

# **WaterSMART: Title XVI Water Reclamation and Reuse Program Funding for Fiscal Year 2016**

**Funding Opportunity R16-FOA-DO-003**

**Eastern Municipal Water District  
Recycled Water Strategic and Master Plan  
Perris, California  
December 10, 2015**

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## List of Abbreviations

AF	acre-feet
AFY	acre-feet per year
CEQA	California Environmental Quality Act
EMWD	Eastern Municipal Water District
IRP	Integrated Resources Plan
IS	Initial Study
Metropolitan	Metropolitan Water District of Southern California
M&I	Municipal and industrial
MMRP	Mitigation Monitoring and Reporting Program
MND	Mitigated Negative Declaration
MT	metric tons
MWh	Megawatt Hour
NEPA	National Environmental Policy Act
NPDES	National Pollutant Discharge Elimination System
O&M	Operations & Maintenance
OSHA	Occupational Safety and Health Administration
OWOW Plan	One Water One Watershed 2.0 Plan
SAWPA	Santa Ana Watershed Project Authority
SWPPP	Storm Water Pollution Prevention Plan
TEPS	Tertiary Effluent Pump Station
TVRWRP	Temecula Valley Regional Water Reclamation Facility

## Technical Proposal and Evaluation Criteria

### Executive Summary

**Date:** December 10, 2015

**Applicant Name:** Eastern Municipal Water District

**Cities, County, State:** Cities of Murrieta and Temecula, Riverside County, California

**Amount of water that will be reclaimed/reused by the project:** 8,375 acre feet per year

**Project Activities summary:**

The Eastern Municipal Water District (EMWD) is requesting funding under the WaterSMART: Title XVI Reclamation and Reuse Program for the Temecula Valley Recycled Water Pipeline. This project is a component of the Recycled Water System Pressurization and Expansion Project, an authorized Title XVI project with an approved feasibility study. The Recycled Water System Pressurization and Expansion Project will result in the direct use of 8,375 acre-feet per year (AFY) of recycled water for beneficial use by pressurizing and expanding EMWD's existing recycled water distribution system. As part of the broader project, EMWD is expanding the existing Temecula Valley Regional Water Reclamation Facility (TVRWRWF), including the Tertiary Effluent Pump Station (TEPS) to increase facility capacity by 5 mgd. In order to provide the increased conveyance capacity and reliability to the system, EMWD is proposing to construct a recycled water pipeline, which will run parallel to an existing pipeline. The proposed pipeline will enable distribution of over 12,000 AFY of recycled water from the TVRWRWF. In addition, a new connection between the existing recycled water pipeline and an existing transmission pipeline will be installed to provide more reliable operation of that portion of the pipeline. Overall implementation of this project will enhance EMWD's stated Strategic Objective to "maximize recycled water use in an environmentally responsible manner" with construction of recycled water delivery facilities that "improve operational flexibility and service level where economically feasible." Figure ES-1 provides the EMWD service area location and Figure ES-2 provides an overview of the pipeline project proposed for funding.

Figure ES-1: EMWD Service Area Location

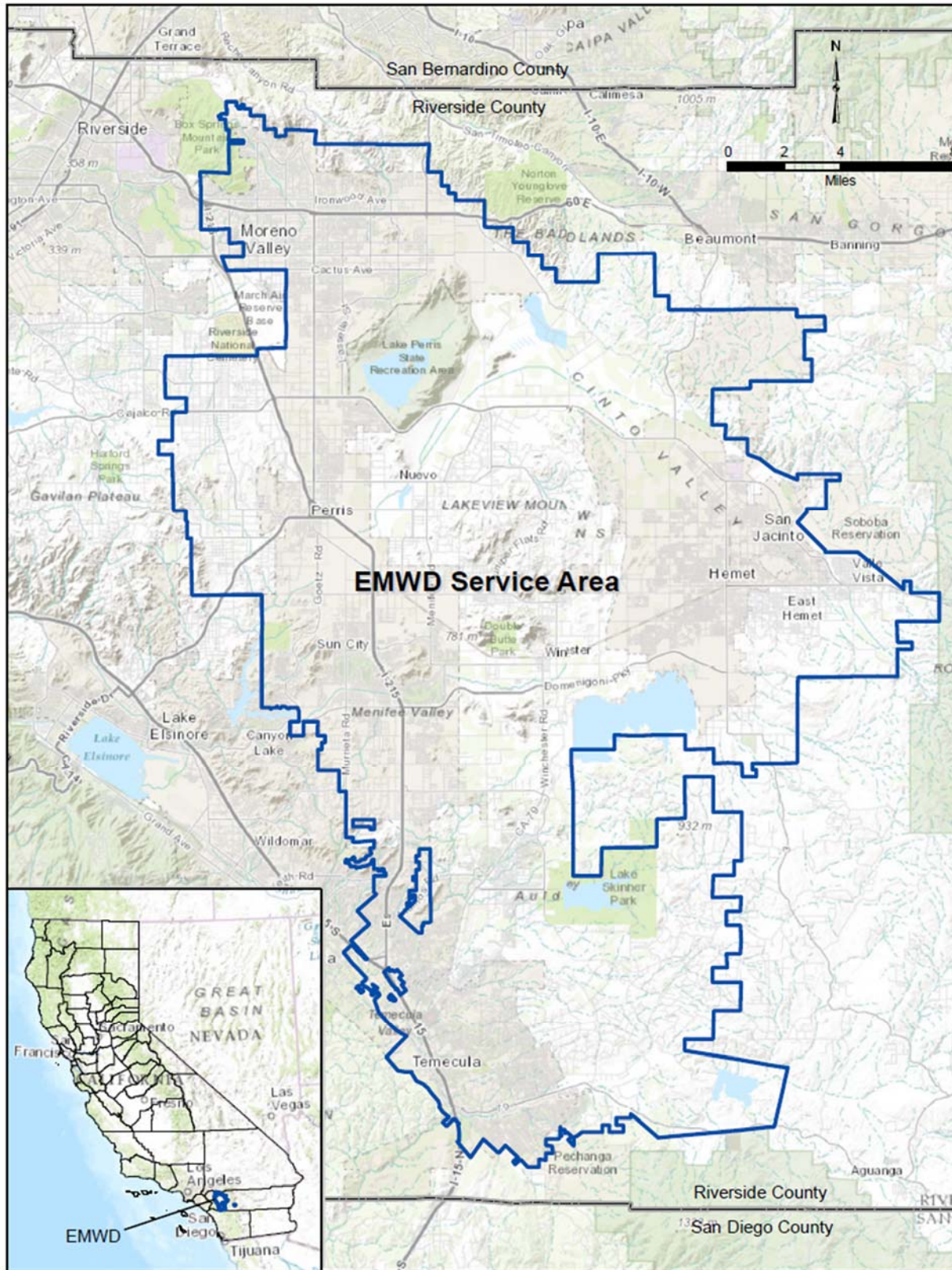


Figure ES-2: Project Proposed for Funding



## Technical Project Description

**The technical project description should provide a brief summary of the Title XVI Project or, when there is more than one project sponsor, the applicant's entire component of the Title XVI Project. If Reclamation has approved a feasibility study for the Project Activities, information contained in the study should be referenced here.**

Located in arid Southern California, EMWD provides water service to an area of approximately 542 square miles, with a population of approximately 785,000 that includes the cities of Moreno Valley, Perris, San Jacinto, Hemet, Murrieta, and Temecula, and unincorporated areas of southwest Riverside County.

Like many water districts in the region, EMWD, a public water agency annexed in 1951 into the Metropolitan Water District of Southern California (Metropolitan), relies heavily on imported water from the Sacramento/San Joaquin Bay-Delta and the Colorado River and faces challenges in meeting the water supply needs of its rapidly growing service area. In light of growing demand, EMWD has invested in developing and managing sustainable local water resources, including groundwater recharge, brackish groundwater desalination, and water recycling.

EMWD currently delivers over 38,000 acre-feet (AF) of recycled water within its service area, much of which is delivered to agricultural customers over the past five years. [REDACTED]

[REDACTED] EMWD has been investing in improvements to its recycled water system in the past years, however, in order for EMWD to effectively make the transition from agricultural to urban use and bring the current system up to a level capable of meeting its new customers' needs, additional key infrastructure investments in the distribution system are necessary.

On October 12, 2007, the US Bureau of Reclamation approved the feasibility study for the Recycled Water System Pressurization and Expansion Project, which will enable the effective transition from the primarily agricultural delivery system to a recycled water system that will meet the growing demands of M&I uses. The project consists of several components including design and construction of recycled water tanks, recycled water storage facilities, pumping facilities and project-related distribution pipelines. These facilities will make 8,375 AFY of recycled water available to M&I customers, offsetting the need for potable water. The proposed Temecula Valley Recycled Water Pipeline is a component of this broader program to maximize the use of recycled water by expanding EMWD's recycled water distribution system.

As a part of the broader program, EMWD is expanding the existing TVRWRF from 18 mgd to 23 mgd. The 5 mgd expansion will include the expansion of the TEPS from 25 mgd to 34.5 mgd. TEPS conveys recycled water via an existing 36- inch and 48-inch diameter cement mortar lined and coated steel pipe, from the TVRWRF to the Palomar RW Booster Station, where it is pumped to Sun City for storage and distribution. The existing 36-inch diameter pipeline, with a length of approximately 17,000 linear feet, will not have capacity to convey the increased flows under the same hydraulic conditions and will require upsizing. Since EMWD has limited on-site storage at

TVRWRF and does not have a permit to discharge to nearby Murrieta Creek, a parallel pipeline, the proposed project “Temecula Valley Recycled Water Pipeline”, will be constructed to provide the increased capacity and reliability.

In addition to the need for increased capacity and reliability, there is an existing connection from the existing 36-inch pipeline to an existing 24-inch transmission pipeline. This connection is controlled by a 24-inch butterfly valve that is encased in concrete, and EMWD’s Operations and Maintenance (O&M) Department are concerned that the valve may have operational issues because of the concrete encasement. Since a connection between the existing 24-inch line and the new 36-inch line is required for reliability of distribution, it is being proposed that a new connection between the TVRWRF and 24-inch be installed and the existing 24-inch valve and connection be abandoned.

The proposed Temecula Valley Recycled Water Pipeline will allow for transmission of additional recycled water from the TVRWRF. It will consist of a 36-inch diameter pipeline which will generally parallel the existing TVRWP within the TVRWRF and Murrieta Creek from the TVRWRF entrance to the connection point with the existing 48-inch transmission main near the intersection of Adams Avenue and Murrieta Creek as shown on Figure 1. This alignment is approximately 3.6 miles (19,200 feet) from the connection at the TEPS to the transmission main connection point. The new pipeline will provide conveyance capacity necessary for future flows at the TVRWRF which are anticipated to be up to 24,000 gallons per minute.

### **Project Cost Estimate and Schedule**

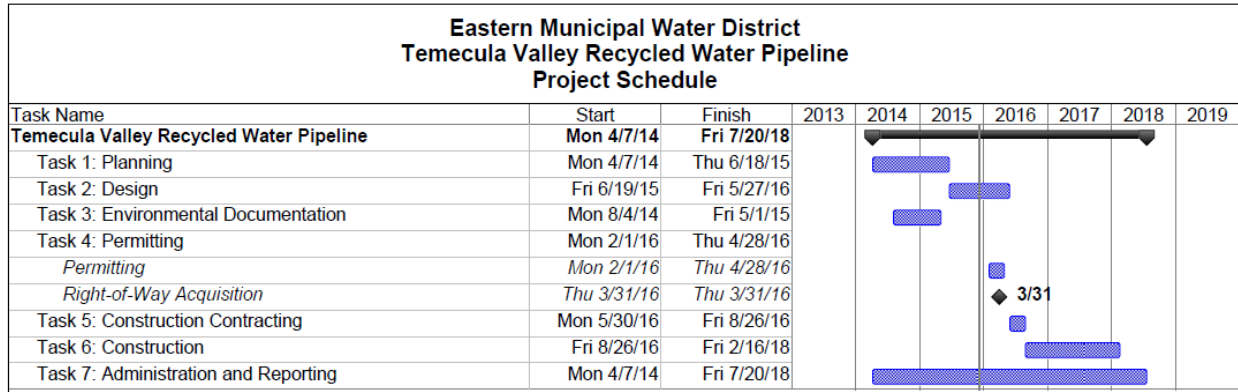
The total project cost for the Temecula Valley Recycled Water Pipeline is approximately \$18,785,800. The estimate captures all activities conducted for this project, as described in the project tasks. Figure 2 provides an overall schedule for the pipeline project that is requesting funding with this application. Construction is scheduled to commence in August 2016 and final project closeout will occur by July 2018. Figure 3 provides the overall schedule for the broader program, the Recycled Water System Pressurization and Expansion Project, which includes the subject pipeline project, the Temecula Valley Recycled Water Pipeline.



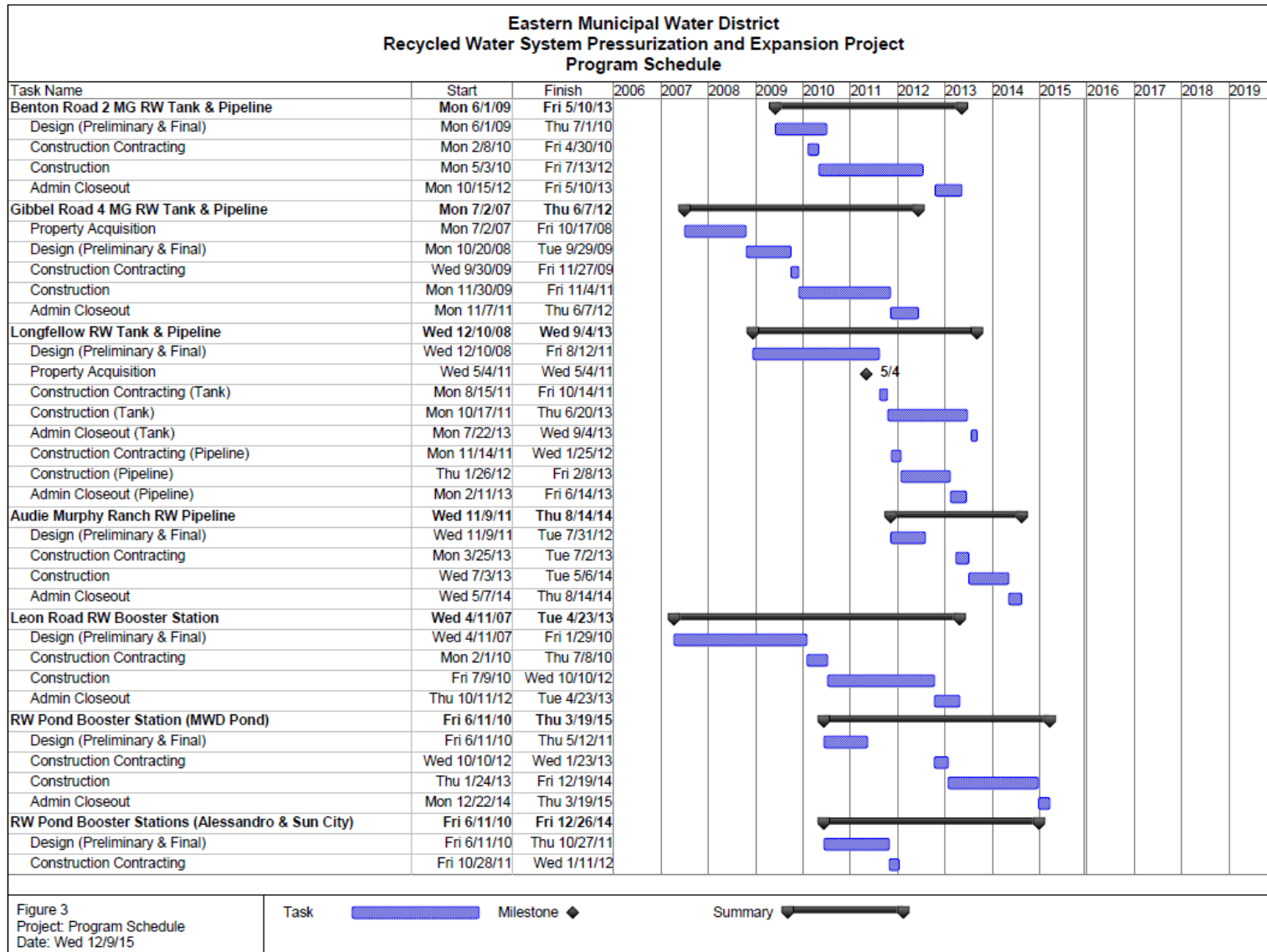
Figure 1: Project Proposed for Funding

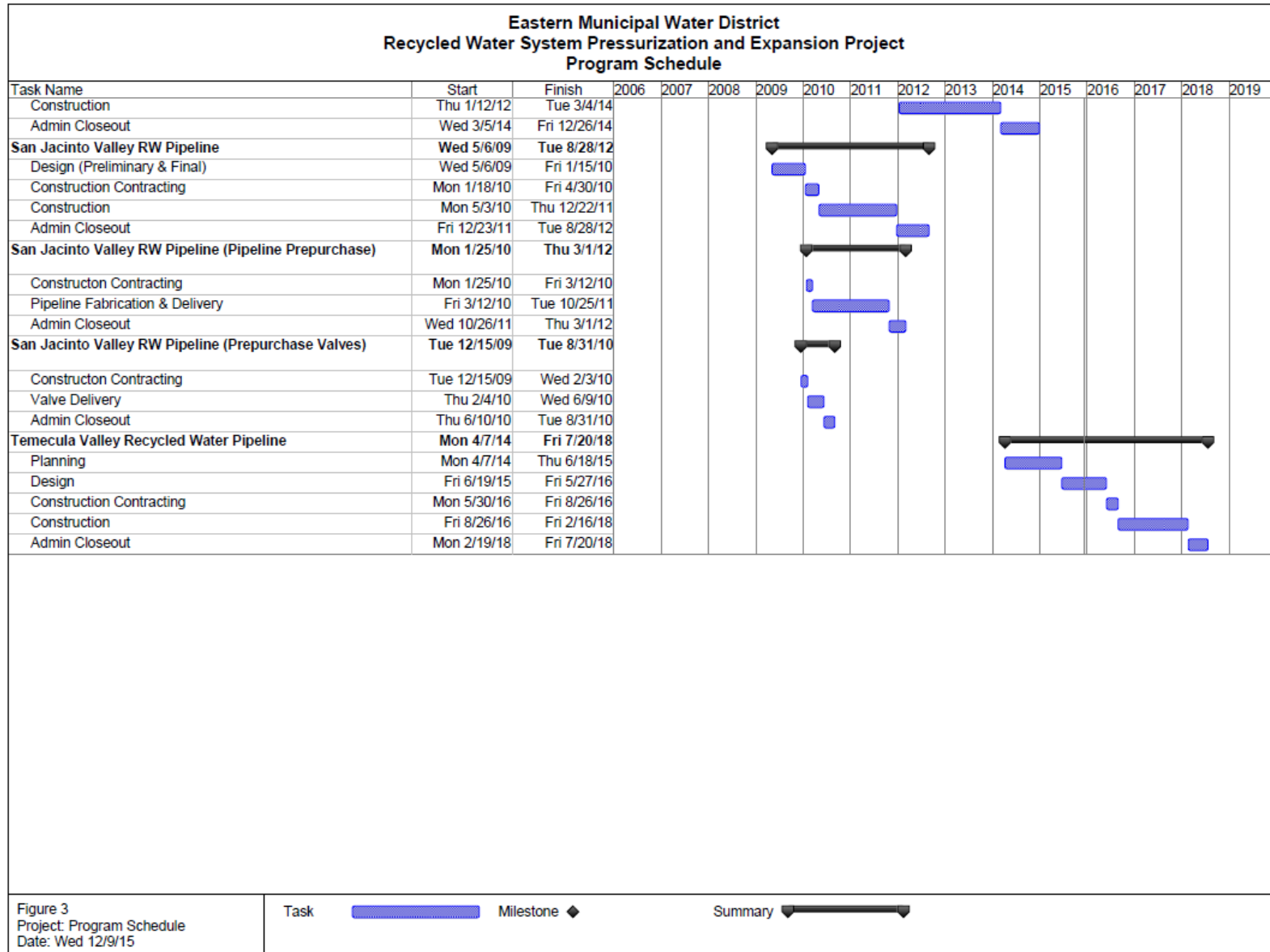


**Figure 2: Temecula Valley Recycled Water Pipeline Schedule**



**Figure 3: Recycled Water System Pressurization and Expansion Project Schedule**





## Project Activities

The following tasks will be conducted for the Temecula Valley Recycled Water Pipeline:

- Task 1 – Planning
- Task 2 – Design
- Task 3 – Environmental Documentation
- Task 4 – Permitting
- Task 5 – Construction Contracting
- Task 6 – Construction
- Task 7 – Administration and Reporting

The following are brief discussions of the specific activities to be conducted under each task.

### *Task 1 – Planning*

Planning for the project has been completed. Preliminary design is included in this task and was completed in June 2015.

### *Task 2 – Design*

The Project is currently in the final design stage which will be complete in May 2016.

### *Task 3 – Environmental Documentation*

A CEQA plus document was prepared for the Project to comply with State and Federal environmental requirements. An Initial Study (IS) and Mitigated Negative Declaration (MND) was prepared in January 2015 to meet the requirements of the California Environmental Quality Act (CEQA), State CEQA Guidelines, and EMWD's Administrative Code Resolution 5111, as amended. A Mitigation Monitoring and Reporting Program (MMRP) was prepared in March 2015 in accordance with §15097 of the State CEQA Guidelines.

The MND and MMRP were approved by EMWD's Board of Directors in April 2015 and a Notice of Determination was filed with the County.

### *Task 4 – Permitting*

The proposed recycled water supply pipeline will be placed within the public road rights-of-way in the cities of Murrieta and Temecula. Therefore the project will require encroachment permits from both cities. An encroachment permit will also be required from the Riverside County Flood Control and Water Conservation District for the crossing of Murrieta Creek. All encroachment permits will be obtained prior to the start of construction.

Coverage under the National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit) will be obtained by the contractor in order to reduce or eliminate construction related water quality impacts.

Permitting activities will occur during the final stages of design. Discussions with the permitting agencies have commenced and no issues with respect to permit acquisition are anticipated.

#### *Task 5 – Construction Contracting*

Following completion of final design and acquisition of permits, the project will be advertised for bidding through standard procedures once funding is secured. Specification review will occur in the first half of June with construction of the project advertised for bidding by June 2016. A pre-bid meeting will be held to take questions from contractors, open and review bids for completeness, and award the project to the responsible bidder with the lowest bid in accordance with the Public Contract Code. A notice to proceed for construction is anticipated to be issued by August 2016.

#### *Task 6 – Construction*

Construction of the proposed Temecula Valley Recycled Water Pipeline is expected to begin in August 2016 with completion by February 2018.

#### *Task 7 – Administration and Reporting*

Design and other decisions related to the proposed project have been coordinated with all involved parties. During construction, EMWD staff and/or qualified engineering consultants will provide construction management and administration, including daily on-site observation; inspection of materials used for construction, including soils and concrete; and documentation of these activities. EMWD will provide project administration, including administration of grant and grant-related reporting. Project closeout will be complete by July 2018.

## Evaluation Criteria

Brief narratives describing how the proposed project meets grant criteria are provided in the following subsections. The evaluation criteria, as described in the Funding Opportunity Announcement, are presented first in bold, followed by specific information on the Recycled Water System Pressurization and Expansion Project as well as the facilities proposed for funding by this grant application as the Temecula Valley Recycled Water Pipeline.

### Evaluation Criterion 1: Water Supply

#### *Subcriterion No. 1a - Stretching Water Supplies (35 points)*

**Points will be awarded based on the extent to which the Title XVI Project is expected to secure and stretch water supplies. Consideration will be given to the amount of water expected to be made available by the Title XVI Project and the extent to which the project will reduce demands on existing facilities and otherwise reduce water diversions.**

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

The Recycled Water System Pressurization and Expansion Project will make approximately 8,375 AFY of recycled water available for beneficial use.

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

The Recycled Water System Pressurization and Expansion Project will make 8,375 AFY of recycled water available to M&I customers, in-lieu of imported and other potable water supplies. As a result, this project will reduce the need for new or expanded non-recycled water supplies by a similar amount.

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

The next available increment of water available to EMWD is imported water from Metropolitan. In the Riverside area, imported water from Metropolitan is typically composed of a mix of approximately 20 percent from the Federal Colorado River Project and the remainder from the California State Water Project. Therefore it is estimated that 20 percent of the 8,375 AFY, or 1,675 AFY on average that is provided by the Recycled Water System Pressurization and Expansion Project, will offset demands on a Federal water system.

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

The 8,375 AFY of recycled water made available by the project would replace imported water from Metropolitan, which consists of both Colorado River diversions, as well as State Water Project water from the Sacramento-San Joaquin River Delta System. As mentioned above, EMWD's imported supply typically consists of approximately 20 percent Colorado River water, so the proposed project would reduce diversions from the Colorado River by an estimated 1,675 AFY. The remaining 80 percent of imported water is supplied by the California State Water Project, so it is estimated that the project will reduce diversions of an additional 6,700 AFY from the Sacramento-San Joaquin River Delta.

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

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

<b>Benefits</b>	<b>Measures</b>
Provide 8,375 AFY of recycled water to M&I and agricultural customers, much of which will be delivered by the proposed pipeline	Metered recycled water deliveries Change in percentage of EMWD supply coming from potable water
Minimize onsite pumping requirements and electricity demand	Actual horsepower and number of booster pumps needed
Increase recycled water availability during peak periods	Change in potable water supply requirements during peak demand periods
Increase supply reliability and reduce dependence on imported supplies	Change in percentage of EMWD supply coming from imported water

#### *Subcriterion No.1b - Contributions to Water Supply Sustainability (20 points)*

**Points will be awarded for Title XVI Projects that contribute to a more sustainable water supply.**

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

The project enables the provision of 8,375 AFY of a drought-proof water supply from recycled water in-lieu of imported water supplies. EMWD provides water from various sources including San Jacinto and Hemet Basin groundwater, recycled water, State Water Project, and Federal Colorado River Project water; but imported water makes up the majority of its supplies. With recent stringent regulations, heightened competition and reliability concerns for supplies of State and Federal waters, alternative sources are actively being developed. In addition, residential and urban development projects in the region are putting increased stress on existing water supplies and creating major challenges for reliably meeting customer water needs. Recycled water is



already extensively used in EMWD's service area to meet non-potable demands and EMWD continues to actively seek opportunities to expand its use. By doing so, it will reduce its dependence on imported water supplies and provide a more sustainable, reliable local water supply, which is comparatively unaffected by climate variability.

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

The project will provide a reliable supply of recycled water, which is a virtually drought-resistant water source, unlike surface water supplies. Alternative water sources include imported State Water Project water and Colorado River Project water. In recent years these sources have become increasingly less reliable. The Colorado River has been experiencing drought conditions for over a decade. In addition, the State of California is in a severe drought, which is significantly limiting the availability of supplies from the State Water Project. These statewide drought conditions have resulted in supplies from the State Water Project being curtailed to a 2014 Table A supply allocation of merely 5%, with 2015 allocations at 20%. Therefore, by maximizing recycled water use and reducing dependence on imported water supplies, this project will enhance water supply reliability even under unpredictable drought conditions.

## **Evaluation Criterion 2: Status of Title XVI Project**

### *Subcriterion No. 2a. - Progress Toward Completion of Title XVI Project (20 points)*

**Points will be awarded for Project Activities that will bring a Title XVI Project to completion (i.e., to full Federal funding levels) or close to completion.**

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

To date, Federal funding of \$10,777,836.18 has been awarded to EMWD from the US Bureau of Reclamation for the Recycled Water System Pressurization and Expansion Project.

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

Federal participation was authorized at 25 percent of total project costs, or up to \$12 million, whichever is less. Estimated costs for the overall program are \$63,222,582.33; hence the federal share is \$12 million. To date, \$10,777,836.18 in Federal funding has been awarded, with \$1,222,163.82 in Federal share remaining. This amount is being requested under this application for the Temecula Valley Recycled Water Pipeline.

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

Yes. The remaining Federal share is being requested with this application.

*Subcriterion No. 2b. Readiness to Proceed (10 Points)*

**Points will be awarded based on the extent to which the Project Activities that will be completed with the requested funding are ready to proceed. Where funding is being requested for construction, the following will be considered:**

**1. What is the status of necessary environmental compliance measures?**

- **When is environmental compliance expected to be complete? Provide a detailed schedule of all environmental compliance activities and a schedule that indicates when construction is expected to begin.**

EMWD determined that an Initial Study and Mitigated Negative Declaration was the appropriate type of document to satisfy the requirements of CEQA. An IS & MND was prepared to meet the requirements of CEQA, State CEQA Guidelines, and EMWD's Administrative Code Resolution 5111, as amended. A MMRP was prepared in accordance with §15097 of the State CEQA Guidelines.

EMWD is also pursuing financial assistance on this project from the Clean Water State Revolving Fund. Adherence to the guidelines for State Revolving Fund Loan Applicants requires that the IS & MND contain a separate standalone biological report as well as a separate standalone cultural resources report. A letter to the California State Historic Preservation Officer has also been prepared.

The MND has been finalized and adopted by the EMWD board, and a notice of determination was filed with the County of Riverside on April 2, 2015. Table 1 outlines the schedule of environmental compliance activities. Pipeline construction is expected to begin by August 2016. A complete project schedule, including construction start dates, is shown in Figure 2.

**Table 1: Schedule of Environmental Compliance Activities**

<b>Milestone Event</b>	<b>Dates</b>
Notice to Proceed for CEQA Document	October 2014
Administrative Draft EA/IS&MND to EMWD for Comments	December 2014
Final Draft EA/IS and MND	January 2015
Notice of Intent filed at County	January 14, 2015
Public Review Period End	February 13, 2015
Final EA/IS and MND including Consultation Summary and MMRP	March 2015
Board Approval	April 1, 2015
Notice of Determination filed at County	April 1, 2015
Appeal Period End	May 1, 2015

**2. What is the status of required State and Federal permits for the Project Activities?**

- **When are all required permits expected to be obtained?**

Projects that may disturb one or more acres of soil, or projects that are part of a larger common plan of development that will disturb one or more acres, are required to comply with the NPDES

Construction General Permit for Discharges of Storm Water Associated with Construction Activity. Thus, permits from the Regional Water Quality Control Board, San Diego Region will be obtained for Discharges of Groundwater from Construction Dewatering to Surface Waters and a General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities. Both permits will be obtained by the contractor prior to construction. Consistent with the permit provisions, the contractor will develop a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP must list Best Management Practices that will be implemented prior to and during construction to protect storm water runoff. Additionally, an Underground Classification permit from the Occupational Safety and Health Administration (OSHA) permit will be needed for the bore and jack tunnel to be constructed under Murrieta Creek, and will be obtained by the contractor prior to construction.

No other state or federal permits are anticipated.

### **Evaluation Criterion 3: Environment and Water Quality**

**Up to 30 points will be awarded based on the extent to which the Title XVI Project will improve surface, groundwater, or effluent discharge quality; will restore or enhance habitat for nonlisted species; or will provide water or critical habitat for federally listed threatened or endangered species:**

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

Currently, EMWD treats all of the wastewater collected in its service area to tertiary standards for use as recycled water by customers, storage in recycled water ponds for later use, or discharge to Temescal Creek. As such, the extensive use of recycled water by EMWD, which will be further promoted by construction of the Temecula Valley Recycled Water Pipeline, will have beneficial effects on the quality of the local surface water systems. Effluent quality of tertiary treatment wastewater discharge is near drinking water standards, thereby significantly reducing impacts to receiving surface waters. Also, through active monitoring and management of salinity and nutrients within the local basins, EMWD promotes maintenance and enhancement of local groundwater quality. For example, EMWD has an offset mitigation program for basins that receive recycled water, which ensures that for every pound of the salt or nutrient added to the basin, it is removed by desalinization wells or mitigated by replenishment with higher quality water. Furthermore, reducing the amount of imported water necessary to meet the water demands in the EMWD service area will reduce stresses on and help maintain water quality in the natural systems the water is derived from.

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

As mentioned above, reduced water imports will reduce overall stresses on the freshwater systems that this water is derived from. Provision of 8,375 AFY recycled water, will replace demand for water from the Sacramento-San Joaquin Delta pumped through the State Water Project, which

could lead to improved habitat conditions for non-listed species in the Delta. Offsets to water imported from Colorado River will similarly enhance conditions in that river system.

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

The proposed pipeline project will enable reliable distribution of recycled water to M&I and agricultural users. As such, this project will not directly provide water or habitat for federally listed threatened or endangered species.

**Evaluation Criterion 4: Renewable Energy and Energy Efficiency**

**Up to 25 points will be awarded based on the extent to which the Title XVI Project incorporates the use of renewable energy and/or addresses energy efficiency:**

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

The project does not include installing renewable energy facilities.

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

EMWD has significantly reduced its energy demand through its recycled water and conservation programs. By using more local resources – including recycled water – and promoting conservation measures, EMWD is able to avoid importing more energy-intensive water supplies. The proposed project will significantly contribute to enhancing overall recycled water use by EMWD.

In addition to EMWD's goal of 100 percent beneficial reuse of recycled water, EMWD has a strong focus on energy efficiency throughout its operations and has been actively pursuing alternative energy sources, including the use of solar, fuel cell technology, digester gas, microturbines, and energy optimization software. In fact, EMWD was recognized for its commitment toward energy independence with the American Water Works Association's "Outstanding Energy Management Award" in October 2014.

Two of the four regional wastewater reclamation facilities operated by EMWD use fuel cell technology, thereby producing enough energy to power nearly one-third of the respective plants. For example, EMWD's Moreno Valley Regional Water Reclamation Facility uses fuel cells to power up to 40 percent of the plant at peak hours. The fuel cells produce energy by converting the digester gas produced in the wastewater treatment process. This has resulted in annual reductions

of approximately \$700,000 in annual electricity purchase costs and 10,600 tons of greenhouse gas emissions. Improvements completed at the Perris Valley Regional Water Reclamation Facility in 2014 include the addition of two 300 kilowatt (kW) fuel cells. Resulting electricity production provides roughly 30 percent of the power to the plant, thereby further reducing EMWD's reliance on the region's power grid.

Work was completed on a 500 kW solar farm at EMWD's Perris headquarters in early 2015 with a Notice of Acceptance on July 30, 2015. The solar project is expected to provide average annual savings of \$200,000 over the next two decades. In conjunction with nine microturbines, this solar farm will make EMWD's operation and administrative centers "grid-neutral" in terms of energy consumption.

EMWD is currently in the construction phase for its Solar Energy Initiative Phase II Project, which will expand renewable energy use at EMWD's facilities, including facilities that are important to the Recycled Water System Pressurization and Expansion Project. Construction is expected to be completed by March 2016. This solar project involves construction of up to 1-Megawatt solar photovoltaic renewable energy generating systems, which are proposed to be implemented at up to five of EMWD's facilities, including the Temecula Valley Regional Water Reclamation Facility.

### **3. Will completion of the Title XVI Project lead to a reduction in energy consumption as compared to current water supply options?**

- **Provide calculations and describe assumptions and methodology.**
- **Will the Title XVI Project include any innovative components to reduce energy consumption or to recover energy?**

The Recycled Water System Pressurization and Expansion Project allows for the use of locally produced recycled water in-lieu of energy-intensive imported State Water Project water and Federal Water. Several studies have substantiated the energy and environmental benefits associated with recycled water use, and more recently, EMWD completed extensive calculations to evaluate energy use for all its current water sources, including State Water, Federal Water, and recycled water.

Based on EMWD's evaluation, State Water requires 2.91 Megawatt Hour (MWh) per AF and Federal Water 2.32 MWh/AF, and EMWD's recycled water uses 0.03 MWh/AF. State Water and Federal Water energy usage were estimated based on Metropolitan's average energy cost and use in 2011. EMWD's recycled water energy usage was estimated based on an average cost of energy (0.1066 \$/kilowatt-hours in 2012), EMWD's overall energy usage for recycled water (1,516 MWh in 2012) and the approximate volume of recycled water produced (46,937 AF in 2012).

The Recycled Water System Pressurization and Expansion Project is anticipated to provide 8,375 AFY recycled water, based on conservative estimates. This water will be supplied in-lieu of imported water, which as mentioned above, is made up of approximately 80 percent State Water and 20 percent Federal Water. Based on these proportions and the estimated energy requirements for each source, 8,375 AFY of imported water supplied to EMWD would require a total of 23,383

MWh each year  $[(0.80)*(8,375 \text{ AFY})*(2.91 \text{ MWh/AF}) + (0.20)*(8,375 \text{ AFY})*(2.32 \text{ MWh/AF})]$ . In comparison, supplying the same amount of recycled water would require 251 MWh  $[(8,375 \text{ AFY})*(0.03 \text{ MWh/AF})]$ . This translates into annual energy savings of 23,132 MWh with implementation of EMWD's Recycled Water System Pressurization and Expansion Project.

Based on energy requirements, EMWD also evaluated (indirect) greenhouse gas emissions associated with each water source. For these calculations an emission rate of 0.299 metric tons (MT) per MWh was used, based on EMWD's 2012 Climate Action Registry Reporting Online Tool submission, whereas State Water emissions were adjusted to reflect 48 percent hydro-generated electricity. This analysis produced greenhouse gas emissions estimates for State Water of 0.45 MT per AF, 0.69 MT/AF for Federal Water, and 0.01 MT/AF for recycled water. Based on the proportions of State Water to Federal Water that make up EMWD's imported water, supplying 8,375 AFY of imported water, results in a total of 4,171 MT of greenhouse gas emissions per year  $[(0.80)*(8,375 \text{ AFY})*(0.45 \text{ MT/AF}) + (0.20)*(8,375 \text{ AFY})*(0.69 \text{ MT/AF})]$ . In comparison, supplying the same amount of recycled water produces 84 MT greenhouse gas emissions annually  $[(8,375 \text{ AFY})*(0.01 \text{ MT/AF})]$ . Supplying recycled water in lieu of imported water would therefore result in a total annual reduction of 4,087 MT in greenhouse gas emissions.

As the amount of recycled water (8,375 AFY) that would be supplied by the Recycled Water System Pressurization and Expansion Project is a conservative number, annual energy savings and greenhouse gas emissions reductions may be much greater.

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

The alternative water supply option is imported water which requires 23,383 MWh compared to 251 MWh for the 8,375 AFY provided by the project. Details for the comparison are provided in question 3 above.

#### **Evaluation Criterion 5: Cost per Acre-Foot of Water and Other Project Benefits**

**Up to 25 points will be awarded based on the cost per acre-foot of water expected to be delivered upon completion of the Title XVI Project and other benefits of the project. *Please use costs related to the entire Title XVI Project, not just the cost of work through September 30, 2018.***

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

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

Table 2 below lists the construction costs, by year, for the completed and planned projects that compose the Title XVI Project.

**Table 2: Construction Costs**

	<b>Calendar Year</b>	<b>Construction Cost</b>
Actual Incurred Construction Costs for Completed Projects		
1.	2008	\$ -
2.	2009	\$2,510,700
3.	2010	\$19,702,823
4.	2011	\$17,891,950
5.	2012	\$10,634,515
6.	2013	\$13,570,754
7.	2014	\$3,287,252
Estimated Construction Costs for Planned/Current Projects		
8.	2015	\$0
9.	2016	\$1,958,930
10.	2017	\$11,895,421
11.	2018	\$415,849

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

The total estimated and actual costs to plan and design the project are approximately \$14,725,007.85.

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

Average O&M costs are estimated at \$996,600.

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

The project began delivering recycled water in 2008.

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

The project life of the project is expected to be 30 years.

**(f) All estimated replacement costs by year**

This project expands the Tertiary Effluent Pump Station to 34.5 MGD and constructs the proposed pipeline to accommodate the expansion. Therefore, no replacement is involved and this item is not applicable. This determination was confirmed with Shaun Wilken (Bureau of Reclamation Grants Management Specialist) on December 8, 2014.

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

The Recycled Water System Pressurization and Expansion Project will make approximately 8,375 AFY of recycled water available for beneficial use.

**2. Comparison of the cost per acre-foot of the Title XVI Project to the cost per acre-foot of one alternative (i.e., nonrecycled water option) that would satisfy the same demand as the proposed project. Provide the cost per acre-foot for one nonrecycled water alternative that would satisfy the same demand. Reclamation will compare the cost per acre-foot that it calculates using the information requested in question No. 1 to the cost per acre-foot for the nonrecycled water alternative provided by the project sponsor.**

The alternative water source available to the project region is imported water from the Metropolitan Water District. As of January 2015, the cost of untreated imported water from Metropolitan is \$714 per AF.

**3. Some Title XVI project benefits may be difficult to quantify. Describe any economic benefits of the project that are not captured by the cost per acre-foot analysis or that are difficult to quantify. Points will be awarded based on the potential economic impact of the project-related benefits.**

The project has many benefits which are difficult to quantify:

- Improved water supply reliability. The reliability of water supply refers to the ability to meet water demands on a consistent basis, even in times of drought or other constraints on source water availability. This is greatly enhanced by the use of recycled water, which is virtually unaffected by climatic variation.
- Reduced water supply cost to EMWD customers by producing and supplying local recycled water rather than importing supplies.
- Reduction in the demand for imported water, thereby reducing annual and seasonal peak demands on the Sacramento-San Joaquin Delta and leading to improvements in habitat conditions.

## **Evaluation Criterion 6: Reclamation's Obligations and Benefits to Rural or Economically Disadvantaged Communities**

### *Subcriterion No. 6a - Legal and Contractual Water Supply Obligations (10 Points)*

**Up to 10 points will be awarded for projects that help to meet Reclamation's legal and contractual obligations.**

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



The Temecula Valley Recycled Water Pipeline is consistent with Reclamation's policy to promote water reuse and reclamation so as to improve water supply reliability, improve efficiency, improve flexibility during water shortages, and to diversify water supply.

*Subcriterion No. 6b - Benefits to Rural or Economically Disadvantaged Communities (10 Points)*

**Up to 10 points will be awarded based on the extent to which the Title XVI Project serves rural communities or economically disadvantaged communities in rural or urban areas.**

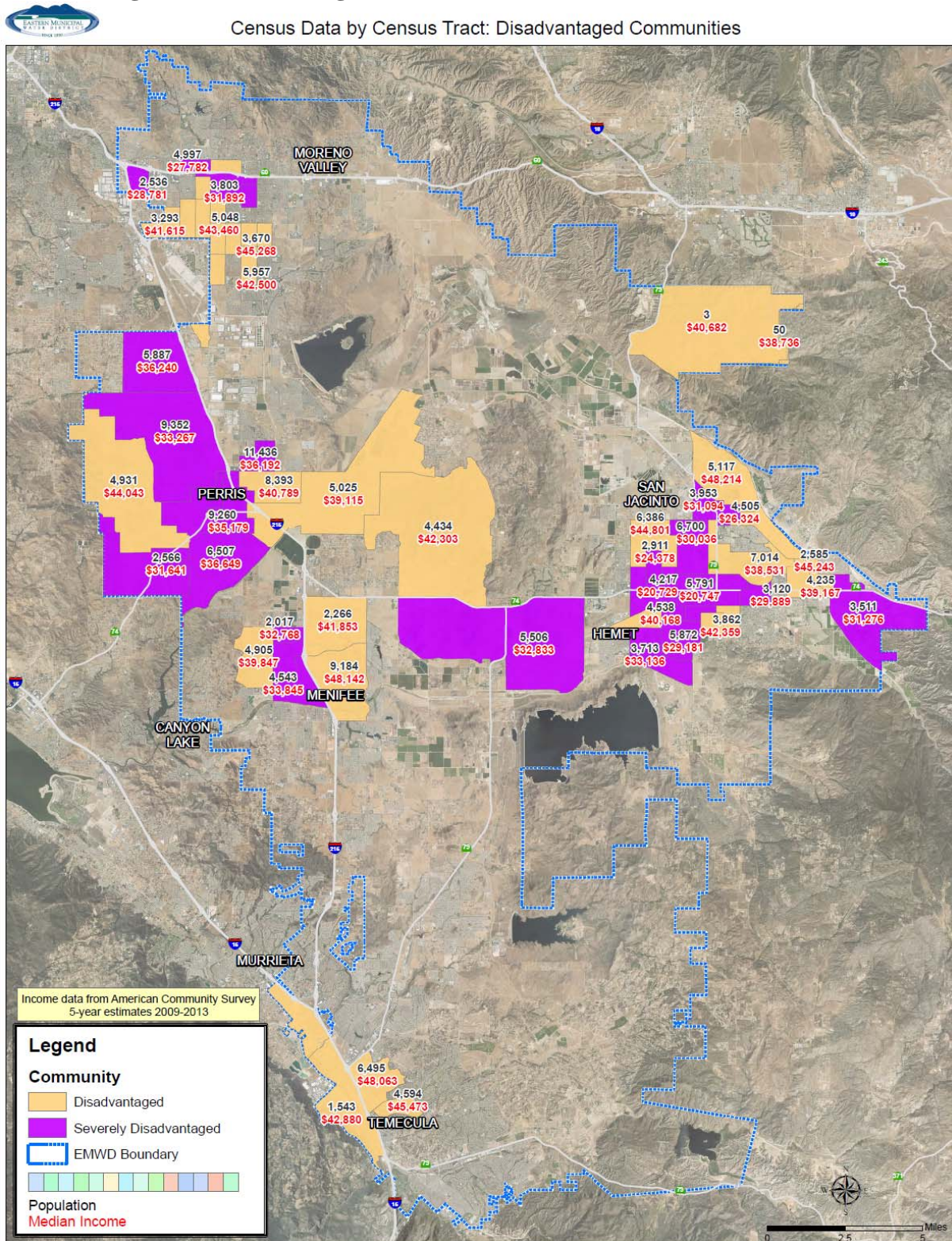
**1. Does the Title XVI Project serve a rural or economically disadvantaged community? (A rural community is defined as a community with fewer than 50,000 people.)**

The project does not serve a rural community; however, the project does serve economically disadvantaged communities within EMWD's service area. As described in more detail below, approximately 24 percent of EMWD's service area qualifies as a disadvantaged community. The proposed pipeline is within the cities of Murrieta and Temecula, but will provide recycled water supply to EMWD's broader service area including the disadvantaged communities of Menifee and Perris.

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

EMWD's service area includes seven incorporated cities in addition to the unincorporated areas of the County of Riverside. As shown in Figure 4, disadvantaged communities (census block groups where median income is less than 80 percent of the Statewide median) make up approximately 24 percent of EMWD's total service area. Figure 4 also shows the Severely Disadvantaged Communities in EMWD's service area, which are defined as communities with a median household income less than 60 percent of the Statewide median.

**Figure 4: Disadvantaged Communities within EMWD's Service Area**



## Evaluation Criterion 7: Watershed Perspective

**Up to 15 points will be awarded based on the extent to which the Title XVI Project promotes or applies a watershed perspective by implementing an integrated resources management approach, implementing a regional planning effort, or forming a collaborative partnership with other entities.**

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

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

EMWD's Recycled Water System Pressurization and Expansion Project addresses watershed goals and objectives of the integrated regional water management plan of the Santa Ana River Watershed, the 2014 One Water One Watershed 2.0 Plan (OWOW Plan). The OWOW Plan is the watershed planning framework for the Santa Ana River Watershed, which was developed through facilitated efforts by the Santa Ana Watershed Project Authority (SAWPA) to guide water resource managers for the immediate future through the year 2035. Specifically, the proposed project meets the water supply goal to "Maintain reliable and resilient water supplies and reduce dependency on imported water" and the objective to "Increase use of recycled water".

EMWD's Recycled Water System Pressurization and Expansion Project is consistent with California's Recycled Water Policy. This policy was passed in 2009 in order to promote increased use of recycled water from municipal wastewater sources. In the face of significant challenges in providing clean water to California's growing population, this policy represents a major effort to enhance and restore the quality of California's water resources and establish more reliable supplies.

As part of this policy, local and regional water agencies are strongly encouraged to move toward clean, abundant, local water for California, with emphasis put on water recycling, particularly as these sources of supply are drought-proof, reliable, minimize the State's overall carbon footprint, and can be sustained over the long-term.

A stated goal within this policy is to substitute as much recycled water for potable water as possible by 2030, with a specific mandate established by the State Water Board to increase the use of recycled water in California by 200,000 AFY by 2020 and by an additional 300,000 AFY by 2030.

EMWD's Recycled Water System Pressurization and Expansion Project is also consistent with Metropolitan's goals to ensure reliability, affordability, water quality, diversity, and flexibility as set forth in the Integrated Water Resources Plan (IRP). Updated in 2010, the IRP is Metropolitan's strategic plan for water supply, which has identified recycled water as one of the main solutions to meeting the water supply challenges faced by Metropolitan and the State. Metropolitan recognizes

that regional water supply reliability can be achieved in part through the implementation of a diverse resource portfolio, of which recycled water is a major component. Additionally, recycled water is a major focus of the IRP's foundational actions to implement Metropolitan's adaptive integrated resources strategy.

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

As mentioned above, this project is an important component in EMWD's active pursuit to develop local and regional plans for expanded water recycling in its service area. EMWD works closely with a variety of local agencies and public interest groups in recycled water planning efforts and other water-related issues. EMWD has worked closely with the Santa Ana Regional Water Quality Control Board in updating local basin plans and developing a long-term salinity management plan to support and ensure compliance with local basin objectives for salinity and nitrogen.

## Environmental Compliance

**To allow Reclamation to assess the probable environmental impacts and costs associated with each application, all applicants must respond to the following list of questions focusing on the requirements of NEPA, ESA, and NHPA. Please answer the following questions to the best of your knowledge. If any question is not applicable to the Project Activities, or if necessary environmental compliance has been completed, please explain.**

**If you have any questions, please contact your regional or area Reclamation office (see <<http://www.usbr.gov/main/offices.html>> with questions regarding environmental compliance issues.**

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

- **Please briefly describe all earth-disturbing work and any work that will affect the air, water, or animal habitat in the project area.**
- **Please also explain the impacts of such work on the surrounding environment and any steps that could be taken to minimize the impacts.**

Earth-disturbing work would extend over an area necessary to accommodate the installation of the 16,500 LF recycled water pipeline including connections to the system. Specific activities would primarily consist of trench excavation, pipe-laying, backfill and repaving.

Potential short-term air quality impacts may occur during temporary construction activities, however given that the pipeline will primarily be placed within existing roadways, dust emission from soil disturbance are anticipated to be minimal. Construction emissions include potential onsite generation of dust during excavation, off-gassing of paving materials and equipment exhaust, and offsite emissions from construction employee commuting and/or trucks delivering building materials. Water related infrastructure, such as the proposed project requires very few vehicle trips for maintenance and operation, typically less than one trip per day per facility. As a result, operational air quality impacts will be minimal. Mitigation measures will be utilized,

including watering during construction (to limit dust) and limiting the amount of daily grading would ensure impacts related to air emissions are minor.

Project activities are not anticipated to substantially alter local drainage or contribute substantially to runoff water. The proposed pipeline would be placed primarily within existing roadways and would therefore not alter the area of impermeable surface within such roadways. Impacts to local surface waters will be minimized through implementation of the SWPPP, required under the California Construction General Permit. In addition, the preliminary alignment will cross Murrieta Creek, which is anticipated to occur using trenchless methodology under deep cover in order to minimize impacts to the creek bed.

It is not anticipated that sensitive habitat communities will experience potentially significant direct or indirect adverse impacts from implementation of the proposed project. The proposed pipeline will be constructed within existing roadways, in addition to using trenchless methods within Murrieta Creek, which will minimize the likelihood of disturbance to natural habitat. Removal of any trees, shrubs, or other potential nesting bird habitat is expected to have less than significant impacts and will be mitigated by having a biologist conduct a pre-construction clearance survey for nesting birds.

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

According to the Environmental Assessment/Initial Study and Mitigated Negative Declaration, no special-status plant or wildlife species were observed on the project site. However, it was determined that the project site, in particular areas associated with Murrieta Creek, have a moderate potential to provide suitable habitat for yellow warbler and least Bell's vireo. The yellow warbler is a California Department of Fish and Wildlife species of special concern, but it is not federally or State listed. Therefore, no federal or State "take" permits would be required for impacts to this species, if present, and it would not be considered a constraint to project development

The least Bell's vireo is a federal and State endangered subspecies of the Bell's vireo. To ensure that this species is protected, EMWD shall, prior to project implementation, and during the appropriate survey period, conduct a focused survey for least Bell's vireo to determine presence/absence within Murrieta Creek within 500 feet of the chosen pipeline alignment.

No active or remnant avian nests or birds displaying nesting behaviors were detected during the habitat assessment, which was conducted in November, outside of the avian nesting season. Although the majority of the project site has been developed, the plant communities within and adjacent to the project site (in particular the riparian habitat within Murrieta Creek) have the potential to provide suitable foraging and cover habitat for year-round and seasonal avian residents and migrating songbirds that could occur in the area.

To ensure the continued absence of nesting birds on or immediately adjacent to the project site, EMWD shall implement the following:

- If ground-disturbing activities or removal of any trees, shrubs, or any other potential nesting habitat are scheduled within the avian nesting season (nesting season generally extend from February 1 - August 31), a pre-construction clearance survey for nesting birds should be conducted within 10 days prior to any ground disturbing activities. The biologist conducting the clearance survey should document a negative survey with a brief letter report indicating that no impacts to active bird nests will occur.
- If an active avian nest is discovered during the 10-day preconstruction clearance survey, construction activities should stay outside of a 300-foot buffer around the active nest. For raptor species, this buffer is expanded to 500-feet. It is recommended that a biological monitor be present to delineate the boundaries of the buffer area and to monitor the active nest to ensure that nesting behavior is not adversely affected by the construction activity. Once the young have fledged, normal construction activities can occur.

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

The project includes one creek crossing; however, no wetlands or “waters of the United States” will be impacted during construction. It is proposed to construct the pipeline in the crossing areas by a trenchless method (i.e., jack and bore or microtunneling) to avoid all impacts to any federally protected wetlands as defined by Section 404 of the Clean Water Act at the Project sites. Should EMWD decide at a later date to utilize the open trench method of construction for any creek crossing, the above mitigation measures would ensure that all impacts to federally protected wetlands would be less than significant.

**4. Are there any known archeological sites in the Project Activities area? If so, please describe and estimate any impacts the project may have.**

Based on review of records maintained by the Eastern Information Center and a field inspection, implementation of the project will have no adverse effect on historic properties as there are none in the immediate area that would be impacted. Given this, there is low to moderate potential to encounter previously unrecorded subsurface archaeological deposits within portions of the project alignment. EMWD shall, at least 30 days prior to beginning Project construction, EMWD shall contact the Pechanga Band of Luiseño Indians to notify the Pechanga Tribe of grading and excavation activities and to coordinate and develop a Cultural Resources Treatment and Monitoring Agreement. The Agreement shall address the treatment of known cultural resources; the designation, responsibilities, and participation of a professional Native American Tribal monitor during grading, excavation and other ground disturbing activities; project grading and excavation schedule; terms of compensation for the monitor; and treatment and final disposition of any cultural resources, sacred items and human remains discovered on site. The Tribal monitor shall be allowed to monitor all grading, excavation and ground disturbing activities and, with the concurrence of EMWD’s Field Engineering Inspector, have the authority to stop or redirect grading and/or excavation activities.

If inadvertent discoveries of cultural resources are encountered at any time during construction, these materials and their context shall be avoided until a qualified archeologist and a representative

from the closest Tribe to the project site (in this case, the Pechanga Band of Luiseño Indians) have consulted with EMWD regarding appropriate avoidance and mitigation measures for the newly discovered resources. Construction personnel shall not collect or retain cultural resources. Prehistoric resources include, but are not limited to: chert or obsidian flakes; projectile points; mortars and pestles; dark, friable soil containing shell and bone; dietary debris; heat-affected rock; or human burials. Historic resources include stone or adobe foundations or walls; structures and remains with square nails; and refuse deposits (glass, metal, wood, ceramics), often found in old wells and privies. Pursuant to California Public Resources Code §21083.2(b) avoidance is the preferred method of preservation for archeological resources. All sacred sites, should they be encountered, shall be avoided and preserved as the preferred mitigation, if feasible. In addition, EMWD will relinquish ownership of all cultural resources, including sacred items, burial goods and all archeological artifacts that are found on the project site to the Pechanga Band of Luiseño Indians for proper treatment and disposition.

**5. Will the proposed Project Activities have a disproportionately high and adverse effect on low income or minority populations? If so, please describe and estimate any impacts the project may have.**

The proposed project will not have a disproportionately high or adverse effect on low income or minority populations. The construction will primarily occur along existing roadways. Construction areas are not centered within areas of primarily low income or minority populations.

**6. Will the Project Activities limit access to and ceremonial use of Indian sacred sites or result in other impacts on tribal lands? If so, please describe and estimate any impacts the Project Activities may have.**

The project will not limit access to, or use of, Indian sacred sites or have other impacts on tribal lands. As discussed under question 4, although there are no known sacred sites in the project area, all sacred sites, should they be encountered, shall be avoided and preserved as the preferred mitigation, if feasible.

**7. Will the Project Activities contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area? If so, please describe and estimate any impacts the Project Activities may have.**

Construction will be within already established roadways, which are maintained in a vegetative free state. The project will not contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species.

## Required Permits or Approvals

**Applicants must state in the application whether any permits or approvals are required and explain the plan for obtaining such permits or approvals.**

The Murrieta Creek crossing will require a permit from the Riverside County Flood Control and Water Conservation District. In addition, as the pipeline will be installed within street rights-of-way in the cities of Temecula and Murrieta, encroachment permits will be required from both cities. EMWD will obtain necessary encroachment permits prior to advertising for construction bids. Permits from the Regional Water Quality Control Board, San Diego Region will be obtained for Discharges of Groundwater from Construction Dewatering to Surface Waters and a General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities, both of which will be obtained by the contractor prior to construction. An Underground Classification permit from the OSHA permit will be needed for the bore and jack tunnel to be constructed under Murrieta Creek, and will be obtained by the contractor prior to construction.



## Project Budget Proposal

### Description of Expenditures Planned Through September 2018

The evaluation criteria listed in Section V.A. of this FOA should be applied to the entire Title XVI Project. Applicants also must provide a description of the Project Activities *that are planned through September 30, 2018*, including a description of Project Activities that have previously been completed without Federal funding that are the basis for a request for Federal funding under this FOA. Applicants also must provide a cost estimate for the Project Activities.

As described in the Technical Project Description section of this proposal, this project is a part of a larger program to expand recycled water use from the TVRWRF. Table 3 provides a summary of general activities needed to complete this program, while Table 4 provides a summary of the detailed completed and planned activities for the proposed project.

**Table 3: Completed and Planned Activities for the Program to Expand the TVRWRF**

	Local Funding	Federal Funding Received/Awarded	Total Cost
<b>Completed Activities</b>			
Gibbel Road Tank and Pipeline	\$5,301,219.83	\$1,766,523.27	\$7,067,743.10
Benton Road Tank and Pipeline	\$4,945,156.22	\$1,648,385.41	\$6,593,541.63
Leon Booster Station	\$2,831,995.47	\$943,998.49	\$3,775,993.96
LongFellow Tank and Pipeline – Phase I	\$5,092,589.86	\$1,697,529.95	\$6,790,119.81
LongFellow Tank and Pipeline – Phase II	\$579,170.78	\$193,056.93	\$772,227.71
San Jacinto Recycled Water Pipeline	\$5,359,542.72	\$1,896,514.24	\$7,256,056.96
Pre-purchase of Pipeline	\$1,839,128.18	\$613,042.73	\$2,452,170.91
Pre-purchase of Valves	139,455.17	\$46,485.06	\$185,940.23
Recycled Water Ponds BS (Alessandro & Sun City)	\$4,268,954.02	\$1,545,144.57	\$5,814,098.59
Recycled Water Ponds BS (MWD)	\$1,858,571.86	\$619,523.95	\$2,478,095.81
Audie Murphy Ranch Pipeline	\$1,111,802.63	\$370,600.88	\$1,482,403.51
<i>Adjustments</i>	\$562,969.30	<b>(\$562,969.30)</b>	\$0.00
<b><i>Subtotal Completed Activities</i></b>	<b>\$33,890,556.04</b>	<b>\$10,777,836.18</b>	<b>\$44,668,392.22</b>
<b>Planned Activities through September 30, 2018</b>			

	Local Funding	Federal Funding Received/Awarded	Total Cost
TVRWRF Effluent Pipeline*	\$17,563,636.18	\$1,222,163.82	\$18,785,800.00
<i>Subtotal Activities through September 30, 2018</i>	\$17,563,636.18	\$1,222,163.82	\$18,785,800.00
<b>Total Activities</b>	<b>\$51,454,192.22</b>	<b>\$12,000,000.00</b>	<b>\$63,222,582.33</b>

\*Federal funding for this activity is being requested as part of this application.

**Table 4: Completed and Planned Activities for the Proposed Project**

	Local Funding	Federal Funding Received/Awarded	Total Cost
<b>Completed Activities</b>			
Task 1 - Planning	\$422,331.01	\$0.00	\$422,331.01
<i>Subtotal Completed Activities</i>	<i>\$422,331.01</i>	<i>\$0.00</i>	<i>\$422,331.01</i>
<b>Planned Activities through September 30, 2018</b>			
Task 2 - Design	\$710,000.00	\$0.00	\$710,000.00
Task 3 - Environmental Documentation	\$57,468.99	\$0.00	\$57,468.99
Task 4 - Permitting	\$7,000.00	\$0.00	\$7,000.00
Task 5 - Construction Contracting	\$26,200.00	\$0.00	\$26,200.00
Task 6 - Construction	\$13,048,036.18	\$1,222,163.82	\$14,270,200.00
Task 7 - Administration and Reporting	\$3,292,600.00	\$0.00	\$3,292,600.00
<i>Subtotal Activities through September 30, 2018</i>	<i>\$17,141,305.17</i>	<i>\$1,222,163.82</i>	<i>\$18,363,468.99</i>
<b>Total Activities</b>	<b>\$17,563,636.18</b>	<b>\$1,222,163.82</b>	<b>\$18,785,800.00</b>

## Funding Plan

Please include the following chart to summarize your non-Federal and other Federal funding sources for the Project Activities that will be completed by September 30, 2018. Denote in-kind contributions with an asterisk (\*).

In addition to the funding plan noted in table 1, please provide information specific to funds expended to date for the Project Activities and proposed expenditures through September 30, 2018 that notes both Federal and non-Federal funds.

Table 5 below summarizes the non-federal funding and other Federal sources for the portion of the project that will be completed by September 30, 2018. Additional details on the funds expended to date and proposed expenditures through September 30, 2018 are provided in Table 3 and Table 4.

**Table 5: Summary of Non-Federal and Federal Funding Sources**

Funding Sources	Funding Amount
Non-Federal Entities	
1. Eastern Municipal Water District	\$17,563,636.18
<i>Non-Federal Subtotal:</i>	\$17,563,636.18
Other Federal Entities	
Not applicable	\$0
<i>Other Federal Subtotal:</i>	\$0
<i>Requested Reclamation Funding:</i>	\$1,222,163.82
<i>Total Project Funding:</i>	\$18,785,800.00