

WaterSMART: Development of Feasibility Studies under the Title XVI Water Reclamation and Reuse Program for Fiscal Year 2014

Funding Opportunity R14AS00030

Eastern Municipal Water District
Indirect Potable Reuse Project Feasibility Study
Perris, California
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List of Abbreviations

AFY	acre-feet per year
AOP	advanced oxidation processes
AWTF	advanced water treatment facility
CDPH	California Department of Public Health
CEQA	California Environmental Quality Act
CRA	Colorado River Aqueduct
CVP	Central Valley Project
Delta	Sacramento-San Joaquin Delta
EMWD	Eastern Municipal Water District
IPR	Indirect Potable Reuse
GWR	Groundwater Replenishment
LHMWD	Lake Hemet Municipal Water District
mg/L	milligrams per liter
MWD	Metropolitan Water District of Southern California
NEPA	National Environmental Policy Act
O&M	operations and maintenance
RO	reverse osmosis
RWQCB	Regional Water Quality Control Board
SJUPMZ	San Jacinto Upper Pressure Management Zone
SJVRWRF	San Jacinto Valley Regional Water Reclamation Facility
Strategic Plan	Recycled Water Strategic Plan
SWP	State Water Project
TDS	total dissolved solids
TOC	total organic carbon

Technical Proposal and Evaluation Criteria

Executive Summary

Applicant

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Indirect Potable Reuse Project

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 initiated a feasibility study of the Indirect Potable Reuse (IPR) Project to achieve its objectives of fully utilizing recycled water within its service area, maximizing potable water offset, creating new local potable water supplies, minimizing cost, and managing groundwater basin salt balance. The IPR Project 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. Under this feasibility study, five IPR alternatives will be evaluated to convey recycled water from the San Jacinto Valley Regional Water Reclamation Facility (SJVRWRF) to groundwater recharge ponds along the San Jacinto River, where it would be blended with diluent water for infiltration. The recycled water may receive additional treatment through an advanced water treatment facility (AWTF) prior to groundwater recharge. The capacity of the IPR Project will be phased over time, with an ultimate capacity of 15,000 acre-feet per year (AFY) for potable use by 2030. EMWD's IPR Project Feasibility Study will be conducted in two phases. The total estimated timeframe for the feasibility study is 36 months, with an anticipated completion date of September 2016.

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).

After a comprehensive analysis of EMWD's regional needs and potential demand management and supply options in EMWD's 2011 Integrated Resources Plan, IPR was identified as one of the water supply strategies capable of providing the greatest regional benefit. The IPR Project will provide up to 15,000 AFY of water for potable uses by 2030. This new source will reduce dependence on imported water purchases from state and federal water sources, increase regional groundwater storage, and eliminate the need for additional imported purchases to meet projected demands.

EMWD's IPR Project Feasibility Study will be conducted in two phases. The Phase I Study, already underway, will identify and evaluate the elements required for the IPR Project, including project sizing, regulatory compliance, groundwater recharge, retention time, salt and nitrate impacts, diluent water availability, conveyance, treatment options, and brine management. The study will analyze alternatives and identify a proposed IPR project that best achieves objectives established by EMWD, including: maximizing cost effectiveness, water reliability, ease of implementation, and groundwater basin water quality improvements; and minimizing environmental impacts and operational complexity. The Phase I Study is anticipated to be completed over 12 months.

The Phase II Study will continue to develop the project elements for the proposed IPR Project and will be completed in approximately 27 months. Tasks that will be completed under Phase II of the Feasibility Study will include groundwater modeling, regulatory agency coordination, permitting strategy, coordination of the IPR Project with other water conservation and supply strategies, and progression of technical aspects of the proposed IPR project, such as site selection, treatment processes, and conveyance. The technical work completed in Phase II will refine any remaining questions before preliminary design.

IPR Project Phase I Study

Phase I of the IPR Project Feasibility Study will identify and evaluate the elements required for the IPR project and analyze alternatives to identify a proposed IPR Project that best achieves the objectives established.

Task 1 – Groundwater and Blend Water Evaluations

Task 1 will evaluate recharge/withdrawal strategy, blending water strategy, and salt balance considerations for five IPR project alternatives. The task includes review of existing data, maps, reports, and agreements for the Hemet/San Jacinto Water Management Plan area.

The task will evaluate the following groundwater recharge issues: areas of available groundwater storage; potential methods (spreading vs. injection); locations and their percolation rates and recharge capacity; operations and legal/institutional obligations and constraints; existing and expected future recharge water sources and their water quality; recharge water conveyance requirements; extraction well locations, capacities, and annual production; compliance with the Groundwater Replenishment (GWR) Reuse Regulations, including recharge water travel times to existing and planned future production wells; and concept-level facilities requirements and costs.

Task 1 will evaluate the following diluent water issues: diluent water requirements based on the predicted quality of AWTF water; diluent water sources (imported water, river diversions, brackish groundwater, stormwater, and mountain-front recharge), quality, locations, availability, quantity, and cost; compatibility between AWTF water, available blend water supplies, and local groundwater; and conceptual-level blending facilities locations, requirements, and costs. Task 1 will also assess the potential long-term salt and nitrate balance achievable in the San Jacinto Upper Pressure Management Zone (SJUPMZ) with a focus on the Maximum Benefit Basin Plan Amendment, EMWD's Salinity Management Plan, and EMWD's Master Reclamation Permit.

Task 2 – Brine Disposal Alternatives

Concentrate disposal has been a major challenge in many recycling and IPR projects. Task 2 will evaluate various opportunities for brine management and reduction within the IPR Project and will investigate and analyze alternatives including both disposal off-site through the Santa Ana Watershed Project Authority Brine Line and on-site treatment that can result in a zero liquid discharge.

Task 3 – Regulatory, Institutional, and Environmental Requirements and Compliance

Task 3 will identify and evaluate potential regulatory, institutional, and environmental requirements and issues that may have a substantial impact on the implementation feasibility of the IPR Project. The evaluation will focus on the project's ability to comply with identified requirements and constraints associated with: California Department of Public Health (CDPH) Draft GWR Reuse Regulations; EMWD's Master Reclamation Permit; Maximum Benefit Basin Plan Amendment for the SJUPMZ; groundwater rights in the SJUPMZ (associated with the Stipulated Judgment entered on April 18, 2013 in Eastern Municipal Water District v. City of Hemet, at al [Riverside County Superior Court case no. RIC 1207274] and Watermaster for the Hemet/San Jacinto Water Management Plan); Soboba water rights settlement; endangered species potentially affected by identified IPR and related facilities and operations; and the approach for California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) compliance.

The task will identify and analyze the guidelines by the permitting agencies as they apply to the proposed project and develop a strategy for compliance/permitting the IPR program. Based on regulatory requirements and analysis, Task 3 will recommend and provide an outline of approach to successful permitting and regulatory compliance.

Task 4 – Facilities Needs Assessment & Constraints Analysis

Task 4 will outline the facilities needs assessment and constraints based on environmental requirements, water quality requirements, treatment approach, effluent feed water characteristics, and the advanced water treatment and advanced purification process. The recycled water supply will affect the sizing of the treatment and recharge facilities. Task 4 will identify five IPR alternatives, evaluate and screen the facilities options, and recommend the preferred facilities.

Based on results of preliminary screening process and the detailed input from Tasks 1 through 3, the five IPR alternatives (including treatment, blending, recharge, and conceptual costs) will be developed and evaluated. Any alternatives found to have fatal flaws will be eliminated. A multi-attribute decision making process will be used to compare the alternatives. Key objectives and evaluation criteria/performance measures for each objective will be defined to evaluate and then rank how well the alternatives meet the key objectives. EMWD will select the recommended alternative to pursue in subsequent phases of the IPR Project.

Task 5 – Program Cost Analysis for Recommended Alternative

Task 5 will define the costs for the recommended alternative determined under Task 4. The most cost effective approach that meets all of the required criteria will be researched, identified, and developed. The task will develop construction, capital, operations and maintenance (O&M), and unit production costs

for all recommended project components, including treatment, conveyance, blending, recharge, brine disposal, and groundwater production based on "order-of-magnitude" precision levels.

Overall project economics and funding strategies will be developed addressing: 1) capital funding approach (e.g., EMWD/State/Federal grants, State Revolving Fund loans, EMWD/regional bond issues, amortization of net costs); 2) unit water production costs; and 3) economic comparison with potential alternative water sources (e.g., imported water, increased recycled water reuse for irrigation and other uses, demand reduction from increased water conservation, other viable options). Analysis will include salinity management cost factors and a conceptual financing impact analysis (water use rates, connection charges, allocation between existing/new customers, allocation between EMWD/regional stakeholders and benefactors).

Task 6 – Project Management

A series of technical meetings and workshops will be held throughout the Phase I Study to discuss the project progress and findings and receive input from EMWD staff. The workshops will be structured to identify key decisions and questions that need to be resolved by the end of the workshops.

IPR Project Phase II Study

Once the selected IPR alternative has been identified in Phase I of the Feasibility Study, Phase II will continue to progress and refine elements of the IPR Project.

Task 1 – Groundwater Numerical Flow and Transport Modeling

Task 1 will develop and apply the groundwater numerical flow and transport models necessary to support discussions with CDPH and the Regional Water Quality Control Board (RWQCB) to advance regulatory approval and confirm the conclusions of the IPR Phase I Study. Groundwater modeling will also be critical in refining the IPR concept and the magnitude of spreading diluent water in the selected recharge ponds. The modeling will provide an empirical method of determining the impacts of spreading additional water for EMWD's Water Banking Project. The groundwater modeling will be conducted to further evaluate the following elements: the direction of flow in the aquifers and the retention time to the nearest wells; potential existing potable supply wells that may be affected due to the retention time requirements; the impacts both to EMWD as well as other stakeholders (City of San Jacinto, private well producers, etc.), and locate areas for potential replacement wells if needed; preliminary locations and depths for monitoring well locations as required by regulations; and the extent of the "mixing zone". In addition, a geochemical analysis to evaluate interactions between AWTF water and recharge ponds will be performed.

Task 2 – Regulatory Coordination and Update

The Phase I work included an initial evaluation of the regulatory and environmental issues. The IPR Project's regulatory requirements and CEQA analysis will be updated because of changing regulations and some new issues related to pilot testing¹. The permitting strategy will also be updated and expanded

¹ The pilot testing effort is not included in this Title XVI Feasibility Study grant application.

to include the California Title 27 waste disposal requirements and potential South Coast Air Quality Management District requirements for implementing a semi-enhanced evaporation pond for brine disposal. Meetings will be held with regulatory agencies.

In light of the advancements made in Phase I, Task 2 of Phase II will include regulatory coordination and updates, a review of CEQA and NEPA requirements, and permitting strategy improvements.

Task 3 – Coordination with EMWD’s Water Banking Project

As part of a separate project, EMWD is developing a Water Banking Program. Under Task 3, the two efforts will be coordinated and any potential conflicts, such as planned use of recharge ponds and sources and timing of water, will be identified and resolved.

Task 4 – Additional Salt and Nitrate Balance Scenarios

The salt and nitrate balance for the SJUPMZ that was completed during Phase I will be refined to generate a “worst-case” scenario from a salt balance perspective. This “worst-case scenario” will include imported water with higher total dissolved solids (TDS) and incorporate the water banking coordination from Task 3.

Task 5 – Technical Support for Funding Pursuits

Technical information will be prepared to support EMWD’s funding pursuits related to the IPR project.

Task 6 – Title XVI Feasibility Study

The Title XVI Feasibility Study will be prepared for the IPR Project. It will incorporate information and analysis developed by EMWD through the Integrated Resources Plan, the IPR Project Phase I Feasibility Study, the IPR Project Phase II Feasibility Study, financial information from EMWD, and other relevant documents. The Title XVI Feasibility Study will address all required elements delineated in Directives and Standards WTR 11-01, including: introductory information; statement of problem and needs; water reclamation and reuse opportunities; description of alternatives; economic analysis; selection of the proposed Title XVI project; environmental consideration and potential effects; legal and institutional requirements; financial capability of the project sponsor; and research needs.

Task 7 – Project Definition Report

Task 7 will advance the following technical components of the proposed IPR Project: recharge approach; conveyance facilities; evaporation pond pre-design; treatment processes pre-design; site selection and development; construction sequencing and schedule; and costs.

Task 8 – Project Management

A series of technical meetings and workshops will be held throughout the Phase II Study to discuss the project progress and findings and receive input from EMWD staff. The workshops will be structured to identify key decisions and questions that need to be resolved to advance the work in the Phase II Study.

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 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. 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 source), and water from Northern California via the State Water Project (SWP).

As one of California's largest water agencies, 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 Sacramento-San Joaquin Delta (Delta), which is the area of pumping origin for the SWP, and salinity of Colorado River supplies. 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.

EMWD also faces a number of challenges to increase local potable and non-potable water supplies. Local groundwater resources are protected and managed under two management plans (in collaboration with other agencies) because areas of the underlying groundwater basin are subject 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 order to maintain compliance with regulated water quality objectives. EMWD also faces future projected seasonal recycled water supply production that exceeds the amount current facilities and demands would capture or use, such that recycled water that could otherwise be put to beneficial use would be discharged. 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.

In 2010, the RWQCB adopted Resolution No. R8-2010-0039, which amended the Santa Ana Basin Plan specifically in the SJUPMZ. The amendment incorporates "maximum benefit" TDS and nitrate-nitrogen water quality objectives and a Maximum Benefit Salt Management Plan for that portion of the EMWD

service area. Under this order, EMWD must comply with the RWQCB's implementation schedule for the specific "maximum benefit" commitments. As long as the commitments and schedule are being met, then the "maximum benefit" objectives will remain in place; otherwise, the more restrictive "antidegradation" water quality objectives will be imposed and associated mitigation measures will be required to achieve those lower values. The "maximum benefit" objectives for the SJUPMZ are 500 milligrams per liter (mg/L) TDS and 7.0 mg/L nitrate-nitrogen. The more stringent "antidegradation" objectives of 320 mg/L TDS and 1.4 mg/L nitrate-nitrogen are significantly lower, and could restrict water recycling projects such as the proposed IPR Project.

EMWD is participating in several groundwater management efforts to improve both water quality and water supply in the basin. EMWD, other local water agencies, and private users have developed the Hemet/San Jacinto Water Management Plan to provide a foundation that guides and supports responsible water management now and in the future. EMWD has also 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. The stakeholders developed the Stipulated Judgment entered on April 18, 2013 in Eastern Municipal Water District v. City of Hemet, at al (Riverside County Superior Court case no. RIC 1207274) that calls for the formation of a Watermaster to implement 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 commitment to implement these water management activities demonstrates that the management area is a highly managed, high-value asset for the in-basin producers and users. These commitments will promote the use of recycled water, provide an alternative water supply for the area, reduce local overdraft of the SJUPMZ, increase the sustainability and reliability of not only the SJUPMZ but adjacent management zones as well, and will maximize the reasonable and beneficial use of all waters available to the area. This will result in the protection of the beneficial uses of the SJUPMZ and adjacent groundwater management zones, and demonstrate that water quality consistent with maximum benefit to the people of the State will be maintained.

In light of these concerns and commitments for regional water supply, EMWD completed the Integrated Resources Plan in July 2011 to address future water supply challenges and develop an overall strategy for future water supply to meet multiple objectives which are consistent with the EMWD mission "to deliver value to our customers and the communities we serve by providing safe, reliable, economical and environmentally sustainable water, wastewater and recycled water services." The Integrated Resources Plan is a flexible, long-term strategy for the development of water supply, implementation of key facilities, and execution of inter-agency agreements needed to expand and operate EMWD's regional water, recycled water, and wastewater system.

The Integrated Resources Plan recommended strategies for both expanded local water supplies and imported water supplies. IPR using recycled water was recommended as a key local water supply strategy for EMWD's future water supply portfolio. IPR supports many of the evaluation objectives established by the Integrated Resources Plan, most specifically the objectives of maximizing local

resources and maximizing water use efficiency by minimizing discharges of recycled water outside of the EMWD service area to maximum beneficial use of recycled water. The IPR Project is anticipated to provide 5,000 AFY of water for potable uses by 2020 and 15,000 AFY by 2030.

With the two-phase IPR Project Feasibility Study, EMWD is initiating the first steps of implementing an IPR project in an effort to achieve:

- Long-term sustainable water supply at a reasonable cost;
- Increased water supply reliability (droughts and emergencies);
- Maximum sustainability and management of local water resources including groundwater and surface water;
- One-hundred percent utilization of recycled water resources in an environmentally responsible manner (no discharge of recycled water);
- Regional salinity management pursuant to the RWQCB Basin Plan objectives and Maximum Benefit Analysis for the SJUPMZ;
- Proactive compliance with all regulatory requirements and mandates; and
- Minimization of capital, O&M, and lifecycle costs.

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 Title XVI 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 32,500 AFY of recycled water to retail and wholesale customers for both municipal and agricultural purposes. Municipal customers use recycled water for landscape irrigation and industrial process water. Agricultural customers use recycled water for irrigation of crops. A portion of agricultural demand of recycled water is in-lieu of using groundwater.

Under the Integrated Resources Plan, IPR using recycled water was recommended as a key local water supply strategy for EMWD's future water supply portfolio. By recharging to groundwater basins in the SJUPMZ, IPR supports many of the evaluation objectives established by the Integrated Resources Plan, most specifically the objectives of maximizing local resources and maximizing water use efficiency by minimizing discharges of recycled water outside of the EMWD service area.

The proposed approach for the IPR Project is to deliver a reliable, drought-proof, sustainable, local supply of recycled water to replenish groundwater basins at constructed recharge ponds. In the Phase I Study, existing recharge ponds or other potential recharge sites in the SJUPMZ will be identified and evaluated for their use in the IPR Project. In the Phase II Study, a more detailed recharge approach utilizing the selected ponds will be completed.

2. Describe the potential water market available to use any recycled water that might be produced upon completion of a Title XVI 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 purposes, construction, and wholesale deliveries. EMWD's 2005 Mandatory Use Policy catalyzed a significant increase in developer requests for landscape service at the same time when there were many other requests for recycled water supply from both internal and external stakeholders. Total projected demands for recycled water exceeded available supply resulting in need to develop a Recycled Water Strategic Plan (Strategic Plan). The Strategic Plan, completed in 2009, included objectives to maximize the beneficial use of recycled water and optimize salt balance. IPR was identified as a potential recycled water opportunity in the Strategic Plan. Subsequently, EMWD has allocated a minimum of 15,000 AFY of recycled water supply for IPR.

The IPR Project will provide recycled water for groundwater replenishment in the SJUPMZ. EMWD could then make use of that additional water supply for potable uses through its potable retail water supply system. In 2010, EMWD provided 77,700 AF of potable retail deliveries, and that demand is estimated to increase to over 162,000 AF by 2035.

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 five Regional Water Reclamation Facilities, storage ponds, pump stations, and an extensive distribution system that currently produces and delivers approximately 45 to 50 millions of gallons per day of tertiary recycled water to customers in EMWD's service area.

Table 1 presents the projected recycled water supply, demand, and availability for an IPR project 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.

Table 1 Recycled Water Availability for IPR

	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
Supply Available for IPR	1,100	4,600	11,200	17,300	23,000

Whenever EMWD's recycled water storage ponds exceed their capacity, recycled water is discharged to Temescal Creek. Currently, these discharges typically 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 when EMWD's recycled water supply greatly exceeds the demand. The IPR Project can utilize the excess recycled water that would normally be discharged into Temescal Creek for

beneficial use and as an alternate water source for EMWD customers, as well as the agencies that are part of the SJUPMZ (EMWD, Lake Hemet Municipal Water District [LHMWD], Cities of Hemet and San Jacinto, and the Soboba Tribe). With the IPR Project, EMWD seeks to put 100 percent of its recycled water to beneficial use in an environmentally responsible manner, while improving local groundwater supply and quality.

As shown in Table 1, EMWD has sufficient recycled water supply to implement an IPR project of about 5,000 AFY as early as 2020, and expand the IPR deliveries to 15,000 AFY around 2030. Phase I of the Feasibility Study will evaluate the quality and appropriate treatment of the existing recycled water. Phase II will further develop the advanced water treatment processes and evaluate options for siting an AWTF at the SJVRWRF.

Evaluation Criterion 3: Description of Potential Alternatives

15 points

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

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

The Integrated Resources Plan was developed to establish a long-term water resources strategy that reflects EMWD's priorities and aligns with its mission and objectives. 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.

The Integrated Resources Plan analyzed nine portfolios with varying components to support a long-term water resources strategy. Other water supply alternatives included in these portfolios were water conservation, augmentation wells, urban stormwater capture, groundwater supply (including brackish desalination), water transfers, water banking, and increased imported water from MWD. Of the nine water supply strategy portfolios analyzed, IPR was a common component to strengthening EMWD's local water supply strategy to meet the region's needs. IPR supports many of the evaluation objectives established by the Integrated Resources Plan, most specifically the objectives of maximizing local resources and maximizing water use efficiency by minimizing discharges of recycled water outside of the EMWD service area.

For the IPR Phase I study, the following six objectives will be used to analyze five IPR alternatives. The objectives were developed based on guidance and input from EMWD management and staff.

- Maximize Cost-Effectiveness
- Maximize Reliability
- Minimize Environmental Impact
- Maximize Implementation
- Improve Groundwater Basin Water Quality
- Minimize Operational Complexity

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

EMWD has initiated the IPR Project Feasibility Study to achieve its objectives of fully utilizing recycled water within its service area, maximizing potable water offset, creating new local potable water supplies, minimizing cost, and managing groundwater basin salt balance. The IPR Project will convey recycled water from the SJVRWRF to groundwater recharge ponds along the San Jacinto River and blend with diluent water for replenishment of the groundwater basin for potable use. The SJVRWRF recycled water may receive additional treatment at an AWTF. The capacity of the IPR Project will be phased over time, with an ultimate capacity of a 15,000 AFY by 2030.

Under the Phase I Study, EMWD will evaluate the five IPR alternatives, shown in Table 2, against the objectives established for the project. The five alternatives are based on four critical water quality parameters that drive the sizing of an IPR project. These four critical water quality parameters are regulated by the Proposed GWR with Recycled Water Regulations (total organic carbon [TOC] and total nitrogen) and the objectives included in the Basin Plan (TDS and nitrate-nitrogen). In addition to different levels of treatment, each alternative will include customized recharge, diluent water, and conveyance methods.

Table 2 IPR Alternatives

Alternative	Theme	Treatment Description
1	Enhanced Natural Process	Tertiary recycled water
2	Balance Salt/Nutrient Reduction	Blend of tertiary recycled water and reverse osmosis (RO) permeate
3	Maximize Salt/Nutrient Reduction	Full advanced treatment
4	Minimize Brine	Alternative treatment (ozone-biologically activated carbon) with sidestream RO
5	Maximum Flexibility and Lowest Initial Cost	Phase 1 – Tertiary recycled water Phase 2 – Same as Alternative 2 (Blend of tertiary recycled water and RO permeate)

Once the proposed IPR alternative has been identified based on the results of the alternatives analysis completed during Phase I of the Feasibility Study, Phase II will continue to progress and refine elements of the IPR Project.

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

Various options are available for treating recycled water intended for groundwater recharge. Some of the technologies will result in better water quality and better value in terms of improvements in water quality relative to unit capital cost, which must be weighed with the potential for greater cost of O&M and the potential for environmental impact caused by higher energy requirements, waste product disposal, and material usages.

Recycled water treatment options that will be preliminarily evaluated in the Feasibility Study include: tertiary treatment only (the current level of treatment at the SJVRWRF); advanced treatment using membrane filtration, RO, ultraviolet light, or advanced oxidation processes (AOP); and various combinations of these treatment technologies. Alternative treatment technologies are other processes that are available but not as commonly used in recycled water applications as tertiary filtration and advanced treatment using membranes. These alternative processes include nanofiltration, electrodialysis reversal, ozone-biologically activated carbon filtration, and ozone-AOP. Phase I of the feasibility study will evaluate the five IPR alternatives presented in Table 2. Each alternative has varying levels of treatment, and each has advantages and disadvantages that will be assessed during the alternatives evaluation.

Brine will be produced by the alternatives offering a higher level of treatment with RO to control or reduce salinity within the service area. Considerations to minimize, use, and dispose brine must be included in the development of IPR alternatives that include RO. The Phase I Study will evaluate brine disposal strategies (such as the Inland Empire Brine Line or evaporation ponds) and brine minimization strategies (such as high recovery RO, interstage lime treatment, closed circuit desalination, ion exchange enhancing technologies, zero discharge desalination, and zero liquid discharge systems).

Evaluation Criterion 4: Stretching Water Supplies

15 points

Points will be awarded based on the extent to which the proposal demonstrates that the Title XVI 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 Title XVI feasibility study.

By pursuing an IPR project, 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 would capture or use. As a result, EMWD may 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.

Other supply options that were analyzed in the Integrated Resources Plan's water resource portfolios included conservation, augmentation wells, brackish desalination, water banking, and transfers.

The IPR project will provide up to 15,000 AFY of water for potable uses by 2030. This new source will increase local groundwater storage, reduce imported water purchases, and eliminate the need for additional imported purchases to meet projected demands. Expansions to the Hemet and Perris Water Filtration Plants and the imported water pipelines that service them may be postponed with the implementation of the IPR Project.

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 Title XVI 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 2010, EMWD's imported surface water deliveries from MWD were approximately 91,600 AF, or about 60 percent of EMWD's total water supplies that year.

The IPR Project will have an ultimate capacity of a 15,000 AFY by 2030. This supply will reduce EMWD's reliance on imported water by 15,000 AFY from the natural watercourses of the Feather River and Delta, which feed SWP supplies, and the Colorado River. The IPR Project Feasibility Study will develop an implementation plan that will identify the phasing and supply developed over time.

The groundwater modeling will provide an updated safe yield estimate for the SJUPMZ that will allow for improved management of that basin. Enhanced management of the basin will potentially allow for increased recharge and pumping activities to occur.

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 Title XVI feasibility study.

Over 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. The IPR Project has an ultimate capacity of a

15,000 AFY. The IPR Project Feasibility Study will develop an implementation plan that will lay out the phasing and supply developed over time.

MWD's CRA delivers water from the Colorado River that is stored in Lake Havasu, part of the Bureau of Reclamation's Parker-Davis Project. The IPR Project will reduce EMWD's reliance on Federal water supplies from the Colorado River, easing some of the competing demands on this water source.

The SWP pumps water from the Delta in Northern California, which is also the pumping location for the Bureau of Reclamation's Central Valley Project (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 IPR Project 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.

Evaluation Criterion 5: Environment and Water Quality

15 points

Points will be awarded based on the extent to which the proposal demonstrates that the Title XVI 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 nonlisted 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 Title XVI feasibility study.

Under Order No. R8-2010-0039, EMWD must comply with the RWQCB's implementation schedule for the specific "maximum benefit" commitments for the SJUPMZ. As long as the commitments and schedule are being met, then the "maximum benefit" objectives will remain in place; otherwise, the more restrictive "antidegradation" water quality objectives will be imposed and associated mitigation measures will be required to achieve those lower values. The "maximum benefit" and "antidegradation" objectives are described in Evaluation Criteria 1. There are triggers in the Maximum Benefit Basin Plan Amendment that require additional desalting in the groundwater basin within six months of either of the following:

- When the 5-year running average TDS of the SJVRWRF effluent exceeds 640 mg/L; and/or
- When the volume-weighted, ambient, average concentration in the SJUPMZ of TDS exceeds 490 mg/L.

In Phase I of the Feasibility Study, a salt and nitrate balance model will be developed to project future groundwater basin TDS and nitrate-nitrogen concentrations for the baseline condition (i.e., no IPR Project) and for the five IPR alternatives. The salt and nitrate balance will be refined in Phase II for the proposed project. The IPR Project may include additional treatment to reduce TDS and nitrates, which will improve groundwater quality and aid the District in meeting the maximum benefit commitments for the groundwater basin.

Implementation of the IPR Project would also improve water quality conditions in the San Jacinto River because the creation of new recharge ponds would reduce urban runoff to the river.

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

Over 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. The IPR Project has an ultimate capacity of a 15,000 AFY by 2030.

MWD's CRA delivers water from the Colorado River that is stored in Lake Havasu, part of the Bureau of Reclamation's Parker-Davis Project. The IPR Project will improve flow conditions in the Colorado River by reducing EMWD's reliance on federal water supplies from the Colorado River.

The SWP pumps water from the Delta which originates from SWP facilities along the Feather River. The IPR Project will improve flow conditions in the Feather River, Sacramento River, and Delta by reducing EMWD's reliance on SWP water supplies from these sources.

The proposed IPR Project will recharge recycled water and diluent water in recharge ponds 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 Title XVI feasibility study.

The recycled water will be delivered to ponds specifically constructed for groundwater recharge for water supply. The recharge ponds are not intended to provide habitat for federally listed species. The feasibility study will evaluate where project facilities may affect critical habitat for species in the area. CEQA/NEPA documentation will evaluate potential effects on all listed species in the project area. The CEQA/NEPA analysis will be conducted as a subsequent phase of the IPR Project studies.

Evaluation Criterion 6: Legal and Institutional Requirements

10 points

Points will be awarded based on the extent to which the proposal demonstrates that the Title XVI 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.

Phase I of the feasibility study will review regulatory, institutional, and environmental requirements for the IPR Project and will develop a permitting strategy. Phase II of the feasibility study will refine that approach based on the selected alternative and begin coordination with regulatory agencies.

The Feasibility Study will evaluate the CDPH Proposed GWR Regulations, including general requirements, classification by method of recharge, pathogen control and multiple barrier requirements, response retention time, recycled water contributions, diluent water requirements, TOC requirements,

nitrogen requirements, other recycled water quality requirements, and monitoring well requirements. Additionally, the Feasibility Study will evaluate the EMWD Master Reclamation Permit and the State Water Resources Control Board Recycled Water Policy and Antidegradation Policy. The main permit governing recycled water is the Master Reclamation Permit. As a groundwater recharge project, the proposed IPR Project would need to secure its own separate permit. The key applicable requirements for EMWD's IPR Project that must be addressed pursuant to the Recycled Water Policy are groundwater evaluations to determine whether the groundwater recharge project has a substantial effect and monitoring for constituents of emerging concern.

In order to implement an IPR project in California, the proposed project must comply with legal and institutional agreements applicable to issues such as water rights and brine/waste disposal. EMWD is investigating the proposed IPR Project options in light of current and proposed requirements including Maximum Benefit Basin Plan Amendment for the SJUPMZ, SJUPMZ Groundwater Rights, and Soboba Water Rights Settlement.

As previously described, the RWQCB's Basin Plan amendments for the SJUPMZ incorporated "maximum benefit" TDS and nitrate-nitrogen water quality objectives and a Maximum Benefit Salt Management Plan for that portion of the EMWD service area. As part of the Hemet/San Jacinto Water Management Plan, EMWD made specific commitments to implement the "maximum benefit" objectives in accordance with the schedule set forth in the amendment. EMWD's Management Plan is supported by LHMWD, the Cities of Hemet and San Jacinto, and two local large farming operations. The IPR Project Feasibility Study will conduct groundwater modeling to evaluate effects on the groundwater basin's salt and nitrate balance to determine whether the IPR project will align with the specific commitments EMWD made to implement the "maximum benefit" objectives in the SJUPMZ.

The SJUPMZ is one of the groundwater sub-basins in Hemet-San Jacinto area established by the Santa Ana RWQCB Basin Plan. In order to effectively manage the local groundwater supply, EMWD, LHMWD, the City of Hemet, and the City of San Jacinto, along with the California Department of Water Resources, developed the Hemet/San Jacinto Groundwater Management Plan. The groundwater resources in the Hemet-San Jacinto Groundwater Management Area, including the SJUPMZ, 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. The IPR Project aligns with the Water Management Plan by enhancing groundwater supplies to meet future water demands and mitigating the 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 2008 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 acre-feet of water in the groundwater basin. The IPR Project implementation coordinates well with the requirements of the Settlement. The 7,500 AFY of imported water required by the Settlement to be recharged can serve as

diluent water, and new recharge facilities will be constructed to service the Settlement water and the IPR Project.

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 Title XVI 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 is working on an Energy Management Plan, which is recommending energy efficiency measures and production of green power at EMWD facilities. A solar generating facility, up to one megawatt in size, is being implemented at the SJVRWRF. The Energy Management Plan will be extended to include opportunities for energy efficiency measures to help power the AWTF for the IPR Project. Additionally, power costs will be incorporated into IPR Project Phase I alternatives analysis as one of the performance measures for maximizing cost-effectiveness. During design of the IPR Project, facility components that may be considered for energy savings opportunities include variable speed pumps and energy recovery devices.

Evaluation Criterion 8: Watershed Perspective

10 points

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

The IPR Project is included in the One Water One Watershed Integrated Regional Water Management Plan for the Santa Ana Watershed region. The San Jacinto River Watershed is tributary to the Santa Ana River Watershed; therefore, this project is beneficial to and will work in coordination with other water management efforts within the watershed. The San Jacinto River Watershed is the headwaters for the overall watershed.

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 on 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.

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 IPR Project alternatives will evaluate regional watershed benefits to these stakeholders through improved water quality, increased groundwater levels, and a more reliable water supply.

EMWD's commitment to implement these water management activities demonstrates that the groundwater management area is a highly managed, high-value asset for the in-basin producers and users. These commitments will promote the use of recycled water, provide an alternative water supply for the area, reduce local overdraft of the SJUPMZ, increase the sustainability and reliability of not only the SJUPMZ but adjacent management zones as well, and will maximize the reasonable and beneficial use of all waters available to the region. This will result in the protection of the beneficial uses of the SJUPMZ and adjacent management zones, and demonstrate that water quality consistent with maximum benefit to the people of the State will be maintained.

The Integrated Resources Plan was developed to address EMWD's future regional water supply challenges and develop an overall strategy for future water supply to meet multiple objectives. IPR was recommended in the Integrated Resources Plan as a key local water supply strategy for EMWD's future water supply portfolio. IPR supports many of the evaluation objectives established by the Integrated Resources Plan, most specifically the objectives of maximizing local resources and maximizing water use efficiency by minimizing discharges of recycled water. The IPR alternatives, presented in Evaluation Criteria 3 Question 2, will contribute to greater groundwater storage in the basin and improved groundwater quality, and 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 you will make your contribution to the cost share requirement, such as monetary and/or in-kind contributions and source funds contributed by the applicant (e.g., reserve account, tax revenue, and/or assessments).

EMWD is providing all of the non-Reclamation funding to perform the IPR Project Feasibility Study. EMWD's contribution will be paid for through its Special Projects Funding Source for Fiscal Years 2014/2015.

(1) Describe any in-kind costs incurred before the anticipated study start date that you seek to include as study costs. Include: (a) What study expenses have been incurred:

The study expenses that have been incurred as of July 1, 2013 are direct labor, engineering labor, and consultants' efforts related to the Phase I Study.

(b) How they benefitted the study:

EMWD initiated planning activities associated with the IPR Project with the preparation of the Phase 1 Study to evaluate the feasibility of the IPR Project. The IPR Project elements were defined and then combined together into complete IPR alternatives. The IPR Project elements include recycled water treatment, recharge method (i.e., recharge ponds or injection wells), recharge locations, conveyance for recycled water and diluent water, brine management, and groundwater extraction. The complete alternatives were then compared and ranked using project-specific evaluation criteria to determine the recommended alternative, which is to recharge a blend of RO permeate and tertiary recycled water to achieve the long-term IPR goal of 15,000 AFY of water for potable uses by 2030. As result of this effort, EMWD will be embarking on the Phase II Study that will further define and evaluate the project.

(c) The amount of the expense:

The total amount of eligible costs incurred from July 1, 2013 through April 5, 2014 is \$305,609.27.

(d) The date of cost incurrence:

These costs were incurred from July 1, 2013 through April 5, 2014.

(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 perform the IPR Project Feasibility Study.

(3) Describe any funding requested or received from other Federal partners. Note: Other sources of Federal funding may not be counted towards the applicant’s 50 percent cost share unless otherwise allowed by statute.

Currently no funding has been requested or received from other potential Federal partners. EMWD may pursue additional funding sources in the future.

(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 IPR Project Feasibility Study.

Please include the following chart to summarize your non-Federal and other Federal funding sources. Denote in-kind contributions with an asterisk (*). Please ensure that the total Federal funding (Reclamation and all other Federal sources) does not exceed 50 percent of the total estimated study cost.

Table 3 Summary of Non-Federal and Federal Funding Sources

Funding Sources	% of Total Study Cost	Funding Amount
Non-Federal Entities		
1. EMWD	60%	\$690,338.15
<i>Non-Federal Subtotal:</i>		\$690,338.15
Other Federal Entities		
None		\$0
<i>Other Federal Subtotal:</i>		\$0
<i>Requested Reclamation Funding:</i>	40%	\$450,000.00
<i>Total Study Funding:</i>	100%	\$1,140,388.15

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 the following page. It was approved at the April 30, 2014 Board of Directors meeting.

EXHIBIT A

RESOLUTION NO. 2014-051

A RESOLUTION OF THE BOARD OF DIRECTORS OF EASTERN MUNICIPAL WATER DISTRICT SUPPORTING THE DISTRICT'S PROPOSAL FOR THE U.S. BUREAU OF RECLAMATION'S WATERSMART DEVELOPMENT OF FEASIBILITY STUDIES UNDER THE TITLE XVI WATER RECLAMATION AND REUSE PROGRAM FOR THE INDIRECT POTABLE REUSE PHASE II FEASIBILITY STUDY, AND DESIGNATING AN AUTHORIZED REPRESENTATIVE

WHEREAS, Eastern Municipal Water District desires to finance a portion of the costs of the Indirect Potable Reuse Phase II Feasibility Study (the "Project"); and

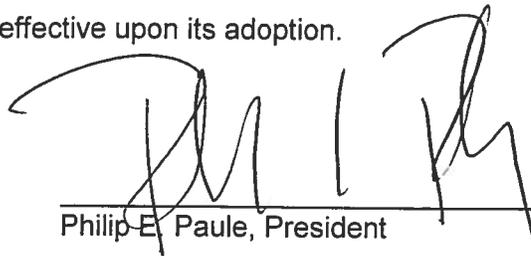
WHEREAS, the District intends to finance the cost of the Project or portions of the Project with moneys provided by the U.S. Bureau of Reclamation ("Reclamation).

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 Grant Proposal for financing the cost of the Project from Reclamation; and
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 receipt of WaterSMART Grant financial assistance; and
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.

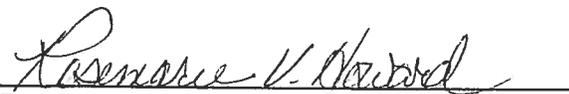
DATED: April 30, 2014



Philip E. Paule, 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 April 30, 2014.

ATTEST:



Rosemarie V. Howard, Secretary

(SEAL)

Budget Proposal

Include a study budget that estimates all costs (not just costs to be borne by Reclamation). Include the value of in-kind contributions of goods and services and sources of funds provided to complete the study. The proposal must clearly delineate between Reclamation and applicant contributions.

The study budget shall include detailed information on the categories listed below and must clearly identify all study costs. Unit costs shall be provided for all budget items including the cost of work to be provided by contractors. Additionally, applicants shall include a narrative description of the items included in the study budget. It is strongly advised that applicants use the budget proposal format shown on tables 2 and 3 at the end of this section or a similar format that provides this information.

Budget Narrative

Submission of a budget narrative is mandatory. An award will not be made to any applicant who fails to fully disclose this information. The budget narrative provides a discussion of, or explanation for, items included in the budget proposal. The types of information to describe in the narrative include, but are not limited to, those listed in the following subsections.

Salaries and Wages

Indicate program manager and other key personnel by name and title. Other personnel may be indicated by title alone. For all positions, indicate salaries and wages, estimated hours or percent of time, and rate of compensation proposed. The labor rates should identify the direct labor rate separate from the fringe rate or fringe cost for each category. All labor estimates, including any proposed subcontractors, shall be allocated to specific tasks as outlined in the recipient's technical study description. Labor rates and proposed hours shall be displayed for each task. Clearly identify any proposed salary increases and the effective date.

Generally, salaries of administrative and/or clerical personnel will be included as a portion of the stated indirect costs. If these salaries can be adequately documented as direct costs, they should be included in this section; however, a justification should be included in the budget narrative.

The key personnel as listed on the budget proposal are:

- Hossein Juybari, Senior Civil Engineer and will serve as the Program Manager;
- Joe Mouawad, Senior Director of Engineering;
- Jayne Joy, Director of Environmental and Regulatory Compliance;
- John Daverin, Senior Engineering Geologist;
- Fermin Balvaneda, Civil Engineer II; and
- John Wuerth, Recycled Water Program Analyst.

The budget proposal, Table 4, includes a breakdown of all the wages, fringe benefits and indirect labor for labor costs incurred as of July 1, 2013 (approved pre-award incurrence date) and to-date (actuals) and forecasted labor costs throughout the estimated duration of the project.

The wage rate = the direct labor charge per hour / the burden factor.

The fringe benefit portion for each employee = the wage rate x the fringe benefit portion of the burden rate.

The indirect labor = the wage rate x indirect cost rate (fixed carry-forward) of 46.53%.

The budget proposal lists all actuals (as of 07/01/13) and estimated hours based on the duration of the project, the scope, involvement of each employee and a resource allocation cost estimate prepared by the Program Manager.

A high average of the direct labor charge per hour was calculated to capture any potential salary increases over the next two years.

Fringe Benefits

Indicate rates/amounts, what costs are included in this category, and the basis of the rate computations. Indicate whether these rates are used for application purposes only or whether they are fixed or provisional rates for billing purposes. Federally approved rate agreements are acceptable for compliance with this item.

The fringe benefit portion of the burden rate was 66.2% for the Engineering Department staff and 77.6% for all other Departments within EMWD for hours incurred as of 07/01/2013 and through 01/13/14. As of 01/14/2014, the fringe benefit portion of the burden rate increased to 69.2% for the Engineering Department staff. The budgeted rates are estimated to be 54.2% for FY 14/15 for the Engineering Department staff and to 61.9% for the remaining EMWD-wide staff. Those rates are a combination of fixed (for actual labor) and provisional rates (for future labor in FY 14/15 & 15/16) for billing purposes.

The fringe benefit rate = the wage rate x the fringe benefit portion of the burden rate.

The costs included within the fringe benefits category are: Pension (PERS); Healthcare; Dental; vision; workman compensation; life insurance; disability insurance; 401A; unemployment; Employee Assistance Program; FICA; and uniforms.

Travel

Include the purpose of the trip, destination, number of persons traveling, length of stay, and all travel costs, including: airfare (basis for rate used), per diem, lodging, and miscellaneous travel expenses. For local travel, include mileage and rate of compensation.

Travel costs as listed on the budget proposal are in the amount of \$1,165.41 and include three airline tickets and a vehicle rental. The travel costs are related to a trip to Reno, Nevada on July 16, 2013. The purpose of the trip was to participate in a site tour of an enhanced evaporation pond similar to that being studied for the IPR Project, with the goal of avoiding the issues and challenges of a similar practice.

No additional travel costs are included in the budget proposal. All project meetings will be held at EMWD facilities.

Equipment

Itemize costs of all equipment having a value over \$5,000 and include information as to the need for this equipment, as well as how the equipment was priced if being purchased for the agreement. If equipment is being

rented, specify the number of hours and the hourly rate. Local rental rates are only accepted for equipment actually being rented or leased for the study. If equipment currently owned by the applicant is proposed for use under the proposed study and the cost to use that equipment is being included in the budget as in-kind cost share, provide the rates and hours for each piece of equipment owned and budgeted. These should be ownership rates developed by the recipient for each piece of equipment. If these rates are not available, the U.S. Army Corps of Engineers (USACE) recommended equipment rates for the region are acceptable. Blue book, Federal Emergency Management Agency (FEMA), and other data bases should not be used.

No equipment costs are included in this grant application.

Materials and Supplies

Itemize supplies by major category, unit price, quantity, and purpose, such as whether the items are needed for office use, research, or construction. Identify how these costs were estimated (i.e., quotes, past experience, engineering estimates or other methodology).

No materials and supplies are included in this grant application.

Contractual

Identify all work that will be accomplished by subrecipients, consultants, or contractors, including a breakdown of all tasks to be completed and a detailed budget estimate of time, rates, supplies, and materials that will be required for each task. If a subrecipient, consultant, or contractor is proposed and approved at time of award, no other approvals will be required. Any changes or additions will require a request for approval. Identify how the budgeted costs for subrecipients, consultants, or contractors were determined to be fair and reasonable.

The total cost of \$1,039,063 includes both incurred and forecasted costs for CDM Smith, Inc. As of 08/05/2013 and through 04/16/2014, EMWD has incurred \$251,673 in consultant fees related to the IPR Project Phase I Study. The tasks performed included groundwater and blend water evaluations, brine proposal alternatives, regulatory institutional and environmental requirements and compliance, facilities needs assessment and constraints analysis, and a program cost analysis. For additional details related to this effort, refer to the attached consultant's fee estimate dated 07/09/2012 in the amount of \$498,719, as shown in Table 5.

Additional tasks to be performed by the Consultant for the Phase II Study are groundwater numerical flow and transport modeling, regulatory coordination and update, water banking, additional salt and nitrate scenarios, technical support for funding pursuits, funding analysis, and project definition related effort. The Consultant's estimated cost to complete the above listed tasks is \$787,390. For additional details related to this effort, refer to the attached consultant's fee estimate dated 04/22/2014 in the amount of \$787,390, as shown in Table 6.

As part of the EMWD competitive bidding process, the Project Manager prepared and issued a request for proposals and received six proposals for the services/tasks described above related to the IPR Project. The proposals were all evaluated based on each firm's experience, technical approach, project understanding, and the team's expertise. The EMWD review panel selected CDM Smith with the best value and highest ranking proposal.

Reporting

Recipients are required to report on the status of their study on a regular basis. Include a line item for reporting costs (including final study and evaluation costs). Please see Section VI.C. Reporting Requirements and Distribution for information on types and frequency of reports required.

Reporting shall be prepared and submitted in accordance to Section. VI.C. Reporting Requirements and Distribution. The reports shall be prepared by a consultant from The Kahlen Group and shall be reviewed and submitted by EMWD staff.

Other

Any other expenses not included in the above categories shall be listed in this category, along with a description of the item and the purpose of its use. No profit or fee will be allowed. Contracts should be broken out into specific line items. You may attach a separate, detailed budget for each contract to adequately address all contractor budget items.

No other costs are included in this grant application.

Indirect Costs

Show the proposed rate, cost base, and proposed amount for allowable indirect costs based on the applicable OMB circular cost principles (see Section III D. Cost-Sharing Requirement) for the recipient's organization. It is not acceptable to simply incorporate indirect rates within other direct cost line items.

If the recipient has separate rates for recovery of labor overhead and general and administrative costs, each rate shall be shown. The applicant should propose rates for evaluation purposes, which will be used as fixed or ceiling rates in any resulting award. Include a copy of any federally approved indirect cost rate agreement. If a federally approved indirect rate agreement is not available, provide supporting documentation for the rate. This can include a recent recommendation by a qualified certified public accountant along with support for the rate calculation.

If you do not have a federally approved indirect cost rate agreement, or if unapproved rates are used, explain why and include the computational basis for the indirect expense pool and corresponding allocation base for each rate. Information on preparing and submitting indirect cost proposals is available from the Interior Business Center, and Indirect Cost Services Section, at <http://www.doi.gov/ibc/services/Indirect_Cost_Services/index.cfm>.

EMWD has negotiated a Federally-approved indirect fixed-carry forward rate of 46.53%. The rate was approved in 2009 and has been applied to all of the District's Federal awards since. Documentation of the approved rate is attached after the budget tables.

Total Cost

Indicate the total amount of study costs, including the Federal and non-Federal cost-share amounts.

The total cost of the IPR Project Feasibility Study is shown in Table 4.

Budget Form

In addition to the above-described budget information, the applicant must complete an SF-424A, Budget Information—Nonconstruction Programs.

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

Table 4 - Budget Proposal

Budget Item Description	COMPUTATION		Quantity Type (hours/days)	TOTAL COST
	\$/Unit	Quantity		
Salaries And Wages (actual incurred as of 07/01/13)				
Hossein Juybari, Sr.Civil Engineer- Project Manager	\$ 64.73	164.50	Hours	\$ 10,647.43
Joe Mouawad, Senior Director of Engineering	\$ 81.00	42.00	Hours	\$ 3,401.90
John Daverin, Senior Engineering Geologist	\$ 58.47	14.00	Hours	\$ 818.56
John Wuerth, Recycled Water Program Analyst	\$ 43.30	7.50	Hours	\$ 324.72
Fringe Benefits (actuals as of 07/01/2013)				
Hossein Juybari, Sr.Civil Engineer- Project Manager	\$ 43.40	164.5	Hours	\$ 7,139.34
Joe Mouawad, Senior Director of Engineering	\$ 54.14	42.00	Hours	\$ 2,273.86
John Daverin, Senior Engineering Geologist	\$ 39.64	14.00	Hours	\$ 554.98
John Wuerth, Recycled Water Program Analyst	\$ 28.66	7.50	Hours	\$ 214.96
Salaries And Wages (Forecast)				
Hossein Juybari, Sr.Civil Engineer- Project Manager	\$ 71.37	237	Hours	\$ 16,915.36
Joe Mouawad, Senior Director of Engineering	\$ 93.12	44	Hours	\$ 4,097.25
John Daverin, Senior Engineering Geologist	\$ 69.59	46	Hours	\$ 3,201.11
John Wuerth, Recycled Water Program Analyst	\$ 27.88	52	Hours	\$ 1,449.76
Fermin Balvaneda, Civil Engineer II	\$ 57.43	50	Hours	\$ 2,871.64
Jayne Joy, Director of Regulatory Compliance	\$ 73.94	44	Hours	\$ 3,253.31
Fringe Benefits (Forecast)				
Hossein Juybari, Sr.Civil Engineer- Project Manager	\$ 38.68	237	Hours	\$ 9,168.12
Joe Mouawad, Senior Director of Engineering	\$ 50.47	44	Hours	\$ 2,220.71
John Daverin, Senior Engineering Geologist	\$ 43.08	46	Hours	\$ 1,981.49
John Wuerth, Recycled Water Program Analyst	\$ 15.11	52	Hours	\$ 785.77
Fermin Balvaneda, Civil Engineer II	\$ 31.13	50	Hours	\$ 1,556.43
Jayne Joy, Director of Regulatory Compliance	\$ 45.77	44	Hours	\$ 2,013.80
Travel				
Airline Tickets	\$ 347.17	3	Per item	\$ 1,041.51
Vehicle Rental	\$ 123.90	1	Per item	\$ 123.90
Equipment				
				\$ -
Supplies/Materials				
				\$ -
Contractual/Construction - CDM SMITH INC				
Actual Costs Incurred as of 07/01/2013				\$ 251,673.96
Estimated Cost through Project Completion				\$ 787,390.00
Other				
Reporting	\$ 71.00	48	Hours	\$ 3,408.00
Total Direct Costs				\$ 1,118,527.87
Indirect Costs - 46.53% (actuals as of 07/01/2013)				
Hossein Juybari, Sr.Civil Engineer- Project Manager	\$ 30.12	164.5	Hours	\$ 4,954.25
Joe Mouawad, Senior Director of Engineering	\$ 37.69	42.00	Hours	\$ 1,582.91
John Daverin, Senior Engineering Geologist	\$ 27.21	14.00	Hours	\$ 380.88
John Wuerth, Recycled Water Program Analyst	\$ 20.15	7.50	Hours	\$ 151.09
Indirect Costs - 46.53% (Forecast)				
Hossein Juybari, Sr.Civil Engineer- Project Manager	\$ 33.21	237	Hours	\$ 7,870.72
Joe Mouawad, Senior Director of Engineering	\$ 43.33	44	Hours	\$ 1,906.45
John Daverin, Senior Engineering Geologist	\$ 32.38	46	Hours	\$ 1,489.48
John Wuerth, Recycled Water Program Analyst	\$ 12.97	52	Hours	\$ 674.57
Fermin Balvaneda, Civil Engineer II	\$ 26.72	50	Hours	\$ 1,336.17
Jayne Joy, Director of Regulatory Compliance	\$ 34.40	44	Hours	\$ 1,513.76
Total Indirect Costs				\$ 21,860.28
Total Study Costs				\$ 1,140,388.15
Federal Share				\$ 450,000.00
Non-Federal Share				\$ 690,388.15

Table 5 - Contractual Costs for CDM Smith - Phase I Study

CDM SMITH, INC Indirect Potable Reuse Program - As Needed Engineering Services		Project Fee Estimate					
Phase 1 Services Manhour Estimate (July 9, 2012)							
Task	Task Description [2]	hours	Labor	Outside Professionals	Other Direct Costs	Total	
TASK 1: GROUNDWATER AND BLEND WATER EVALUATIONS							
1.1	Review existing data, maps and Reports	40	\$6,160	\$0	\$143	\$6,303	
1.2	Identify and Evaluate Recharge/Withdrawal Strategies	170	\$26,680	\$0	\$535	\$27,215	
1.3	Identify and Evaluate Blending Water Strategies	118	\$18,670	\$0	\$387	\$19,057	
1.4	Identify and Evaluate Salt Balance Considerations	157	\$20,695	\$0	\$226	\$20,921	
1.5	Prepare Report Sections						
	Concept-level Facilities Requirements and Costs	230	\$38,760	\$0	\$986	\$39,746	
	Prepare Report Sections	514	\$79,460	\$0	\$1,813	\$81,273	
	Kickoff Meeting	1	32	\$5,880	\$0	\$104	\$5,984
	Technical Meetings	1	20	\$3,640	\$0	\$70	\$3,710
	Workshops	2	48	\$8,200	\$0	\$155	\$8,355
	Subtotal	1329	\$208,145	\$0	\$4,420	\$212,565	
TASK 2: BRINE DISPOSAL ALTERNATIVES							
2.1	Review existing data, maps and Reports	14	\$2,270	\$0	\$37	\$2,307	
2.2	Identify and Evaluate Brine Disposal Strategies	90	\$16,180	\$0	\$302	\$16,482	
2.3	Prepare Report Sections						
	Concept-level Facilities Requirements and Costs	86	\$15,700	\$0	\$288	\$15,988	
	Prepare Report Sections	138	\$23,730	\$0	\$493	\$24,223	
	Technical Meetings	1	18	\$3,660	\$0	\$84	\$3,744
2.6	Workshops		0	\$0	\$0	\$0	
	Workshops	1	28	\$5,000	\$0	\$77	\$5,077
	Subtotal	346	\$61,540	\$0	\$1,204	\$62,744	
TASK 3: REGULATORY, INSTITUTIONAL AND ENVIRONMENTAL REQUIREMENTS AND COMPLIANCE							
3.1	Review existing data, guidelines and permits	8	\$1,520	\$0	\$13	\$1,533	
3.2	Identify and Evaluate Regulatory, Institutional and Environmental Requirements	44	\$7,970	\$0	\$58	\$8,028	
3.3	Identify and Analyze Existing IPR Permits	32	\$5,890	\$0	\$58	\$5,948	
3.4	Prepare Report Sections						
	Prepare Report Sections	68	\$11,790	\$0	\$114	\$11,904	
	Technical Meetings	0	0	\$0	\$0	\$0	
	Workshops	1	26	\$5,050	\$0	\$84	\$5,134
	Subtotal	178	\$32,220	\$0	\$327	\$32,547	
TASK 4: FACILITIES NEEDS ASSESSMENT & CONSTRAINTS ANALYSIS							
4.1	Review existing Recycled Water Supply	14	\$2,360	\$0	\$50	\$2,410	
4.2	Identify, Screen and Evaluate the Facilities Options	192	\$34,110	\$0	\$792	\$34,902	
4.3	Prepare Project Report						
	Concept-level Facilities Requirements and Costs	180	\$32,650	\$0	\$737	\$33,387	
	Prepare Project Report	300	\$50,850	\$0	\$1,277	\$52,127	
	Technical Meetings	3	54	\$10,980	\$0	\$253	\$11,233
	Workshops	1	26	\$5,390	\$0	\$111	\$5,501
	Subtotal	766	\$136,340	\$0	\$3,220	\$139,560	
TASK 5: PROGRAM COST ANALYSIS							
5.1	Prepare Capital and O&M costs for recommended Project Components	75	\$11,700	\$0	\$309	\$12,009	
5.2	Outline Program economics	48	\$8,760	\$0	\$263	\$9,023	
5.3	Develop Funding Strategy	48	\$8,760	\$0	\$263	\$9,023	
5.4	Prepare Report Sections						
	Prepare Report Sections	74	\$12,860	\$0	\$344	\$13,204	
	Technical Meetings	1	16	\$3,260	\$0	\$84	\$3,344
	Workshops	1	22	\$4,590	\$0	\$111	\$4,701
	Subtotal	283	\$49,930	\$0	\$1,373	\$51,303	
TOTAL (TASKS 1-5)		2902	\$488,175	\$0	\$10,544	\$498,719	

Table 6 - Contractual Costs for CDM Smith - Phase II Study

CDM SMITH, INC Indirect Potable Reuse Program Phase II Services Manhour Estimate April 22,2014		Project Fee Estimate				
Task	Task Description	hours	Labor	Outside Professionals	Other Direct Costs	Total
TASK 1: GROUNDWATER NUMERICAL FLOW AND TRANSPORT MODELING						
1.1	Evaluate Available Information and Develop Refined Localized Conceptual Model	86	\$15,144	\$0	\$757	\$15,901
1.2	Develop and Verify Localized Flow Model					
1.2.1	Integrate Regional Model Files with Local Site Conceptual Model	48	\$7,884	\$0	\$394	\$8,278
1.2.2	Establish Local Grid within Regional Mode	128	\$20,036	\$0	\$1,002	\$21,038
1.2.3	Develop Methodology for Flow Assessment in Vadose Zone	46	\$7,362	\$0	\$368	\$7,730
1.3	Develop Transport Model to Simulate Recycled Water Movement in Vadose and Saturated Zones					
1.3.1	Develop Conceptual Transport model for Saturated Zone	70	\$10,624	\$0	\$531	\$11,155
1.3.2	Configure and Test Linkage between LGR Model and MT3DMS	139	\$22,791	\$0	\$1,140	\$23,931
1.4	Run Simulations of up to Five Alternative Scenarios to Evaluate Regulatory Compliance and					
1.4.1	Configure and Run 5 Alternatives	195	\$30,631	\$0	\$1,532	\$32,163
1.4.2	Analyze Results	143	\$24,063	\$0	\$1,203	\$25,266
1.5	Prepare Groundwater Modeling Technical Memorandum	164	\$30,376	\$0	\$1,519	\$31,895
1.6	Technical Focus Meetings and Stakeholder Workshop	128	\$23,652	\$0	\$1,183	\$24,835
1.7	Deliver Model Files and Conduct Training	74	\$14,794	\$0	\$740	\$15,534
Task 1 Subtotal		1,221	\$207,357	\$0	\$10,368	\$217,725
Task 2: REGULATORY COORDINATION AND UPDATE						
2.1	Regulatory Coordination and Update					
2.1.1	Meetings with Division of Drinking Water and RWQCB	136	\$26,368	\$0	\$1,170	\$27,538
2.1.2	Evaluate Potential impacts to Permitting by State Department Merger	36	\$6,844	\$0	\$152	\$6,996
2.1.3	Regulatory TM	124	\$24,206	\$0	\$664	\$24,870
2.2	Environmental Review and Update					
2.3.1	Environmental Review	46	\$8,204	\$0	\$90	\$8,294
2.3.2	Environmental TM	70	\$13,006	\$0	\$250	\$13,256
2.3	Permitting Strategy Update					
2.4.1	Permitting Strategy Review	28	\$5,756	\$0	\$140	\$5,896
2.4.2	Meeting with SCAQMD	34	\$6,904	\$0	\$271	\$7,175
2.4.3	Permitting Strategy TM	130	\$24,192	\$0	\$562	\$24,754
Task 2 Subtotal		604	\$115,480	\$0	\$3,301	\$118,781
TASK 3: COORDINATION WITH EMWD'S WATER BANKING PROJECT						
3.1	Coordinate with EMWD Water Banking Project	100	\$21,030	\$0	\$1,052	\$22,082
Task 3 Subtotal		100	\$21,030	\$0	\$1,052	\$22,082
TASK 4: ADDITIONAL SALT AND NITRATE BALANCE SCENARIOS						
4.1	Identify Salt and Nitrate Scenarios to Model	70	\$10,600	\$0	\$208	\$10,808
4.2	Model Salt and Nitrate Scenarios	96	\$14,000	\$0	\$208	\$14,208
Task 4 Subtotal		166	\$24,600	\$0	\$416	\$25,016
TASK 5: TECHNICAL SUPPORT FOR FUNDING PURSUITS						
5.1	Technical Support for Funding Pursuits	100	\$21,030	\$0	\$1,052	\$22,082
Task 5 Subtotal		100	\$21,030	\$0	\$1,052	\$22,082
TASK 6: TITLE XVI FEASIBILITY STUDY						
6.1	Executive Summary for Title XVI Feasibility Study	282	\$48,128	\$0	\$2,406	\$50,534
6.2	Title XVI Meetings	44	\$8,348	\$0	\$417	\$8,765
Task 6 Subtotal		326	\$56,476	\$0	\$2,824	\$59,300
TASK 7: PROJECT DEFINITION REPORT						
7.1	Recharge Approach	181	\$32,527	\$0	\$1,626	\$34,153
7.2	Conveyance Facilities Alignment TMs					
7.2.1	RO Permeate Conveyance Pipeline Evaluation TM	161	\$28,305	\$0	\$1,263	\$29,568
7.2.2	RO Permeate Stabilization Analysis	145	\$25,265	\$0	\$1,263	\$26,528
7.3	Evaporation Pond Design Approach TM	245	\$45,035	\$0	\$1,814	\$46,849
7.4	Membrane Filtration Equipment Procurement TM	127	\$23,759	\$0	\$1,098	\$24,857
7.5	High Recovery RO Predesign TM	185	\$33,449	\$0	\$768	\$34,217
7.6	AWTF Site Selection and Site Development TM	211	\$37,289	\$0	\$1,509	\$38,798
7.7	Construction Sequencing and Schedule TM	95	\$16,395	\$2,000	\$750	\$19,145
7.8	Opinion of Probable Construction and O&M Costs TM	85	\$16,235	\$20,000	\$652	\$36,887

Table 6 - Contractual Costs for CDM Smith - Phase II Study

CDM SMITH, INC Indirect Potable Reuse Program Phase II Services Manhour Estimate April 22, 2014		Project Fee Estimate				
		hours	Labor	Outside Professionals	Other Direct Costs	Total
7.9	Project Definition Report Executive Summary	126	\$21,106	\$0	\$758	\$21,864
7.10	Project Definition Report Compilation	67	\$9,085	\$0	\$454	\$9,539
<i>Task 7 Subtotal</i>		<i>1,628</i>	<i>\$288,450</i>	<i>\$22,000</i>	<i>\$11,956</i>	<i>\$322,406</i>
TOTAL TASKS 1 THROUGH 7		4,145	\$734,423	\$22,000	\$30,967	\$787,390

copy: February
E. C. Rathbone



United States Department of the Interior

NATIONAL BUSINESS CENTER

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Indirect Cost Services

MAR 21 2011

2180 Harvard Street, Suite 430

Sacramento, CA 95815



EXECUTIVE

March 16, 2011

Mr. Anthony J. Pack, General Manager
Eastern Municipal Water District
2270 Trumble Road
Perris, California 92572-8300

Dear Mr. Pack:

We reviewed the revised indirect cost rate proposal for the fiscal year (FY) ending June 30, 2010. We are prepared to approve a fixed carryforward rate of 46.53 percent for all programs. This rate is based on total direct costs, less capital expenditures and passthrough funds. The result of our review is summarized in the enclosed Exhibit. If you agree with the contents, **please sign and return the two copies** of the Indirect Cost Negotiation Agreement to us to complete the negotiation process. I will then sign and return one copy to you.

New indirect cost rate proposals are necessary to obtain approved rates for FYs 2011 and 2012. These proposals, which were due in our office before January 1, 2010 and 2011, respectively, may be based on actual costs, budgetary data, or a combination of these data. Your proposal requesting a rate for FY 2012 must include a carryforward computation for FY 2010 based on and or reconcilable to financial statements that meet the requirements of the Single Audit Act of 1984, Public Law 98-502, as amended. For additional information on how to prepare indirect cost proposals, please visit our Web site at <http://www.aqd.nbc.gov/ics>.

If you have any questions concerning the agreement or this letter, please write or call Ms. Maria Nua, Program Analyst, at (916) 566-7111.

Sincerely,

Deborah A. Moberly
Indirect Cost Coordinator

Enclosures: Exhibit and Negotiation Agreement

Ref: J: States & Local Gov/Local Gov't & Water Districts/Emwdw719/Emwd-Na.10

Phone: (916) 566-7111
Fax: (916) 566-7110



E-mail: ICS@nbc.gov
Internet: <http://www.aqd.nbc.gov/ics>