

WaterSMART

# Lower Chino Dairy Area Desalination and Reclamation Project



**WaterSMART**

**Title XVI Water Reclamation and Reuse Program, FY 2017, FOA No. BOR-DO-17-F002**



Previous Agreements: R11AC35306, R12AC35339, R14AC00049 and R15AC00059

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List of Acronyms

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AF	acre-feet
AFY	acre-feet per year
CAO	Cleanup and Abatement Order
CDA	Chino Basin Desalter Authority
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CVP	Central Valley Project
DWR	California Department of Water Resources
ESA	Endangered Species Act
FONSI	Finding of No Significant Impact
IEUA	Inland Empire Utilities Agency
IX	Ion Exchange
JCSD	Jurupa Community Services District
JPA	Joint Powers Authority
kWh	kilowatt hour
kWh/AF	kilowatt hour per acre-foot
MCL	Maximum Contaminant Limit
Metropolitan	Metropolitan Water District of Southern California
MGD	million gallons a day
Mg/l	milligrams per liter
MND	Mitigated Negative Declaration
MOU	Memorandum of Understanding
NEPA	National Environmental Policy Act
NPDES	National Pollutant Discharge Elimination System
OBMP	Optimum Basin Management Plan
Reclamation	US Bureau of Reclamation
RWQCB	Regional Water Quality Control Board
RO	Reverse Osmosis
SARI	Santa Ana Regional Interceptor
SARWC	Santa Ana River Water Company
SAWPA	Santa Ana Watershed Project Authority
SEIR	Subsequent Environmental Impact Report
SWRCB	State Water Resources Control Board
TCE	Trichloroethylene
TDS	total dissolved solids
USBR	US Bureau of Reclamation



Proposal Contents (cont'd)

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VOC	volatile organic compounds
Watermaster	Chino Basin Watermaster
Western	Western Municipal Water District

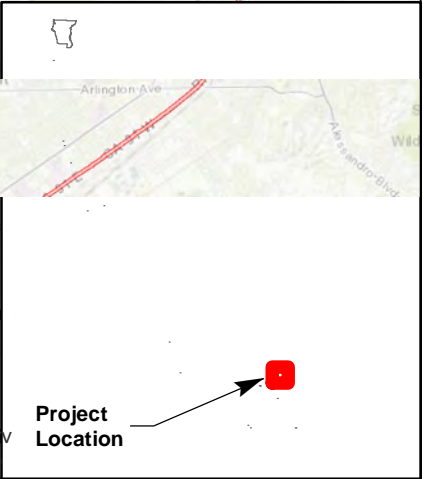
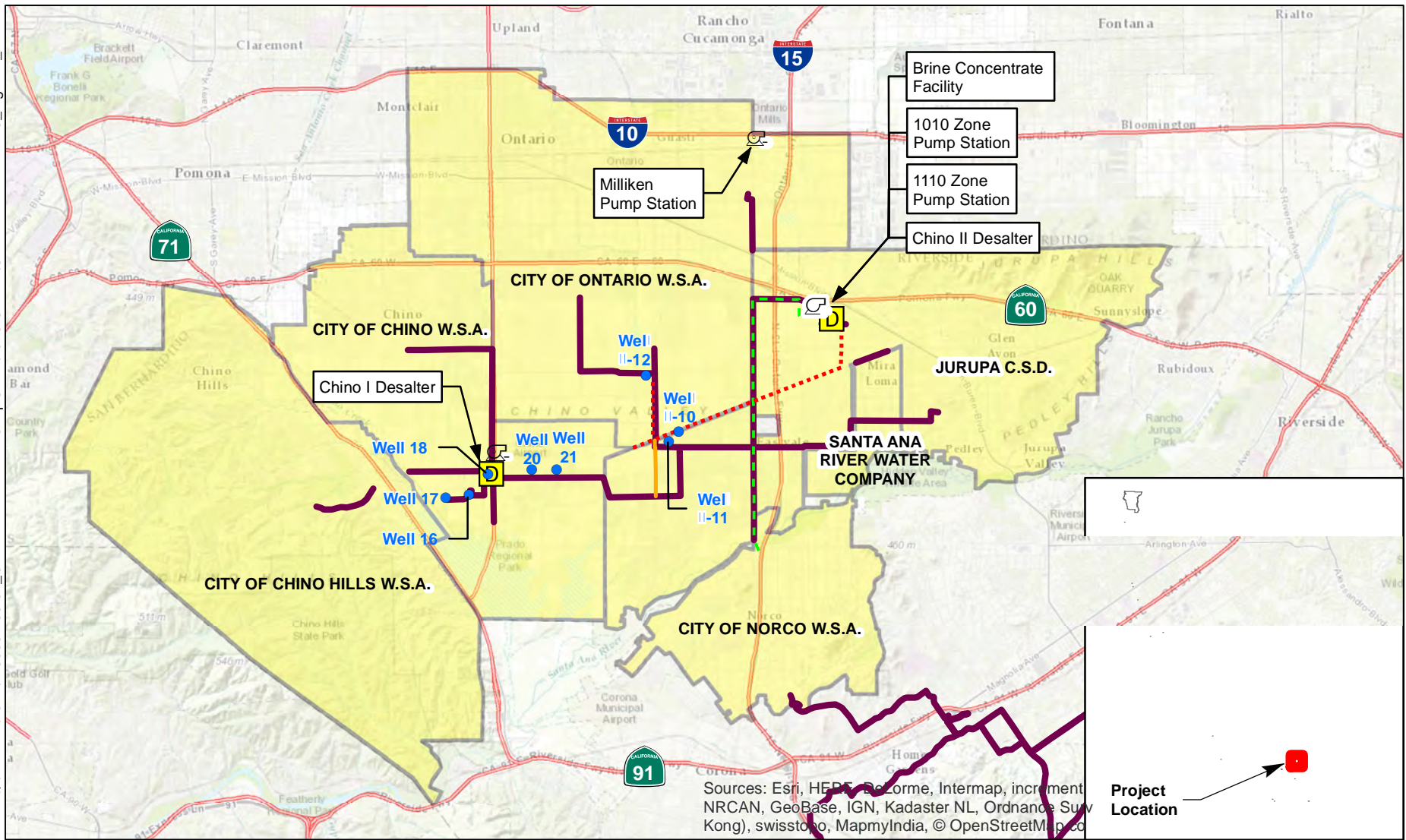
## Section 1: Technical Proposal

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### 1.1 Executive Summary

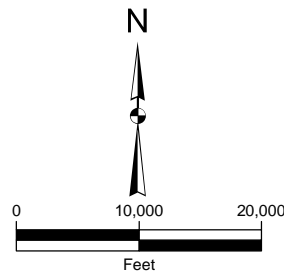
**Date:** December 12, 2016  
**Applicant:** Inland Empire Utilities Agency  
**City, County, State:** City of Chino, San Bernardino County, California  
**Amount of Water Reclaimed:** 10,600 acre-feet per year  
**Project Name:** Lower Chino Dairy Area Desalination and Reclamation Project

Inland Empire Utilities Agency (IEUA), in association with the Chino Basin Desalter Authority (CDA) and Santa Ana Watershed Project Authority (SAWPA), is seeking grant funding for Lower Chino Dairy Area Desalination and Reclamation Project initiative authorized by Title XVI. In this grant application, the entire authorized Title XVI Project is called the Chino Desalter Phase 3 Expansion Project. The overall Chino Desalter Phase 3 Expansion Project will make an additional 10,600 acre-feet per year (AFY) of treated potable water available through enhanced pumping of brackish groundwater from the Chino Basin. The Project components proposed for funding are comprised of a comprehensive system to pump and treat poor quality groundwater to a level suitable for potable use and then distribute this water to communities in the Inland Empire area. Elements of the program include a raw water system including wells and pipelines, treatment at interconnected desalters, disposal of brine, and distribution of product water through product water pipelines and pump stations. Figure ES-1 provides a project overview.



**Legend**

- Pump Station
- Project Wells
- Desalter
- Additional Raw Water Pipelines
- Intertie Pipeline
- Chino II Product Water Pipeline
- Raw Water Pipeline
- Chino Basin Desalter Authority Service Area



**Kennedy/Jenks Consultants**

Chino Basin Desalter Authority  
Riverside, California

**Project Overview**

K/J 1189051\*02  
November 2016

**Figure ES-1**

## 1.2 Technical Project Description

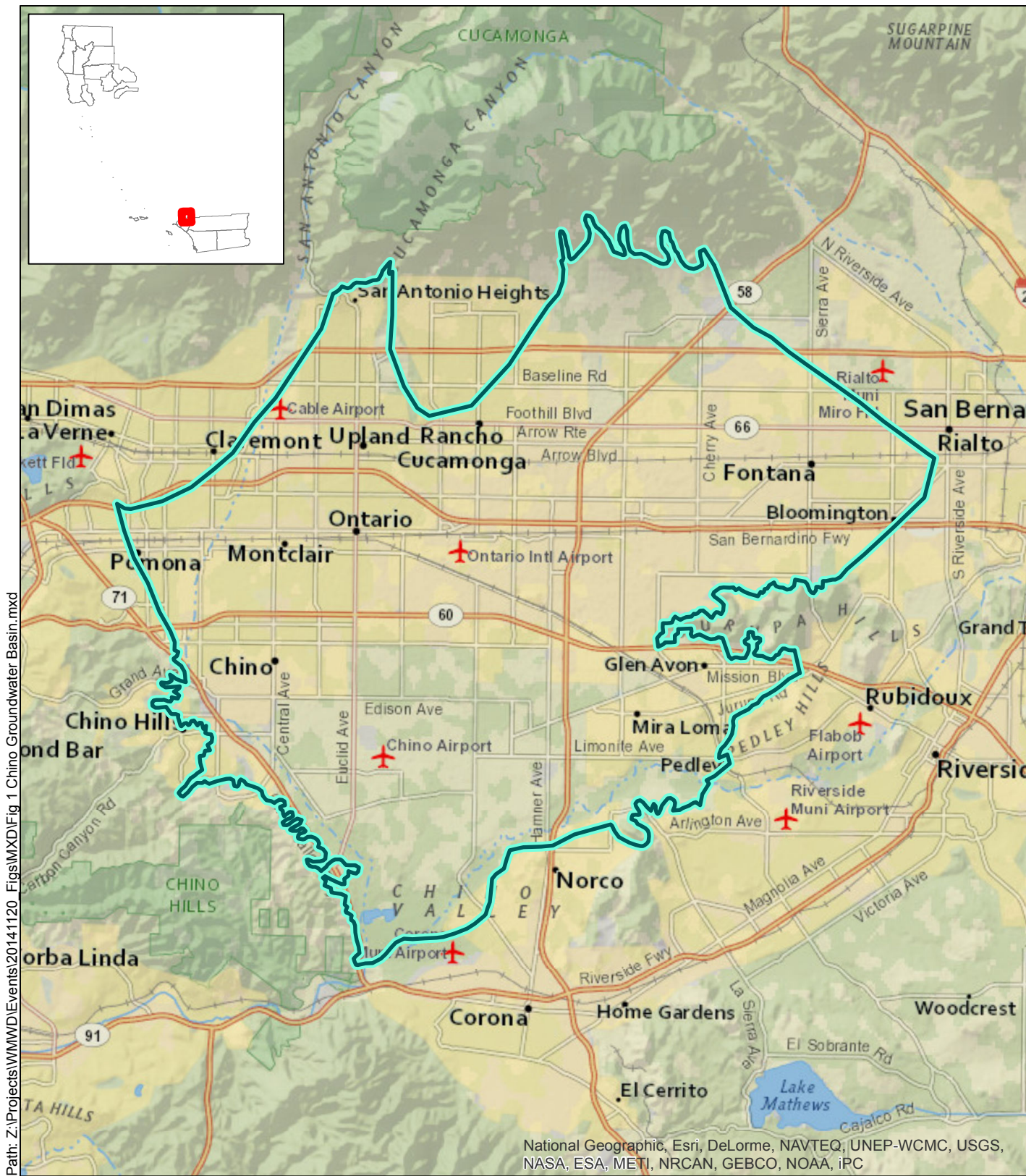
### 1.2.1 Project Description and Background Information

The Chino Groundwater Basin (Chino Basin, Basin) is the principal water supply for 20 municipal agencies and nearly 400 agricultural and dairy operations. Total groundwater production is approximately 190,000 AFY. Figure 1 illustrates the location of the Chino Groundwater Basin. The Basin consists of approximately 235 square miles of the upper Santa Ana River watershed with approximately 80 percent of the Basin within San Bernardino County, approximately 15 percent in Riverside County, and 5 percent in Los Angeles County. It is estimated that the Basin has a storage capacity of five to seven million acre-feet.

The Chino Basin is subject to adjudication, whereby the major water management actions (monitoring, recharge, salt management, and production) are overseen by a nine-member Watermaster Board. The goals and objectives for management of the Chino Groundwater Basin are embodied in the Chino Basin Optimum Basin Management Plan (OBMP). The groundwater aquifer in the Chino Basin has historically been affected by high salinity and high nitrate concentrations resulting from past agricultural activities. The high salinity in the Basin has rendered this local water supply non-potable and threatened other down-gradient water bodies. High salt and nitrate concentrations are two long-standing water quality issues in the Chino Basin. Between January 2001 and June 2006, over half of all wells (452 wells) in the Chino Basin exceeded the California maximum contaminant level (MCL) for nitrate and nearly half of all wells (359 wells) exceeded the MCL for total dissolved solids (TDS). Nitrate contamination has known short-term acute health effects. The health effects of elevated TDS are not well defined, but high TDS levels noticeably affect the taste of water and hence affect consumer acceptance of water.

The Chino I Desalter (Chino I) began operation in 2000 as the first phase of a groundwater management project designed to help maintain hydraulic control of the Chino Basin, to preserve or increase the yield of the Basin, to remove contaminants from the groundwater, and to provide a drinking water supply. The Chino II Desalter (Chino II) started operation in 2006 to expand the capacity of the groundwater treatment system. Treatment technologies used at Chino I and Chino II include reverse osmosis (RO), ion-exchange (IX) and volatile organic compound (VOC) air stripping. Construction of these facilities constituted the Chino Desalter Phase 1 and Phase 2 projects. Chino Desalter facilities are owned and operated by the CDA, a joint powers authority (JPA) composed of the IEUA, Western Municipal Water District (Western), City of Ontario, City of Norco, Jurupa Community Services District (JCSD), City of Chino Hills, City of Chino, and the Santa Ana River Water Company (SARWC).

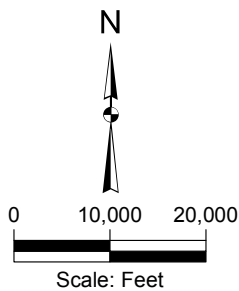




Path: Z:\Projects\WMWD\Events\20141120\_Figs\MXD\Fig 1 Chino Groundwater Basin.mxd

**Legend**

 Chino Groundwater Basin



**Kennedy/Jenks Consultants**

Chino Basin Desalter Authority  
Riverside, California

**Chino Groundwater Basin**

K/J 1089053\*00  
December 2014

**Figure 1**

Despite the construction and operation of the desalter facilities, issues still remain in the Chino Basin.

- The southern end of the Chino Basin, which is adjacent to the Santa Ana River, overflows on the surface to the River. The groundwater in the Lower Basin is heavily degraded with salt, nitrogen and volatile organic compounds due to a long history of certain commercial/industrial operations, irrigated agriculture and dairy farming. Historically, the underlying groundwater in the lower end of the basin has been used to support agricultural uses and discharge of degraded groundwater to the River did not occur. However, as the land in the lower end of the Basin is converted to urban uses, the low-quality water overflows to the Santa Ana River, creating adverse impacts to downstream users. This “spill” of degraded water affects the 350,000 AFY of Santa Ana River water used by Orange County Water District (OCWD). Contamination of the Santa Ana River harms the comprehensive groundwater recharge program of OCWD. Additionally, the degraded water makes its way to Prado Basin, a significant freshwater wetland resource in Southern California. The California Regional Water Quality Control Board (RWQCB) – Santa Ana Region has ordered elimination of this “spill” (i.e., hydraulic control).
- The Basin is under a Superior Court order (Case #RCV 51010) to address water quality caused by agricultural practices.
- Ongoing salt issues could limit future use of recycled water in the Chino Basin.

To address these issues, the CDA is implementing the Phase 3 Chino Basin Desalter Expansion Project. This Project is an extension of the Lower Chino Dairy Area Desalination and Reclamation Project authorized by Section 1638 (H.R. 177). In September 2006, IEUA provided the US Bureau of Reclamation (Reclamation, USBR) a Feasibility Report that included the proposed project. The Feasibility Report was prepared in compliance with *Reclamation Guidelines for Preparing, Reviewing, and Processing Water Reclamation and Reuse Project Proposal Under Title XVI of Public Law 102-575*. The Phase 3 Expansion Project would expand the desalter program such that the groundwater pumping for the desalters would reach 40,000 AFY. Pumping would occur in amounts and at locations in southwestern Chino Basin that the Chino Basin Watermaster believes would contribute to the full achievement of hydraulic control. Phase 3 would include, the expansion of Desalter capacity, brine concentrate reduction, the construction and operation of new groundwater wells, as well as new pump stations and pipelines. Overall, the Chino Desalter Phase 3 Expansion Project will make an additional 10,600 AFY of local groundwater available for drinking water.

Implementation of the Phase 3 Expansion has been ongoing since 2009. Table 1 shows the completed activities as well as the ongoing and planned activities. The total estimated cost for the Phase 3 Expansion is \$141,689,662. Figure ES-1 maps Phase 3 Expansion facilities and Figure 2 provides photos of various project elements.

**Table 1. Completed and Planned Activities, Chino Desalter Phase 3 Expansion**

	<b>Local Funding</b>	<b>Federal Funding Received/Awarded</b>	<b>Total Cost</b>
<b>Completed Activities</b>			
Studies and Design of Chino Creek Wellfield	(a)	(a)	(a)
Comprehensive Preliminary Design Report	(a)	(a)	(a)
Chino II Desalter Expansion	\$15,013,273	\$0	\$15,013,273
California Environmental Quality Act	(a)	(a)	(a)
Drilling and Equipping Chino Creek Wells 16, 17, and 18	\$4,617,238	\$0	\$4,617,238
Raw Water Pipeline Chino Creek Wellfield to Chino I	\$1,779,632	\$0	\$1,779,632
Milliken Pump Station	\$1,783,719	\$0	\$1,783,719
1110 Pump Station Expansion	\$1,589,980	\$0	\$1,589,980
1010 Pump Station <sup>(b)</sup>	\$2,175,780	\$725,260	\$2,901,040
Drilling and Equipping Wells 20 and 21 <sup>(c)</sup>	\$2,742,713	\$914,238	\$3,656,951
Product Water Transmission Pipeline <sup>(b)</sup>	\$23,324,682	\$3,274,740	\$26,599,422
<b>Activities Finishing December 2016</b>			
Drilling Well 19, Drilling and Equipping of Chino Creek Well 19A <sup>(c)</sup>	\$3,266,632	\$636,857	\$3,903,489
Brine Concentrate Reduction Facilities <sup>(d)</sup>	\$42,706,713	\$12,200,000	\$54,906,713
<i>Subtotal Activities Through Dec 2016</i>	\$99,000,362	\$17,751,095	\$116,751,457
<b>Activities through September 2019</b>			
Construction of Chino I/Chino II Intertie Pipeline and Flow Control Facility <sup>(e)</sup>	\$5,525,578	\$0	\$5,525,578
Groundwater Supply Wells and Raw Water Pipelines <sup>(e)</sup>	\$16,412,627	\$3,000,000	\$19,412,627
<i>Subtotal Activities Through Sept 2019</i>	\$21,938,205	\$3,000,000	\$24,938,205
<b>Total All Activities</b>	\$120,938,567	\$20,751,095	\$141,689,662
Notes:			
(a) The costs for planning and design activities included with construction costs			
(b) These elements are receiving \$4,000,000 in funding from Agreement R12AC35339.			
(c) These elements are receiving \$1,551,095 in funding from Agreement R11AC35306.			
(d) This element is receiving \$12,200,000 in funding from Agreement R15AC00059.			
(e) These elements are receiving \$ 3,000,000 in funding from Agreement R14AC00049.			





Brine Concentrate Facility



Raw Water Pipeline



Zone 1010 Pump Station



Well I-20



Product Water Pipeline



Chino II Desalter

Chino Basin Desalter Authority  
Riverside, California

**Project Overview**

November 2016  
Figure 2, Page 7





Chino Basin Desalter Authority  
Riverside, California

**Project Overview**

November 2016  
Figure 2 Page 8

## 1.2.2 Project Activities

The following tasks are a part of the Chino Desalter Phase 3 Expansion:

- Task 1 - Environmental Documentation/National Environmental Policy Act Compliance
- Task 2 - Preliminary Design
- Task 3 - Final Design
- Task 4 - Permitting
- Task 5 - Construction Contracting
- Task 6 - Construction
- Task 7 - Administration and Reporting

### Task 1 – Environmental Documentation/National Environmental Policy Act Compliance

The *Initial Study/Mitigated Negative Declaration for Chino Desalter Phase 3 Expansion (Initial Study/MND)* was approved by CDA in January 2011. The *Initial Study/MND* found that although the proposed Project could have a significant effect on the environment, there will not be a significant effect due to mitigation measures. This document formed the basis for completing necessary National Environmental Policy Act (NEPA) documents. The Lower Colorado Region of Reclamation found that the Project is not a major Federal action that will significantly impact the quality of the human environment. Therefore, an Environmental Impact Statement was not required for implementing the Project and a Finding of No Significant Impact (FONSI) was issued on September 28, 2011.

### Task 2 – Preliminary Design

The first task in the Chino Desalter Phase 3 Expansion was to inventory the existing facilities, well capacities, water quality, and water needs. Extensive studies, including modeling, on the Chino Creek Wellfield were conducted to determine the potential to withdraw additional water and the pumping needed to create hydraulic control in the basin. The next step was to evaluate the potential to expand treatment capacity at the Chino II Desalter. A predesign report (January 2008) served as the basis for design of expanding the Chino II Desalter from 10 MGD to 20.5 MGD. Thereafter, a Preliminary Design Report for the overall Phase 3 Expansion was prepared (December 2010). This preliminary design report lays out the major elements of the expansion: raw water pumping and distribution, treatment, brine disposal, and product water distribution.

### Task 3 – Final Design

Final design has occurred as separate plans and specifications for the various elements of the Phase 3 Expansion. Final design is complete for all major elements of the Chino Phase 3 Expansion except for the wells and raw water pipelines associated with the element “Groundwater Supply Wells and Raw Water Pipelines”.

### Task 4 – Permitting

The necessary permits have been acquired for all completed elements. For those elements not yet completed, the various permits needed, and their status is provided in Table 2 (provided as part of section 1.3.2 of this application).

### Task 5 – Construction Contracting

With the exception of the element “Groundwater Supply Wells and Raw Water Pipelines”<sup>1</sup>, construction contracting has been completed for the Chino Desalter Phase 3 Expansion. After final design, the Phase 3 elements are advertised for bidding through standard procedures. The CDA pre-qualified construction contractors using procedures consistent with the Public Contract Code. Pre-bid meetings are held to take questions from contractors, open and review bids for completeness, and award the Project to the responsible bidder with the lowest bid in accordance with the Public Contract Code.

### Task 6 – Construction

As shown in Table 1, construction has been completed for many elements of the Chino Desalter Phase 3 Expansion. With the exception of the element “Groundwater Supply Wells and Raw Water Pipelines”, construction has started for all components of the Chino Desalter Phase 3 Expansion. Completion of construction for the entire Phase 3 Expansion is expected by July 2019.

### Task 7 – Administration and Reporting

The Chino Desalter Phase 3 Expansion is being built by member agencies of the CDA. Design and other decisions will be coordinated with all CDA members. During construction, CDA member staff and/or qualified engineering consultants will provide construction management and administration, including daily on-site observation; inspection of materials used for construction, including soils and concrete; and documentation of these activities.

IEUA will provide project administration, including administration of grants, compliance and grant-related reporting.

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<sup>1</sup> This element was formerly called “6000 gpm Additional Pumping Capacity Chino Basin and Raw Water Pipelines”

See Figure 3 for a Project schedule.

### 1.3 Evaluation Criteria

Brief narratives describing how the proposed project meets grant criteria are provided in the following subsections. The evaluation criteria, as described in the Funding Opportunity Announcement, are presented first in *italics*, followed by specific information on the Chino Desalter Phase 3 Expansion Project as well as the facilities proposed for funding by this grant application.

#### 1.3.1 Water Supply

***Subcriterion No. 1a. Stretching Water Supplies.*** *Points will be awarded based on the extent to which the project is expected to secure and stretch water supplies. Consideration will be given to the amount of water expected to be made available by the project and the extent to which the project will reduce demands on existing facilities and otherwise reduce water diversions.*

1. *How many acre-feet of water are expected to be made available each year upon completion of the Title XVI Project? Please use the total Title XVI Project water savings, not just projected water savings for the Project Activities that will be completed by September 30, 2018.*

The Chino Desalter Phase 3 Expansion Project will make an additional 10,600 acre-feet (AF) product water available each year.

2. *Will the Title XVI Project reduce, postpone, or eliminate the development of new or expanded non-recycled water supplies?*

The Chino Desalter Phase 3 Expansion Project itself is the development of a desalinated water supply. By making an additional 10,600 AF product water available each year, dependence on other non-recycled water supplies will be reduced.

3. *How significantly will the demand on existing Federal water supplies be reduced? List the expected reduction to Federal water supply demand (in acre-feet) and the amount of water currently supplied directly or indirectly by a Federal facility to the project sponsor. Provide calculations.*

The next available increment of water available to the agencies in the Chino Basin is imported water from the Metropolitan Water District of Southern California. In the San Bernardino and Riverside area, imported water is approximately 20 percent from the Federal Colorado River Project and the remainder from the California State Water Project (also a federal project). Therefore, it is estimated that the 10,600 AFY produced by the Chino Desalter Phase 3 Expansion will offset demand on a Federal water system.



4. *How will the project reduce diversions from natural watercourses or withdrawals from aquifers? Responses should be specific (including number of acre-feet) and should include the percentage by which diversions or withdrawals will be reduced.*

The Project is part of a planned, coordinated, and necessary extraction of water from the Chino Basin. Extraction of contaminated groundwater from the Chino Basin is necessary to protect the quality of the Santa Ana River by intercepting contaminated groundwater for reuse before it enters the river system. Contamination of the River by poor quality Chino groundwater could limit the beneficial use of the Santa Ana River water. Colorado River water diversions equal about 20 percent of the total water supply for the region. As such, enhancing the ability to utilize this groundwater will reduce the demand for diversion of Colorado River water by 2,120 AFY, which is 20 percent of the total 10,600 AFY produced by the Chino Desalter Phase 3 Expansion.

5. *What performance measures will be used to quantify actual benefits upon completion of the Title XVI Project?*

Anticipated benefits and the measures to quantify the actual benefits are:

Improve groundwater quality in Chino Basin	⇒	Benefit measured by TDS and nitrate levels in raw groundwater compared to metered potable water deliveries from desalters
Deliver 10,600 AFY of additional local supplies	⇒	Metered potable water deliveries from Chino I and II Desalters
Increased treatment efficiencies	⇒	Ratio of raw water input to product water output
	⇒	Change in amount of brine discharged to SARI
Protect downstream water quality in Santa Ana River	⇒	Groundwater level monitoring within the Chino Groundwater Basin

**Subcriterion No.1b.** *Contributions to Water Supply Sustainability. Points will be awarded for Title XVI Projects that contribute to a more sustainable water supply.*

1. *Will the Title XVI Project make water available to address a specific concern (e.g., water supply shortages due to climate variability and/or heightened competition for limited water supplies)? Consider the number of acre-feet of water to be made available. Explain the specific concern and its severity. Also explain the role of the Title XVI Project in addressing that concern and the extent to which the Project will address it.*

The Project both enables delivery of a drought-proof water supply from local groundwater and by removing salt from the basin enables expanded use of another drought-proof local source, recycled water.

The areas overlying the Chino Basin obtain water from various sources; including Chino Basin Groundwater, recycled water, and State Water Project. Recipients outside the Basin who will receive project water, receive water from the Colorado River. With the recent stringent regulations and heightened competition for supplies of State and Colorado River waters, alternative sources have been examined. The Chino Desalter Phase 3 Expansion, with the construction of the proposed project components, is being pursued because it is the most feasible and drought-resistant alternative. By increasing desalting capacity in the Chino Basin and building the necessary product water facilities to distribute this water, local water supplies will be enhanced and preserved and the effective use of the Chino I and II desalters, as an important local salt management tool, will be preserved and expanded.

Importantly, the Project enhances salt removal, which is necessary, in order to expand the use of recycled water in the Chino Basin. On February 3, 2009, the SWRCB adopted the Recycled Water Policy (Resolution No. 2009-0011). It is the intent of the policy that salts and nutrients from all sources be managed in a manner that ensures attainment of water quality objectives and protection of beneficial uses. Because recycled water introduces salts to the watershed, its use is regulated by the Recycled Water Policy. Without salt removal, the State could limit future use of recycled water in the Chino Basin.

2. *Will water made available by this Title XVI Project continue to be available during periods of drought? To what extent is the water made available by this Title XVI Project more drought resistant than alternative water supply options? Explain.*

The Chino Basin is an adjudicated basin, meaning the water rights to the basin have been defined and allocated, the amount of water that can be pumped has been defined by the court, and there is a formalized system to account for pumping and recharge with the intent of protecting and enhancing the safe yield of the basin. The adjudication put in place a set

of operating rules meant to protect both groundwater levels and groundwater quality. Because the Chino Basin is an adjudicated basin, water available from the Project will continue to be available during periods of drought.

Alternative water sources include imported State Water Project water and Colorado River Project water. In recent years, these sources have become increasingly less reliable. The Colorado River recently experienced an 11 year drought. The California Department of Water Resources recently completed a study (State Water Project Delivery Capability Report 2015) suggesting that long-term deliveries of State Water Project will be no more than 60 percent of full allocation; and in a very dry year deliveries may be no more than 8 percent of full allocation<sup>2</sup>.

As previously discussed, compared to the alternative water sources, the Project removes salts from the basin and makes it possible to use additional recycled water (via direct delivery or groundwater recharge).

### 1.3.2 Status of Project

**Subcriterion No. 2a.** *Progress Toward Completion of an Authorized Title XVI Project. Points will be awarded for Project Activities that will bring a Title XVI project to completion (i.e., to full Federal funding levels) or close to completion.*

#### 1. How much Federal funding has been provided for the Title XVI project to date?

A total of \$20,751,095 has been provided to the Lower Chino Dairy Area Desalination and Reclamation Project from the US Bureau of Reclamation. \$1,551,095 has been provided per Assistance Agreement R11AC35306; \$4,000,000 as part of Assistance Agreement R12AC35339; \$3,000,000 as part of Assistance Agreement R14AC00049, and \$12,200,000 from Agreement R15AC00059.

#### 2. How much Federal funding is necessary to fully satisfy the authorized Federal cost-share?

Federal participation was authorized at 25 percent of project costs, up to \$26,000,000. Estimated cost for the overall program is \$141,689,662 (year 2016 dollars); making the federal share approximately \$35,422,415 (though based on the authorization the federal share is capped at \$26,000,000). To date \$20,751,095 in federal funding has been awarded, with \$5,248,905 in federal share remaining.

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<sup>2</sup> California Department of Water Resources. 2015. *The State Water Project Delivery Capability Report*. July. Table C.18.

3. *Will the funding requested under this FOA satisfy the Federal cost share?*

Funding requested under this FOA, if all \$5,248,905 is awarded, will satisfy the Federal cost share of \$26,000,000 authorized for this project.

**Subcriterion No. 2b.** *Readiness to Proceed.* Points will be awarded based on the extent to which Project Activities that will be completed with the requested funding are ready to proceed.

*Where funding is being requested for design, the following will be considered:*

1-2. *Has the staff/contractor that will do the planning or design work been identified? If a contractor will be used, but has not been hired yet, when will the contracting process begin?*

With the exception of the element “Groundwater Supply Wells and Raw Water Pipelines”<sup>3</sup>, design has been completed for the Chino Desalter Phase 3 Expansion. A consultant for the design of well drilling and well equipping has been selected. A consultant has been selected to perform the alignment study related to the raw water pipelines. A consultant for final design of the raw water pipelines will be selected through a competitive process planned to start January 2017.

3. *When will the planning or design work begin?*

With the exception of the element “Groundwater Supply Wells and Raw Water Pipelines”, design has been completed for the Chino Desalter Phase 3 Expansion. Design for the element “Groundwater Supply Wells and Raw Water Pipeline” began on April 1, 2016. Activities have included confirming well location, preparing the well conceptual site layout and performing a sanitary survey, and preparing an alignment study for the raw water pipelines. Equipping design for the production well included in this element cannot be completed until the well site location is finalized and the well has been drilled and its production is established. Design work for well equipping is anticipated to begin in January 2017.

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<sup>3</sup> This element was formerly called “6000 gpm Additional Pumping Capacity Chino Basin and Raw Water Pipelines”



*Where funding is being requested for construction, the following will be considered:*

- 1-2. *What is the status of necessary environmental compliance measures? When is environmental compliance expected to be complete? Provide a detailed schedule of all environmental compliance activities and a schedule that indicates when construction is expected to begin.*

Environmental impacts of the Phase 3 Expansion Project have been evaluated extensively, including

- Chino Basin OBMP Program Environmental Impact Report (June 2001)
- Chino I Desalter Expansion and Chino II Desalter Project Draft Environmental Impact Report (November 2001)
- Chino I Desalter Expansion and Chino II Desalter Project Draft Subsequent Environmental Impact Report (November 2001)
- Chino I Desalter Expansion and Chino II Desalter Project Final Environmental Impact Report (January 2002)
- Chino II Desalter Expansion Notice of Exemption (February 2008)
- Inland Empire Utilities Agency Peace II Project Final Subsequent Environmental Impact Report (September 2010)
- Chino Desalter Phase 3 Expansion Initial Study/Mitigated Negative Declaration (January 2011)
- Chino Desalter Phase 3 Expansion FONSI (September 2011)
- Addendum to the Chino Desalter Phase 3 Expansion Initial Study/Mitigated Negative Declaration for the Addition of an Expanded TCE Treatment Program (June 2015). IEUA together with the Cities of Ontario and Upland requested a modification to the Phase 3 Expansion Project so that pumping to treat salinity and nitrates could also be used to address and remediate groundwater that is contaminated by Trichloroethylene (TCE). For the Chino Desalter Phase 3 Expansion project this has meant a new site for a planned Expansion Project well, and modifying some raw water pipeline from the original design. The CDA Board found that the Phase 3 Expansion Project, as modified, (i) will not have any significant effects not discussed in the Initial Study/Mitigated Negative Declaration; (ii) will not result in substantially more severe effects on the environment; (iii) no mitigation measures or alternatives previously found infeasible are now feasible; or (iv) no mitigation measure different than those

analyzed in the Initial Study/Mitigated Negative Declaration would substantially reduce one or more significant effects on the environment. The Addendum was prepared pursuant to the State CEQA Guidelines, 14 CCR §15164, to identify minor technical changes to the project that do not require preparation of a subsequent Environmental Impact Report. The CEQA re-evaluation criteria at 14 CCR 15162(a) are functionally identical to Federal Council on Environmental Quality (CEQ) regulations for implementing NEPA at 40 CFR 1502.9(c). Therefore it was not necessary to perform any new NEPA analyses.

See Figure 3 for a Project schedule; a summary of the schedule for environmental compliance activities is provided below:

Discharge Authorization and Monitoring Reporting Program (NPDES) Permit	Complete (May 2009)
CEQA documentation, <i>Initial Study/Mitigated Negative Declaration for Chino Desalter Phase 3 Expansion</i>	Complete (January 2011)
NEPA compliance for the project described in the <i>Initial Study/Mitigated Negative Declaration for Chino Desalter Phase 3 Expansion - FONSI</i>	Complete (Sept 2011)
CEQA documentation, Addendum to the Initial Study/Mitigated Negative Declaration for the Chino Desalter Phase 3 Expansion for the Addition of an Expanded TCE Treatment Program	Complete (June 2015)

3. *What is the status of required State and Federal permits for the Project Activities? When are all required permits expected to be obtained?*

Table 2 documents the permits needed for each element of the Phase 3 Expansion. The outstanding permits include well drilling permits and encroachment permits, and domestic water supply permits.

- Well Drilling Permits – well drilling permits from San Bernardino and Riverside County are needed for the element “Groundwater Supply Wells and Raw Water Pipelines.” These permits will be acquired by the selected contractor prior to starting construction. It is anticipated that the final needed well drilling permits will be obtained by October 2017.

Figure 3. Grant Project Schedule

ID	Task Name	Start	Finish	2017				2018				2019				
				Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	
1	<b>Completed Activities</b>															
2	Comprehensive Preliminary Design Report (completed Dec 2010)															
3	Chino II Desalter Expansion (completed Oct 2010)															
4	California Environmental Quality Act															
5	Chino Basin Optimum Basin Management Plan EIR (completed Jun 2001)															
6	Chino I Desalter Expansion and Chino II Desalter EIR (completed Jan 2002)															
7	Chino II Desalter Expansion Notice of Exemption (completed Feb 2008)															
8	Peace II Project Final Subsequent EIR (Sept 2010)															
9	Chino Desalter Phase 3 Expansion IS/MND (completed Jan 2011)															
10	Addendum to the Chino Desalter Phase 3 Expansion IS/MND (completed Jun 2015)															
11	National Environmental Policy Act (FONSI) (completed Sept 2011)															
12	Permitting															
13	Discharge Authorization/NPDES Permit (completed May 2009)															
14	Well Drilling Permit 19 and 19A (completed Nov 2014)															
15	Encroachment Permits Chino I/II Intertie Pipeline (completed Oct 2015)															
16	Drilling and Equipping Chino Creek Wells 16, 17 and 18 (completed Mar 2014)															




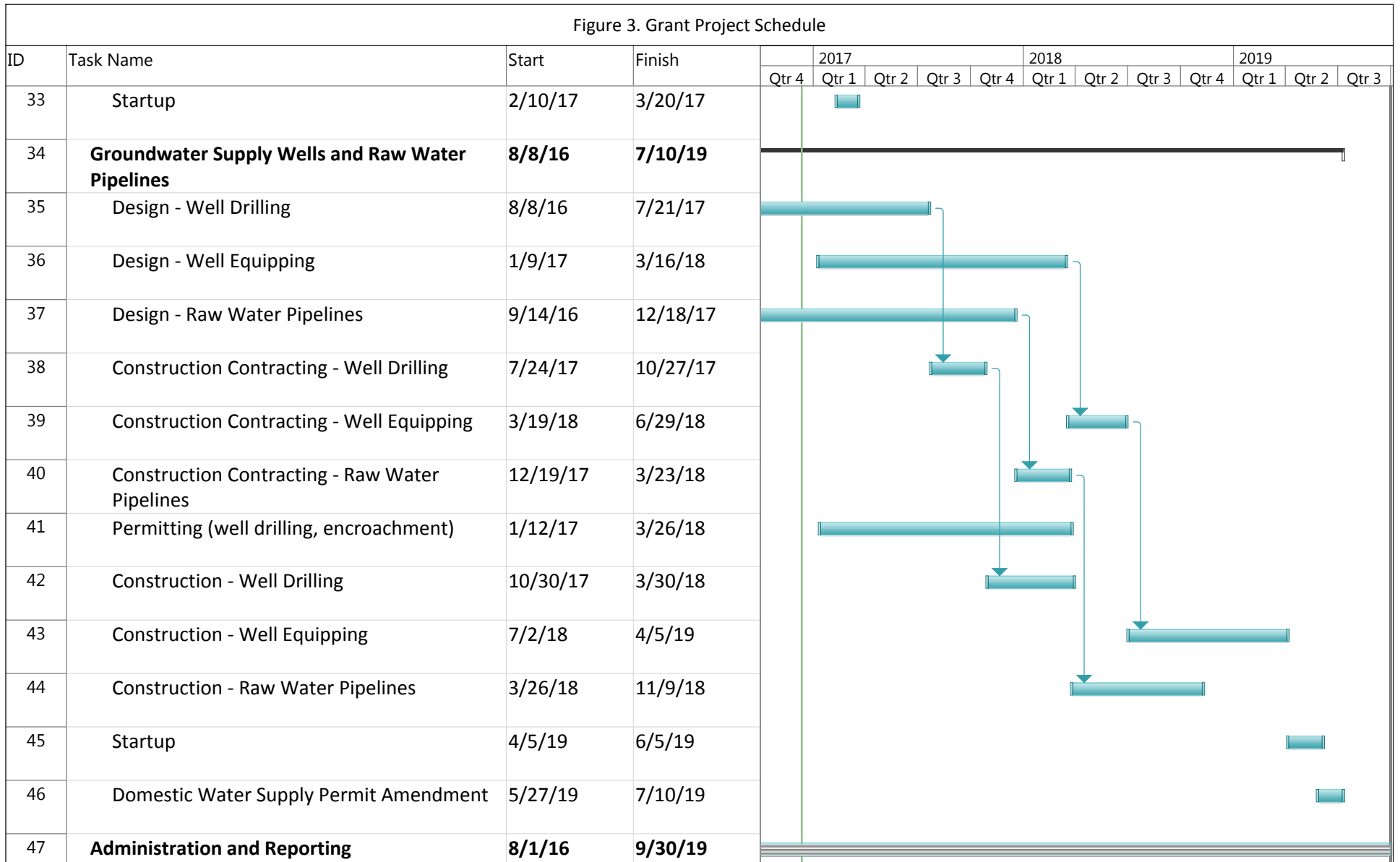
Lower Chino Dairy Area Desalination and Reclamation Project December 2016	Summary		Manual Task	
	Project Summary			

Figure 3. Grant Project Schedule

ID	Task Name	Start	Finish	2017				2018				2019				
				Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	
17	Raw Water Pipeline Chino Creek Wellfield to Chino I (completed Mar 2014)															
18	Milliken Pump Station (completed May 2015)															
19	1110 Pump Station Expansion (completed May 2016)															
20	1010 Pump Station (completed May 2016)															
21	Drilling and Equipping Chino Creek Wells 20 and 21 (completed Jan 2016)															
22	Product Water Transmission Pipeline (completed Sept 2016)															
23	<b>Activities Finishing December 2016</b>	<b>10/21/11</b>	<b>12/31/16</b>													
24	Drilling 19, Drilling and Equipping Chino Creek Well 19A	10/21/11	12/31/16													
25	Brine Concentrate Reduction Facility	9/18/13	12/31/16													
26	<b>Effective Date of Grant Agreement</b>	8/1/17	9/30/19													
27	<b>Ongoing Tasks</b>	<b>10/26/15</b>	<b>9/30/19</b>													
28	<b>Chino I/Chino II Intertie</b>	<b>10/26/15</b>	<b>3/20/17</b>													
29	Design (complete)															
30	Construction Contracting (complete)															
31	Permitting (complete)															
32	Construction	10/26/15	2/9/17													

Lower Chino Dairy Area Desalination and Reclamation Project December 2016	Summary		Manual Task	
	Project Summary			

Figure 3. Grant Project Schedule



Lower Chino Dairy Area Desalination and Reclamation Project December 2016	Summary		Manual Task	
	Project Summary			

**Table 2. Permitting for the Chino Desalter Phase 3 Expansion**

<b>Project Element</b>	<b>Permit</b>	<b>Permit Agency</b>	<b>Status</b>
Drilling Well 19, Drilling and Equipping Chino Creek We;; 19A	Well Drilling Permit	San Bernardino County Department of Public Health	Obtained
	Discharge Authorization and Monitoring Reporting Program (NPDES) Permit	Santa Ana Regional Water Quality Control Board	Obtained
	Domestic Water Supply Permit Amendment for Chino I Desalter	State Water Resources Control Board Division of Drinking Water	Will apply for permit once wells completed. Anticipated Dec 2016.
Brine Concentrate Reduction Facilities	Discharge Authorization and Monitoring Reporting Program (NPDES) Permit	Santa Ana Regional Water Quality Control Board	Obtained
	Domestic Water Supply Permit Amendment for Chino II Desalter	State Water Resources Control Board Division of Drinking Water	Will apply for permit once facility operable. Anticipated December 2016.
Chino I/Chino II Intertie Pipeline and Flow Control Facility	Discharge Authorization and Monitoring Reporting Program (NPDES) Permit	Santa Ana Regional Water Quality Control Board	Obtained
	Encroachment Permit	City of Eastvale	Obtained
	Encroachment Permit	City of Ontario	Obtained
	Encroachment Permit	County of San Bernardino Flood Control District	Obtained



**Table 2 cont.**

<b>Project Element</b>	<b>Permit</b>	<b>Permit Agency</b>	<b>Status</b>
<b>Groundwater Supply Wells and Raw Water Pipelines</b>	Well Drilling Permits	San Bernardino County Department of Public Health and Riverside County Department of Public Health	Successful bidder will obtain permits before construction. Anticipated Nov 2017.
	Encroachment Permits	California Dept. of Transportation, County of San Bernardino Flood Control District, County of San Bernardino, County of Riverside, City of Ontario	Successful bidder will obtain permits before construction. Anticipated March 2018.
	Discharge Authorization and Monitoring Reporting Program (NPDES) Permit	Santa Ana Regional Water Quality Control Board	Obtained
	Domestic Water Supply Permit Amendment for Chino II Desalter	State Water Resources Control Board Division of Drinking Water	Will apply for permit once wells are completed. Anticipated July 2019.

- Encroachment Permits – these permits will be needed from the California Department of Transportation, the County of San Bernardino Flood Control District, County of San Bernardino, the County of Riverside, and the City of Ontario for the element “Groundwater Supply Wells and Raw Water Pipelines.” These permits will be acquired by the selected contractor prior to starting construction. It is anticipated that the final needed encroachment permits will be obtained by March 2018.
- Domestic Water Supply Permit Amendment – anytime a water supplier makes modifications to its drinking water system, before those modifications (i.e., new raw water sources, new treatment elements) can be placed into service the water supplier must coordinate with the State Water Resources Control Board Division of Drinking water to amend their water supply permit. CDA cannot apply for the permit modifications until construction on a given element is complete. It is anticipated that the final Domestic Water Supply Permit Amendment be concluded by July 2019.

All the required permits are from State and local agencies; no federal permits are required for the Project.

### 1.3.3 Environment and Water Quality

**Criterion 3.** *Points will be awarded based on the extent to which the project will improve surface, groundwater, or effluent discharge quality; will restore or enhance habitat for non-listed species or will provide water or critical habitat for Federally-listed threatened or endangered species.*

1. *Will the Title XVI Project improve the quality of surface or groundwater? To what extent will the project improve effluent quality beyond levels necessary to meet State or Federal discharge requirements?*

The Project will directly improve the quality of groundwater in the Chino Basin and surface water of the region.

Groundwater in the Lower Chino Dairy Area is heavily degraded with nitrate and salts from a century-long legacy of irrigated agriculture and dairy farming. Nitrate concentrations have historically ranged from 10 milligrams per liter (mg/L) as nitrogen to as high as 100 mg/L, and TDS concentrations have ranged from 600 mg/L to as high as 3,000 mg/L (IEUA 2006).

The Chino Desalter Phase 3 Expansion will improve both the quality of groundwater in the Basin and surface water of the region. The Project will improve the local groundwater quality by removing salts, nitrates and volatile organic compounds from the Chino Basin. In turn, this will significantly reduce the flow of degraded water into the Santa Ana River, thereby protecting downstream water supplies and ecosystems.

To reach the additional product water capacity of 10,600 AFY projected for the Chino Desalter expansion, an additional 12,040 AF of groundwater (or raw water) will be pumped annually. Treatment of this additional water at the Chino II Desalter will result in an estimated 14,400 tons of annual salt removal from the Chino Basin through the SARI line. This is based on the following:

- The RO process at the desalters is expected to remove nearly all the salt contained in the pumped groundwater (about 1,100 milligrams per liter or 1,356 kilograms per AF) (IEUA 2011). No more than twenty percent of raw water bypasses the RO treatment train. Assuming 80 percent of raw water (12,040 AF) taken from the Chino North Management Zone is treated by RO, the Chino Phase 3 Expansion Project will result in treatment of approximately

9,630 AFY<sup>4</sup>. This translates into approximately 13,058,280 kilograms (9,630 AF x 1,356 kilograms per AF), or about 28,788,580 pounds or 14,400 tons of salt being removed annually.

Additional groundwater pumping from the Chino North Management Zone will reduce degraded groundwater flow to the Santa Ana River. As described earlier, a key strategy of the Chino OBMP and the RWQCB Basin Plan is hydraulic control of the southern end of the Chino Basin which is adjacent to the Santa Ana River. Historically, agricultural users overlying the southern end of the Chino Basin have extracted and used this groundwater; but as the area converts to urban uses it's estimated that as much as 40,000 AFY of degraded Chino Basin groundwater could enter the Santa Ana River (IEUA, 2006). The Santa Ana River is the primary source of recharge for all of Orange County. Contamination of the river by poor quality Chino groundwater could limit the beneficial use of river water.

In addition, the project will be conducted in a manner so as to facilitate cleanup of a trichloroethylene (TCE) plume in the Chino Groundwater Basin south of the Ontario International Airport. In June 2013, the CDA entered into a Memoranda of Understanding (MOU) with parties pursuing cleanup of the South Archibald TCE plume. Brackish water treatment is the purpose of the project but with the MOU and collaboration with the other parties, the project will be implemented to promote broad groundwater remediation. It is anticipated that 95 percent of the TCE from the influent can be removed by the Chino Basin Desalters. Product water from the Chino II Desalter is forecast to be significantly less than the MCL of 5 micrograms per liter, the current drinking water standard. Costs specific to TCE treatment will be borne by the parties seeking TCE plume clean up and are not included in the project budget described in this grant application.

2. *Will the Title XVI project improve flow conditions in a natural stream channel? Will the project restore or enhance habitat for nonlisted species? If so, how?*

The Chino Desalter Phase 3 Expansion Project will protect water quality of the Santa Ana River and enhance riparian habitat conditions. Downstream of the Chino Basin lies the Prado Basin, the largest wetland and riparian habitat in Southern California. The Prado Basin contains approximately 465 acres of constructed wetlands as well as large areas of mature riparian habitat, naturally occurring wetlands, and deepwater habitats, providing home to numerous terrestrial and aquatic animal and plant species. By capturing and treating low-quality flows, the Chino Desalter Phase 3 Expansion will reduce the discharge of poor quality water to the

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<sup>4</sup> With bypass water added to the treated water, total supply made available from the Phase 3 Expansion will meet or exceed 10,600 AFY.

River, thus helping to protect the Prado Basin and the various species of the River and the reservoir downstream.

In addition to the local protection efforts and improvements, any addition to local, in-Basin water supplies, such as the 10,600 AFY provided by the Phase 3 Expansion, can help to replace demand for water from the Sacramento-San Joaquin Delta pumped through the State Water Project and the Colorado River, which could lead to improved habitat conditions for non-listed species in the Delta and Lake Mead. Further, because the Project will reduce imports from the State Water Project and the Colorado River, it also in turn will affect the Federal Water Projects such as the Central Valley Project (CVP), the Delta Project and CALFED. These are Federal projects overseen by the USBR or as in the case of CALFED, some CVP facilities (i.e., the San Luis Unit) that were developed in coordination with the California State Water Project. The improved habitat conditions therefore will also benefit in a positive way the Central Valley Project/Delta Division Project and Colorado River/Lake Mead Project.

As already mentioned in Criterion 3 Question 1 above, the Chino Desalter Phase 3 Expansion will improve both the quality of groundwater in the Basin and surface water downstream from the Basin. The Project will improve the local groundwater quality by removing salts, nitrates and volatile organic compounds from the Chino Basin. In turn, this will significantly reduce the flow of degraded water into the Santa Ana River, thereby protecting downstream water supplies and ecosystems.

3. *Will the Title XVI Project provide water or habitat for federally listed threatened or endangered species? If so, how?*

As already mentioned in Criterion 3 Question 1 above, the proposed Project will reduce the potential for degradation of water quality in the Santa Ana River and protect riparian habitat, including helping to maintain necessary stream flows. The Santa Ana River is home to the arroyo chub (*Gila orcutti*) and Santa Ana speckled dace (*Rhinichthys osculus ssp.*) both of which are fish federally-listed as “species of special concern”. The Santa Ana River is also home to the Santa Ana sucker (*Catostomus santaanae*) a species considered threatened under the Endangered Species Act (ESA). In addition, the Prado Basin has acres of habitat for the endangered Least Bell’s Vireo (*Vireo bellii pusillus*) and Southwestern Willow Flycatcher (*Empidonax traillii extimus*). Lessening the degraded water that flows through the wetlands will allow the habitat to flourish, which in turn will have a beneficial impact on the Least Bells Vireo and Southwestern Willow Flycatcher. Lake Mead is home to the razorback sucker (*Xyrauchen texanus*) which is considered endangered. Also, any addition to in-Basin water supplies, such as the 10,600 AFY provided by the Phase 3 Expansion, can help to replace demand for water from the Sacramento-San Joaquin Delta

pumped through the State Water Project and the Colorado River Project, which could lead to improved habitat conditions for ESA-listed species in the Delta and *Lake Mead*.

#### 1.3.4 Renewable Energy and Energy Efficiency

**Criterion 4.** *Points will be awarded based on the extent to which the Title XVI Project incorporates the use of renewable energy and/or addresses energy efficiency:*

1. *Will the Title XVI project include installing low-impact hydroelectric, solar-electric, wind energy, or geothermal power systems or other facilities that enable use of these or other renewable energy sources to provide power to components of the Project? Are any energy recovery devices or processes included in the Project? Provide the amount of energy expected to be generated through renewable energy sources (in kilowatt-hours). What percentage of the Title XVI Project's total energy consumption will be provided by installing renewable energy components?*

The Chino I and Chino II Desalters participate in the Southern California Edison Agricultural Energy Efficiency Program. Under this program, the CDA teams with the local energy provider to regularly test the efficiency of various equipment required for a desalter (e.g., clear well pumps, booster pumps). Poor performing equipment is targeted for refurbishment or replacement. This has the effect of reducing overall energy use and decreasing peak energy use. The proposed Project will enhance and expand operations of the Chino II Desalter and is a good example of the CDA's efforts to improve energy and operational efficiency. The Chino II Desalter has several energy efficiency features:

- (1) Reduced energy related to imported water supplies
- (2) Reduced energy needed for groundwater production (more recovery of water at same rate of groundwater pumping)
- (3) Reduced energy related to brine disposal and treatment

The Chino II Desalter is one of the few desalters that utilizes a combination of treatment processes. The express intent of the different treatment processes is to use low energy treatment processes when feasible thereby limiting the use of high energy treatment processes. The Chino II Desalter, which began operation in 2006, uses both RO and ion exchange (IX) processes to treat groundwater. The IX system has very low energy demands

The Brine Concentrate Reduction Facility element of the Phase 3 Expansion Project is a concentrate treatment and recovery system. The Brine Concentrate Reduction Facility includes processes to increase RO

efficiency and boosts product water recoveries from approximately 80% to up to 95%. This increase in water recovery means product water at the Chino II desalter will increase by an additional 2.2 MGD for a total of 22.7 MGD with the same amount of raw water pumping.

The Brine Concentrate Facility also includes energy recovery facilities. The brine enters the Brine Concentrate Reduction Facility at high pressure, an energy recovery system (two turbines) upstream of the pellet reactor recovers excess energy. This allows the facility to minimize electrical use.

It is expected that with brine concentrate reduction, brine disposal to the SARI and brine treatment at Orange County Sanitation District Plant #2 will be decreased by 2,200 AFY. It is estimated that the Brine Concentrate Reduction Facility utilizes 440 kilowatt-hours per AF (kWh/AF) treated. On average, wastewater treatment in California takes 500 to 1,500 kWh/AF (*The Water Energy Nexus. Southwest Hydrology* October/November 2007). So each AF recovered by the Brine Concentrate Reduction Facility saves 60 kWh (500 kWh for wastewater treatment less 440 kWh for brine concentrate reduction). Therefore, a reduction in necessary brine treatment by 2,200 AFY would reduce net energy use by 132,000 kWh each year.

- 2. If the Title XVI Project does not itself include renewable energy, will the Title XVI Project facilitate power generation in the water delivery system by making more water available? If so, explain the relationship between this Title XVI Project and any potential renewable energy improvements in the water delivery system.*

The Title XVI Project will enhance local water supplies available in the potable water system from the Chino II Desalter. However, at this time no improvements related to renewable energy generation are proposed for the water delivery system.

- 3. Will completion of the Title XVI Project lead to a reduction in energy consumption as compared to current water supply options? Provide calculations and describe assumptions and methodology.*

The Chino Desalter Phase 3 Expansion Project will provide 10,600 AFY in additional local water supply, in-lieu of the import of State Water Project water (State Water) and Colorado River water (Federal Water). It is estimated that State Water delivered to the East Branch Extension requires 3,250 kWh/AF. For the purposes of this calculation, it is assumed that each AF of avoided water import is equal to 3,250 kWh/AF saved (data for energy used by the Colorado River Project is not available). Based on a Southern California Edison efficiency test, energy



consumption at the Chino Desalter facilities is approximately 1,700 kWh/AF, including operation of wells, treatment and pumping. Given that the Chino Desalter Phase 3 Expansion will generate 10,600 AFY, this is a net annual reduction of over 16.4 million kWh ( $[3,250 \text{ kWh/AF} - 1,700 \text{ kWh/AF}] \times 10,600 \text{ AFY}$ ) over using imported water.

Assuming  $5.8883\text{E-}04$  metric tons of annual carbon dioxide is equivalent to one kWh, the Project offsets 4,866 metric tons of carbon dioxide annually ( $16.4 \text{ million kWh} \times 5.8883\text{E-}04$ ), thereby eliminating greenhouse gas emissions by sources dominated by non-renewable energy (IEUA, 2011).

Further, as mentioned above, the proposed Brine Concentrate Reduction Project will lead to reductions in energy consumption attributed to reduced brine disposal and treatment.

4. *Will the Title XVI Project include any innovative components to reduce energy consumption or to recover energy?*

Please see response in Item 2 above.

5. *How does the Title XVI Project's energy consumption compare to other water supply options that would satisfy the same demand as the Project?*

Please see response in Item 3 above.

### 1.3.5 Cost per Acre-Foot of Water and Other Project Benefits

**Criterion 5.** *Points will be awarded based on the cost per acre-foot of water expected to be delivered upon completion of the Title XVI Project and other benefits of the project. Please use costs related to the entire Title XVI Project, not just the cost of work through September 30, 2018.*

1. *Reclamation will calculate the cost per acre-foot of water produced by the Title XVI Project using information provided by project sponsors. Please provide the following information for this calculation:*

- (a) *The total estimated construction costs, by year, for the Title XVI Project (include all previous and planned work).*

As shown in Table 3 below, Chino Desalter Phase 3 Expansion construction costs are anticipated to be \$133,209,771.

**Table 3 – Construction Costs by Year**

<i>Calendar Year</i>	<i>Construction Costs</i>
2009	\$15,013,273
2010	\$0
2011	\$761,780
2012	\$2,378,241
2013	\$8,203,989
2014	\$43,953,652
2015	\$31,865,070
2016	\$15,586,109
2017	\$989,338
2018	\$3,614,580
2019	\$10,843,739
<b>Total</b>	<b>\$133,209,771</b>

*(b) The total estimated or actual costs to plan and design the Title XVI Project (note: this should include the cost to complete a Title XVI feasibility study).*

Total estimated costs for planning and design, environmental documentation, and pilot studies, including preparation of the Title XVI Feasibility Study are: \$8,224,568 (this excludes administrative and legal costs, land costs, and equipment costs).

*(c) The average annual operation and maintenance costs for the life of the Title XVI Project (note: this is an annual not total cost).*

Operation and maintenance costs are estimated to be approximately \$3,451,000 per year.

*(d) The year the Title XVI Project will begin to deliver recycled water.*

Treated brackish groundwater from Chino I and II desalters is already being delivered; in 2015 deliveries were approximately 25,629 AF. Full water deliveries, including the additional 10,600 AFY from the facilities funded by the proposed grant Project, are anticipated by August 2019.

*(e) The projected life (in years) that the Title XVI Project is expected to last (note: this should be measured from the time the project starts delivering water).*

A useful life of 50 years can be assumed for this Project, which based on a start year of 2019, results in a projected life until 2069.

(f) All estimated replacement costs, by year.

**Table 4 – Annual Replacement Costs**

	<b>Year</b>	<b>Cost</b>
RO membrane replacement Chino I	2019 - 2069	\$30,000
RO membrane replacement Chino II	2019 - 2069	\$78,000
Resin replacement Chino II	2019 - 2069	\$50,000
Other/Capital Replacement/Emergency Reserve	201 - 2069	\$45,165
<b>Total</b>		<b>\$203,165</b>

(g) The maximum volume of water (in acre-feet) that will be produced upon completion of the Title XVI Project.

The Phase 3 Expansion Project will enable production and delivery of 10,600 AFY.

2. Comparison of the cost per acre-foot of the Title XVI Project to the cost per acre-foot of one alternative (i.e., nonrecycled water option) that would satisfy the same demand as the proposed project. Provide the cost per acre-foot for one nonrecycled water alternative that would satisfy the same demand.

In April 2012, the CDA performed an updated financial analysis of the Chino Desalter Phase 3 Expansion. That analysis estimated the resulting unit cost for water from the program to be \$551/AF. The alternative water source available to the Project region is imported water from the Metropolitan Water District. Effective January 2017, the cost of treated imported water from the Metropolitan Water District is \$1,073 per AF (Tier 2 rate for new supply).

3. Some Title XVI project benefits may be difficult to quantify. Describe any economic benefits of the project that are not captured by the cost per acre-foot analysis, or that are difficult to quantify.

The Project has many benefits which are difficult to quantify:

- Protection of Santa Ana River and Colorado River/Lake Mead quality and riparian habitat, including protection of the water supply and ecological resources.
- Improved water supply reliability. The reliability of water supply refers to the ability to meet water demands on a consistent basis, even in times of drought or other constraints on source water availability.
- Enhanced ability to manage salts in the basin which will allow continued and even expanded use of local recycled water supplies.

- Reduced fouling, and hence reduced maintenance, of the SARI pipeline due to removal of 38 tons calcium carbonate and silica a day through the brine concentrate facility
- Stabilization of water supply cost to Chino Basin users by producing water locally rather than importing supplies.
- Reduction of the unit cost of water by spreading fixed costs over a large production volume.
- Reduction in the demand for imported water, thereby reducing annual and seasonal peak demands on the Sacramento-San Joaquin Delta and the Colorado River, leading to improvements in habitat conditions.

#### 1.3.6 Reclamation's Obligations and Benefits to Rural or Economically Disadvantaged Communities

**Subcriterion No. 6a.** *Legal and Contractual Water Supply Obligations. Points will be awarded for projects that help to meet Reclamation's legal and contractual obligations.*

1. *Does the Title XVI Project help fulfill any of Reclamation's legal or contractual obligations such as providing water for Indian tribes, water right settlements, river restoration, minimum flows, legal court orders, or other obligations? Explain.*

The Chino Desalter Phase 3 Expansion is consistent with Reclamation's policy to promote water reuse and reclamation so as to improve water supply reliability, improve efficiency, improve flexibility during water shortages, and to diversify water supply. The Project also assists Reclamation's legal Endangered Species Act and contractual obligations in restoring the dual priorities of water supply reliability and ecosystem restoration in the Bay Delta by reducing the demand for imported water in our region of California.

**Subcriterion No. 6b.** *Benefits to Rural or Economically Disadvantaged Communities.* Points will be awarded based on the extent to which the project serves rural communities or economically disadvantaged communities in rural or urban areas.

1. *Does the Title XVI Project serve a rural or economically disadvantaged community? (A rural community is defined as a community with fewer than 50,000 people.)*

The Project does not serve a rural-community; however, the Project does serve economically disadvantaged areas.

2. *Are any rural or economically disadvantaged communities within the Title XVI Project sponsor's service area?*

Yes, as shown on Figure 4, disadvantaged communities (census block groups where median income is less than 80% of the Statewide median) make up approximately 28% of the area served by the proposed facilities. The City of Ontario leads the participating agencies with approximately 39% of its service area considered disadvantaged.

### 1.3.7 Watershed Perspective

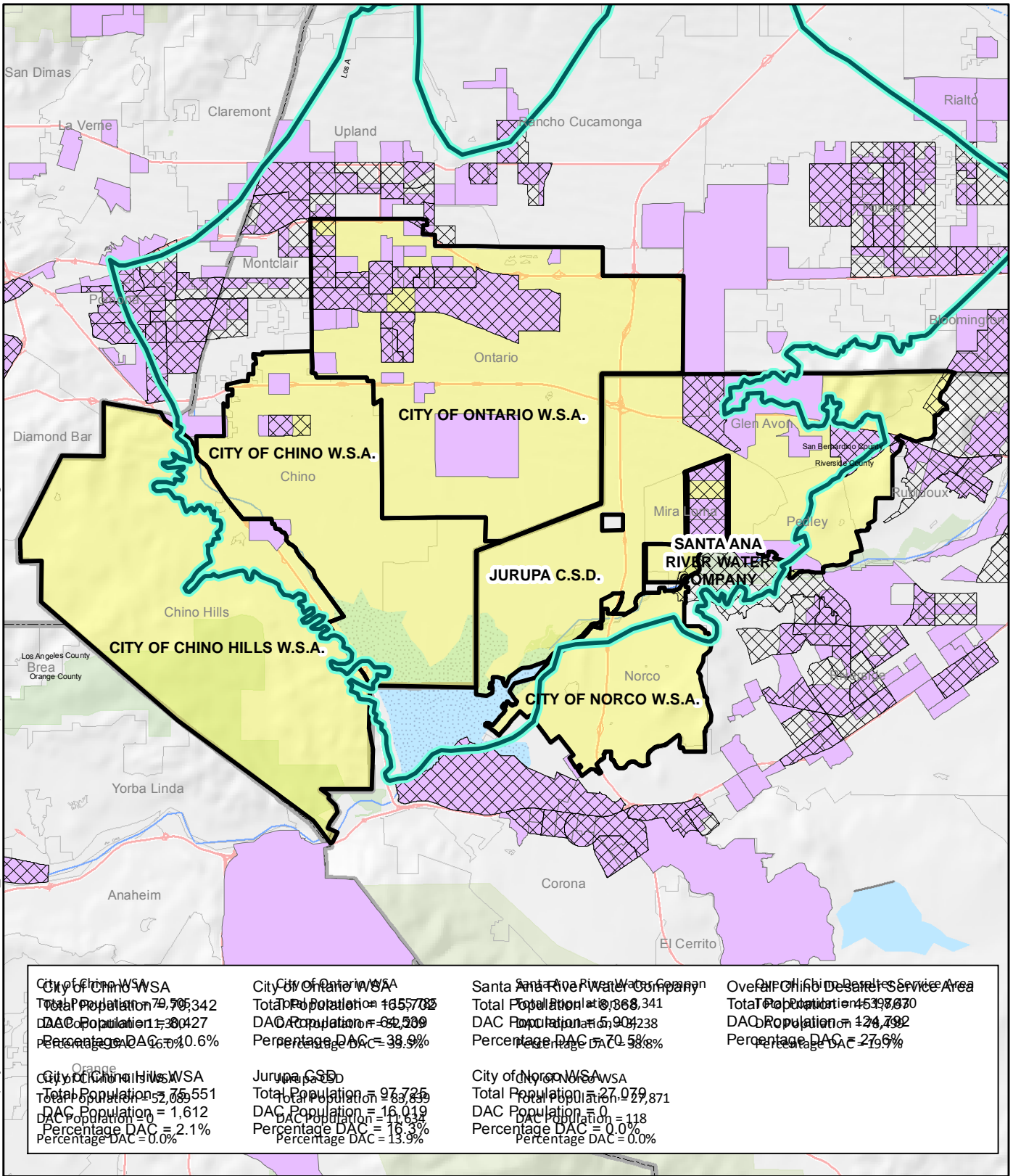
*Points will be awarded based on the extent to which the project promotes or applies a watershed perspective by implementing an integrated resources management approach, implementing a regional planning effort, or forming a collaborative partnership with other entities.*

*A watershed perspective generally means an approach to planning directed at meeting the needs of geographically dispersed localities across a region or a watershed that will take advantage of economies of scale and foster opportunities for partnerships. This approach also takes into account the interconnectedness of water and land resources, encourages the active participation of all interested groups, and uses the full spectrum of technical disciplines in activities and decision making.*

1. *Does the Title XVI Project implement a regional or State water plan or an integrated resource management plan? Explain.*

The Chino Desalter Phase 3 Expansion Project is a regional and coordinated effort to improve water supply and water management in the Chino Basin. In addition to major components being included in the "One Water One Watershed Integrated Regional Water Management Plan", the proposed Project is a part of the Chino OBMP prepared by the Chino Basin Watermaster. The Watermaster is a consensus-based organization of 23 agencies to facilitate development and utilization of the Chino

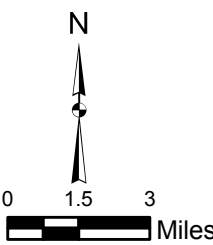
Path: \\ven3\projects\2011\1189051\_00\_01\_02\_ChinoDesalterPhase3Exp\Grant\2015 UWP\M\F4 Disadvantaged Communities in the Lower Chino Dairy Area.mxd



U.S. Census Bureau; 2014 ACS 5-year Estimates  
 California Median Household Income (MHI) 2013: \$61,489  
 Disadvantaged Communities (DAC): MHI ≤ \$49,191

**Legend**

- Areas Served by the Chino Desalter Phase 3 Expansion
- Disadvantaged Communities (2014 Census Tracts)
- Disadvantaged Communities (2014 Census Block Group)
- Chino Groundwater Basin



**Kennedy/Jenks Consultants**  
 Chino Basin Desalter Authority  
 Riverside, California

**Disadvantaged Communities in the Lower Chino Dairy Area**

KJ 1089053\*02  
 November 2016

Figure 4



Groundwater Basin. The proposed Project will be built by member agencies of the Chino Basin Desalter Authority. The CDA was created through a Joint Exercise of Powers Agreement (JPA). The Chino Desalter Phase 3 Expansion Project is an example of regional partnerships resulting in basin-wide benefits. The Project will increase water supply available to multiple water agencies. The additional groundwater extraction helps to achieve hydraulic control of the Chino Basin and prevents low quality groundwater from entering the Santa Ana River, thereby benefitting agencies downstream of the Chino Basin.

2. *Does the Title XVI Project promote collaborative partnerships to address water-related issues? Explain.*

The Chino Desalter Phase 3 Expansion is a regional project, supported by a group of agencies who have developed regional groundwater treatment facilities that benefit many areas. The Chino Desalter Phase 3 Expansion proposed Project will directly benefit many agencies in the region, including the City of Chino Hills, the City of Chino, Jurupa Community Services District (JCSD), Santa Ana River Water Company, the City of Norco, and the City of Ontario, as well as the Western Municipal Water District (WMWD) Service area.

The Project is a result of multi-year collaboration between water purveyors, the Chino Basin Watermaster, and the Santa Ana RWQCB in response to on-going Basin salt management issues. The project will address:

- Salinity and nitrate issues in the Chino Groundwater Basin. The Chino Groundwater Basin is the principal water supply for 20 municipal agencies and about 400 agricultural and dairy operations.
- “Spill” of degraded groundwater to the Santa Ana River and Prado Basin. Poor quality groundwater (salts, nitrogen, volatile organic compounds) from the southern end of the Chino Basin daylight and flows on the surface to the Santa Ana River. Without the Phase 3 Expansion Project this “spill” of degraded water will continue to affect the 350,000 AFY of Santa Ana River water used by OCWD. Without the project the degraded water will continue to adversely affect the Prado Basin, a significant freshwater wetland resource.
- Costs to water customers. All agencies utilizing the Chino I and Chino II desalters benefit from reduced unit costs of water as fixed costs are spread over a larger production volume. Additionally, as pumping costs are shared equally between all CDA members, the reduction in Chino II product water pumping costs resulting from implementation of the Phase 3 Expansion Project will benefit all members.

- Costs of groundwater protection and remediation. The Phase 3 Expansion sponsors have coordinated with entities undertaking trichloroethylene cleanup in the Chino Basin. The various entities have identified a way whereby pumping to produce and treat brackish water can be done in a manner to remediate trichloroethylene. This coordination has involved moving one of the planned Phase 3 wells and equipping three wells with variable frequency drives so as to adjust well output for cleanup of the trichloroethylene plume. This collaboration avoids the time and cost of building separate and redundant water infrastructure.
- Potential limitations on recycled water. By removing salts the project benefits recycled water purveyors in the region by reducing salt load to the basin thereby allowing continued growth in recycled water use
- Regional supply reliability. By providing a reliable local supply the project reduces reliance on imported water supply and improves the region's drought resiliency. By facilitating growth of recycled water as a supply the project further contributes to drought preparedness.

## Section 2: Environmental and Cultural Resources Compliance

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To allow Reclamation to assess the probable environmental impacts and costs associated with each application, all applicants must respond to the following list of questions focusing on the requirements of the NEPA, ESA, and NHPA. Please answer the following questions to the best of your knowledge. If any question is not applicable to the project please explain why.

1. Will the Project Activities impact the surrounding environment (i.e., soil [dust], air, water [quality and quantity], animal habitat, etc.)? 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.

### **Applicable CEQA/NEPA Documentation**

The Phase 3 Expansion is a planned effort with a primary purpose to improve water quality in the Santa Ana River and the Chino Groundwater Basin. Extensive environmental evaluation has concluded that although certain project activities could have significant effects on the environment, impacts will be reduced to levels less than significant with implementation of mitigation measures. As described earlier, the *Initial Study/Mitigated Negative Declaration for the Chino Desalter Phase 3 Expansion* was approved by CDA in January 2011. An Addendum to the Chino Desalter Phase 3 Expansion Initial Study/Mitigated Negative Declaration was prepared for the Addition of an Expanded TCE Treatment Program to the project (June 2015).

Based on its review of the *Initial Study/Mitigated Negative Declaration for the Chino Desalter Phase 3 Expansion*, Reclamation determined that the project did not constitute a major Federal action which would significantly affect the quality of the human environment within the meaning of Section 102(2)(C) of NEPA. Reclamation completed a Finding of No Significance on September 28, 2011 (No. 11-SCAO-015-FONSI). The addition of the Expanded TCE Treatment Program was evaluated under CEQA (as described above). The CEQA re-evaluation criteria at 14 CCR 15162(a) are functionally identical to Federal Council on Environmental Quality (CEQ) regulations for implementing NEPA at 40 CFR 1502.9(c). It was not necessary to do new NEPA analyses. The CEQA documents found, and Reclamation agreed in the FONSI, that the Phase 3 Expansion would have no impact or less than significant impacts associated with agriculture, land use and planning, mineral resources, population and housing, recreation and utilities and services. The issues of air quality, biology, cultural resources, geology and soils, hazards and hazardous

materials, hydrology and water quality, noise, public services and transportation and traffic did require the implementation of mitigation measures to reduce impacts to a less than significant level. In the paragraphs below the referenced mitigation measures come from the *Mitigation Monitoring and Reporting Program* of the *Chino Desalter Phase 3 Expansion Project Initial Study/MND*, which was adopted by the Chino Basin Desalter Authority in December 2010.

### **Potential Project Impacts and Mitigation Measures**

Air Quality. The South Coast Air Basin is a designated non-attainment area for ozone and dust<sup>5</sup>. The South Coast Air Basin is designated as an attainment area with a maintenance plan for carbon monoxide (CO) and nitrogen dioxide (NO<sub>2</sub>). However, air quality impacts from the Chino Phase 3 Expansion Project activities are overall not significant and will be minimized as necessary through mitigation measures. Water related infrastructure, such as that proposed requires very few vehicle trips for maintenance and operation, typically less than one trip per day per facility. The impact of increased pumping and water treatment activity on electrical usage would be very small relative to the overall electrical demand of the region served; and it will be less per acre-foot than importing water. Construction emissions include onsite generation of dust, off-gassing of paving materials and equipment exhaust, and offsite emissions from construction employee commuting and/or trucks delivering building materials. Mitigation measures, including watering during construction (to limit dust), staggering of project element construction, and limiting the amount of daily grading would ensure impacts related to air emissions are minor.

Potential short-term air quality impacts attributable to the facilities proposed for funding are generally due to grading and facility construction activities. Construction activities for the Chino Phase 3 Expansion are to be restricted to the maximum “mix” of activities listed in Tables III-22 and III-23 of the *Mitigation Monitoring and Reporting Program* of the adopted *Initial Study/MND*. The construction “mix” ensures that the South Coast Air Quality Management District significant thresholds are not violated.

The FONSI prepared by Reclamation stated, “Estimated air emissions will not exceed the Clean Air Act conformity applicability *de minimis* thresholds [40 CFR 93.153 (b)] and will not be regionally significant. No conformity determination is required.”

Biology/Wetlands. Direct project impacts will occur on land that has been previously developed or disturbed by human activity for agricultural, residential, commercial or industrial uses. At three locations with limited

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<sup>5</sup> Specifically particulate matter less than 10 microns in size (PM<sub>10</sub>) and particulate matter less than 2.5 microns in size (PM<sub>2.5</sub>)

biological resource values, mitigation was identified to reduce impacts before construction begins. The Initial Study found no evidence that the project would affect wildlife resources. No significant indirect effect on riparian habitat in the Prado Basin (due to increased groundwater pumping) is expected.

For potential impacts to sites where sensitive resources may occur, mitigation measures will be implemented as discussed within the biological section of the *Initial Study/Mitigated Negative Declaration*. These measures (Mitigation Measures IV-1 through IV-6) are as follows:

- Project impact areas will be evaluated by a qualified biologist prior to initiation of ground disturbance to demonstrate that no bird nests will be disturbed by project construction activities.
- Prior to commencement of construction activity in locations that are not fully developed, a clearance survey will be conducted by a qualified biologist to determine if any burrowing owl burrows are located within the potential area of impact. If occupied burrows may be impacted, an impact minimization plan shall be developed by the biologist that will protect the burrow in place or provide for relocation to an alternate burrow within the vicinity but outside of the Project footprint in accordance with current California Department of Fish and Wildlife (CDFW) guidelines.
- Following construction activities within or adjacent to any natural area, the disturbed areas shall be revegetated using a plant mix of native plant species that are suitable for long term vegetation management, which shall be implemented in cooperation with regulatory agencies and with oversight from a qualified biologist.
- Three areas were identified as potentially sensitive biological resource habitat. Within the three areas identified as potentially sensitive biological resource habitat, the well or other facility shall be located in adjacent disturbed areas.
- Where relocation to an undisturbed area is not feasible, a follow-on detailed site survey shall be conducted 30-days prior to initiating construction to verify that no sensitive species occur within the unavoidable impact area. Where such sensitive resources occur and cannot be avoided, a compensatory mitigation plan shall be implemented that permanently preserves comparable

or better habitat based on the findings of a qualified biologist and the CDFW.

- It is not anticipated that any discharge of fill or streambed alteration will result from installing project-related pipelines. However, if it becomes necessary to discharge fill or alter a streambed in conjunction with the implementation of the Project, CDA shall, prior to discharge of fill or streambed alteration of jurisdictional areas, obtain regulatory permits from the U.S. Army Corps of Engineers, Santa Ana RWQCB and the CDFW.

Cultural Resources. A cultural resources survey and evaluation of the project sites was prepared as part of the CEQA document. Based on detailed investigation, the report concluded that the Phase 3 Expansion sites do not contain any significant surface cultural resources. No known Indian Trust assets were identified. Two contingency mitigation measures (Mitigation Measures V-1 to V-2) were adopted to address any subsurface resources that may be exposed during construction:

- In the event that cultural resources not previously identified are encountered during ground disturbing activities, such activities shall be halted until a qualified archaeologist/historian can evaluate the nature and significance of the finds. The CDA and/or contractor shall implement the management recommendations of the archaeologist/historian that examines any accidentally exposed cultural resources.
- When excavations (not well drilling) extend below ten feet or encounter older alluvial sediments, the contractor shall have a qualified paleontological consulting firm conduct a review of the sediments and determine whether monitoring during additional initial ground disturbing is required during continuing excavation activities. If paleontological resources are discovered, excavation activities in the area of the find shall be halted until the qualified paleontologist can evaluate the nature and significance of the finds. The Chino Basin Desalter Authority and/or contractor shall implement the management recommendations of the paleontologist monitoring and evaluating any resource exposed during construction activities.

Geology. A potential concern was identified regarding strong seismic ground shaking and related failure of Phase 3 Expansion facilities, and some concern about soil erosion. Mitigation (measures VI-1 to VI-8) includes using established techniques and qualified geotechnical engineers to evaluate subsurface soils during design and construction.

Hazards and Hazardous Materials. No underground storage tanks, hazardous waste generators, landfills, or other potentially hazardous materials sources were identified within the limits of the Phase 3 Expansion Project. Hazardous materials are used routinely in support of treatment operations and some project activities may generate hazardous wastes. Use and disposal of hazardous or toxic materials will be managed in accordance with existing laws and regulations. Appropriate engineering controls, including those listed below, will be implemented to minimize emissions from the facility and to minimize the potential for an accidental release.

- For Phase 3 Expansion facilities that handle hazardous materials or generate hazardous waste, the Business Plan prepared and submitted to the county or local city shall incorporate best management practices (BMPs) designed to minimize the potential for accidental release of such chemicals.
- For the storage of any acutely hazardous material at a Phase 3 Expansion facility, such as chlorine gas, modeling of pathways of release and potential exposure of the public to any released material shall be completed and specific measures, such as secondary containment, shall be implemented to ensure that sensitive receptors will not be exposed to significant health threats based on the toxic substance involved.
- All contaminated material shall be delivered to a licensed treatment, disposal or recycling facility that has the appropriate systems to manage the contaminated material without significant impact on the environment.

Hydrology and Water Quality. The Phase 3 Expansion will increase the local water supply. The project will also provide hydraulic control, a requirement of the Regional Water Quality Control Board Basin Plan for the Chino Basin intended to protect water quality downstream of the Basin. The project is expected to result in a decline in groundwater level of about 30 feet relative to the current groundwater levels. For the local water producer in the vicinity of the new Chino Creek Wellfield where the new CDA wells will be installed, an adverse impact may occur.



- Mitigation will be provided to the estimated eight (8) private well owners/operators within the Chino Creek Wellfield area when the well owner/operator cannot produce enough groundwater to meet their needs and the cause of reduced production can be demonstrated to be the expansion of the desalter program. The mitigation will restore the lost production capacity to ensure that the well owner/operator can produce enough groundwater to meet the owner's needs or provide an alternate source of water to replace the lost production capacity.

Noise. The Phase 3 Expansion would require construction of pipelines, pump stations, wells, desalter modifications and support facilities. Major construction activities are anticipated to include grading, excavation, installation of pipelines, concrete forming, mechanical equipment installation, and associated electrical installation. Construction activities within or adjacent to areas where sensitive receptors are located could increase the noise exposure at sensitive receptor locations and have an intermittent short-term impact on ambient noise levels. This increase in noise levels would only be temporary. The temporary increase in noise exposure would cease immediately at the completion of construction. Since construction noise is of a temporary nature, most jurisdictions do not require such noise to be mitigated to the specific threshold levels outlined above. However, they do require operational considerations (i.e., limitation of construction hours, the muffling of construction equipment, noise complaint response programs, etc.) to minimize noise impacts during the construction process. Construction noise mitigation measures have been included in the project.

Under normal operating conditions Phase 3 Expansion pipelines are generally not expected to increase the ambient noise levels, except for the periodic maintenance visit to inspect pipeline facilities. The operation of monitoring wells is also a fairly passive source of noise generation. Once installed such wells either have automatic monitoring equipment or are visited periodically to obtain the desired data. Modifications to desalter facilities can increase local noise levels from operation of pumps and other equipment; however, the two existing desalters (Chino I and Chino II) are located within industrial areas where no sensitive noise receptors exist. However, the operation of both production wells and booster pumps can generate noise levels that may be a nuisance to nearby sensitive land user. The Phase 3 Expansion project includes mitigation (measures XI-1 to XI-9) such as limited construction hours and use of noise attenuating building materials to ensure that future production well and booster pump noise is reduced below a significance threshold in each of the affected communities:

- Construction shall be limited to the hours of 7 a.m. to 7 p.m. on Monday through Friday, and between 9 a.m. to 6 p.m. on Saturday, and shall be prohibited on Sundays and federal holidays.
- All construction vehicles and fixed or mobile equipment shall be equipped with properly operating and maintained mufflers.
- All employees that will be exposed to noise levels greater than 75 dB over an 8 hour period shall be provided with adequate hearing protection devices to ensure no hearing damage will result from construction activities.
- If equipment is being used that can cause hearing damage at adjacent noise receptor locations (distance attenuation shall be taken into account), portable noise barriers shall be installed that are demonstrated to be adequate to reduce noise levels at receptor locations below hearing damage thresholds. Alternatively, the construction shall meet the construction noise requirements of the local jurisdiction (city or county).
- All production wells or booster pumps shall have their noise levels attenuated to 50 dBA CNEL at the adjacent property boundary, when noise sensitive uses occur on such property. Alternatively, the construction shall meet the construction noise requirements of the local jurisdiction (city or county).
- Project design will include measures which assure adequate interior noise levels as required by Title 25 (California Noise Insulation Standards). Alternatively, the construction shall meet the construction noise requirements of the local jurisdiction (city or county).
- Construction staging areas shall be located as far from adjacent sensitive receptor locations as possible at each facility. Alternatively, the construction shall meet the construction noise requirements of the local jurisdiction (city or county).
- Good relations with the local community shall be maintained where construction is scheduled, such as by keeping people informed of the schedule, duration, and progress of the construction to minimize the public objections of unavoidable noise.

- All above ground well pumps or booster pump stations shall have their noise levels attenuated to 50 dBA CNEL at the property boundary when adjacent to a noise sensitive land use.

Public Services. Phase 3 Expansion facilities could be subject to illegal trespass and could require police protection. Per mitigation Measure XIII-1 fencing will be required to control access to the Phase 3 Expansion construction sites as well as at the completed facilities to minimize the potential demand for police services.

Transportation and Traffic. The facilities that would be implemented in support of the Phase 3 Expansion include desalting facilities, monitoring/production wells, booster stations and pipelines. There are no Phase 3 Expansion facilities that would substantially alter existing or future traffic generation and destination activities. None of the physical changes in the environment resulting from the Phase 3 Expansion implementation are forecast to directly or indirectly cause any permanent changes in any transportation or circulation systems. Construction activities would create traffic hazards, particularly where pipeline routes traverse major trafficked highways and cross intersections. Pipelines will be placed underground (except possibly within the Desalter compounds) and there will be short-term disruptions of traffic flows and the potential creation of traffic hazards as a result of the construction within road rights-of-way. Per mitigation measures XV-1 to XV-8, traffic management plans consistent with the California Manual on Uniform Traffic Controls Devices will be prepared and implemented prior to initiation of construction within a traveled roadway alignment. These mitigation measures, provided below, ensure that pipeline construction activities do not create significant adverse traffic impacts.

- The construction contractor will provide adequate traffic management resources, as determined by the applicable jurisdiction, to ensure adequate access to all occupied properties on a daily basis, including emergency access. The applicable jurisdiction shall require a construction traffic management plan for work in public roads that complies with the CMUTCD, Part 6, Temporary Traffic Controls, or other agencies' applicable standard, to provide adequate traffic control and safety during construction activities.
- The applicable jurisdiction shall require that all disturbances to public roadways be repaired in a manner that complies with the Standard Specifications for Public Works Construction (green book) or other applicable jurisdiction standards.

- The construction contractor will time the construction activities to minimize obstruction of through traffic lanes adjacent to project sites and/or along project alignments during peak hours.
- During construction the applicable jurisdiction shall require that traffic hazards for vehicles, bicycles, and pedestrians be adequately identified and controlled to minimize hazards.
- The applicable jurisdiction shall require the contractor to ensure that no open trenches or traffic safety hazards are left in roadways during periods of time when construction personnel are not present (nighttime, weekends, etc.).
- Phase 3 Desalter Expansion facilities located within one-quarter mile of a school will be required to prepare a traffic management plan for review and comment by the appropriate school district. The minimum performance standard for the traffic plan will be to provide sufficient traffic management resources to protect pedestrian and vehicle safety in the vicinity of school sites.
- To the extent feasible, installation of pipelines or other construction activities in support of the Phase 3 Desalter Expansion shall not be located on major evacuation or emergency response routes. Where construction on such routes is necessary, local emergency response providers shall be contacted and emergency access and evacuation requirements shall be maintained at a level sufficient to meet their needs.
- Access to the Santa Ana River Trail and through-traffic bicycle access on the trail will be maintained during construction activities for the Hamner Avenue pipeline.

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

Biological surveys of Project sites of the Chino Phase 3 Expansion Program found that the majority of facilities would be installed in areas that are already developed or disturbed where biological resource values are minimal, and where there is no suitable habitat for sensitive species. Three locations were identified that could support sensitive resources: a small weedy area of the Chino Creek Wellfield, an area on the north side

of the Santa Ana River where construction staging could occur, and an area on the south side of the Santa Ana River where construction staging could occur. The following mitigation measures were adopted to avoid significant impacts to sensitive species:

- To avoid an illegal take of active bird nests, any grubbing, brushing or tree removal will be conducted outside of the State identified nesting season (nesting season is approximately from March 1 through September 1 of a given calendar year). In any case, it is illegal to take active bird nests of native birds and when present at a project site, no take is allowed. Alternatively, project impact areas will be evaluated by a qualified biologist prior to initiation of ground disturbance to demonstrate that no bird nests will be disturbed by project construction activities.
- Prior to commencement of construction activity in locations that are not fully developed, a clearance survey will be conducted by a qualified biologist to determine if any burrowing owl burrows are located within the potential area of impact. If occupied burrows may be impacted, an impact minimization plan shall be developed by the biologist that will protect the burrow in place or provide for relocation to an alternate burrow within the vicinity but outside of the project footprint in accordance with current California Department of Fish and Wildlife guidelines. Active nests must be avoided until all nestlings have fledged.
- Following construction activities within or adjacent to any natural area, the disturbed areas shall be revegetated using a plant mix of native plant species that are suitable for long term vegetation management which shall be implemented in cooperation with regulatory agencies and with oversight from a qualified biologist or landscape architect. The seed mix shall be verified to contain the minimum amount of invasive plant species seeds reasonably available for the project area.
- Within the three areas identified as containing potentially sensitive biological resource habitat, the well or other facility shall be located in adjacent disturbed areas or relocated to nearby disturbed areas.
- Where relocation is not feasible within the three sensitive areas, a follow-on detailed site survey shall be

conducted 30-days prior to initiating construction to verify that no sensitive species occur within the unavoidable impact area. Where such sensitive resources occur and cannot be avoided, a compensatory mitigation plan shall be implemented that permanently preserves comparable or better habitat based on the findings of a qualified biologist and the California Department of Fish and Wildlife.

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

The Chino Phase 3 Expansion Program has the potential to impact the Prado Basin, the Santa Ana River and tributaries. However, it has been concluded that impacts would be less than significant impact level with incorporation of mitigation measures.

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

The Chino Basin Desalter Authority acquired a portion of the Santa Ana Watershed Project Authority system which is estimated to date to the late 1990's.

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

The proposed project will not result in modifications to irrigation system features.

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 several buildings listed on the National Register of Historic Places in the IEUA service area that will not be impacted by this project. A historic resources survey and evaluation of the proposed project area was prepared as part of the CEQA document. Historical background research for this study was conducted by a qualified historian on the basis of published literature in regional history and historic maps of the project

vicinity. Among maps consulted were the U.S. General Land Office's (GLO) land survey plat maps dated 1856-1884 and the U.S. Geological Survey's (USGS) topographic maps dated 1901-1954. These maps are collected at the Science Library of the University of California, Riverside, and the California Desert District of the U.S. Bureau of Land Management, located in Moreno Valley. This study identified two known cultural resources, designated Sites 33-016029 and 33-016681/36-013627. These resources were previously recorded as lying partially within the proposed project's area of potential affect, but the historic resources evaluation found that neither of them appeared to constitute a "historic property" or a "historical resource" that may be affected by the proposed project. Based on these findings, and pursuant to 36 CFR 800.4(d)(1) and Calif. PRC §21084.1, the historic resources report determined that no "historic properties" or "historical resources" have been recorded within or adjacent to the area of potential affect, and thus none will be affected by the project. In April 2012 Reclamation contacted the State Historic Preservation Officer who recommended a *Finding of No Adverse Effects* for the project under the National Historic Preservation Act.

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

Archeological research, including a historical/archaeological resources records search, contact with Native American representatives, and field surveys have been conducted as part of the environmental evaluations. Cultural resources were identified to exist within the Chino Basin; however, potential significant impacts are expected to be reduced to levels less than significant with implementation of mitigation measures. Measures will include halting operations and initiating evaluation by a qualified professional, in the event that not previously identified resources are encountered or consulting with a qualified professional as to the extent of necessary monitoring.

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

The Project will not have a disproportionately high or adverse effect on low income or minority populations and benefits of the Project would be shared by all water users of the Chino Basin as well as downstream.

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

Contact with Native American representatives (Ramona Band of Cahuilla Indians, Pechanga Band of Mission Indians, San Manuel Band of Mission Indians, Morongo Band of Mission Indians, Santa Rosa Band of Mission Indians, Gabrielino Tongva Nation, Serrano Nation of Indians, Soboba



Band of Luiseño Indians) did not identify any concerns related to the Project on tribal lands or sacred sites.

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

Previous environmental review did not identify the introduction, continued existence or spread of noxious weeds or non-native invasive species as a project impact. In fact, the contractor will be required to revegetate all areas disturbed by construction except those areas occupied by structures or hardscapes. Revegetation shall emphasize the use of native species or drought tolerant non-invasive species.

## Section 3: Letters of Support

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Letters of support were received from the following entities and attached to this application.

- Santa Ana Watershed Project Authority
- Jurupa Community Services District

## Section 4: Required Permits or Approvals

The necessary permits have been acquired for all completed elements. For those elements not yet completed, the various permits needed, and their status is provided in Table 5.

**Table 5. Permits for the Chino Phase 3 Expansion**

<b>Project Element</b>	<b>Permit</b>	<b>Permit Agency</b>	<b>Status</b>
Drilling Well 19, Drilling and Equipping Chino Creek Well 19A	Well Drilling Permit	San Bernardino County Department of Public Health	Obtained
	Discharge Authorization and Monitoring Reporting Program (NPDES) Permit	Santa Ana Regional Water Quality Control Board	Obtained
	Domestic Water Supply Permit Amendment for Chino I Desalter	State Water Resources Control Board Division of Drinking Water	Will apply for permit once wells completed. Anticipated Dec 2016.
Brine Concentrate Reduction Facilities	Discharge Authorization and Monitoring Reporting Program (NPDES) Permit	Santa Ana Regional Water Quality Control Board	Obtained
	Domestic Water Supply Permit Amendment for Chino II Desalter	State Water Resources Control Board Division of Drinking Water	Will apply for permit once facility operable. Anticipated December 2016.
Chino I/Chino II Intertie Pipeline and Flow Control Facility	Discharge Authorization and Monitoring Reporting Program (NPDES) Permit	Santa Ana Regional Water Quality Control Board	Obtained
	Encroachment Permit	City of Eastvale	Obtained
	Encroachment Permit	City of Ontario	Obtained
	Encroachment Permit	County of San Bernardino Flood Control District	Obtained

**Table 5 cont.**

<b>Project Element</b>	<b>Permit</b>	<b>Permit Agency</b>	<b>Status</b>
<b>Groundwater Supply Wells and Raw Water Pipelines</b>	Well Drilling Permits	San Bernardino County Department of Public Health and Riverside County Department of Public Health	Successful bidder will obtain permits before construction. Anticipated Nov 2017.
	Encroachment Permits	California Dept. of Transportation, County of San Bernardino Flood Control District, County of San Bernardino, County of Riverside, City of Ontario	Successful bidder will obtain permits before construction. Anticipated March 2018.
	Discharge Authorization and Monitoring Reporting Program (NPDES) Permit	Santa Ana Regional Water Quality Control Board	Obtained
	Domestic Water Supply Permit Amendment for Chino II Desalter	State Water Resources Control Board Division of Drinking Water	Will apply for permit once wells are completed. Anticipated July 2019.

## Section 5: Official Resolutions

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The Board of Directors for the Inland Empire Utilities Agency are expected to adopt resolution 2016-12-01 on December 21, 2016. A certified copy will be available by December 22, 2016. A draft of Resolution 2016-12-01 is provided as Attachment B to this grant application.

## Section 6: Funding Plan and Letters of Commitment

For the reviewer's convenience, expenditures planned through September 30, 2019 are shown in Table 6 below (this is the same as Table 1 presented earlier).

**Table 6. Completed and Planned Activities, Chino Desalter Phase 3 Expansion**

	Local Funding	Federal Funding Received/ Awarded	Total Cost
<b>Completed Activities</b>			
Studies and Design of Chino Creek Wellfield	(a)	(a)	(a)
Comprehensive Preliminary Design Report	(a)	(a)	(a)
Chino II Desalter Expansion	\$15,013,273	\$0	\$15,013,273
California Environmental Quality Act	(a)	(a)	(a)
Drilling and Equipping Chino Creek Wells 16, 17, and 18	\$4,617,238	\$0	\$4,617,238
Raw Water Pipeline Chino Creek Wellfield to Chino I	\$1,779,632	\$0	\$1,779,632
Milliken Pump Station	\$1,783,719	\$0	\$1,783,719
1110 Pump Station Expansion	\$1,589,980	\$0	\$1,589,980
1010 Pump Station <sup>(b)</sup>	\$2,175,780	\$725,260	\$2,901,040
Drilling and Equipping Wells 20 and 21 <sup>(c)</sup>	\$2,742,713	\$914,238	\$3,656,951
Product Water Transmission Pipeline <sup>(b)</sup>	\$23,324,682	\$3,274,740	\$26,599,422
<b>Activities Finishing December 2016</b>			
Drilling Well 19, and Drilling and Equipping of Chino Creek Well 19A <sup>(c)</sup>	\$3,266,632	\$636,857	\$3,903,489
Brine Concentrate Reduction Facilities <sup>(d)</sup>	\$42,706,713	\$12,200,000	\$54,906,713
<i>Subtotal Activities Through Dec 2016</i>	\$99,000,362	\$17,751,095	\$116,751,457

**Table 6 cont.**

	Local Funding	Federal Funding Received/ Awarded	Total Cost
<b>Completed Activities</b>			
<b>Activities through September 2019</b>			
Construction of Chino I/Chino II Intertie Pipeline and Flow Control Facility <sup>(e)</sup>	\$5,525,578	\$0	\$5,525,578
Groundwater Supply Wells and Raw Water Pipelines <sup>(e)</sup>	\$16,412,627	\$3,000,000	\$19,412,627
<i>Subtotal Activities Through Sept 2019</i>	<i>\$21,938,205</i>	<i>\$3,000,000</i>	<i>\$24,938,205</i>
<b>Total All Activities</b>	<b>\$120,938,567</b>	<b>\$20,751,095</b>	<b>\$141,689,662</b>
<p>Notes:</p> <p>(a) The costs for planning and design activities included with construction costs</p> <p>(b) These elements are receiving \$4,000,000 in funding from Agreement R12AC35339.</p> <p>(c) These elements are receiving \$1,551,095 in funding from Agreement R11AC35306.</p> <p>(d) This element is receiving \$12,200,000 in funding from Agreement R15AC00059.</p> <p>(e) These elements are receiving \$ 3,000,000 in funding from Agreement R14AC00049.</p>			

## 6.1 Non-Federal Share of Expenditures

Funding for the Project will come from three primary sources: 1) Reclamation Title XVI Desalination and other Reclamation funding; 2) cost share from CDA and CDA sponsor member agencies (Western, Ontario, JCSD); and 3) in-kind services and cost share from IEUA. Local funds will provide 75% or more of the project cost and be match for the Title XVI grant.

A portion of the CDA, CDA sponsor and IEUA monies will be reimbursed from various State of California grants and local grants, including \$53 million from the State Water Resources Control Board Division of Drinking Water (formerly the California Department of Public Health), \$4.9 million from State Water Resources Control Board, and \$8.8 million from the California Department of Water Resources. All of the state grant funds that will be used for local cost share have been awarded.

IEUA and the CDA have executed a Memorandum of Understanding (MOU) related to the funding of specific Phase 3 Expansion raw water pipelines. The intent of the MOU and the funding is to site Chino Desalter supply wells in a way that will simultaneously address nitrate, TDS, and volatile organic compounds in groundwater. TCE plume clean-up is a secondary benefit of the proposed project.

Table 7 shows the funding sources for the project. All involved agencies will provide monetary cost share, with the exception of IEUA. IEUA will provide both monetary and in-kind services. No funds have been requested from other federal agencies.



The funds documented in Table 7, along with the existing Title XVI awards totaling \$20,571,095 will meet the expected project costs of \$141,689,662.

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

<b>Non-Federal Entities</b>	<b>Total Costs</b>
1. Western Municipal Water District	\$14,116,996
2. City of Ontario	\$6,900,505
3. Jurupa Community Services District	\$8,554,923
4. Chino Desalter Authority	\$1,557,174
5. IEUA In-Kind Contribution*	\$882,285
6. IEUA	\$16,104,866
7. State of California Grants	\$67,572,912
<i>Non-Federal Subtotal</i>	<i>\$115,689,661</i>
<b>Other Federal Entities</b>	
Not applicable	\$0
<i>Other Federal Subtotal</i>	<i>\$0</i>
<b>Requested Reclamation Funding</b>	<b>\$5,248,905</b>
* in-kind funding	

Letters of Commitment for the following entities are provided in Attachment C:

- Chino Basin Desalter Authority on behalf CDA and its member agencies Western Municipal Water District, City of Ontario, Jurupa Community Services District.

With the exception of the funding requested as part of this application, there are no pending funding requests. Without federal funding, the element “Groundwater Supply Wells and Raw Water Pipelines” will be delayed. IEUA has budgeted for these expenditures, but without federal funds IEUA will need to release contracts for design and construction over a longer period of time. This would mean construction of these elements could not be done in parallel with other Phase 3 Expansion Elements. This would mean some of the cost savings from tandem construction would be lost, costs for construction labor and materials are likely to increase, and community disruption (i.e., traffic disruptions) would be greater.

## 6.2 Completed Elements/Previous Project Expenditures

As shown in Table 6, many of the project elements are complete (e.g., costs have been incurred) or are near completion (costs are well understood). With the exception of approximately \$124,591 of in-kind services provided by IEUA, all costs have been expenditures for consultants or contractors or vendors directly related to project design and construction. Costs have been incurred from September 2006. These expenditures have resulted in the construction and operation of specific Chino Desalter Phase 3 Expansion elements, including:

- Completion of project feasibility studies and environmental evaluations (evaluation of the potential production of the Chino Creek Wellfield and effect on “spill” from pumping from the wellfield, Preliminary Design Report, California Environmental Quality Act evaluation);
- Expansion of the Chino II Desalter from 10 mgd to 20.5 mgd;
- Creation of the Chino Creek Wellfield/development of the raw water source to serve the desalters (drilling of well 19, drilling and equipping of wells 16, 17, 18, 20, 21, and 19A, construction of a raw water pipeline to deliver well water to Chino I Desalter);
- Creation of an efficient product water delivery system. Two pump stations have been built (Milliken and Zone 1010 Pump Stations) and one pump station expanded (Zone 1110). A 40,000 linear foot (lf) regional transmission pipeline was built to connect the Chino II Desalter to the delivery networks of three CDA member agencies (Western, Jurupa Community Services District, and the City of Ontario). Without these elements it will not be possible to deliver the entire amount of new water made available by the Chino Desalter expansion. Before these elements were built, water produced at the Chino II desalter was delivered to the JCSD 1110 pump station, lifted to the JCSD 1110 zone (at elevation 1110 feet mean sea level [msl]) then routed through the JCSD system to Ontario, Norco, and the SARWC. However, Ontario, Norco, and the SARWC then moved their Chino II water into lower pressure zones. Lifting the Chino II water that went to Ontario, Norco, and SARWC to Zone 1010 resulted in unnecessary energy usage and higher pumping costs. By constructing the new pump station and product water pipeline, it became possible to deliver all the new water made available at the Chino II Desalter and reduce energy required for pumping product water.
- Construction of a Brine Concentrate Reduction Facility at the Chino II Desalter facility. With an initial treatment capacity of 10 million gallons per day (MGD), treatment capacity at Chino II Desalter was expanded to 20.5 MGD under the Phase 3 program. Additional treatment capacity, however, is also tied to increased brine disposal and additional related costs. As a means of increasing reverse osmosis (RO) treatment efficiency at the facility and reducing RO concentrate waste that must be disposed of through the Santa Ana Regional Interceptor (SARI) Line, a full-scale concentrate treatment and recovery system has been constructed. This system consists of a high rate pellet softening technology that removes calcium and silica from the RO concentrate, thereby allowing subsequent treatment of the softened water through a secondary RO process. This softening step increases RO efficiency and increases product water recoveries from approximately 80% to up to 95%, and decreases brine waste by nearly 70%. In the process, pellets are precipitated out of the RO concentrate, creating a solid product that is diverted from the waste stream and may be further utilized in various industrial applications. As of late 2016 the Brine Concentrate Reduction

Facility is just starting operations; this efficiency enhancement is expected to enable capacity at Chino II to be increased by an additional 2.2. MGD for a total of 22.7 MGD with the same amount of raw water input.

### 6.3 Budget Form 424C

Budget Form 424C accompanies this application.

## Section 7: Unique Entity Identifier and System for Award Management (SAM)

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IEUA is registered in the System for Award Management and will continue to maintain an active SAM registration with current information during which IEUA has an active Federal award or application or plan under consideration by a Federal awarding agency. The IEUA cage code is 4C6A3.

## Section 8: References

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- California Department of Water Resources. 2015. *State Water Project Capability Report*. July.
- California Department of Water Resources. 2003. *California's Groundwater, Bulletin 118*.
- California Energy Commission (CEC). 2005. *California's Water - Energy Relationship*. [www.energy.ca.gov/2005publications/CEC-700-2005-011/CEC-700-2005-011-SF.PDF](http://www.energy.ca.gov/2005publications/CEC-700-2005-011/CEC-700-2005-011-SF.PDF)
- Carollo Engineers, 2010, Chino Desalter Phase 3 Comprehensive Predesign Report, Prepared for JCSD, City of Ontario, and Western Municipal Water District.
- Chino Basin Desalter Authority. 2015. Addendum to the Chino Desalter Phase 3 Expansion Initial Study/Mitigated Negative Declaration for the Addition of an Expanded TCE Program.
- IEUA, 2006, Executive Summary Report for the Chino Basin Desalters Expansion Project, Prepared for U.S. Department of Interior Bureau of Reclamation.
- IEUA, 2010, Chino Creek Well Field Development Project, Wells 1,2, and 3, Application Title XVI Water Reclamation and Reuse Program Funding for FY 2011.
- IEUA, 2011, 1010 Zone Pump Station and New Product Water Pipelines, Part of the Lower Chino Dairy Area Desalination Projects, Application Title XVI Water Reclamation and Reuse Program Funding for FY 2012.
- IEUA, 2012, Brine Concentrate Reduction Facility and Prado Basin Habitat Sustainability Program Part of the Lower Chino Dairy Area Desalination Project, Application Title XVI Water Reclamation and Reuse Program Funding for FY 2013.
- United States Bureau of Reclamation (Reclamation). 2013. Technical Memorandum No. 2, Greenhouse Gas Emissions Calculator for the Water Sector: User's Manual Santa Ana Watershed Basin Study, California. September.
- United States Environmental Protection Agency (U.S. EPA). 2012. Water: Sustainable Infrastructure. Available at: [http://water.epa.gov/infrastructure/sustain/localofficials\\_facts.cfm](http://water.epa.gov/infrastructure/sustain/localofficials_facts.cfm). Accessed on January 8, 2013.

---

Attachment A  
Letters of Support

John V. Rossi  
General Manager

Robert Stockton  
Division 1

Thomas P. Evans  
Division 2

Brenda Dennstedt  
Division 3

Donald D. Galleano  
Division 4

S.R. "Al" Lopez  
Division 5



Securing Your Water Supply

December 5, 2016

Bureau of Reclamation  
Acquisitions Operations Branch  
Attn: Matthew Reichert, Mail Code: 84-27852  
PO Box 25007  
Denver, CO 80225

**Subject:** Support for the Lower Chino Dairy Area Desalination Project

To Whom It May Concern:

On behalf of Western Municipal Water District ("Western"), we would like to express our strong support for the Lower Chino Dairy Area Desalination Project, and the application for WaterSMART grant funding. Western's service area overlies approximately 527 square miles in Western Riverside County wherein close to one million people reside. Western's main mission is to provide safe and reliable water service to this population. To do this, Western is a member agency of Metropolitan Water District of Southern California ("MWD"), which is a supplier of imported water from northern California and the Colorado River Aqueduct. To increase water supply diversity and reliability beyond imported water from MWD, Western joined the Chino Desalter Authority to expand its access to local desalted groundwater supplies. Currently Western owns and operates the existing Arlington Desalter and as a member of the Chino Desalter Authority, is a participant in the Lower Chino Dairy Area Desalination Project. The Lower Chino Dairy Area Desalination Project includes, among other things, the expansion of desalters in the Chino Groundwater Basin, brine treatment and minimization, the construction and operation of new groundwater wells, and new raw and product water delivery infrastructure.

### ***Water Supply***

With over 800 wells, the Chino Groundwater Basin is a critical water source for agriculture, industry, and public drinking water suppliers. It is the principle water source for 20 municipal agencies and approximately 400 agricultural and dairy operations. However, high salinity levels in some areas of the basin have required the construction and operation of regional desalters to maintain the basin as a viable water source. These desalters provide water to an area of nearly 114,000 acres as well as water for use by Western Municipal Water District, the City of Ontario, Jurupa Community Services District, City of Chino, City of Chino Hills, City of Norco, and the Santa Ana River Water Company.



Altogether, approximately 1.5 million individuals in the Inland Empire benefit from the operation of these desalters.

It is in the best interest of all the water agencies and customers depending on the Chino Groundwater Basin to optimize the efficiency of our regional water treatment facilities in order to preserve the use of low cost, drought resilient local groundwater. The Lower Chino Dairy Area Desalination Project will result in an additional 10,600 acre feet per year (AFY) of local water supply. The project proposed for grant funding will facilitate the efficient delivery of 7,067 AFY new product water.

### ***Water Supply Sustainability***

The goals and objectives for management of the Chino Groundwater Basin are embodied in the Chino Basin Optimum Basin Management Plan. Despite the construction and operation of the desalter facilities, the Optimum Basin Management Plan identifies many outstanding issues. Groundwater in the lower Chino Basin is heavily degraded with salt and nitrogen and this water overflows on the surface to the Santa Ana River. This "spill" of degraded water affects the 350,000 AFY of Santa Ana River water used by Orange County Water District. Contamination of the Santa Ana River harms the comprehensive groundwater recharge program of Orange County Water District. The Santa Ana Regional Water Quality Control Board has ordered elimination of this "spill" (e.g., hydraulic control). In fact, the Basin is under a Superior Court order (Case #RCV 51010) to address water quality caused by agricultural practices. Ongoing salt issues could limit future use of recycled water in the Chino Basin.

The Lower Chino Dairy Area Desalination Demonstration and Reclamation Project, consistent with the goals and objectives of the Optimum Basin Management Plan will:

- Increase desalter groundwater pumping from the lower Chino Basin to 40,000 AFY;
- Achieve hydraulic control of Chino Groundwater Basin overflow to the Santa Ana River; and
- Improve basin water quality through removal of basin salts and facilitate use of recycled water.

### ***Other Benefits***

Two groundwater plumes are located in the vicinity of wells proposed as part the Lower Chino Dairy Area Desalination Project: the Chino Airport and the Ontario International Airport plumes. Design, siting, and operation of the Lower Chino Dairy Area Desalination Project wells and pumping operations are being undertaken in a manner to facilitate cleanup of these plumes.

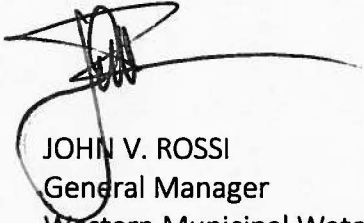
Support for Lower Chino Dairy Area Desalination Project

December 5, 2016

Page 3 of 3

Support from the Bureau of Reclamation through the WaterSMART Title XVI Program has allowed many elements of the Lower Chino Dairy Area Project to go forward and this support has greatly benefited local water supply and water quality. The project is in its final phases and the current grant request will allow for successful project completion. We strongly urge your thoughtful consideration of the Lower Chino Dairy Area Desalination Project.

Sincerely,

A handwritten signature in black ink, appearing to read "JOHN V. ROSSI", with a long horizontal flourish extending to the right.

JOHN V. ROSSI

General Manager

Western Municipal Water District

# City of Chino Hills



December 1, 2016

14000 City Center Drive  
Chino Hills, CA 91709  
(909) 364-2600

Bureau of Reclamation  
Acquisitions Operations Branch  
Attn: Matthew Reichert, Mail Code: 84-27852  
PO Box 25007  
Denver, CO 80225

[www.chinohills.org](http://www.chinohills.org)

Subject: Support for the Lower Chino Dairy Area Desalination Project

To Whom It May Concern:

On behalf of the City of Chino Hills, we would like to express our strong support for the Lower Chino Dairy Area Desalination Project, and the application for WaterSMART grant funding. As a member of the Chino Basin community, this project will enhance the regional water sufficiency, while improving water quality of the groundwater. The Lower Chino Dairy Area Desalination Project includes, among other things, the expansion of desalters in the Chino Groundwater Basin, brine treatment and minimization, the construction and operation of new groundwater wells, and new raw and product water delivery infrastructure.

### **Water Supply**

With over 800 wells, the Chino Groundwater Basin is a critical water source for agriculture, industry and public drinking water suppliers. It is the principle water source for 20 municipal agencies and approximately 400 agricultural and dairy operations. However, high salinity levels in some areas of the basin have required the construction and operation of regional desalters to maintain the basin as a viable water source. These desalters provide water to an area of nearly 114,000 acres and provides water for use by Western Municipal Water District, the City of Ontario, Jurupa Community Services District, City of Chino, City of Chino Hills, City of Norco, and the Santa Ana River Water Company. Altogether, approximately 1.5 million individuals in the Inland Empire benefit from the operation of the desalters.

It is in the interest of all the water agencies and customers, depending on the Chino Groundwater Basin, to optimize the efficiency of the regional water treatment facilities in order to preserve the use of low cost local groundwater. The Lower Chino Dairy Area Desalination Project will result in an additional 10,600 acre feet per year (AFY) of local water supply. The project proposed for grant funding will facilitate the efficient delivery of 7,067 AFY new product water.

### **Water Supply Sustainability**

The goals and objectives for management of the Chino Groundwater Basin are embodied in the Chino Basin Optimum Basin Management Plan. Despite the construction and operation of the desalter facilities, the Optimum Basin Management Plan identifies many outstanding issues. Groundwater in the lower Chino Basin is heavily degraded with salt and nitrogen and this water

*City Council:* Art Bennett ▪ Ed M. Graham ▪ Ray Marquez ▪ Cynthia Moran ▪ Peter J. Rogers

overflows on the surface to the Santa Ana River. This "spill" of degraded water affects the 350,000 AFY of Santa Ana River water used by Orange County Water District. Contamination of the Santa Ana River harms the comprehensive groundwater recharge program of Orange County Water District. The Santa Ana Regional Water Quality Control Board has ordered elimination of this "spill" (e.g., hydraulic control). In fact the Basin is under a Superior Court order (Case #RCV 51010) to address water quality caused by agricultural practices. Ongoing salt issues could limit future use of recycled water in the Chino Basin.

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- o Increase desalter groundwater pumping from the lower Chino Basin to 40,000 AFY; and
- o Achieve hydraulic control of Chino Groundwater Basin overflow to the Santa Ana River; and
- o Improve basin water quality through removal of basin salts and facilitate use of recycled water.

***Other Benefits***

Two groundwater plumes are located in the vicinity of wells proposed as part the Lower Chino Dairy Area Desalination Project: the Chino Airport and the Ontario International Airport plumes. Design, siting, and operation of the Lower Chino Dairy Area Desalination Project wells and pumping operations are being undertaken in a manner to facilitate cleanup of these plumes.

Support from the Bureau of Reclamation has allowed many elements of the Lower Chino Dairy Area Project to go forward and this support has greatly benefited local water supply. The project is in its final phases, the current grant request will allow for successful project completion. We strongly urge your thoughtful consideration of the Lower Chino Dairy Area Desalination Project.

Sincerely,



Ray Marquez  
Mayor

cc: Peter Rogers, Vice Mayor  
Konradt Bartlam, City Manager  
Nadeem Majaj, P.E., Public Works Director

# City of Chino Hills



December 1, 2016

14000 City Center Drive  
Chino Hills, CA 91709  
(909) 364-2600

Bureau of Reclamation  
Acquisitions Operations Branch  
Attn: Matthew Reichert, Mail Code: 84-27852  
PO Box 25007  
Denver, CO 80225

[www.chinohills.org](http://www.chinohills.org)

Subject: Support for the Lower Chino Dairy Area Desalination Project

To Whom It May Concern:

On behalf of the City of Chino Hills, we would like to express our strong support for the Lower Chino Dairy Area Desalination Project, and the application for WaterSMART grant funding. As a member of the Chino Basin community, this project will enhance the regional water sufficiency, while improving water quality of the groundwater. The Lower Chino Dairy Area Desalination Project includes, among other things, the expansion of desalters in the Chino Groundwater Basin, brine treatment and minimization, the construction and operation of new groundwater wells, and new raw and product water delivery infrastructure.

### **Water Supply**

With over 800 wells, the Chino Groundwater Basin is a critical water source for agriculture, industry and public drinking water suppliers. It is the principle water source for 20 municipal agencies and approximately 400 agricultural and dairy operations. However, high salinity levels in some areas of the basin have required the construction and operation of regional desalters to maintain the basin as a viable water source. These desalters provide water to an area of nearly 114,000 acres and provides water for use by Western Municipal Water District, the City of Ontario, Jurupa Community Services District, City of Chino, City of Chino Hills, City of Norco, and the Santa Ana River Water Company. Altogether, approximately 1.5 million individuals in the Inland Empire benefit from the operation of the desalters.

It is in the interest of all the water agencies and customers, depending on the Chino Groundwater Basin, to optimize the efficiency of the regional water treatment facilities in order to preserve the use of low cost local groundwater. The Lower Chino Dairy Area Desalination Project will result in an additional 10,600 acre feet per year (AFY) of local water supply. The project proposed for grant funding will facilitate the efficient delivery of 7,067 AFY new product water.

### **Water Supply Sustainability**

The goals and objectives for management of the Chino Groundwater Basin are embodied in the Chino Basin Optimum Basin Management Plan. Despite the construction and operation of the desalter facilities, the Optimum Basin Management Plan identifies many outstanding issues. Groundwater in the lower Chino Basin is heavily degraded with salt and nitrogen and this water



overflows on the surface to the Santa Ana River. This "spill" of degraded water affects the 350,000 AFY of Santa Ana River water used by Orange County Water District. Contamination of the Santa Ana River harms the comprehensive groundwater recharge program of Orange County Water District. The Santa Ana Regional Water Quality Control Board has ordered elimination of this "spill" (e.g., hydraulic control). In fact the Basin is under a Superior Court order (Case #RCV 51010) to address water quality caused by agricultural practices. Ongoing salt issues could limit future use of recycled water in the Chino Basin.

The Lower Chino Dairy Area Desalination Demonstration and Reclamation Project, consistent with the goals and objectives of the Optimum Basin Management Plan will:

- o Increase desalter groundwater pumping from the lower Chino Basin to 40,000 AFY; and
- o Achieve hydraulic control of Chino Groundwater Basin overflow to the Santa Ana River; and
- o Improve basin water quality through removal of basin salts and facilitate use of recycled water.

**Other Benefits**

Two groundwater plumes are located in the vicinity of wells proposed as part the Lower Chino Dairy Area Desalination Project: the Chino Airport and the Ontario International Airport plumes. Design, siting, and operation of the Lower Chino Dairy Area Desalination Project wells and pumping operations are being undertaken in a manner to facilitate cleanup of these plumes.

Support from the Bureau of Reclamation has allowed many elements of the Lower Chino Dairy Area Project to go forward and this support has greatly benefited local water supply. The project is in its final phases, the current grant request will allow for successful project completion. We strongly urge your thoughtful consideration of the Lower Chino Dairy Area Desalination Project.

Sincerely,



Ray Marquez  
Mayor

cc: Peter Rogers, Vice Mayor  
Konradt Bartlam, City Manager  
Nadeem Majaj, P.E., Public Works Director

DENNIS R. YATES  
Mayor

EUNICE M. ULLOA  
Mayor Pro Tem



GLENN DUNCAN  
EARL C. ELROD  
TOM HAUGHEY  
Council Members

MATTHEW C. BALLANTYNE  
City Manager

## CITY of CHINO

December 6, 2016

Bureau of Reclamation  
Acquisitions Operations Branch  
Attn: Matthew Reichert, Mail Code: 84-27852  
PO Box 25007  
Denver, CO 80225

Subject: Support for the Lower Chino Dairy Area Desalination Project

To Whom It May Concern:

On behalf of the City of Chino, we would like to express our support for the Lower Chino Dairy Area Desalination Project, and the application for WaterSMART grant funding. The Lower Chino Dairy Area Desalination Project provides for the reclamation of impaired groundwater, and includes, among other things, the expansion of desalters in the Chino Groundwater Basin, brine treatment and minimization, the construction and operation of new groundwater wells, and new water delivery infrastructure.

The Chino Groundwater Basin is a critical source of water for agriculture, industry, and public drinking water suppliers. However, high salinity levels in the Basin has necessitated the construction and operation of regional desalters in order to maintain the Basin as a viable water source. Potable water produced by the Chino Basin Desalter Authority represents approximately 30 percent of the City of Chino's total potable water supply. In addition to the City of Chino, the Authority's desalters also provide potable water for use by the cities of Chino Hills, Norco, and Ontario, and by the many communities served by the Jurupa Community Services District, the Santa Ana River Water Company, and the Western Municipal Water District of Riverside County.

Chino Basin groundwater quality is degraded with salt and nitrogen and this groundwater flows naturally to the Santa Ana River which is a major source of water for Orange County, California. The Santa Ana Regional Water Quality Control Board has ordered the strict control of degraded groundwater quality contribution to the River. The Lower Chino Dairy Area Desalination Project, consistent with the

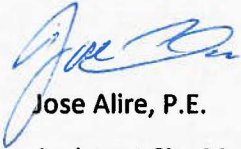


goals and objectives of the Chino Basin Optimum Basin Management Program approved by the California Superior Court, and the requirements of the Santa Ana Regional Water Quality Control Board, achieves hydraulic control of the impaired groundwater flow to the Santa Ana River.

Other derived benefits associated with the Lower Chino Basin Area Desalination Project removal of salts from the groundwater include facilitation of recycled water reuse in the Basin, and the designed remediation of two groundwater contamination plumes characterized by volatile organic compounds.

Support from the Bureau of Reclamation has allowed several elements of the Lower Chino Dairy Area Project to move forward, greatly benefitting Chino Basin and downstream water suppliers. The Project, designed to develop local water supplies by remediating poor water quality, and reduce dependence on imported water, is in its final phases, and the current grant request will help to ensure successful Project completion. We urge your thoughtful consideration of the Lower Chino Dairy Area Desalination Project.

Sincerely,

A handwritten signature in blue ink, appearing to read "Jose Alire", is positioned above the printed name.

Jose Alire, P.E.

Assistant City Manager/ Public Works Director





# Santa Ana Watershed Project Authority

OVER 45 YEARS OF INNOVATION, VISION, AND WATERSHED LEADERSHIP



One Water One Watershed

AWRA INTEGRATED WATER RESOURCES MANAGEMENT AWARD

HARVARD KENNEDY SCHOOL'S TOP 25 INNOVATIONS IN AMERICAN GOVERNMENT

November 9, 2016

Thomas P. Evans  
Commission  
Chair

Bureau of Reclamation  
Acquisitions Operations Branch  
Attn: Matthew Reichert, Mail Code: 84-27852  
PO Box 25007  
Denver, CO 80225

Celeste Cantú  
General  
Manager

Subject: Support for the Lower Chino Dairy Area Desalination Project

To Whom It May Concern:

Orange  
County  
Water  
District

On behalf of San Ana Watershed Project Authority we would like to express our strong support for the Lower Chino Dairy Area Desalination Project, and the application for WaterSMART grant funding. This project is in line with SAWPA's mission to create a sustainable Santa Ana River Watershed that is salt balanced, drought proofed, and supports economic and environmental vitality.

Western  
Municipal  
Water District

The Lower Chino Dairy Area Desalination Project includes, among other things, the expansion of desalters in the Chino Groundwater Basin, brine treatment and minimization, the construction and operation of new groundwater wells, and new raw and product water delivery infrastructure.

Eastern  
Municipal  
Water  
District

Water Supply

With over 800 wells, the Chino Groundwater Basin is a critical water source for agriculture, industry and public drinking water suppliers. It is the principle water source for 20 municipal agencies and approximately 400 agricultural and dairy operations. However, high salinity levels in some areas of the basin have required the construction and operation of regional desalters to maintain the basin as a viable water source. These desalters provide water to an area of nearly 114,000 acres and provide water for use by Western Municipal Water District, the City of Ontario, Jurupa Community Services District, City of Chino, City of Chino Hills, City of Norco, and the Santa Ana River Water Company. Altogether, approximately 1.5 million individuals in the Inland Empire benefit from the operation of the desalters.

San  
Bernardino  
Valley  
Municipal  
Water  
District

Inland  
Empire  
Utilities  
Agency

It is in the interest of all the water agencies and customers depending on the Chino Groundwater Basin to optimize the efficiency of the regional water treatment facilities in order to preserve the use of low cost local groundwater. The Lower Chino Dairy Area Desalination Project will result in an additional 10,600 acre feet per year (AFY) of local water supply. The project proposed for grant funding will facilitate the efficient delivery of 7,067 AFY new product water.



### Water Supply Sustainability

The goals and objectives for management of the Chino Groundwater Basin are embodied in the Chino Basin Optimum Basin Management Plan. Despite the construction and operation of the desalter facilities, the Optimum Basin Management Plan identifies many outstanding issues. Groundwater in the lower Chino Basin is heavily degraded with salt and nitrogen and this water overflows on the surface to the Santa Ana River. This “spill” of degraded water affects the 350,000 AFY of Santa Ana River water used by Orange County Water District. Contamination of the Santa Ana River harms the comprehensive groundwater recharge program of Orange County Water District. The Santa Ana Regional Water Quality Control Board has ordered elimination of this “spill” (e.g., hydraulic control). In fact the Basin is under a Superior Court order (Case #RCV 51010) to address water quality caused by agricultural practices. Ongoing salt issues could limit future use of recycled water in the Chino Basin.

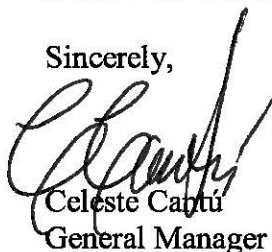
The Lower Chino Dairy Area Desalination Demonstration and Reclamation Project, consistent with the goals and objectives of the Optimum Basin Management Plan will 1) Increase desalter groundwater pumping from the lower Chino Basin to 40,000 AFY; 2) achieve hydraulic control of Chino Groundwater Basin overflow to the Santa Ana River; and 3) improve basin water quality through removal of basin salts and facilitate use of recycled water.

### Other Benefits

Two groundwater plumes are located in the vicinity of wells proposed as part the Lower Chino Dairy Area Desalination Project: the Chino Airport and the Ontario International Airport plumes. Design, siting, and operation of the Lower Chino Dairy Area Desalination Project wells and pumping operations are being undertaken in a manner to facilitate cleanup of these plumes.

Support from the Bureau of Reclamation has allowed many elements of the Lower Chino Dairy Area Project to go forward and this support has greatly benefited local water supply. The project is in its final phases, the current grant request will allow for successful project completion. We strongly urge your thoughtful consideration of the Lower Chino Dairy Area Desalination Project.

Sincerely,



Celeste Caputo  
General Manager





COMMUNITY SERVICES DISTRICT

Chad Blais, President  
Kenneth J. McLaughlin, Vice President  
Betty A. Anderson, Director  
Joan E. Roberts, Ph.D., Director  
Jane F. Anderson, Director

December 5, 2016

Bureau of Reclamation  
Acquisitions Operations Branch  
Attn: Matthew Reichert, Mail Code: 84-27852  
PO Box 25007  
Denver, CO 80225

Re: Support for the Lower Chino Dairy Area Desalination Project

To Whom It May Concern:

On behalf of Jurupa Community Services District (JCSD), we would like to express our strong support for the Lower Chino Dairy Area Desalination Project, and the application for WaterSMART grant funding. The Lower Chino Dairy Area Desalination Project includes, among other things, the expansion of desalters in the Chino Groundwater Basin, brine treatment and minimization, the construction and operation of new groundwater wells, and new raw and product water delivery infrastructure. JCSD has a 33 percent interest in the Chino Basin Desalter Authority (CDA) and the expansion project which provides JCSD with one third of its total water supply portfolio. The Lower Chino Dairy Area Desalination Project would improve reliability for JCSD customers and the region.

#### ***Water Supply***

With over 800 wells, the Chino Groundwater Basin is a critical water source for agriculture, industry and public drinking water suppliers. It is the principle water source for 20 municipal agencies and approximately 400 agricultural and dairy operations. However, high salinity levels in some areas of the basin have required the construction and operation of regional desalters to maintain the basin as a viable water source. These desalters provide water to an area of nearly 114,000 acres and provide water for use by Western Municipal Water District, the City of Ontario, Jurupa Community Services District, City of Chino, City of Chino Hills, City of Norco, and the Santa Ana River Water Company. Altogether, approximately 1.5 million individuals in the Inland Empire benefit from the operation of the desalters.

It is in the interest of all the water agencies and customers depending on the Chino Groundwater Basin to optimize the efficiency of the regional water treatment facilities in order to preserve the use of low cost local groundwater. The Lower Chino Dairy Area Desalination Project will result in an additional 10,600 acre feet per year (AFY) of local water supply. The project proposed for grant funding will facilitate the efficient delivery of 7,067 AFY new product water.

#### ***Water Supply Sustainability***

The goals and objectives for management of the Chino Groundwater Basin are embodied in the Chino Basin Optimum Basin Management Plan. Despite the construction and operation of the desalter facilities, the Optimum Basin Management Plan identifies many outstanding issues. Groundwater in the lower Chino Basin is heavily degraded with salt and nitrogen and this water overflows on the surface to the Santa Ana River. This "spill" of degraded water affects the 350,000 AFY of Santa Ana River water used

by Orange County Water District. Contamination of the Santa Ana River harms the comprehensive groundwater recharge program of Orange County Water District. The Santa Ana Regional Water Quality Control Board has ordered elimination of this “spill” (e.g., hydraulic control). In fact the Basin is under a Superior Court order (Case #RCV 51010) to address water quality caused by agricultural practices. Ongoing salt issues could limit future use of recycled water in the Chino Basin.

The Lower Chino Dairy Area Desalination Demonstration and Reclamation Project, consistent with the goals and objectives of the Optimum Basin Management Plan will:

- Increase desalter groundwater pumping from the lower Chino Basin to 40,000 AFY; and
- Achieve hydraulic control of Chino Groundwater Basin overflow to the Santa Ana River; and
- Improve basin water quality through removal of basin salts and facilitate use of recycled water.

***Other Benefits***

Two groundwater plumes are located in the vicinity of wells proposed as part the Lower Chino Dairy Area Desalination Project: the Chino Airport and the Ontario International Airport plumes. Design, siting, and operation of the Lower Chino Dairy Area Desalination Project wells and pumping operations are being undertaken in a manner to facilitate cleanup of these plumes.

Support from the Bureau of Reclamation has allowed many elements of the Lower Chino Dairy Area Project to go forward and this support has greatly benefited local water supply. The project is in its final phases, the current grant request will allow for successful project completion. We strongly urge your thoughtful consideration of the Lower Chino Dairy Area Desalination Project.

Sincerely,



Todd M. Corbin  
General Manager

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Attachment B  
Draft Resolution

**RESOLUTION NO. 2016-12-3**

**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: 2017 WATER RECLAMATION AND REUSE PROGRAM FUNDING FOR FISCAL YEAR 2017 WITH THE U.S. DEPARTMENT OF INTERIOR - BUREAU OF RECLAMATION AND DESIGNATING A REPRESENTATIVE TO EXECUTE THE FINANCIAL ASSISTANCE AGREEMENT, AND ANY AMENDMENTS THERETO**

**WHEREAS**, the United States Department of the Interior, Bureau of Reclamation under the WaterSMART: Title XVI Water Reclamation and Reuse Program will make funding available to qualifying applicants; and

**WHEREAS**, the Board of Directors of the Inland Empire Utilities Agency has identified a project that exemplifies the objectives of the WaterSMART Grant in the Lower Chino Dairy Area Project; and

**BE IT RESOLVED**, that the Inland Empire Utilities Agency\* is authorized to enter into a financial assistance agreement under the WaterSMART: Title XVI Water Reclamation and Reuse Program Funding for Fiscal Year 2017;

**BE IT RESOLVED**, the General Manager has reviewed and supports the application being submitted;

**BE IT RESOLVED**, that the Inland Empire Utilities Agency\* Board of Directors authorizes the General Manager, Assistance General Managers, or his designees to execute the financial assistance agreement, any amendments, and any grant related documents thereto;

**BE IT RESOLVED**, that the Inland Empire Utilities Agency, along with the Chino Basin Desalter Authority and its member agencies, are capable of providing the amount of funding and/or in-kind contributions specified in the grant application funding plan;

**BE IT RESOLVED**, that the Inland Empire Utilities Agency will work with the Bureau of Reclamation to meet established deadlines for entering into a cooperative agreement, and;

**ADOPTED** this 21<sup>st</sup> day of December, 2016.

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Terry Catlin, President of the Inland Empire Utilities Agency\* and of the Board of Directors thereof

ATTEST:

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





Attachment C  

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Letters of Commitment



*Jim Bowman, Chairperson  
J. Arnold Rodriguez, Vice Chairperson  
Peter J. Rogers, Secretary  
Betty Anderson, Director  
Terry Catlin, Director  
Tom Haughey, Director  
S.R. "Al" Lopez, Director  
Greg Newton, Director*

2151 S. Haven Avenue, Suite 202 • Ontario, CA 91761 • (909) 218-3230

*Curtis D. Paxton, General Manager/CEO*

December 2, 2016

Bureau of Reclamation  
Acquisitions Operations Branch  
Attn: Matthew Reichert, Mail Code: 84-27852  
PO Box 25007  
Denver, CO 80225

**Subject:** Funding Commitment - Lower Chino Dairy Area Desalination Project

To Whom It May Concern:

This letter is to document the funding commitment to the Lower Chino Area Desalination Project by the Chino Basin Desalter Authority (CDA) and its member agencies.

The Chino Basin is the principal water supply for 20 municipal agencies and about 400 agricultural and dairy operations. The groundwater aquifer is plagued with high salinity and high nitrate concentrations. The Chino I Desalter began operation in 2000 and the Chino II Desalter began operation in 2006. Construction of these facilities constituted the Chino Desalter Phase 1 and Phase 2 Projects. Despite the construction and operation of the desalter facilities issues still remain in the Chino Basin. Overflows from the Basin enter and degrade the Santa Ana River, the Basin is under a Superior Court order to address water quality caused by agricultural practices, and on-going salt issues could limit future use of recycled water. To address these issues, the CDA is implementing the Phase 3 Chino Basin Desalters Expansion Project. The project is part of the Lower Chino Dairy Area Desalination Demonstration and Reclamation Project authorized by Section 1638 of H.R. 177. The City of Ontario, Jurupa Community Services District, and Western Municipal Water District, members of the CDA, are sponsoring the Phase 3 Expansion. Inland Empire Utilities Agency (IEUA) is assisting with the Phase 3 Expansion by providing grant administration services and is funding construction of specific raw water pipelines.

The Phase 3 Expansion consists of multiple components:

- Construction of new extraction wells in the Chino Creek Wellfield
- Construction of new extraction wells to serve the Chino II Desalter
- Construction of raw water pipelines to deliver untreated groundwater to desalter facilities for treatment
- Modifications to the existing Chino I Desalter to increase salt removal
- Expansion of the Chino II Desalter to increase capacity
- Construction of a brine concentrate reduction facility at the Chino II Desalter to reduce brine disposal volumes
- Construction of product water pipelines to deliver treated water to users
- Expansion of an existing pump station and construction of two new pump stations
- Construction of an intertie pipeline and flow control facility between the Chino I and Chino II desalters.

### Capital Costs

Many tasks of the Phase 3 Expansion Project have been completed. Remaining elements are the Chino I Desalter modifications, construction of new wells and associated raw water pipelines to serve the Chino II Desalter, and a small segment of the intertie pipeline. The overall Phase 3 Project will be ongoing from September 2008 until December 2019. At this point in the project the majority of costs are well understood. Costs for completed project elements or elements already bid are \$116,751,457; anticipated costs for elements not yet bid are \$24,938,205 for a total anticipated cost of \$141,689,661.

### Sponsor Commitment to Project

Sponsor commitment to the project is demonstrated by the Water Purchase Agreements executed by the City of Ontario, Jurupa Community Services District, and Western Municipal Water District. The agreements, dated January 2011, provide for “the acquisition, construction, operation and financing of the expanded desalted water facilities....” Within these purchase agreements, the City of Ontario, Jurupa Community Services District, and Western Municipal Water District have agreed to fund capital costs of the Phase 3 Expansion. Table 1 provides sponsor financial commitment to the project as stated in the Water Supply Purchase Agreements and current costs which have been revised based on actual construction costs and award of monies from the State of California.

**TABLE 1. SPONSOR COMMITMENT TO PROJECT**

<b>Sponsor</b>	<b>Capital Costs as Agreed in Water Purchase Agreement</b>	<b>Capital Costs Based on Sept 1, 2016 CDA Budget Estimate</b>
Ontario Municipal Utilities Company	\$28,322,939	\$19,235,880
Jurupa Community Services District	\$22,023,017	\$19,593,401
Western Municipal Water District	\$37,902,092	\$31,610,347
<i>Total</i>	<i>\$88,248,048</i>	<i>\$72,223,857</i>

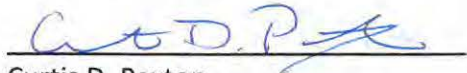
As demonstrated by Table 1, sponsors have committed to \$88,248,048 in funding, this is above the amount of the estimated funding needed (\$72,223,857).

Funding for the project is available now; there are not time constraints on the availability of funds nor are there any other contingencies associated with the sponsor funding.

Feel free to contact me with any questions related to sponsor funding or the Phase 3 Expansion Project. Included with this letter are endorsements from representatives of the Phase 3 Expansion sponsor agencies.

Sincerely,

CHINO BASIN DESALTER AUTHORITY



Curtis D. Paxton  
General Manager

Sincerely,

PHASE 3 EXPANSION SPONSOR AGENCIES

CITY OF ONTARIO

---

Scott Burton, Utilities General Manager

JURUPA COMMUNITY SERVICES DISTRICT

---

Todd M. Corbin, General Manager

WESTERN MUNICIPAL WATER DISTRICT

---

John V. Rossi, General Manager

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CITY OF ONTARIO

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John V. Rossi, General Manager