

# WaterSMART Drought Response Program: Drought Resilience Projects for Fiscal Years 2020 and 2021

Funding Opportunity Announcement No. BOR-DO-F002



## *Local Water Supply Restoration Granular Activated Carbon Treatment Facility*

Inland Empire Utilities Agency  
6075 Kimball Avenue  
Chino, CA 91708

Project Manager: Jesse Pompa  
E-mail: [jpompa@ieua.org](mailto:jpompa@ieua.org)  
Telephone Number: (909) 993-1545

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## Executive Summary

**Date:** October 16, 2019

**Applicant Name:** Inland Empire Utility Agency

**City, County, and State** Chino, San Bernardino County, California

Inland Empire Utilities Agency (IEUA), on behalf of the Chino Basin Desalter Authority (CDA), is seeking grant funding for the implementation of the Local Water Supply Restoration Granular Activated Carbon (GAC) Treatment Facility (Project). The Project consists of the construction of an above-ground GAC system that will treat groundwater from four existing Chino Groundwater Basin (Chino Basin, Basin) wells [REDACTED]. Currently, those wells are out of service due to local groundwater contamination by volatile organic compounds (VOCs), particularly trichloroethene (TCE) and 1,2,3-trichloropropane (1,2,3-TCP). The Project consists of the construction of a GAC system, dedicated to treating the [REDACTED] wells. The system will consist of a set of primary and secondary GAC vessels in series, installed on a concrete pad at the [REDACTED] site. The Project will enable treatment of the contaminated groundwater from those wells to allow production of up to 1,452 acre-feet per year (AFY) of potable supplies, thereby increasing local water supply availability by that same amount. As such, the Project improves local water supply reliability to CDA and in turn to all its member agencies collectively across Riverside and San Bernardino counties.

By treating the degraded groundwater in the Chino Basin to a level that meets regulatory requirements for drinking water, the Project will meet the primary goal of the FOA by permanently increasing the reliability of the Chino Basin's water supply and improving regional water security and drought resiliency. The Project duration is estimated to be 19 months following the grant award (May 2020), with completion in December 2021. Construction is anticipated to begin in November 2020 and be completed by September 2021. The project is not located on a federal facility.

## Background Data

Inland Empire Utilities Agency (IEUA/Agency) is a municipal water district, regional wastewater treatment agency and wholesale distributor of imported water. The Agency is responsible for serving approximately 875,000 people over 242 square miles in western San Bernardino County, California. Water supplies in the region are from five water sources: Imported water from the California State Water Project (SWP) through the Metropolitan Water District of Southern California (MWD), groundwater, recycled water, surface water and purchases from other agencies. Imported water is distributed to IEUA member agencies, which are retail agencies, who then convey the water through their own distribution systems to the end users. IEUA also produces Title 22-compliant recycled water from the wastewater that it treats at four treatment plants. The recycled water can be distributed to end users in its service area, spread in groundwater recharge basins to replenish the Chino Basin, or discharged to the Santa Ana River.

The Groundwater supplies are from the Chino Basin, one of the largest groundwater basins in Southern California with an estimated 5,000,000 acre-feet (AF) of groundwater and 1,000,000 AF of unused basin storage capacity. The Chino Basin consists of approximately 220 square miles, where 80 percent of the basin lies within San Bernardino County, 15 percent within Riverside

County, and 5 percent within Los Angeles County. Due to its sprawling geographical area that extends across multiple jurisdictions, and because groundwater from the Basin is the principal water supply for 20 municipal agencies and approximately 400 agricultural and dairy operations, the Chino Basin serves as an integral part of the regional and statewide water supply system. The Chino Basin has a rapidly growing population. In addition, the area has also been subjected to numerous years of drought and the effects of climate change in the recent past. Consequently, the demand for water from the Chino Basin is expected to continue to rise. The Chino Basin will be crucial to meeting future water demands.

The Chino Basin Desalter Authority (CDA) is a Joint Exercise of Powers of Authority (JPA) formed to manage the production, treatment, and distribution of highly treated potable water to cities and water agencies throughout its service area. CDA desalinates groundwater from the Chino Basin and produces 35,200 AFY of high-quality water that is delivered to the municipal water supply systems of its Member Agencies: Cities of Chino, Chino Hills, Norco and Ontario; Jurupa Community Services District; Western Municipal Water District; and Santa Ana River Water Company. IEUA is also a CDA member agency but does not receive water delivery. The next available increment of water available to CDA member agencies in the Chino Basin is imported water purchased from MWD. In the San Bernardino and Riverside area, approximately 20 percent of imported water is sourced from the federal Colorado River Project and the remainder from the California State Water Project, also a federal project. The more local water that CDA can supply to the region, the less member agencies are dependent on MWD imported water supplies.

Production and storage rights in the Chino Basin are defined in the Stipulated Judgment (Judgment), issued in 1978 (Chino Basin Municipal Water District vs. the City of Chino et al. [SBSC Case No. RCV 51010]). Since that time, the Basin has been sustainably managed, as required by the Judgment, under the direction of a court-appointed Chino Basin Watermaster (Watermaster). A fundamental premise of the Judgment is that all Chino Basin water users are allowed to pump sufficient water from the Basin to meet their requirements. To the extent that pumping by a party exceeds its share of the safe yield, assessments are levied by Watermaster to replace overproduction. Traditionally, overproduction has resulted in purchase of SWP water through IEUA that is subsequently recharged into the Chino Basin.

Total water consumption within IEUA's service area for FY 18/19 was 188,817 AF. IEUA anticipates a slight increase in FY19/20 water usage due to the continually growing population in the region and the general climate change trend of projected temperature increases.

The occurrence of long dry periods, characteristic of Southern California's climate, limit the recharge of precipitation and stormwater for years at a time, thus requiring collaborative and forward-thinking approaches on the part of Chino Basin water managers in order to conserve, enhance, and maximize groundwater for its highest and best use.

Total IEUA Service Area Water Use for Fiscal Year 18/19, October 1, 2018 through September 3, 2019 is in Table 1 below:

Table 1. Water use by type

<b>Water Type</b>	<b>AFY</b>
Imported Water	63,230
Recycled Water (Direct Use)	15,956
Groundwater (Chino Basin)	60,417
Other Groundwater	24,292
Local Surface Water	11,075
Purchases from Other Agencies	28,277
Sales to Other Agencies	-14,432
<b>Total</b>	<b>188,817</b>

IEUA's past working relationships with Reclamation can be seen below in Table 2.

Table 2. IEUA's Past Working Relationships with the United States Bureau of Reclamation

<b>Project Name</b>	<b>Amount</b>	<b>Contract Number</b>	<b>Award Date</b>	<b>Contract Termination</b>
<b>CEQA for Regional Water Recycling Project</b>	\$22,608	01-FC-35-0020	Prior to 2001	11/20/2002
<b>Chino Basin Comprehensive Water Efficiency Landscape Planning Process</b>	\$125,000	00-FC-20-0208	6/26/2000	3/31/2003
<b>Regional Recycled Water Program Feasibility Study</b>	\$980,000	06-FC-35-0189	6/27/2006	3/31/2008
<b>Chino Basin Water Efficient Irrigation Demonstration</b>	\$50,000	05-FG-35-0170	9/12/2005	1/31/2010
<b>Regional Recycled Water Program – NE Area</b>	\$5,938,454	R10AC35R16	12/22/2009	4/15/2011
<b>California Friendly Water Wise Landscape Program</b>	\$30,000	R09AP35261	8/28/2009	5/31/2011
<b>Regional Recycled Water Program – NW Area</b>	\$7,910,000	R10AC35R17	12/22/2009	3/21/2012
<b>Turner Basin/Guasti Multi Use Beneficial Project</b>	\$406,712	R11AP35315	9/22/2011	9/30/2013
<b>Regional Residential Landscape Surveys and Retrofit Programs</b>	\$199,000	R12AP35353	9/7/2012	12/31/2014

<b>Construct Regional Recycled Water Program</b>	\$4,940,000	08-FC-35-0237-1	3/20/2009	6/30/2015
<b>Chino Creek Wellfield Development, Wells 1.2.3</b>	\$1,551,095	R11AC35306	9/29/2011	6/30/2017
<b>1010 Zone Pump Station and New Product Water Pipelines</b>	\$3,970,000	R12AC35339	9/24/2012	11/30/2016
<b>Brine Concentrate Reduction Facility</b>	\$14,551,296	R15AC00059	9/14/2015	8/31/2017
<b>Groundwater Supply Wells and Raw Water Pipelines</b>	\$5,683,792	R14AC00049	9/17/2014	12/31/2019
<b>GW Recharge Yield Enhancement Conjunctive Use Project for Storm water Capture</b>	\$750,000	R15AP00151	9/4/2015	1/31/2021
<b>Update of the Chino Basin Drought Contingency Plan</b>	\$200,000	R16AC00113	9/15/2016	9/30/2019
<b>RP-3 Basin Improvement Project</b>	\$300,000	R16AP00142	9/16/2016	3/31/2020
<b>Wineville Basin and Jurupa Basin Improvements</b>	\$750,000	R18AP00077	8/17/2019	9/30/2020
<b>Total</b>	\$48,357,957			

Chino Creek Wellfield Development, Wells 1, 2 and 3; 1010 Zone Pump Station and New Product Water Pipeline; Brine Concentrate Reduction Facility; and Groundwater Supply Wells and Raw Water Pipeline; were projects applied for and built on the CDA's behalf.

### Project Location

The project is located in the City of Chino, County of San Bernardino, State of California

### Technical Project Description and Milestones

#### Project Need

The Chino Airport has been in operation since the early 1940s. Since 1960, the County of San Bernardino has operated the site as a public airport for commercial, industrial, and general aviation use. Past and present uses include a flight academy; aircraft sales and storage; modification of

military aircraft; various aeronautic manufacturing; crop dusting; aircraft restoration; aircraft maintenance repair shops; aircraft painting, stripping and washing; fire retardant chemical mixing and loading; United States Forest Service aircraft maintenance and operations; and aircraft museums. These activities are thought to have contributed to contamination of the underlying groundwater. Seven volatile organic compounds (VOCs) have been identified in the underlying groundwater: trichloroethene (TCE); 1,2,3-trichloropropane (1,2,3-TCP); cis-1,2-dichloroethene (cis-1,2-DCE); 1,2-dichloroethane (1,2-DCA); 1,1-dichloroethene (1,1-DCE); carbon tetrachloride; and 1,4-dioxane. TCE and 1,2,3-TCP are the two most common VOCs found in the impacted groundwater beneath and downgradient of the Airport and are the primary contaminants of concern with concentrations as high as 2,100 micrograms per liter ( $\mu\text{g/l}$ ) and 16  $\mu\text{g/l}$ , respectively. The other five VOCs (cis-1,2-DCE, 1,2-DCA, 1,1-DCE, carbon tetrachloride, and 1,4-dioxane) have much smaller areas of impact and all fall within the footprint of the TCE and 1,2,3-TCP plumes.

Multiple CDA wells are currently affected by the plume and are therefore out of service. [REDACTED] Additionally, [REDACTED] Well [REDACTED] requires blending with other sources and cannot be used without groundwater from wells [REDACTED]. [REDACTED] wells [REDACTED] have a production capacity of 1,452 AFY. Without these wells, CDA operations and production capacity are limited. [REDACTED]

[REDACTED] After groundwater contamination was identified in 1989, extensive reviews of historical records and numerous environmental investigations were conducted, and remedial actions were identified for implementation. Out of multiple remedial action alternatives evaluated, a groundwater pump and treat system was selected as the preferred action in combination with institutional controls and monitored natural attenuation. Implementation of the identified pump and treat system is the subject of this application, which will focus on the extraction and ex-situ treatment of groundwater from [REDACTED] wells [REDACTED]. The proposed Project will thereby remove plume containment to allow for the ultimate beneficial use of treated water through CDA's drinking water system.

### **Project Description, Activities and Implementation Schedule**

The Project consists of the construction of a GAC system, dedicated to treating [REDACTED] wells [REDACTED]. The system will consist of a set of primary and secondary GAC vessels in series, installed on a concrete pad at the Desalter site. Associated on-site piping will also be installed at the existing desalter site and electrical modifications and system integration will also occur. Raw water piping to the Project site is already in place. The following are the specific activities that will be accomplished as part of the proposed Project:

#### *Task 1. Project Management, Administration and Reporting*

Project management will be provided by CDA staff to ensure successful project implementation. Activities will include project administrative oversight, working with vendors and contractors, managing work orders, and conducting progress meetings as necessary to ensure timely completion. In addition, grant administration will be performed to execute the grant agreement, ensure compliance with grant requirements, prepare and submit necessary progress and invoicing documents, and coordinate with the Reclamation grant manager as needed.

#### *Task 2. Environmental Documentation*

In compliance with California Environmental Quality Act (CEQA) requirements, an Initial Study and Mitigated Negative Declaration (IS/MND) were prepared in 2018 for the Chino Airport Groundwater Remedial Project which encompasses the Project proposed with this application. The document was filed in January 2019. The IS/MN found that the project would not have a significant effect on the environment with incorporation of certain mitigation measures. Results of that CEQA analysis will form the basis for preparing necessary National Environmental Policy Act (NEPA) documents. Based on the CEQA findings, it is anticipated that the NEPA document will consist of a Finding of No Significant Impact (FONSI).

#### *Task 3. Preliminary and Final Design*

A Feasibility Study was completed in 2017 by the County of San Bernardino, which identified and evaluated remedial action alternatives. Following the Feasibility Study, a Draft Interim Remedial Action Plan was completed in December 2017, which included preliminary conceptual design of the recommended alternative. For the Project proposed with this application, CDA will select an engineering consultant(s) to prepare a full Preliminary Design Report (PDR) that will take into account information from previous County studies. Following completion of the PDR, CDA's engineering consultant will conduct final design, including preparation of plans and specifications, for the GAC treatment facility and related modifications. Consultant selection is anticipated to be completed by January 9, 2020. Preliminary design is anticipated to be completed by March 1, 2020 and final design is anticipated to be completed July 1, 2020.

#### *Task 4. Permitting*

Permitting requirements are anticipated to be minimal for the Project. Depending on final design and anticipated area of disturbance, a NPDES General Permit for Discharges of Storm Water Associated with Construction Activity may be required. Grading and/or building permits will be acquired, if needed for the installation of the concrete pad and treatment system. The GAC groundwater treatment system would not generate air emissions requiring permitting under local air regulations. Necessary permits will be acquired prior to the start of construction and will be identified more specifically during final design.

#### *Task 5. Construction*

Construction of the GAC treatment facility will begin after completion of final design. Bidding and construction contracting will occur through a competitive bidding process, in accordance with CDA standard procedures and consistent with Public Contract Code. Construction work will take place within CDA property. The GAC treatment facility, consisting of a set of GAC vessels in lead/lag series orientation, will be installed on a new concrete pad, approximately 30 feet by 18 feet size. On-site piping will be installed to direct flows from existing well piping into the treatment system. In addition, electrical modifications and system integration will occur. In association with the construction of the new GAC treatment facility, an existing air stripper for TCE will be demolished. Construction is anticipated to begin November 2020 and be completed by September 2021.

#### *Implementation Schedule*

The Project will be completed within approximately 19 months of project award. The project schedule, showing major tasks, interdependencies, milestones and dates is shown in Table 3.

Table 3. Project Schedule

Task Name	Start	Finish
CDA Local Water Supply Restoration [REDACTED]	7/1/19	12/31/21
Grant Award Notice Date	5/29/20	5/29/20
Project Management	11/29/19	7/30/21
Grant Administration and Reporting	11/29/19	12/31/21
CEQA Documentation	4/2/18	1/30/19
NEPA Documentation	6/1/20	7/31/20
Preliminary Design	12/2/19	3/2/20
Final Design	3/3/20	7/1/20
Permitting	7/1/20	8/31/20
Construction Contracting and Bidding	9/1/20	10/30/20
Construction	11/2/20	9/30/21

## Performance Measures

The proposed Project will provide multiple benefits that can be quantified, as shown in Table 4 below.

Table 4. Performance Measures

Benefit Type	Description	Method of Measurement
Water Supply Benefits	The Project will enable CDA to bring its wells [REDACTED] back online to produce additional groundwater.	Groundwater production will be metered at the wells. Flow meters on the GAC treatment facility will also capture treated water volume.
Water Quality	The proposed GAC treatment facility will remove TCE and 1,2,3-TCP from the groundwater produced at CDA wells to meet potable standards.	Water quality will be regularly tested to ensure compliance with potable water standards. In California, the current Maximum Contaminant Level (MCL) for TCE is 5 µg/L and 0.005 µg/L for 1,2,3-TCP.
Water Supply Reliability	By treating groundwater produced at CDA wells, the Project makes an additional water supply available that helps increase local water supply reliability, while replacing demands on imported water supplies.	The more water CDA can provide to its member agencies, the less demand there is for imported water supplies. Improved reliability will be based on the amount of water produced and treated which will be metered at the wells and at the GAC treatment facility.

## Evaluation Criteria

### Evaluation Criterion A—Project Benefits

*How will the project build long-term resilience to drought? How many years will the project continue to provide benefits?*

The Chino Basin serves as an integral part of the regional and statewide water supply system. However, groundwater production from the basin is currently limited due to the identified VOC contamination plume. Through the operation of its water treatment systems and groundwater wells within the Chino Basin, CDA supplies 35,200 AFY of high-quality water to its member agencies. The next available increment of water available to CDA member agencies in the Chino Basin is water purchased from Metropolitan Water District of Southern California (MWD), largely made up of imported State Water Project supplies and water from the Colorado River. The more local water that can be supplied by CDA, the less the member agencies are dependent on MWD imported water supplies, and the greater is the local resilience to drought. Constructing the proposed GAC treatment facility will allow CDA to resume producing high quality groundwater from wells I-1, I-2, I-3 and I-4 which would otherwise remain out of service due to existing VOC contamination. These wells have a total production capacity of 1,452 AFY.

As such, the Project would make 1,452 AFY of groundwater available for beneficial use, thereby enhancing local water supplies and building local resilience to drought. Implementation of the proposed Local Water Supply Restoration GAC Treatment Facility is a critical step for improving local water supply reliability and building long-term drought resilience. The GAC treatment system is anticipated to have a useful life of 50 years thereby enabling treatment of this groundwater over that time period. In addition, the sustainable management of the basin under the direction of the Chino Basin Watermaster will also ensure availability of groundwater supplies into the future. As such, the Project is anticipated to provide benefits for at least 50 years.

*Will the project make additional water supplies available? If so, what is the estimated quantity of additional supply the project will provide and how was this estimate calculated? Provide this quantity in acre-feet per year as the average annual benefit over ten years (e.g., if the project captures flood flows in wet years, provide the average benefit over ten years including dry years).*

As noted above, constructing the proposed GAC treatment facility will allow CDA to produce high quality groundwater from wells [REDACTED] which would otherwise remain out of service due to existing VOC contamination. Based on the total capacity of those wells, the Project would make 1,452 AFY of groundwater supplies available, as shown in Table 5 below. Without the Project, these supplies would not be useable.

*Table 5. Groundwater Supply Availability*

Well	GPM	AFY
■	330	479
■	150	218
■	420	610
■	100	145
<b>Total*</b>	<b>1,000</b>	<b>1,452</b>

\*Total production volume assumes 10% down time

*What percentage of the total water supply does the additional water supply represent? How was this estimate calculated?*

CDA member agencies have “take or pay” contracts with CDA for 35,200 AFY of water supply. With the wells being out of service, CDA cannot produce at the maximum capacity. The groundwater that would become available with the proposed GAC treatment facility, 1,452 AFY as shown in the table above, would make up approximately four percent of CDA’s water supplies.

*Provide a brief qualitative description of the degree/significance of the benefits associated with the additional water supplies.*

CDA supplies water to seven local water suppliers who in turn serve a total population of about 386,000 across San Bernardino and Riverside Counties. Increasing the availability of supplies to CDA, therefore, has far-reaching impacts and contributes to improved water supply reliability on a regional basis. CDA contract entitlements currently range from 1,000 AFY to over 11,000 AFY. As such, 1,452 AFY of additional groundwater supplies made available with this Project represents a significant portion of individual member agency entitlements. In addition, for most CDA member agencies, imported water purchased from MWD is the next available alternative supply. As a result, increased availability of local groundwater supplies helps reduce dependence on imported supplies that are becoming increasingly unreliable.

*Will the project improve the management of water supplies?*

- *If so, how will the project increase efficiency or operational flexibility?*
- *What is the estimated quantity of water that will be better managed as a result of this project? How was this estimate calculated? Provide this quantity in acre-feet per year as the average annual benefit over ten years (e.g., if the project captures flood flows in wet years, provide the average benefit over ten years including dry years).*
- *How will the project increase efficiency or operational flexibility?*
- *What percentage of the total water supply does the water better managed represent? How was this estimate calculated?*
- *Provide a brief qualitative description of the degree/significance of anticipated water management benefits.*
- *Will the project make new information available to water managers? If so, what is that information and how will it improve water management?*

Currently, a portion of the Chino Basin, underlying the Chino Airport, is contaminated by VOCs, primarily TCE and 1,2,3-TCP that have been detected in concentrations as high as 2,100 micrograms per liter ( $\mu\text{g/l}$ ) and 16  $\mu\text{g/l}$ , respectively. As a result, multiple CDA wells have been taken offline and CDA cannot produce useable groundwater at its maximum capacity without prior VOC treatment. This groundwater impairment therefore hinders CDA's ability to meet the groundwater needs of its member agencies, particularly during drought periods when alternative supplies are scarcer.

The Project improves management of water supplies and improves the reliability of local water supplies by helping to maintain the viability of the Chino Basin as a vital local source of groundwater. The Project would make 1,452 AFY of groundwater supplies available for use by the CDA. The groundwater that would become available with the proposed GAC treatment facility, 1,452 AFY as shown in the table above, would make up over 4 percent of CDA water supplies. The Project is a major component of the identified preferred remedial action alternative to address the serious Chino Basin groundwater contamination underlying the Chino Airport. The proposed GAC treatment facility will contribute to containment of the VOC plume for long-term remediation, while more importantly allowing for immediate beneficial use of existing groundwater supplies that would otherwise be unusable. The average TCE concentration in CDA Wells I-1 thru I-4 ranges from 0.015 to 0.02 ppm. The estimated mass removal using CDA's GAC system is estimated to be approximately 26 lbs/year TCE. Using the same assumptions as the TCE calculation, the average 1,2,3-TCP concentration in CDA Wells I-1 thru I-4 range is between .025 and .05 ppb; the calculation of the mass removal of 1,2,3 TCP is estimated to be approximately 2 lbs/year.

*Will the project have benefits to fish, wildlife, or the environment? If so, please describe those benefits.*

Yes, the Project has potential benefits to fish, wildlife and the environment for two major reasons, as described below.

The next available increment of water available to the water suppliers in the Chino Basin is imported water from MWD. In the San Bernardino and Riverside area, imported water is approximately 20 percent from the Federal Colorado River Project and the remainder from the State Water Project, which comes from the Sacramento-San Joaquin Delta. By increasing the availability of local groundwater sources, which the proposed Project will do, CDA member agencies can rely more on those local groundwater supplies and less on imported water. In turn, by replacing demand for water from the Colorado River or the Sacramento-San Joaquin Delta, the Project may contribute to reduced diversions and therefore improved habitat conditions and water quality in those riverine systems.

In addition, the Project provides protection of human health and the environment through its benefits of treatment and containment of the contaminated groundwater. The Project reduces the toxicity, mobility, and volume of the VOCs present in the local groundwater through the extraction and treatment of contaminated groundwater at the proposed GAC facility. It would protect the environment by helping to prevent further migration of the plume to downgradient, off-site groundwater resources or off-site receptors. Further, by helping to permanently remove the groundwater contaminants over time, these Project benefits are long-term benefits.

**If the proposed project includes any of the following components, please provide the applicable additional information:**

*Wells—What is the estimated capacity of the new well(s), and how was the estimate calculated? How much water do you plan to extract through the well(s)? Will the well be used as a primary supply or supplemental supply when there is a lack of surface supplies? Please provide information documenting that proposed well(s) will not adversely impact the aquifer it/they are pumping from (overdraft or land subsidence). At a minimum, this should include aquifer description, information on existing or planned aquifer recharge facilities, a map of the well location and other nearby surface water supplies, and physical descriptions of the proposed well(s) (depth, diameter, casing description, etc.). If available, information should be provided on nearby wells (sizes, capacities, yields, etc.), aquifer test results, and if the area is currently experiencing aquifer overdraft or land subsidence. Please describe the groundwater monitoring plan that will be undertaken and the associated monitoring triggers for mitigation actions. Describe how the mitigation actions will respond to or help avoid any significant adverse impacts to third parties that occur due to groundwater pumping.*

The project does not involve the installation of new wells; however, implementation of the project will enable CDA to use four of its existing wells that would otherwise remain offline due to the local groundwater contamination. Based on well capacity, a total of 1,452 AFY could be produced from those wells once they are brought online again. CDA's groundwater production in the Chino Basin is part of approved management actions for the Chino Groundwater Basin, embodied in the Chino Basin Optimum Basin Management Plan, and overseen by the Watermaster

The wells treated by the proposed GAC treatment facility will feed into CDA's potable water distribution system to serve its member agencies with local groundwater. The groundwater supplied by CDA constitutes the primary source of water or a supplemental water source to its member agencies. As noted above, the volume that would become available with the project would make up nearly six percent of CDA water supplies to its member agencies. The percentage is based on the amount of current take or pay contracts with CDA of 35,200 AFY.

#### Evaluation Criterion B—Drought Planning and Preparedness

*Attach a copy of the applicable drought plan, or sections of the plan, as an appendix to your application. These pages will not be included in the total page count for the application.*

*Explain how the applicable plan addresses drought. Proposals that reference plans clearly intended to prepare for, and address drought will receive more points under this criterion.*

IEUA is currently working on an update to the 2009 Drought Plan utilizing a USBR drought planning grant. See Attachment C for a copy of the IEUA Drought Plan from 2009 and Attachment D for a copy of the **draft** Chino Basin Drought Contingency Plan Update that has been submitted to the USBR in September 2019. The questions below will be responded to regarding the 2009 Drought Plan that has already been approved by IEUA's Board and the member agencies.

*Explain whether the drought plan was developed with input from multiple stakeholders. Was the drought plan developed through a collaborative process?*

The drought plan was developed through a collaborative, consensus-based process. IEUA, working together with regional cities, retail water agencies, Chino Basin Watermaster and the Chino Basin Water Conservation District, prepared the IEUA 2009 Drought Plan. Between summer 2007 and April 2009, IEUA held regular monthly meetings and numerous workshops explaining the Metropolitan Water District (MWD) water supply conditions regional drought allocation options, and the development of an IEUA drought allocation plan, which is part of the

Drought Plan. As a part of this two-year process, substantial collaboration with MWD and its other member agencies, IEUA's retail agencies and area cities took place. In addition to the monthly meetings, a total of 55 presentations, workshops and meetings were held between July 2007 and April 2009 regarding the plan before it was finalized.

*Does the drought plan include consideration of climate change impacts to water resources or drought?*

Since the 2009 Drought Plan was developed when Southern California was in the midst of its third consecutive year of drought and the Governor had proclaimed a statewide drought emergency, the plan was developed during a period when climate change impacts to water resources was actually occurring. In February 2008, the MWD (a southern California regional wholesaler that delivers imported water from the Colorado River and the California State Water Project) adopted a Water Supply Allocation Plan (WASP) in anticipation of possible water supply shortages. The IEUA Drought Plan was developed for the purpose of implementing the MWD WASP within IEUA's service area in a manner that is fair and equitable. It also includes drought planning regarding issues specific to IEUA's service area and encourages the development of and full utilization of local water resources so climate change will not have as much of an impact. The Plan includes all aspects of drought planning such as actions to avoid rationing, drought response stages, allocation of available imported water, methodology, pricing and communications strategy.

*Describe how your proposed drought resiliency project is supported by an existing drought plan.*

The Plan encourages local investments in local supplies to drought-proof the region. Increased Chino Desalter production and investments to enhance local water supplies are specifically mentioned as plan goals. Both of these goals directly relate to this project.

*Does the drought plan identify the proposed project as a potential mitigation or response action?*

One of the core principles of the IEUA Drought Plan is to maximize the development and use of local water supplies, including recycled water, desalter water, groundwater and increased water efficiency. This project is supported by the drought plans response action due to the core principles of maximizing the development of both groundwater and desalter water.

*Does the proposed project implement a goal or need identified in the drought plan?*

Increased Chino Desalter production and investments to enhance local water supplies are specifically mentioned as plan goals. Both of these goals directly relate to this project since cleaning the groundwater in order to be below the maximum contaminant level of 1,2,3-trichloropropane that is allowed for potable water is one of the main reasons for the project. Thus, this project will directly enhance the local water supplies available for potable use.

*Describe how the proposed project is prioritized in the referenced drought plan?*

In the 2009 drought plan, the first priority was to meet the WASP requirements. All projects listed were than recommendations regarding how to make sure the WASP was met. Each project was given equal priority since they could be done simultaneously if needed.

Evaluation Criterion C—Severity of Actual or Potential Drought Impacts to be addressed by the Project

***Describe the severity of the impacts that will be addressed by the project:***

*What are the ongoing or potential drought impacts to specific sectors in the project area if no action is taken? What are ongoing or potential drought impacts to specific sectors in the project area if no action is taken.*

The proposed project will allow the CDA to use its local groundwater aquifer to produce 1,452 AFY of water; without this project, this water supply would not be available to local agencies. This would mean agencies that rely on CDA water would have to enact mandatory water use reductions on a greater scale and earlier in the drought than would occur with the project. As occurred in the recent drought, customers will first be asked to undertake voluntary reductions, then as drought grows more severe outside water use will be restricted (no washing of sidewalks, limited irrigation periods), followed by a curtailment of outdoor water use, and in the most drastic stages, water use will be limited to just that needed for health and safety.

*Whether there are ongoing or potential environmental impacts.*

Drought results in losses of habitat, including fish and wildlife habitat, lack of food and water for wild animals and increased susceptibility to disease. The proposed Project would not improve drought conditions for environmental resources but neither would the proposed project exacerbate these impacts.

*Ongoing, past or potential, local, or economic losses associated with current drought conditions.*

In 2019 San Bernardino County was declared a “natural disaster area” by Agriculture Secretary Sonny Perdue due to losses caused by recent drought. In the Inland Empire dairy and cattle represent the most important agricultural operation. Losses to California’s dairy industry result from higher costs and lower availability of local hay, silage and pasture. Irrigated pasture is needed by dairy operations. The drought accelerated milk cow culling and reduced milk output.

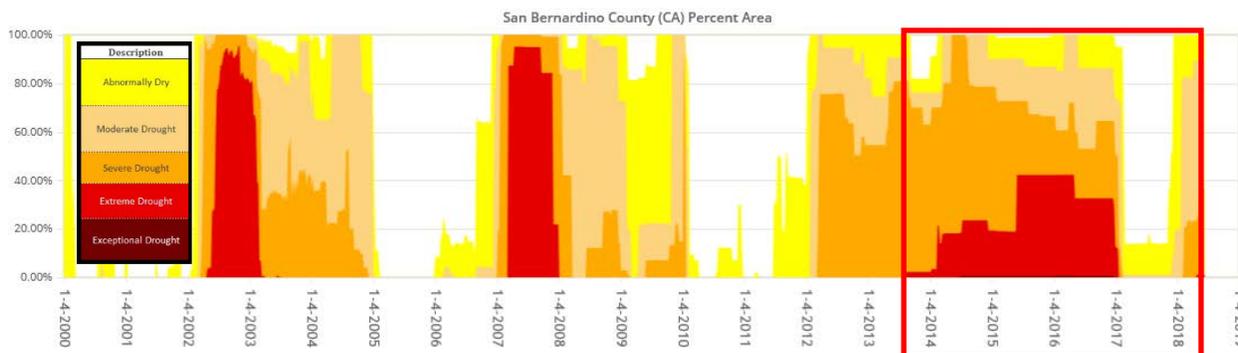
*Whether there are other drought-related impacts not identified above.*

Drought exacerbates competition for supplies, particularly competition between municipal and agricultural users. Collaborating with the region’s water agencies to maintain viable local water supplies is an important activity to minimize these conflicts.

*Describe existing or potential drought conditions in the project area.*

San Bernardino County has experienced some of the most severe drought conditions nationwide since 2014 (U.S. Drought Monitor, California Drought Map, May 6, 2014). Between 2015 and 2016 parts of the County were under conditions of “extreme drought” and “severe drought”, according to the U.S Drought Monitor and as shown in Figure 1. Conditions lessened in 2017 with an above average wet year, however in 2018 conditions worsened back to a “severe drought”. Though 2019 has again provided some relief, it is impossible to predict how drought conditions may improve or worsen in the next few years, however, severe drought conditions are certain to occur in the short-term and the long-term. Years 2014 and 2015 represented the height of the recent drought as the corresponded to years with very low SWP deliveries; in 2014 SWP deliveries were 5 percent of allocations, in 2015 SWP deliveries were 20 percent of allocation. This highlights the need for local supplies.

**Figure 1: United States Drought Monitor Data for San Bernardino County**



<http://droughtmonitor.unl.edu/Data/Timeseries.aspx>

*Is the project in an area that is currently or recently suffering from drought?*

As noted above, San Bernardino County, within which the project is located, has experienced substantial drought conditions over the last 5 years, starting in 2014. During that time, all or parts of the County were under “extreme drought” and “severe drought” conditions. To date the County continues to experience “severe drought” conditions. See also response above and Figure 1.

*Describe any projected increases to the severity or duration of drought in the project area resulting from climate change.*

The Reclamation Report, “Climate Change Analysis for the Santa Ana River Watershed” (2013) found that “Climate change threatens California’s natural environment, economic prosperity, public health, and quality of life.” Specifically, the Reclamation report anticipated a decline in precipitation and runoff with a corresponding increase in temperature in the Santa Ana River Watershed. This local drought will be exacerbated by climate change effects on imported water. The *State Water Project Delivery Capability Report 2017* projects a temperature increase of 1.3° to 4.0 °F by mid-century and 2.7° to 8.1° F by the end of the 21st century. It predicts that increased temperatures will lead to less snowfall at lower elevations and decreased snowpack. By mid-century they predict that Sierra Nevada snowpack will reduce by 25 to 40 percent of its historical average resulting in drastic decreases in water supply.

#### Evaluation Criterion D—Project Implementation

*Describe the implementation plan of the proposed project. Please include an estimated project schedule that shows the stages and duration of the proposed work, including major tasks, milestones, and dates.*

Specific project activities that will be accomplished as part of the proposed Project include:

- Task 1. Project Management, Administration and Reporting
- Task 2. Environmental Documentation/Permitting
- Task 3. Preliminary and Final Design
- Task 4. Permitting
- Task 5. Construction

Activities by task are detailed in the Project Description. A CEQA IS/MND was previously completed in January 2019. Going forward, activities will focus on preliminary design beginning

before the end of 2019 and concluding by early Spring 2020. Subsequently, final design will be performed, concluding by July 2020. NEPA compliance activities and permitting will be performed in parallel to final design and will be completed prior to construction begin. Construction contracting will begin upon completion of final design, and construction is anticipated to be completed by November 2021.

*Describe any permits that will be required, along with the process for obtaining such permits.*

Permitting requirements are anticipated to be minimal for the Project. Depending on final design and anticipated area of disturbance, a NPDES General Permit for Discharges of Storm Water Associated with Construction Activity may be required. Grading and/or building permits will be acquired, if needed for the installation of the concrete pad and treatment system. The groundwater treatment system would not generate air emissions requiring permitting under local air regulations; however, if an air stripper is identified as necessary during final design, appropriate permit(s) would be acquired, as needed. Necessary permits will be acquired prior to begin of construction and will be identified more specifically during final design. The selected contractor(s) will be required to obtain all necessary permits.

*Identify and describe any engineering or design work performed specifically in support of the proposed project.*

In an effort to begin addressing the identified groundwater contamination and comply with a Regional Water Quality Control Board Cleanup and Abatement Order (No. R8-2008-0064), San Bernardino County conducted studies to identify and evaluate remedial action alternatives. Those studies helped CDA identify the proposed GAC treatment facility. A Feasibility Study was completed in 2017 which identified remedial action objectives and evaluated multiple potential remedial alternatives. The recommended remedial alternative of that study consists of institutional controls, monitoring natural attenuation and plume containment by groundwater extraction and ex situ treatment. Following the Feasibility Study, a Draft Interim Remedial Action Plan was completed in December 2017 which included preliminary conceptual design of the recommended alternative. The proposed Project will implement a component of the identified groundwater extraction and ex situ treatment measure by treating wells [REDACTED] with the proposed GAC treatment facility. The previously completed studies will be incorporated into CDA's preliminary design for the proposed Project, as appropriate.

*Describe any new policies or administrative actions required to implement the project.*

Implementation of the proposed Project will not require any new policies or administrative actions. The Project is part of a larger effort by the County of San Bernardino to accomplish effective remediation of the contaminated groundwater and is therefore supported by stakeholders to that process. In addition, the groundwater treated at the proposed GAC treatment facility will be produced at existing CDA wells and pumped to CDA's potable water system for further treatment and distribution to member agencies. As such, no additional permitting or administrative actions will be required for treatment or use of the groundwater.

*Describe how the environmental compliance estimate was developed. Have the compliance costs been discussed with the local Reclamation office?*

An IS/MND was completed in 2018 and posted in 2019 for the Chino Airport Groundwater Remedial Project which encompasses the proposed Project. It was determined that the overall project would not have a significant effect on the environment. It is understood that NEPA will

also be required as part of the Project environmental evaluation. Contact has been established with Reclamation and assistance will be provided by the Temecula office to conduct the NEPA analysis. A cost estimate of \$10,000 was calculated. Based on the 2018 IS/MND, the NEPA document is anticipated to consist of a FONSI.

### Evaluation Criterion E—Nexus to Reclamation

*Describe the nexus between the proposed project and a Reclamation project or activity, including:*

*How is the proposed project connected to a Reclamation project or activity?*

The Project will reduce reliance on imported water supplies during normal and drought conditions. The proposed project will be implemented within southern California which is within the area that receives water from the Lower Colorado River/Boulder Canyon Project. All CDA member agencies supplement their supplies with imported water purchased from MWD, which include Colorado River supplies. The project will also help to reduce reliance on water from the State Water Project diverted from the Sacramento-San Joaquin Delta region, any benefits of which could accrue to the general health of the Bay Delta as well as the continued operation of Reclamation's Central Valley Project.

*Will the project benefit any tribe(s)?*

The Project will improve local supply reliability to CDA members but will not specifically benefit any tribes.

*Does the applicant receive Reclamation project water?*

IEUA, which is applying on behalf of CDA, is a member of MWD from which it receives imported water. In the San Bernardino and Riverside area, imported water is approximately 20 percent from the Federal Colorado River Project and the remainder from the State Water Project. CDA, which will be implementing the project, does not receive Reclamation project water. CDA supplies are exclusively made up of groundwater from the Chino Basin. CDA members supplement their supplies with imported water purchased from MWD, through IEUA or Western Municipal Water District.

*Is the project on Reclamation project lands or involving Reclamation facilities?*

The Project would not directly involve Reclamation project lands or involve Reclamation facilities.

*Is the project in the same basin as a Reclamation project or activity?*

The Project will be implemented within and to the benefit of the CDA service area. CDA is comprised of eight local agencies: City of Chino, City of Norco, Jurupa Community Services District, City of Ontario, City of Chino Hills, Santa Ana Water Company, Western Municipal Water District, and Inland Empire Utilities Agency. Approximately 80 percent of the CDA service area is in the County of San Bernardino and approximately 20 percent within Riverside County. This region is within Reclamation's Lower Colorado Region and is served by Reclamation's Boulder Canyon Project. Within this region there have been various Bureau of Reclamation-funded plans and projects that have been completed (see Table 2: Past Working Relationships with

Reclamation). In addition, this project will assist Reclamation in their activities toward managing water in the west by improving a segment of California's water supply.

*Will the proposed work contribute water to a basin where a Reclamation project is located?*

The Project will reduce demands for water in southern California. This in turn will reduce demands for both Colorado River Water (Reclamation's Boulder Canyon Project) and Sacramento-San Joaquin Delta water (Reclamation's Central Valley Project).

## Evaluation Criterion F—Department of the Interior Priorities

### 1. ***Creating a conservation stewardship legacy second only to Teddy Roosevelt***

*Utilize science to identify best practices to manage land and water resources and adapt to changes in the environment*

The proposed Project will improve management and utilization of groundwater resources in the Chino Basin, by enabling CDA to pump and treat contaminated groundwater. In addition to increasing availability of supplies for beneficial use, the Project will also contribute to containment of the contaminant plume for long-term improvement of the basin. These conclusions are based on previously completed rigorous scientific and technical study.

After groundwater contamination was identified in 1989, extensive reviews of historical records and numerous environmental investigations were conducted to identify potential sources of groundwater contamination, identify and characterize actual contamination, and identify potential options for remedial action. The proposed Project is the result of the numerous studies that have been completed since then, including the 2017 Feasibility Study which identified a recommended course of action: a groundwater pump and treat system in combination with institutional controls and monitored natural attenuation.

The proposed GAC treatment facility is a component of the identified pump and treat system that will ultimately allow for the beneficial use of treated water through CDA's drinking water system. The Project contributes to increased utilization of available groundwater supplies in combination with improved management of the basin for long-term sustainable use. As a result, the Project improves reliability of local water supplies to meet demands during normal and drought conditions and help the region adapt to changes in the environment.

*Examine land use planning processes and land use designations that govern public use and access*

Planning for the proposed Project has taken and will continue to take into account its impacts on the environment and lands within which the Project will be implemented. Based on initial planning efforts, the Project will be installed within property owned by CDA. This approach will minimize potential impacts to alternative sites or their access, including lands that could provide public benefit.

*Revise and streamline the environmental and regulatory review process while maintaining environmental standards*

The 2018 CEQA IS/MND concluded that the Chino Airport Groundwater Remedial Project would not have a significant effect on the environment with incorporation of certain mitigation measures.

Further, by installing the proposed GAC treatment facility within CDA property that is already utilized for groundwater treatment operations, this Project will reduce the likelihood of new potential impacts that could require a lengthy environmental review process.

*Review the Department's water storage, transportation, and distribution systems to identify opportunities to resolve conflicts and expand capacity*

This Project presents an opportunity to avoid potential water-related conflict while helping to reduce dependence on Reclamation water supplies. The Project will increase the availability of local groundwater which would replace demand on imported water. As noted above, imported water in this area is made up of Colorado River and State Water Project supplies. These supplies are becoming increasingly strained and less reliable due to changes in the environment that are impacting their availability. By improving local water supply reliability, the Project will contribute to reducing the potential for water-related conflicts that could arise from water shortages.

*Foster relationships with conservation organizations advocating for balanced stewardship and use of public lands*

This Project does not involve public lands, however implementing this Project within property already owned by CDA will reduce any potential for impacts to use of or access to public lands.

*Identify and implement initiatives to expand access to Department lands for hunting and fishing*

This Project will be installed within property already owned by CDA, thereby reducing any potential for impacts to the use of or access to public or Department lands.

*Shift the balance towards providing greater public access to public lands over restrictions to access*

This Project will be installed within property already owned by CDA, thereby reducing any potential for impacts to the use of or access to public or Department lands.

## *2. Utilizing our natural resources*

*Ensure American energy is available to meet our security and economic needs*

This Project will enable CDA to provide additional groundwater supplies to its member agencies, thereby enabling them to reduce their demands on imported water. This offset of imported water with groundwater has major energy savings implications. Imported water is an energy intensive source in large part due to its long-distance transport across often uneven terrain. Therefore, reductions in imported water use also result in reduced energy consumption. As a result, this Project will help reduce energy consumption related to water supplies served to CDA member agencies, thereby ensuring that more energy is available for other uses, including American security and economic needs.

*Ensure access to mineral resources, especially the critical and rare earth minerals needed for scientific, technological, or military applications*

Implementing this Project within property already owned by CDA will minimize potential impacts to alternative sites or their access, including lands that could potentially contain valuable mineral resources.

*Manage competition for grazing resources*

Implementing this Project within property already owned by CDA will minimize potential impacts to alternative sites, including lands that may provide valuable grazing resources.

### *3. Restoring trust with local communities*

*Be a better neighbor with those closest to our resources by improving dialogue and relationships with persons and entities bordering our lands*

The proposed Project is part of the County of San Bernardino's larger groundwater cleanup program. Stakeholder outreach and community involvement is a major part of that effort and is described in the 2018 Chino Airport Community Involvement Plan (CIP). Those activities facilitate public involvement and improve dialogue and relationships with persons and entities near and far that may be impacted by or benefit from the Project.

*Expand the lines of communication with governors, state natural resource offices, Fish and Wildlife offices, water authorities, county commissioners, tribes, and local communities*

As noted above, the proposed Project is part of the County of San Bernardino's larger groundwater cleanup program which includes an extensive community and stakeholder involvement component. Past and ongoing stakeholder involvement activities for the Chino Airport Remedial Project have included engagement between the County and the Regional Water Quality Control Board, the Chino Basin Watermaster, CDA, U.S. Army Corps of Engineers, as well as other members of the local community and municipal agency stakeholders.

### *4. Striking a regulatory balance*

*Ensure that ESA decisions are based on strong science and thorough analysis.*

Environmental evaluation has been and will be performed that will ensure minimized or avoided potential impacts to endangered species, based on strong science and thorough analysis.

### *5. Modernizing our infrastructure*

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

The Project constitutes a critical infrastructure project with far-reaching benefits that will serve American needs. The Project will benefit water customers across the Riverside and San Bernardino counties that receive water from CDA, however by offsetting imported water demands, the Project will provide benefits far beyond the CDA service area.

*Prioritize Department infrastructure needs to highlight: (1) Construction of infrastructure, (2) Cyclical maintenance, (3) Deferred maintenance*

This Project will provide additional local groundwater which will help offset imported water supplies, including supplies sourced from Federal projects such as the Federal Colorado River Project. By reducing demands on Federal water projects, the Project could contribute to the prioritization of Department infrastructure through deferred maintenance.

## Budget Proposal

### Funding plan and letters of commitment.

Describe how the non-Federal share of project costs will be obtained. Reclamation will use this information in making a determination of financial capability.

The estimated project cost for the Project \$2,731,686.61. With this application, IEUA is requesting \$750,000, which amounts to approximately 27 percent of the total project costs. Funding for the Project will come from four primary sources: 1) Reclamation funding; 2) CDA funds from member agencies through their normal fiscal year budgeting procedure; 3) Third Party in-kind costs for work performed by CDA staff and 4) IEUA in-kind services for work performed by IEUA staff.

See Attachment E for the required letter of commitment from the CDA.

The cost-share requirement will be covered by the CDA. In addition, the CDA will also provide third-party in-kind costs through their staff working on the project. Please see budget narrative for specifics regarding staff and what work will be performed.

*Describe any funding or cash requested or received from other Federal partners or non-Federal entities.*

No funding has been requested or received from other Federal partners or non-Federal entities other than the CDA.

*Describe any pending funding requests (i.e. grants or loans) that have not yet been approved and explain how the project will be affected if such funding is denied.*

There are no other outstanding funding requests. If funding from this grant opportunity for the Project is denied, the project schedule will be delayed.

*Describe project costs incurred before the anticipated Project start date that you seek to include as project costs. For each cost, identify:*

- *The project expenditure and amount*
- *The date of cost incurrence*
- *How the expenditure benefits the project*

Costs for conceptual design and environmental review were borne by the County of San Bernardino and are not included in the costs of the proposed project. IEUA and CDA anticipates completing preliminary design by March 2020 and final design by October 1, 2020. IEUA and CDA are not seeking design costs are part of this application. Construction and implementation is anticipated to start in November 2020 and are included in this budget proposal.

Table 6 provides the total cost of the project. Table 7 summarizes all funding sources (non-Federal and Federal) for the Project. Table 8 shows the budget proposal.

Budget Proposal

*Table 6. Total Project Cost Table*

<b>SOURCE</b>	<b>AMOUNT</b>
Costs to be reimbursed with the requested Federal funding	\$750,000
In-kind costs to be paid by the applicant	\$85,414.21
Value of third-party contributions	\$1,896,272.40
<b>TOTAL PROJECT COST</b>	<b>\$2,731,686.61</b>

*Table 7. Summary of Non-Federal and Federal Funding Sources*

<b>FUNDING SOURCES</b>	<b>AMOUNT</b>
<b>Non-Federal Entities</b>	
1. IEUA	\$85,414.21
2. CDA	\$1,896,272.40
<b>Non-Federal Subtotal</b>	\$1,981,686.61
<b>Other Federal Entities</b>	
None	\$0
<b>Other Federal Subtotal</b>	\$0
<b>Requested Reclamation Funding</b>	
Requested Reclamation Funding	\$750,000
<b>Total Funding</b>	<b>\$2,731,686.61</b>





## Budget Narrative

### Salaries and Wages

Costs associated with IEUA reporting and grant administration. The services provided by IEUA staff are in-kind services. The rates that will be charged are salary rates in addition to fringe benefits. Salary increases are generally awarded each year along with each employee's performance evaluation on their anniversary date. Many of IEUA's employees are represented by an Association Bargaining Unit. A MOU was negotiated which requires that staff receive cost of living adjustments (COLA) during the time period of this grant. The COLA effective 7/1/2020 is 3.0% of the base salary. Both represented and non-represented staff will receive the COLA. New COLA's may be negotiated when a successor MOU is adopted. The 3.0% COLA was included in the hourly rates, shown in the budget table above. All staff, including grant administration staff, are able to directly charge the actual amount of time spent working on this project. A project number will be set up in the financial system to specifically track these costs.

<u>Cost (w/ Fringe)</u>	<u>Hourly Rate</u>	<u>Est. hours</u>	<u>Total</u>
<i>Jesse Pompa, Manager of Grants</i> ██████████	██████████	██████████	██████████

Develops and maintains relationships with federal, state and local grantors; acts as a liaison with grantors and with sub-grantees such as member agencies or CDA; oversees the cultivation, selection and management of internal and external teams to bid for and implement grants on a regional basis; assists project managers in synchronizing the timing of grant expenditures with grant reimbursements.

Note: Jason Gu is currently the Manager of the Grants Department but will be retiring on 12/31/2019. Jesse Pompa, the current Deputy Manager of Grants, will be the new Manager of Grants effective 1/1/2020. The rates that are being used in the budget are Mr. Gu's current rate. The actual rate for Mr. Pompa will be used in the invoices.

#### Other personnel are:

<i>Grant Accountant</i>	██████████	██████████	██████████
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Maintains and reconciles grant revenue and expenditures to the financial system and general ledger; prepares adjusting journal entries; prepares billings and invoices for reimbursement from local, state and federal grantor agencies; prepares journal entries to record grant credits and grant match charges; maintains detailed grants accounting documentation and records. Monitors the status of grant account balances; follows up with departments to ensure grant funds are expended in accordance with grant agreements.

<i>Grant Administrator</i>	██████████	██████████	██████████
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Provides technical support to project managers, contractors and consultants regarding laws, regulations and contractual requirements as they relate to the grant;

### Fringe Benefits

The fringe benefit rate of 75% are calculated by IEUA for budgeting purpose based on the prior year actuals. Costs used in the calculation include such items as employee insurance, taxes and retirement, paid leaves, employee incentive programs, uniforms, safety shoe and auto allowances. These rates are fixed rates for billing.

**Travel**

CDA staff anticipate visiting the project site periodically during construction but travel to CDA facilities is a part of normal activity for CDA staff and no reimbursement or match for staff travel is being sought. It is not known at this time whether consultant costs for travel will be required. If so, those costs would be included within the “contractual” budget category with any consultant/contractor cost estimates.

**Equipment, Materials and Supplies**

The Project will require pressure filters, piping and valves, backwash pumps, and a 20,000 gallon steel backwash tank. Costs for these items were estimated based on the conceptual remediation plan prepared by San Bernardino County.

**Contractual**

Contractual/Construction work to be performed by contractors is described in the Project Description of this application. Consultants/contractors are anticipated to be used to perform site work, placement of the GAC concrete pad, placement and housing of equipment, placement and housing for electrical systems, and paintings and coatings. A contractor may also be utilized as an independent construction manager, who will also have responsibility for labor compliance during construction. Cost estimates are based on past experience with other projects in the same geographic area and are considered fair and reasonable.

San Bernardino County previously prepared an Initial Study/Mitigated Negative Declaration for the Chino Airport Groundwater Remedial Project, of which the proposed Project is a component. Because these costs were incurred pre-award, IEUA and CDA are not seeking funding for these expenditures. In consultation with Reclamation, IEUA and CDA have included \$10,000 in the project budget to comply with the National Environmental Policy Act.

**Third-Party In-Kind Contributions**

The Chino Basin Desalter Authority staff will perform portions of the work. Their work will be in-kind services for the following (see Table 9 below):

*Table 9. Third-Party In-Kind Contributions*

Title	Work to be Performed	Hours	Rate*	Total
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

## Environmental and Regulatory Compliance Costs

### CEQA

San Bernardino County previously prepared an Initial Study/Mitigated Negative Declaration for the Chino Airport Groundwater Remedial Project, of which the proposed Project is a component, Because these costs were incurred pre-award IEUA and CDA are not seeking funding for these expenditures.

### NEPA

The Southern California Area Office staff of the U.S. Bureau of Reclamation will perform the NEPA for this project. The Reclamation staff from the office indicated it would cost approximately \$10,000 to perform the NEPA.

### Other Expenses

IEUA anticipates regular, quarterly reporting on project activities. In addition to IEUA staff time listed above, during construction, reporting will be the responsibility of the Construction Contractor. No other expenses are anticipated that are not captured under the above categories.

### Indirect Costs

The U.S. Department of Interior National Business Center (IBC) approved provisional indirect cost rate for IEUA is 22.59% for FY 2020. See Attachment F for the Indirect Cost Rate Agreement Letter for the FY 2020.

### Total Costs

The total cost of the Project is \$2,731,686.61

## Environmental and Cultural Resources Compliance

*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.*

The Chino Airport Groundwater Remedial Project, of which the proposed Project is a component, was evaluated in an IS/MND prepared in 2018. Based on that document, it was concluded that the project activities would not have a significant effect on the environment with incorporation of specific mitigation measures.

The proposed Project consists of the construction of a GAC treatment facility on a new concrete pad along with associated onsite piping to direct raw water flows into the treatment system. Additional activities include electrical modifications and system integration.

The Project will be constructed within property currently owned by CDA and used for water treatment operations that began in 2001. The site is located within a developed area categorized for general industrial land use.

Installation of the concrete pad may require minimal grading, and trenching may be required to install on-site piping to direct flows from existing well piping to the treatment system. These activities would result in minor soil disturbance but are not anticipated to have substantial impacts on either soil resources or air quality. The emissions analysis conducted as part of the IS/MND did not indicate any significant air quality impacts or exceedance of local air quality thresholds. The proposed earthwork associated with this Project is not anticipated to have substantial air quality impacts.

Construction and earth disturbing work generally have the potential to temporarily impact water quality, but it is anticipated that potential impacts would be mitigated with implementation of best management practices. Construction activities will be conducted in compliance with local and state stormwater laws. If found necessary, a Stormwater Pollution Prevention Plan will be prepared which will specify best management practices to reduce potential construction-related water quality impacts.

Over the long-term, the Project will benefit water quality by contributing to containment of the existing contaminant plume. Further, CDA operations, including groundwater production at its wells, are designed to contribute to improved management of the Chino Basin and occur within limitations of the existing adjudication. As a result, the Project is not anticipated to result in substantial impacts on water quality or quantity.

With respect to potential impacts to animal habitat, Project impacts will occur on land that has been previously developed or disturbed by human activity. The Project will be installed within the existing CDA facility site, which is a developed area of industrial use. The site lies adjacent to established rights-of-way and in the direct vicinity of mostly developed land uses. These areas contain limited biological resource value and the Project is not anticipated to have impacts on animal habitat or sensitive biological resources. An applicable mitigation measure identified in the IS/MND includes avoiding bird nesting season and/or conducting pre-construction nest surveys to ensure that impacts to any nesting birds are avoided. These precautionary measures would be taken during implementation of the proposed Project.

*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?*

Based on the IS/MND, no federally- or state-listed species are anticipated to occur or be affected by the Project. Burrowing Owl was identified as a special interest species with potential to occur in the larger project impact area, however burrowing owl potential at the site of the proposed GAC treatment facility was determined to be unlikely. As noted above, given the developed nature and specific land uses at the Project site, there is limited biological resource value. Overall, the Project is not anticipated to have impacts on animal habitat or sensitive biological resources.

*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 federally protected wetlands or other Waters of the United States occur within the Project site. There will be no impact to such resources.

*When was the water delivery system constructed?*

CDA acquired a portion of the Santa Ana Watershed Project Authority system which is estimated to date to the late 1990's. CDA was formed in 2001 and commenced operations that same year as the first phase of a groundwater management project designed to help maintain hydraulic control of the Chino Basin, to preserve or increase the yield of the Basin, to remove contaminants from the groundwater, and to provide a drinking water supply

*Will the proposed project result in any modification of or effects to, individual features of an irrigation system? 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.*

No

*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.*

Based on a cultural resources review conducted as part of the 2018 IS/MND, no National Register of Historic Places, no California Landmarks or Points of Historical Interest, or locally significant cultural resources were identified within the Project area. The research covered the Chino Airport property and one-half mile buffer around the airport, within which the CDA property is located where the proposed GAC treatment facility will be installed. There are no known archaeological sites in the proposed Project area. Based on an archaeological records search conducted for the 2018 IS/MND, it was concluded that the relative level of sensitivity for historical resources and isolates was low. Potential significant impacts are expected to be reduced to levels less than significant with implementation of mitigation measures. Those measures would include halting operations and initiating evaluation by a qualified professional, in the event that not previously identified resources are encountered or consulting with a qualified professional as to the extent of necessary monitoring.

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

There are no known or anticipated archeological resources as the site has been extensively developed, graded, and compacted in the past.

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

The Project will not have a disproportionately high or adverse effect on low income or minority populations. Benefits of the Project would be shared by all CDA member agencies and their customers through the supply of additional groundwater and by other stakeholders of the Chino Basin due to the contribution to containing the contaminant plume.

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

The Project will not limit access to or ceremonial use of Indian sacred sites or result in other impacts on tribal lands. The Project will be implemented within the limits of the CDA property currently used for water treatment operations.

*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?*

The Project will be implemented within an already disturbed and partially developed area within the CDA property. Any earth-disturbing work would have limited potential to contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species.

## Required Permits or Approvals

Permitting requirements are anticipated to be minimal for the Project. Depending on final design and anticipated area of disturbance, a NPDES General Permit for Discharges of Storm Water Associated with Construction Activity may be required. Grading and/or building permits will be acquired, if needed for the installation of the concrete pad and treatment system. The GAC groundwater treatment system would not generate air emissions requiring permitting under local air regulations. Necessary permits will be acquired prior to begin of construction and will be identified more specifically during final design. Modification to CDA's existing operations permit with the State Water Resources Control Board, Division of Drinking Water will be obtained prior to putting the GAC groundwater treatment system into service.

## Existing Drought Contingency Plan

Please See Attachment C for the existing Drought Contingency Plan. In addition, an update to the Drought Contingency Plan is currently underway. A copy of the Draft Plan that was submitted to the USBR for their review in September 2019, is also attached as Attachment D.

## Letters of Support

See Attachment E for the letter of commitment from the Chino Basin Desalter Authority.

## Resolution

Please see Attachment G for the authorizing Resolution for this project. The certified resolution will be available by October 24, 2019 and will be sent to the USBR at that time.