

*Proposition 1 Water Storage Investment Program  
Inland Empire Utilities Agency*

Chino Basin Conjunctive Use Environmental Water  
Storage/Exchange Program

# QUARTERLY REPORT #8

April through June 2020

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Progress Report to the California Water Commission  
July 30, 2020

# 1. Purpose and Introduction

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This Quarterly Report is to inform the California Water Commission (Commission) of changes and updates to the project, schedule, and status of the Inland Empire Utilities Agency (IEUA) Chino Basin Conjunctive Use Environmental Water Storage/Exchange Program, hereafter referred to as the Chino Basin Program (CBP), occurring during the most recent quarter of April through June 2020. The report contents are based on guidance provided by Commission staff and document progress that IEUA is making toward complying with conditions required to enter a funding agreement with the Commission for implementation of the CBP.

The report is organized into the following sections:

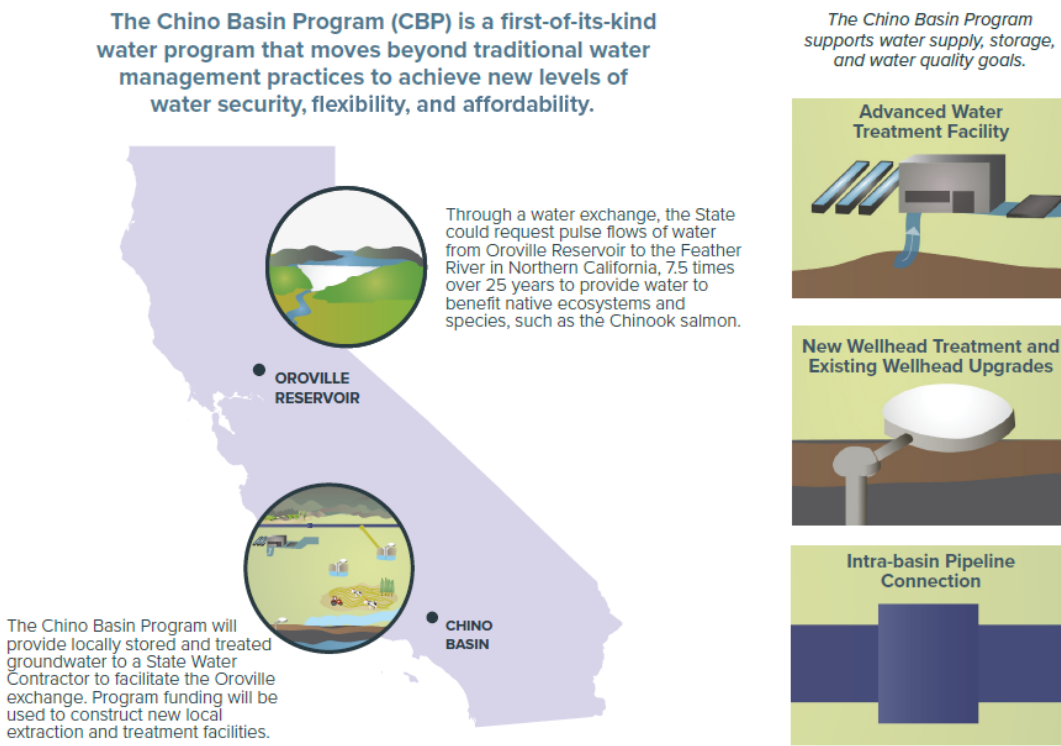
1. Purpose and Introduction
2. Project Planning Update
3. Project Schedule Update
4. Project Cost and Financing Update
  - Attachment 1 — Table 1. Project Schedule
  - Attachment 2 — Table 2. Quarterly Reporting Items for Commission Hearing on Final Awards

## 2. Project Planning Update

The Project Planning Update is a narrative summary update of the project. This summary provides a description of the status of IEUA meeting the requirements and milestones identified by the Commission (see Attachments 1 and 2, respectively). Issues or concerns that have, will, or could affect milestones or requirements are also provided here. IEUA continues to work closely with its partner agencies to address key questions and to complete the analysis needed to advance the planning and design of the CBP. There are no issues or concerns that affect milestones or associated requirements at this time.

IEUA continues to make progress with the planning, analysis, and preliminary design of the CBP (see Figure 2-1). IEUA continues to work with its partners to define water sources for the program and associated facilities, costs, and agreements. The CBP team has completed development of the project components, integrated these components into alternatives, estimated the capital and operational costs for each alternative, applied evaluation criterion to identify recommended program alternatives for further refinement, and completed an economic analysis to evaluate the costs and benefits of program alternatives. The collective outcome from these efforts is informing coordination and collaboration with local agency partners and coordination with State resource agencies. This information will also be used to support future steps of the program, including environmental planning and compliance, permitting, monitoring and operational plans, and financial planning. Provided below is additional information on core activities during the most recent quarter.

Figure 2-1. Location and Features of the Chino Basin Program



## Water Sources

Planning efforts continue to define water sources for advanced water purification to produce 15,000 acre-feet per year of advanced treated water. During the most recent quarter progress was made on further refining the principles for long-term agreements for securing supplies that meet IEUA agencies’ needs and related basin obligations. These long-term agreements are being developed with full awareness to other regional water management agreements also under development. Opportunities to align like concepts appearing in these collective agreements will provide for greater success and greater opportunity for expanded, coordinated water management in the region. The next steps will include framing agreements with these concepts in mind, and with consideration for the already defined principles based on mutual benefit.

## Preliminary Design

Preliminary design of the CBP is continuing. These efforts include further refinement of CBP components, evaluation of various combinations of CBP components, and recommendations for CBP program alternatives (highest performing combinations of CBP components). CBP alternatives are formed around two main categories of facilities: PUT, the components to recharge purified water to the Chino Basin, and TAKE, the components to extract groundwater and convey potable water supply. The PUT and TAKE components are summarized in **Table 2-1**.

Over the past quarter the CBP team evaluated 6 PUT alternatives and 8 TAKE alternatives (48 combinations in total). Capital costs and operation and maintenance (O&M) costs were developed for each PUT and TAKE alternative. A multi-criterion evaluation process uses these costs and other weighted criterion developed around program objectives and input from stakeholders to score alternatives. PUT and TAKE alternatives are evaluated based on their individual score and combinations of PUT and TAKE configurations. The identification and evaluation process for the PUT and TAKE alternatives, is shown conceptually in **Figure 2-2**. **Figure 2-3** is a conceptual illustration of a potential program-level CBP alternative.

The next steps in the alternatives evaluation process are underway and involve completing additional modeling analysis of recommended program alternatives to confirm Chino Groundwater Basin operating constraints are met, preparing conceptual level design drawings for major components, and completing technical memoranda to document the alternatives development and analysis efforts for partner agency review.

*Table 2-1. Summary of PUT and TAKE Components*

PUT Components	TAKE Components
<ul style="list-style-type: none"> <li>• Tertiary recycled water supply and conveyance</li> <li>• Advanced water purification facility (AWPF)</li> <li>• Purified water pumping and conveyance</li> <li>• Groundwater recharge (injection wells and/or recharge basins)</li> </ul>	<ul style="list-style-type: none"> <li>• Groundwater extraction and treatment</li> <li>• Potable water pumping and conveyance</li> <li>• Potable water usage (MWD pump back or in lieu)</li> </ul>
<p>The CBP will comprise both PUT and TAKE components.</p>	

Information related to the preliminary design has been presented at workshops with local partner agencies and smaller group meetings focused on specific service area details. The most recent workshops occurred in March and July 2020. These workshops featured presentations of the alternatives development and evaluation described above. Questions and input provided during these workshops are informing refinements to PUT and TAKE components and identification of the preferred program alternative.

Figure 2-2. Evaluation Screening Approach

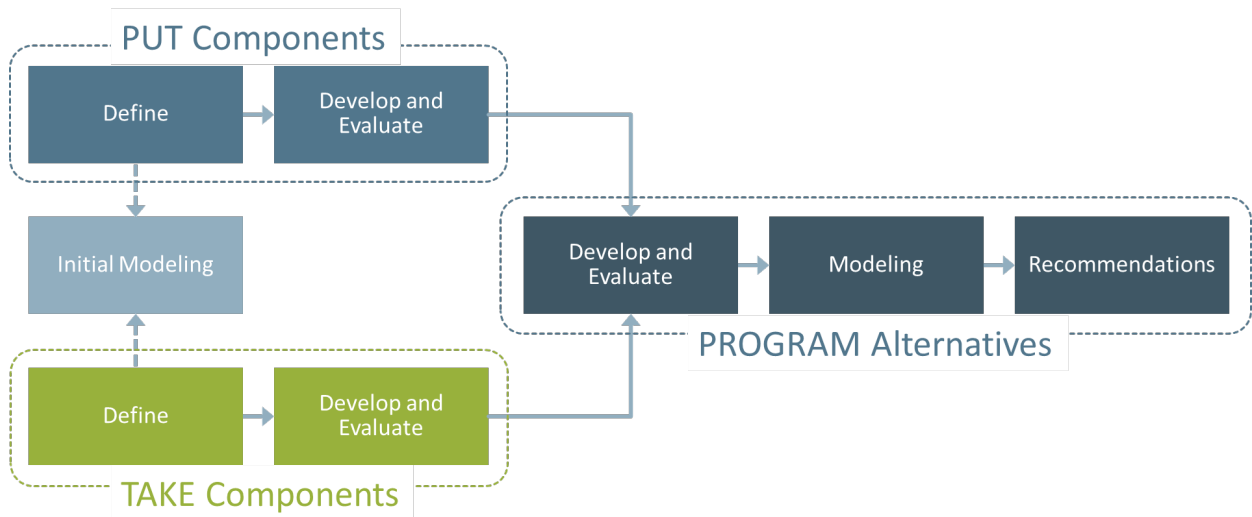
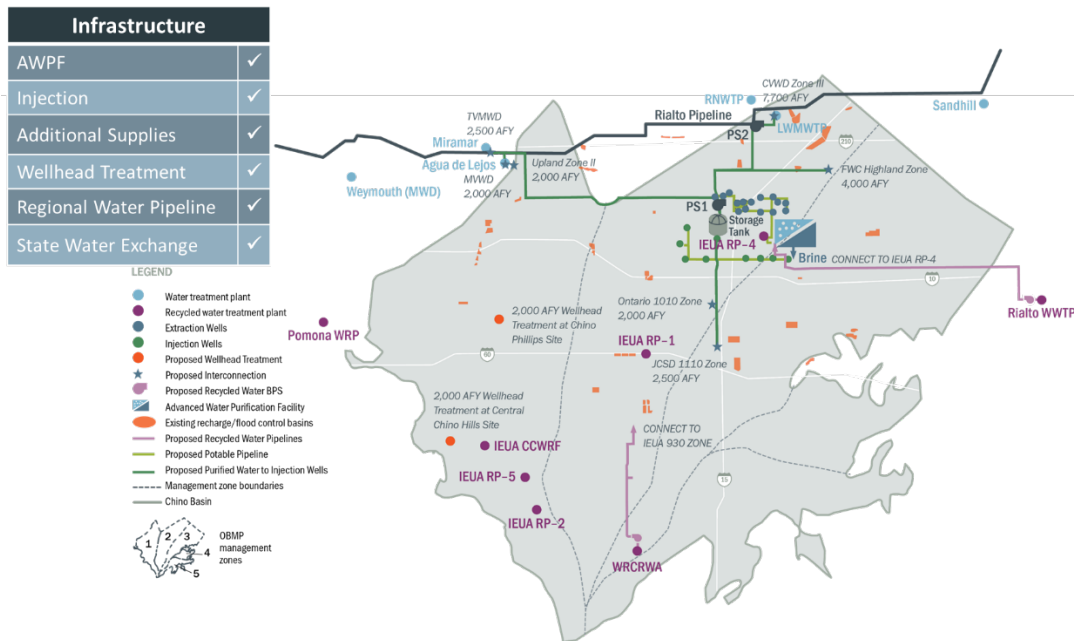


Figure 2-3 Potential Program Alternative, Conceptual Illustration

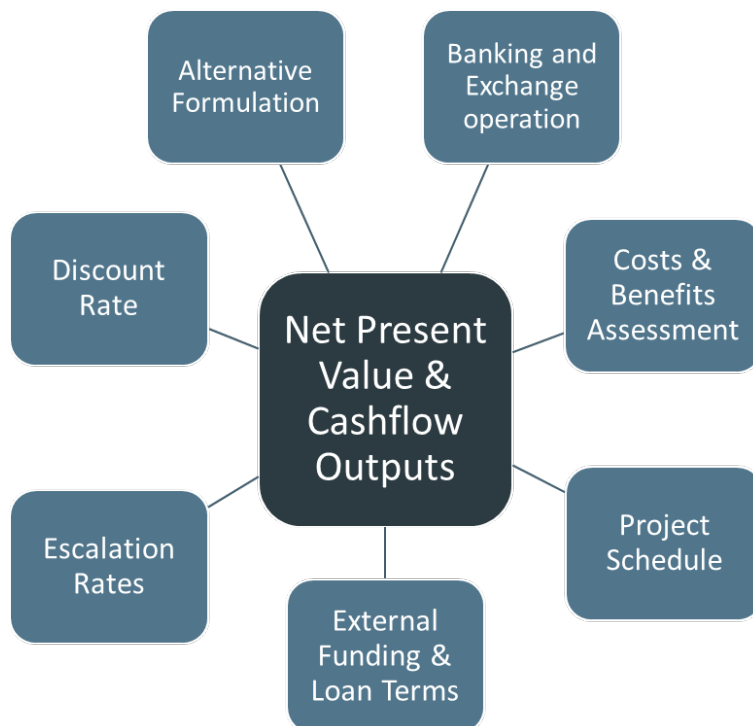


## Economic and Financial Analysis

The preliminary design effort developed the various project components and estimated the capital and O&M costs of these components. An economic analysis was completed that integrated these costs together with an economic evaluation of benefits. This required development of an integrated tool combining the CBP banking and exchange operation and a CBP benefits and costs net present value (NPV) calculator. This decision-support tool, shown conceptually in **Figure 2-4**, has the capability to incorporate and/or address changes in input and key assumptions as requested by agency partners.

The tool provides a relative economic comparison of alternatives using cashflow and NPV life cycle costs to consider the economic feasibility of alternatives and effects on ratepayers. Key areas of sensitivity and uncertainty are also considered for this evaluation to understand how to these parameters and assumptions affect the comparison. Benefits and costs of program alternatives as compared to baseline conditions help inform identification of a preferred program alternative. The tool also provides an estimate of the unit water costs across the planning horizon for the different program alternatives. The next steps for the economic analysis are underway and include documenting the findings in a technical memoranda for partner agency review and input and supporting financial analysis of potential rate structures.

*Figure 2-4 Decision Support Tool*

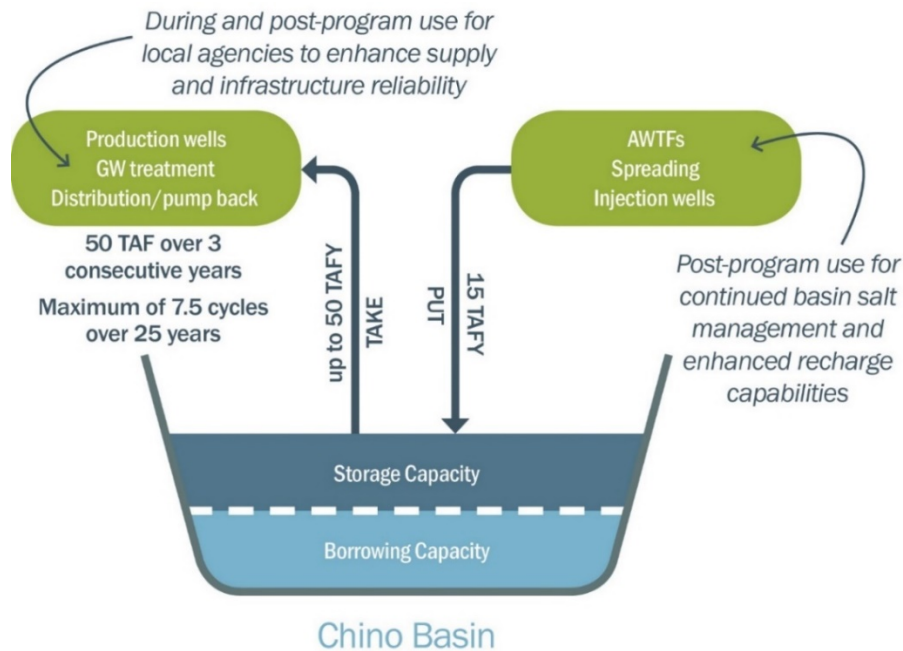


## CBP Banking and Exchange Analysis

IEUA, working with its local and State partners, continues to evaluate the potential to support pulse flows of up to 50,000 acre-feet originating in Lake Oroville during the spring of dry years designed to improve survival rates of emigrating juvenile Chinook salmon. IEUA has developed a CBP-State

Water Project (SWP) Operations Analysis tool (shown conceptually in **Figure 2-5**) to simulate the CBP banking and extraction operations under different hydrologic conditions (dry years, critically dry years, etc.) and how these stored water supplies would provide local benefit and support the exchange with the State. The operations analysis tool was recently enhanced to include flexible groundwater banking operations capabilities to help determine banked water potentially available as a water supply under different operating assumptions. This is important for computing water supply benefits. During this last quarter IEUA was requested by the State to provide a high-level presentation of the operational modeling analysis to help demonstrate the relationship between the pulse flow operations and SWP storage operations.

*Figure 2-5. CBP Conceptual Operations*



## CBP PEIR and Permitting Update

IEUA continues to coordinate plans for preparation of the CBP Programmatic Environmental Impact Report (PEIR) with other regional environmental planning efforts, such as the Chino Basin Storage Framework and Optimum Basin Management Program Update. The Final Subsequent Environmental Impact Report for the 2020 Optimum Basin Management Program has been completed and is scheduled for consideration for approval by the IEUA Board in Fall 2020.

## Design, Construction, and Operation Update

As noted above, additional feasibility and preliminary design studies are underway. These efforts are defining project infrastructure alternatives and operational elements needed to complete design and development of operations plans.

## Communications and Engagement Update

The CBP implementation requires close planning and coordination with local, regional, and State

agencies. IEUA sees these efforts as critical to developing a clear understanding of interests, needs, and concerns, and continues to develop and advance its project communications and outreach efforts through various means as discussed below.

### *IEUA Outreach Efforts*

IEUA is implementing a multi-pronged local agency communications approach. IEUA continues to conduct one-on-one meetings with local agencies to review program objectives and status and agency needs and questions. IEUA also conducts technical committee meetings and workshops to provide a CBP update and to address specific issues and key questions. Several technical committee meetings were held during this last quarter and two workshops were scheduled for July 2020 (discussed in the next section). These communication efforts provide IEUA with valuable stakeholder insights and feedback on the CBP and related IEUA efforts. IEUA outreach efforts also includes maintaining a program website and a media outreach strategy.

### *CBP Workgroup*

As described in previous progress reports, IEUA initiated a workgroup process (the CBP Workgroup) to help develop the CBP that best achieves the objectives and provides broad mutual benefit to the region. Through the participation in CBP Workgroup sessions, IEUA is working with local and regional agencies to discuss integration and coordination of local and CBP objectives and associated agreements, and to obtain input and identify questions. The CBP Workgroup workshop sessions conducted to date and planned through the next quarter are summarized in **Table 2-2**. Two workshops are planned for July 2020 to discuss the CBP economic analysis and CBP preliminary design initial findings. Stakeholders participating in the workshops include the 14 local agencies that signed the Memorandum of Understanding (MOU), as well as several other stakeholders with associated interests to the Chino Basin, such as Metropolitan Water District of Southern California (MWDSC).



Table 2-2. CBP Workgroup Workshops

Month	Workshop	Objectives
<b>December 2018</b>	CBP Workgroup	CBP overview, workgroup charter, introduce CBP Collaborative MOU for CBP participation, and identify key questions
<b>January 2019</b>	CBP Workgroup	CBP costs/benefits review, review questions, and present draft MOU for CBP participation
<b>February 2019</b>	CBP Workgroup	CBP water sources and financial analysis review, introduce CBP agreement terms, and review questions
<b>May 2019</b>	CBP Workgroup	IEUA rate study update, CBP alternatives development approach, CBP agreement, and review questions
<b>June 2019</b>	CBP Workgroup	CBP water sources update, CBP alternatives and evaluation approach, and review questions
<b>August 2019</b>	IEUA Water Resources Workshop	IEUA recycled water supply and additional water sources update
<b>September 2019</b>	IEUA Water Resources Workshop	IEUA regulatory challenges update, CBP alternatives update, and CBP economic analysis update
<b>March 2020</b>	CBP Workgroup	IEUA regulatory challenges review, IEUA master planning update, and CBP alternatives evaluation review
<b>July 2020</b>	CBP Workgroup	CBP economic analysis review workshop; CBP preliminary design and program alternatives review workshop

### *MWDSC and State Engagement*

IEUA continues to coordinate with MWDSC and State agencies to evaluate the operational parameters and associated conditions for the CBP. These coordination efforts are used to review and refine operational elements and questions, discuss and develop principles and conditions that will shape institutional arrangements, and to coordinate overall roles and responsibilities.

The CBP team is continuing to work closely with State resource agencies. This past quarter DWR coordinated a workshop among WSIP projects involving exchanges at Lake Oroville for pulse flows. Participants, including IEUA, reviewed exchange concepts and a DWR draft “roadmap” outlining key elements of the exchange process. The participants will have a second meeting in August 2020 that will include participation by the Department of Fish and Wildlife (CDFW).

IEUA met with Commission staff twice during the most recent quarter to review project progress, discuss key local agency and stakeholder questions and concerns, discuss coordination with State resource agencies, and to review the pathway ahead for completing the analysis and agreements with these agencies. A site visit involving State resource agency representatives was planned for this summer but has been further postponed due to continuing concerns regarding COVID-19 and associated constraints.

### 3. Project Schedule Update

IEUA and local agency partners are working together to define the program elements on a schedule consistent with the proposed commitments to achieve local and statewide public benefits (see **Figure 3-1** and **Table 3-1**). The program completion date remains December 2025, with full operation commencing in 2026. Additional details of the schedule and progress are provided in Attachments 1 and 2, respectively.

Figure 3-1. Simplified CBP Schedule



CBP milestones leading up to the Commission’s WSIP conditional funding award date are shown on **Table 3-1**.

Table 3-1. CBP Funding Milestones

Date	Milestone
Winter 2019/2020	Complete water sources evaluation, refine economic evaluation, and complete PDR
Summer 2020	Consensus on water sources, draft terms for water sources, and Draft PDR
Fall 2020	Draft agreement terms with local agencies and partners
Winter 2021	Final PDR, and Draft agreement terms with resource agencies
Spring/Summer 2021	Draft CBP PEIR, and Final agreement terms with local and resource agencies
Fall 2021	CWC final funding award negotiations and funding agreement execution

## Next Steps

As discussed in the previous progress report, IEUA will continue to work with local and regional partners to further develop the CBP and will continue to drive the following activities:

- **CBP Workshops:** Continue focused workshops with local partner agencies to discuss the analysis of key questions about economics, financing, water sources, agreement terms and conditions, and operational and management considerations.
- **Water Sources:** Draft and negotiate partnership agreements.
- **Preliminary Design:** Identify recommended program alternatives for further development. Develop draft PDR.
- **Economic and Financial Analysis:** Complete financial analysis and ability to pay analysis. Develop draft documentation.
- **Partner and State Agency Coordination:** Continue to meet and coordinate with local and regional agency partners and State agencies to work collaboratively to advance CBP planning and development. Develop draft agreements with local agency partners. Engage elected officials to help shape policy opinion to help inform development of draft agreements. Continue regular coordination with the Commission to assist with discussions with State resource agencies. Meet with State resource agencies to discuss SWP operations analysis and principles for consideration in proposed State agreements.
- **Communications and Outreach:** Continue to conduct one-on-one meetings with local stakeholders, general manager meetings, special committee meetings, and workshops.

## **4. Project Cost and Financing Update**

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### **Capital Costs, Cash Flow, and Financing**

IEUA is continuing its analysis of potential funding sources to help with financing of the CBP. The CBP team is completing an economic and financial life cycle analysis of the alternatives. The findings from these efforts will provide information needed to help IEUA and partner agencies make decisions about CBP development, implementation, operations, and financial and operational partnership agreements.

### **Pursuit of Additional Grant Funds**

IEUA continues to explore additional grant opportunities for the CBP, including federal grant programs (i.e., Water Infrastructure Improvements for the Nation (WIIN) Act), State grant programs (i.e., Proposition 68), and State Revolving Funds programs.

## **ATTACHMENT 1**

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### **Table 1. Project Schedule**



Table 1. Project Schedule

Funding Agreement Milestone	Start Date	Finish Date	% Complete
<b>Non-Public Benefits Cost-Share Contracts</b> (other agreements may be required and will be included when identified)			
Agreements with IEUA Member Agencies	2019	2020	45%
Agreements with State Water Project Contractor	2019	2021	25%
Chino Basin Storage and Recovery Application	2019	2021	5%
<b>Contracts for Administration of Public Benefits</b>			
CDFW (ecosystem agreement)	2019	2021	15%
SWRCB (water quality)	2019	2021	5%
DWR (emergency response)	2019	2021	5%
DWR (operations agreement)	2019	2021	15%
<b>Completed Feasibility Studies</b> (includes feasibility studies related to planning efforts that are the framework for the CBP, as well as CBP-specific studies)			
2000 Optimum Basin Management Plan (OBMP) for Chino Basin	1995	2000	100%
2001 Chino Basin Organics Management Strategy	1998	2001	100%
2002 Recycled Water System Feasibility Study	2000	2002	100%
2002 Wastewater Facilities Master Plan	2000	2002	100%
2002 Salinity Management Plan	2000	2002	100%
2005 Urban Water Management Plan	2003	2005	100%
2005 Recycled Water Implementation Plan	2003	2005	100%
2007 Recycled Water Three Year Business Plan	2006	2007	100%
2010 Urban Water Management Plan	2009	2011	100%
2013 Recharge Master Plan Update	2011	2013	100%
2015 Energy Management Plan	2014	2015	100%
2015 Recycled Water Program Strategy	2013	2016	100%
2015 Wastewater Facilities Master Plan Update	2014	2016	100%
2015 Water Use Efficiency Business Plan Update	2014	2016	100%
2016 Feasibility Study of Recycled Water Interconnection — Pomona, Monte Vista Water District, and IEUA	2014	2016	100%
2016 Integrated Water Resources Plan	2013	2016	100%
2017 Recycled Water Intertie Study – Jurupa Community Services District and IEUA	2014	2017	100%
2018 Recharge Master Plan Update	2017	2018	100%
2020 OBMP Update for Chino Basin	2018	2020	70%
CBP Feasibility Studies and Pre-Design	2019	2021	70%
IEUA Rate Study	2019	2020	75%
<b>Environmental Documentation</b> (includes environmental documentation already completed that supports elements of the CBP)			
IEUA Facilities Master Plan PEIR	2016	2017	100%
OBMP Update for Chino Basin EIR Addendum	2016	2017	100%
OBMP Update for Chino Basin CEQA	2019	2020	0%
CBP PEIR	2019	2020	0%

<b>Funding Agreement Milestone</b>	<b>Start Date</b>	<b>Finish Date</b>	<b>% Complete</b>
<b>Federal, State, and Local Approvals</b>			
Federal: Potential operations approvals w/USBR	2019	2021	0%
Federal: Potential permitting approvals w/USACE	2019	2021	0%
Federal: Other possible federal permits/approvals tbd	2019	2021	0%
State: Incidental Take Permit, if needed (w/CDFW)	2019	2021	0%
State: Section 1707 water rights change, if needed (by DWR, w/SWRCB)	2019	2021	0%
State: SWP water supply contract amendments, if needed (by SWPC, w/DWR)	2019	2021	0%
State: Other possible State permits/approvals tbd	2019	2021	0%
Local: Possible encroachment permits (w/city/county)	2019	2021	0%
Local: Storage in Chino Basin Water Bank (w/CBWM)	2019	2021	0%
Local: Other possible local permits/approvals tbd	2019	2021	0%
<b>Funding Agreement Components</b>			
Project Workplan	2017	2021	10%
Project Schedule	2017	2021	10%
Project Budget	2017	2021	10%
<b>Project Design</b>	2021	2023	0%
<b>Construction</b>	2023	2025	0%
<b>Begin Operations</b>	2026	2075	0%

## **ATTACHMENT 2**

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### **Table 2. Quarterly Reporting Items for Commission Hearing on Final Awards**





Table 2. Quarterly Reporting Items for Commission Hearing on Final Awards\*

Description	Estimated Completion Date	% Complete
<b>Contracts for non- public cost-share</b> (other agreements may be required and will be included when identified)		
Agreements with IEUA Member Agencies	2020	45%
Agreements with State Water Project Contractor (SWPC)	2021	25%
Chino Basin Storage and Recovery Application	2021	5%
<b>Contracts for administration of public benefits</b>		
CDFW (ecosystem)	2021	15%
SWRCB (water quality)	2021	5%
DWR (emergency response)	2021	5%
DWR (operations)	2021	15%
<b>Completed feasibility studies</b> (includes feasibility studies related to planning efforts that are the framework for the CBP, as well as CBP-specific studies)		
2000 Optimum Basin Management Plan (OBMP) for Chino Basin	Done	100%
2001 Chino Basin Organics Management Strategy	Done	100%
2002 Recycled Water System Feasibility Study	Done	100%
2002 Wastewater Facilities Master Plan	Done	100%
2002 Salinity Management Plan	Done	100%
2005 Urban Water Management Plan	Done	100%
2005 Recycled Water Implementation Plan	Done	100%
2007 Recycled Water Three Year Business Plan	Done	100%
2010 Urban Water Management Plan	Done	100%
2013 Recharge Master Plan Update (RMPU)	Done	100%
2015 Energy Management Plan	Done	100%
2015 Recycled Water Program Strategy	Done	100%
2015 Wastewater Facilities Master Plan Update	Done	100%
2015 Water Use Efficiency Business Plan Update	Done	100%
2016 Feasibility Study of Recycled Water Interconnection — Pomona, Monte Vista Water District, and IEUA	Done	100%
2016 Integrated Water Resources Plan	Done	100%
2017 Recycled Water Intertie Study – Jurupa Community Services District and IEUA	Done	100%
2018 Recharge Master Plan Update	Done	100%
OBMP Update for Chino Basin CEQA	2020	70%
CBP Feasibility Studies and Pre-Design	2021	70%
IEUA Rate Study	2020	75%

Description	Estimated Completion Date	% Complete
<b>Final environmental documentation</b> (includes environmental documentation already completed that supports elements of the CBP)		
IEUA Facilities Master Plan PEIR	2017	100%
OBMP Update for Chino Basin EIR Addendum	2017	100%
OBMP CEQA Update for Chino Basin	2020	0%
CBP PEIR	2020	0%
<b>All required federal, State, and local approvals, certifications, and agreements</b>		
Federal: Potential operations approvals w/USBR	2021	0%
Federal: Potential permitting approvals w/USACE	2021	0%
Federal: Other possible federal permits/approvals tbd	2021	0%
State: Incidental Take Permit, if needed (w/CDFW)	2021	0%
State: Section 1707 water rights change, if needed (by DWR, w/SWRCB)	2021	0%
State: SWP water supply contract amendments, if needed (by SWPC, w/DWR)	2021	0%
State: Other possible State permits/approvals tbd	2021	0%
Local: Possible encroachment permits (w/ city/county)	2021	0%
Local: Storage in CBWB (w/Chino Basin Watermaster)	2021	0%
Local: Other possible local permits/approvals tbd	2021	0%

\*Note: Updates to the Funding Agreement and Status Update sections of the Table 2 quarterly reporting template (provided by the Commission) are for elements needed to execute a funding agreement. The Commission requires an update of these elements only when a significant change has occurred. There currently is no information to report for these elements and there has been no change in the information related to these elements at this time.



## CONTACT INFORMATION

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**INLAND EMPIRE UTILITIES AGENCY**  
Chino Basin Conjunctive Use Environmental Water Storage/Exchange Program  
(Chino Basin Program)

Sylvie Lee  
Manager of Planning & Environmental Resources  
[slee@ieua.org](mailto:slee@ieua.org)