 30 AFY per year in Arizona. In 2018, Reclamation began receiving diversion records from the Tribe and expects the Tribe's California domestic diversion to be closer to 300 AFY.

Past Relationship with Reclamation

Reclamation is a federal agency and thus has federal Indian Trust responsibilities to American Indian Tribes, such as the Tribe. The Tribe has been involved with Reclamation under PL 93-638 for many years for general assistance. Additionally, Reclamation is also a water manager and collaborator in the Lower Colorado River Region. The YPRD serves water to 14,676 acres of land in California, including the Reservation, and is owned by Reclamation.

Reclamation's Technical Services Center (TSC) conducted an assessment of the YPRD delivery and drainage system that included a physical assessment and evaluation of the YPRD, an evaluation of O&M costs allocation, a canal capacity assessment, and recommendations for flow measurement upgrades. Technical memoranda were published in July 2016.

Under a service agreement with the Water Conservation Field Services Program (WCFSP) in Reclamation's Yuma Area Office, Reclamation's TSC has installed and calibrated several flow measurement structures and devices on the YPRD. This work began in 2016 and continues through 2019. Most of the sites selected for flow measurement are in laterals at jurisdictional boundaries between the Indian and Bard Units.

The Tribe's relationship with Reclamation has also been enhanced by the Tribe's enthusiastic participation as a partner of the Lower Colorado River Multi-Species Conservation Program, a program implemented by Reclamation, in the restoration of the Yuma East Wetlands.

The Tribe is cooperating with Reclamation's Water Accounting and Verification Group to share domestic water use data and generally improve the accuracy of accounting on the Reservation.

The Tribe has worked closely with Reclamation as part of the Ten Tribes Partnership to complete the Tribal Water Study.





1.2.4 Project Location

The Project is located on the Reservation, which is just north of Yuma, AZ, across the Colorado River. The River. The Project area of interest is located in Imperial County, California, at latitude 32° 45'N and longitude 104° 39'W. The map presented in

Figure 1 shows an overview of the Reservation and the project area as well as its geographic location on the Colorado River in southwest Arizona/southeast California.

1.3 Technical Project Description and Milestones

The proposed voluntary seasonal fallowing water conservation project (Project) will develop a new water market which incentivizes farmers to fallow land on a voluntary basis during the harshest and most water intensive time of the year. This Project is meant to be an open-ended agreement subject to modification based on the experience gained through its implementation. Partners for the Project are currently limited to MWD. Seasonal fallowing is for a four-month period from April 15th through August 15th. During this time period, farmers on the Reservation typically grow lower value, water intensive crops such as grains and grasses. Farmers who volunteer to participate in the program will agree not to apply water or grow crops for the entire four-month fallowing period. Water conserved through this program would be diverted by MWD through the Colorado River Aqueduct. The Tribe will be responsible for administrating program enrollment, documentation, payments, and overall management of the Project, including communication with the various stakeholders in the market. Brian Golding, Sr., is the Tribe's Director of Economic Development and will be the Project Manager. He has been the Tribe's Director of Economic Development since 2004 and is very familiar with the YPRD, its O&M, and capital improvements.

This Project is being proposed under Funding Group I. The activities detailed below will be completed within 2 years from the date of award, by August 2021.

1.3.1 Current Water Market

The Colorado River is the most important water resource in the western United States. It supplies water for more than 40 million people and nearly 5.5 million acres of farmland in the western United States and Mexico. The Colorado River Basin has endured a 20-year drought. The total system storage across the Colorado River Basin began the 2019 water year at just 47% full. As of late May 2019, Lake Powell and Lake Mead, the two largest reservoirs on the system are only 39% and 41% full. While the basin did receive above-average snowpack in 2019, drought conditions prevail (USBR, 2019a).

The 100-year record Basin-wide average long-term natural flow is about 16.4 million acre-feet of water per year (maf). Under downscaled global climate models, which assume the climate will continue to warm into the foreseeable future, the mean natural flow at Lees Ferry is projected to decrease by about nine percent by 2060. The apportioned water in the Basin exceeds this value with 7.5 maf apportioned to each the upper and lower basins, and 1.5 maf guaranteed to Mexico annually. Colorado River demand for consumptive uses is projected to range between 18.1 maf and 20.4 maf by 2060. The largest increase in projected demand is in the municipal and industrial category due to population growth – much of which will occur in southern California (USBR, 2012).





MWD is a regional wholesaler that provides water for 26 public agencies and nearly 19 million people living in six counties in southern California. To supplement local supply, the wholesaler imports water from the Feather River in northern California and from the Colorado River. Colorado River water is pumped out of Lake Havasu at the W. P. Whitsett Intake Pumping Plant into the Colorado River Aqueduct which extends 242 miles to its terminus at Lake Matthews near Riverside, CA. In 2018, MWD diverted 891,844 acre-feet of Colorado River water with a consumptive use of 889,108. MWD's Colorado River diversion varies substantially from year to year. From 2014 through 2018, the minimum diversion was 679,767 acre-feet and the maximum diversion was 1,181,597 acre-feet (USBR, 2019b). MWD states a commitment to finding new means of maintaining agricultural productivity while providing reliable supplies to the water users in southern California. The seasonal land fallowing pilot program between the Bard Unit and MWD is an example of such an effort.

MWD and the Tribe have an existing relationship in the form of a forbearance agreement. As noted above, the 2006 Consolidated Decree approved the transfer of up to 13,000 acre-feet of water per year from the Tribe to the Metropolitan Water District of Southern California (MWD) under a forbearance agreement into which the Tribe and MWD had entered. This agreement has been beneficial for both parties.

The Tribe would like to continue working with MWD and implement a seasonal land fallowing program similar to what MWD and BWD implemented for the Bard Unit in 2016 and 2017.

1.3.2 Project Component 1 – Outreach and Partnership Building

The Tribe will host a Project Kickoff meeting after notification of award is provided. Potential partners and stakeholders (including MWD and BWD), interested farmers and landowners, Tribal Members, and other entities representing environmental, agricultural, municipal, or recreation uses, and the general public will be invited to the meeting. An explanation of the existing seasonal fallowing program between the Bard Unit and MWD, the benefits of fallowing, and logistics of the Project will be presented. Through this meeting, the Tribe seeks the input of comments, ideas, and concerns from all potential stakeholders as well as feedback from farmers regarding the existing seasonal fallowing program between the Bard Unit and MWD.

Once an agreement between the Tribe and MWD is reached and a draft water marketing strategy document (described in more detail in Section 1.3.4) has been developed, this document will be distributed to interested landowners, lessees, Tribal members, and other entities representing environmental, agricultural, municipal, or recreation uses and a meeting will be held for public review and comment. The Tribe will take input from this meeting into consideration and, if necessary, will make changes to the document.

1.3.3 Project Component 2 – Scoping and Planning Activities

To understand the administrative and institutional requirements for implementing a seasonal fallowing program, research into different water marketing approaches will be conducted. This will include research into the existing seasonal fallowing program between Bard Unit and MWD as well as other existing fallowing programs.



The Tribe’s water attorney will provide guidance to the Tribe regarding the legal mechanisms required for transferring the use of the Tribe’s California water rights to MWD or other California based water users.

The Tribe will hire a technical consultant to assist in the analysis of the benefits and costs of seasonal fallowing and the feasibility of implementing such a program on Reservation lands. The consultant will consider alternative means of achieving the benefits of fallowing. Costs of fallowing, such as increased soil salinity, and methods to manage these downsides will also be considered. The consultant will identify Reservation lands that are best suited to be enrolled in a seasonal fallowing program. The consultant will also conduct an analysis of the Tribe’s general leasing practices and, on a parcel by parcel basis, an analysis of lease expiration dates, historic cropping patterns and estimated water requirements, soil conditions, desired on-farm improvements, and required capital improvements to the YPRD water delivery system.

The Tribe will hire a technical consultant to quantify the diversion and consumptive use per acre that otherwise would have been used for irrigation over the 4-month fallowing period. The consumptive use estimates will constitute the estimated conserved water per acre of fallowed land.

The Tribe will communicate and host workshop meetings with MWD and BWD to establish the various terms of the Project agreement. In representation of the Tribe, these meetings will include Tribal Council members, the Project Manager, and the Tribe’s water attorney. A draft strategy document will be developed as a result of these meetings. A process described in Section 1.3.4 that will result in a finalized strategy document will ensue.

The finalized water marketing strategy document will be shared with interested landowners and lessees with the purpose of seeking participation. The Tribe will develop a system to receive and process applications for the enrollment of land into the seasonal fallowing program. The Tribe will be responsible for ensuring the enrolled land meets the criteria set forth in the draft strategy document. The Tribe will be responsible for the submittal of all required documents regarding the enrolled land, including maps and legal descriptions, to the proper Reclamation office by the established due date.

1.3.4 Project Component 3 – Development of a Water Marketing Strategy Document

As a result of the partnership building and scoping activities described above, The Tribe will develop a water marketing strategy document. This document will detail the proposed approach for establishing a seasonal fallowing program between the Tribe and MWD. The document will include details of the implementation plan, legal framework, monitoring, and stakeholder support and input as described in Table 4:

Table 4. Water Marketing Strategy Document Content

Implementation Plan	<p>Describe how the water market/water marketing activities will be implemented following completion of the strategy including:</p> <ul style="list-style-type: none"> • How the water market will operate or how marketing activities will be conducted, including a discussion of any alternatives that were considered and support for why the recommended approach was selected; • Long-term project management and financial sustainability; • Actual or potential administrative structure and institutional components;
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	<ul style="list-style-type: none"> • Participants, water rights, and infrastructure involved; • How transactions will be tracked; • Issues to be resolved and the steps to be taken prior to implementation; • Description of any decision support tools, software databases, registries, dashboards, or models which are needed to facilitate implementation of the water marketing strategy. • Pilot Activities (if applicable): <ul style="list-style-type: none"> o Describe the types of pilot activities undertaken, how the activities were implemented and their duration; and o The outcome of all pilot activities including what was learned, and how this information informed others and was incorporated into the strategy.
Legal Framework	<p>Describe the legal framework for the water market/marketing activities, including:</p> <ul style="list-style-type: none"> • How the water marketing activity fits within state water law requirements; • Any contracts, interstate-compacts, treaties, or other legal requirements that may impact the water market or marketing activities; • Actual or potential rules and requirements that will govern the implementation of the water market/marketing activities.
Monitoring	<p>How water marketing activities will be monitored, including:</p> <ul style="list-style-type: none"> • The process by which market participants will track the physical movement of water from supplier to recipient, • How the recipient will recognize the receipt of water, and • How transactions will be monitored to avoid harm to other water users.
Stakeholder Support and Input	<p>Describe how stakeholder support and input was incorporated in the water market/water marketing activities, including:</p> <ul style="list-style-type: none"> • Who was involved in the planning process; who expressed their support for the planning process; was the project supported by entities representing environmental, agricultural, municipal, tribal, or recreation uses, and • What input from stakeholders was incorporated into the water marketing strategy?

Once a draft water marketing strategy document is complete, it will be shared with MWD and BWD for their review. After the conclusion of MWD and BWD review and the incorporation of all appropriate feedback, the Tribe will submit the water marketing strategy document to Reclamation for review which may include requirements regarding water orders, adjustments to water orders, on-farm weed and dust control, monitoring, etc. The Tribe will consider input from Reclamation and revise the document if necessary. Upon revision, the finalized document will again be shared with MWD and BWD for review. This final draft will be distributed to interested landowners, lessees, Tribal members, and other entities representing environmental, agricultural, municipal, or recreation uses, and a meeting will be held for public review and comment. Comments from this meeting will be incorporated into the final draft. This finalization of the water marketing strategy document is expected to occur in the 18th month of the Project. The Tribal Council will consider adoption of the water marketing strategy document by a Tribal resolution and implementation of the strategy will follow adoption.

The finalized water marketing strategy document will be shared with interested landowners and lessees with the purpose of seeking participation. The water marketing strategy document will be attached to the final project report.





- The analysis of the general leasing practices and, on a parcel by parcel basis, an analysis of lease expiration dates, historic cropping patterns and estimated water requirements, soil conditions, desired on-farm improvements, and required capital improvements to the YPRD water delivery system.

The Tribe will also develop a system to advertise the program to landowners and lessees, and to receive and process applications for the enrollment of land into the seasonal fallowing program. The processing of applications will involve a process to verify the enrolled land meets the requirements established by the terms of the agreement. The Tribe will also develop a system for the submittal of all required documents regarding the enrolled land, including maps and legal descriptions, to the proper Reclamation office by the established due date.

Task 3: Development of the Water Marketing Strategy Document

The Tribe will develop a draft water marketing strategy document and share it with MWD for their review and comment. MWD's feedback on the Document will be taken into consideration and the document will be revised accordingly. At that point, it will be submitted to Reclamation for their review. Reclamation's input will be considered and the Document will be revised accordingly resulting in a final version of the Document. At this point, the Document will be shared with interested stakeholders including landowners, lessees, Tribal members, and other entities representing environmental, agricultural, municipal, or recreation uses. A meeting will be held to receive input from all the above stakeholders.

Task 4: Documentation of Progress and Final Project Report

The Tribe will prepare and submit interim performance reports on a semi-annual basis. A total of three performance reports will be prepared and submitted to Reclamation at six, twelve, and eighteen month intervals after the award of funding. These progress reports will compare the actual progress to the planned milestones described above and identify if the Project is within the original cost estimate. If milestones are not being met, or the Project is running overbudget, an explanation will be provided for what led to the setbacks or excess expenditures. The performance reports will also include updates on all stakeholders' outreach activities. Any updates regarding the approach of the Project or specific staff or subcontractors to perform tasks will be included in the performance reports.

The Tribe will prepare a Final Project Report which will be submitted to Reclamation prior to two years from when funds for the Project are awarded. The Report will summarize the work undertaken to build partnerships, receive stakeholder and public input, plan and scope, and implement the Project. Any lessons learned through the planning process, including the identification of other resources, data, or tools that would have been helpful will be included in the Report. Initial findings from the Project will be explored and detailed in the Report. This will include an analysis of how Project implementation improves the long-term Colorado River water supply reliability. The Report will also explain how the Project's water marketing strategy demonstrates collaboration amongst Lower Colorado River water users. Attached to the Report will be a final version of the water marketing strategy document.



1.4 Evaluation Criteria

1.4.1 Evaluation Criterion A – Water Marketing Benefits

- *Explain whether the water market/water marketing strategy project will address a specific water supply shortfall and describe the extent of benefits to different sectors, including agricultural, municipal/industrial, tribal and environmental sectors, including:*

- *Will the water marketing strategy project address a specific water supply shortfall?*

Yes, the proposed strategy will address the water shortage problem in the Colorado River Basin area. According to USBR Colorado River Basin Water Supply and Demand Study (2012), the Colorado River provides water to about 40 million people for municipal use, irrigation water to nearly 5.5 million acres, is the lifeblood for at least 22 Native American Tribes (including Quechan), and multiple recreational areas including 11 National Parks. The Colorado River is the lifeblood of the West.

This project specifically will make conserved water from the Colorado River available to MWD’s nearly 19 million water users in Southern California.

- *What is the nature and severity of the shortfall, and which sectors are affected? Please provide support for your response.*

Over the past 20 years, the Colorado River Basin has endured drought. The total system storage across the Colorado River Basin began the 2019 water year at just 47% full. As of late May 2019, Lake Powell and Lake Mead, the two largest reservoirs on the system are only 39% and 41% full. While the basin did receive above-average snowpack in 2019, drought conditions prevail (USBR, 2019a).

These conditions affect MWD’s 19 million water users, including the cities of Los Angeles and San Diego. Additionally, Arizona, Nevada, and Mexico all count on the Colorado River to supply a large percentage of their water needs. The Colorado River is consumptively used for DDMI (domestic, commercial, municipal, and industrial) water supply and irrigation water for nearly 5.5 million acres. Additionally, the river is significant for hydropower, recreational, and environmental uses as well.

- *How and to what extent will the water market/water marketing strategy activities, once implemented, address the shortfall? Please describe the expected benefits (e.g., how water users will benefit) and provide support for your response.*

We estimate that up to 2000 acres or 3600 acre-feet (2000 acres x 1.8 AF/acre) of water may be made available to MWD. MWD provides water to nearly 19 million people in Southern California. Agriculture is a major consumptive user of water. The following program will benefit the farmers by giving them a financial and ecological incentive to rest or fallow their farms or portions of their farms for a season. Additionally, MWD water users will benefit by having a more secure water supply, especially if drought conditions persist.

- *Will the water market/water marketing strategy activities benefit multiple sectors (e.g., agricultural, municipal, tribal, and environmental) and/or types of water uses (e.g., hydropower generation, municipal, recreation, and irrigation)? If so, to what*



extent, and which sectors and water user will benefit? Provide support for your response.

Municipal: Currently, the Project only anticipates supplying conserved agricultural water to MWD. MWD is the largest municipal water provider in the United States. MWD provides water to 26 cities and water agencies, supporting the \$1 trillion economy in Southern California (MWD website).

Tribal: The Quechan Tribe also benefits from the Project and partnership with MWD. The Tribe and Tribal members own the land that will be enrolled in the voluntary fallowing program. They will receive the payments from MWD for conserved water, which will contribute to the Tribe's local economy. The non-Tribal farmers who lease Tribal land in the Indian Unit also benefit financially and through better land management of cropped lands through fallowing.

Agricultural and Environmental: Summer fallowing is often used in the Western US to prepare the soil for subsequent potential increased crop production. In addition to water savings, benefits of farm fallowing include increased soil water storage potential, maximize plant nutrient availability, minimize soil erosion, and minimize energy and economic inputs for the season (Nielsen and Calderon, 2011). Healthier soils and water conservation are benefits to the agricultural community and environmental conditions on the Reservation.

- *Explain how and to what extent the proposed water market/water marketing strategy activities will improve water supply reliability in general in the area upon implementation of the strategy (address all that apply):*
 - *reducing the likelihood of conflicts over water;*

The provision of voluntary additional water supplies to MWD, such as through a Tribal seasonal fallowing program, will reduce the amount of water MWD will have to find from another source, potentially reducing the likelihood of conflict.
 - *increasing resiliency to drought;*

Earlier this year, members of the seven states dependent on Colorado River water, the Department of the Interior, and the Bureau of Reclamation signed a drought contingency plan for the Upper and Lower Colorado River Basins. Over the past decade, severe drought has limited the amount of water in storage in major reservoirs. Southern California in particular has experienced moderate to exceptional drought since 2010 (US Drought Monitor). This voluntary conservation of water will directly increase the region's resiliency to drought conditions.
 - *sustaining agricultural communities;*

Summer fallowing is often used in the Western US to prepare the soil for subsequent potential increased crop production. In addition to water savings, benefits of farm fallowing include increased soil water storage potential, maximize plant nutrient availability, minimize soil erosion, and minimize energy and economic inputs for the season (Nielsen and Calderon, 2011). Healthier soils and water conservation are benefits to the agricultural community.



- *demonstrating a water marketing approach that is innovative and which may be applied by others; or*
Seasonal fallowing programs are practiced in Arizona and other states in the Western US. However, the regular use of fallowing program for inputting water into the market, especially during drought conditions, can be applied by other irrigation districts and water agencies. This Project will study the amount of benefit to the farmer, landowner, and water buyer (MWD) using this approach.
- *providing instream flows for species, recreation or water quality objectives.*
This Project will not apply water directly for instream flows or recreation. However, reduced applied irrigation water will benefit the system by protecting water quality due to reduced runoff from agricultural fields. Runoff can carry applied nutrients, sediments, and pesticides that degrade water quality if irrigation water is not applied efficiently.
- *Explain the extent to which the water market/water marketing strategy activities will be ready to proceed upon completion of the strategy, addressing each of the following:*
 - *Describe your plans and timeline for implementing the strategy upon its completion.*
Activities of this proposal will commence upon notification of award. An initial kickoff meeting will be held with all stakeholders at their earliest convenience, ideally within 30 days of award notification. Enrollment in the program by farmers in the Indian Unit will begin over the winter months before spring planting. All fallowing volunteers will be determined before April 1, 2021 and consolidated acreage will be reported to Reclamation. The first fallowing season will be from April 15 to August 15, 2021.
 - *Are there complex issues, including issues of law or policy, that would need to be resolved before the strategy could be implemented?*
There are no complex issues that require resolution prior to implementing the strategy. The 2006 Consolidated Decree allows for the transfer of the Tribe's water to MWD through lease fallowing programs. The Tribe's legal counsel will be involved in the project to address any potential complications that might arise if the development of the strategy document identifies any additional possible recipients beyond MWD.
 - *Explain whether previous planning, outreach and/or water marketing activities have been completed, including work on any of the three required project components. Note that links to existing work that will contribute to the strategy are requested in Section D.2.2.8. Existing Analysis Contributing to the Water Marketing Strategy (if applicable). While previous planning/water marketing is not required, these efforts may support the resolution of complex issues within the timeframe for the grant, so that implementation may follow quickly upon completion of the strategy.*
The Bard Unit of the Yuma Project Reservation Division launched a similar pilot program for seasonal fallowing from 2016-2017. Conserved agricultural water was



delivered to MWD for a negotiated price. This effort resulted in a diversion reduction of 3.6 acre-feet per acre of enrolled farmland per year.

The Tribe has already reached out to MWD for a partnership in this Project. Due to policy implications and time constraints, MWD was not able to provide a letter of support prior to this FOA’s application deadline.

Also, some farmers from the Bard Unit also farm land in the Indian Unit and will be familiar with the structure of the Project.

1.4.2 Evaluation Criterion B – Level of Stakeholder Support and Involvement

- *Identify stakeholders in the planning area who have committed to be involved in the planning process.*
 - *Describe their commitment, e.g., will they contribute funding or in-kind services or otherwise engage in the planning process?*
 - *Please explain whether the proposed project is supported by a diverse set of stakeholders (appropriate given the types of interested stakeholders within the watershed and the scale, type and complexity of the proposed strategy). For example, is the project strategy supported by entities representing environmental, agricultural, municipal, tribal, or recreation uses?*

Committed and interested stakeholders to the Project include entities representing municipal, agricultural, Tribal, and environmental interests. These include the Tribe, MWD, BWD, and the Nature Conservancy. MWD has expressed openness to negotiating a seasonal fallowing agreement with the Tribe. BWD supports this project and stands ready to collaborate with the Tribe. The Nature Conservancy supports the project and its efforts to help address the supply/demand imbalance in the system.

Documentation can include letters from stakeholders committing to be involved in the planning process (see Section D.2.2.9. Letters of Support); such letters should explain what their specific interest is and how they plan to participate.

- *Describe stakeholders in the planning area who have expressed their support for the planning process, whether or not they have committed to participate. Support can include letters of support from stakeholders or a description of feedback from interested stakeholders; such letters should identify the stakeholder’s specific interest.*
 Letters of support for the Project have been received from BWD and The Nature Conservancy. These can be found in Section D.2.2.9. MWD was not able to provide a letter of support due to the short notice given.
- *Is there opposition to the proposed strategy? If so, describe the opposition and explain how it will be addressed. Opposition will not necessarily result in fewer points.*
 The Tribe is not aware of any opposition to the strategy.
- *Do any separate planning efforts express support for the proposed water market/water marketing activities? Or, will the proposed water marketing strategy complement other*



ongoing or recent planning efforts within the area? Other relevant planning efforts can include:

The Tribe hired NRCE, Inc. to conduct an analysis and assess the BIA leasing program of the Tribe's agricultural land. The purpose of this work is to look for ways to maximize the benefits of the Tribe's water rights for the Reservation lands and for the Tribe as a whole. This work will allow for the informed selection of leased agricultural land for enrollment in the voluntary seasonal fallowing program. This analysis and assessment is current and ongoing. The contractual work task proposed in this project, Analysis of Seasonal Fallowing Feasibility and Prioritization for Specific Parcels, is a portion of the existing scope of work with NRCE. The project would provide funding for the portion of the scope of work directly related to the prioritization of specific agricultural lands for fallowing agreements.

An Agricultural Resource Management Plan (ARMP) is currently being developed for the Tribe by the BIA Fort Yuma Agency's subcontractor, Ecosystems Management Inc (EMI). The Tribe is working with EMI to ensure that the ARMP includes details regarding the existing BIA leasing program and the Tribe's lease management goals which include the implementation of voluntary lease-fallowing agreements.

In 2017, the Tribe hired NRCE Inc. to conduct an assessment of the Tribe's water resources which included an assessment of the USBR water accounting methods for the Tribe's diversions and consumptive use. This process resulted in an improved relationship with the Tribe and USBR water accounting personnel and direct lines of frequent communication that serve to ensure the Tribe forbears the full 13,000 acre-feet to MWD each year. The Tribe's improved understanding of how USBR accounts for delivered and non-delivered portions of the Tribe's water rights is relevant to how the water conserved through a fallowing program can be accurately accounted for and delivered to MWD.

- *Please describe any relevant planning efforts, including who is undertaking these efforts and whether they support or are complemented by the proposed water marketing strategy. Explain how the proposed water marketing strategy will avoid duplication or complication of other ongoing planning efforts.*

The existing efforts to analyze and assess the agricultural land leasing practices through the work being done by NRCE Inc. and EMI, as well as the work to prioritize agricultural lands to be enrolled in a seasonal land fallowing program, directly support the proposed water marketing strategy as they will allow the Tribe to make informed decision when participating in this proposed project. The Tribe has a long history of effective cooperation and coordination with MWD, and the two have partnered successfully on the existing forbearance agreement. The proposed water marketing strategy builds on that without duplicating or conflicting with it.

- *Describe what efforts that you will undertake to ensure participation by a diverse array of stakeholders in developing the water marketing strategy. If specific stakeholders have not yet been identified, or if some sectors are not yet represented, explain how you will accomplish this in the first few months after an award. Support can include a description of key stakeholder interests in the planning area and what efforts that you will undertake to engage them in the planning process, including outreach to stakeholders or collaborating with other groups or partners.*



Potential partners and stakeholders including interested farmers and landowners, Tribal Members, entities representing environmental, agricultural, municipal, or recreational interests, and the general public will be invited to the Project kickoff meeting as well as subsequent meetings to present the Water Marketing Strategy Document. The Project Manager, the Tribe's Water Counsel, and other of the Tribe's technical consultants will brainstorm potential stakeholders to invite to these meetings.

1.4.3 Evaluation Criterion C – Ability to Meet Program Requirements

- *Describe how the three required project components of a water marketing strategy grant will be addressed within the required timeframe. Please include an estimated project schedule that shows the stages and duration of the proposed work including major tasks, milestones, and dates. If prior planning work will be relied on to meet any of the required project components, please explain this and describe the work that will be relied on. Your response should demonstrate your understanding of the tasks required to address the required project components of a water marketing strategy grant. Note: the budget proposal will also be considered under this sub-criterion (e.g., whether the budget is reasonably detailed and appropriate for the work proposed).*

The following sections are repeated in the technical proposal Section 1.3 above.

Component 1: Outreach and Partnership Building

The outreach to potential stakeholders will last the initial 15 months of the Project. This will include a project kickoff meeting as well as a public review and comment meeting once a draft water marketing strategy document is developed and shared with stakeholders. Potential partners and stakeholders (including MWD), interested farmers and landowners, Tribal Members, entities representing environmental, agricultural, municipal, or recreational interests, and the general public will be invited to the meetings. During this time period the Tribe and MWD will be augmenting their existing relationship through the development of a new partnership for the implementation of a seasonal fallowing program.

Component 2: Scoping and Planning Activities

At the time awards are funded, the Tribe and MWD will immediately begin scoping and planning activities related to the implementation of the Project. These scoping and planning activities are projected to take place during the initial 15 months of the Project. The Tribe will conduct research into existing seasonal fallowing programs. The Tribe's water attorney will provide guidance on the legal mechanisms required for transferring the use of the Tribe's California water rights to MWD or other California-based water users. Meetings, email, and phone correspondence between the Tribe and MWD representatives will take place to discuss/negotiate the terms of the seasonal fallowing program agreement. Tribal representatives included in these meetings and correspondence will include the Project Manager, members of the Tribal Council and the Tribe's water attorney. The planning and scoping activities include all technical work required for the implementation of the Project. The Tribe plans to subcontract the following technical tasks to NRCE, Inc., an engineering firm with over 30 years of experience and a long history of working with the Tribe:

- The quantification of the diversion and consumptive use per acre that otherwise would be used during the four-month fallowing program; and,





Brian Golding, Sr., is the Tribe’s Director of Economic Development and will be the Project Manager. He has been the Tribe’s Director of Economic Development since 2004 and is very familiar with the YPRD, its O&M, and capital improvements.

If pilot activities are to be a part of the project, please include the following:

- *Describe any permits or approvals that will be required, along with the process for obtaining such permits or approvals.*
A Tribal Council resolution will be required to enter into an official agreement with MWD for water purchasing.
- *Identify and describe any engineering or design work performed specifically, in support of the proposed pilot activities.*
Water resources and agricultural engineering firm NRCE will be contracted to model water requirements and water savings for the Indian Unit, as well as for selection of parcels for fallowing.
- *Describe how the environmental compliance estimate was developed. Has the compliance cost been discussed with the local Reclamation office?*
This Project does not anticipate additional costs for environmental compliance. Reclamation’s environmental requirements for fallowing will be placed on the farmer of the fallowed lands, and compensation for any required environmental activities will be factored into the price of water.

1.4.4 Evaluation Criterion D – Department of the Interior Priorities

The Project supports the Department of the Interior’s following priorities as listed in the FOA:

1. *Creating a conservation stewardship legacy second only to Teddy Roosevelt*
 - a. *Utilize science to identify best practices to manage land and water resources and adapt to changes in the environment;*

As the environment changes and drought conditions persist, water conservation will be imperative. This project will pilot a seasonal fallowing program and monitor water savings, soil conditions, and enter into a new water market strategy to provide water to non-agricultural water users without losing agricultural production in the long run. Keeping the land productive and supplying a growing population with water are priorities for the Tribe.

2. *Restoring trust with local communities*
 - a. *Be a better neighbor with those closest to our resources by improving dialogue and relationships with persons and entities bordering our lands;*

The Reservation sits on the borders of Arizona, California, and Mexico. The Lower Colorado River supplies water to each of these entities. Finding better ways to communicate and share water resources for multiple uses is a priority of this Project.

- b. *Expand the lines of communication with Governors, state natural resource offices, Fish and Wildlife offices, water authorities, county commissioners, Tribes, and local communities.*





As part of the Outreach Project Component, potential partners and stakeholders (including MWD and BWD), interested farmers and landowners, Tribal Members, and other entities representing environmental, agricultural, municipal, or recreation uses, and the general public will be invited to the meeting. Using a cooperative approach, opinions and comments from all of these representative groups will be incorporated into the water market strategy document.

3. *Modernizing our infrastructure*

- a. *Remove impediments to infrastructure development and facilitate private sector efforts to construct infrastructure projects serving American needs;*

An impediment to infrastructure upkeep and improvement is timing. It is hard to line channels or undertake other infrastructure replacement or improvement projects when water must be in the channels for delivery. During fallowing, these infrastructure updates and capital improvement projects may be undertaken.



2 PROJECT BUDGET

2.1 Funding Plan

The Quechan Indian Tribe requests a federal funding match of \$54,089. The Tribe is committed to contributing \$54,089 to the Project as a monetary contribution from the Tribe. No in-kind contributions or costs will be incurred before the start of the project. There is no other funding received from other Federal partners, and there are no other pending funding requests for this project.

Funding Sources	Funding Amount
Non-Federal Entities	
1. Quechan Indian Tribe	\$54,089
Non-Federal Subtotal	\$54,089
Other Federal Entities	
1. Other Federal Subtotal	\$0.00
Other Federal Subtotal	\$0.00
Requested Reclamation Funding	\$54,089
Total Project Funding	\$108,178

2.2 Budget Proposal

Budget Item Description	Computation		Quantity Type (hours/days)	Total Cost
	\$/Unit	Quantity		
Salaries and Wages				
Brian Golding, Sr. President	39.72	280	Hours	\$11,122
Vice President	37.4	36	Hours	\$1,346
Tribal Council	36.44	36	Hours	\$1,312
Clerical	23.71	180	Hours	\$4,268
	12.51	176	Hours	\$2,202
Fringe Benefits				
Brian Golding, Sr. President	10.67	280	Hours	\$2,988
Vice President	10.9	36	Hours	\$392
Tribal Council	10.76	36	Hours	\$387
Assistant Planner	8.98	180	Hours	\$1,616
	7.23	176	Hours	\$1,272
Supply Costs				
Office supplies	\$250	1	EA	\$250
Contractual				
NRCE: Analysis of Diversion and Consumptive Use	\$13,271	1	EA	\$13,271





NRCE: Analysis of Seasonal Fallowing Feasibility and Prioritization for Specific Parcels	\$28,129	1	EA	\$28,129
Jay Weiner	\$27,100	1	EA	\$27,100
Bard Water District	\$1,746	1	EA	\$1,746
USBR YAO: NEPA CEC	\$1,000	1	EA	\$1,000
Total Direct Costs				\$98,402
Indirect Costs - 36% of non-contractual expenses				\$9,776
Total Estimated Project Costs				\$108,178

2.3 Budget Narrative

2.3.1 Direct and Indirect Costs

Brian Golding, Sr., the Tribe’s Director of Economic Development, will be Project Manager. Other Tribal employees included in this proposal include the members of the Tribal Council, and the Assistant Planner in the Office of Economic Development. Labor expenses were included to cover the time necessary for outreach and partnership building, scoping and planning activities, the development of a water marketing strategy document, the documentation of progress, and the development of a final project report.

An indirect cost of 36% is applied to all non-contractual costs which includes wages and fringe benefits.

2.3.2 Fringe Benefits

Project funds will be used to support the following fringe benefits for Tribal employees:

- FICA: 6.6% of hourly wage
- SUTA: 2.45% of hourly wage for Tribal Council and 1.05% of hourly wage for Project Manager and Assistant Planner
- Health Insurance: \$5.64 / hour
- 401(k): 5% of hourly wage

2.3.3 Travel

All meetings will be held on the Reservation. There are no travel expenses for Tribal employees.

2.3.4 Equipment

None.

2.3.5 Materials and Supplies

None.





2.3.6 Contractual

2.3.6.1 *Analysis of Diversion and Consumptive Use*

The Tribe plans to subcontract NRCE, Inc., an engineering firm with over 30 years of experience and a long history of working with the Tribe, to quantify the diversion and consumptive use per acre that otherwise would have been used for irrigation over the 4-month following period. This will include an analysis of cropping patterns, crop water requirements, and on-farm and conveyance efficiencies on Reservation agricultural land. A cost estimate of \$13,271 for this work was developed and submitted by NRCE. The table set forth in Appendix A is NRCE's budget using 2019 rates.

2.3.6.2 *Analysis of Seasonal Fallowing Feasibility and Prioritization for Specific Parcels*

The Tribe plans to subcontract NRCE, Inc. to assist in identifying Reservation lands that are best suited to be enrolled in a seasonal fallowing program. This will include an analysis of the Tribe's general leasing practices and, on a parcel by parcel basis, an analysis of lease expiration dates, historic cropping patterns and estimated water requirements, soil conditions, desired on-farm improvements, and required capital improvements to the YPRD water delivery system. A cost estimate of \$27,117 for this work was developed and submitted by NRCE. The table set forth in Appendix A is NRCE's budget using 2019 rates.

2.3.6.3 *Tribe's Water Legal Counsel*

Jay Weiner, Attorney at Law with Rosette, LLP, will be the Tribe's legal counsel for the Project. This will include work in all four of the Project tasks. Mr. Weiner will provide legal guidance to the Tribe while building water marketing partnerships and through scoping and planning activities. He will review the various drafts and changes made to the water marketing strategy document and he will review the Final Project Report. These costs were estimated as 176 hours at an hourly billing rate of \$225 and travel expenses for 2 trips estimated at \$1,400 each.

2.3.6.4 *Bard Water District*

Expenses for Ron Derma, General Manager of BWD since 1989, were included to act as a representative for the BWD in the partnership building activities, scoping and planning activities, and the review of the water marketing strategy document. These costs were estimated as 24 hours at a labor rate of \$48.83 with fringe benefits equal to 49% of the labor rate.

2.3.7 Environmental and Regulatory Compliance Costs

Environmental and regulatory compliance costs for weed and dust mitigation will be built into the water rates.

2.3.8 Indirect Costs

An indirect cost of 36% was applied to wages and fringe benefits of all Tribal employees, consistent with the Tribe's CY 2018 Indirect Cost Rate Agreement, as approved by the U.S. Department of the Interior's Interior Business Center. This is meant to cover overhead expenses.

2.3.9 Total Costs

The total cost estimate of this project is be \$108,178





2.4 Budget Form

The completed SF-424D, Budget Information –Construction Programs will be submitted with this technical proposal on grants.gov website.



3 ENVIRONMENTAL AND CULTURAL RESOURCES COMPLIANCE

3.1 Environmental and Cultural Resources

- *Will the proposed project impact the surrounding environment (e.g., soil [dust], air, water [quality and quantity], animal habitat)? Please briefly describe all earth-disturbing work and any work that will affect the air, water, or animal habitat in the project area. Please also explain the impacts of such work on the surrounding environment and any steps that could be taken to minimize the impacts.*

As part of the seasonal fallowing agreement, lessees enrolled in the seasonal fallowing program will be responsible for weed and dust control to limit any adverse impacts on soil and air quality from land fallowing.

- *Are you aware of any species listed or proposed to be listed as a Federal threatened or endangered species, or designated critical habitat in the project area? If so, would they be affected by any activities associated with the proposed project?*

According to the U.S. Fish and Wildlife Service (FWS) IPAC tool there is only one threatened or endangered species that are potentially affected by activities in the Project area. However, the agricultural land on the Reservation that would be enrolled in the seasonal fallowing program is outside the final critical habitat designated by FWS for the Yuma Clapper Rail.

- *Are there wetlands or other surface waters inside the project boundaries that potentially fall under CWA jurisdiction as “Waters of the United States?” If so, please describe and estimate any impacts the proposed project may have.*

No.

- *When was the water delivery system constructed?*

Construction of the YPRD began in 1908.

- *Will the proposed project result in any modification of or effects to, individual features of an irrigation system (e.g., headgates, canals, or flumes)? If so, state when those features were constructed and describe the nature and timing of any extensive alterations or modifications to those features completed previously.*

The proposed project will not directly result in any modification or effects to features of the irrigation system.

- *Are any buildings, structures, or features in the irrigation district listed or eligible for listing on the National Register of Historic Places? A cultural resources specialist at your local Reclamation office or the State Historic Preservation Office can assist in answering this question.*





No.

- *Are there any known archeological sites in the proposed project area?*

No.

- *Will the proposed project have a disproportionately high and adverse effect on low income or minority populations?*

No, indeed quite the contrary given the benefit it will provide the Tribe and its members.

- *Will the proposed project limit access to and ceremonial use of Indian sacred sites or result in other impacts on tribal lands?*

No.

- *Will the proposed project contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area?*

No. The lessees who enroll land in the seasonal fallowing project will be responsible for weed control on fallowed land.

3.2 Federal Environmental and Cultural Resources Laws

3.2.1 National Environmental Policy Act

The Tribe reached out to Reclamation’s Yuma Area Office (YAO) requesting guidance regarding NEPA compliance. According to personnel at the Yuma Area Office, for fallowing programs, NEPA compliance would be required in the form of a Categorical Exclusion Checklist (CEC). A total of \$1,000 is budgeted to provide a CEC which will be issued by YAO’s Environmental Planning and Compliance Group.

3.2.2 National Historic Preservation Act

No negative effects to historic properties are anticipated due to the implementation of the proposed project.

3.2.3 Endangered Species Act

Considering that the proposed project will not expand on the system’s existing footprint, no aspect of the proposed activities will affect an endangered or threatened species.

4 REQUIRED PERMITS OR APPROVALS

Letters of Support

Letters of support/partnership are attached in Appendix A.

5 OFFICIAL RESOLUTION





The official tribal council resolution of the tribal governing body pertaining to this WaterSMART grant is currently under review. An enacted resolution will be provided to Reclamation, per the terms of the funding opportunity, within 30 days of the application deadline.

6 UNIQUE IDENTIFIER

The Fort Yuma Quechan Indian Tribe is currently registered in the System for Award Management (SAM), and will maintain an active registration in SAM. The organizational DUNS number for the Tribe is 073364358.



REFERENCES

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APPENDIX A: COST ESTIMATES





Technical Analyses Budget

Staff Title	Hourly Rate	Task 1		Task 2		Totals	
		Analysis of Diversion and Consumptive Use During 4-Month Following Period		Analysis of Seasonal Fallowing Benefits, Feasibility, and Prioritization for Specific Land Parcels			
		Hours	Cost	Hours	Cost	Hours	Cost
Supervising Senior	\$250.00	2	\$500	2	\$500	4	1,000
Associate Engineer II	\$135.00	32	\$4,320	96	\$12,960	128	17,280
Assistant Engineer I	\$110.00	32	\$3,520	48	\$5,280	80	8,800
Engineering Aide II	\$85.00	32	\$2,720	56	\$4,760	88	7,480
Clerical/Administrative	\$60.00	8	\$480	16	\$960	24	1,440
Total Labor		106	\$11,540	218	\$24,460	324	36,000
<i>Expenses</i>			<i>\$1,731</i>		<i>\$3,669</i>		<i>5,400</i>
Task Totals			\$13,271		\$28,129		41,400

