U.S. Bureau of Reclamation Notice of Funding Opportunity
No. R25AS00013

Montclair Basin Improvement Project

Inland Empire Utilities Agency
6075 Kimball Avenue
Chino, CA 91708
Ashley Womack, Grants and Government Affairs Officer
awomack@ieua.org (909) 925-7205

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Executive Summary

Date: October 7, 2024	**Applicant Name**: Inland Empire Utilities Agency (IEUA)
City of Applicant: Chino	**Project Length of Time**: One Year
City of Project: Montclair	**Estimated Completion Date**: December 2026
County: San Bernardino	**Task A**
State: CA	**Funding Group II**
Applicant Type: Category A.	**Located on a Federal Facility**: No

Project Summary

The Inland Empire Utilities Agency (IEUA), located in southwestern San Bernardino County, California, a Category "A" applicant, will enhance water supply reliability and sustainability in the Chino Basin with the Montclair Basin Improvement Project, located in Montclair, San Bernardino County. The Project is designed to increase the diversion and volume for groundwater recharge of stormwater, dry weather runoff and imported water into the Chino Groundwater Basin (CGB). Two of the four retention basins that make up the facility will be modified to directly receive additional channel flow of stormwater, runoff, and imported water and increase basin storage in Basin 1 through the improvement of an existing Basin 2 spillway system. Key stakeholders include the Inland Empire Utilities Agency (IEUA), Monte Vista Water District, San Bernardino County Flood Control District, Chino Basin Water Conservation District and the Chino Basin Watermaster. Recent drought conditions have reduced groundwater levels and increased reliance on imported water. This project will mitigate these impacts by increasing local stormwater and recycled water capture and reuse, reducing imported water demand, and replenishing the groundwater basin. The project aligns with the IEUA's Regional Drought Contingency Plan, Integrated Resources Plan, and Amendment to the 2013 Recharge Master Plan Update.

Background

The Inland Empire Utilities Agency (IEUA/Agency) is a regional wastewater treatment agency and wholesale distributor of imported water serving approximately 935,000 people throughout western San Bernardino County. Under the leadership of a directly elected five-member Board of Directors, the Agency is committed to supporting the needs of its service area and safeguarding public health through significant investments in a diverse water supply portfolio, reliable municipal/industrial wastewater collection and treatment services, and other related utility services in a regionally planned and cost-effective manner.

As a member agency of the Metropolitan Water District of Southern California (Metropolitan), IEUA provides supplemental water supplies, primarily via the State Water Project (SWP) to the cities of Chino, Chino Hills, Fontana via Fontana Water Company and portions of West Valley Water District, Montclair via Monte Vista Water District, Ontario, Rancho Cucamonga via Cucamonga Valley Water District, and Upland (including San Antonio Water Company). IEUA also replenishes local groundwater supplies with captured rainwater and recycled water produced by IEUA that is later extracted by local water agencies for use as a drinking water supply.

Water recycling is a critical component of the water resources management strategy for IEUA and the Chino Basin. The Agency is responsible for treating over 51 million gallons per day of wastewater, on average, received from seven sewering agencies including the cities of Chino, Chino Hills, Fontana, Montclair, Ontario, and Upland, and the Cucamonga Valley Water District. This water is treated to Title 22 regulations set forth by the State Division of Drinking Water and distributed to its retailers for agriculture, municipal irrigation, industrial uses, and groundwater replenishment.

IEUA currently operates five regional wastewater treatment plants: RP-1 (Ontario), RP-2 – Solids (Chino), RP-4 (Rancho Cucamonga), Carbon Canyon Water Recycling Facility (Chino), and RP-5 (Chino).

In conjunction with these facilities, IEUA also maintains and operates:

- The Chino Desalter I (located in Chino) on behalf of the Chino Basin Desalter Authority, which uses reverse osmosis technology to remove salt and nitrates from groundwater pumped from 14 wells throughout the Chino Basin. It produces 10.9 mgd of high-quality drinking water, serving the water needs of approximately 35,000 people.
- The Inland Empire Regional Composting Facility (located in Rancho Cucamonga) on behalf of the Inland Empire Regional Composting Authority, which uses biosolids from the wastewater treatment process to produce over 230,000 cubic yards of high-quality compost each year for local landscaping and horticultural use, marketed under the name SoilPro.
- 46 groundwater recharge basins across 19 recharge sites designed to hold stormwater run-off, imported water, and IEUA recycled water to replenish alluvial aquifers and groundwater supply. Through partnership with the Chino Basin Water Conservation District and the San Bernardino Flood Control District, IEUA's groundwater recharge framework enhances the current reliability of local supplies for a rapidly growing population and is an integral part of the Agency's local water supply planning efforts.

The Agency also prioritizes initiatives that enhance and preserve the quality of life throughout the region, which include investments in local water resources, conservation programs, and renewable energy sources. IEUA advocates for environmental stewardship and offers several free educational resources and outreach programs to inform students and the community on ecological preservation, water awareness, and sustainability.

IEUA applied for the WaterSmart Drought Response Program for fiscal year 2021 but did not receive the award. Since then, IEUA has advanced the Project and completed Phase 1, which involved construction of the spillway. IEUA obtained non-federal grant funding from Metropolitan as well as a State Revolving Loan to finalize the construction phase of the diversion outlets. Due to significant rainfall in the region, the project was paused to allow the Basins to capture as much stormwater as possible. During this period, inflation has increased the overall project cost. Given that the 2024 Dry Yield Report forecasts another wet year, IEUA has decided to reapply for the grant to mitigate the inflation costs. The feedback provided by USBR during the debrief was used to strengthen this new application.

IEUA is seeking funding from the Bureau of Reclamation's WaterSmart Drought Response Program: Drought Resiliency Projects for Fiscal Year 2025, funding group II, task A for Phase 2 of the Montclair Basin Improvement Project to enhance water supply reliability and sustainability in the Chino Basin.

The Project is an infrastructure improvement project for the design and construction of upgrades to the existing Montclair Basin (Basin) located in the city of Montclair, in San Bernardino County, California. The Basin is part of a multiple-use agreement with Chino Basin Water Conservation District (CBWCD), Inland Empire Utilities Agency (IEUA), Chino Basin Watermaster (Watermaster), and San Bernardino County Flood Control District (SBCFCD) for stormwater retention and groundwater recharge. The Montclair Basins support local water supplies to residents and visitors of Montclair via the Monte Vista Water District. The Montclair Basins use a natural process called percolation to replenish the local water supply. The process allows available water from the channel to flow through several layers of sand, gravel, and silt before reaching the groundwater level in the area. The Montclair Basins can capture 523 acre-feet of water, or over 170 million gallons of water annually. The water is stored underground in the Chino Groundwater Basin until it is later pumped and treated for potable use for the residents. The Chino Basin Water Conservation District owns and maintains the Basin with protective fencing, landscaping, slope repairs, and pest control to ensure continuous basin recharge.

The Project is designed to increase the diversion and volume for groundwater recharge of stormwater, dry weather runoff and imported water into the Chino Groundwater Basin (CGB). Two of the four retention basins that make up the facility will be modified to directly receive additional channel flow of stormwater, runoff, and imported water and increase basin storage in Basin 1 through the improvement of an existing Basin 2 spillway system. The Project goal is to increase the basin storage capacity and San Antonio channel flow diversion for drought resiliency through groundwater recharge. Partners in the Project are:

- CBWCD, the owner of the Basin, has completed the work on the spillway between Basin 1 and Basin 2;
- Parties (IEUA, CBWCD, Watermaster, SBCFCD) to a 1978 judgment related to the CGB will be providing the match share for the San Antonio channel flow diversion work in Basin 2 and Basin 3; and,
- IEUA will be providing construction oversight for the San Antonio channel flow diversion into Basin 2 and Basin 3, and project management for the entire project.

San Bernardino County faces high temperatures and droughts, worsened by climate change. The recent 2020-2023 drought led California Governor Newsom to declare a state of emergency on October 2021 due to extreme conditions, which officially ended on March 24, 2023, with Executive Order N-5-23. It is projected that the region will be impacted by higher temperatures and multiple droughts in the future. While forecasts vary, climatologists predict the possibility of a mega-drought due to impacts of climate change. The region has already experienced drought impacts such as drinking water supply restrictions, lower surface water supplies, increased risk of wildfires due to dry vegetation, environmental impacts to both the wildlife and vegetation in the region, and drought-induced economic damage. Conservation of the storm and dry weather runoff

through recharge has been proven to be effective in reducing drought impacts that California frequently experiences.

Using the recharge basin to store imported State Water Project (SWP) water from Northern California also benefits the region during times of drought when SWP supply can be limited. Every drop that can be retained for future use when water is scarce is important to a region that is so prone to drought. This type of recharge project is specifically included in the Amendment to the 2013 Recharge Master Plan Update (RMPU), which is a planning document to enhance groundwater replenishment by developing existing and new basins. This project has been included in IEUA's Regional Drought Contingency Plan (DCP), which was approved by the U.S. Bureau of Reclamation (USBR) in June 2020, as well as the Integrated Resources Plan (IRP). A portion of the project, the Basin 2 spillway repair and improvement is already complete, and has helped to increase the basin's storage capacity. The RMPU's Recharge Improvement which adds two diversion structures within the San Antonio Channel is currently ready for construction. This construction project for the additional diversion is expected to take one year for completion. The construction bidding process will begin upon the successful notice of award in the first quarter of 2025. The construction start date is expected to be October 8, 2025, in alignment with the NOFO, for the San Antonio channel diversions. The expected Project completion date is December 2026. The Project is not located on a Federal facility.

For Task A-C projects, include details regarding the applicant's or applicant's Category A partner's water supplies.

IEUA is a wholesale water supplier, mainly providing supplemental water from the State Water Project to cities like Chino, Chino Hills, Fontana (through Fontana Water Company), Montclair (via Monte Vista Water District), Ontario, Rancho Cucamonga (through Cucamonga Valley Water District), and Upland (including San Antonio Water Company). IEUA also replenishes local groundwater with captured rainwater, local run-off, and recycled water, later used as drinking water.

IEUA's diverse water supply sources ensure regional reliability, including imported water, local surface water, groundwater, and recycled water. The Agency receives imported water from the State Water Project via Metropolitan. The Chino Groundwater Basin, managed by Chino Basin Watermaster (Watermaster) contracts, provides local groundwater. IEUA also sends treated wastewater through Santa Ana Creek to Orange County Water District under the Santa Ana Water Transfer Agreement.

The project area's water supplies are within the service area of Monte Vista Water District (MVWD), a member agency with IEUA. This District, a county water district formed in 1927, provides retail and wholesale water supply services to a population of over 135,000 within a 30-square mile area, including the communities of Montclair, Chino Hills, portions of Chino and the unincorporated area lying between the cities of Pomona, Chino Hills, Chino, and Ontario. The following chart shows the average annual water supply in acre-feet from all sources over a decade (2014-2023), including delivered or diverted water from contracts, water rights, wells, reclaimed/recycled water, and water transfer agreements.

Fiscal Year	Surface Water Total (acre feet)*	Agency Groundwater (acre feet)	Recycled M&I Water (acre feet)	Other (acre feet)	Total (acre feet)
2014/2015	3,190	5,920	308		9,418
2015/2016	2,818	4,915	278		8,011
2016/2017	3,197	4,876	306		8,379
2017/2018	6,712	5,914	318		12,944
2018/2019	4,593	4,892	289		9,774
2019/2020	4,740	3,998	298		9,036
2020/2021	3,076	5,127	343		8,546
2021/2022	2,801	5,160	342		8,303
2022/2023	2,664	4,417	291		7,372
2023/2024	4,451	2,988	264		7,703
Total Average Annual Water Supply for FY14/15 - FY23/24 in AFY =					8,949
Average Annual Water Supply (for the location of the Project) = 8,949 acre-feet (Divide Total Supplies for 2014 – 2023 above by 10)					

*Table 1 Project Area Water Supply *Includes water transfers and exchanges that occur on a long-term basis. Excludes single-year transfers.*

MVWD obtains its drinking water supply from the following sources:
Groundwater: Over many years, water that falls on the ground travels through the soil, is naturally filtered, and collects in "aquifers" hundreds of feet below the earth's surface. Groundwater is pumped from the ground through production wells, disinfected, and distributed to customers. In 2023, approximately 49.5% of MVWD's water supply was produced from a series of aquifers known collectively as the Chino Groundwater Basin.

Imported Surface Water: Water from rivers and streams in northern California is collected and transported through the California Aqueduct to southern California. MVWD's imported water supply is treated at the Agua de Lejos Treatment Plant in the city of Upland prior to distribution to customers. In 2023, approximately 45.1% of MVWD's water supply was imported from northern California.

City of Upland: The source of Upland's water supply originates from local mountain and canyon runoff, groundwater, and imported water. In 2023, MVWD received approximately 5.4% of its water supply from San Antonio Water Company through Upland's water system.

Project Location

The Montclair Basin Improvement Project is located in San Bernardino County in the city of Montclair, California as shown in Figure 1 – Montclair Basin Improvement Project. According to the White House Climate and Justice Screening Tool (CJST), the Project is in a Disadvantaged Community (DAC) because tract number 06071000201 meets one burden threshold and the

associated socioeconomic threshold. The addresses and latitude and longitude for the project location are as follows:

- Montclair Basin 2 is located at 4800 Moreno Street, Montclair, CA 91763
    - 34.088798134, - 117.700869441
- Montclair Basin 3 is located at 4800 San Jose Street, Montclair, CA 91763
    - 34.085126945, - 117.700745484

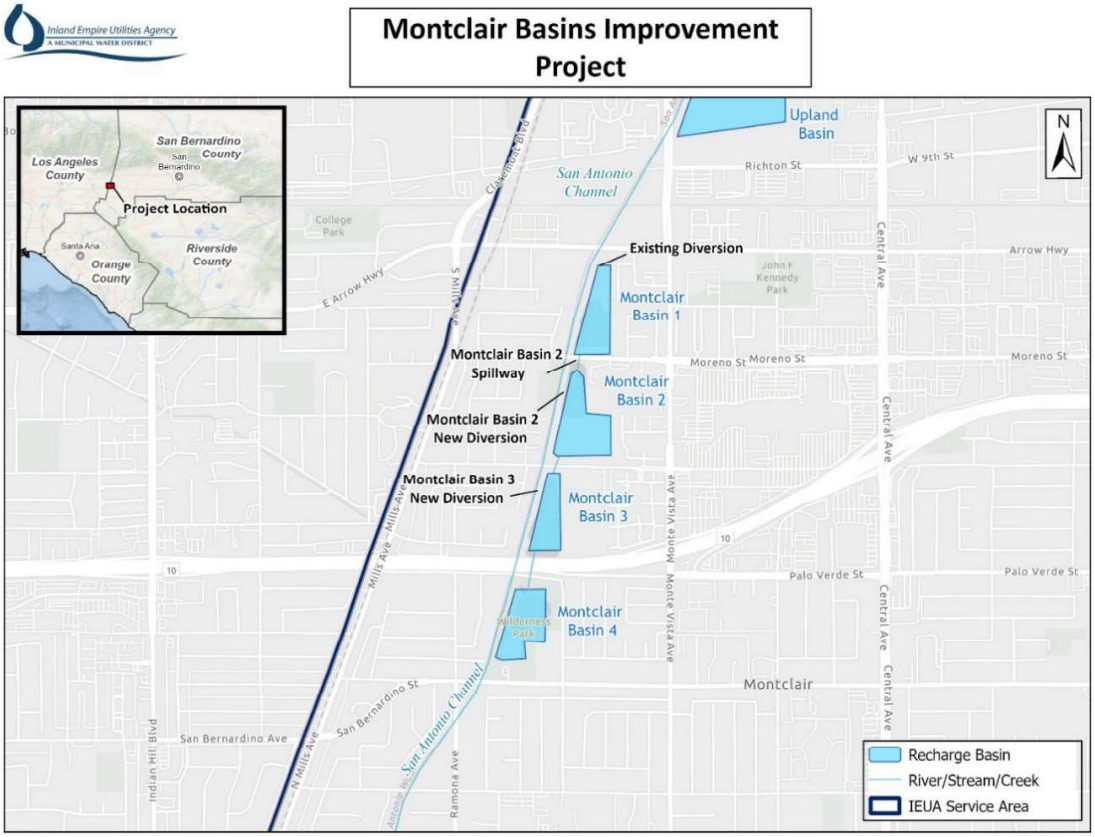

Figure 1 Project Location Map

Project Description

The Project is considered a Task A project under the NOFO guidelines because the Montclair Basin Improvement Project aims to enhance groundwater recharge capabilities in the Chino Groundwater Basin (CGB) by constructing new diversion inlets and improving existing infrastructure. Conservation of the storm and dry weather runoff through recharge has been proven to be effective in reducing the effect of the droughts that California frequently experiences. This is partly because groundwater basins lose less water to evapotranspiration than surface water. This project will allow additional water to be recharged through Basins 2 and 3 into the CGB. By constructing the diversion infrastructure and repairing and improving the spillway, the Project advances the fundamental goals of the NOFO by permanently increasing the reliability of the region's water. The Project will allow approximately 152 acre-feet per year to be recharged into the CGB, thereby enhancing regional water supply resiliency in an area historically impacted by drought.

The CGB is one of the largest groundwater basins in southern California, containing approximately five (5) million acre-feet (MAF) of water with an unused storage capacity of approximately one (1) MAF for a total potential of six (6) MAF. Production and storage rights in the CGB are defined in a Stipulated Judgment (Judgment), issued in 1978 (Chino Basin Municipal Water District vs. the City of Chino et al. [SBSC Case No. RCV 51010]) by the Superior Court of the State of California. Since that time, the CGB has been successfully and sustainably managed, as required by the Judgment, under the direction of a court-appointed Watermaster. Watermaster is responsible for managing the CGB in accordance with the Judgment and several regional planning documents and agreements.

Water from the CGB serves agricultural, municipal, domestic, institutional, and industrial needs. Over the past 50 years, urban areas have grown substantially, with more farmland likely to become urbanized according to regional plans. The exact amount of water extracted by a specific user category is not known because many of the domestic and agricultural wells do not have meters monitoring the amount pumped from the CGB. However, the Watermaster monitors the total water usage within the Basin.

The Basin is part of a flood control system operated regionally under a multiple-use agreement for both flood control and groundwater recharge operations by IEUA. The Basin is composed of four flood control/retention basins connected by spillways. The main purpose of most flood control basins operated by IEUA is for stormwater management. This is accomplished by diverting stormwater from the flood control channels during storm events to the basins to minimize the volume of water flowing through the flood control channels. Without these basins, the flood control channels would be unable to handle the peak flows experienced during larger storm events. Stormwater is captured and percolates into the groundwater basin. The flood control channels also carry dry weather runoff from excessive outdoor irrigation. Runoff, whether stormwater or dry weather runoff, not captured by retention basins, flows to the Santa Ana River and is captured by Orange County Water District, a water agency operating outside the CGB. The Basin is supplied by stormwater and local dry weather runoff and imported water.

The Montclair Improvement Project is divided into two phases. The first phase, which has been completed, involved repairing the spillways. The second phase, for which this application is made, centers on building diversion inlets. This project aims to create diversion inlets that will enable water diversions from San Antonio Channel directly into Basins 2 and 3. This would enhance control and flexibility over stormwater, dry weather flows, and imported water, allowing more water to be retained and diverted into Basins 2 and 3 even if Basin 1 is under maintenance. Upon completion, the two phases will allow an additional 152 AFY to be captured in Basins 2 and 3. In an area that is arid and does not have large amounts of precipitation, every drop of water that can be captured becomes an important source of water to the region.

Here are the tasks completed and those remaining for the Phase 2 diversion inlets of the Project:

Task 1: Project Design
The preliminary design evaluation for the diversion inlets was completed in 2016 by Stantec Consulting and Scheevel Engineering. Modeling was performed by Wildermuth Environmental to determine which of the four retention basins would produce the most yield if a new inlet was incorporated into the design. Carollo Engineering, Inc was hired to develop the design of this project. The Final Design is complete, including the plans and specifications. Carollo will remain under contract to perform the engineering services during construction of the project.

Task 2: Environmental Compliance
The environmental compliance requirements under the California Environmental Quality Act (CEQA) have been completed for the proposed projects to build diversion inlets into Basins 2 and 3 by Tom Dodson and Associates, an environmental specialist with decades of experience in the region. A filing Notice of Determination for the project was made on March 17, 2017, under the IEUA's Facilities Master Plans which include the Amendment to the 2010 Recharge Master Plan Update for the Montclair Basins Improvement. This notice stated the following:

- An Environmental Impact Reposts was prepared for this project pursuant to the provisions of CEQA.
- Mitigation measures were made part of the approval of the project.
- A mitigation reporting and monitoring plan was adopted for the projects listed in the FMP.
- A statement of overriding consideration was adopted for the project under the FMP.

If this grant is awarded, IEUA will address further environmental requirements under the National Environmental Policy Act (NEPA) prior to bidding and construction of the diversion structures for the two basins. will need to be completed before construction starts. IEUA anticipates this process taking roughly 60-90 days and does not anticipate any delays to the projected schedule in Evaluation Criteria D.

Task 3: Permits
All necessary permits have been obtained.

The following regulatory permits have been issued:

- Army Corps Section 408 US Army Corps of Engineers
- Army Corps Section 404 US Army Corps of Engineers
- California Department of Fish and Wildlife – Streambed Alteration Agreement

Task 4: Construction Contracting/Bid and Award
IEUA will proceed with construction work for the San Antonio channel diversions via a bid package after the completion of NEPA. IEUA's project manager and contracting staff will administer the construction contract of this project. As a public agency, IEUA staff follows the public works construction contracting procedures. After approval by IEUA's Board of Directors, staff will develop the bid packages, including all the pertinent requirements and provisions for this project, and advertise for bids. After evaluation of all bid proposals submitted, IEUA staff will

summarize bids and provide a recommendation to IEUA's Board of Directors that the construction contract be awarded to the lowest responsible/responsive bidder. IEUA's contracting staff will verify the selected contractor's bonds and insurance and issue a Notice-To-Proceed to the selected lowest bidder after approval by IEUA's Board.

Task 5: Construction
Construction will begin with mobilization and site preparation. To allow unimpeded basin grading and improvements for the Basins 2 and 3 channel diversion projects, the existing vegetation within a portion of the basins will need to be removed. Vegetation removal must take place before the bird nesting season, which typically ranges from about March 1st through September 15th of any given year. The above-ground vegetation will be cleared, followed by removal of the vegetation's root systems. Vegetation will be processed and converted to mulch whenever possible.

The work to be performed in Basins 2 and 3 channel diversion components will consist of the construction of two drop inlets along the San Antonio Creek Channel that will feed into Basins 2 and 3, including associated demolition work, excavation work, slide gate and actuator, buried reinforced concrete piping, outlet structures, grading work, electrical work, level instrumentation and controls work, as well as repair and reconstruction of existing improvements affected by the work, and incidentals for a complete and usable facility. A vertical gate structure for the diversion structures in Basins 2 and 3 will be constructed.

Prior to operating the Basin as a groundwater recharge facility, minor grading and embankment improvements will be required. These improvements will provide a clean basin bottom for maximum recharge potential and improved basin perimeter slopes for assured stability and serviceability.

At the conclusion of construction, and after successful start-up and testing of all new mechanical systems, all equipment will be demobilized from the site. As new stormwater and imported water is delivered to Basins 2 and 3, water levels, inflow, outflow and evaporation will be measured. Infiltration rates will be calculated from the collected data and compared to the project rates developed during the preliminary investigations.

Task 6: Data Collection
Existing sensors will be used to collect data. Basin inflow, outflow, and level measurements are required to accurately measure the Basin performance. Collection of this data will also be needed to make operational decisions to maximize performance and control flood risk. Level sensors will be installed in the Basin to monitor changes in Basin volume, and several flow meters will be installed in the Basin inlets and outlets to account for flow into and out of the Basin.

Task 7: Construction Administration
As a public agency, IEUA staff must request an approval from the IEUA Board of Directors to issue a Request for Proposals for the construction management services for the Basins 2 and 3 channel diversion projects. In addition, the project design consulting firm will likely provide engineering services during the construction phase of this project due to their familiarity in the project and for continuity. The construction administration activities will include the completion of construction tasks, and compliance with regulatory and environmental regulations.

Task 8: Grant Administration and Reporting
IEUA is required to report to the Grantor on a regular basis during the term of the grant. In addition to preparing required reports, Grant Administration and Reporting will include overseeing grant compliance, invoicing, preparing documentation of information that must be passed onto the contractors in the solicitation and contract related to the grant, and attendance at the contractor kick-off meeting to ensure the contractor understands all grant requirements and State and Federal regulations that the contractor will have to meet. All staff time associated with this project will be charged directly to an account set up specifically to track actual time worked on the project.

Applicant Category and Eligibility of Applicant

The Inland Empire Utilities Agency (IEUA) is a regional wastewater treatment agency, as such qualifies under the Category A applicant within the irrigation districts and water districts category.

Evaluation Criteria

E.1.1. Evaluation Criterion A. Severity of Drought or Water Scarcity and Impacts (15 points)

Is the project in an area that is currently suffering from drought or water scarcity, or which has recently suffered from drought or water scarcity?
Yes, the project is in an area experiencing drought or water scarcity, as well as recently suffering from such conditions. In San Bernardino County, where the project is situated, droughts have increasingly become lengthier and more severe with each cycle. The region has experienced particularly harsh drought conditions over the past few years, especially from 2011- 2019 and 2020 to 2023. During the later period, the drought was so extreme that California Governor Gavin Newsom declared a state of emergency in October 2021, which remained in effect until March 2023.

The most recent drought cycle in this region has been characterized by increasing intensity and duration, exacerbated by climate change. The historical data from the Drought Monitor at droughtmonitor.unl.edu, displayed in Figure 2 (CA state) and 3 (San Bernardino County), highlights that the droughts have progressively lasted longer and become more severe with each cycle. These droughts have resulted in significant impacts, including restrictions on drinking water supply, reduced surface water availability, heightened wildfire risks due to dry vegetation, and detrimental effects on local wildlife and vegetation.

According to www.drought.gov, the tool used by the U.S. Drought Monitor, provides data that shows California and San Bernardino County droughts (D1-D4) are becoming longer, more intense, and the recovery time is shortening. Since 2000, the drought monitor has reflected six drought cycles with two of the most recent being the most severe dipping into the D4 status. D4 is the highest category, considered exceptional drought and corresponds to an area experiencing unprecedented and widespread crop and pasture losses, fire risk and water shortages that result in water emergencies.

The first of those droughts that lead to a D4 status in California lasted 376 weeks beginning on December 27, 2011, and ending on March 5, 2019. The most intense period of drought occurred the week of July 29, 2014, where D4 affected 58.41 percent of California land. While San Bernardino County's D4 drought lasted 368 weeks beginning on January 31, 2012, and ending on February 19, 2019. The most intense period of drought occurred the weeks of February 2, 2016, and April 18, 2016, where D4 affected 0.7 percent of San Bernardino County land.

The second of those droughts that lead to a D4 status in California lasted 192 weeks beginning February 10, 2020, and ending on October 16, 2023. The most intense period of drought occurred the week of August 17, 2021, where D4 affected 48.97 percent of California land. While San Bernardino County's D4 drought lasted 160 weeks and two days beginning on August 8, 2020, and ending on September 4, 2023. The most intense period of drought occurred the weeks of March 23, 2021, thru July 26, 2021, where D4 affected 21.41 percent of San Bernardino County land.

The period between these two intense droughts, from March 6, 2019, to February 9, 2020, provided only a brief 48 weeks and four days for recovery. Following the end of the 2023 drought cycle, the drought monitor indicates both the state and county are in another recovery period. However, the recent heat wave and wildfires during the first few weeks of September 2024 have exacerbated conditions. As of the week of September 3, 2024, California has been in D1 status since July 9, 2024, affecting 8.36 percent of the state's land. In San Bernardino County, the heat wave and wildfires have significantly impacted the region. As of the week of September 3, 2024, the county is in D1 status, affecting 46.66 percent of its land.

Data from www.drought.gov indicates that, over the past 24 years, California's drought-affected areas have significantly increased. Currently, 1.3 million Californians and 46.7% of San Bernardino County residents (949,650 people) are experiencing drought. Early September 2024 saw temperatures exceed 100°, peaking at 115°, compared to the average of 90° for the month.

Additionally, the community has faced economic damages caused by these water scarcity conditions. Projections indicate that the region will continue to experience high temperatures and multiple future droughts, with the potential for a mega-drought as climate change effects persist. This underscores the urgent need for effective drought mitigation strategies, such as the conservation of storm and dry weather runoff through recharge initiatives, to alleviate the ongoing and future impacts of drought in the area.

County or State	# of weeks in (D1 D4)	Beginning date	Ending Date	Beginning date of D4	Ending date of D4	% of land affected
CA	376	12/27/11	3/5/19	7/29/14	8/5/14	58.41
San Bernardino County	368	1/31/12	2/19/19	2/2/16	4/18/16	0.7
CA	192	2/10/20	10/16/23	8/17/21	8/24/21	48.97
San Bernardino County	160	8/8/20	9/4/23	3/23/21	7/26/21	21.41

Table 2 Drought Monitor Data

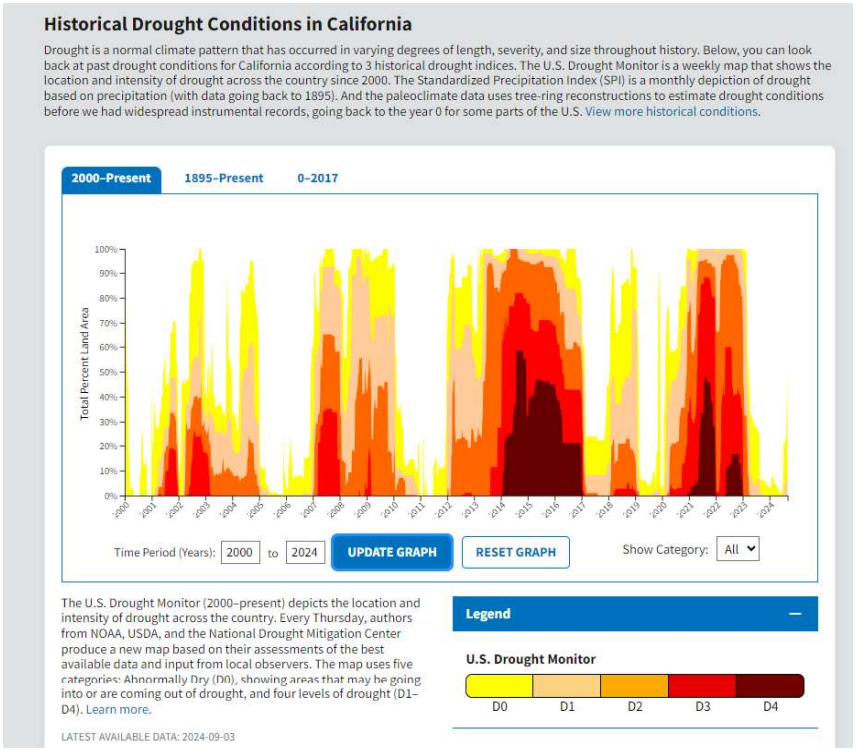

Figure 2 U.S. Drought Monitor Historical Drought Conditions in California

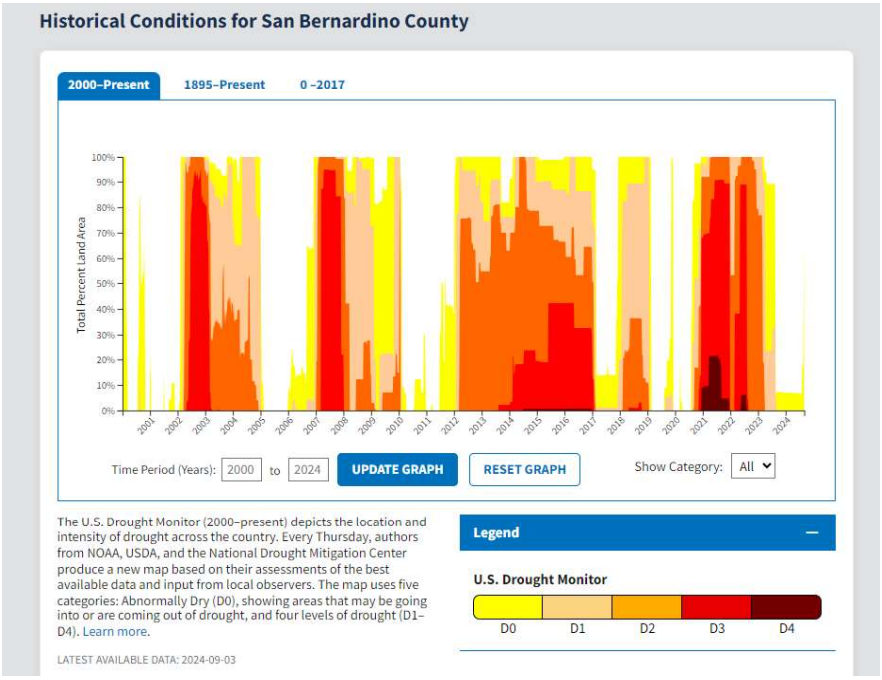

Figure 3 U.S. Drought Monitor Historical Drought Conditions in San Bernardino County

Describe any projected increases to the severity or duration of drought or water scarcity in the project area resulting from changes to water supply availability and climate change.

Climatologists have changed the way they view drought in years past and now recognize ongoing higher temperatures and longer drought conditions may be the "new normal" for California. A study Published in the Proceedings of the National Academy of Sciences of the United State of America on March 31, 2015, conducted by scientists at Stanford University entitled, "*Anthropogenic Warming Has Increased Drought Risk in California*"[i] has linked climate change with "more frequent occurrences of high temperatures and low precipitation that will lead to increased severe drought conditions."

Droughts are expected to occur more frequently, more intensely, and last longer. The Natural Resources Defenses Council (NRDC) estimates that if nothing is done to address the implications associated with climate change, between the years 2025 and 2100, the cost of providing water to the western United States will increase from $200 billion to $950 billion per year.

Climate change is one of the key factors that will have a substantial impact on water supplies. While recent droughts in California have been significant, climate change trends indicate a future of unprecedented "mega-droughts" that have the potential to last multiple decades. The California Department of Water Resources forecasts dry periods in southern California to last longer and have lower average precipitation than historical dry periods, based on a combination of regional climate models. This further highlights the need for long-term drought planning in southern California.

Whether there are public health concerns or social concerns associated with current or potential conditions.

Drought heavily affects the region's water supply, impacting numerous areas. Potential drought-related losses in the Project area include:

Agriculture – The region currently produces feed crops for the dairy industry and other food crops on over 2,000 acres for consumption in southern California and beyond. These practices have a high potential to be interrupted or eliminated due to water quality and supply impacted by the drought. The dairy industry also has a presence in the region. According to an article from the Dairy Herd Management at https://www.dairyherd.com " A Whole Lot of Water Goes Into That Milk" from November 11, 2017, 30 to 50 gallons per day is needed per dairy cow to keep them healthy and producing good quality milk for a total of between 10.5 MGD to 17.5 MGD. With water deficiency, milk production will decrease. Thus, water shortages during drought can have a high impact on the dairy industry both in the health of the cows and economically.

Industrial – Water is supplied to various types of industries in the region, including food and beverage, steel processing, and other beneficial industries. These industries rely on the water supply to operate and provide services, which helps maintain economic growth in the region. If drought reduces the water available, it could have a major economic impact due to the possible need to reduce production to match the reduction in water. Reduced water supply will impact industries which rely more heavily on water services such as commercial laundries, food processing, and other highly water-dependent manufacturing.

Urban Use – IEUA's service area currently has over 935,000 people who depend on water supplies for food, families, business, etc. The population in this area is growing, increasing demand for resources. As further drought impacts continue, decreased water quality and supply availability may result in supply interruptions for customers. The region also supplies water to Ontario International Airport and several smaller airports such as Cable Airport in Upland about two miles north of Montclair and the Chino Airport in Chino.

Drought has had a historically significant impact on the water supply in the region. The hydrologic conditions of the area, which make it prone to frequent and extended droughts, mean that all water conservation is critically important. The CGB and its associated storage is an important water supply in the region. Since the CGB has a natural underground outflow, the supplies need to be replenished. This Project will allow stormwater, dry weather flows and imported water from SWP to be added to the water supply in the region through recharge to the CGB.

There are vast public and social concerns regarding a decreased local water supply in the Project area. The concerns are generally the loss of water to support IEUA's 935,000 users, with ripple effects in residential, commercial, industrial, institutional, educational, and agricultural sectors. The region's water sources are limited and are directly impacted by climate change.

Whether there are ongoing or potential environmental impacts (e.g., impacts to endangered, threatened or candidate species or habitat).

The drought brings varying concerns about maintaining suitable habitat for various species, including endangered and threatened species. The CGB watershed overlaps critical habitat for several endangered species including the Santa Ana Sucker, the California Gnatcatcher, the Delhi Sands Flower-Loving Fly, Least Bells Vireo, two species of Kangaroo Rats among others. Several species of plant life in the CGB are also endangered species including but not limited to Braunton Milk Vetch, Thread Leaved Brodiaea and Nevin's Barberry. All of these have the potential of being affected or even completely devastated by drought. Water supplies sustain the habitats and ecosystems for the various creatures and plants who claim the region as their home.

Whether there are local or economic losses associated with current water conditions that are ongoing, occurred in the past, or could occur in the future (e.g., business, agriculture, reduced real estate values).

Potential ongoing drought losses in the Project area include, but are not limited to, the following:

Agriculture – The region currently produces feed crops for the dairy industry and other food crops on over 2,000 acres for consumption in Southern California, and beyond. These practices have a high potential to be interrupted or eliminated due to water quality and supply impacted by the drought.

Industrial – The region supplies water for various types of industries, including food and beverage, steel processing, and other beneficial industries. These industries rely on the water supply to operate and provide services, which helps maintain economic growth in the region.

Urban Use – IEUA's service area currently has over 935,000 people who depend on water supplies for food, families, business, etc. The population in this area is growing, increasing demand for resources. As further drought impacts continue, decreased water quality and supply availability may result in supply interruptions for customers. The region also currently supplies water to several international and non-commercial public airports serving the region, and Southern California.

Infrastructure – If water supplies are not replenished, the CGB could become over-drafted to the point of causing massive land subsidence that destabilizes local infrastructure. There is already some land subsidence in the region, specifically in the northwestern portion of IEUA's service area, near the Montclair Basin. Subsidence could affect many infrastructure types including, but not limited to, highways and buildings, residential properties, water and sewer pipelines, industrial sites and wastewater plants. The potential economic impact of trying to fix or stabilize these types of infrastructure if their structural integrity is destroyed by subsidence could cost billions of dollars to both the private sector and government entities.

Whether there are other water-related impacts not identified above (e.g., tensions over water that could result in a water-related crisis or conflict).

The Watermaster was appointed due to the numerous water rights lawsuits that were filed in the California Superior Court. The Watermaster has successfully managed the CGB and the associated water rights since the Superior Court appointed the Watermaster to oversee the Chino Basin. However, if projects such as the Project are not undertaken and the water supply dwindles due to the impacts from the droughts that plague the region, major battles could emerge over the water rights all over again.

Moreover, IEUA must send a specific amount of water downstream to the Orange County Water District as mandated by the California Supreme Court's "Santa Ana Watershed treaty." If this Project is not finished and water supplies keep decreasing, IEUA will struggle to meet both its legal obligations and regional water needs.

E.1.2. Evaluation Criterion B. Project Benefits (30 points)

E.1.2.1. Sub-Criterion B.1. Project Benefits (Tasks A, B, D only)

What is the estimated quantity of additional supply the project will provide and how was this estimate calculated?

The estimated quantity of additional supply the project will provide is 152 AFY, thereby decreasing future demand for State Water Project (SWP) water by 152 AFY. This estimate was calculated using sophisticated and detailed surface water modeling of the drainage system in the San Antonio Creek watershed, incorporating long-term records of daily precipitation and routing of daily stormwater discharges throughout the drainage systems. The average annual benefit of stormwater recharge, based on this modeling, is projected to be 1,520 AF over ten years, accounting for both wet and dry years.

What percentage of the total water supply does the project's water yield represent?

Utilizing the 10-year average presented in the Executive Summary (Table 1) the percentage of total additional water supplied by the Project is 1.70% of the total annual water supply in the MVWD service area. The proposed Project will provide 152 AFY of stormwater and dry- weather runoff capture. Currently, the total annual water consumption in the Projects service area is 8,949 averaged over the past 10 years, of which many were D4 level drought years with significant water supply shortages.

Total Project Water Yield in AFY	152
Average Annual Water Supply in AFY (From Table in section D.2.2.2. Technical Proposal, Executive Summary)	8,949
Percentage Yield (Divide Total Project Water Yield by Average Annual Water Supply)	1.70%

Table 3 Projected Water Yield and Impact on Total Supply

How will the project build long-term resilience to drought or other water reliability issues?

The proposed Project will build long-term resilience to drought by recharging previously uncaptured water from local storm events and dry-weather runoff into the Chino Basin groundwater system. In a region plagued by drought, every drop that can be recharged and stored in the groundwater basin is extremely important to the resiliency of the region. The new volume of recharge will increase the amount of water stored in the CGB, thereby developing a permanent, local water supply and decreasing future demand for imported water from the SWP. The supply of SWP water can vary significantly due to climate change, seismic events, and other factors, so the development of a permanent, local supply will enhance the region's long-term resilience to drought. The stormwater expected to be recharged will help provide drought-resiliency in the region by capturing water during wet periods for use during dry periods and drought. When the SWP water is available, this project will also allow for SWP water to be recharged for later use during drought periods. These benefits were the reason that this project type was included in IEUA's USBR-approved Drought Contingency Plan.

Without the implementation of this Project, the region would likely face increased interruptions and failures in water supply, especially during prolonged droughts or other water reliability issues. The dependency on a variable and unpredictable external supply would leave the region vulnerable to water shortages, necessitating frequent emergency responses and exacerbating the stress on existing water resources.

How many years will the project continue to provide benefits?

The proposed Project is expected to bring benefits for an estimated 30-year life and beyond.

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

The Project is an integral part of the 2013 RMPU, a local plan aimed at the long-term, sustainable management of groundwater supplies in the CGB. Pursuant to the 1978 Stipulated Judgment that

created the Watermaster, the Safe Yield of the CGB is allocated to the Judgment parties in constant amounts from year to year whether the region is experiencing wet periods or drought.

This region is frequently in drought or in periods of extremely high temperatures, both of which affect the amount of water available to the region. When there is precipitation, every drop of water that can be saved and added to the groundwater aquifer for use in the future is extremely important The Project's additional water supplies will increase the average annual recharge in the CGB, resulting in more water available for pumping during times of drought. As stated in the 2013 RMPU, groundwater levels in this area are most significantly influenced by groundwater production and artificial recharge. The proposed Project will create a new, stable water supply that will be available when it is needed. These additional water supplies are crucial for reducing reliance on SWP imports, thereby achieving local, regional, and statewide benefits that extend all the way to the California Bay-Delta. Every drop that can be conserved through recharge added to all other recharge projects under the 2013 RMPU provides local sustainability and resiliency.

This project will help protect the Delta by reducing the demand for imported water, specifically from the State Water Project (SWP) via the Metropolitan Water District of Southern California. Any water recharged from storm events or dry-weather runoff will lessen the region's reliance on water from the Delta, thus safeguarding the species that inhabit it. Furthermore, as the water percolates through the ground to the aquifer, natural filtration processes will remove some pollutants. This filtration helps prevent polluted stormwater from entering the Santa Ana River and eventually the ocean, thereby protecting these water bodies from contamination. The project will also enhance the sustainability of the local water supply and benefit other areas of California by making more of the limited SWP water available for use elsewhere. By reducing the strain on the Delta ecosystems, the project supports the preservation of endangered species by requiring less water to be diverted from this critical habitat.

According to the California Department of Water Resources, the SWP water supply contracts expire in 2035[ii], which makes future allocations uncertain. Developing a permanent, reliable local water supply mitigates the risks associated with the variability of future SWP allocations, ensuring long-term water security for the region and beyond.

How will the project supply help buffer against water shortages, reduce the need for emergency responses, and enhance the resilience of water systems?

The Project will enhance water systems' resilience by providing a reliable supply of groundwater that can be drawn upon during droughts, effectively buffering against water shortages. The infrastructure improvements associated with the Project will allow for better management and control of stormwater and dry-weather runoff, ensuring that more water is captured and recharged into the Chino Basin Groundwater system. This additional water supply will mitigate the need for emergency responses by maintaining a stable reserve that can be accessed when surface water sources are scarce.

By constructing diversion inlets into the recharge basins, the Project will offer operational flexibility, allowing water managers to isolate specific basins for routine maintenance without

disrupting the overall recharge process. This flexibility means that even during maintenance activities, the system's ability to recharge and store water remains uninterrupted, further bolstering the region's water resilience.

Moreover, the Project's capacity to collect and store more stormwater and dry-weather runoff that would otherwise be lost ensures that valuable water resources are conserved and made available for use during dry periods. This strategic management of water resources reduces reliance on imported water and strengthens the local water supply system against climate change, such as prolonged droughts and increased variability in water availability.

In summary, the Project significantly enhances the region's ability to manage water resources effectively, providing a robust buffer against water shortages, minimizing the necessity for emergency responses, and reinforcing the overall resilience of the water systems.

E.1.2.2. Sub-Criterion B.2. Project Benefits (Task C only)

Not applicable, this application is for Task A.

E.1.2.3. Sub-Criterion B.3. Additional Project Benefits (All Tasks)

Sub-Criterion B.3.a. Climate Change

In addition to drought resiliency measures, does the proposed project include other natural hazard risk reductions for hazards such as wildfires or floods?

In addition to enhancing drought resiliency, the proposed project includes several measures aimed at reducing risks associated with other natural hazards, such as wildfires and floods, as highlighted in the USBR's "Water Reliability in the West 2021 SECURE Water Act Report."

For instance, the project employs water recharge techniques that not only improve water quality but also help mitigate flood risks by controlling stormwater discharge. This strategic management of water resources ensures that excess runoff is directed into aquifers, thereby reducing the likelihood of flooding in vulnerable areas.

Moreover, the project incorporates vegetation management practices which play a critical role in wildfire risk reduction. By maintaining healthy and hydrated landscapes, these practices create natural firebreaks and reduce the fuel available for wildfires.
Overall, the proposed project is designed to bolster climate resilience comprehensively, addressing multiple natural hazards beyond drought, thereby ensuring the sustainability and security of the region's water supply.

Will the proposed project establish and use a renewable energy source?

The proposed project does not establish nor use a renewable energy source.

Will the proposed project reduce greenhouse gas emissions by sequestering carbon in soils, grasses, trees, and other vegetation?

The proposed project does not reduce greenhouse gas emissions by sequestering carbon in soils, grasses, trees, and other vegetation.

Does the proposed project include green or sustainable infrastructure to improve community climate resilience?

Yes, the proposed project includes green or sustainable infrastructure aimed at improving community climate resilience. The Project implements capturing and storing available stormwater for reuse, a key measure to enhance drought resiliency as outlined in the USBR's "Water Reliability in the West 2021 SECURE Water Act Report,"

The project will help mitigate flood risks by controlling stormwater discharge. This strategic management of water resources ensures that excess runoff is directed into aquifers, reducing the likelihood of flooding in vulnerable areas.

Overall, the proposed project is designed to bolster climate resilience comprehensively, addressing multiple natural hazards and ensuring the sustainability and security of the region's water supply.

Does the proposed project seek to reduce or mitigate climate pollution such as air or water pollution?

Yes, the proposed project includes advanced water management techniques designed to improve water quality through soil aquifer treatment (SAT). This involves diverting stormwater runoff into a groundwater system through soil percolation. SAT enhances water quality, increases groundwater storage, and provides a sustainable way to manage water resources, especially in arid and semi-arid regions. Through the recharge of water into the aquifer and the reduction of stormwater discharge, the project will decrease the levels of harmful water pollutants like copper, lead, and pathogens in the Santa Ana River's ecosystem. These typical water pollutants can disrupt downstream ecosystems; by affecting the ecosystem's ability to sequester carbon. Diverting potential water pollutants upstream of the channel can mitigate their impacts on downstream ecosystems and help limit greenhouse gases by preserving ecosystems' ability to sequester carbon. By mitigating water pollution, the project fosters a more resilient and sustainable environment, aligning with the broader goals of climate change mitigation and ecological preservation.

Does the proposed project have a conservation or management component that will promote healthy lands and soils or serve to protect water supplies and its associated uses?

Yes, the proposed project indeed has a conservation and management component that promotes healthy lands and soils while protecting water supplies and their associated uses. The proposed Project incorporates advanced land and water management practices designed to enhance the sustainability of natural resources as outlined in the USBR's "Water Reliability in the West 2021 SECURE Water Act Report."

One key measure is the strategic recharge of water into aquifers, which improves water quality and ensures water availability during dry periods, thereby protecting water supplies. This technique reduces stormwater discharge and virtually eliminates dry-weather runoff to the Santa Ana River, decreasing levels of harmful pollutants such as copper, lead, and pathogens. This improvement in water quality benefits local ecosystems, including vegetation, fish, and wildlife habitats.

Additionally, the project employs vegetation management practices that maintain healthy and hydrated landscapes, which are essential for soil conservation and wildfire risk reduction. By

creating natural firebreaks and reducing the fuel available for wildfires, these practices contribute to healthier lands and increased ecological resilience.

Overall, the proposed project comprehensively addresses the conservation of lands and soils and the protection of water supplies, aligning with the broader goals of climate change mitigation and ecological preservation outlined in the USBR's report.

Does the proposed project contribute to climate change resiliency in other ways not described above?

The proposed project boosts climate change resiliency by aligning with regional water management strategies, fostering coordinated and integrated water resource management. This collaboration enhances adaptability to climate stressors like droughts and extreme weather, as detailed in the USBR's "Water Reliability in the West, 2021 SECURE Water Act Report."

Sub-Criterion B.3.b. Ecological Benefits

Does the project seek to improve the ecological resiliency of a wetland, river, or stream in the face of climate change

The proposed project is designed to significantly enhance the ecological resiliency of the Santa Ana River by recharging water into the Chino Groundwater Basin (CGB). Through the natural treatment processes inherent in aquifer recharge, the project aims to improve water quality by reducing stormwater discharge and virtually eliminating dry-weather runoff into the Santa Ana River. This initiative will minimize high levels of contaminants such as copper, lead, and pathogens, thus supporting diverse ecosystems including vegetation, fish, wildlife, and invertebrates. Quantitatively, the project is expected to save approximately 152 acre-feet per year (AFY) over its 30-year lifespan. Every drop of stormwater or runoff recharged into the basin offsets the need for imported water, thereby alleviating environmental and capacity pressures on the Bay-Delta. This reduction in reliance on the State Water Project (SWP) will benefit the Sacramento-San Joaquin Rivers at the Delta by leaving more water available for in-stream and off-stream uses that support the Delta flow regime, thus positively impacting the fisheries and habitats of threatened and endangered species in that region.

Identify ecological benefits expected to result from project implementation.

IEUA did not conduct a study to identify potential ecological benefits from the project implementation. However, the project can be expected to yield an ecological benefit through improvements in water quality in a decrease in water contaminants. No studies were made to measure the potential decrease in contamination.

Will the proposed project reduce the likelihood of a species listing or otherwise improve the species status?

The proposed project is poised to significantly reduce the likelihood of species listing and improve the status of various endangered and threatened species within the Chino Groundwater Basin (CGB) watershed. Climate change has made the region hotter and drier; these extended periods raise considerable concerns about maintaining suitable habitats for several critical species, including the Santa Ana Sucker, the California Gnatcatcher, the Delhi Sands Flower-Loving Fly, Least Bells Vireo, and two species of Kangaroo Rats. In addition to these fauna, several endangered

plant species such as the Braunton Milk Vetch, Thread Leaved Brodiaea, and Nevin's Barberry inhabit the region and are threatened by drought. By recharging water into the CGB and reducing stormwater discharge and dry-weather runoff into the Santa Ana River, the project will improve water quality and sustain the habitats essential for these species. Minimizing contaminants such as copper, lead, and pathogens will foster healthier ecosystems, which will directly benefit the vegetation, fish, wildlife, and invertebrates in the area. Consequently, this project will support the survival and potential delisting of these species by providing the necessary water supplies to sustain their habitats and ecosystems amidst the challenges posed by hotter, drier periods.

Sub-Criterion B.3.c. Other Benefits

Will the project benefit multiple sectors and/or users (e.g., agriculture, municipal and industrial, environmental, recreation, or others)? Describe the associated sector benefits.

The proposed project is poised to benefit multiple sectors and users, addressing various needs across agriculture, industrial, recreational, and environmental areas. For agriculture, particularly dairy management, the project offers a reliable water source essential for maintaining livestock health and productivity. Industrially, the project is expected to contribute to the region's economic growth by ensuring a stable water supply, which is crucial for various manufacturing and commercial activities. Recreationally, the project will enhance water quality and availability, benefiting parks, wetlands, and other natural areas, enriching the community and promoting a healthier lifestyle. Environmentally, the project will have significant positive impacts by enhancing the ecological resilience of the Santa Ana River and its surroundings. By recharging the Chino Groundwater Basin, the project will reduce stormwater discharge and dry-weather runoff, thereby improving water quality and supporting diverse ecosystems. This reduction in contaminants will benefit vegetation, fish, wildlife, and invertebrates, promoting a thriving natural environment and contributing to the overall health of the watershed.

Will the project benefit a larger initiative to address sustainability?

Yes, the proposed project will significantly benefit a larger initiative to address sustainability. By recharging water into the Chino Groundwater Basin, the project reduces reliance on the State Water Project (SWP), thus alleviating environmental and capacity pressures on the Sacramento-San Joaquin Rivers at the Delta. This reduction in demand allows more water to be available for in-stream and off-stream uses that support the Delta flow regime, positively impacting the fisheries and habitats of threatened and endangered species in that region. Furthermore, improved water management enhances the ecological resilience of the Santa Ana River, supporting diverse ecosystems and reducing the risk of fire outbreaks by maintaining healthier vegetation and wetland areas.

Will the project help to prevent a water-related crisis or conflict? Is there frequently tension or litigation over water in the basin?

Yes, the proposed project will help to prevent a water-related crisis or conflict in the Chino Groundwater Basin. There is frequently tension and litigation over water in the basin, often related to water rights and allocation.

The California Department of Water Resources notes that the water supply contracts, which expire in 2035, set forth the maximum amount of State Water Project (SWP) water that can be allocated

to 29 public agencies and local water districts. These agencies will need to renegotiate terms to ensure a continued water supply. Among these 29 agencies is the Metropolitan Water District of Southern California, of which the Inland Empire Utilities Agency (IEUA) is a member agency that receives SWP water. With the new contract expiring in about 10 years, it remains unclear how much water will be available to request annually under the new contract.

The Chino Basin Groundwater is managed by the Watermaster, appointed by the San Bernardino Flood Control to handle disputes over water rights. The Montclair Basins, part of the lower basins of a total of four basins in the region, will benefit from this project by allowing more water to be diverted to these lower basins during affluent water years and flood years, thereby increasing the amount of water being added to the basin further improving the benefits of the Project and preventing crisis during times of drought.

Additionally, the IEUA is mandated to send a specified amount of water downstream via the Santa Ana River to the Orange County Water District and to flow down to the ocean in accordance with a California Supreme Court decision. Should IEUA's water supply dwindle further, this mandate could potentially leave residents vulnerable to water shortages. Hence, the project will help mitigate these risks by ensuring a more stable and sustainable water supply for the region.

Lastly, the project is situated in a disadvantaged community, as identified by the White House Justice Screening Tool (CJST). This community has historically faced challenges related to water scarcity and environmental justice. The implementation of this project will not only improve the availability of water during times of drought but also enhance the overall water security for this vulnerable population. By ensuring a steady and reliable supply of water, the project aims to support the community's agricultural, industrial, recreational, and environmental needs. This steady supply will contribute to economic stability, health, and quality of life for residents. Furthermore, by addressing water scarcity in a disadvantaged area, the project will promote equity and resilience, ensuring that the community can thrive now and for generations to come.

E.1.3. Evaluation Criterion C. Planning and Preparedness (15 points)

Plan Description and Objective

When was the plan developed? How often is it updated?

The Recharge Mater Plan Update (RMPU) was developed in 2010 and it is updated every five years. The Montclair Basin Improvement Project is part of the 2013 Amendment to the 2010 Recharge Master Plan Update.

What is the purpose and objective of the plan?

The purpose and objective of the Recharge Master Plan Update (RMPU) is to document the investigation conducted under the direction of the Court and the Chino Basin Watermaster to amend the 2010 Recharge Master Plan Update. This plan was created in compliance with the requirements of the Peace II Agreement and the December 2007 Court Order, which mandated the implementation of the Peace II Agreement and the completion of the RMPU. The RMPU aimed to ensure a comprehensive strategy for water resource management within the Chino Basin, addressing the conditions set forth by the Court. The 2010 RMPU was not only a strategic document but also a condition subsequent to the December 2007 Court order, which required its

completion and submission to the Court by July 1, 2010. The Watermaster successfully completed and submitted the RMPU on time in June 2010, fulfilling its objective to support sustainable water management and legal compliance in the region.

What is the geographic scope of the plan?

The geographic scope of the Recharge Master Plan Update (RMPU) encompasses the Chino Basin, a vital groundwater basin located in southern California. This basin spans several jurisdictions, including portions of San Bernardino County, Riverside County, and Los Angeles County. The RMPU is specifically designed to address the water resource management needs within this region, ensuring sustainable water supply and compliance with legal mandates. The detailed planning efforts documented in the RMPU are focused on optimizing the recharge potential and overall management of the basin's water resources, reflecting its significance to the local communities and stakeholders who depend on its water supply for agricultural, municipal, and environmental purposes.

Explain how the applicable plan addresses drought.

The Recharge Master Plan Update (RMPU) comprehensively addresses drought through several key elements designed to enhance drought resilience and sustainable water resource management within the Chino Basin. The plan incorporates a robust system for monitoring drought conditions, utilizing real-time data collection and analysis to track water levels, precipitation patterns, and other critical indicators. This system allows for timely identification of emerging drought conditions and facilitates proactive management responses. Additionally, the RMPU includes drought projections that consider the impacts of climate change, offering forward-looking assessments that inform long-term planning and resource allocation.

Vulnerability assessments are a cornerstone of the RMPU, identifying areas and sectors within the Chino Basin that are most susceptible to drought impacts. These assessments guide the prioritization of drought mitigation projects, which are specifically outlined within the plan. These projects encompass a range of strategies, such as enhanced groundwater recharge, water recycling initiatives, and the development of additional storage facilities to bolster the region's drought resilience.

Drought response actions detailed in the RMPU include both immediate and long-term measures, ensuring that the basin can effectively manage water resources during periods of scarcity. The plan establishes an operational and administrative framework that outlines the roles and responsibilities of various stakeholders, ensuring coordinated and efficient implementation of drought response strategies. This framework includes predefined triggers and threshold levels for activating specific response actions, thereby ensuring that interventions are timely and effective. Overall, the RMPU's comprehensive approach to drought management reflects a commitment to safeguarding the Chino Basin's water resources against the challenges posed by prolonged dry periods and climate variability.

Plan Development Process

Who was involved in developing the plan? Identify specific entities or organizations and describe their involvement.

The development of the Recharge Master Plan Update (RMPU) was a collaborative effort involving several key entities and organizations. The Chino Basin Watermaster played a central role in coordinating the plan's development, ensuring compliance with the mandates of the Peace II Agreement and the December 2007 Court Order. Central to this process was Wildermuth Environmental, Inc., which was specifically tasked with creating the RMPU due to the directives issued by the court under the Peace Agreement. Their involvement was crucial in conducting detailed investigations and analyses required to update the RMPU. Additionally, the Inland Empire Utilities Agency (IEUA) provided critical support in terms of technical expertise and resource management strategies. Together, these entities worked in unison to address the multifaceted challenges of water resource management within the Chino Basin, producing a comprehensive and forward-looking plan that reflects the collective input and expertise of all stakeholders involved.

Was the plan was prepared with input from stakeholders with diverse interests? Describe the process used for interested stakeholders to provide input during the development of the plan.

The Recharge Master Plan Update (RMPU) was prepared with significant input from stakeholders with diverse interests. The collaborative process was designed to ensure that a wide array of perspectives were considered, thus enhancing the plan's comprehensiveness and effectiveness.

The process began with the establishment of a stakeholder advisory committee that included representatives from various sectors such as water, land, and agricultural, municipal, environmental, and recreational interests. This committee met regularly throughout the development of the RMPU to provide input and feedback on key components of the plan.

Public workshops and forums were also held to gather input from the broader community. These events were well-publicized and open to all interested parties, providing a platform for stakeholders to voice their concerns and suggestions. Additionally, targeted outreach efforts were made to engage underrepresented groups, ensuring that their unique perspectives were incorporated into the plan.

Input was gathered through various means including surveys, public comments, and direct consultations. All feedback was carefully reviewed and integrated into the RMPU, resulting in a plan that reflects the diverse needs and priorities of the Chino Basin's stakeholders.

If the plan was prepared by an entity other than the applicant describe whether and how the applicant was involved in the development of the plan or why they were not part of the planning process.

The Recharge Master Plan Update (RMPU) was developed by Wildermuth Environmental, Inc., a specialized environmental consulting firm. Although the Watermaster did not directly prepare the RMPU, their involvement was crucial throughout the development process. The Watermaster played a pivotal role in coordinating the efforts, ensuring that Wildermuth Environmental, Inc. adhered to the directives and requirements established by the Peace II Agreement and the December 2007 Court Order. This collaboration ensured that the RMPU was thoroughly vetted, accurate, and aligned with the legal and strategic objectives of the basin's water management framework.

Additionally, the Inland Empire Utilities Agency (IEUA) provided significant expertise and resources during the RMPU's development. IEUA's role included offering technical support and

management strategies crucial to addressing the multifaceted challenges of water resource management within the Chino Basin. IEUA's contribution ensured that the technical aspects of the plan were robust, practical, and geared towards sustainable water management.

The Watermaster's involvement also included providing critical oversight, facilitating stakeholder engagement, and contributing their extensive knowledge of the basin's water resources. This integrated approach ensured that the final RMPU was a robust and comprehensive document, reflecting the collective expertise and input of all parties involved.

Tribal Plans:

The RMPU does not incorporate any tribal plans as there is no tribal land in the Chino Basin region.

Plan Support for Project

Does the plan identify the proposed project by name and location as a potential mitigation or water management action?

The Recharge Master Plan Update (RMPU) explicitly identifies the proposed project by its name and location as a crucial water management action. The RMPU highlights how the project aligns with the overarching goals of sustainable water resource management within the Chino Basin. By being specifically named, the project is recognized as a vital component of the region's strategy to mitigate water scarcity and enhance groundwater recharge capabilities. This identification not only underscores the importance of the project but also positions it as a targeted measure to address identified challenges within the basin, ensuring its prioritization in the broader context of water management initiatives.

Explain how the proposed project was prioritized in the plan over other potential projects/measures.

The Montclair Basin project was prioritized in the Recharge Master Plan Update (RMPU) due to its strategic significance and the pressing need to address specific water management challenges within the Chino Basin. The selection process involved a comprehensive assessment of various potential projects, comparing their projected impacts, feasibility, and alignment with the overall objectives of sustainable water resource management. The Montclair Basin project stood out due to its potential to significantly enhance groundwater recharge capabilities, directly mitigating water scarcity issues that are critical for the region.

Additionally, the project was prioritized based on its technical and environmental soundness, as well as the degree of stakeholder support it garnered. The collaborative efforts of the Watermaster and IEUA highlighted the project's robust design and readiness for implementation, ensuring that it could deliver tangible benefits efficiently. The prioritization process also considered the project's ability to meet legal and strategic directives outlined by the Peace II Agreement and the December 2007 Court Order, ultimately affirming its status as a high-priority initiative within the RMPU.

If the proposed project is not specifically identified in the plan, does implementing the proposed project achieve a goal or need identified in the plan? Is the supported goal or need prioritized within the plan? If so, how is it prioritized?

The project is named the "Montclair Basins" within the RMPU and noted as part of the Chino Basin Facilities Improvement Plan (CBFIP), the original document planning this project. This explicit identification in the plan underscores its significance and ensures that it is a recognized and prioritized component of the region's water management strategy. (See Appendix)

E.1.4. Evaluation Criterion D. Readiness to Proceed and Project Implementation (15 points)

Describe the implementation plan of the proposed project.
The major tasks and milestones listed in the table below correlate with the tasks in the Project Description.

Task	Milestone/Activity	Planned Start Date	Planned Completion date	Status
1	Project Design			Completed
2	Environmental Compliance			
	CEQA			Completed
	NEPA	After Grant award date	10/7/2025	Not started
3	Permits			Completed
4	Construction Contracting/Bid and award	8/1/2025	10/15/2025	Not started
5	Construction	10/16/2025	10/16/2026	Not started
6	Data Collection	3/31/2027	3/31/2030	Not Started
7	Construction Administration	10/16/2025	10/16/2026	Not Started
8	Grant Administration & Reporting	In accordance with grant contract		Not started
	Post Construction	10/17/2026	3/31/2027	Not Started

Table 4 Major Tasks and Milestones

The following is the process that will occur or has occurred under the Montclair Basin Improvement Project:

Task 1: Project Design - The preliminary and final design phases are 100% complete

Task 2: Environmental Compliance - At the time of this application, this task is completed for CEQA. If awarded, IEUA will identify and prepare the relevant NEPA and historical preservation compliance documents for this Project and will provide the documents for USBR NEPA approval.

Task 3: Permits- At the time of this application, all permits have been issued and this task is completed.

Task 4: Construction Contracting/Bid and award - IEUA will proceed with construction work after the completion of NEPA. IEUA's project manager and contracting staff will administer the construction contract of this project. As a public agency, IEUA staff follows the public works construction contracting procedures. After approval by the IEUA Board of Directors, staff will advertise for bids and develop the bid package, including all the pertinent requirements and provisions for this project. After evaluation of all bid proposals submitted, IEUA staff will summarize bids and provide a recommendation to IEUA's Board of Directors that the construction contract be awarded to the lowest responsible/responsive bidder. IEUA's contracting staff will verify the selected contractor's bonds and insurance and issue a Notice-to-Proceed to the selected lowest bidder after approval by IEUA Board of Directors.

Task 5: Construction: Construction will consist of the following activities:

A. Mobilizations and Site Preparation - Clearing and Grubbing – To allow unimpeded basin grading and improvements the existing vegetation within a portion of the basins will need to be removed. Vegetation removal must take place prior to the bird nesting season, which typically ranges from approximately March 1st through September 15th of any given year.

To conduct the clearing and grubbing activities the basin will have to be dry. To avoid bird nesting season and flood control activities, clearing, and grubbing will likely be performed between September 15th and November 15th of a given year. The above-ground vegetation will be cleared, followed by removal of the vegetation's root systems. Removed vegetation will be trucked off-site and used as mulch where possible. It is anticipated that some mulch will be reused by IEUA for beneficial uses on its properties. The remaining mulch will be exported from the site and made available for public sale or given away.

B. Project Construction-

- Basin 2 and 3 Diversions Improvements – This construction will modify an existing concrete line channel to increase stormwater diversion from San Antonio Channel into Montclair Basin for groundwater recharge.
- Channel Modifications – Modify existing channels to allow for effective stormwater capture.
- Electrical and Controls – Additional electrical and controls will be installed to monitor and control the new diversion remotely and on-site.

Task 6: Data Collection- To demonstrate project performance, IEUA will use each basin's baseline performance data and compare them with post-project performance data. Currently, each site has monitoring sensors that collect basin water levels and calculate recharge performance rates. At the completion of the project the ongoing data will be compared with pre-project data to confirm performance. IEUA staff will prepare a detailed chart which will compare pre- and post-project conditions of each basin and provide detailed narratives on the project to ensure that the Project is meeting its design goals.

Task 7: Construction Administration - The construction administration activities will include the completion of construction tasks and compliance with regulatory and environmental regulations.

Environmental Mitigation Measures for CEQA Compliance – The following mitigation measures will be implemented during construction to remain in CEQA compliance.

- Implementing a fugitive dust control plan;
- Using equipment that meets more stringent exhaust emission criteria;
- Keeping equipment well-tuned;
- Minimizing equipment idling time;
- Clearing and grubbing outside of the bird nesting season;
- Fencing construction limits;
- Having a biological monitor present when required;
- Habitat compensation/mitigation if required;
- Implementation of a Stormwater Pollution Prevention Plan (SWPPP);
- Implementation of Water Quality Control Procedures;
- Fencing operations to prevent public access;
- Implementing fire prevention measures;
- Adhering to local noise ordinances; Limiting work hours as practicable and required.

Performance Testing and Demobilization - At the conclusion of construction, after successful start-up and testing of all new mechanical systems, all equipment will be demobilized from the site.

Task 8: Grant Administration Reporting - IEUA is required to report to the Grantor on a regular basis during the term of the grant. In addition to the preparing of the required reports, administration and reporting will include overseeing grant compliance, invoicing, preparing documentation of information that must be passed onto the contractors in the solicitation and contractor contract related to the grant, attendance at the contractor kick-off meeting to ensure contractor understands all grant requirements and State and Federal regulations that the contractor will have to meet. All staff time associated with this project can be charged directly to a specified account.

Additionally, to meet the requirements of Labor Code section 1771.5 and Davis Bacon, IEUA's labor compliance program for this project will be administered by a consultant. They will be required to certify invoices for any services applicable to the labor code.

Describe any permits or approvals that will be required (e.g., water rights, water quality, stormwater, other regulatory clearances).

All necessary permits have been obtained.

The following regulatory permits have been issued:

- Army Corps Section 408 US Army Corps of Engineers
- Army Corps Section 404 US Army Corps of Engineers
- California Department of Fish and Wildlife – Streambed Alteration Agreement

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

IEUA hired Carollo Engineers, Inc.to perform the design for the San Antonio channel flow diversion inlets. The design and plans and specifications are 100% complete.

Describe any land purchases that must occur before the project can be implemented, and the status of the purchase.

No land purchases must occur before the project can be implemented. Chino Basin Water Conservation District is the owner of the Montclair Basins and is in partnership with this project.

If the project is completely or partially located on Federal land or at a Federal facility?

This Project is not located on Federal land nor on a Federal facility.

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

No new policies or administrative actions are required to implement the project.

E.1.5. Evaluation Criterion E. Presidential and Department of the Interior Priorities (15 points)

Benefits for Disadvantaged Communities

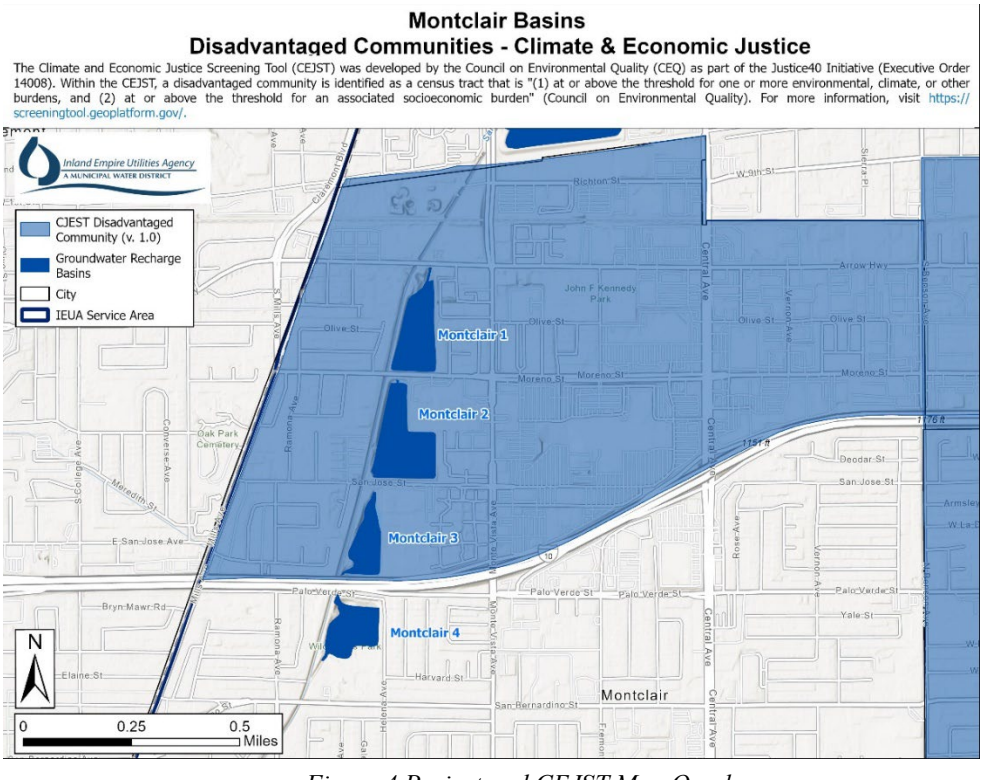

Figure 4 Project and CEJST Map Overlay

If applicable, describe how the proposed project will directly serve and/or benefit a disadvantaged community.

According to CEJST, the tract in which the proposed project is located is within a disadvantaged community (Tract no. 0607100201). This tract is identified as disadvantaged because the levels of inhalable particles, 2.5 micrometers or smaller, are in the 96th percentile, and the tract is in the

98th percentile for traffic proximity and volume. This area is also noted as being in the 90th percentile for linguistic isolation, as the majority of the households have no one over the age of 14 who speaks English. Lastly, this tract is highlighted by the fact that 20 percent of people aged 25 or older have an education level of less than a high school diploma. Additionally, the Montclair Basin Improvement Project provides groundwater for the residents of the city of Montclair via the Monte Vista Water District. According to CEJST, nearly 50 percent of Monte Vista Water District's service area is located within a disadvantaged community. These areas are noted for their low median income, lack of someone over the age of 14 speaking English, and education levels below a high school diploma.

The proposed project will benefit these disadvantaged communities around the Montclair Basins serviced by Monte Vista Water District by improving public health and safety, water quality, and water supply. By upgrading infrastructure, it will reduce water contaminants by removing pollutants from stormwater, preventing harmful substances from entering the groundwater. This ensures cleaner drinking water for residents. Additionally, it will mitigate health issues related to poor water quality and enhance water security by increasing groundwater availability for use during droughts.

If applying under Task D, utilize the CEJST's methodology and data information to describe the community's environmental, climate, socioeconomic, or other burdens.
Not applicable, this application is for Task A.

E.1.6. Evaluation Criterion F. Nexus to Reclamation (5 points)

Does the applicant have a water service, repayment, or O&M contract with Reclamation? If so, please provide the contract number(s).
IEUA does not have any water service, repayment, or O&M contract with Reclamation.

If the applicant is not a Reclamation contractor, does the applicant receive Reclamation water through a Reclamation contractor or by any other contractual means?
IEUA receives imported water from the Metropolitan Water District of Southern California who receives Reclamation water through a Reclamation contractor. However, IEUA currently only receives imported water from the State Water Project.

Will the proposed work benefit a Reclamation project area or activity?
This proposed project aims to improve water conservation, which may indirectly reduce the need for imported Reclamation water from the Metropolitan Water District. This reduction could potentially allow for the reallocation of water to other Reclamation project regions or activities, as determined by Metropolitan and Reclamation.

Is the applicant a Tribe?
IEUA is not a Tribe.

E.1.7. Evaluation Criterion G. Stakeholder Support for Proposed Project (5 Points)

The following stakeholders are in support of the project:

See Section D.2.2.11 Letters of Support

- Chino Basin Water Conservation District, which owns the Montclair Basins, is in support of the proposed project and has contributed the necessary funding to complete the spillway portion of the project.
- Chino Basin WaterMaster oversees the health and wellbeing of the basins and provides appropriate management of the basins, is in support of the project.
- Monte Vista Water District receives water from the Montclair Basins percolation efforts via the Chino Basin Ground water is in support of the project.
- Cucamonga Valley Water District, a customer agency of IEUA, is in support of the project.

See Section D2.2.14 Letters of Funding Commitment

- Metropolitan Water District of Southern California has provided financial contributions in the amount of $666,635 via grant funding for a portion of the cost-share for this project.
- The California State Water Resources Control Board is in support of the proposed project and has provided cost share funding for this project via the Clean Water Act State Revolving Funds Loan.
- The community of Montclair, the region, and San Bernardino County are also in support of the project. The spillway phase of the project was highlighted in the following articles.
    - Southern California spillway turns stormwater into drinking water | Stormwater Solutions
    - Public water agency in Montclair helps public conserve water and protects future water needs – Daily Bulletin

Performance Measures

To quantify the performance, monitoring will utilize the Supervisory Control and Data Acquisition (SCADA) system, an automation control system which remotely monitors and controls all groundwater basins. It will provide data on the volume of water entering each basin and the volume of water recharged into the groundwater system through water level sensors. The existing level sensors will be used for stormwater, imported water, and any dry-weather runoff. The volume of water is calculated from engineered and surveyed data information on the Basin contours. IEUA will:

1. Compare baseline performance data from Basins 1-4 with post-project performance data. Currently, each site has pressure transducers and data loggers in order to measure Basin water levels, which are used to estimate recharge volumes. At the completion of the Project, ongoing water level data will be compared with baseline data to measure performance. IEUA staff will prepare a detailed chart comparing pre- and post-project basin conditions and provide detailed narratives to ensure that the Project is meeting its design goals.
2. For the Basin 2 spillway repair and improvement project, a spreadsheet analysis was developed based on the available data to evaluate the operation of the Basins 1-4 historically, and with the proposed Basin 1 operations. The analysis estimates groundwater recharge in Basins 1-4 with inflow from available diversions from San Antonio Creek Channel and from local stormwater discharges. The basins operate as flow-through facilities during periods of recharge operations as water fills and spills from Basin 1 to Basin 2, etc. until all four basins are full, with each basin receiving local stormwater inflow from drainage areas adjacent to the Basin.

Inflows greater than the storage and recharge capacity discharge from Basin 4 to the San Antonio Creek Channel. Analysis of the historic operations of the Montclair Basins indicates that the average recharge provided by the Montclair Basins to the CGB is approximately 1,124 acre-feet per year. CBWCD and IEUA would compare actual performance with the historic analysis in order to project performance.

D.2.2.3. Budget Narrative

Project Budget

Budget Object Category	Total Cost	Federal Estimated Amount	Non Federal Estimated Amount
a. Personnel	**$163,190**		
b. Fringe Benefits	**$119,267**		
c. Travel	**$0**		
d. Equipment	**$0**		
e. Supplies	**$0**		
f. Contractual	**$25,000**		
g. Construction	**$2,324,015**		
h. Other Direct Costs	**$0**		
i. Total Direct Costs	**$2,631,472**		
i. Indirect Charges	**$73,411**		
Total Costs	**$2,704,882**	**$1,389,147**	**$1,315,736**
Cost Share Percentage		**51%**	**49%**

Table 5 Budget Summary

Non Federal Estimated Amount Cost Share Breakdown				
Cost Share provider (Third Party Contributor)	**Name of Program**	**Contract Agreement No.**	**Type of Award**	**Amount of Award**
Metropolitan Water District of Southern California	Stormwater Recharge Use Pilot Program	204147	Grant	**$666,635**
California State Water Resource Control Board	Clean Water State Revolving Fund	8415-110	Loan	**$2,062,000**

Table 6 Non-Federal Estimated Amount- Cost Share Breakdown

IEUA has secured the following agreements with non-federal funding contracts in place.

- Metropolitan Water District of California has awarded IEUA $666,635 in non-federal grant funds for Stormwater for Recharge Use Pilot Program, agreement number 204147. See D2.2.14 Letters of Funding Commitment

- California State Water Resources Control Board (SWRCB) has awarded IEUA Clean Water State Revolving Funds loan in the amount of $2,062,000 in non-federal funding, agreement number D2101013. If awarded, IEUA will lessen the amount of loan taken from the SWRCB in the amount of the awarded funds and use the remainder of the loan to cover remaining cost share costs. See D2.2.14 Letters of Funding Commitment

Budget Narrative

a. Personnel

Personnel			
Position Title	**Time (Hr.)**	**Rate (Hr.)**	**Total Cost**
Senior Engineer/Project Manager - Joel Ignacio	496	$89	$44,206
Principal Engineer	99.2	$94	**$9,283**
Grants and Government Affairs Officer	99.2	$85	**$8,420**
Assistant Engineer	198.4	$60	**$11,969**
Construction Project Inspector	992	$63	**$62,837**
Grants Accountant	198.4	$60	**$11,969**
Grants Analyst	198.4	$52	**$10,338**
Intern	198.4	$21	**$4,166**
Total			**$163,190**

Table 7 Personnel Budget

Current salaries for the identified key personnel, including names and titles for lead staff, have been calculated based on the estimated hours and rate of compensation required to fulfill the staffing needs for the proposed project. Within the budget narrative, we hereby certify that the labor rates included in the budget proposal represent the actual labor rates of the identified personnel/positions and are consistently applied to both Federal and non-Federal activities. Please note that the annual/hourly labor rate does not include fringe benefits but does include a 3% salary increase for Fiscal Year 2025 in accordance with the perspective Memorandums of Understanding.

Joel Ignacio, Senior Engineer/Project Manager, has administered the design and preparation of this project, utilizing consulting engineering firms or in-house staff. Joel will oversee tasks 4 through 8. He will continue to prepare cost estimates, establish the scope, schedule, and budget for design projects, and negotiate and manage consultant contracts. Joel will review drawings and specifications for compliance with Agency standards, interpret specifications and IEUA policies, and initiate or review change orders. He will prepare periodic project status reports and seal final plans.

Joel will also represent the Agency with consultants and contractors, prepare correspondence on technical engineering issues, and coordinate wastewater, water, and planning activities with other departments and outside agencies. He will revise design and construction standards to improve methods, procedures, and practices, make authoritative interpretations of applicable laws, regulations, policies, and design standards, and approve construction documents. Additionally, he will track, evaluate, and report on design project progress to division management, and monitor construction work in progress, including field investigations, to ensure compliance with approved plans, specifications, and standards. His hourly rate is $89, and he is expected to work 496 hours, resulting in a total compensation of $44,206.

The Principal Engineer will supervise and lead engineers and approve expenditures for tasks 4 through 8. He will review and recommend contracts for the project. Their hourly rate is $94, and they are expected to work 99.2 hours, resulting in a total compensation of $9,283.

The Grants & Government Affairs Officer will assist the project manager in the performance of all tasks related to grant administration and reporting (task 8). They will develop and maintain relationships with federal, state, and local grantors; act as a liaison with grantors and sub-grantees, such as member agencies or JPAs; oversee the cultivation, selection, and management of internal and external teams to bid for and implement grants on a regional basis; and assist project managers in synchronizing the timing of grant expenditures with grant reimbursements. Their salary is $8,420 for 99.2 hours of work at $85 an hour over the project period.

The Assistant Engineer, assists in tasks 4 through 7 by planning and developing engineering design projects; prepares requests for proposal from engineering consultants and assists in evaluating proposals; prepares engineering plans, specifica-tions, designs and project cost estimates for project; establishes progress schedules; reviews consultant or in-house designs/specifications for compliance with Agency standards; troubleshoots design problems; may assist with environmental reviews for projects. Monitors and provides design engineering support for capital construction work in progress; attends necessary construction meetings; conducts field investigations and site visits; prepares responses to RFIs and RFDs; participates in site acceptance testing. Their hourly rate is $60 and are expected to work 198.4 hours, resulting in total compensation of $11,969.

The Construction Project Inspector is responsible for ensuring that all construction activities comply with project specifications and standards. They will conduct regular site visits, monitor progress, address any issues that arise, and ensure that all work is performed safely and to the highest quality standards. Their hourly rate is $63, and they are expected to work 992 hours, resulting in total compensation of $62,837.

The Grants Accountant maintains and reconciles grant revenue and expenditures to the financial system and general ledger; prepares adjusting journal entries; prepares billings and invoices for reimbursement from local, state and federal grantor agencies; prepares journal entries to record grant credits and grant match charges; maintains detailed grants accounting documentation and records. Monitors the status of grant account balances; follows up with departments to ensure grant funds are expended in accordance with grant agreements. These activities are associated with task 8, grant administration and reporting. Their hourly rate is $60, and they are expected to work 198.4 hours, resulting in total compensation of $11,969.

The Grants Analyst offers technical assistance to project managers, contractors, and consultants concerning laws, regulations, and contractual obligations related to the grant including reporting and compliance requirements. These duties relate to task 8. Their hourly rate is $52, and they are expected to work 198.4 hours, resulting in total compensation of $10,338.

The Intern supports the Senior Engineer and Construction Project Manager on the project – track documents for reports, verify agreements for invoices, prepare maps and plans, work with grants on compliance requests. Their support correlates with tasks 4 through 8. Their hourly rate is $21, and they are expected to work 198.4 hours, resulting in a total compensation of $4,166. The Intern rate of $21 per hour is their current salary which does not accrue fringe benefits nor annual increase.

b. Fringe Benefits

Fringe Benefits			
Position Title	**Compensation**	**Quantity**	**Total Cost**
Joel Ignacio, Senior Engineer/Project Manager	75%	$44,206.14	$33,155
Principal Engineer	75%	$9,282.95	**$6,962**
Grants and Government Affairs Officer	75%	$8,420.44	**$6,315**
Assistant Engineer	75%	$11,969.14	**$8,977**
Construction Project Inspector	75%	$62,837.32	**$47,128**
Grant Accountant	75%	$11,969.14	**$8,977**
Grants Analyst	75%	$10,338.17	**$7,754**
Intern	0	$4,166.40	**$0**
Total			**$119,267**

Table 8 Fringe Benefits Budget

IEUA has an established 75% fringe rate which includes 22% for employee insurances (medical benefits, long term disability, worker's compensation, retiree health benefits, and life insurance); 29% for taxes and retirement (PERS-employer's share, FICA-employer's share, FICA-Medicare, and state unemployment); and 22% for paid leaves (vacation, supervisor/management leave, sick leave, bereavement leave, and holidays).

c. Travel

The proposed project does not require any travel costs: therefore, no travel expenses are included in the budget.

d. Equipment

The proposed project does not require any equipment purchased outside of the construction contract. Please see the construction section.

e. Supplies

The proposed project does not require any tangible property/supplies outside of the construction contract. Please see the construction section.

f. Contractual

Contractual				
Contractor Name	**Purpose and Contracting Method**	**Total Cost**	**Description of Costs**	**Basis of Cost**
Environmental Consultant, TBD	Providing support for meeting NEPA requirements	**$25,000**	Professional Services Cost	Quote from previous similar service
Total		**$25,000**		

Table 9 Contractual Budget

In support of meeting NEPA requirements, IEUA plans to hire an environmental consultant with a total budget of $25,000. This cost is based on professional service quotes from previous similar services. The consultant's role will include providing crucial environmental assessments and facilitating compliance with regulatory standards. The CEQA requirements have been completed.

g. Construction

Construction				
Contractor Name	**Description of Services**	**Total Cost**	**Description of Cost Estimate**	**Basis of Cost**
General Contractor	Construction contract to furnish and install all labor, material, equipment, and appurtenances to construct the project improvements at the Facility.	**$2,324,015**	See table below for estimate prepared by the Project's contract engineer as updated by IEUA for 2025 costs.	The estimate is based on a previous similar project. The procurement method will be a public bid.
Total		**$2,324,015**		

Table 10 Construction Budget

Construction Cost Estimate					
Bi #	**Description**	**QTY**	**UOM**	**Unit Cost**	**Total Cost**
1	Mobilization/General Conditions	1	LS	$94,587	**$94,587**
2	Water Control/Dewatering	1	LS	$80,238	**$80,238**
3	Allowance for Permitting	1	LS	$33,433	**$33,433**
4	Preparation & Implementation of Environmental Mitigation	1	LS	$26,746	**$26,746**
5	SWPPP Implementation	1	LS	$20,060	**$20,060**
6	Channel Bypass System	1	LS	$53,492	**$53,492**
7	Channel Demolition and Removal	130	CY	$1,337	**$173,849**
8	Fence Demolition and Removal	120	LF	$20	**$2,407**
9	Clearing and Grubbing	1	LS	$6,687	**$6,687**
10	Unclassified Fill	5500	CY	$5.35	**$29,421**
11	Drop Inlet Structures (Concrete, 2 Locations)	260	CY	$2,006	**$521,548**
12	Drop Inlet Grating	2	EA	$66,865	**$133,730**
13	Chain Link Fence (6-Foot High)	120	LF	$67	**$8,024**
14	Miscellaneous Metals	1	LS	$6,687	**$6,687**
15	48-Inch Sluice Gate	2	EA	$66,865	**$133,730**
16	48-Inch Sluice Gate Actuator	2	LS	$8,024	**$16,048**
17	48-Inch RCP (D-3000)	240	LF	$468	**$112,334**
18	Concrete Collar	4	EA	$2,006	**$8,024**
19	Concrete Slope Anchors	4	EA	$3,343	**$13,373**
20	Dissipator Structure	2	EA	$80,238	**$160,476**
21	Rip-Rap	320	TON	$53	**$17,117**
22	Electrical, Instrumentation, and Controls	1	LS	$334,326	**$334,326**
				Subtotal Direct Construction Costs	**$1,986,337**
	Construction Allowances (Markups, Prime OH&P, Insurance, Taxes)	1	LS	7%	**$139,044**
	Contingency		LS	10%	**$198,634**
				Total Construction Costs	**$2,324,015**

Table 11 Construction Cost Estimate Budget

IEUA will release an Invitation to Bid document to pre-qualified bidders to solicit for public bids. The contract will be awarded to the lowest responsive and responsible bidder.

Construction will include the following:

1. **Mobilization and Site Preparation**

   Clearing and Grubbing – To allow for unobstructed basin grading and enhancements, the current vegetation within a segment of the basin needs to be removed. This must be done prior to the bird nesting period, which generally spans from about March 1st to September 15th each year.

   The basin must be dry to perform clearing and grubbing activities. Clearing and grubbing will likely take place between September 15 and November 15 to avoid bird nesting season and flood control operations. Above-ground vegetation will first be cleared, followed by the removal of the root systems. The removed vegetation will be transported off-site and used as mulch where feasible.

   Vegetation will be processed into mulch wherever possible. It is expected that some of this mulch will be reused by IEUA for beneficial purposes on its properties. The surplus mulch will be taken off-site and either sold to the public or given away.

2. **Project Construction**
   A. **Basin Inlet Diversion Modifications** – In order to increase stormwater recharge, the existing basin inlet structure must be modified to allow the capture of increased stormwater available along Day Creek.
   B. **Gate Structure –** In order to improve basin performance, a gate structure will be constructed at the mid-level outlet in the basin to increase storage capacity.
   C. **Data Collection –** Basin inflow, outflow, and level measurements are required to accurately measure the Basin performance. Collection of this data will also be needed to make operational decisions to maximize performance and control flood risk. Level sensors will be installed in the Basin to monitor changes in Basin volume, and several flow meters will be installed in the Basin inlets and outlets to account for flow into, and out of, the Basin.
   D. **Grading –** Prior to operating the basin as a groundwater recharge facility, minor grading and embankment improvements will be required. These improvements will provide a clean basin bottom for maximum recharge potential and improved basin perimeter slopes for assured stability and serviceability.

3. **Performance Testing and Demobilization**

At the conclusion of construction, and after successful start-up and testing of all new mechanical systems, all equipment will be demobilized from the site. As new stormwater is delivered to the Basin, water levels, inflow, outflow and evaporation will be measured. Infiltration rates will be calculated from the collected data and compared to the project rates developed during the preliminary investigations

Environmental Compliance/Mitigation/Enhancement

The environmental mitigation measures for CEQA and NEPA compliance will include the following:

- Implementing a fugitive dust control plan;
- Using equipment that meets more stringent exhaust emission criteria;
- Keeping equipment well-tuned;
- Minimizing equipment idling time;
- Clearing and grubbing outside of the bird nesting season;
- Fencing construction limits;
- Having a biological monitor present when required;
- Habitat compensation/mitigation if required;
- Implementation of a Stormwater Pollution Prevention Plan;
- Implementation of Water Quality Control Procedures;
- Fencing operations to prevent public access;
- Implementing fire prevention measures;
- Adhering to local noise ordinances;
- Limiting work hours as practicable and required.

Construction Administration

As a public agency, IEUA staff must request approval from IEUA Board of Directors to issue a Request for Proposals for any construction management services for the diversion components. In addition, the project design consulting firm will likely provide engineering services during the construction phase. The construction administration activities will include the completion of construction tasks, and compliance with regulatory and environmental regulations.

h. Other Direct Costs

The proposed project does not require other Direct Costs, therefore, they are not included in the budget.

i. Indirect Costs

Indirect Costs					
Rate Type	**Current Federal NICRA**	**Base Description**	**Base Total**	**Rate**	**Total Cost**
Indirect Rate	Yes	See Appendix	$282,457	25.99%	$73,411
Estimated amount of indirect costs to be paid with Federal Funds					**$73,411**

Table 12 Indirect Costs Budget

IEUA has a negotiated indirect cost agreement dated February 14, 2022, with a provisional rate of 25.99%. A new agreement has not yet been negotiated. IEUA applies this rate to salaries only.

D.2.2.4. Environmental and Cultural Resources Compliance

H.1. Environmental and Cultural Resource Considerations

Will the proposed project impact the surrounding environment?

In 2017, IEUA had an environmental firm submit SIP/NEPA De Minimis Air Quality/Pollution Determination for the Project. The proposed project consists of excavating and constructing two diversion structures into a recharge basin at the Montclair basin in the City of Montclair. The project is expected to occur over a two-month period starting in Construction. The Project will require (2) Loader, (1) Excavator, and (1) Concrete Mix Truck. For analytical purposes, it is conservatively estimated that each piece of equipment is operating for 8 hours per day. Additionally, the project would result in the 125 cubic yards (225 square feet) of demolished waste and 450 cubic yards of exported material. From the study, the emissions for the time of 2018 will not exceed the NEPA threshold

Are you aware of any species listed or proposed to be listed as a Federal threatened or endangered species, or designated critical habitat in the project area?

Yes, there are several species listed as Federal threatened or endangered, and their critical habitats overlap with the CGB watershed. These species include the Santa Ana Sucker, California Gnatcatcher, Delhi Sands Flower-Loving Fly, Least Bell's Vireo, and two species of Kangaroo Rats. In addition, plant species such as Braunton's Milk Vetch, Thread-Leaved Brodiaea, and Nevin's Barberry are also endangered and present in the area. The droughts pose significant risks to these species and their habitats.

To mitigate the impacts, vegetation removal must occur before the bird nesting season, typically from March 1st to September 15th each year. The basin must be dry for clearing and grubbing activities, which are expected to take place between September 15th and November 15th. The process involves clearing above-ground vegetation and removing root systems. The removed vegetation will be transported off-site and used as mulch where possible. IEUA plans to reuse some mulch on its properties, while the rest will be made available for public sale or giveaway.

Are there wetlands or other surface waters inside the project boundaries that potentially fall under CWA jurisdiction as "Waters of the United States"?

No, there are no wetlands or other surface waters inside the project boundaries that potentially fall under the CWA jurisdiction as "Waters of the United States."

In 2020, a jurisdictional delineation (JD) letter report was prepared by Jacobs Engineering Group for the proposed channel flow diversion into Montclair Basins' 2 & 3. The purpose of the JD is to determine the extent of State and federal jurisdictional waters within the project area potentially subject to regulation by the U.S. Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act (CWA), Regional Water Quality Control Board (RWQCB) under Section 401 of the CWA and Porter Cologne Water Quality Control Act, and CDFW under Section 1602 of the California Fish and Game Code (FGC), respectively.

The 2020 JD letter stated the evaluation of the Project Area for the presence of riverine/riparian/wetland habitat and jurisdictional waters, i.e. Waters of the U.S. (WoUS), as regulated by the USACE and RWQCB, and/or jurisdictional streambed and associated riparian habitat as regulated by the CDFW. Per the 2020 JD, to be considered a jurisdictional wetland under the federal CWA, Section 404, an area must possess three (3) wetland characteristics: hydrophytic vegetation, hydric soils, and wetland

Per the 2020 JD, the basins and creek channel are considered a jurisdictional Waters of the United States (WoUS). The USACE has authority to permit the discharge of dredged or fill material in the WoUS under Section 404 of the CWA.

Areas meeting all three wetland parameters would be designated as USACE wetlands, if they are adjacent to jurisdictional WoUS, or otherwise determined to have a significant nexus to a TNW. The evaluation from the JD found no wetland vegetation within the proposed Basin 3.

From the evaluation there were several wetland vegetation species present, but the samples point did not meet the minimum criteria for the dominance test of the prevalence index for hydrophytic vegetation indicators. Therefore, due to the absence of hydrophytic vegetation within the Project Area, there are no wetland WoUS on Basin 3.

The conclusion from the 2020 JD is the following:

There are no wetland WoUS in Basin the project area.

San Antonio Creek Channel and Montclair Basins 2 and 3 are jurisdictional man-made flood-control and groundwater recharge features that are subject to the CWA and FGC under the jurisdictions of USACE, RWQCB, and CDFW, respectively. Therefore, the proposed permanent or temporary impacts to San Antonio Creek Channel and Montclair Basins 2 and 3 l require a Streambed Alteration Agreement from the CDFW, as well as CWA Sections 401/404 permits from the RWQCB and Corps, respectively.

When was the water delivery system constructed?

The San Antonio Creek Channel was lined with concrete as part of a flood control project by the Army Corps of Engineers. The construction of the San Antonio Dam, which controls water flow into the concrete-lined channel, started in 1953 and was completed in 1955.

Will the proposed project result in any modification of or effects to, individual features of an irrigation system (e.g., headgates, canals, or flumes)?

The proposed project will indeed result in modifications to individual features of the existing irrigation system. Specifically, alterations will be made to the headgates and canals that are part of the Montclair Basins delivery system. This system, originally constructed in the early 20th century, has undergone several upgrades over the decades to improve efficiency and capacity. The most significant modifications occurred in the 1980s when new automated headgates were installed, and the canals were lined with concrete to reduce water loss. The current project aims to further enhance these features by incorporating advanced control systems and modern materials, thereby ensuring more effective water management and reduced environmental impacts.

Are any buildings, structures, or features in the project area listed or eligible for listing on the National Register of Historic Places?

No, there are no buildings, structures, or features in the project area listed or eligible for listing on the National Register of Historic Places. The Cultural Resource study for the project confirms this.

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

No, the proposed project is to improve already built basins and there are no known archeological sites within the proposed project area. The Cultural Resource Survey confirms this.

Will the proposed project have an adverse and disproportionate effect on communities with environmental justice concerns (as discussed in E.O. 14096)?

The proposed Project is located within a disadvantaged community, as identified by the Climate and Economic Justice Screening Tool (CEJST). This tract faces significant environmental and social challenges, including high levels of particulate matter pollution and traffic proximity, linguistic isolation, and low educational attainment. The project aims to benefit these communities by improving public health, water quality, and water supply through infrastructure upgrades that will reduce water contaminants and prevent pollutants from entering the groundwater. Furthermore, by increasing groundwater availability, the project will enhance water security during droughts, offering substantial benefits to the residents served by the Monte Vista Water District. Therefore, rather than having an adverse and disproportionate effect, the proposed project is expected to positively impact these disadvantaged communities, aligning with the goals of environmental justice under E.O. 14096.

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

No, the proposed Project is not located on or near tribal lands and will not limit access to ceremonial use of Indian sacred sites. The Cultural Resource Survey confirms this.

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

The proposed project will not contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species in the area. Measures will be implemented to ensure that all equipment and materials used in the construction process are thoroughly cleaned and inspected to prevent the inadvertent transfer of invasive species. Additionally, ongoing monitoring and management practices will be established to detect and address any potential introduction of undesirable vegetation. These proactive steps are designed to protect the local ecosystem and maintain the integrity of the native plant communities.

H.1.1. National Environmental Policy Act

IEUA is ready to adhere to all NEPA requirements and will start construction only after the NEPA process is finished.

H.1.2. National Historic Preservation Act

IEUA has reviewed and agreed to undertake a Section 106 process should USBR deem it necessary. To the best of IEUA's knowledge, the proposed project does not involve any historical properties.

H.1.3. Endangered Species Act

IEUA acknowledges and understands that proceeding with the project may necessitate an ESA, as determined by USBR. IEUA agrees to adhere to all requirements stipulated in the ESA process.

D.2.2.5. Required Permits or Approvals

All necessary permits have been obtained.

The following regulatory permits have been issued:

- Army Corps Section 408 US Army Corps of Engineers
- Army Corps Section 404 US Army Corps of Engineers
- California Department of Fish and Wildlife – Streambed Alteration Agreement

D.2.2.6. Overlap or Duplication of Effort Statement

IEUA has secured grant funding in the amount of $666,635 from Metropolitan Water District of Southern California for Stormwater for Recharge Use Pilot Program, agreement number 204147. in non-federal funds.

California State Water Resources Control Board (SWRCB) has awarded IEUA Clean Water State Revolving Funds loan in the amount of $2,062,000 in non-federal funding, agreement number D2101013. If awarded this grant, IEUA will lessen the amount of loan taken from SWRCB in the amount of the awarded funds.

The project is not being submitted to any other federal funding requests. This application is the only Federal Funding request for the Montclair Basin Improvement Project.

D.2.2.7 Conflict of Interest Disclosure Statement

There is no actual or potential conflict of interest at the time of submission of this application.

D.2.2.8 Unform Audit Reporting Statement

IEUA submitted a Single Audit Report for the fiscal year ending June 30, 2023. The report is available on the Federal Audit Clearinghouse website, EIN 95-6004609.
IEUA is in the process of completing a Single Audit Report for the fiscal year ending June 30, 2024.

D.2.2.9 Certification Regarding Lobbying

IEUA completed and submitted the form on grants.gov.

D. 2.2.10 SF-LLL: Disclosure of Lobbying activities

Not applicable.

D.2.2.11 Letters of Support

Chino Basin
Water Conservation
District
Waterwise Community
Center

4594 San Bernardino St
Montclair, CA 91763
Ph. (909) 626-2711
Fax. (909) 626-5974
info@cbwcd.org
cbwcd.org

Board of Directors

Mark Ligtenberg
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Vice President: Division 1

Gil Aldaco
Treasurer: Division 5

Teri Layton
Division 2

Amanda Coker
Division 3

Hanif Gulmahamad
Division 6

Ryan Sonnenberg
Division 7

Elizabeth Willis
General Manager
Secretary to the Board

Lee McElhaney
District Counsel

September 20, 2024

U.S. Bureau of Reclamation
Financial Assistance Operations Section
Attn: NOFO Team
Denver Federal Center Bldg. 67, Rm. 152
6th Avenue and Kipling Street
Denver, CO 80225

Re: Notice of Funding Opportunity No. R25AS00013
WaterSMART: Drought Response Program: Drought Resiliency Project for FY 2025

To the Selection Committee:

Chino Basin Water Conservation District endorses the Inland Empire Utilities Agency's (IEUA) grant application to the U.S. Bureau of Reclamation for the WaterSMART: Drought Resiliency Project Grants for Fiscal Year 2025. If this grant is approved, it will finance the Montclair Basin Improvements project, which seeks to enhance stormwater recharge and bolster local drought resiliency. This initiative is crucial for efficient local sustainability planning, an endeavor that Chino Basin Water Conservation District wholeheartedly supports.

The project aims to increase the diversion and storage volume for groundwater recharge of stormwater, dry weather runoff, and imported water into the Chino Groundwater Basin (CGB). San Bernardino County is situated in a region susceptible to high temperatures and droughts. Predictions indicate that the area will likely face higher temperatures and numerous droughts in the future. Although estimates differ, climatologists suggest a potential mega-drought resulting from climate change effects. The region has already suffered from drought impacts such as drinking water restrictions, decreased surface water supplies, increased wildfire risks due to dry vegetation, environmental damage affecting both wildlife and vegetation, and economic harm induced by drought. Conserving storm and dry weather runoff through recharge has shown to be an effective method in mitigating the frequent drought impacts in California.

Chino Basin Water Conservation District respectfully requests USBR's support for this project, which will assist the region in storing more stormwater during wet years to save for dry years.

Sincerely,

Elizabeth Willis
General Manager
Chino Basin Water Conservation District

CHINO BASIN WATERMASTER

9641 San Bernardino Road, Rancho Cucamonga, CA 91730
Tel: 909.484.3888 www.cbwm.org

Todd M. Corbin
General Manager

TRANSMITTED VIA EMAIL

To: U.S. Bureau of Reclamation Financial Assistance Operations Section

Attn.: NOFO Team

Address: Denver Federal Center Bldg. 67, Rm. 152
6th Avenue and Kipling Street
Denver, CO 80225

Subject: Notice of Funding Opportunity No. R25AS00013
WaterSMART: Drought Response Program: Drought Resiliency Project for FY 2025

To the Selection Committee:

Chino Basin Watermaster is pleased to support the Inland Empire Utilities Agency (IEUA) in its submission of a grant application to the U.S. Bureau of Reclamation (USBR) in response to the Funding Opportunity Announcement No: R25AS00013 WaterSMART: Drought Resiliency Project Grants for Fiscal Year 2025. If awarded, the grant would allow IEUA to implement the Montclair Basin Improvements project.

Chino Basin Watermaster is particularly supportive of this project as it will further continue drought planning efforts through the implementation of a project that will increase the amount of storm water recharged at Montclair Basin to enhance local resiliency. The impact of such projects is critical for effective local sustainability planning for this region, which Chino Basin Watermaster supports as well.

Sincerely,

Todd M. Corbin
General Manager

cc: Shivaji Deshmukh, General Manager, Inland Empire Utilities Agency
Ashley Womack, Grants and Government Affairs Officer, Inland Empire Utilities Agency

Monte Vista
Dedicated to Quality, Service and Innovation
Justin Scott-Coe, PhD, CSDM
GENERAL MANAGER

September 25, 2024

U.S. Bureau of Reclamation
Financial Assistance Operations Section
Attn: NOFO Team
Denver Federal Center Bldg. 67, Rm. 152
6th Avenue and Kipling Street
Denver, CO 80225

Re: WaterSMART: Drought Response Program: Drought Resiliency Project for FY 2025

To the Selection Committee:

Monte Vista Water District (MVWD) supports the Inland Empire Utilities Agency's application to the U.S. Bureau of Reclamation for the WaterSMART: Drought Resiliency Project Grants for Fiscal Year 2025. If awarded, this grant will fund the Montclair Basin Improvements project, which aims to improve stormwater recharge and enhance local drought resilience. MVWD applauds this initiative which is vital for improving our regional water supply's resiliency and sustainability.

The project's goal is to expand the capacity for diverting and storing stormwater, dry weather runoff, and imported water for groundwater recharge in the Chino Groundwater Basin. Our region is prone to high temperatures and cyclical droughts. Recently, our region has faced drought-related challenges such as drinking water restrictions, reduced imported water supplies, and economic losses. Capturing stormwater and dry weather runoff through recharge has proven to be an effective strategy for mitigating drought impacts in California. This recharge also directly benefits MVWD by raising water levels for our backbone groundwater production wells.

MVWD respectfully requests USBR's support for this project, which will help the region store more stormwater during wet periods to use in dry periods.

Sincerely,

Justin Scott-Coe, General Manager

Water District
10575 Central Avenue, Post Office Box 71 • Montclair, CA 91763 • (909) 624-0035 • FAX (909) 624-4725 • www.mvwd.org

Sandra S. Rose, PRESIDENT
G. Michael Milhiser, VICE PRESIDENT
Tony Lopez, DIRECTOR / BOARD AUDITOR
Philip L. Erwin, DIRECTOR
Manny Martinez, DIRECTOR

Chino Basin
Water Conservation
District
Waterwise Community
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General Manager
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District Counsel

September 20, 2024

U.S. Bureau of Reclamation
Financial Assistance Operations Section
Attn: NOFO Team
Denver Federal Center Bldg. 67, Rm. 152
6th Avenue and Kipling Street
Denver, CO 80225

Re: Notice of Funding Opportunity No. R25AS00013
WaterSMART: Drought Response Program: Drought Resiliency Project for FY 2025

To the Selection Committee:

Chino Basin Water Conservation District endorses the Inland Empire Utilities Agency's (IEUA) grant application to the U.S. Bureau of Reclamation for the WaterSMART: Drought Resiliency Project Grants for Fiscal Year 2025. If this grant is approved, it will finance the Montclair Basin Improvements project, which seeks to enhance stormwater recharge and bolster local drought resiliency. This initiative is crucial for efficient local sustainability planning, an endeavor that Chino Basin Water Conservation District wholeheartedly supports.

The project aims to increase the diversion and storage volume for groundwater recharge of stormwater, dry weather runoff, and imported water into the Chino Groundwater Basin (CGB). San Bernardino County is situated in a region susceptible to high temperatures and droughts. Predictions indicate that the area will likely face higher temperatures and numerous droughts in the future. Although estimates differ, climatologists suggest a potential mega-drought resulting from climate change effects. The region has already suffered from drought impacts such as drinking water restrictions, decreased surface water supplies, increased wildfire risks due to dry vegetation, environmental damage affecting both wildlife and vegetation, and economic harm induced by drought. Conserving storm and dry weather runoff through recharge has shown to be an effective method in mitigating the frequent drought impacts in California.

Chino Basin Water Conservation District respectfully requests USBR's support for this project, which will assist the region in storing more stormwater during wet years to save for dry years.

Sincerely,

Elizabeth Willis
General Manager
Chino Basin Water Conservation District

D.2.2.13 Official Resolution

RESOLUTION NO. 2024-9-3

RESOLUTION OF THE BOARD OF DIRECTORS OF THE INLAND EMPIRE UTILITIES AGENCY*, SAN BERNARDINO COUNTY, CALIFORNIA, AUTHORIZING THE INLAND EMPIRE UTILITIES AGENCY TO ENTER INTO A FINANCIAL ASSISTANCE AGREEMENT UNDER THE WATERSMART DROUGHT RESPONSE PROGRAM: DROUGHT RESILIENCY PROJECTS FOR FY 2025 WITH THE U.S. DEPARTMENT OF INTERIOR, BUREAU OF RECLAMATION AND DESIGNATING A REPRESENTATIVE TO EXECUTE THE FINANCIAL ASSISTANCE AGREEMENT, AND ANY AMENDMENTS THERETO FOR THE RECHARGE MASTER PLAN UPDATE, MONTCLAIR BASIN IMPROVEMENT PROJECT

BE IT RESOLVED, that the Inland Empire Utilities Agency* (IEUA) is authorized to enter into a financial assistance agreement under the WaterSMART: Drought Response Program: Drought Resiliency Projects for Fiscal Year 2025 with the U.S. Department of Interior - Bureau of Reclamation (USBR) for the Recharge Master Plan Update (RMPU) Montclair Basin Improvement Project;

BE IT RESOLVED, that the General Manager has reviewed and supports the application for the Montclair Basin Improvement Project;

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

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

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

BE IT FURTHER RESOLVED, that IEUA's Board of Directors hereby adopts Resolution No. 2024-9-3 on this 18th day of September, 2024.

Jasmin A. Hall, Vice President of the Inland Empire Utilities Agency* and of the Board of Directors thereof

ATTEST:

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

Board of Directors thereof

* A Municipal Water District

The undersigned certifies that this is a true copy as on file in the permanent records of the Agency. This stamp must be in purple ink to constitute a certified copy.
Inland Empire Utilities Agency*
A Municipal Water Agency
By _____ Date September 18, 2024

STATE OF CALIFORNIA)
) SS
COUNTY OF SAN BERNARDINO)

I, Steven J. Elie, Secretary/Treasurer of the Inland Empire Utilities Agency*, DO HEREBY CERTIFY that the foregoing Resolution No. 2024-9-3 was adopted at a regular meeting on September 18, 2024 of said Agency* by the following vote:

AYES: Camacho, Elie, Hall

NOES: None

ABSTAIN: None

ABSENT: Hofer, Tule

Steven J. Elie
Secretary/Treasurer

(SEAL)

* A Municipal Water District

D2.2.14 Letters of Funding Commitment

Metropolitan Water District of California has awarded IEUA $666,635 in non-federal grant funds for Stormwater for Recharge Use Pilot Program, agreement number 204147. IEUA will be utilizing these funds as part of the cost share costs.

California State Water Resources Control Board (SWRCB) has awarded IEUA Clean Water State Revolving Funds loan in the amount of $2,062,000 in non-federal funding, agreement number D2101013. If awarded, IEUA will lessen the amount of loan taken from the SWRCB in the amount of the awarded funds and use the remainder of the loan to cover remaining cost share costs.

INLAND EMPIRE UTILITIES AGENCY

AND

CALIFORNIA STATE WATER RESOURCES CONTROL BOARD

INSTALLMENT SALE AGREEMENT

MONTCLAIR BASIN IMPROVEMENT PROJECT

PROJECT NO. C-06-8415-110

AGREEMENT NO. D2101013

PROJECT FUNDING AMOUNT: $2,062,000

ELIGIBLE START DATE: JULY 1, 2017
ELIGIBLE START WORK DATE: DECEMBER 3, 2021
START OF CONSTRUCTION DATE: DECEMBER 3, 2021
COMPLETION OF CONSTRUCTION DATE: FEBRUARY 22, 2023
FINAL DISBURSEMENT REQUEST DATE: AUGUST 22, 2023
FINAL REPAYMENT DATE: FEBRUARY 22, 2043
RECORDS RETENTION END DATE: FEBRUARY 22, 2059

DocuSign Envelope ID: A89CA3DD-FB89-4EFF-B7EB-79B6446B99D9

AGREEMENT
BETWEEN
METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA
AND
INLAND EMPIRE UTILITIES AGENCY
AND
CHINO BASIN WATER CONSERVATION DISTRICT

STORMWATER FOR RECHARGE USE PILOT PROGRAM – NEW CONSTRUCTION

AGREEMENT NUMBER

204147

Appendix

Planning Document

2013 Amendment to the
2010 Recharge Master Plan Update

Prepared for

Chino Basin Watermaster

Inland Empire Utilities Agency

Prepared by

Wildermuth Environmental, Inc.

September 2013

Recycled water recharge is not used to satisfy replenishment obligations. Instead, it is recharged into the basin and subsequently assigned to certain Appropriator parties' supplemental storage accounts, thereby potentially increasing the Appropriators' production rights and reducing their future replenishment liabilities. Watermaster assigns recharged recycled water to Appropriators based on the relative sewage contributions of the Appropriators to the IEUA.

4.1.4 Increase in Recharge from Operational and Minor Facility Improvements

As part of the review of the 2010 GWRMP Update, several additional operational and minor facility improvements were identified as potential opportunities to quickly enhance recharge within the Chino Basin. These enhancements are generally broken down into the following categories.

4.1.4.1 Internal Berms

- San Sevaine Basin – construction of internal berms within basin 5 would enable a larger portion of the basin floor to be wet, therefore increasing stormwater capture and recharge.

- College Heights Basins – the construction of internal berms (E-W) within basins will better spread recharge within the basin and is anticipated to reduce the potential of site seepage to the west.

4.1.4.2 Basin Rehabilitation

- Etiwanda Debris Basin – less than expected infiltration rates have been observed. Ripping of the basin and rebuilding of an internal berm would enhance capture and recharge.

4.1.4.3 Conveyance Improvements

- Jurupa Basin – the pump station at Jurupa Basin currently has only one pump that supplies a maximum delivery of 10 cfs of imported or stormwater to RP-3. The facility was constructed with an empty bay for a second pump. Installation of the second pump would enable the facility to capture all flows from the San Sevaine channel.

- Montclair Basins – as part of the CBFIP, it was originally planned to automate the inlet gate into Montclair Basin No. 1 as well as to construct an inlet from the San Antonio channel into Montclair Basin Nos. 2 or 3. These improvements would enable the Montclair Basin to make inlet adjustments remotely and ensure that diversion could remain in effect during maintenance activities.

Table 4-1
Storm and Supplemental Water Recharge Capacity Estimates

(acre-ft/yr)

Basin	IEUA Estimated Recharge Capacity[1]				2010 RMPU Recharge Capacity[2]		
	Storm	Imported	Recycled	Total	Storm	Supplemental[4]	Total
Brooks Street Basin	1,900	3,600	1,400	6,900	672	2,474	3,146
College Heights Basins	100	7,900	0	8,000	0	7,421	7,421
Montclair Basin 1 Montclair Basin 2 Montclair Basin 3 Montclair Basin 4	2,100	9,900	0	12,000	1,024	19,789	20,813
Seventh and Eighth Street Basins	1,600	2,600	1,100	5,300	1,223	2,474	3,697
Upland Basin	1,000	8,700	0	9,700	479	9,895	10,373
Subtotal Management Zone 1	***6,700***	***32,700***	***2,500***	***41,900***	***3,398***	***42,052***	***45,450***
Ely Basins	1,000	0	2,300	3,300	1,366	2,474	3,840
Etiwanda Spreading Area (Joint Use of Etiwanda Debris Basin)	1,700	7,900	2,400	12,000	883	3,463	4,346
Etiwanda Ponds[3]	1,100	5,300	1,600	8,000	0	0	0
Hickory Basin	900	4,200	1,300	6,400	213	2,061	2,274
Lower Day Basin	500	3,700	1,000	5,200	555	4,453	5,008
San Sevaine No. 1 San Sevaine No. 2 San Sevaine No. 3 San Sevaine Nos. 4 and 5	2,200	14,500	4,100	6,900	2,865	11,379	14,243
Turner Basins Nos. 1 and 2 Turner Basins Nos. 3 and 4[5]	2,700	5,100	1,900	6,900	1,485	1,484	2,970
Victoria Basin	1,000	4,700	1,400	7,100	561	2,968	3,530
Subtotal Management Zone 2	***11,100***	***45,400***	***16,000***	***72,500***	***7,928***	***28,282***	***36,210***
Banana Basin	800	3,400	1,000	5,200	445	2,061	2,506
Declez Basin	300	1,600	500	2,400	912	2,474	3,385
IEUA RP3 Ponds	1,700	7,900	2,400	12,000	444	8,245	8,689
Subtotal Management Zone 3	***2,800***	***12,900***	***3,900***	***19,600***	***1,801***	***12,780***	***14,581***
Total	**20,600**	**91,000**	**22,400**	**134,000**	**13,126**	**83,114**	**96,241**

[1] From IEUA draft report dated April __, 2012 sent to Watermaster by email

[2] 2010 Recharge Master Plan (WEI, 2010)

[3] The Etiwanda Ponds became unavailable after the IEUA recharge capacity estimates were prepared

[4] Supplemental water includes imported and recycled water.

[5] New recharge improvements are being constructed on the land on which Turner Basins Nos. 3 and 4 is located and the recharge capacity on this land will subsequently be increased.

Table 4-3
Chino Basin Total Recharge
FY 2005/06 through FY 2011/12

Chino Basin Groundwater Recharge Sites	Stormwater and Local Runoff	Metropolitan Water District	Recycled	Total
8th Street 1 & 2	7,871	1,122	4,507	13,500
Banana	1,844	1,001	4,320	7,165
Brooks	3,637	5,045	5,166	13,848
College Heights	944	10,074	-	11,018
Declez	4,820	-	65	4,885
Ely	10,986	968	2,976	14,930
Etiwanda Conservation	-	-	-	0
Etiwanda Debris Basin	2,116	4,367	-	6,483
Grove	2,074	-	-	2,074
Hickory	3,468	1,340	4,061	8,869
Lower Day	2,508	7,310	-	9,818
Montclair	7,087	35,583	-	42,670
RP3	6,999	2,607	4,974	14,580
San Sevaine	5,448	17,132	851	23,431
Turner 1/2 and 3/4	11,763	860	2,500	15,123
Upland	3,280	16,013	-	19,293
Victoria	2,341	352	927	3,620
Total Replenishment	**77,186**	**103,774**	**30,347**	**211,307**

Table 6-1
Recharge Improvements Recommended by the Chino Basin Recharge Master Plan Steering Committee For Evaluation in Task 8

Project Name	Facility Owner	Project Advocates[2]	Map Code	Estimated Increase in Recharge from Improvements (acre-ft/yr)			Proposed Improvements	
				Storm/Dry Weather	Imported	Recycled	Description of Improvements[1]	Expected Benefits
Management Zone 1								
15th Street Basin	City of Upland	IEUA	20	Unknown	Unknown	Unknown	I1 Investigate ways to improve storm and supplemental water recharge	1. Increase storm and supplemental water recharge
Upland Basin	City of Upland	City of Upland	22	na	na	Unknown	I1 Investigate the recharge of recycled water	1. Increase the recharge of recycled water; helps achieve the Peace II 6,500 acre-ft/yr recharge commitment to MZ1
		IEUA		Unknown	Unknown	na	C1 Construct a low-level drain or pump station to drain basin for maintenance	1. Increase recharge of storm and imported water
Montclair Basins	CBWCD	CBWCD	23	150 to 200	Unknown	na	C1 Clean and grub Basin 4, remove 5 feet of bottom materials from Basin 4, construct pump stations and pipelines to convey water from Basin 4 to Basins 2 and 3 and from Basin 3 to Basin 2	1. Increase storm water recharge
		IEUA		Unknown	Unknown	na	C2 Construct new inlets from San Antonio Creek to Basins 2 and 3	1. Increase storm water recharge
				Unknown	Unknown	na	C3 Automate inlet to Basin 1	1. Increase storm water recharge
				Unknown	Unknown	na	C4 Construct low-level drains from Basin 1 to 2 and 2 to 3	1. Increase recharge of storm and imported water
				na	na	na	I1 Investigate the recharge of recycled water	1. Increase the recharge of recycled water; helps achieve the Peace II 6,500 acre-ft/yr recharge commitment to MZ1
College Heights	CBWCD	IEUA	24	Unknown	Unknown	na	C1 Construct internal berms to reduce seepage to Upland Basin	1. Increase recharge of imported water
				na	na	unknown	I1 Investigate the recharge of recycled water	1. Increase the recharge of recycled water; helps achieve the Peace II 6,500 acre-ft/yr recharge commitment to MZ1
Brooks Basin	CBWCD	IEUA	25	Unknown	Unknown	Unknown	O1 Remove trees from below high-water line	
				Unknown	na	Unknown	I1 Investigate the rerouting of recycled water and street runoff to State Street storm drain	1. Increase storm and recycled water recharge
				Unknown	Unknown	Unknown	I2 Evaluate the installation of a low elevation pump station to drain basin for maintenance	1. Increase storm and storm and supplemental water recharge
North West Upland Basin	City of Upland	City of Upland	36	Unknown	Unknown	Unknown	C1 Construct a new stormwater management basin that will recharge water	1. Increase storm water recharge with unknown potential for supplemental water recharge.

Table 8-2c
Ranked Yield Enhancement Projects (Melded Unit Cost Under $612 acre-ft)

Project ID	Group[1]	Project	Yield	Recycled Water	Storm Water Recharge Unit Cost	Capital Cost	Total Annual Cost
Recommended MZ3 Projects							
18a	i	CSI Storm Water Basin	81	0	$ 388	$ 440,000	$ 31,612
23a	iv	2013 RMPU Proposed Wineville PS to Jurupa, Expanded Jurupa PS to RP3 Basin, and 2013 Proposed RP3 Improvements[2,3]	3,166	2,905	$ 500	$ 19,552,000	$ 1,582,914
25a	i	Sierra	64	0	$ 537	$ 490,000	$ 34,262
27	i	Declez Basin	241	0	$ 1,135	$ 4,070,000	$ 273,720
Total MZ3			**3,552**	**2,905**	**$ 541**	**$ 24,552,000**	**$ 1,922,509**
Recommended MZ2 Projects							
11	i	Victoria Basin[2, 4]	43	120	$ 151	$ 75,000	$ 6,484
7	ii	San Sevaine Basins[2, 5]	642	1,911	$ 217	$ 1,775,000	$ 139,256
12	ii	Lower Day Basin (2010 RMPU)	789	0	$ 242	$ 2,480,000	$ 190,482
14	i	Turner Basin	66	0	$ 916	$ 890,000	$ 60,338
15a	i	Ely Basin	221	0	$ 981	$ 3,200,000	$ 216,362
17a	i	Lower San Sevaine Basin (2010 RMPU)	1,221	0	$ 1,239	$ 22,550,000	$ 1,512,065
Total MZ2			**2,981**	**2,031**	**$ 713**	**$ 30,970,000**	**$ 2,124,987**
Recommended MZ1 Projects							
2	i	Montclair Basins	248	0	$ 415	$ 1,440,000	$ 102,876
Total MZ1			**248**	**0**	**$ 415**	**$ 1,440,000**	**$ 102,876**
Total Recommended Projects			**6,781**	**4,936**	**$ 612**	**$ 56,962,000**	**$ 4,150,372**
Other Projects							
19a	iii	Wineville Basin (2010 RMPU)	2,157	0	$ 184	$ 4,890,000	$ 397,924
20	iii	Jurupa Basin	421	0	$ 369	$ 2,150,000	$ 155,491
22a	ii, iii	RP3 Basin Improvements (2013 RMPU)	137	2,905	$ 915	$ 1,855,000	$ 125,787

Note - color shading within each MZ indicates mutually exclusive projects.

[1] The project group column was created to determine the total yield from different combinations of projects. The group was determined as follows: i- the project can be standalone; ii- the project is mutually exclusive; iii- the project can be standalone but is also included in a multi-project scenario; and iv- the project includes the "iii" group.

[2] At the July 18, 2013 Steering Committee Meeting, Ryan Shaw (IEUA) indicated that Project IDs 7, 11, and 22a are being recommended to be cost shared and the capital cost shown assumes a 50/50 split of the capital cost per Peace II Agreement Article VIII.

[3] Project ID 23a includes Project IDs 19a, 20, and 22a and associated conveyance facilities. The total capital cost represents an IEUA capital cost share for only Project ID 22a. The capital costs associated with Project IDs 19a and 20 and the associated conveyance facilities were not cost shared. The recycled water recharge shown represents the increase in Project ID 22a. The recycled water recharge associated with Project ID 19a was not included because the project was not recommended to be cost shared by IEUA. The total capital cost of Project ID 23a is about $21,300,000.

[4] The total capital cost for Project ID 11 is about $150,000.

[5] The total capital cost for Project ID 12 is about $3,550,000.

a - Project ID no.'s with an "a" extension indicate that the project includes excavation and haul-off costs, and the capital cost shown assumes that the project's excavation and haul-off costs are reduced by 90 percent with the excavated materials being used in another construction project.

Table D-3a
Cost Opinion for Montclair Basins -- PID 1

Item #	Description	Quantity	Unit	Unit Cost	Total Cost	Total Cost[1]
Direct Construction Costs						
1	Mobilization @ 5% Other Direct Construction Cost	1	LS	5%	$ 196,665	$ 196,665
2	Basin 4 Material Removal					
	Basin Excavation & Haul Offsite	32000	Cu. Yds.	$ 14	$ 448,387	$ 44,839
	Fine Grading	650	Cu. Yds.	$ 17	$ 10,929	$ 10,929
3	Pump Station and Pipeline (Basin 4 to Basin 2 and 3)					
	Basin Excavation & Haul Offsite	150	Cu. Yds.	$ 14	$ 2,102	$ 2,102
	Interior Berm Excavation	3,000	Cu. Yds.	$ 3	$ 10,089	$ 10,089
	Concrete Structure	150	Cu. Yds.	$ 1,345	$ 201,774	$ 201,774
	24" Diameter	50	Lin. Ft.	$ 330	$ 16,478	$ 16,478
	Sluice Gate	50	$/in-dia	$ 595	$ 29,750	$ 29,750
	Booster Pump Station	150	$ /HP	$ 5,000	$ 750,000	$ 750,000
	CMU Building	100	Sq. Ft.	$ 300	$ 30,000	$ 30,000
	Backfill and Compaction (Native)	600	Cu. Yds.	$ 6	$ 3,363	$ 3,363
	Compacted Embankment	1,650	Cu. Yds.	$ 7	$ 11,098	$ 11,098
	Coarse Drain Material	50	Ton	$ 26	$ 1,289	$ 1,289
	Basin Discharge Concrete Structure	20	Cu. Yds.	$ 1,345	$ 26,903	$ 26,903
	Electrical @ 25%	1	LS	$ 195,000.00	$ 195,000	$ 195,000
	Instrumentation and Controls @ 10% of Electrical	1	LS	$ 19,500	$ 19,500	$ 19,500
	24" Diameter	2,400	Lin. Ft.	$ 330	$ 790,955	$ 790,955
	Excavation	3,200	Cu. Yds.	$ 6	$ 17,935	$ 17,935
	Backfill and Compaction (Native)	2,000	Cu. Yds.	$ 6	$ 11,210	$ 11,210
	Import Pipe Bedding Material	700	Cu. Yds.	$ 15	$ 10,500	$ 10,500
	Surface Rehabilitation	12,000	Sq. Ft.	$ 25	$ 300,000	$ 300,000
4	Pump Station and Pipeline (Basin 3 to Basin 2)					
	Basin Excavation & Haul Offsite	150	Cu. Yds.	$ 14	$ 2,102	$ 2,102
	Interior Berm Excavation	2,800	Cu. Yds.	$ 3	$ 9,416	$ 9,416
	Concrete Structure	150	Cu. Yds.	$ 1,345	$ 201,774	$ 201,774
	24" Diameter	50	Lin. Ft.	$ 330	$ 16,478	$ 16,478
	Sluice Gate	50	$/in-dia	$ 595	$ 29,750	$ 29,750
	Booster Pump Station	75	$ /HP	$ 5,000	$ 375,000	$ 375,000
	CMU Building	200	Sq. Ft.	$ 300	$ 60,000	$ 60,000
	Backfill and Compaction (Native)	600	Cu. Yds.	$ 6	$ 3,363	$ 3,363
	Compacted Embankment	1,750	Cu. Yds.	$ 7	$ 11,770	$ 11,770
	Coarse Drain Material	50	Ton	$ 26	$ 1,289	$ 1,289
	Basin Discharge Concrete Structure	20	Cu. Yds.	$ 1,345	$ 26,903	$ 26,903
	Electrical @ 25%	1	LS	$ 108,750.00	$ 108,750	$ 108,750
	Instrumentation and Controls @ 10% of Electrical	1	LS	$ 10,875	$ 10,875	$ 10,875
	24" Diameter	400	Lin. Ft.	$ 330	$ 131,826	$ 131,826
	Excavation	500	Cu. Yds.	$ 6	$ 2,802	$ 2,802
	Backfill and Compaction (Native)	300	Cu. Yds.	$ 6	$ 1,681	$ 1,681
	Import Pipe Bedding Material	150	Cu. Yds.	$ 15	$ 2,250	$ 2,250
	Surface Rehabilitation	2,000	Sq. Ft.	$ 25	$ 50,000	$ 50,000
SubTotal Direct Construction Costs					**$ 4,130,000**	**$ 3,726,000**
	Contingency > $2 million@ 10%	1	LS	10%	$ 413,000	$ 413,000
	Construction Management > $2 million@ 10%	1	LS	10%	$ 413,000	$ 413,000
Total Construction Cost					**$ 4,956,000**	**$ 4,552,000**
	Engineering and Admin > $2 million@ 10%	1	LS	10%	$ 495,600	$ 495,600
Total Engineering and Administration					**$ 496,000**	**$ 496,000**
Total Estimated Project Cost					**$ 5,450,000**	**$ 5,050,000**
Annual Cost - 30 Years @ 5% Interest					**$ 354,500**	**$ 328,500**

[1] The capital cost shown assumes that the project's excavation costs would be reduced by 90%. The material excavated could be used for another construction site or leased to a mining operator.

Table D-3b
Cost Opinion for Montclair Basins -- PID 2

	Description	Quantity	Unit	Unit Cost	Total Cost
Direct Construction Costs					
Item #					
1	Mobilization @ 5% Other Direct Construction Cost	1	LS	5%	$ 45,846
2	Basin Inlet Structure to Basin 2 and 3				
	Channel Demolition	250	Cu. Yds.	$ 62	$ 15,413
	Basin Excavation & Haul Offsite	3,800	Cu. Yds.	$ 14	$ 53,246
	Concrete Structure	250	Cu. Yds.	$ 1,345	$ 336,290
	Concrete Channel & Weir	75	Cu. Yds.	$ 560	$ 42,036
	Compacted Embankment	2,000	Cu. Yds.	$ 7	$ 13,452
	Backfill and Compaction (Native)	1,600	Cu. Yds.	$ 6	$ 8,968
	Trench Shoring	300	Lin. Ft.	$ 50	$ 15,000
	Coarse Drain Material	1,200	Ton	$ 26	$ 30,939
	Sluice Gate	72	$/in-dia	$ 595	$ 42,840
	36" Dia. RCP	300	Lin. Ft.	$ 303	$ 90,798
	Import Pipe Bedding Material	200	Cu. Yds.	$ 15	$ 3,000
	Basin Discharge Concrete Structure	100	Cu. Yds.	$ 1,345	$ 134,516
	Basin Discharge Concrete Structure	20	Cu. Yds.	$ 1,345	$ 26,903
	Surface Rehabilitation	1,200	Sq. Ft.	$ 25	$ 30,000
	Electrical @ 25%	2	LS	$ 33,410	$ 66,819
	Instrumentation and Controls @ 10% of Electrical	2	LS	$ 3,341	$ 6,682
SubTotal Direct Construction Costs					**$ 963,000**
	Contingency $1 - $2 million @ 15%	1	LS	15%	$ 144,450
	Construction Management $1 - $2 million @ 15%	1	LS	15%	$ 144,450
Total Construction Cost					**$ 1,251,900**
	Engineering and Admin $1 - $2 million @ 15%	1	LS	15%	$ 187,785
Total Engineering and Administration					**$ 188,000**
Total Estimated Project Cost					**$ 1,440,000**
Annual Cost - 30 Years @ 5% Interest					**$ 93,700**

Table D-3c
Cost Opinion for Montclair Basins -- PID 4

	Description	Quantity	Unit	Unit Cost	Total Cost
Direct Construction Costs					
Item #					
1	Mobilization @ 5% Other Direct Construction Cost	1	LS	5%	$ 22,348.45
2	Basin Low Level Drain Outlet (Basin 1 to Basin 2)				
	Basin Excavation & Haul Offsite	100	Cu. Yds.	$ 14	$ 1,401
	Interior Berm Excavation	2,000	Cu. Yds.	$ 3	$ 6,726
	Concrete Structure	50	Cu. Yds.	$ 1,345	$ 67,258
	Sluice Gate	36	$/in-dia	$ 595	$ 21,420
	Backfill and Compaction (Native)	400	Cu. Yds.	$ 6	$ 2,242
	Compacted Embankment	1,250	Cu. Yds.	$ 7	$ 8,407
	Coarse Drain Material	50	Ton	$ 26	$ 1,289
	Basin Discharge Concrete Structure	10	Cu. Yds.	$ 1,345	$ 13,452
	36" Diameter	200	Lin. Ft.	$ 429	$ 85,866
	Excavation	400	Cu. Yds.	$ 6	$ 2,242
	Backfill and Compaction (Native)	300	Cu. Yds.	$ 6	$ 1,681
	Import Pipe Bedding Material	100	Cu. Yds.	$ 15	$ 1,500
	Surface Rehabilitation	400	Sq. Ft.	$ 25	$ 10,000
3	Basin Low Level Drain Outlet (Basin 2 to Basin 3)				
	Basin Excavation & Haul Offsite	100	Cu. Yds.	$ 14	$ 1,401
	Interior Berm Excavation	2,000	Cu. Yds.	$ 3	$ 6,726
	Concrete Structure	50	Cu. Yds.	$ 1,345	$ 67,258
	Sluice Gate	36	$/in-dia	$ 595	$ 21,420
	Backfill and Compaction (Native)	400	Cu. Yds.	$ 6	$ 2,242
	Compacted Embankment	1,250	Cu. Yds.	$ 7	$ 8,407
	Coarse Drain Material	50	Ton	$ 26	$ 1,289
	Basin Discharge Concrete Structure	10	Cu. Yds.	$ 1,345	$ 13,452
	36" Diameter	200	Lin. Ft.	$ 429	$ 85,866
	Excavation	400	Cu. Yds.	$ 6	$ 2,242
	Backfill and Compaction (Native)	300	Cu. Yds.	$ 6	$ 1,681
	Import Pipe Bedding Material	100	Cu. Yds.	$ 15	$ 1,500
	Surface Rehabilitation	400	Sq. Ft.	$ 25	$ 10,000
SubTotal Direct Construction Costs					**$ 469,000.00**
	Contingency < $1 million@ 20%	1	LS	20%	$ 93,800.00
Total Construction Cost					**$ 562,800.00**
	Engineering and Admin < $1 million@ 20%	1	LS	20%	$ 112,560.00
	Construction Management < $1 million@ 20%	1	LS	20%	$ 112,560.00
Total Engineering and Administration					**$ 225,000.00**
Total Estimated Project Cost					**$ 790,000.00**
Annual Cost - 30 Years @ 5% Interest					**$51,400.00**

Figure D-3a
Time Series Comparison of the Stormwater Recharge Estimates from the Calibrated Wasteload Allocation Model to the IEUA Estimated Capture Volume -- Montclair Basins

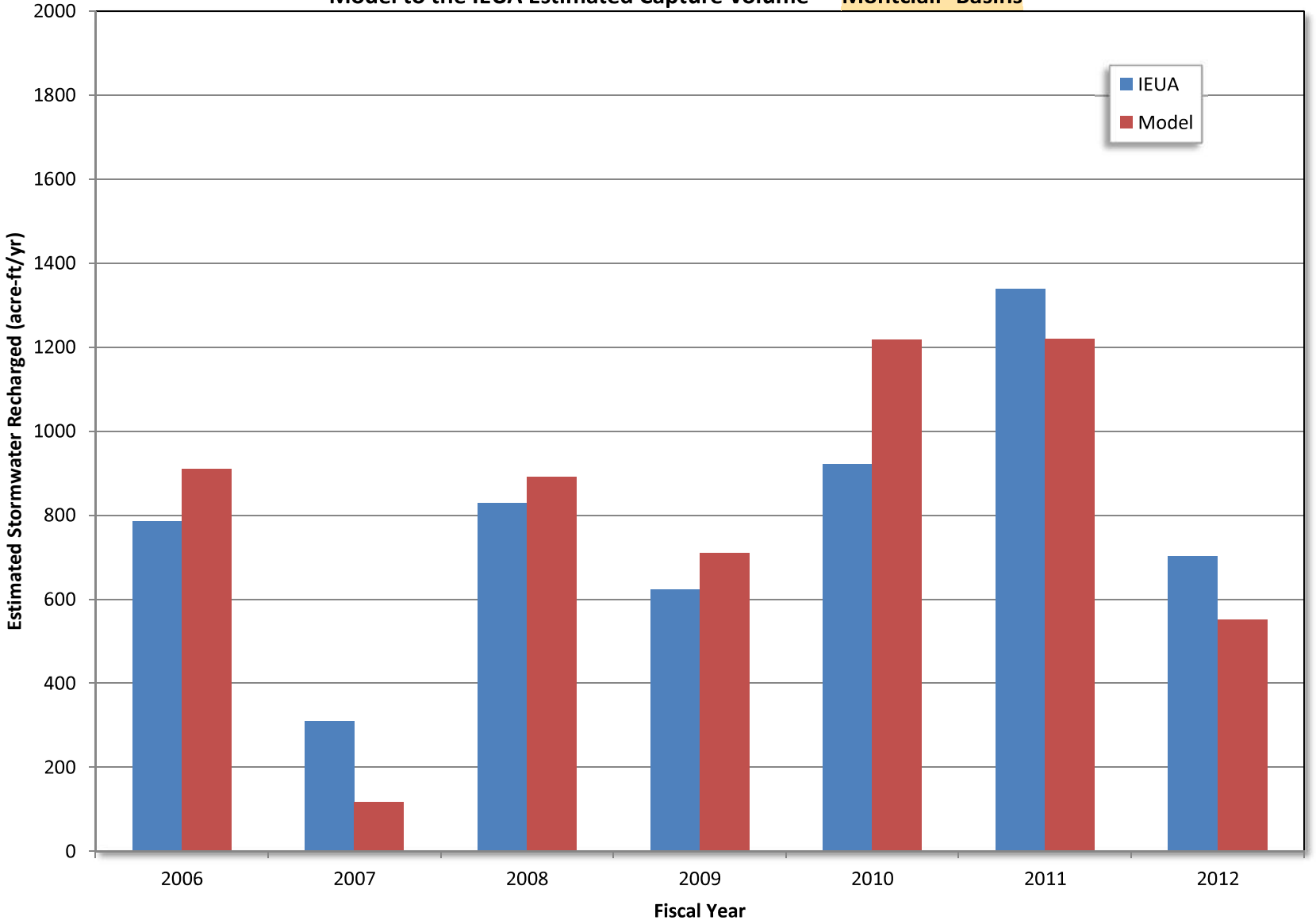
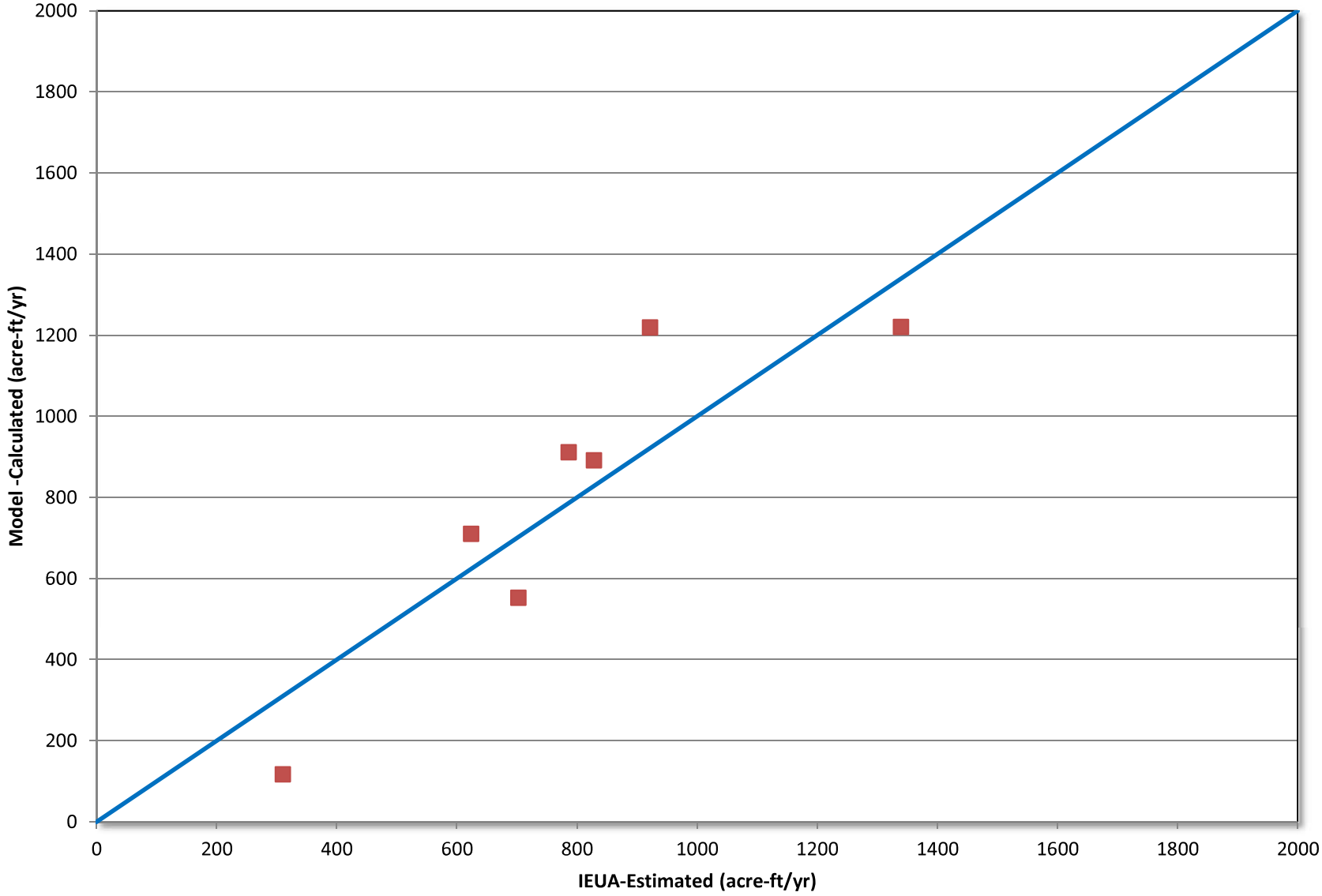


Figure D-3b
Scatter Plot Comparison of the Stormwater Recharge Estimates from the Calibrated Wasteload Allocation Model to the IEUA Estimated Capture Volume -- Montclair Basins



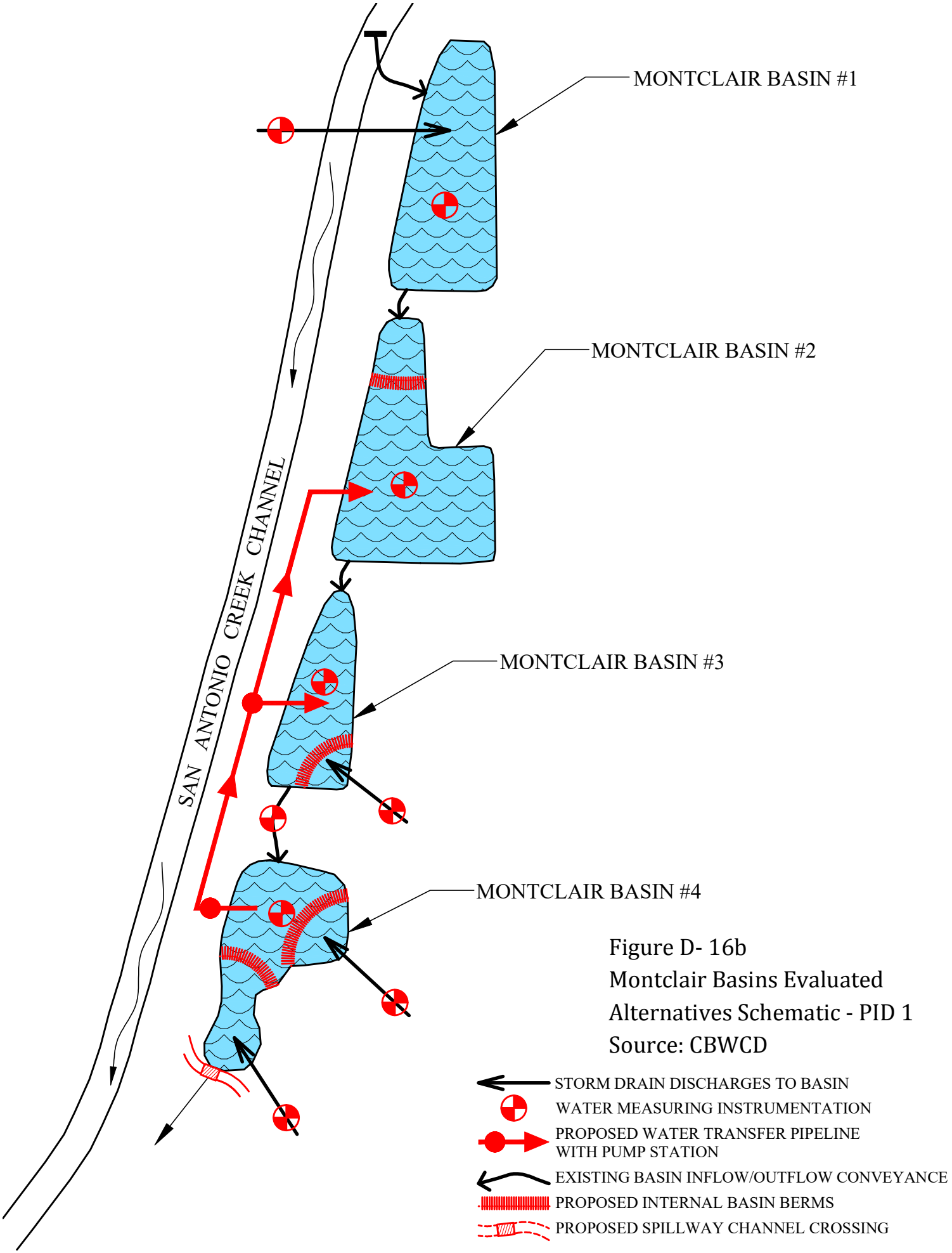


Figure D- 16b
Montclair Basins Evaluated Alternatives Schematic - PID 1
Source: CBWCD