

# Chino Basin Water Bank Strategic Plan



## WaterSMART Grants: Water Marketing Strategy Grants Funding Opportunity BOR-DO-18-F010

Inland Empire Utilities Agency

Jason Gu, Grants Officer

6075 Kimball Avenue | Chino | CA 91708

[jgu@ieua.org](mailto:jgu@ieua.org)

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# Technical Proposal and Evaluation Criteria

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## Executive Summary

**Date:** July 17, 2018

**Applicant Name:** Inland Empire Utilities Agency

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

**Project Title:** Chino Basin Water Bank Project

The Chino Basin Water Bank Strategic Plan (Project) is designed to promote and implement water storage and recovery programs within the Chino Groundwater Basin (Chino Basin). The Project will bring together the region's water service providers; wastewater service providers; owners and operators of surface water treatment and groundwater recharge and production facilities; and, the Chino Basin Adjudication parties in order to maximize the beneficial use of available water supplies in the Chino Basin and beyond. Four Project partners have successfully established the Chino Basin Water Bank Joint Powers Authority (JPA). The Project partners initiated work on a feasibility study through a cost sharing agreement. Based on the results of outreach, scoping, and planning activities, the Project will develop a water marketing strategy for the Chino Basin Water Bank. The water marketing strategy will describe the proposed approach to establish and expand the new water market and water marketing activities. By establishing a regional water marketing strategy under the framework of a single entity, the Project will enhance long-term water supply sustainability and reliability to benefit the agricultural, municipal, commercial, industrial and environmental needs of the region. The Project will also benefit the \$48 million WaterSMART grant investment by the U.S. Bureau of Reclamation (Reclamation) on the 16 local and regional projects in the region. The water marketing strategy will be implemented in three phases: 1) Achieving Consensus on Chino Basin Water Bank Concept (2016-2018); 2) Chino Basin Water Bank Formation (2018-2019); and, 3) Chino Basin Water Bank Strategy Plan Implementation (2019 through 2021).

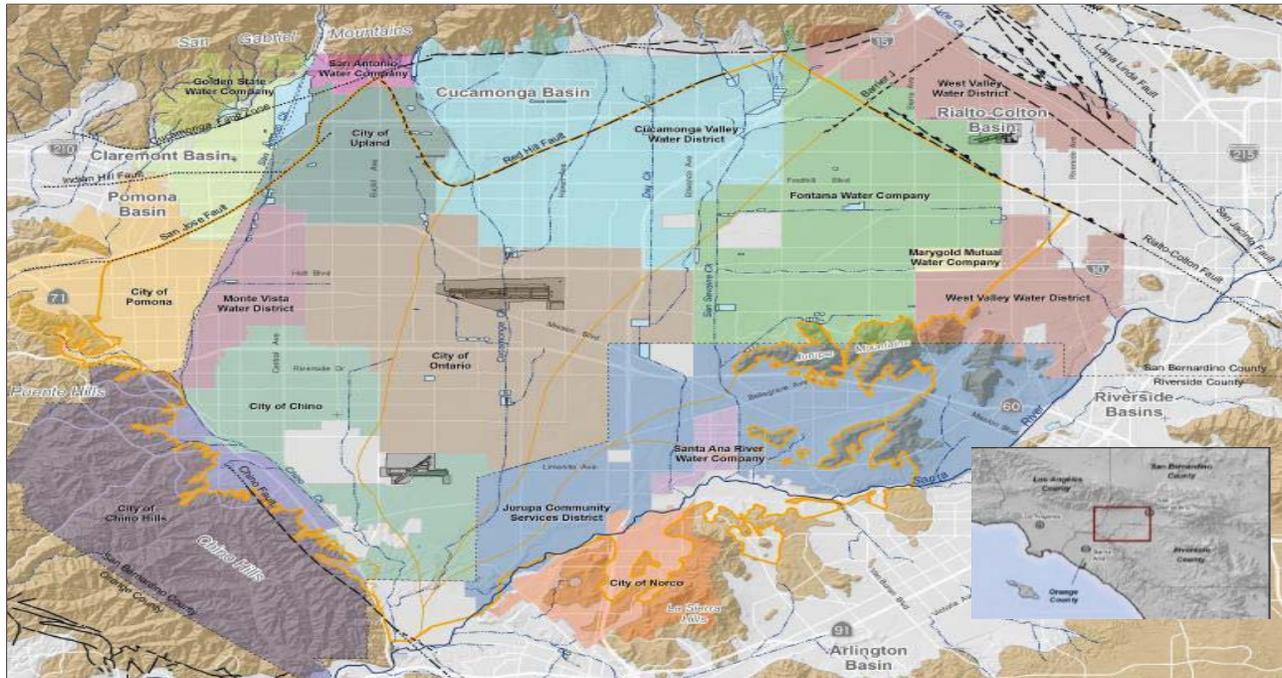
## Background Data

IEUA is a municipal water district serving approximately 875,000 people in 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 (Figure 1). 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 five 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. By developing and implementing a water marketing strategy that makes use of the Chino Basin's excess storage capacity, the Project will improve the region's drought resiliency, decrease dependence on State Water Project (SWP) imports during dry years, and free SWP resources to other areas outside of the Chino Basin, benefitting Reclamation and the state of California.

### Chino Basin Water Rights

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 that is subsequently recharged into the Chino Basin.



**Figure 1** The Chino Groundwater Basin, located in the southwestern portion of San Bernardino County in Southern California (outlined in orange), serves as the principal water supply for 20 municipal agencies.

The hydrologic regime in the Chino Basin has far-reaching, statewide implications for water supply and groundwater management. 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. As remaining undeveloped and agricultural lands in the Chino Basin are converted to urban areas, the need to conserve and recharge high-quality groundwater is continuing to grow in importance. Should Chino Basin groundwater supplies become permanently degraded or depleted, local communities will be at the mercy of increasingly scarce federal and state water imports. In order to ensure that this does not happen, a wide array of stakeholder groups, including IEUA, Jurupa Community Services District, the Santa Ana River Water Company, the cities of Chino, Chino Hills, Norco, and Ontario, and Western Municipal Water District, in consultation with the Santa Ana Regional Water Quality Control Board, continue to work closely together to design and implement comprehensive basin management programs.

Since 1978, total groundwater production in Chino Basin has averaged about 154,000 acre-feet per year (AFY) with a maximum of 189,000 AFY in 2008. The Chino Basin provides approximately 60 percent of the total water used by IEUA’s 875,000 consumers for agricultural, urban, commercial, and industrial uses. The total annual water consumption in IEUA’s service area was 184,060 AF for fiscal year 2016/17, while the total annual water consumption in IEUA’s service area averaged 215,285 AFY over the past five

years. Local water sources include groundwater, surface water, desalinated groundwater and recycled water. With 20 percent growth projected over the next decade, the successful implementation of the proposed Project will be essential to maintaining a safe yield and drought-resistant groundwater basin. IEUA is a member of the Metropolitan Water District of Southern California (MWDSC) and thus acts as a supplemental water provider. One-fourth of the water used in the region is imported from the MWDSC through the SWP. Over the last several years, imported water deliveries from the SWP have declined from a high of 81,600 AF in 2009 to 32,700 AF in 2016. The average annual water supply imported from the Bay-Delta over the last five years is approximately 50,000 AFY.

IEUA and Chino Basin’s major groundwater producing parties, comprised of local public water providers, have invested hundreds of millions of rate-payer and state taxpayer dollars to implement the Optimum Basin Management Program (OBMP) and build local infrastructure in order to maximize beneficial use of local groundwater, surface water, and recycled water resources. These investments have resulted in over 400,000 AFY of groundwater production capacity (including 40,000 AFY of court-mandated groundwater desalination), over 165,000 AFY of imported surface water treatment capacity, over 135,000 AFY of groundwater recharge capacity, and over 63,000 AFY of available recycled water supply. Due to these investments, Chino Basin water providers have significantly reduced reliance on imported water, especially during dry years, and have saved nearly 400,000 AF of groundwater held in local storage accounts, which can be safely accessed during periods of extended drought or emergencies. IEUA and its partners seek to build on this success through utilization of available basin storage to assist the region, state and federal stakeholders in meeting water supply, quality, and environmental goals. The Project recognizes the value of the Chino Basin’s unused groundwater storage capacity and supports the creation of storage and recovery programs for public benefit.

**Relationship with Reclamation**

IEUA has a long-standing relationship with Reclamation (Table 1). Reclamation has provided funding for projects within the Chino Basin that improve regional water supply efficiency and sustainability.

| <b>Project Name</b>   | <b>Amount</b> | <b>Contract Number</b> | <b>Award Date</b> | <b>Contract Termination</b> |
|---|---------------|------------------------|-------------------|-----------------------------|
| CEQA for Regional Water Recycling Project                             | \$22,608      | 01-FC-35-0020          | Prior to 2001     | 11/20/2002                  |
| Chino Basin Comprehensive Water Efficiency Landscape Planning Process | \$125,000     | 00-FC-20-0208          | 6/26/2000         | 3/31/2003                   |
| Regional Recycled Water Program Feasibility Study                     | \$980,000     | 06-FC-35-0189          | 6/27/2006         | 3/31/2008                   |
| Chino Basin Water Efficient Irrigation Demonstration                  | \$50,000      | 05-FG-35-0170          | 9/12/2005         | 1/31/2010                   |
| Regional Recycled Water Program – NE Area                             | \$5,938,454   | R10AC35R16             | 12/22/2009        | 4/15/2011                   |
| California Friendly Water Wise Landscape Program                      | \$30,000      | R09AP35261             | 8/28/2009         | 5/31/2011                   |

| Table 1: Relationship with U.S. Bureau of Reclamation                                 |                     |                 |            |            |
|---|---------------------|-----------------|------------|------------|
| Regional Recycled Water Program – NW Area   | \$7,910,000         | R10AC35R17      | 12/22/2009 | 3/21/2012  |
| Turner Basin/Guasti Multi Use Beneficial Project                                      | \$406,712           | R11AP35315      | 9/22/2011  | 9/30/2013  |
| Regional Residential Landscape Surveys and Retrofit Programs                          | \$199,000           | R12AP35353      | 9/7/2012   | 12/31/2014 |
| Construct Regional Recycled Water Program   | \$4,940,000         | 08-FC-35-0237-1 | 3/20/2009  | 6/30/2015  |
| 1010 Zone Pump Station and New Product Water Pipelines                                | \$3,970,000         | R12AC35339      | 9/24/2012  | 11/30/2016 |
| Brine Concentrate Reduction Facility  | \$14,551,296        | R15AC00059      | 9/14/2015  | 8/31/2017  |
| Groundwater Supply Wells and Raw Water Pipelines                                      | \$5,629,652         | R14AC00049      | 9/17/2014  | 12/31/2019 |
| Groundwater Recharge Yield Enhancement Conjunctive Use Project for Stormwater Capture | \$750,000           | R15AP00151      | 9/4/2015   | 5/31/2017  |
| Update of the Chino Basin Drought Contingency Plan                                    | \$200,000           | R16AC00113      | 9/15/2016  | 9/30/2018  |
| RP-3 Basin Improvement Project  | \$300,000           | R16AP00142      | 9/16/2016  | 9/30/2018  |
| <b>Total</b>  | <b>\$47,562,466</b> |                 |            |            |

## Project Location

See Figure 1 for a map of the project location.

## Project Description

The Chino Basin Water Bank (Funding Group II Project) has multiple benefits. It will:

- Proactively address drought and water supply shortages and increase long-term water management flexibility
- Enable non-local parties to store and use groundwater in the Chino Basin, allowing for transfers and exchanges inside and outside of the Chino Basin while providing broad regional benefits to Chino Basin producing parties
- Generate revenues to equitably fund Chino Basin Water Bank infrastructure, increase system reliability, reduce costs, and maximize benefits shared by Project stakeholders and local rate-payers
- Improve local water quality and reliability in the Chino Basin and surrounding watershed, spur economic growth, improve water reliability, reduce long-term costs for non-local stakeholders, and provide the State opportunities to store water in support of the California Bay-Delta’s wetlands and fisheries

- Take advantage of opportunities to store supplemental water in the Chino Basin when it becomes available and engage a regional market for stored water

The Chino Basin Water Bank may also provide for the sale of local groundwater as allowable under the Chino Basin's existing regulatory and legal framework, pursuant to the 1978 Judgment, and thus successful Project implementation will require an analysis of the mechanisms for transferring water within the Chino Basin in accordance with legal constraints on existing water rights. Four Project partners, including IEUA, city of Ontario, Cucamonga Valley Water District, and Monte Vista Water District, have come together to initiate the development of the Chino Basin Water Bank by forming a planning JPA. This formation brought together the region's water providers, owners and operators of surface water treatment and groundwater recharge and production facilities, and Chino Basin Adjudication parties, in order to maximize the beneficial use of available California water supplies. This effort included building consensus among the partners responsible for establishing the Chino Basin Water Bank.

The JPA is taking a three-phased approach to developing and implementing the Chino Basin Water Bank. Phase 1 is substantially complete. Recognizing that broad support among Basin stakeholders is critical to developing a functional water bank, extensive stakeholder outreach consisting of one-on-one interviews, meetings, and workshops was conducted by the JPA consultants. This outreach effort helped to capture ideas regarding a water bank framework as well as identify any stakeholder concerns. Each phase is briefly described below.

**Phase 1: Achieving Consensus on Chino Basin Water Bank Concept (2016-2018)** – The goal was to seek stakeholder input on a Chino Basin Water Bank framework for implementation and operation. This framework is in process and has established “guiding principles” that the Chino Basin stakeholders can support and “bank elements” consistent with the guiding principles. The framework draws from the experience of other California water banks and accounts for the Chino Basin's current initiatives, stakeholder interests and input, sustainability opportunities, and local and state objectives.

**Phase 2: Chino Basin Water Bank Formation (2018-2019)** – The second phase begins in summer 2018 and will establish the operational details of a Chino Basin Water Bank. This entails evaluating existing facilities that could be used to operate the Chino Basin Water Bank; developing a financial model and structure to support the Chino Basin Water Bank operation and administration, and preparing a Storage and Recovery Application (including conduct of a Material Physical Injury analysis (required under the Judgment)). A Chino Basin Water Bank operations manual will also be developed to ensure the key processes and procedures for bank activities are clearly documented. Other key Phase 2 elements include extensive and ongoing Basin stakeholder outreach, engaging Watermaster on the Storage Framework development they have underway that will identify the volume of storage capacity available, and preliminary market assessment.

**Phase 3: Chino Basin Water Bank Implementation (2019 -2021)** – The third project phase will be a transitional period from bank formation to full implementation. Phase 3 includes developing a formal marketing plan, providing staffing support, and transitioning services to implement the Chino Basin Water Bank (CBWB).

#### **Required Project Elements (Funding Group II)**

The plan for the Chino Basin Water Bank encourages participation by multiple local and regional stakeholders; addresses the three elements of a water marketing strategy; and, meets the required procedural steps, concluding with the preparation of a technical report that will summarize the Project findings and conclusions.

**Project Element 1. Outreach and Partnership Building** – Four Project partners, including IEUA, city of Ontario, Cucamonga Valley Water District, and Monte Vista Water District, have come together to initiate the development of the Chino Basin Water Bank by forming a Joint Powers Authority (JPA) to supplement data and findings with additional technical evaluations and modeling needed to define the Project’s governance structure, facility needs, financial and operational plans. Preparing the JPA and associated management structure consistent with the Judgment was essential to productive partnership building. Achieving consensus was an essential part of the process that will ensure Project success. IEUA and its Project partners will continue to work with regional stakeholders to refine the water bank concept structure based on identified objectives and guiding principles. Coordination will continue among the following stakeholders: the city of Ontario; Cucamonga Valley Water District; Monte Vista Water District; Watermaster; the cities of Chino, Chino Hills, Rancho Cucamonga, and Upland; Fontana Water Company; Jurupa Community Services District; San Bernardino Valley Municipal Water District; San Gabriel Valley Water District; Three Valleys Municipal Water District; Orange County Water District; MWDSC; Santa Ana Watershed Project Authority; Water Facilities Authority; other local municipalities; flood control districts, and, regulatory agencies, in addition to a more diverse range of representatives from the Milk Producers Council, the Agricultural Pool, the Rancho Cucamonga Mill, and various water-related consultants and law firms. This outreach and partnership building has included research, public meetings, and other forms of communication to encourage Project buy-in and engagement.

In addition to the stakeholders mentioned above, the JPA has been coordinating with various technical staff and consultants to identify investigations or studies to be performed, such as: infrastructure, groundwater, and financial modeling; water rights and acquisition; environmental services; and, other trades and practices as needed to develop the Chino Basin Water Bank.

**Project Element 2. Scoping and Planning Activities**

Project scoping and planning activities will be highly integrated with partnership building, with the purpose of further developing and refining the structure of the Chino Basin Water Bank. This will require a review of existing data in order to assess demand for supplemental water; evaluate the potential revenue streams against the cost of implementing the water market; and ensure that the selected approach conforms with the legal and regulatory requirements of the OBMP. Project scoping and planning activities, intended to explore the potential to develop a new water market, will focus on the following elements described in Table 2.

| <b>Table 2. Scoping and Planning Activities</b>  |  |   |
|--|--|---|
| <b>Activity</b>  | <b>Status</b>  | <b>Reference</b>  |
| Quantify potential local, regional, and statewide benefits, particularly through understanding water sale markets and prospective customers inside and outside of the Chino Basin and Santa Ana River Watershed.   | Will be conducted in Phase 2 and 3 of the Project.   | Planned scope of work for Phase 2 and 3 of the Project. |
| Quantify the costs to plan and implement a water marketing strategy. Data should provide input to capital planning and financial management of the proposed water resource programs, which may include rate design modeling and analysis; funding and revenue evaluations; cost of service allocations; utility rate studies; financial feasibility and valuation analyses; project cost allocations; and risk analyses. | The operating costs of the Chino Basin Water Bank will be defined in Phase 2 of the Project. Capital facilities will be defined and a financial model developed. | Planned scope of work for Phase 2 of the Project.       |

| Table 2. Scoping and Planning Activities   |   |   |
|--|---|---|
| Activity   | Status  | Reference   |
| Quantify groundwater storage requirements based on prospective market data. The planning activities should provide technical support services as they relate to the management of the groundwater supply within the Chino Basin, which may include surface and groundwater modeling; salt load and nutrient management and modeling; deposit and withdrawal storage modeling; and development of decision support tools to identify cost-effective strategies for managing surface and groundwater supplies. | Modeling is currently being undertaken by Watermaster. Preliminary results indicate there is at least 400,000 AF of additional storage capacity available in the Basin. | Watermaster Storage Framework Workshops.          |
| Assessing current Chino Basin operations, management practices, and conjunctive use initiatives.   | Phase 2 of the Project will consider these activities.  | Planned scope of work for Phase 2 of the Project. |
| Assessing regional water resource initiatives, such as the Santa Ana River Conservation and Conjunctive Use Program (SARCCUP).   | SARCCUP may be folded into the Chino Basin Water Bank.  | Planned scope of work for Phase 3 of the Project. |
| Assessing the mechanisms for transferring water within the Chino Basin in accordance with legal constraints on existing water rights.  | Phase 3 of the Project will consider this.  | Planned scope of work for Phase 3 of the Project. |
| Developing the Chino Basin Water Bank governance criteria and framework.   | The planning JPA has been established and will transition to an operating JPA as the Chino Basin Water Bank begins operations.  | JPA formation document.                           |

**Project Element 3. Development of a Water Marketing Strategy** – Based on the results of outreach, scoping, and planning activities, IEUA and its Project partners will develop a water marketing strategy for the Chino Basin Water Bank. The water marketing strategy will describe the proposed approach to establish and expand the new water market and water marketing activities based on the results of the activities that are performed under Project Elements 1 and 2. Many of these complementary activities will continue to enhance and inform the planning process. Work efforts for this Funding Group II Project may include:

- Identifying existing and new facilities needed to augment groundwater banking operations
- Developing a financial structure, pricing, and marketing plan
- Developing a Chino Basin Water Bank operations plan
- Developing a hydraulic infrastructure model, or marketing support tool, capable of simulating various water supply and distribution conditions; modeling to help optimize water supply distribution and operations of existing and future facilities under a larger regional program; develop decision support tools to identify cost-effective strategies for distributing water supply under various scenarios; identify and evaluate system restrictions; and, evaluate the need for additional water supply facilities, interconnections or localized treatment facilities to support regional initiatives
- Conducting groundwater modeling to simulate various water management practices such as conjunctive use and variable groundwater productions, consistent with the goals of the OBMP

- Conducting a conjunctive use study for management planning to formulate the rules and requirements needed to make the water marketing activities function; and
- Developing inter-agency, regional and institutional contracts and agreements, which will include provisions for future monitoring and data sharing among stakeholders

See Table 3, below, for a description of each requirement and how they will be addressed. See Table 4 for the project summary.

| <b>Table 3. Water Marketing Strategy Requirements</b>  |  |
|--|--|
| <b>Requirement</b>   | <b>Water Marketing Strategy</b>  |
| Describe how the water market/water marketing activities will be implemented following completion of the strategy including:   |  |
| <i>How will the water market operate or how will marketing activities be conducted, including a discussion of any alternatives that were considered and support for why the recommended approach was selected?</i> | The marketing plan will be managed by the JPA. Several alternatives were discussed in the initial workshop with stakeholders in 2016. There were water bank models discussed, including Kern County/Castaic Lake Water Agency (CLWA). Several options for how to approach the water bank including 1) “Banker”: customers make deposits and withdrawals 2) “Lender”: Customers borrow water, return with interest and 3) “Broker”: Assist customers in finding available investment opportunities. |
| <i>How will long-term project management and financial sustainability be addressed?</i>  | The JPA will provide ongoing oversight and funding. Costs will be recovered through fees on participating parties. The financial model will delineate the appropriate fee structure. Fees will be tailored to the needs of participating parties.  |
| <i>How will the actual or potential administrative structure and institutional components be addressed?</i>  | A JPA has been established and will provide the responsible party to administer the activities of the Project. The JPA has provisions for additional basin stakeholders to join.   |
| <i>How will the participants, water rights, and infrastructure be structured?</i>  | The Project will be positioned as a storage program with the current Judgment and administered in accordance with all Watermaster and Judgment requirements. This will ensure all water rights are respected.  |
| <i>How will transactions be tracked?</i>   | A reporting structure will be developed in Phase 2 of the Project but is envisioned to maintain existing Watermaster accounting methodology. The JPA would submit information to Watermaster, which would maintain the official record of accounts.  |
| <i>What are the issues to be resolved and the steps to be taken prior to implementation?</i>   | Details of the physical facilities involved including cost basis need to be defined. A financial model must be developed to recover appropriate costs and compensate for use of participating parties’ facility costs. A marketing plan must be developed. Significant stakeholder engagement must occur throughout the establishment of the Project.  |
| Describe the legal framework for the water market/marketing activities, including:   |  |

**Table 3. Water Marketing Strategy Requirements**

| Requirement   | Water Marketing Strategy  |
|---|---|
| <i>How will the water marketing activity fit within state water law requirements?</i>   | The Project will comport with all Judgment requirements. This is essential to sustain stakeholder support in the Chino Basin. Willing buyer/seller type agreements will be sought and all appropriate environmental documentation will be obtained. The Project is administered by public agencies and will undergo transparent and broad scrutiny.   |
| <i>Are there any contracts, interstate-compact treaties, or other legal requirements that may impact the water market or marketing activities?</i>  | The participants of the Project are yet to be determined but exchanges of water on the State Water Project and Colorado River could ultimately be involved. MWDSC will be heavily involved in any such activity. The JPA understands that collaboration is the key to success in any water discussions in California.   |
| <i>What are the actual or potential rules and requirements that will govern the implementation of the water marketing activities?</i>   | The Judgment that defines how the Chino Basin will operate for the benefit of all the region establishes the basis for sustainable operations of the Chino Basin. The rules and requirements established by the Judgment will be adhered to in the establishment and operation of the Project. This will be ensured by meticulously following the requirements of the Judgment and Watermaster.   |
| <i>What are the actual or potential contracts, agreements that are being drafted or would need to be drafted, and any legal actions that would need to be taken (e.g., change of water rights) to support the water marketing activities?</i> | Contract vehicles will be drafted in Phase 2 of the project and will be modeled after existing agreements for other water banks as appropriate (e.g. Semitropic, High Desert, Strand Ranch, etc.). These will be tailored to the requirements/cost elements of the Project. Any contract that is developed will be vetted with all affected parties to ensure that the Project performs as anticipated.   |
| <i>What are any legal issues to be resolved prior to Project implementation?</i>  | A Storage and Recovery Application will need to be filed with Watermaster. It is not anticipated to be a problem. Depending on the participants, exchange or transfer agreements will need to be entered into on a case by case basis.  |
| <b>How water marketing activities will be monitored, including:</b>   |   |
| <i>How will market participants track the physical movement of water from seller to buyer?</i>  | The operating rules of the Project will define the steps that will guarantee that “wet” water is stored and recovered. Depending on the participant, this may require exchange agreements, payment of wheeling charges, payment of water acquisition charges, etc. Metering requirements will be established (again tailored to the participants). Reporting requirements will be established within the existing Judgment. Measuring protocols will be put in place. |

| Table 3. Water Marketing Strategy Requirements  |   |
|---|---|
| Requirement   | Water Marketing Strategy  |
| <i>How will purchasers recognize the receipt of water?</i>  | Metering will define the volumes delivered to storage and retrieved from storage. Where in-lieu deliveries are involved, measuring protocols will be defined in advance by the participating parties and the JPA. These protocols will be built into the contracts. Audits will be conducted to ensure performance.   |
| <i>How will transactions be monitored to avoid harm to other water users?</i>   | Watermaster will continue to maintain all records. The JPA will operate within Watermaster rules. The JPA will report transaction information to Watermaster. Watermaster is obligated to ensure such harm does not occur.  |
| <b>Decision support tools:</b>  |   |
| <i>What decision support tools, software databases, registries, dashboards, or models were developed as part of the strategy or still need to be developed in order to facilitate implementation of the water marketing strategy?</i> | An operational model and financial model are planned for development in Phase 2 of the Project.   |
| <b>To the extent that the Project included pilot activities, describe those activities and their outcome, including:</b>  |   |
| <i>What types of pilot activities have been undertaken?</i>   | Phase 1, as described above, has been completed leading to basin consensus on the guiding principles of the Project and key elements. Details of the elements will be developed in Phase 2 which commences in Summer 2018.  |
| <i>What was the outcome of all pilot activities including what was learned, and how will this information be incorporated into the water marketing strategy?</i>  | A draft report summarizing Phase 1 activities has been submitted to the JPA partners. The feedback from the basin parties has been very helpful to frame the elements of a workable Project in the Chino Basin. Continued outreach will be essential to move from Project concept to operations. The Project will incorporate the feedback into the water marketing strategy. Multiple basin stakeholders have interest in acquiring, storing, and selling water through the Project. |

| Table 4. Project Summary<br>(Funding Group II) |   |   |
|--|---|---|
| Project Element                                | Outcome   | Deliverable   |
| Outreach and Partnership Building              | Achieve consensus among Chino Basin stakeholders regarding guiding principles, establishment, governance, and operations. | <ul style="list-style-type: none"> <li>○ Research, public meetings, and other forms of communication to encourage Project buy-in and engagement.</li> <li>○ Executed Joint Powers Authority (JPA) agreement.</li> <li>○ Communication and Outreach Plan.</li> </ul> |

|   |  |   |
|---|--|---|
| Scoping and Planning Activities           | Develop and refine the structure of the Chino Basin Water Bank (Table 3).        | <ul style="list-style-type: none"> <li>○ Project Work Plan submitted to Reclamation for review.</li> </ul>  |
| Development of a Water Marketing Strategy | Develop and implement the water marketing strategy within three years (Table 4). | <ul style="list-style-type: none"> <li>○ Possible inter-agency, regional and institutional contracts and/or agreements.</li> <li>○ Technical Project Report submitted to Reclamation at least 60 days before completion of the performance period.</li> </ul> |

## Evaluation Criteria

### Evaluation Criterion A – Water Marketing Benefits (40 points)

*Explain whether the water market/activity will address a specific water supply shortfall*

The Chino Basin relies on groundwater from inside and outside the Chino Basin; local surface water from various creeks originating in the San Gabriel Mountains; and, imported and recycled water supplies provided by IEUA. As a response to the series of droughts that have impacted Southern California over the past 100 years, in particular 2014 and 2015, which were two of the driest years in history in California, Chino Basin water parties have developed a sophisticated network of water supply facilities. See the Existing Analysis section for a drought map and sources. Chino Basin water parties have developed a sophisticated network of water supply facilities. The following is a list of future supply challenges and shortfalls facing the Chino Basin:

- Increasing the Operating Safe Yield for the Chino Basin
- Mitigating the loss of natural infiltration caused by higher density development, reduced outdoor landscaping, and irrigation efficiency measures
- Mitigating land subsidence through targeted groundwater recharge or limiting localized groundwater production in specific areas
- Instituting different management practices for groundwater recharge in each of the five Chino Basin management zones
- Identifying additional supply sources to help meet Chino Basin groundwater recharge goals
- Addressing slowly rising levels of total dissolved solids (TDS) and nitrate levels in groundwater and the potential loss of available supply as further degradation occurs
- Constructing additional treatment infrastructure for groundwater; and,
- Containing and treating existing groundwater contamination plumes

The Chino Basin Water Bank is one of the most effective ways to address the identified challenges and shortfalls by increasing the storage volume of the Chino Basin; increasing the facilities available for infiltration; and identifying additional sources for groundwater recharge. Implementation of the Project will help drought-proof the Chino Basin by increasing local groundwater reserves that are less vulnerable to fluctuations in evaporation. In addition, “leave behind water” is anticipated where Project participants agree to leave some percentage of their stored water behind, which will provide a sustainable supply to augment recharge of the basin, help meet replenishment obligations, and create a vibrant market for stored water in the Basin.

*Explain how and to what extent the proposed water market or water marketing activities will improve water supply sustainability in general in the area upon implementation of the strategy.*

*Reducing the likelihood of conflicts over water:*

By making water available during periods of drought, the Chino Basin Water Bank will reduce water conflicts while still reducing diversions. It will require an innovative approach given the massive scale, diversity, and geographic distribution of potential stakeholders across the region.

*Increasing resiliency to drought:*

During the recent development of the IRP, Chino Basin water parties, along with other retail and wholesale water agencies within the larger Santa Ana River Watershed, collaborated to develop the first watershed-wide conjunctive use program. The Santa Ana River Conservation and Conjunctive Use Project (SARCCUP) will improve the Santa Ana River Watershed's water supply resiliency through development of additional dry-year yield supply. The Chino Basin Water Bank will assist in implementing SARCCUP by facilitating the movement of SARCCUP water by making the Chino Basin's underutilized 1,000,000 plus AF of storage available for use as a reliable supply to supplement limited imported water supplies during periods of drought.

*Sustaining agricultural communities:*

The Chino Basin Water Bank is expected to operate in conjunction with the Chino Basin Adjudication parties, which already include the region's agricultural users and dairy farmers (Agricultural Pool); industrial users (Non-Agricultural Pool); and the municipalities (Appropriative Pool). By building consensus among various partners and stakeholders to improve water quality and available supply in a well-functioning market, the Project will benefit future water bank customers and current Chino Basin adjudication pools.

*Demonstrating a water marketing approach that is innovative and may be applied by others:*

The State of California Proposition 1 Water Storage Investment Program (WSIP), administered by the California Water Commission (CWC), has tentatively approved nearly \$206.9 million in funding for IEUA's Chino Basin Conjunctive Use Environmental Water Storage/Exchange Program (Chino Basin Project). The Chino Basin Project will be operated under the Chino Basin Water Marketing Strategic plan, which has demonstrated strong support from the State of California. The Water Bank Strategic Plan will be critical to the success of the WSIP investment; it will play a key role in the implementation of the Chino Basin Project once it is constructed, as well as other IEUA water bank projects. (see Attachment A for *Inland Valley Daily Bulletin* article about the project).

*Providing instream flows for species, recreation or water quality objectives:*

The Chino Basin Water Bank will address TDS and nitrate concerns by accounting for added salts from the deposits to the Water Bank. It will also improve local water quality and reliability in the Chino Basin and surrounding watershed and provide the State opportunities to store water in support of the California Bay-Delta's wetlands and fisheries.

*Explain the extent to which the water market/activity will be ready to proceed upon completion*

As part of market strategy development, the Project has already produced an executed Joint Powers Authority (JPA) agreement and inter-agency cost sharing agreements, regional contracts or agreements between stakeholder groups (Table 3). Execution of these documents will allow the Project to proceed immediately upon completion of the strategy and allow the JPA to administer the Chino Basin Water Bank independently of other interests (notwithstanding Watermaster oversight through the Judgment). Previous planning has already been performed; links are provided in the Existing Analysis section of this application. The Project partners held an outreach workshop in August 2016. Attachment B includes the RSVP list and associated PowerPoint presentation. This Workshop was followed up with large outreach

workshops in October 2017 (to develop guiding principles) and February 2018 (to affirm key Project elements). Another meeting is scheduled for August 2018 to review the Phase 1 report. In addition, dozens of meetings with the Chino Basin stakeholders were held from mid-2017 to present. The water market activities will be ready to proceed upon the completion of the strategy.

**Evaluation Criterion B – Level of Stakeholder Support and Involvement (30 points)**

*Identify stakeholders in the planning area who have committed to be involved in the planning process.*

Four Project partners, including IEUA, city of Ontario, Cucamonga Valley Water District, and Monte Vista Water District, have come together to initiate the development of the Chino Basin Water Bank and have established a JPA to supplement data and findings with additional technical evaluations and modeling needed to define the Project’s governance structure, facility needs, financial and operational plans.

The Chino Basin Water Bank planning efforts involve a diverse group of stakeholders, and the network of engaged stakeholders will continue to expand during outreach meetings and workshops. Currently, the initiating stakeholders, or Project partners, have already completed a Cost Sharing Letter Agreement (Attachment C). In 2016, this Agreement was negotiated and finalized between four partnering agencies: IEUA, Monte Vista Water District, Cucamonga Valley Water District, and Ontario Municipal Utilities Company. The intent of the Agreement was to set forth the understanding and sharing of legal and consultant support services for the Chino Basin Water Bank to develop a feasibility review and foundational document with costs shared equally among all parties. Ongoing planning activities in the region include the Chino Basin Safe Yield Reset; Chino Basin Storage Management Plan; Chino Basin Recharge Master Plan; Santa Ana River Conservation and Conjunctive Use Program (SARCCUP); and, other efforts related to the implementation of the OBMP.

The scope of the services to be performed through the Cost Sharing Agreement include:

- JPA Development – This task involved the drafting of the Chino Basin Water Bank JPA, specifically defining JPA governance and the roles and responsibilities of its partners, which will eventually include all major producers in the Chino Basin. The first meeting of the JPA governing board was held May 30, 2018;
- Water Bank Structure Evaluation – This task will include technical and financial analyses of water banking mechanics. This evaluation is expected to aid in determining the best structure of the Chino Basin Water Bank; and,
- Economic Benefit Evaluation – This task will include the evaluation of the anticipated economic benefits and regional benefits as a whole.

Public outreach to local stakeholders has already been initiated. Attachment B lists the participants who RSVP’d and provides the PowerPoint presentation for the initial outreach meeting. In addition to the entities who RSVP’d, additional attendees joined on a walk-in basis. In addition, we have received multiple letters of support of this project (see Attachment D).

*Describe stakeholders in the planning area*

*Regional Support*

IEUA has secured Letters of Support from: the Monte Vista Water District (MVWD); Cucamonga Valley Water District (CVWD); the city of Ontario; the Jurupa Community Services District (JCSJ); and the Santa Ana Watershed Project Authority (SAWPA) (Attachment D). In addition, the Project partners have all committed funding (Attachment C). The participants of the outreach workshop held in August of 2016 have shown interest in supporting the Project. The Project partners will continue to perform outreach to these parties in order to ensure their continued participation. This is especially important since

achieving broad consensus is central to Project success. Participants of the outreach workshop included representatives from municipalities, water suppliers, the Chino Basin Watermaster, San Bernardino County, the Milk Producers Council, the Agricultural Pool, the Rancho Cucamonga Mill, and various water-related consultants and law firms. Follow-up stakeholder workshops were held in October 2017 and February 2018 and an additional workshop is scheduled for August 2018 (see Attachment E). All were well-attended. The JPA will continue to work closely with all stakeholders to address any concerns.

#### *Statewide Support*

The State of California Proposition 1 Water Storage Investment Program (WSIP), administered by the California Water Commission (CWC), has tentatively approved nearly \$206.9 million in funding for IEUA's Chino Basin Conjunctive Use Environmental Water Storage/Exchange Program (Chino Basin Project). The Chino Basin Project will be operated under the Chino Basin Water Marketing Strategic plan, which has demonstrated strong support from the State of California. The Water Bank Strategic Plan will be critical to the success of the WSIP investment; it will play a key role in the implementation of the Chino Basin Project once it is constructed, as well as other IEUA water bank projects. (see Attachment A for *Inland Valley Daily Bulletin* article about the project).

#### *Is there opposition to the proposed strategy?*

The only opposition expressed to date is related to the uncertainty surrounding the mechanisms and procedures for operating the Chino Basin Water Bank, which will necessitate coordination with Watermaster, integration with the incentives of the original Judgment parties, and quantification of the expected benefits for all parties involved. The continued outreach and planning activities proposed as part of the Project are intended to address these challenges and support continued consensus among the stakeholders. In particular, Watermaster is required to perform a rigorous evaluation of any groundwater storage application in order to confirm that the proposed storage is consistent with the Judgment and presents no material physical injury (MPI) to any Judgment party. Watermaster is currently reevaluating the Chino Basin's Safe Yield and has described its desire "to participate in creating a storage management plan that will leverage the available storage in the basin to the greatest benefit for all parties." The Project is therefore consistent with Watermaster's vision, which is crucial to success given its final approval of the storage account. Watermaster is developing a Storage Framework. Modeling results have indicated that up to 1,000,000 AF of storage is possible without significant MPI. This is sufficient to support a sizable project.

#### *Do any separate planning efforts express support for the proposed water market/transaction?*

The Chino Basin is a heavily studied and managed basin with several supporting local and regional plans. Each of the supporting plans have their own purpose and relationship to the Chino Basin Water Bank. Table 5 describes the intent of each plan and its relationship to the Project.

**Table 5. Chino Basin Water Bank and Associated Local and Regional Plans**

| Plan  | Purpose  | Relationship to the Chino Basin Water Bank  |
|---|--|---|
| <b>Optimum Basin Management Plan</b>                            | <i>Enhance basin water supplies, protect and enhance water quality, improve basin management and equitably finance the OBMP; executed by the Judgment Parties.</i>   | The OBMP describes the available storage capacity and identifies the framework for storage activities in the Chino Basin. The Project will attempt to expand on its framework, develop necessary agreements, identify required infrastructure upgrades, and develop administrative mechanisms to further the goals of the Chino Basin Water Bank. |
| <b>Chino Basin Safe Yield Reset</b>                             | <i>Reestablish the “safe yield” of the Chino Basin; executed by the Judgment Parties and endorsed by the Chino Basin Watermaster.</i>  | The safe yield was reevaluated and reduced to reflect changes to long-term hydrology and near-term cultural conditions. The Project will be structured to ensure that the Chino Basin’s safe yield is not diminished or altered by the Chino Basin Water Bank.  |
| <b>Chino Basin Recharge Master Plan</b>                         | <i>Conduct groundwater replenishment for water supply reliability; prepared by the Chino Basin Watermaster in consultation with IEUA and Chino Basin Water Conservation District.</i>                              | The Chino Basin Water Bank will likely result in additional infrastructure in order to recharge, inject, or withdraw from the Chino Basin, activities which must be managed in conjunction with the Recharge Master Plan.   |
| <b>Santa Ana River Conservation and Conjunctive Use Program</b> | <i>Develop a program that will enhance Chino Basin and watershed drought resilience, enhance groundwater quality, increase yield, and address point recharge needs; developed by five regional water agencies.</i> | SARCCUP will utilize the Chino Basin Water Bank as a user to meet the Program’s intended objectives.  |
| <b>Urban Water Management Plan</b>                              | <i>Provide water supply planning for a 20-year planning period for the region; developed by IEUA.</i>  | The plan considers supplemental water sources for drought planning, including the use of a water bank.  |
| <b>Integrated Water Resources Plan</b>                          | <i>Provide the Region’s blueprint for ensuring reliable, cost-effective, and environmentally responsible water supplies for the next 25 years; developed by IEUA.</i>  | The IRP describes the potential benefits of having a functional water bank in the Chino Basin.  |

*Describe what efforts that you will undertake to ensure participation by diverse stakeholders*

To further this participation, IEUA and its Project partners will continue outreach and partnership building efforts to obtain additional supporting stakeholders. The team expects to accomplish this

through individual meetings, workshops and notices, such as the workshops already held. The Project team will specifically work with these regional stakeholders: the cities of Chino, Chino Hills, Rancho Cucamonga, Pomona, and Upland; Watermaster; Fontana Water Company; the Jurupa Community Services District; San Bernardino Valley Municipal Water District; San Gabriel Valley Water District; Three Valleys Municipal Water District; Orange County Water District; Metropolitan Water District of Southern California (MWDSC); Santa Ana Watershed Project Authority; Water Facilities Authority; other local municipalities; and regulatory agencies in addition to a diverse range of representatives from the Milk Producers Council, the Agricultural Pool, the Rancho Cucamonga Mill, and various water-related consultants and law firms.

**Evaluation Criterion C – Ability to Meet Program Requirements (20 points)**

*Describe how the three elements of a water marketing strategy will be addressed*

Each of the three elements of the water marketing strategy are described in detail in the Project description and will be addressed by tasks in executed contracts performed by the technical consultants Sierra Water Group and ARCADIS. Some work, including preliminary comparative analysis, outline modeling of the Chino Basin Water Bank, and Chino Basin Working Group Meetings, have already been performed and will be relied upon during the outreach and planning stages. As noted in the proposed budget (Table 8), ARCADIS “phases” and “sub-phases” are based on a proposal submitted by ARCADIS and may change as the required Project elements are developed, particularly in regards to Phase 3 tasks, which are still in the planning stages. The estimate provided by Arcadis for Phase 3 is \$300,000. See Table 6 (below) for a list of tasks, milestones and completion dates. Project Schedules can be found in Attachment F.

IEUA and its Project partners will meet the requirements of Project Element 1 – Outreach and Partnership Building by:

- Coordinating meetings and facilitating stakeholder workshops
- Coordinating with various technical staff and consultants to identify additional investigations or studies to be performed, such as Infrastructure, groundwater, and financial modeling; water rights and acquisition; environmental services; and, other trades and practices as needed to develop the Chino Basin Water Bank
- Developing a Communication and Outreach Plan

IEUA and its Project partners will meet the requirements of Project Element 2 – Scoping and Planning Activities by:

- Developing benchmark criteria and metrics for data gathering efforts
- Quantifying potential local, regional, and statewide benefits, particularly through understanding water sale markets and prospective customers inside and outside of the Chino Basin and Santa Ana River Watershed
- Quantifying the costs to plan and implement the water marketing strategy
- Quantifying groundwater storage requirements based on prospective market data
- Assessing current Basin operations, management practices, and conjunctive use initiatives
- Assessing regional water resource initiatives, such as the SARCCUP
- Assessing the mechanisms for transferring water within the Chino Basin in accordance with legal constraints on existing water rights
- Developing the Chino Basin Water Bank governance criteria and framework

- Developing a Project Workplan

IEUA and its Project partners will meet the requirements of Project Element 3 – Scoping and Planning Activities by:

- Preparing the JPA and associated management structure consistent with the Judgment
- Identifying the facilities needed to augment groundwater banking operations;
- Developing a financial structure, pricing, business, and marketing plan
- Developing a Chino Basin Water Bank operations plan
- Developing a hydraulic infrastructure model, or marketing support tool, capable of simulating various water supply and distribution conditions; modeling to help optimize water supply distribution, reliability and potential infrastructure restrictions
- Conducting groundwater modeling to simulate various water management practices such as conjunctive use and variable groundwater productions, consistent with OBMP goals
- Conducting a conjunctive use study for management planning
- Developing inter-agency, regional and institutional contracts and agreements, which will include provisions for future monitoring and data sharing among stakeholders
- Producing a Technical Project Report

**Table 6.** Project Schedule

| <u>PHASE</u>   | <u>MILESTONE</u>                                      | <u>END</u>     |
|--|---|----------------|
| <b><i>Phase 1: Feasibility Studies</i></b>                                   |   |                |
| Task 1a.   | Comparative Analysis                                  | Completed 2016 |
| Task 1b.   | Outline “Model” Water Bank                            | Completed 2016 |
| Task 1c.   | Chino Basin Working Group Meetings                    | Completed 2016 |
| <b><i>Phase 1: Achieving Consensus on Chino Basin Water Bank Concept</i></b> |   |                |
| <b>TASK 1: Project Management</b>  |   |                |
| Task 1a.   | Conduct kickoff meeting                               | July 2017      |
| Task 1b.   | Budget tracking/progress reporting                    | April 2018     |
| Task 1c.   | Conference calls/team meetings (internal)             | April 2018     |
| Task 1d.   | Bimonthly progress status meetings (5)                | March 2018     |
| Task 1e.   | Project administration                                | April 2018     |
| <b>TASK 2: Refine Bank Conceptual Structure</b>                              |   |                |
| Task 2a.   | Review benchmark material developed to date           | July 2017      |
| Task 2b.   | Receive briefing on Watermaster activities and issues | July 2017      |
| Task 2c.   | Receive briefing on basin operations                  | Aug. 2017      |
| Task 2d.   | Receive briefing on the groundwater model             | Aug. 2017      |
| Task 2e.   | Receive briefing on SARCCUP model                     | Aug. 2017      |
| Task 2f.   | Develop suggested revisions list                      | Aug. 2017      |
| Task 2g.   | Update/modify PowerPoint                              | Sept. 2017     |
| Task 2h.   | Finalize conceptual banking approach/value statements | Sept. 2017     |
| <b>TASK 3: Stakeholder Outreach</b>  |   |                |
| Task 3a.   | Confirm key stakeholders and develop contact strategy | July 2017      |
| Task 3b.   | Develop understanding of needs/wants/must haves       | July 2017      |
| Task 3c.   | Develop interview template                            | Aug. 2017      |
| Task 3d.   | Develop findings template                             | Aug. 2017      |
| Task 3e.   | Develop approach                                      | Aug. 2017      |

|  |  |            |
|--|--|------------|
| Task 3f.   | Conduct initial stakeholder group meeting                        | Sept. 2017 |
| Task 3g.   | Document meeting results   | Sept. 2017 |
| Task 3h.   | Revise bank concept based upon initial stakeholder group meeting | Sept. 2017 |
| Task 3i.   | Conduct one-on-one meetings with stakeholders                    | Oct. 2017  |
| Task 3j.   | Conduct Agricultural Pool Briefing                               | Nov. 2017  |
| Task 3k.   | Conduct Non-Agricultural Pool Briefing                           | Dec. 2017  |
| Task 3l.   | Conduct Appropriative Pool Briefing                              | Dec. 2017  |
| <b>TASK 4: Revise Banking Concept</b>                        |  |            |
| Task 4a.   | Follow-up with one-on-one meetings with stakeholders             | Jan. 2018  |
| Task 4b.   | Refine PowerPoint  | Jan. 2018  |
| Task 4c.   | Lay out the process and timelines                                | Feb. 2018  |
| Task 4d.   | Prepare Watermaster application forms                            | March 2018 |
| <b>TASK 5: Revise and Finalize Consensus Banking Concept</b> |  |            |
| Task 5a.   | Finalize Bank Concept  | March 2018 |
| Task 5b.   | Develop Phase 2 Scope  | April 2018 |

### **Phase 2: Chino Basin Water Bank Formation/Structuring**

|  |   |            |
|--|---|------------|
| <b>TASK 1: Project Management</b>                    |   |            |
| Task 1a.   | Project Management                                      | Ongoing    |
| <b>TASK 2: Technical Advisory</b>                    |   |            |
| Task 2a.   | CBWB JPA Meetings                                       | May 2019   |
| Task 2b.   | Stakeholder Engagement and Workshops                    | Feb. 2019  |
| <b>TASK 3: Facilities and Engineering Evaluation</b> |   |            |
| Task 3a.   | Existing Facility Inventory                             | Aug. 2018  |
| Task 3b.   | Conceptual Put/Take Scenarios and Facilities Evaluation | Jan. 2019  |
| Task 3c.   | Conceptual Cost Estimate                                | Jan. 2019  |
| Task 3d.   | Technical Memorandum                                    | Jan. 2019  |
| <b>TASK 4: Financial Analysis</b>                    |   |            |
| Task 4a.   | Costs/Cost Drivers Review and Fee Structure Evaluation  | Nov. 2018  |
| Task 4b.   | Cost Allocation Analysis                                | Dec. 2018  |
| Task 4c.   | Financial Model Development                             | March 2019 |
| Task 4d.   | Pricing Scenario Development                            | April 2019 |
| Task 4e.   | Frame and Facilitate Discussion                         | April 2019 |
| <b>TASK 5: Preparation of Storage Application</b>    |   |            |
| Task 5a.   | Coordination with CBWB JPA                              | June 2019  |
| Task 5b.   | Watermaster Engagement                                  | June 2019  |
| Task 5c.   | Storage and Recovery Agreement Application Support      | June 2019  |
| <b>TASK 6: Operations Plan Development</b>           |   |            |
| Task 6a.   | Operations Plan Development                             | June 2019  |

### **Phase 3: Chino Basin Water Bank Implementation**

|         |  |           |
|---------|--|-----------|
| Task 1: | Project Management                         | June 2021 |
| Task 2: | Operations Support and Transition Services | June 2021 |
| Task 3: | Marketing Plan Development                 | June 2020 |
| Task 4: | JPA Board Governance                       | June 2021 |

*Availability and quality of existing data and models applicable to the water marketing strategy:*

The Chino Basin is one of the largest groundwater basins in Southern California and one of the most actively studied and managed. Hundreds of millions of dollars have been invested to protect and enhance the basin and support the nearly \$1 billion economy of the region. Since the 1978 Judgment, most of the responsibility for conducting basin studies has fallen to Watermaster. Results from extensive Chino Basin modeling show that approximately 1,000,000 AF of groundwater storage capacity is currently not being utilized. The Chino Basin Water Bank will provide the necessary mechanisms and procedures to maximize this capacity as an additional water source to be called upon during extended drought periods in Southern California. Watermaster also maintains an active groundwater model. A link to modeling reports created during the Safe Yield Reevaluation is provided in the Existing Analysis section of this application, as well as a list of studies and evaluations that have been performed on the Chino Basin to analyze or evaluate storage volume, contamination, safe yield, or other aspects of the basin.

*Identify staff with appropriate technical expertise and describe their qualifications.*

IEUA anticipates that the Project team will include members from the four partners involved in the Cost Sharing Agreement. The list of team members will continue to grow during the outreach and partnership building activities. Internal to IEUA, Jason Gu will be the Project Manager. As IEUA's Grants Officer, Jason has 14 years of experience in grant management as both the Grants Officer and Grants Administrator. Under his and his predecessor's guidance, IEUA has received a low risk auditee designation during every single audit that has occurred since the inception of IEUA's Grants Department in 2002. Jason Pivovaroff, Lead Senior Engineer for the Project, is an experienced Professional Engineer with over 10 years of experience in water, water resources and wastewater.

In order to obtain the necessary technical assistance, the team has already contracted with Eric Robbins of the Sierra Water Group and ARCADIS for significant portions of the Project. The ARCADIS team will be managed by Ed Means. Mr. Means brings nearly 40 years of experience including 18 years with the Metropolitan Water District of Southern California, in positions of Laboratory Manager, Director of Resources, Chief of Operations, Chief Operating Officer and Acting General Manager of a billion-dollar water utility. ARCADIS will also employ the use of a technical advisory team with more than a combined 80 years of experience in construction and operation of groundwater banking projects and facilities and master planning of water and wastewater systems. ARCADIS will utilize teams of staff with varying levels of experience for each discipline of the Project, which include Governance and Stakeholder Facilitation (Edward Means); Framework and Design (John Thornton); Financial Analysis (John Mastracchio); and Engineering and Permitting (Glenn Hoeger). Experience statements for each of the ARCADIS team members can be found Attachment G. IEUA has no plans at this time to request additional technical assistance from Reclamation.

**Evaluation Criterion D – Department of Interior Priorities (10 points)**

*Does the proposed Project support implementation of Interior Priorities?*

The proposed Chino Basin Water Bank directly supports the following Department of Interior Priorities as listed in the application guidelines:

**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**

The Chino Basin Water Bank will improve the Santa Ana River Watershed by increasing drought resiliency through support of the Santa Ana River Conservation and Conjunctive Use Program (SARCCUP). SARCCUP's main objectives are to:

- Utilize available storage space in local groundwater basins to capture water during wet periods and improve water supply reliability during dry periods, drought, or other emergency conditions
- Provide new local dry-year water supply to supplement and perhaps replace limited imported water during dry periods, drought, or other emergency conditions
- Reduce water demand with non-invasive plants and implementation of water conservation measures
- Enhance the watershed environment through restoration of riparian habitat and Santa Ana sucker habitat, arundo donax removal, endangered species habitat creation, and open space development

**2. Utilizing our natural resources**

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

The use of local supplies instead of imported water from the State Water Project reduces state-wide energy demand by 2.657 megawatt-hours (MWhs) per AF. During periods of high energy demand and drought, the Chino Basin Water Bank will be able to effectively reduce the energy demand for water conveyance, making capacity available for other beneficial uses. The Project is expected to have statewide benefits by providing regional drought resiliency for the Chino Basin, thereby reducing the demand on California’s water conveyance facilities, some of which are owned and managed by Reclamation. Reclamation reservoirs in Northern California, such as Folsom, San Luis Reservoir, O’Neil, Hoover Dam, and Davis Dam, will experience decreased dry year demand due to successful implementation of the Chino Basin Water Bank. By utilizing the Chino Basin’s excess storage capacity, the Chino Basin Water Bank will improve the region’s drought resiliency, decrease dependence on SWP imports during dry years, and free SWP resources to other areas outside of the Chino Basin, benefitting Reclamation and the state of California.

**3. Restoring trust with local communities**

*a. Expand the lines of communication*

IEUA has involved a number stakeholders regarding improvements to the Chino Basin and has continued consultation as part of this Project:

Water Authorities

- Monte Vista Water District (MVWD)
- Chino Valley Water District (CVWD)
- Fontana Water Co.
- Chino Basin Water District (CBWD)
- Western Municipal Water District (WMWD)
- Jurupa Community Services District (JCSD)

Tribes

IEUA has worked with three tribes regarding improvements to the Chino Basin and expects to continue consultation as part of this Project:

- Gabrieleno Band of Mission Indians – Kish Nation
- Morongo Band of Mission Indians
- Torres Martinez Desert Cahuilla Indians

Local Communities

- |                       |                           |
|-----------------------|---------------------------|
| ● City of Ontario     | ● City of Chino           |
| ● City of Chino Hills | ● San Bernardino County   |
| ● City of Pomona      | ● Milk Producers Council  |
| ● City of Upland      | ● State/Agricultural Pool |

## Environmental and Cultural Resources Compliance

IEUA will perform a thorough evaluation of the proposed Chino Basin Water Bank, which will include further identification of the required environmental and cultural resources compliance that will be needed prior to Project implementation. At a minimum, IEUA anticipates complying with CEQA, State Water Resources Control Board regulatory requirements, and the Chino Basin Adjudication. If funding for the construction of the facilities is received from a federal agency, IEUA will also comply with NEPA.

1. *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 Project is expected to have minimal earth disturbing components.

2. *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?*

The Chino Basin is known to provide a habitat for the Delhi Sands Flower-Loving Fly and San Bernardino Kangaroo Rat. It is not anticipated that there will be any impacts to these species.

3. *Are there wetlands or other surface waters inside the project boundaries that potentially fall under Clean Water Act (CWA) jurisdiction as "Waters of the United States?" If so, please describe and estimate any impacts the proposed project may have.*

Various surface waters and creeks originating in the San Gabriel Mountains flow through the Chino Basin and likely fall under the Clean Water Act (CWA) jurisdiction as "Waters of the United States." The proposed Project is expected to have minimal earth disturbing components and therefore negligible impacts on these surface water sources.

4. *When was the water delivery system constructed?*

IEUA is a member of the MWDSC and thus acts as a supplemental water provider. One-fourth of the water used in the region is imported from the MWDSC through the SWP. The water delivery system within IEUA's 242-square mile service area was constructed in stages between 1940 and 2009.

5. *Will the proposed project result in any modification of or effects to, individual features of an irrigation system (e.g., head gates, 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.* No.

6. *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.*

There are structures listed on the National Register of Historic Places in IEUA's service area. They are not located near the Project site.

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

No. The Project will not affect any archeological sites.

8. *Will the proposed project have a disproportionately high and adverse effect on low income or minority populations?* No.

9. *Will the proposed Project limit access to and ceremonial use of Indian sacred sites or result in other impacts on tribal lands?* No.

10. 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.

## Required Permits or Approvals

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IEUA will perform a thorough evaluation of the proposed Chino Basin Water Bank, which will include further identification of the required permits or approvals that will be needed prior to Project implementation. Since the Project is expected to have minimal earth disturbing components, typical construction permits will likely not be needed. One of main outputs from the scoping and planning activities will be a Groundwater Storage and Recovery Program application to be submitted to Watermaster. Under the terms of the 2000 Chino Basin Peace Agreement, Watermaster is required to evaluate all Storage and Recovery Program applications using the following criteria:

- Relationship to the 500,000 AF initial target for the cumulative quantity of water held in storage in addition to existing storage accounts
- Prioritization based on provision of broad mutual benefits to the parties of the Chino Basin Judgment.

## Project Budget

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### Funding Plan and Letters of Commitment

*How you will make your contribution to the cost share requirement?*

IEUA staff costs, salaries and fringe benefits, will be in-kind contribution. The balance will be a monetary contribution. The source of IEUA's share of the contributions will be from an IEUA Board approved budget in the Water Fund which is funded by property taxes.

*Describe any in-kind costs incurred before the anticipated project start date:*

*a. The project expenditures and amount, and if expenditure is in-kind or donation*

IEUA has incurred the following type project expenses:

Professional Services

- Sierra Water Group, (Phase 1) for performing tasks related to the feasibility of the project and for structuring how the project should progress. These costs are for \$9,975 but are not within the eligibility time period.
- Arcadis U.S., Inc., for Phase 1 which includes achieving consensus on banking concept, refining bank conceptual structure and stakeholder outreach. The amount incurred from 7/1/2017 to 5/30/2018 is \$329,734.50. Additional costs may be incurred for the Phase 1 tasks before a grant agreement has been executed.
- Best Best & Krieger LLP, for development of Joint Powers Authority. A total of \$5,264.64 of costs have been incurred of which \$371.30 are within the eligibility time frame. The eligible costs were incurred from 10/1/2017 to 12/1/017. Additional costs may be incurred for work performed when legal advice is needed before a grant agreement has been executed.
- Some labor costs have been incurred by IEUA staff for review of consultant work and attending meeting in the amount of \$331.57 during March and April 2018. Additional time may be charged prior to grant agreement execution. The labor and staff benefits are considered in-kind services.

*b. How the expenditures benefit the Project*

If the Sierra Water Group had not been determined that the project is feasible, this project would not have continued. This benefited the project by making sure that a project is not started that is actually unable to be completed. Arcadis worked on providing a structure for how the project should progress.

This will benefit the project so that work on the project does not end up going off on tangents but progresses in a logical and cost-efficient manner. In addition, it will provide a framework that will be finalized and followed by Arcadis as the planning process progresses.

Formalization of the process is an important step in making sure the Project moves forward and is completed. The development of the JPA by Best Best &Krieger LLP is a major step in the formalization process. The JPA Board held its first meeting in May of 2018. The JPA development will be a continuing process since the hope is that other stakeholders will also join the JPA as the Project develops.

*c. The date of cost incurrence*

July 1, 2017 through May 31, 2018. Additional costs in the same categories listed above will be incurred before the grant is executed. The amount is not known at this time.

*Provide the identity and amount of funding to be provided by funding partners*

There are several non-federal funding sources. Cucamonga Valley Water District, Monte Vista Water District, the city of Ontario through its Municipal Utilities Company department and IEUA each committed \$50,000 to this project pursuant to a cost sharing agreement executed 8/24/2016. An amendment to this agreement was executed that committed an additional \$100,000 per agency for a total of \$600,000.00. The parties of the agreement shall be responsible for payment of an equal share of the amount due and the lead agency will invoice them for the costs on a quarterly basis. See Attachment C for a copy of the agreements.

June 5, 2018

Ms. Julie J. Hendricks  
U.S. Bureau of Reclamation  
Financial Assistance Support Section  
P.O. Box 25007, MS 84-27814  
Denver, CO 80225  
E-mail: [jhendricks@usbr.gov](mailto:jhendricks@usbr.gov)

Re: Financial Commitment Letter – Funding Opportunity Announcement No. BOR-DO-18-F010 for  
Water SMART Grants: Water Marketing Strategy Grants for Fiscal Year 2018

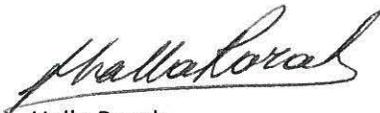
To the Selection Committee:

A Joint Powers of Authority (JPA) was formed in order to help facilitate the planning and implementation of the Chino Basin Water Bank Project. The current members of the JPA are:

- Cucamonga Valley Water District;
- Monte Vista Water District;
- City of Ontario; and,
- Inland Empire Utilities Agency

At the first Board meeting of the JPA, the JPA adopted their Fiscal Year 2018/2019 budget, which included the commitment of \$600,000 in funding for the Chino Basin Water Bank Project. This commitment is backed by \$150,000 per JPA Member Agency. The funds are available as of the May 30, 2018, Water Bank JPA Board meeting. Board approval will be needed to carry the funds forward to the next fiscal year. There are no contingencies associated with the funding commitment.

Sincerely,



Halla Razak  
Secretary of the Chino Basin Water Bank  
Joint Powers of Authority

cc: Luis Cetina, Cucamonga Valley Water District, JPA Chair  
Michael Milhiser, Monte Vista Water District, JPA Vice Chair  
Carrie Corder, Cucamonga Valley Water District, JPA Treasurer  
Jason Gu, Inland Empire Utilities Agency, Manager of Grants/Grants Officer

*Water Smart – Thinking in Terms of Tomorrow*

Describe any funding requested or received from other Federal partners.

There are not additional Federal funding partners.

Describe any pending funding requests that have not yet been approved and explain how the Project will be affected if such funding is denied.

There are no pending funding requests.

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

| FUNDING SOURCES                                    | AMOUNT               |
|--|----------------------|
| Non Federal Entities                               |                      |
| 1. City of Ontario                                 | \$ 150,000.00        |
| 2. Cucamonga Valley Water District                 | \$ 150,000.00        |
| 3. Monte Vista Water District                      | \$ 150,000.00        |
| 4. Water Bank JPA                                  | \$ 600,000.00        |
| 5. Inland Empire Utilities Agency in kind services | \$ 208,460.50        |
| 6. Inland Empire Utilities Agency                  | \$ 8,488.60          |
| Non-Federal Subtotal                               | \$1,266,949.10       |
|  |                      |
| 1  |                      |
| 2  |                      |
| 3  |                      |
| Other Federal Subtotal                             | \$0.00               |
| <b>REQUESTED RECLAMATION FUNDING</b>               | <b>\$ 400,000.00</b> |

**Note:** In kind services includes estimated staff time and fringe benefits.

## Budget Proposal

The costs presented in the budget (Table 8) represent the best estimates for the described Project. IEUA will have the following type of costs:

**Table 8.** Proposed Budget

| Budget Item Description                       | COMPUTATION |          | Quantity Type | Total Cost   |
|---|-------------|----------|---------------|--------------|
|   | \$/Unit     | Quantity |               |              |
| <b>Salaries and Wages</b>                     |             |          |               |              |
| Jason Gu, Grant Manager, Project Manager      | \$ 77.63    | 50       | Hours         | \$ 3,881.50  |
| Lead Senior Engineer                          | \$ 67.10    | 600      | Hours         | \$ 40,260.00 |
| Manager of Planning & Environmental Resources | \$ 85.63    | 300      | Hours         | \$ 25,689.00 |
| Executive Manager                             | \$ 104.09   | 300      | Hours         | \$ 31,227.00 |
| Intern  | \$ 16.00    | 100      | Hours         | \$ 1,600.00  |
| Grant Accountant                              | \$ 45.42    | 150      | Hours         | \$ 6,813.00  |
| Grant Administrator                           | \$ 45.42    | 150      | Hours         | \$ 6,813.00  |

|  |  |    |           |               |
|--|--|----|-----------|---------------|
| Deputy Manager of Grants   | \$ 70.45   | 50 | Hours     | \$ 3,522.50   |
| <i>Total</i>   |  |    |           | \$ 119,806.00 |
| <b>Fringe Benefits</b>   |  |    |           |               |
| Full-Time Employees excludes intern                              | 75%  |    |           | \$ 88,654.50  |
| <i>Total</i>   |  |    |           | \$ 88,654.50  |
| <b>Contractural/Construction</b>                                 |  |    |           |               |
| <b>Consultant 1 Sierra Water Group, Inc. or other consultant</b> |  |    |           |               |
| Phase 1 - Feasibility Studies                                    |  |    |           |               |
| Task 1A - Comparative Analysis                                   | Task is completed, no eligible costs for this task |    |           | \$0.00        |
| Task 1B - Outline "Model" Water Bank                             | Task is completed, no eligible costs for this task |    |           | \$0.00        |
| Task 1C - Chino Basin Working Group Meetings                     | Task is completed, no eligible costs for this task |    |           | \$0.00        |
| Phase 2 - Water Bank Structuring                                 |  |    |           |               |
| Task 2A - Develop Transaction Criteria                           | \$ 285.00  | 32 | Hours     | \$ 9,120.00   |
| Task 2B - Financial Modeling                                     | \$ 285.00  | 29 | Hours     | \$ 8,265.00   |
| Task 2C - Prepare Decision Memorandum                            | \$ 285.00  | 32 | Hours     | \$ 9,120.00   |
| Task 2D - Chino Basin Working Group Meetings                     | \$ 285.00  | 35 | Hours     | \$ 9,975.00   |
| <b>Consultant 2 Arcadis, U.S. Inc. *</b>                         |  |    |           |               |
| Phase 1-Achieving Consensus on Banking Concept                   |  |    |           |               |
| Task 1-Project Management  | \$ 81,590.00                                       | 1  | Per Task  | \$ 81,590.00  |
| Task 2- Refine Bank Conceptual Structure                         | \$ 53,721.00                                       | 1  | Per Task  | \$ 53,721.00  |
| Task 3- Stakeholder Outreach                                     | \$ 158,198.00                                      | 1  | Per Task  | \$ 158,198.00 |
| Task 4 – Revise Bank Concept                                     | \$ 127,496.00                                      | 1  | Per Task  | \$ 127,496.00 |
| Task 5- Revise and Finalize Consensus Banking Concept            | \$ 51,682.00                                       | 1  | Per Task  | \$ 51,682.00  |
| Phase 2 Water Bank Formation                                     | \$ 500,000.00                                      | 1  | per Phase | \$ 500,000.00 |
| Phase 3 Implementation   | \$ 300,000.00                                      | 1  | per Phase | \$ 300,000.00 |
| <b>Consultant 3 Best Best &amp; Krieger, LLP</b>                 |  |    |           |               |
| Phase 2 Water Bank Formation                                     |  |    |           |               |
| JPA formation  | \$ 26,306.66                                       | 1  | Per Task  | \$ 26,306.66  |
| <b>Consultant 4 Environmental Specialist</b>                     |  |    |           |               |
| Phase 2 Water Bank Formation                                     |  |    |           |               |
| CEQA   | \$ 60,000.00                                       | 1  | Per Task  | \$ 60,000.00  |
| <b>Consultant 5 (not yet awarded)</b>                            |  |    |           |               |

| Phase 2. Water Bank Formation        |             |            |          |                 |
|--------------------------------------|-------------|------------|----------|-----------------|
| Task 1 Economic Benefit Evaluation   | \$30,000.00 | 1          | per task | \$ 30,000.00    |
| <i>Total</i>                         |             |            |          | \$1,425,473.66  |
| <b>TOTAL DIRECT COSTS</b>            |             |            |          | \$ 1,633,934.16 |
| <b>Indirect Costs</b>                |             |            |          |                 |
| Modified Total Direct Cost           | 27.93%      | \$ 118,206 |          | \$ 33,014.94    |
| <b>TOTAL ESTIMATED PROJECT COSTS</b> |             |            |          | \$ 1,666,949.10 |

\*Sierra Water Group, Inc. (Sierra) phase 2 tasks are based on the proposal submitted by Sierra and may change as the required Project Elements are developed, The rates for all activities are determined by the total per phase divided by the hours that are expected to be worked per the proposal.

## Budget Narrative

**Salaries and Wages** – Costs associated with IEUA project management, coordination with stakeholders, developing the Request for Proposal for consultants, soliciting proposals, consultant selection, award, reporting and grant administration. The services provided by IEUA staff are in-kind services a portion of which will be reimbursed by the other members of the JPA. Many of IEUA’s employees are represented by Association Bargaining Units. Current salaries for the identified personnel, have been calculated based on the estimated hours the project is expected to take multiplied by the current rate of compensation listed in the salary Memorandums of Understanding (MOU) negotiated by the bargaining units for each type of staff member that will be required to fulfill the staffing needs for the proposed project. Salary increases are generally awarded each year at the time of each employee’s performance evaluations. The dates and amounts will vary by individual. A new MOU is currently being negotiated by the bargaining units that should take effect on July 1, 2018 but have not yet been approved by IEUA’s Board. During the negotiations, cost of living adjustments (COLA) will be addressed. The number of years that COLAs will be received, if any, and the percentages of any COLAs will be determined when the successor MOU is adopted by IEUA’s Board. If COLAs are adopted, both represented and non-represented staff will receive the same COLA. The average COLA for the last four years was 3.25%.

The rates that will be charged to the grant will be the actual salary rates of the individual assigned to the project. All staff is able to directly charge the actual amount of time spent working on this project. It is IEUA’s policy to have staff charge these costs directly to the project. IEUA will charge these tasks in the same manner as they charge all other projects per OMB regulations. A project number has been set up in the financial system to specifically track all costs related to the Project.

The following is the type of work that will be performed for each position listed in the Budgets associated with IEUA in kind services:

- The Project Manager-Grants Manager/Grants Officer will coordinate all required grant activities and is the primary contact between IEUA staff and the USBR. In addition, he will be responsible for all submittals to the USBR and will supervise all work performed by the Grants Department staff, review all progress reports, financial reports, final reports, and invoicing related to this project;
- Deputy Manager of Grants will assist the Grants Manager/Grants Officer in managing the workload of the Grants Department related to this grant.

- The Lead Senior Engineer will coordinate the work of the consultants, review all work created by the consultants and assist with required grant reporting, development of a Project Work Plan; Communication and Outreach Plan; Water Marketing Strategy and required Technical Project Report; will attend meetings with stakeholders; will assist in developing the Request for Proposal for work by consultants, soliciting proposals, consultant/contractor selection, and award;
- Manager of Planning & Environmental Resources will have input in all documents created by consultants and supervise all work performed by the Lead Senior Engineer and attend meetings with stakeholders and consultants;
- Executive Manager will coordinate stakeholder outreach and attend meetings with stakeholders. He or she will also assist in developing a consensus between the stakeholders on the outcome of the project. Will be involved in the development of the Request for Proposals for work by consultants, be involved in the solicitation for proposals, consultant selection, and award. He will review and comment on documents created through this project;
- The Grant Senior Accountant will be responsible for all grant financial processes related to the grant including ensuring compliance to the grant agreement and Federal and State regulations and IEUA procurement policies and procedures regarding costs and preparation of grant invoices; and,
- The Grant Administrator is responsible for all compliance to the grant agreement and to Federal and State regulations related to project activities. Will assist in the preparation of and review of all grant deliverables and ensure all deliverables are prepared accurately, in a timely manner. The Grant Administrator will answer questions from contractors, provide grant language that must be passed onto contractors, review all request for proposals and responses to requests for proposals for compliance to OMB requirements and will assist the Grant Manager/Grant Officer and Deputy Grant Manager in coordinating the grant activities and in responding to the USBR's Grant Manager's requests.

**Fringe Benefits** – The fringe benefit rate of 75% was calculated by IEUA for budgeting purpose based on the prior year actuals. Costs used in the calculation include but are not limited to 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. See Attachment H regarding documentation for Fringe Benefits.

**Travel** – There are no trips planned under this agreement. The travel would be for mileage to and from meetings and would be included in the consultant's invoices. The federal rate for mileage will be utilized.

**Equipment** – does not apply to this project since it is for planning.

**Material and Supplies** – All material and supplies utilized will be part of the consultant contracts. They are responsible for providing all materials to be passed out during outreach meetings.

**Contractual** – Contracts will be let for the following Consultants who will be performing elements of the Project:

For tasks where the consultant has not yet been determined, the job will be publicly advertised, and the lowest or best qualified consultants will be selected. The hourly rates for the consultant's estimates are based on actual contracts in place or from proposals submitted by consultants recommending tasks and

estimating the costs for each task. These amounts may vary as the water bank design is complete, the water bank concept is refined, and the implementation is begun.

**Sierra Water Group, Inc.** (Sierra) has already completed Phase 1 under their contract. The work occurred outside of the eligible time period. This work was needed in order to ensure that the project was feasible. Phase 1 was broken into three tasks:

Task 1A Comparative Analysis was performed by collecting information from current/prospective water banks for analysis. Sierra identified components of similar banking projects and prepared a comparative analysis.

Task 1 B included Outline the Model Water Bank by identifying possible transaction criterion for the water bank model, preparing an outline of the model bank for evaluation of opportunities and preparing a matrix of the possible transaction criteria required to create the water bank.

Task 1C Included attending the Chino Basin Water Bank Working Group Meetings and preparing documents and presentations for the meetings regarding Phase 1.

Phase 2 is based upon a proposed scope of work prepared by Sierra. A contract has not yet been executed so the work could be performed by Sierra or by another (or multiple other) consultants.

Task 2A Develop Transaction Criteria

Identify specific transaction criteria, develop the model water bank for evaluation of opportunities, and model transactions, identify transaction criteria for water banking partners and prepare a refined matrix.

Task 2B Financial Modeling

Identify and evaluate:

- water resource costs (potential sellers); i
- conveyance costs
- water bank cost

Prepare financial model for Chino Basin Water Bank

Develop preferred option (with input from Chino Basin Working Group)

Task 2 C Prepare Decision Memorandum

Preparation of decision memorandum, review and incorporate Chino Basin Working Group comments and finalize decision memorandum.

Task 2 D Chino Basin Working Group Meetings

Consultant will attend Chino Basin Working Group Meetings regarding Phase 2 work, communicate with members outside of the meetings and prepare documents/presentations for the meetings.

**Arcadis, U.S. Inc.** (Arcadis) (contract already in place)

Phase 1-Achieving consensus on banking concept.

Task 1 Project Management

This task includes project administration, regular project meetings with the four project funding partners (funding partners), and internal team meetings. The Arcadis Project Manager will track and monitor project progress, budget, and schedule and provide the funding partners with a monthly progress update. Monthly meetings will be used to provide general project status updates, discuss specific task findings and progress, and conduct strategy sessions.

## Task 2 – Refine Bank Conceptual Structure

The project team will work with the funding partners to refine the bank concept structure prior to conducting initial stakeholder outreach. To refine the bank concept, the project team will review existing data and receive briefings on various elements influencing the bank concept, including:

- Water bank benchmark material developed to date
- Watermaster requirements for storage agreements
- Initial review of potential local, regional, statewide benefits to banking
- Review current Chino basin operations
- Review Chino basin groundwater model
- Safe yield recalculation
- Santa Ana River Conservation and Conjunctive Use Program model so that the water bank fits with this regional program

Arcadis will summarize the review findings in a synthesis document and refine the bank conceptual structure. The proposed refined bank concept will be vetted with the funding partners in a strategy session to finalize the conceptual banking approach and value statements.

## Task 3 – Stakeholder Outreach

The stakeholder outreach task includes preparing for, conducting, and documenting outreach findings. Outreach preparation includes confirming key stakeholders and developing contact strategy; developing interview template and findings template; and scheduling interviews. As part of the outreach preparation, Arcadis will conduct a strategy session with the funding partners to confirm the approach for the pre-interview meetings with stakeholders.

Two rounds of stakeholder outreach are planned for this task as follows:

- Pre-interview meetings to establish the initial contact with stakeholders (individuals and groups) and to develop a better understanding of stakeholders' perspectives on the bank.
- One-on-one interview meetings to present the bank concept

Arcadis will document interview findings systematically in the findings template and will provide information regarding key discussions to the funding partners during regular monthly status meetings.

## Task 4 – Revise Bank Concept

Once the one-on-one interviews are complete, Arcadis will update/revise the bank concept based on stakeholder input and present a draft bank concept to the funding partners. An additional round of stakeholder outreach will be conducted to present the revised bank concept for stakeholder review. Arcadis will also assist in preparing Watermaster application forms and participate in a Watermaster Board meeting.

## Task 5 – Revise and Finalize Consensus Bank Concept

Upon completing Task 4, Arcadis will revise and finalize the bank concept, and basic governance. Arcadis will meet with the funding partners and discuss and refine Phase 2 Scope of work.

### PHASE 2 – Water Bank Formation

The scope of work and costs for tasks by Arcadis under Phase 2 came from a proposal for this work. As Phase 1 progresses, Phase 2 will be refined to meet the needs of the region prior to beginning Phase 2. Task currently assumed are:

#### Task 1 – Project Management

Task 2– Identify facilities, if necessary, to augment water bank project

Task 3– Conduct groundwater modeling as necessary

Task 4 – Develop financial structure (including needs/pricing)

Task 5 – Develop formal operating plan

Task 6 – Evaluate external funding opportunities

Task 7 – Develop management structure

Task 8 – Develop marketing plan

Task 9 – Procure signatories

Phase 3 – Implementation

The scope of work and costs for tasks by Arcadis under Phase 3 came from a proposal for this work. As Phase 1 and Phase 2 progresses, Phase 3 specific tasks will be refined to meet the needs of the water bank prior to beginning Phase 3. Task currently assumed are:

Task 1 – Project Management

Task 2 – Provide staffing support and transition services

### **Best Best & Krieger, LLP**

Phase 1 – Joint Power Agreement (JPA) Development

This task includes drafting the Chino Basin Water Bank JPA including specifically defining JPA governance and the roles and responsibilities of the partners. It is expected that this effort will aid the parties in determining the best Governance for the Chino Basin Water Bank. Assistance with possible legal matters as new stake holders and agencies join the JPA in addition to the initial four funding partners.

Phase 2 Prepare legal documents as needed related to water bank development.

It is anticipated that implementation of the Chino Bank Water Bank may include legal agreements and legal assistance as the water bank is developed. This may include but is not limited to assistance with possible legal agreements as new stake holders and agencies join the JPA and assistance with ensuring the water bank meets the legal requirements due to the adjudication of the Chino Groundwater Basin since the JPA's intent will be to make sure this project and the JPA is in alignment with the longstanding vision of the Basin parties consistent with the Judgment, court approved management agreements and all other associated contracts and agreements.

### **Consultant 4 Environmental Specialist**

This task will develop an Environmental Impact Report (EIR) for CEQA compliance based on the facilities and intended operations of the Chino Basin Water Bank. These facilities and proposed operations will be identified through the Phase 2 work under contract with Arcadis. The amount identified for CEQA work is approximate and estimated. The amount that is being budgeted is based upon rates submitted by IEUA's environmental specialist when IEUA requested bids for a Master Services Contract for an environmental specialist. Since there are currently four funding partners, the Environmental Specialist could be the one utilized by any of the funding partners or a new specialist might be retained after requests for proposals are developed for the JPA. When the planning documents are complete, plan specific costs will be proposed by the environmental specialist.

### **Consultant 5 Economic Benefit Evaluation (not yet awarded)**

A consultant will be hired to perform an Economic Benefit Evaluation. This evaluation will include evaluation of the benefit to the users of the Chino Basin, the region and the state.

**Other Expenses** – Not applicable

**Indirect Costs** – The U.S. Department of Interior National Business Center (IBC) approved provisional indirect cost rate for IEUA is 27.93% for FY 2015. See Attachment I for the Indirect Cost Rate Agreement Letter for the FY 2016. When IBC completes their review on the FY15/16 indirect cost submission, this percentage will change to reflect the new approved provisional indirect cost rate.

**Total Costs** –

The total cost of this project is estimated to be \$1,666,949.10.

## Existing Analysis

The following are attached as additional information:

- Attachment A – Daily Bulletin Article about IEUA’s WSIP Project
- Attachment B – Outreach: Includes the RSVP list and associated PowerPoint presentation for the August of 2016 stakeholder outreach meeting
- Attachment C – Executed Four Party Cost Sharing Letter Agreement for the Chino Basin Water Bank Feasibility Review and Foundational Document Development
- Attachment D – Letters of Support
- Attachment E – Follow-up stakeholder workshop presentations October 2017 and February 2018
- Attachment F – Project Schedule for Phases I, II, III
- Attachment G – ARCADIS Experience Statements
- Attachment H – Documentation for Fringe Benefits
- Attachment I – Provisional indirect cost rate

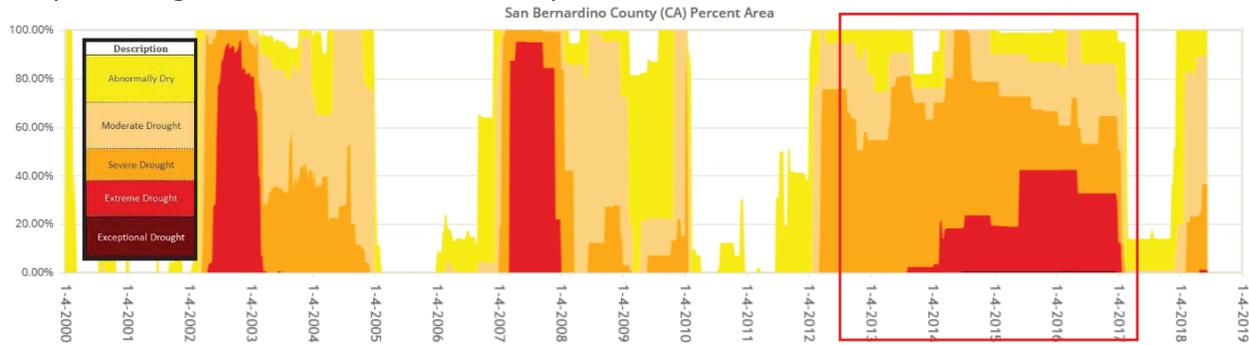
For the reviewer’s information, links to the following planning documents and modeling summaries are provided below:

- Local and Regional Plans (Table 5):
  - Chino Basin Safe Yield Reset  
<http://www.cbwm.org/FTP/Safe%20Yield%20Reset/2015%20Safe%20Yield%20Reset%20Agreement/Exhibits%20A-F%20to%202015%20Safe%20Yield%20Reset%20Agreement/Exhibit%20F.pdf>
  - Chino Basin Recharge Master Plan  
<http://rmp.wildermuthenvironmental.com/final-rmpu.html>
  - Santa Ana River Conservation and Conjunctive Use Program (SARCCUP)  
<https://18x37n2ovtbb3434n48jhbs1-wpengine.netdna-ssl.com/wp-content/uploads/2016/12/NOP-Comment-Period-Extension-1.pdf>
  - Optimum Basin Management Plan  
[http://www.cbwm.org/docs/engdocs/obmpphas1rep/text/OBMP\\_Ph1\\_Report.pdf](http://www.cbwm.org/docs/engdocs/obmpphas1rep/text/OBMP_Ph1_Report.pdf)
  - Urban Water Management Plan  
<https://18x37n2ovtbb3434n48jhbs1-wpengine.netdna-ssl.com/wp-content/uploads/2016/07/FINAL-IEUA-WFA-2015-UWMP-2016-07-07.pdf>
  - Integrated Water Resources Plan 2015  
<https://www.ieua.org/download/draft-irp-3-23-16/>
- List of studies and evaluations that have been performed on the Chino Basin to analyze or evaluate storage volume, contamination, safe yield, or other aspects of the basin
  - Mark J. Wildermuth, Water Resources Engineers and Risk Sciences. 1995. Conceptual Study Design to Review Existing Water Quality Objectives, Wasteload Allocations &

Monitoring Programs for Inorganic Nitrogen (TIN) & Dissolved Solids in the Santa Ana River Watershed and to Develop Appropriate Alternatives Where Necessary. March 24, 1995.

- Mark J. Wildermuth, Water Resources Engineers. 1997a. Phase 1A Task 2.1 Final Report: Collect, Compile, and Review Existing Reports and Data. September, 1997;
  - Mark J. Wildermuth, Water Resources Engineers. 1997b. Phase 1A Task 2.2 and 2.3 Final Report: Describe Watershed Hydrology and Identify Current TDS and TIN Inflows in the Watershed. September, 1997.
  - Mark J. Wildermuth, Water Resources Engineers. 1998. Phase 1B Final Technical Memorandum: Task 3.1 – Define Points of Compliance and Management Areas; Task 3.2 – Describe Methods to Define Ambient Water Quality. Prepared for the TIN/TDS Task Force.
  - Mark J. Wildermuth, Water Resources Engineers. 1998b. Chino Basin Recharge Master Plan, Phase 1 Final Report. Prepared for Chino Basin Water Conservation District and Chino Basin Watermaster.
  - Montgomery Watson, and Mark J. Wildermuth Water Resources Engineer. 1994. Final Task 6 Memorandum, Development of Three Dimensional Groundwater Model. March, 1994.
  - Wildermuth Environmental, Inc. 1999. Optimum Basin Management Program – Phase 1 Report. Prepared for the Chino Basin Watermaster. August 1999.
  - Wildermuth Environmental, Inc. 2000. TIN/TDS Phase 2A: Tasks 1 through 5, TIN/TDS Study of the Santa Ana Watershed, Technical Memorandum. Prepared for the TIN/TDS Task Force. July, 2000.
  - Wildermuth Environmental, Inc. 2005. Optimum Basin Management Program, State of the Basin Report – 2004. Prepared for the Chino Basin Watermaster. July, 2005.
  - Wildermuth Environmental, Inc. 2012. 2012 State of the Cucamonga Basin. Prepared for the City of Upland, Cucamonga Valley Water District, and San Antonio Water Company. February, 2012.
  - Wildermuth Environmental, Inc. 2015a. 2013 Chino Basin Groundwater Model Update and Recalculation of Safe Yield Pursuant to the Peace Agreement. Prepared for the Chino Basin Watermaster. October, 2015.
  - Wildermuth Environmental, Inc. 2015b. Strategic Plan for the Six Basins. Prepared for the Six Basins Watermaster. December, 2015.
  - Wildermuth Environmental, Inc. 2017-18. Development of Storage Framework. <http://cbwm.org/FTP/Storage%20Framework/>
- Drought Maps  
<https://www.climate.gov/maps-data/dataset/weekly-drought-map>  
<http://droughtmonitor.unl.edu/Data/Timeseries.aspx>

## Map of droughts in San Bernardino County from 2000-2017:



- Modeling Reports:
  - Safe Yield Reevaluation Modeling Report  
[http://www.cbwm.org/docs/engdocs/WEI 2013 CBWM Recalculation Model Update/20151005 WEI 2013 CBWM Recal Model Final low.pdf](http://www.cbwm.org/docs/engdocs/WEI%202013%20CBWM%20Recalculation%20Model%20Update/20151005%20WEI%202013%20CBWM%20Recal%20Model%20Final%20low.pdf)

## Letters of Support

The following organizations have submitted Letters of Support for this Project as seen in Attachment I:

- Cucamonga Valley Water District
- City of Ontario
- Monte Vista Water District
- Santa Ana Watershed Project Authority
- Jurupa Community Services District

## Proof of Sam.gov Registration

| Registration Details for Complete Record   | Registration Details for Incomplete Record  |
|--|---|
| <p><b>Entity Name:</b> INLAND EMPIRE UTILITIES AGENCY A MUNICIPAL WATER DISTRICT (INC)</p> <p><b>DUNS Number:</b> 043656206</p> <p><b>CAGE:</b> 4C6A3</p> <p><b>Address:</b><br/>                     6075 KIMBALL AVE<br/>                     CHINO, CA 91708-9174<br/>                     UNITED STATES</p> <p><b>Purpose of Registration:</b> Federal Assistance Awards</p> <p><b>Registration Status:</b> Active</p> <p><b>Expiration Date:</b> 08/24/2018</p> <p><b>Address Update Required:</b> No</p> <p style="text-align: center;"> <input type="button" value="UPDATE ENTITY"/> <input type="button" value="VIEW"/> <input type="button" value="DEACTIVATE"/> </p> | <p>Your entity registration is Active. Please select Update Entity from Registration Details for Complete Record if you want to update or renew it.</p> |

# Official Resolution

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See Official Resolution No. 2018-6-10 on the following pages.

**RESOLUTION NO. 2018-6-10**

**RESOLUTION OF THE BOARD OF DIRECTORS OF THE INLAND EMPIRE UTILITIES AGENCY\*, SAN BERNARDINO COUNTY, CALIFORNIA, AUTHORIZING THE INLAND EMPIRE UTILITIES AGENCY TO ENTER INTO A FINANCIAL ASSISTANCE AGREEMENT UNDER THE WATERSMART GRANTS: WATER MARKETING STRATEGY GRANTS FOR FY 2018 WITH THE U.S. DEPARTMENT OF INTERIOR - BUREAU OF RECLAMATION AND DESIGNATING A REPRESENTATIVE TO EXECUTE THE FINANCIAL ASSISTANCE AGREEMENT, AND ANY AMENDMENTS THERETO FOR THE CHINO BASIN WATER MARKET PLAN**

**BE IT RESOLVED**, that the Inland Empire Utilities Agency\* (IEUA) is authorized to enter into a financial assistance agreement under the WaterSMART Grants: Water Marketing Strategy Grants for Fiscal Year 2018, with the U.S. Department of Interior - Bureau of Reclamation (USBR) for Chino Basin Water Market Plan; and

**BE IT RESOLVED**, that IEUA's Board of Directors authorizes the General Manager to execute the financial assistance agreement, any amendments, and any grant related documents thereto; and

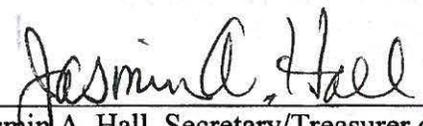
**BE IT RESOLVED**, that IEUA has the capacity to provide the amount of funding and/or in-kind contributions specified in the funding plan; and

**BE IT RESOLVED**, that IEUA will work with the USBR to meet established deadlines for entering into a cooperative agreement; and

**BE IT FURTHER RESOLVED**, that IEUA's Board of Directors hereby adopts Resolution No. 2018-6-10 on this 20<sup>th</sup> day of June, 2018.

  
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Steven J. Elie, President of the Inland Empire Utilities Agency\* and of the Board of Directors thereof

ATTEST:

  
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Jasmin A. Hall, Secretary/Treasurer of the Inland Empire Utilities Agency\* and of the Board of Directors thereof

\* A Municipal Water District

