WaterSMART: Development of Feasibility Studies under the Title XVI Water Reclamation and Reuse Program for Fiscal Year 2015

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Recycled Water Strategic and Master Plan

EASTERN MUNICIPAL WATER DISTRICT
SINCE 1950

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List of Abbreviations

AFY	acre-feet per year
AWT	Advanced Water Treatment
CDP	Criterium Decision Plus
CEQA	California Environmental Quality Act
CIP	Capital Improvement Plan
CRA	Colorado River Aqueduct
CVP	Central Valley Project
Delta	Sacramento-San Joaquin Delta
EMWD	Eastern Municipal Water District
IPR	Indirect Potable Reuse
IRP	Integrated Resource Plan
IRWMP	Integrated Regional Water Management Plan
MWD	Metropolitan Water District of Southern California
NEPA	National Environmental Policy Act
NPR	Nonpotable Reuse
O&M	Operations & Maintenance
SAWPA	Santa Ana Watershed Project Authority
SWP	State Water Project
TDS	Total Dissolved Solids

Technical Proposal and Evaluation Criteria

Executive Summary

Applicant

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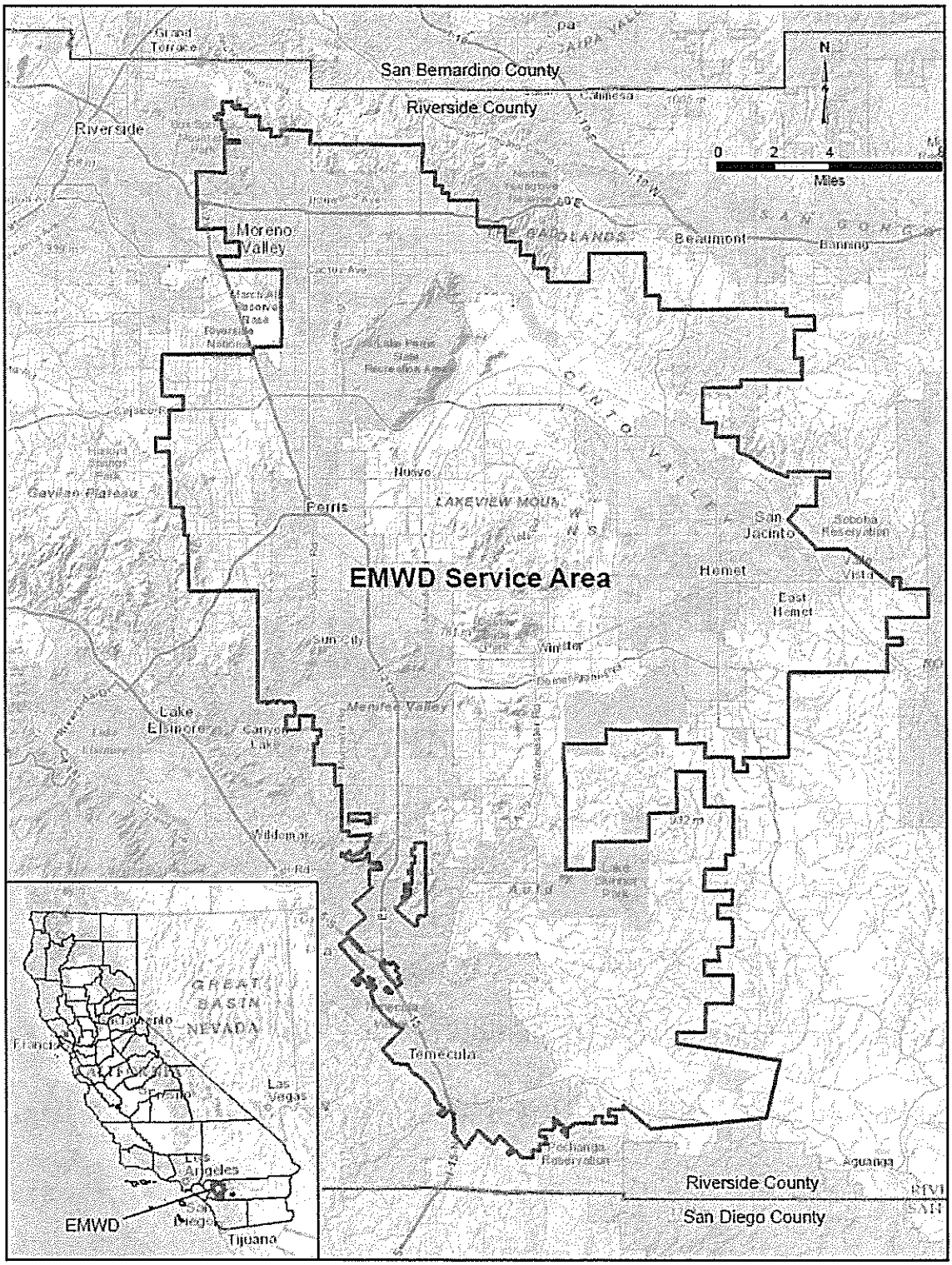
Recycled Water Strategic and Master Plan

Eastern Municipal Water District (EMWD) is one of California's largest water agencies, providing water, wastewater, and recycled water services to approximately 768,000 people in a 542-square mile service area located in Riverside County, as shown in Figure 1. EMWD has embarked on preparing a Recycled Water Strategic and Master Plan (Plan/feasibility study) that will develop, evaluate, and select the best set of recycled water projects that will help it meet its goals of achieving zero discharge, maximizing potable water offset, minimizing cost, and managing salinity. The Plan will be composed of two parts, the Strategic Plan and the Facilities Master Plan. These two components will be supported by hydraulic modeling and a series of technical workshops. For the Strategic Plan, four recycled water end use categories will be combined in different ways to create recycled water strategic alternatives. The four end use categories include: (1) indirect potable reuse (IPR), (2) nonpotable reuse (NPR) for municipal irrigation and industrial, (3) NPR for agriculture, environmental and restricted recreational use, and (4) recycled water wholesale. Once developed, the strategic alternatives will then be refined into facilities-based alternatives for the Facilities Master Plan. Under a separate WaterSMART Grant awarded in 2014 (Opportunity # R14AS00030; Agreement #R14AC00072), EMWD is working on the IPR Phase 1 and Phase 2 Studies that will identify IPR projects in the San Jacinto Valley and South Perris parts of the service area. The findings from those studies will be used in the Plan being developed under this new 2015 WaterSMART grant as part of the investigation of strategies and facilities for new recycled water uses. The ultimate product of the Plan will be the selection of the most optimal combination of recycled water projects across EMWD's service area. The Plan will improve the reliability of the water supply options available to EMWD, providing increased local supply sources that are less affected by climatic conditions and regulatory restrictions compared to their current imported water sources. The total estimated timeframe to complete the Plan is 12 months, with an anticipated completion date of March 2016.

Figure 1: EMWD Service Area Location



Technical Study Description

The technical study description should describe the work in detail. This description shall have sufficient detail to permit a comprehensive evaluation of the proposal. Proposals should address the requirements of a Title XVI feasibility study, as listed in Section 4.B of the Reclamation Manual Directives and Standards, *Title XVI Water Reclamation and Reuse Program Feasibility Study Review Process (WTR 11-01).*

Eastern Municipal Water District (EMWD) has embarked on several recycled water planning efforts to advance its strategic goals of achieving zero discharge, maximizing potable offset, minimizing cost, and managing salinity. The Recycled Water Strategic and Master Plan (feasibility study)[1] will build off of previous recycled water planning efforts and incorporate current studies to determine the best set of recycled water system improvements and projects to incorporate into EMWD's next Capital Improvement Plan (CIP). The feasibility study will develop and analyze various large-scale projects to expand and optimize EMWD's total available recycled water supply. The regional effort will be conducted in parallel with other planning efforts, including the update of EMWD's Integrated Resources Plan (IRP), the development of a Wastewater Collection Facilities Master Plan, the development of a Water Facilities Master Plan, the development of a Regional Water Reclamation Facilities Master Plan, and the completion of EMWD's Indirect Potable Reuse (IPR) Program Study (which was funded under the Title XVI WaterSMART Grant Program in 2014). Findings from these studies will be incorporated into the feasibility study and will ultimately feed into EMWD's CIP.

The feasibility study will be conducted in two parts: the Recycled Water Strategic Plan (Strategic Plan) and the Recycled Water Facilities Master Plan (Facilities Master Plan). These two documents will be supported by hydraulic modeling and a series of technical workshops. Analyses from the Strategic Plan will inform the Master Plan, and both will be used to assess the feasibility of the recycled water alternatives. The preferred alternative will help EMWD attain its objectives to reach and maintain zero discharge, maximize potable water offset and manage salinity. The components of the overall feasibility study are discussed in greater detail below.

Recycled Water Strategic and Master Plan

The following tasks describe the work to be performed for the Strategic Plan, Facilities Master Plan, Hydraulic Modeling, Technical Workshops, and Project Management. Collectively, these tasks comprise the Recycled Water Strategic and Master Plan.

Task 1 – Strategic Plan

Task 1 will consist of developing and evaluating program-level recycled water system alternatives for incorporation into EMWD's Recycled Water Strategic Plan. Work will consist of refining the recycled water strategic objectives using historical and current information and

[1] For simplicity and to avoid confusion, the remainder of this application write-up uses the abbreviation "feasibility study" to refer to the Recycled Water Strategic and Master Plan.

assessing the basic problems and needs of EMWD's recycled water system. Such problems include an existing system heavily influenced by agricultural customers and irrigation demand, which results in substantial variations in diurnal, seasonal, year-to-year, and geographic distribution of demands. They also include the operational issues that go along with these variations. The evaluation will involve investigating EMWD's current and projected supplies and demands, looking at current and projected wastewaters and disposal options, and examining plans for new wastewater facilities. Other work completed under this task will involve an evaluation of EMWD's current recycled water use policies.

Task 1 will develop and evaluate strategic alternatives for program-level facilities and consider the impacts of policy changes on the alternatives. High-level capital and O&M costs will be developed to assist with comparing the alternatives. A criteria-based decision matrix will be developed using Criterium Decision Plus (CDP) software to evaluate the various alternatives. Evaluation criteria and performance measures will include but not be limited to: sustainability, cost factors, potable water offset, environmental stewardship, operational complexity, reliability, competing use, and other potential factors. These evaluation criteria and performance measures will be developed in conjunction with EMWD staff as part of the first Workshop (Task 4).

The Strategic Plan will include discussion of the following topics:

- Considerations which may prevent implementing a recycled water project
- Methods or community incentives to stimulate recycled water demand or eliminate obstacles
- At least two alternative measures or technologies available for water reclamation, distribution, and reuse for the project under consideration
- Characterization of non-quantitative benefits (e.g., drought tolerant water supply, reduced water importation, and other social or environmental benefits).

All introductory and background information for the feasibility study including a statement of problem and needs, and water reclamation and reuse opportunities as required for a Title XVI Feasibility Study will be discussed in the final Strategic Plan document.

Task 2 – Facilities Master Plan

The Task 2 Facilities Master Plan will build off the alternatives developed for the Strategic Plan. Operational constraints and opportunities will be identified during the development of the Facilities Master Plan and assessed using the hydraulic model (Task 3). Task 2 will involve refining planning criteria and further validating the supply and demand projections based on the analysis performed in Task 1. An analysis of water storage requirements and supply augmentation requirements will be performed to determine the facilities required to manage seasonal/peak imbalances in EMWD's recycled water system through the planning horizon.

The Santa Ana Region Salt Management Plan will be used to evaluate the impacts of the recommended projects on water quality and salinity. Any potential water quality impacts and/or benefits discovered as a result of this preliminary analysis will be described and addressed for each alternative and discussed with EMWD staff during the second workshop (Task 4).

Additional analyses that will be conducted during the Facilities Master Plan development include an economic analysis to determine the estimated costs for the recommended projects, a project implementation schedule, and a statement on any additional research needs, and the extent that the proposed project will use proven technologies and conventional system components. The final Facilities Master Plan document will include a plan for funding the proposed water reclamation and reuse project's construction, operation, maintenance, and replacement costs, including an analysis of how EMWD will pay construction and annual operation, maintenance, and replacement costs.

Task 3 – Hydraulic Modeling
A hydraulic model will be used to evaluate system performance for the strategic and facilities alternatives. The model will include an evaluation of the existing recycled water system and an evaluation after a number of recommended improvements. Model Scenarios will be developed first as high-level concept scenarios for the Strategic Plan and then as more detailed scenarios for the Facilities Master Plan. The recommended improvements identified during the system analysis will then be summarized for each demand projection year.

Task 4 – Workshops
A series of four workshops will be held throughout the Project to discuss the project progress and findings and to receive input from the EMWD staff Technical Advisory Group. The workshops will be structured to identify key decisions and questions that need to be resolved. The purpose of Workshop 1 will be to assess the recycled water system demands and supplies, operational constraints and opportunities, strategic objectives, and evaluation criteria and performance measures. Workshop 2 will review the analysis of recycled water end use options, program-level facilities and costs, and funding and financing options. Workshop 3 will review all policy and funding recommendations, present a market/end use assessment, compare facilities alternatives and costs analysis, and discuss the Model Scenarios and System Hydraulics Network Analyses. The final workshop, Workshop 4, will present the refined facilities and policy recommendations.

Task 5 – Project Management
The Project Management task will include a kickoff meeting for the Project that will clarify the Strategic Plan goals and objectives and introduce operational issues and key assumptions. Additionally, there will be regular progress meetings and conference calls between the consultants and EMWD staff to discuss progress on Project development.

Task O1 – Optional Operations Meeting
This task covers a potential second Operations Special Meeting, if necessary, to increase understanding of how the existing recycled water distribution system is operated, potential issues with existing protocols, and ideas for solutions that have already been considered by EMWD Operations staff. The meeting will also be used to identify additional data gaps and to discuss additional potential improvements to current operations and policies.

Task O2 – WaterSMART Grant Supplemental Support
There may be requirements for the Title XVI Feasibility Study that are not completely addressed by Tasks 1 through 5. As needed, these requirements will be addressed under Optional Task 2. This task will ensure all required elements described in Section 4.B of the Reclamation Manual

Directives and Standards, *Title XVI Water Reclamation and Reuse Program Feasibility Study Review Process (WTR 11-01)* are included in the feasibility study.

These items may include a description of the non-Federal funding condition and a discussion of how the Title XVI project will reduce the need for EMWD to develop and fund additional water supplies such as surface water diversions, groundwater withdrawals, and Federal water supplies. Other work that may be performed under this task could involve an analysis of the potential environmental impacts and/or benefits of the selected alternatives, including impacts to endangered or threatened species, public health and safety, natural resources, cultural resources, historical resources, and regional water supply and water quality. This particular analysis would contain enough information to assess the potential measures and costs necessary to comply with the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). Optional Task 2 may also include a discussion of any water rights conflicts, legal and institutional requirements, multi-jurisdictional or interagency agreements, and permitting procedures and regulations associated with implementation of the preferred alternatives. Other items not directly addressed under Tasks 1 through 5 in the Recycled Water Strategic and Master Plan may be performed under Optional Task 2 as well. The budget provided for this task will be used as appropriate to provide a complete feasibility study under Title XVI.

Evaluation Criteria

Evaluation Criterion 1: Statement of Problems and Needs

10 points

Points will be awarded based on the presence of watershed-based water resource management problems and needs for which water reclamation and reuse may provide a solution. Describe in detail the water resource management problems and needs in the area and explain how water reclamation and reuse may address those problems and needs.

EMWD has substantial constraints on all existing water supply sources and is in great need of improved management for recycled water supplies. EMWD is one of California's largest water agencies, providing water, wastewater, and recycled water services to approximately 768,000 people in a 542-square mile service area located in Riverside County, approximately 75 miles east of Los Angeles. The service area spans two major watersheds: the Santa Ana River Watershed which includes the San Jacinto River Watershed, and the Santa Margarita River Watershed. EMWD is the fourth largest recycled water producer and fifth largest water district in California, serving retail customers located in the Cities of Moreno Valley, Perris, San Jacinto, Hemet, Temecula, Murrieta, and Menifee, as well as the unincorporated communities of Good Hope, Lakeview, Nuevo, Mead Valley, Murrieta Hot Springs, Valle Vista, and Winchester, as shown in Figure 1. Water demand within EMWD's service area is expected to increase by more than 75 percent in the next 25 years.

Approximately 15 percent of EMWD's current water supply comes from local groundwater sources (both potable and brackish groundwater), 25 percent from recycled water supply, and the remaining 60 percent includes both treated and raw imported water supplied by the Metropolitan Water District of Southern California (MWD). EMWD's supplies from MWD include water

from the Colorado River via the Colorado River Aqueduct (CRA) (a Federal water supply), and water from Northern California via the State Water Project (SWP) (a state water supply).

Imported water supplies are constrained. These supplies are subject to long-term reliability challenges associated with drought shortages, climate change, seismic events, environmental flow restrictions in the Sacramento-San Joaquin Delta (Delta), which is the area of pumping origin for the SWP, and salinity of Colorado River supplies. And there are competing uses of limited raw water conveyance capacity and uncertain reliability of imported water due to potential drought shortages, environmental flow constraints, and emergency outage conditions. Because of the significant investments being made by MWD to improve supply and system reliability, imported water costs are expected to increase significantly into the foreseeable future. These increased costs will be faced by EMWD.

Local groundwater supplies are also constrained. Local groundwater resources are protected under two management plans, the Groundwater Management Plan for the West San Jacinto Groundwater Basin, and the Hemet/San Jacinto Groundwater Management Area Water Management Plan. These plans were developed by EMWD (in collaboration with other agencies) because areas of the underlying groundwater basin have been subjected to decline from overuse. This is difficult to manage because EMWD does not have control over the amount of extractions by other local groundwater users, and there are constraints in place to maintain compliance with regulated water quality objectives. Overuse in the basins has led to issues with the local Soboba Band of Luiseño Indians with respect to tribal water rights and water management practices in the Hemet/San Jacinto Management Area. While an agreement with the local Soboba Band of Luiseño Indians and the Federal government has been developed to resolve these issues, ongoing water management in the basins is required to ensure the agreement is honored.

Climate change is expected to further impact EMWD's water resource management problems and needs. The Santa Ana Watershed Project Authority (SAWPA) Integrated Regional Water Management Plan (IRWMP), which includes EMWD's service area, completed a climate change assessment study with U.S. Bureau of Reclamation in 2011. This study projected a decrease in annual local surface runoff of approximately 10% by 2050 and 15% by 2070 due to increases in temperature, decreases in precipitation, and reductions in snowfall. Climate change is also expected to impact imported MWD water supplies, both from the SWP and CRA. SWP water availability is expected to decrease due to a projected 25-40% reduction in mountain snowpack, leading to more frequent water shortages during drought periods. Warmer temperatures could also lead to higher demands and decreasing carryover storage year to year. The SAWPA IRWMP states that alternative supply options, including recycled water, may need to be relied upon in order to meet the continually growing demands in the region.

EMWD is committed to the expansion and optimization of the use of recycled water, which will provide an alternative water supply for the area, contribute to reducing local overdraft, increase the sustainability and reliability of management zones, and maximize the reasonable and beneficial use of all waters available to the region.

EMWD has been developing its recycled water system since 1991 as part of the strategy for solving water resource issues in the region. In recent years, EMWD developed its 2009 Recycled

Water Strategic Plan to explore options to achieve zero discharge, maximize potable offset, minimize cost, and manage salinity. This plan was quickly followed in 2010 by the Recycled Water Facilities Master Plan and the Recycled Water Facilities Operations Plan, which detailed the required facilities and operational considerations to implement the 2009 Strategic Plan. The 2011 Recycled Water Facilities Plan was developed to identify viable retrofit opportunities; and the 2012 Demand Management Plan was prepared to manage demand with available supplies by prioritizing different customers. In 2014, the Draft Developer Candidacy Condition Refinement Study was prepared to reassess conditioning practices for expanding common area landscape demand in a cost effective and sustainable manner; and the IPR Phase 1 Study was drafted to explore groundwater recharge opportunities with recycled water in the San Jacinto Valley. The District is currently evaluating IPR alternatives in the South Perris area and will then define the preferred IPR program for the entire service area.

In addition, the District is currently updating the IRP, which was originally completed in 2011 to set a methodology for implementing various supply sources. The District also drafted a Local Water Banking Feasibility Study for the San Jacinto Valley to augment local supplies under drought conditions and is currently developing the San Jacinto Valley Water Supply Evaluation to define near-term and long-term supply investment opportunities in the area. Finally, the Sewer Master Plan and Potable Water Facilities Master Plan are scheduled to begin in parallel with this Plan. All of these documents will need to be consistent as they feed information into the next Capital Improvement Plan, anticipated in early 2016. Now, EMWD is taking the next steps toward optimization and maximizing reuse with the Recycled Water Strategic and Master Plan.

Specifically, the feasibility study will address the following issues related to the recycled water system to optimize and integrate existing customers with new customers and IPR:

- Conservation impacts on recycled water supplies – conservation and lower growth has reduced available and projected supply
- Difference between available supplies and committed/potential demands – in general, committed and potential demands exceed anticipated supply on an annual basis; this will be validated in the Plan
- Significant variations in timing and location of committed/potential demands – conventional demands vary significantly year to year in the amount used, geographical location, and seasonality due to weather, market conditions, crop type, and available land
- Seasonality and peaking of new demands that impact the need for infrastructure – as annual demands increase, the composite seasonality, diurnal peaking, and geographic location of conventional demands significantly impacts infrastructure requirements, including additional seasonal storage, service level tanks, and augmentation supply development
- Consideration of operations and maintenance (O&M) implications for all strategic decisions – existing facilities can be operated more efficiently, in some cases, to achieve a zero-discharge outcome; these implications will be considered for future expansions as well
- Additional seasonal storage that may be needed to achieve zero discharge
- Cost recovery gap for infrastructure – pricing structures need to be revisited as part of the alternatives analysis to address funding solutions for system improvement and expansion

- Mandatory use ordinance and map conditioning that need to be revisited – past practices of map conditioning have allowed EMWD to be highly successful in expanding recycled water use; however, evolving conditions indicate the need to revisit the mandatory use ordinance

Evaluation Criterion 2: Water Reclamation and Reuse Opportunities

15 points

Points will be awarded based on the extent to which the proposal demonstrates that the feasibility study will explore opportunities for water reclamation and reuse in the study area.

1) **Describe how the feasibility study will investigate potential uses for reclaimed water (e.g., environmental restoration, fish and wildlife, groundwater recharge, municipal, domestic, industrial, agricultural, power generation, and recreation).**

Recycled water is extensively used in EMWD's service area to meet non-potable demands. EMWD has sold up to 38,000 AFY of recycled water to retail and wholesale customers for municipal, environmental, restricted recreational and agricultural purposes. Municipal customers use recycled water for landscape irrigation and industrial process water. Environmental customers (the California Department of Fish and Wildlife) use recycled water to support wetland restoration efforts in the San Jacinto Wildlife Area. Restricted recreational customers use water for duck ponds. Agricultural customers use recycled water for irrigation of crops. A portion of the recycled water supplied to agricultural is provided in-lieu of groundwater.

This feasibility study will investigate strategies to optimize recycled water service to existing municipal, industrial, environmental, and agricultural customers and select a preferred strategy that will allow expansion to new customers while also integrating IPR. Potential new uses for recycled water will include municipal, industrial, restricted recreational, agricultural, in-lieu, wholesale to partner agencies, and IPR; and they will take into account the variations in demand patterns, geographical locations, and seasonality of demands. For agricultural uses, weather, market conditions, crop types, and available land will be considered. Once a preferred strategy for expansion is identified, the feasibility study will also investigate the facilities needed to optimally serve existing and future customers, including facilities needed to operate as a zero-discharge system.

IPR projects are currently being evaluated separately under the IPR Phase 1 and 2 Studies and these findings will be validated and built upon in the feasibility study. The process of analyzing both strategic and facilities alternatives in this feasibility study will be supported by detailed hydraulic modeling of the recycled water system, a Criterium Decision Plus decision tool, and a series of technical and policy workshops with EMWD to arrive at the most favorable solution to move forward.

2) **Describe the potential water market available to use any recycled water that might be produced upon completion of a water reuse project, as well as methods to**

stimulate recycled water demand and methods to eliminate obstacles for use of reclaimed water.

Historically, the majority of EMWD's recycled water sales have been to agricultural interests throughout the service area, with the balance used for landscaping, environmental (California Department of Fish and Wildlife) and restricted recreational purposes, construction, and wholesale deliveries. Based on increased developer activity in the early 2000s, EMWD adopted a Mandatory Use Policy that established the right to require potential customers to use recycled water in place of potable water, where feasible. This Mandatory Use Policy has significantly increased developer requests for landscape service while many other requests for recycled water supply from both potential internal and external customers were also being received. EMWD then developed the 2009 Recycled Water Strategic Plan and 2010 Recycled Water Facilities Master Plan to optimize the beneficial use of recycled water. These documents identified a number of new customer demands and recommended IPR projects as part of an overall strategy to achieve zero discharge, offset potable water use, minimize cost, and optimize salt balance. Total projected demands for recycled water have gradually grown to exceed available supplies, resulting in the need to develop an updated plan to optimize customer selection, system operations, and facilities such that EMWD can continue to achieve these objectives. This feasibility study will identify the optimal portfolio of existing and new customer types, make recommendations on system operation improvements, and establish a facilities master plan for implementation.

EMWD will continue to use its Mandatory Use Policy and Developer Conditioning procedures to stimulate recycled water for landscape use in its service area, though policy revisions may be recommended as part of this feasibility study. EMWD will also examine financing options, including rate structures, as a part of the strategic alternatives analysis in this feasibility study. Rate structures may also be used as a stimulus for recycled water use.

In terms of removing obstacles to recycled water use, the IPR projects that will make up a portion of the future portfolio will provide recycled water for groundwater replenishment in the service area. This subsequently makes that water available for potable use through its potable retail water supply system (significantly more versatile than conventional NPR "purple pipe" systems). In 2014, EMWD provided nearly 88,863 AFY of potable retail deliveries, and that demand is anticipated to increase to over 162,000 AFY by 2035. In addition, the system operation improvements that will be recommended by this feasibility study will result in removing certain logistic obstacles to recycled water use, such as not having sufficient recycled water available at specific times of year or in specific parts of the distribution system.

3) **Describe the sources of water that will be investigated for potential reclamation, including impaired surface water and groundwater.**

EMWD's regional recycled water system includes four Regional Water Reclamation Facilities, storage ponds, pump stations, and an extensive transmission and distribution system that currently produces and delivers approximately 45 million gallons per day of tertiary recycled water to customers in EMWD's service area.

EMWD plans to use tertiary treated recycled wastewater (Title 22 standards) as the main source of reclaimed water investigated under the feasibility study. Additionally, EMWD may consider utilizing advanced water treatment if reduced total dissolved solids (TDS) and nitrate levels are necessary for IPR.

Table 1 presents the projected recycled water supply, demand, and surplus in five year increments from 2015 through 2035. EMWD's regional recycled water supply is greater than the current and projected Title 22 recycled water demand. This excess supply will be met by growing and new demands.

Table 1: Recycled Water Availability

	Projections (AFY)				
	2015	2020	2025	2030	2035
Recycled Water Supply	51,500	60,800	69,400	77,200	84,300
Title 22 Demand	50,400	56,200	58,200	59,900	61,300
Allocated for IPR	0	5,000	5,000	15,000	15,000
Potentially Available Recycled Water	**1,100**	**0**	**6,200**	**2,300**	**8,000**

Currently, unutilized recycled water supply is discharged to storage ponds when demands are low. Whenever EMWD's recycled water storage ponds exceed their capacity, which does occur because of operational inefficiencies and demand variations, recycled water is discharged to Temescal Creek. Typically, these discharges occur intermittently during the wet season when recycled water demand is at its lowest level. However, these discharges are projected to occur more frequently in the future if new customers/end uses are not developed and the system operations are not optimized. Under these conditions, EMWD's recycled water supplies will continue to exceed demands.

Evaluation Criterion 3: Description of Potential Alternatives

15 points

Points will be awarded based on the extent to which the proposal demonstrates that the feasibility study will develop descriptions of water supply alternatives, including a proposed water reuse project and other water supply alternatives.

1) **Describe the objectives that all alternatives will be designed to meet. What other water supply alternatives will be investigated as part of the feasibility study?**

Strategic objectives for the feasibility study will be developed as part of Task 1 (see above). The objectives will likely be based on (and build upon) previous recycled water strategic and master planning objectives as described below:

- Achieve Zero Discharge
- Maximize Potable Water Offset
- Minimize Cost
- Optimize Salt Balance

This feasibility study will also likely integrate objectives from EMWD's Integrated Resources Plan IRP, which was developed to establish a long-term water resources strategy. The seven primary objectives identified for the Integrated Resources Plan were:

- Provide a reliable water supply;
- Maximize local resources;
- Develop a sustainable water supply;
- Maximize water use efficiency;
- Accomplish financial stability;
- Maximize implementation potential; and
- Implement projects that improve the environment and the salinity conditions.

Objectives specific to the Recycled Water Strategic and Master Plan will be developed based on guidance and input from EMWD management and staff during the first workshop under Tasks 1 and 4 of the Plan scope of work. These objectives will be refined as needed at an initial meeting with EMWD staff. All alternatives will be developed to reflect the updated objectives.

Recycled water alternatives will be compared against other water supply alternatives such as importing additional water from MWD to meet growing demands and water transfers from other agencies. EMWD has also considered constructing an additional desalter to meet salinity management requirements in the Hemet/San Jacinto Water Management Plan Area if needed to support recycled water use with the IPR project.

2) **Provide a general description of the proposed project that will be the subject of a feasibility study.**

EMWD will be developing this feasibility study to support CIP development (i.e., implementation of projects). The scope of work tasks for the Plan include an assessment of current and projected water supplies and demands throughout the service area and an investigation of potential system operations and facilities improvements to increase recycled water use and overall supply reliability. The Plan will also develop, model, and evaluate multiple alternatives to help EMWD achieve the most optimal use of projected recycled water supplies.

The alternatives that will be evaluated will begin as "strategic alternatives" that integrate different combinations of supply sources, system operation improvements, and customer types with the IPR projects. Customer types will include municipal, industrial, environmental, restricted recreational, agricultural, and wholesale. The optimal combination of these recycled water uses for each geographic area in the system will be selected based on sustainability, cost factors, potable water offset, environmental stewardship, operational complexity, reliability, competing use, and other potential factors as described above. The strategic alternatives will then be ranked and prioritized and a "preferred alternative" will be identified. This preferred alternative will then be developed into a detailed project in the Facilities Master Plan portion of the feasibility study. The preferred alternative will be made up of individual project recommendations for each sub-area within EMWD's service boundary. Each sub-area will be customized and optimized according to the supplies, system issues, end uses, and conditions in

that locality. The preferred alternative is likely to include some variation of the IPR projects based on the findings of the IPR Phase 1 and 2 Studies, which received separate funding in 2014 under the WaterSMART grant program.

3) **Describe alternative measures or technologies for water reclamation, distribution, and reuse that will be investigated as part of the feasibility study.**

The feasibility study will look at alternative measures for distributing and reusing supplies across EMWD's service area. The feasibility study will divide the overall service area into multiple geographic sub-areas and determine the optimal profile/makeup of supplies, operational changes, and end uses in each sub-area. Each sub-area will likely have a different optimal proportion of agricultural use, municipal use, industrial use, environmental use, restricted recreational use, IPR, and wholesale depending on the type of end uses and conditions in that sub-area. For example, in sub-areas where increased development is expected and recycled water backbone facilities already exist, it may be preferable to develop municipal irrigation. For sub-areas that overlie the San Jacinto and Perris Groundwater Basins, it may be preferable to develop IPR. Expanded seasonal and operational storage facilities for sub-areas will also be investigated as part of this feasibility study to improve operational efficiency.

In addition, findings from the IPR Phase 1 and Phase 2 Studies that recommend advanced water treatment (AWT) or other new technologies for water quality purposes will be incorporated into the recommendations for a preferred alternative under this feasibility study.

Evaluation Criterion 4: Stretching Water Supplies

15 points

Points will be awarded based on the extent to which the proposal demonstrates that the feasibility study will address activities that will help to secure and stretch water supplies.

1) **Describe the potential for the project to reduce, postpone, or eliminate the development of new or expanded water supplies. Include description of any specific issues that will be investigated or information that will be developed as part of the feasibility study.**

By pursuing recycled water development in its service area, EMWD is working to improve regional water supply reliability. Approximately 15 percent of EMWD's current water supply comes from local groundwater sources (both potable and brackish groundwater), 25 percent from recycled water supply, and the remaining 60 percent, which includes both treated and raw imported water, is supplied by MWD from the Colorado River via the CRA, and from Northern California via the SWP. EMWD faces a number of challenges stemming from its reliance on imported water, with uncertain long-term reliability challenges associated with drought shortages, climate change, seismic events, environmental flow restrictions in the Delta, and salinity of Colorado River supplies. To increase EMWD's local water supplies (both potable and non-potable), a number of technical, regulatory, financing, and revenue considerations need to be addressed and overcome. Some key challenges and considerations for EMWD include:

- Future projected seasonal recycled water supply production that exceeds the amount current facilities and demands can capture or use. As a result, EMWD may be forced to discharge recycled water that could otherwise be put to beneficial use.
- Competing uses of limited raw water conveyance capacity.
- Uncertain reliability of imported water due to potential drought shortages, environmental flow constraints, and emergency outage conditions.

The feasibility study will investigate ways to expand and optimize the current recycled water system to maximize recycled water supply utilization throughout the planning horizon. Increased and more efficient use of recycled water will reduce the need to develop other new water supplies, increase overall supply reliability, and minimize conflicts due to supply seasonality, inadequate storage volumes, and conveyance issues.

2) **Describe the potential for the project to reduce or eliminate the use of existing diversions from natural watercourses or withdrawals from aquifers. Include description of any specific issues that will be investigated or information that will be developed as part of the feasibility study.**

EMWD's current water sources include local groundwater (both potable and brackish groundwater), recycled water, and imported surface water supplied by MWD. MWD delivers water from two sources, the Colorado River via the CRA and the Delta via the California Department of Water Resources' SWP. In 2013, EMWD's imported surface water deliveries from MWD were approximately 81,600 AF, or about 58 percent of EMWD's total water supplies that year.

The feasibility study will look at ways to fully utilize recycled water supplies in EMWD's system thereby reducing potable water demands by up to an additional 23,000 AFY by 2035. A reduction in potable water demands will reduce EMWD's reliance on imported water from natural watercourses like that Delta that feed SWP supplies and the Colorado River and on local groundwater.

The feasibility study will also incorporate IPR projects that will use recycled water to recharge groundwater supplies. These projects contribute to better management of the basins, reductions in overdraft, and increased use of local supplies in lieu of less reliable imported supplies.

3) **Describe the potential for the project to reduce the demand on existing Federal water supply facilities. Include description of any specific issues that will be investigated or information that will be developed as part of the feasibility study.**

Increased use of recycled water will allow EMWD to reduce demands on various Federal water supply facilities, including both the CRA and the Central Valley Project (CVP). Approximately 60 percent of EMWD's water supply is provided by MWD's imported surface water from the Colorado River via the CRA and the Delta via the SWP. Approximately 50% of MWD's water, on average, is from the CRA which is a federal water supply facility. The proposed feasibility study will identify and implement additional recycled water use opportunities that will reduce

EMWD's reliance on imported water from MWD and its reliance on Federal water supplies from the Colorado River.

The other portion of MWD's water comes from the SWP. SWP pumps water from the Delta in Northern California, which is also the pumping location for the Bureau of Reclamation's CVP. The CVP is operated in coordination with the SWP as the two projects use the Sacramento River and Delta as common conveyance facilities. The projects recommended by this feasibility study will reduce EMWD's reliance on SWP water supplies from the Delta, thereby relieving some of the competing demands on the SWP system and leaving more surface water for other uses. This will also benefit the CVP as changes in demands for Delta water from one project benefit the other due to their shared operation.

There is another potential impact that does not apply directly to Federal water supply facilities but does support a Federal judicial finding and subsequent agreement. EMWD has worked with the local Soboba Band of Luiseño Indians and the Federal government to develop a Settlement Agreement that would resolve past issues with respect to tribal water rights and water management practices in the Hemet/San Jacinto Water Management Area. The stakeholders developed the Stipulated Judgment entered on April 18, 2013 in Eastern Municipal Water District v. City of Hemet, et al (Riverside County Superior Court case no. RIC 1207274) that calls for the formation of a Watermaster to implement the Hemet/San Jacinto Water Management Plan, which describes water supply management to maximize the reasonable and beneficial use of all waters available to the area, eliminate overdraft, protect prior rights of the Soboba Tribe, and provide for the substantial enjoyment of all water rights by recognizing their priorities. The alternatives that will be evaluated for the feasibility study will include IPR along the San Jacinto River bed. Recharge along the river will help stabilize groundwater supplies in the Hemet/San Jacinto Management Area and ensure the agreement with the Soboba Band of Luiseño Indians and the federal government is honored.

Evaluation Criterion 5: Environment and Water Quality

15 points

Points will be awarded based on the extent to which the proposal demonstrates that the feasibility study will address the potential for a water reclamation and reuse project to improve surface, ground water, or effluent discharge quality; restore or enhance habitat for non-listed species; or provide water or critical habitat for federally listed threatened or endangered species.

1) **Describe the potential for the project to improve the quality of surface or groundwater, including description of any specific issues that will be investigated or information that will be developed as part of the feasibility study.**

The feasibility study will provide further analysis of the impacts of the selected recycled water strategic alternatives on water quality and salinity. In order to comply with the Santa Ana Regional Board's Water Quality Control Plan requirements related to salinity, EMWD has developed and continues to update their salinity management plan. This plan evaluates the salinity of water supplies available in EMWD's service area, including recycled water. EMWD

is working to maximize the use of reliable local water resources, including groundwater, brackish groundwater, and recycled water, while achieving its goal to manage the overall salinity of source water, groundwater, and recycled water in its service area.

As the IPR projects become more defined, the specific requirements will be included in the sets of alternatives analyzed in the feasibility study. Groundwater recharge using treated recycled water and diluent volumes in the San Jacinto and Perris Groundwater Basins has the potential to help manage salt issues and reduce other overdraft related water quality issues. The IPR projects can also potentially improve surface water quality by creating new recharge ponds that would reduce urban runoff.

All alternatives that will be evaluated for the feasibility study will reduce discharges to Temescal Creek by increasing and optimizing recycled water use. Currently, wastewater is treated and discharged to holding ponds during the off season that are designed to store the water for subsequent use. The feasibility study will investigate multiple strategic alternatives and supporting facilities that will help EMWD utilize recycled water more consistently throughout the year and eliminate discharges to achieve its objective of zero discharge. Projects such as recharge ponds also have the potential to reduce urban runoff to surface waters.

2) **Describe the potential for the project to improve flow conditions in a natural stream channel, including a description of any specific issues that will be investigated or information that will be developed as part of the feasibility study.**

Approximately 60 percent of EMWD's water supply is provided by MWD's imported surface water from the Colorado River via the CRA and the Delta via the SWP. Implementation of the Plan will result in EMWD increasing its use of recycled water and reducing its reliance on imported water from MWD. A reduction in MWD demands may contribute to improved flow conditions in the Colorado River, and in the Feather River, Sacramento River, and California Delta that are heavily influenced by SWP pumping to convey water to southern California.

Recycled water strategic alternatives for the feasibility study will include IPR projects that will recharge recycled water and diluent water along the San Jacinto River bed. By recharging the groundwater basin here, less river water will infiltrate and more surface water will remain as flow in the natural streambed.

3) **Describe the potential for the project to provide water or habitat for federally listed threatened or endangered species, including description of any specific issues that will be investigated or information that will be developed as part of the feasibility study.**

The feasibility study will potentially contribute to the protection of water or habitat for federally listed threatened or endangered species by providing increased reliability and increased environmental flows to the California Department of Fish and Wildlife's San Jacinto Wildlife Area. This wildlife refuge is the only refuge area in the state to use recycled water for habitat creation and recycled water is used to help maintain, enhance and improve this environmental preserve. The wildlife refuge provides flyover habitat for several bird species and semi-

permanent and permanent wetlands and marsh habitat. Part of EMWD's recycled water commitment includes maintaining environmental and restricted recreational flows. The feasibility study will be evaluating and potentially incorporating improvements that will insure sustainable and dependable environmental deliveries of up to 2,500 AFY of recycled water to the California Department of Fish and Wildlife's San Jacinto Wildlife Area. To the extent that the existing habitat contains federally listed threatened or endangered species, the feasibility study will develop alternatives to maintain recycled water deliveries, thus protecting the habitats of these species.

In addition, all alternatives that will be investigated as part of the feasibility study will evaluate and address how project facilities could affect water or critical habitat for federally listed species in the area. CEQA/NEPA documentation will be required where potential effects are determined and these impacts will be mitigated. The CEQA/NEPA analysis will be conducted as a subsequent phase of the feasibility study.

Evaluation Criterion 6: Legal and Institutional Requirements

10 points

Points will be awarded based on the extent to which the proposal demonstrates that the feasibility study will address legal or institutional requirements or barriers to implementing a project, including water rights issues and any unresolved issues associated with implementation of a water reclamation and reuse project.

The feasibility study will assess and address water rights and other legal and institutional requirements as part of the development of the Strategic Plan. Groundwater resources in the Hemet-San Jacinto Groundwater Management Area are managed by a Watermaster who is charged with implementing the Water Management Plan and the Soboba Water Rights Settlement. Currently, the total production rights in the basin exceed the safe yield. IPR projects in the San Jacinto Basin align will enhance groundwater supplies to meet future water demands and mitigate basin overdraft. Long-term groundwater rights disputes between the Soboba Tribe and Southern California water agencies in the Hemet and San Jacinto Valley area were resolved in 2013 by a water rights settlement that established water rights for the Soboba Tribe and provided for replenishment of the groundwater basin with imported water. The Soboba Settlement Act calls for an average of 7,500 AFY of imported water to be provided until at least 2035 by MWD to recharge and reduce the groundwater basin overdraft. EMWD and MWD entered into a long-term water supply contract for this recharge water, which requires EMWD to construct and operate recharge facilities, eventually storing up to 40,000 AF of water in the groundwater basin. The feasibility study will address and support this requirement by including alternatives that incorporate IPR in the Hemet-San Jacinto Groundwater Management Area. Imported water used to meet diluent requirements for recharge can also be used to meet the terms of the Settlement.

The feasibility study will also investigate the potential for wholesale recycled water arrangements with partner agencies, including institutional requirements and needed facilities.

Evaluation Criterion 7: Renewable Energy and Energy Efficiency

10 points

Points will be awarded based on the extent to which the proposal demonstrates that the feasibility study will address methods to incorporate the use of renewable energy or will otherwise address energy efficiency aspects of the water reclamation and reuse project being investigated.

EMWD's completed its Energy Management Plan in 2014. The Energy Management Plan recommends several energy efficiency measures and production of green power at EMWD facilities. Alternatives that will be assessed for the proposed feasibility study will involve utilization of facilities that are addressed by the Energy Management Plan. Recommendations from the Energy Management Plan include installing microturbines to maximize digester gas, increasing use of fuel cells that are powered by natural and digester gas, expanding solar facilities at water reclamation plants, and potentially implementing a food waste to energy program at the Perris Valley Regional WRF.

Some of the facilities alternatives for the feasibility study will include IPR projects that use reclaimed water from the San Jacinto Valley Regional WRF for recharge along the San Jacinto River. The San Jacinto Valley Regional WRF currently uses a one megawatt solar generating facility. EMWD is in the process of expanding its solar program to other facilities as well.

Additional energy savings opportunities will be included during the design of the IPR projects in conformance with the recommendations of the Energy Management Plan. These measures may include variable speed pumps and energy recovery devices. As maximizing cost-effectiveness will be one of EMWD's strategic objectives, facilities alternatives that include energy efficiency measures will be preferred over those that do not.

Evaluation Criterion 8: Watershed Perspective

10 points

Points will be awarded based on the extent to which the proposal demonstrates that the feasibility study will address alternatives that promote and apply a regional or watershed perspective to water resource management.

EMWD is one of California's largest water agencies, providing water, wastewater, and recycled water services to approximately 768,000 people in a 542-square mile service area located in Riverside County. EMWD is the fourth largest recycled water producer and fifth largest water district in California. As such, EMWD's approach to regional water supply issues must take into account the needs of all its retail customers, which include the Cities of Moreno Valley, Perris, San Jacinto, Hemet, Temecula, Murrieta, and Menifee, as well as the unincorporated communities of Good Hope, Lakeview, Nuevo, Mead Valley , Murrieta Hot Springs, Valle Vista, and Winchester.

The proposed feasibility study will be considering recycled water alternatives throughout EMWD's entire service area which is within the Santa Ana River Watershed. Alternatives will

also include wholesale with agencies outside the area. Several recycled water projects that will be evaluated such as the IPR options are included in the "One Water One Watershed" Integrated Regional Water Management Plan for the Santa Ana River Watershed Region. The San Jacinto River Watershed is the headwaters for the overall watershed and tributary to the Santa Ana River Watershed; therefore, benefits to the San Jacinto River watershed as a result of projects implemented from the feasibility study will also benefit and work in coordination with other water management efforts within the larger Santa Ana River Watershed.

EMWD is participating in several groundwater management efforts to improve both water quality and water supply in the basin. EMWD worked with the local Soboba Band of Luiseño Indians and the Federal Government to develop a Settlement Agreement that would resolve past issues with respect to tribal water rights and water management practices in the management area. EMWD and other local water users developed the Hemet/San Jacinto Groundwater Management Plan to provide a foundation that guides and supports responsible water management, now and in the future. The Watermaster implements the Plan which describes water supply management to maximize the reasonable and beneficial use of all waters available to the area, eliminate overdraft, protect prior rights of the Soboba Tribe, and provide for the substantial enjoyment of all water rights by recognizing their priorities. The recycled water alternatives in the feasibility study will evaluate regional watershed benefits to these stakeholders through improved water quality, increased groundwater levels, and a more reliable water supply.

The alternatives developed for the feasibility study will include combinations of recycled water uses for each geographic area in EMWD's system. The distribution of these potential uses will consider the Basin Management Plans for the Santa Ana River and Santa Margarita River Watersheds. The recycled water expansion for municipal uses and the management of current and future agricultural uses will incorporate Basin Management Objectives for the watersheds to ensure the alternatives promote beneficial uses of the basin groundwater.

The proposed feasibility study will include the development of a Recycled Water Strategic and Master Plan. Both documents will evaluate EMWD's water resources on a regional level and select the best alternatives for EMWD's system based how the alternatives work together with the resources available to benefit the region as a whole. The recycled water alternatives that will be analyzed in the feasibility study include groundwater recharge through IPR which will contribute to increased groundwater storage in the basin and improved groundwater quality. All alternatives will strive to increase the beneficial use of EMWD's significant recycled water resources within the region.

Required Permits or Approvals

Applicants must state in the application whether any permits or approvals are required for development of the proposed feasibility study and explain the plan for obtaining such permits or approvals.

No permits or approvals are required for development of the feasibility study.

Funding Plan and Letters of Commitment

Describe how the non-Reclamation share of study costs will be obtained. Reclamation will use this information in making a determination of financial capability. The funding plan must include all study costs, as follows:

How will you make your contribution to the cost share requirement, such as monetary and/or in-kind contributions and source funds contributed by the applicant.

EMWD is providing all of the non-Reclamation funding to implement the Project. EMWD's contribution will be paid for through its Recycled Water Expansion Reserve Fund.

(1) Describe any in-kind costs incurred before the anticipated study start date that you seek to include as study costs.

EMWD is not seeking to include as study costs any in-kind costs incurred before the anticipated study start date.

(2) Provide the identity and amount of funding to be provided by funding partners, as well as the required letters of commitment.

EMWD is providing all of the non-Reclamation funding to implement the Project.

(3) Describe any funding requested or received from other Federal partners.

No funding has been requested or received from other potential Federal partners.

(4) Describe any pending funding requests that have not yet been approved, and explain how the study will be affected if such funding is denied.

EMWD has no pending funding requests to support the costs of the Project.

Table 2: Summary of Non-Federal and Federal Funding Sources

Funding Sources	% of Total Project Cost	Funding Amount
Non-Federal Entities:		
1. EMWD	76%	$426,853
Non-Federal Subtotal:		$426,853
Other Federal Entities		
None		$0
Other Federal Subtotal:		$0
Requested Reclamation Funding:	24%	$150,000
Total Study Funding:	100%	$626,853

Official Resolution

Include an official resolution adopted by the applicant's board of directors or governing body, or for State government entities, an official authorized to commit the applicant to the

financial and legal obligations associated with receipt of Federal financial assistance, verifying:

- **The identity of the official with legal authority to enter into agreement**
- **The board of directors, governing body, or appropriate official who has reviewed and supports the application submitted**
- **The capability of the applicant to provide the amount of funding and/or in-kind contributions specified in the funding plan**
- **The applicant will work with Reclamation to meet established deadlines for entering into a cooperative agreement**

A copy of the EMWD Board Resolution is attached on page 25 of this application, following Table 3. It was approved at the February 18, 2015 Board of Directors meeting.

Budget Proposal

Budget Narrative

Salaries and Wages

EMWD is not seeking funding for, nor intending to use as cost sharing, any costs related to EMWD personnel. Therefore, no information relating to EMWD personnel salaries and wages, hours and rate of compensation will be included here.

Fringe Benefits

EMWD is not seeking funding for, nor intending to use as cost sharing, any costs related to EMWD personnel. Therefore, no information relating to the cost of fringe benefits is included here.

Travel

EMWD is not seeking funding for, nor intending to use as cost sharing, any costs related to travel. Therefore, no information relating to the cost of travel is included here.

Equipment

EMWD is not seeking funding for, nor intending to use as cost sharing, any costs related to equipment. Therefore, no equipment costs are included in this grant application.

Materials and Supplies

EMWD is not seeking funding for, nor intending to use as cost sharing, any costs related to materials and supplies. Therefore, no materials and supplies costs are included in this grant application.

Contractual

The total project cost of $626,853 includes forecasted costs for RMC Water and Environment. The tasks to be performed include development of the Recycled Water Strategic Plan,

development of the Recycled Water Facilities Master Plan, hydraulic modeling and workshops. For additional details, refer to the consultant's fee estimate dated February 12, 2015 in the amount of $626,853, as shown in Table 3.

As part of the EMWD competitive bidding process, the EMWD Project Manager prepared and issued a request for proposals, and received one proposal for the services/tasks described above related to the Project. The proposal was evaluated based on the firm's experience, technical approach, project understanding, and the team's expertise. The EMWD review panel selected RMC Water and Environment based on this evaluation.

Reporting

Reporting shall be prepared and submitted in accordance to Section VI.D. "Reporting Requirements and Distribution". The reports shall be prepared and submitted by EMWD staff. EMWD is not seeking funding for, nor intending to use as cost sharing, any costs related to reporting. Therefore, no reporting costs are included in this grant application.

Other

No other costs are included in this grant application.

Indirect Costs

No indirect costs are included in this grant application.

Total Cost

The total cost of the Project is $626,853, as shown in Table 3.

Budget Form

EMWD's completed SF-424A is included in the application cover forms.

Table 3: Contractual Costs for RMC Water and Environment

Tasks	RMC Labor		CDM Smith (Subconsultant)		Kennedy/Jenks (Subconsultant)		Other Direct Costs	Total
	Total Hours	Total Labor Costs	Total Hours	Subconsultant Total Cost	Total Hours	Subconsultant Total Cost	Total ODCs	Total Fee
Task 1: Strategic Plan								
1.1 Strategic Objectives	70	$14,098	22	$4,187	0	$0	$0	$18,285
1.2 Supply and Demand Evaluation	72	$14,352	38	$7,300	0	$0	$0	$21,652
1.3 Policy Evaluation	52	$10,480	10	$2,226	0	$0	$0	$12,706
1.4 Strategic Alternatives Analysis	162	$31,188	196	$36,002	0	$0	$0	$67,190
1.5 Strategic Plan Document	128	$24,916	68	$12,894	0	$0	$0	$37,810
Subtotal Task 1:	484	$95,034	334	$62,609	0	$0	$0	$157,643
Task 2: Facilities Master Plan								
2.1 System Operations Assessment	148	$28,636	0	$0	0	$0	$525	$29,161
2.2 Planning Criteria	66	$13,256	6	$1,373	0	$0	$0	$14,629
2.3 Validate/Update Existing/Future Demand and Supplies	88	$17,492	50	$9,261	0	$0	$0	$26,753
2.4 Recycled Water Storage and Supply Augmentation Requirements	104	$20,400	0	$0	0	$0	$0	$20,400
2.5 Water Quality Analysis/Salinity Management Consideration	110	$21,606	0	$0	0	$0	$0	$21,606
2.6 Facilities Definition/Evaluation and Costs	184	$36,212	28	$6,157	0	$0	$0	$42,369
2.7 Capital Improvement Program	106	$21,342	6	$1,373	0	$0	$0	$22,715
2.8 Facilities Master Plan Document	264	$50,956	56	$10,634	0	$0	$0	$61,590
Subtotal Task 2:	1070	$209,900	146	$28,798	0	$0	$525	$239,223
Task 3: Hydraulic Modeling								
3.1 System Operations	2	$478	0	$0	38	$8,122	$525	$9,125
3.2 Model Update	2	$478	0	$0	76	$14,721	$0	$15,199

Tasks	RMC Labor		CDM Smith (Subconsultant)		Kennedy/Jenks (Subconsultant)		Other Direct Costs	Total
	Total Hours	Total Labor Costs	Total Hours	Subconsultant Total Cost	Total Hours	Subconsultant Total Cost	Total ODCs	Total Fee
.3 Model Calibration	2	$478	0	$0	82	$16,091	$0	$16,569
3.4 Model Scenarios	2	$478	0	$0	48	$9,713	$0	$10,191
3.5 Facility Analysis	2	$478	0	$0	194	$38,897	$0	$39,375
3.6 System Facility Schematics	2	$478	0	$0	80	$14,942	$0	$15,420
Subtotal Task 3:	12	$2,868	0	$0	518	$102,486	$525	$105,879
Task 4: Workshops								
4.1 Workshop 1	28	$5,904	8	$1,894	0	$0	$525	$8,323
4.2 Workshop 2	28	$5,904	8	$1,894	0	$0	$525	$8,323
4.3 Workshop 3	28	$5,904	0	$0	16	$3,791	$525	$10,220
4.4 Workshop 4	28	$5,904	0	$0	0	$0	$525	$6,429
Subtotal Task 4:	112	$23,616	16	$3,788	16	$3,791	$2,100	$33,295
Task 5: Project Management								
5.1 Project Kickoff	28	$5,792	0	$0	0	$0	$525	$6,317
5.2 Progress Meetings/Calls	40	$9,250	0	$0	0	$0	$1,575	$10,825
5.3 Project Administration	36	$6,252	24	$3,150	24	$2,520	$0	$11,922
5.4 Work Plan and QA/QC Plan	40	$10,080	16	$3,788	32	$7,854	$0	$21,722
Subtotal Task 5:	144	$31,374	40	$6,938	56	$10,374	$2,100	$50,786
Optional Tasks								
O-1 Optional Operations Meeting	36	$7,340	8	$1,705	8	$1,964	$525	$11,534
O-2 WaterSmart Grant Supplemental Work	140	$27,968	0	$0	0	$0	$525	$28,493
Subtotal Optional Tasks:	176	$35,308	8	$1,705	8	$1,870	$1,050	$40,027
TOTAL	1,998	$398,100	544	$103,838	598	$112,965	$6,300	$626,853

STATE OF CALIFORNIA)
)ss.
COUNTY OF RIVERSIDE)

I, TAMI MARTINEZ, Deputy Secretary to the Board of Directors of Eastern Municipal Water District, do hereby certify that the foregoing Resolution was duly adopted by the Board of Directors of said District at the Regular Meeting of said Board held on the 18th day of February, 2015, and that it was so adopted by the following vote:

AYES:	Directors, Paule, Kuebler, Record, Slawson, and Sullivan
NOES:	None
ABSTAIN:	None
ABSENT:	None

Tami Martinez, Deputy Secretary of the
Eastern Municipal Water District
and to the Board of Directors thereof

STATE OF CALIFORNIA)
)ss.
COUNTY OF RIVERSIDE)

I, TAMI MARTINEZ Deputy Secretary to the Board of Directors of Eastern Municipal Water District, do hereby certify that the above and foregoing is a full, true and correct copy of Resolution No. 2015-010 of said Board, and that the same has not been amended or repealed.

DATE: February, 18, 2015

Tami Martinez, Deputy Secretary of the
Eastern Municipal Water District
and to the Board of Directors thereof

(SEAL)

RESOLUTION NO. 2015-010

A RESOLUTION OF THE BOARD OF DIRECTORS OF EASTERN MUNICIPAL WATER DISTRICT TO SUPPORT THE SUBMITTAL OF AN APPLICATION TO THE U.S. BUREAU OF RECLAMATION'S WATERSMART: DEVELOPMENT OF FEASIBILITY STUDIES UNDER THE TITLE XVI WATER RECLAMATION AND REUSE PROGRAM FOR THE RECYCLED WATER STRATEGIC AND FACILITIES MASTER PLAN, AND DESIGNATE AN AUTHORIZED REPRESENTATIVE

WHEREAS, Eastern Municipal Water District desires to finance a portion of the costs of the Recycled Water Strategic and Facilities Master Plan (the "Project"); and

WHEREAS, the District intends to finance the cost of the Project or portions of the Project with monies provided by the U.S. Bureau of Reclamation ("Reclamation").

NOW, THEREFORE, THE BOARD OF DIRECTORS OF EASTERN MUNICIPAL WATER DISTRICT DOES HEREBY RESOLVE, DETERMINE AND ORDER AS FOLLOWS:

1. The General Manager (the "Authorized Representative") or his designee is hereby authorized and directed to sign and file, for and on behalf of the District, a WaterSMART: Development of Feasibility Studies under the Title XVI Water Reclamation and Reuse Program Grant Application for financing the cost of the Project from Reclamation;

2. This Authorized Representative, or his designee, is authorized to certify that the District has and will comply with the financial and legal obligations associated with the receipt of a WaterSMART Feasibility Study Title XVI Grant financial assistance;

3. That Eastern Municipal Water District has the capacity to provide funding and/or in-kind contributions specified in the funding plan; and

4. That Eastern Municipal Water District will work with Reclamation to meet established deadlines for entering into a cooperative agreement.

5. This Resolution shall be effective upon its adoption.

DATED: February 18, 2015

/s/Randy A. Record
Randy A. Record, President

I hereby certify that the foregoing is a full, true and correct copy of the Resolution adopted by the Board of Directors of the Eastern Municipal Water District at its meeting held on February 18, 2015.

/s/Sheila Zelaya
Sheila Zelaya, Deputy Board Secretary

(SEAL)