

**WaterSMART Grants:  
Small-Scale Water Efficiency Projects  
Fiscal Year 2018**

**Residential Irrigation Efficiency Project**

Riverside County, California



**Eastern Municipal Water District  
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**July 30, 2018**

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## TECHNICAL PROPOSAL AND EVALUATION CRITERIA

**July 31, 2018**

**Eastern Municipal Water District  
Perris, Riverside County, California**

### **Residential Landscape Efficiency Project**

#### **1.0 Executive Summary**

The Residential Landscape Efficiency Project (Project) will provide 50 single family EMWD customers with no-cost direct installation of high-efficiency irrigation equipment and professional irrigation management for one year. The objectives of the proposed Project are prioritized in the EMWD 2015 Water Efficiency Master Plan, the District’s water budget-based rate system and state legislation mandating increased water conservation targets. The Project is expected to be completed in less than two years, beginning September 2018 and ending November 2020. Funds will be used to hire a qualified landscape consultant to perform irrigation evaluations, retrofit inefficient irrigation equipment and manage irrigation runtimes over a one year period for a cost of approximately \$2,400 per home. EMWD staff will perform overall project management, including tracking water use, coordinating consultant site visits and providing direct customer support as needed. The completed Project is estimated to save 10 acre-feet each year, with a total project savings of 100 acre-feet over ten years. The conserved water resulting from this Project will help meet the goals of this funding opportunity announcement by assisting EMWD to make more efficient use of water supplies, thereby reducing demand for limited local and imported supplies and associated future water conflict. The proposed Project is not located on a Federal facility.

#### *Estimated Water Savings Calculation*

Description	Quantity (square feet)	Water Savings (Gallons per square foot per year)	Water Savings (Acre-feet per square foot per year)	Project Savings (Acre-feet per year)	10-Year Project Savings (Acre-feet)
Landscape Area	125,000	27	0.00008	10	100

#### **2.0 Background Data**

EMWD has 2,441 miles of pipeline delivering water to 141,000 retail connections and seven wholesale customers. EMWD’s system ties together its imported and local potable water sources

to feed the entire District: Groundwater is the major local supply of water in the District for the cities of Hemet and San Jacinto as well as surrounding unincorporated areas; two desalination plants serve the middle portion of the District; a micro filtration plant in Perris currently serves imported water from Metropolitan Water District of Southern California (MWD) to the City of Perris and surrounding areas; the Hemet Micro Filtration Plant supplements supply to the Hemet/San Jacinto area with imported water from MWD; MWD’s Mills Filtration Plant serves Moreno Valley South; and the Skinner Filtration Plant in the southeast serves the Murrieta/Temecula area. The limits of services for each source of supply vary due to demand level and operational procedures and constraints. EMWD’s potable water demand, water sources and the communities served are summarized in the tables below.

***Current and Projected Potable Water Demand for EMWD***

	Actual and Projected AF					
	2017	2020	2025	2030	2035	2040
Retail Potable Water Sales	69,865	92,400	102,600	113,100	123,300	133,000
Water Sales to Sub-Agencies	5,749	9,400	11,400	13,300	15,100	17,100
Other Water Uses / Losses	67,395	59,845	63,734	66,317	69,000	71,300
Total	143,009	161,645	177,734	192,717	207,400	221,400

***Retail Water Distribution to Communities***

Sources	Communities
<ul style="list-style-type: none"> <li>• 80 MGD connection to Mills WTP - Imported</li> <li>• 24 MGD Perris WFP - Imported – Local Treated</li> <li>• 6 MGD Menifee Desalter - Desalination</li> <li>• 5 MGD from 5 wells - Ground Water</li> </ul>	Moreno Valley, Perris, Good Hope, Homeland, Juniper Flats, Lakeview, Mead Valley, Menifee, Nuevo, North Canyon Lake, Quail Valley, Romoland, Sun City
<ul style="list-style-type: none"> <li>• 28 MGD from 14 wells - Ground Water</li> <li>• 12 MGD Hemet WFP - Imported – Local Treated</li> </ul>	Hemet, San Jacinto, Winchester, Green Acres, Eden Hot Springs, Soboba Hot Springs, Gilman Hot Springs, Valle Vista, Diamond Valley
<ul style="list-style-type: none"> <li>• 87 MGD connection to Skinner WTP - Imported</li> </ul>	Temecula, Murrieta, Murrieta Hot Springs, French Valley, Domenigoni Valley

**2.1 5-Year Average Annual Water Supply**

EMWD has four sources of water supply: Imported water purchased from MWD, local potable groundwater, local desalinated groundwater and recycled water. Total water supply for EMWD is made up of 57 percent imported water, 12 percent local potable groundwater, 5 percent desalted groundwater and 26 percent recycled water. MWD delivers water from two sources: the State Water Project and the Colorado River Aqueduct. The table below lists the past retail supply quantities by source.

**EMWD Retail Water Supply (AFY) 2013 – 2017**

Type	Source	Percent	2013	2014	2015	2016	2017
Imported – Treated	MWD	32%	48,796	49,597	35,221	38,204	47,526
Imported – Locally Treated	MWD	13%	18,154	21,616	18,628	15,546	12,860
Imported-Raw	MWD	6%	8,461	768	941	13,353	20,094
Ground Water	WSJMA <sup>2</sup>	11%	18,824	12,786	14,570	14,864	13,270
Desalination	WSJMA <sup>2</sup>	5%	4,800	6,776	7,288	6,454	6,342
Recycled	EMWD’s RWRF <sup>3</sup>	33%	43,905	45,848	45,385	43,594	42,918
Total		100%	142,940	137,391	122,032	132,016	143,009
<sup>1</sup> Includes recharge water, <sup>2</sup> West San Jacinto Management Area (WSJMA), <sup>3</sup> Regional Water Reclamation Facilities (RWRF)							

**2.2 Water Use**

Located in Southwest Riverside County, EMWD’s service area experienced one of the fastest growth rates in the nation in the early 2000’s. Although currently experiencing a dramatic slowdown in the development market, EMWD is less than 50 percent built out and expects demand to grow as the economy recovers. According to the Riverside County Center for Demographic Research 2010 projection, 58,000 new homes in EMWD’s retail service area are proposed by 2020. To prepare for new economic opportunities and the water demand that will accompany them, EMWD is developing aggressive water use efficiency standards and practices for new development to implement.

**EMWD Projected Population Growth**

	2010	2015	2020	2025	2030	2035
Population	690,594	779,857	870,603	960,053	1,043,818	1,111,729

EMWD’s service area is made up of mostly single family residential homes with a small amount of commercial and industrial development. Only a small portion of EMWD’s agricultural customers are served with potable water; the majority of agricultural demand and a portion of

landscape and industrial demand are met with recycled water. The percentage of EMWD’s current potable water supply used by retail customer type is shown in the tables below.

***Current Potable Water Uses for EMWD’s Retail Customers***

<b>Water Use</b>	<b>Single Family</b>	<b>Multi-Family</b>	<b>Commercial</b>	<b>Industrial</b>	<b>Institutional</b>	<b>Landscape</b>	<b>Agriculture</b>
Potable Supply	67.0%	8.6%	6.8%	0.4%	3.1%	11.3%	2.8%

**2.3 Past and Present Working Relationships with Reclamation**

<b>Project Title</b>	<b>Reclamation Program</b>	<b>Funding Type</b>	<b>Award Date</b>	<b>Award Amount</b>	<b>Project Status</b>
Agricultural Irrigation Systems Optimization Review	Water Conservation Field Services Program	Grant	9/19/2017	\$ 70,000	ACTIVE
Automated Metering Infrastructure Replacement	WaterSMART Water and Energy	Grant	9/22/2017	\$ 1,000,000	ACTIVE
CA Friendly Large Landscape Irrigation Rebate Program	Water Conservation Field Services Program	Grant	6/5/2006	\$ 50,000	COMPLETE
High Efficiency Clothes Washer Direct Install	WaterSmart Water & Energy Efficiency grant	Grant	11/24/2010	\$ 299,500	COMPLETE
Landscape Information Database	Water Conservation Field Services	Grant	8/27/2009	\$ 10,000	COMPLETE
Landscape Irrigation Rebate Program (LIRP)	USBR	Grant	4/13/2009	\$ 50,000	COMPLETE
Outdoor School Water Management Program	CALFED Water Use Efficiency Grant	Grant	9/3/2015	\$ 438,640	ACTIVE

**2.4 Project Location**

EMWD’s service area encompasses 555 square miles in a semi-arid region in southwest Riverside County along Interstate 215. It is bounded on the west by Western Municipal Water District and Elsinore Valley Municipal Water District, on the north by the San Bernardino County Line, and on the south by the San Diego County Line. The Project will include EMWD customers throughout the service area located southeast from the city of Riverside at latitude 33° 48' N and longitude 117° 12' W. A vicinity map is included below.



varying degrees and at high cost, the fact remains that most homeowners simply do not have either the time or interest to consistently manage the water being applied to their landscapes. At EMWD, water budgets are subject to a four-tiered rate structure where the cost of water significantly increases when the customer exceeds 100% of their water budget (Tier 2), and increases again when they exceed 150% of their budget (Tier 3) as shown in the illustration below. Even with these financial disincentives in place, more than 5 percent of all residential water use (3,000 acre-feet) exceeded assigned water budgets in 2017.

**EMWD's Current Residential Water Budget & Tiered Rate System**



The proposed Project intends to establish a new benchmark for efficient landscape irrigation management at single family homes using proven irrigation technology and scientific water management practices to eliminate water waste, cut outdoor water use in half and improve landscape health. The Project will utilize EMWD’s Automated Meter Infrastructure (AMI) system, remote controlled web-based irrigation controllers and flow meters, professional water management and monitoring of daily water use at 50 participating homes. An additional control group of 50 selected homes will be remotely monitored with AMI meters. The control group’s water use will be compared to participating homes in order to identify any significant patterns of variation between the two groups.

**Project Activities**

**Phase 1: Participant Selection**

- EMWD will issue a Request for Proposals to select a professional water management consultant using a competitive process
- EMWD will specify proven irrigation technology solutions to be used in the Project (web-based irrigation controllers with flow meters, high-efficiency nozzles, pressure regulators, drip irrigation equipment)
- EMWD will select a treatment group of 50 single family homes each using the following customer selection criteria –
  - Water use exceeded water budget by at least 120 percent for 6 months in 2017
  - Landscape area is 2,500 square feet (+/- 10%)
  - Existing automated irrigation system in working condition
  - Existing remote read water meter (AMI)
  - Established landscape plants
  - Landscape plants are similar (+/- 1,000 square feet turf, 1,500 square feet shrubs, trees, groundcover)
  - Similar climate zone (ETo water demand)
  - Customer agrees to allow the professional irrigation consultant to upgrade their irrigation system (at no cost to the customer), remotely manage the amount of

irrigation water applied to their landscape for one year, visually inspect their landscape once per month, and customers will repair any broken irrigation equipment in a timely manner

- EMWD will select a control group of 50 single family homes that will not actively participate in the Project. Staff will select the control group using criteria similar to the treatment group (e.g. water use, landscape area, AMI meters, established landscape, type of plants and climate zone)

#### **Phase 2: Site Work**

- EMWD will facilitate site meetings with selected program participants and consultant to review program guidelines and complete project documentation
- EMWD will photograph each landscape at the beginning of the project to document the condition of the irrigation system and landscape plants
- Consultant will complete a comprehensive irrigation system pre-inspection at each participating home, that will include:
  - Measuring static and dynamic water pressure
  - Evaluating sprinkler spacing and measuring distribution uniformity
  - Identifying damaged, missing or inefficient equipment needing replacement
  - Recommending equipment upgrades for improved system efficiency
- Consultant will submit a written report to EMWD detailing the results of pre-inspections at each participating home
- EMWD will review pre-inspection reports and authorize consultant to proceed with approved irrigation system equipment upgrades and repairs
- Consultant will complete approved irrigation system retrofits and repairs
- EMWD will verify that irrigation systems are functioning in optimal condition at each participating home and reimburse consultant for approved services

#### **Phase 3: Monitor and Report**

- EMWD will track water use at each home in the treatment and control groups using AMI data and compare it to actual weather demand on a weekly basis
- Consultant will monitor water use at all project sites on a daily basis using web-based software applications provided by the irrigation controller manufacturer that totalize water use, and send text alerts in the case of malfunctions and excessive use
- EMWD will coordinate quarterly site inspections with consultant and respond to customer requests
- EMWD will provide participating customers with electronic monthly “Customer Scorecards” that compare actual water use to water budgets and offer assistance for both indoor and outdoor conservation programs
- Consultant will provide training on all efficient irrigation systems installed at project completion to ensure customer can maintain the new irrigation system properly
- EMWD will submit progress and final project reports to USBR as required

## 3.1 Evaluation Criteria

### A. Project Benefits

**Conserved Water:** 10 acre-feet of conserved water is estimated to be made available each year to offset additional demands of developing residential communities. EMWD will conduct an extensive public outreach campaign to highlight the benefits of this project and encourage all District customers to incorporate the advanced water management practices used by the homes participating in this project. The landscapes at residential sites are irrigated using imported potable water and are typically irrigated using highly inefficient irrigation systems. The result is a net waste of approximately 30% of the applied water due to irrigation system inefficiency. Potable water supply shortfalls are a recurring reality in the southwestern U.S. due to cyclical droughts and competing environmental and development interests. Multiple benefits will result from the implementation of the proposed Project including the reduction of non-point source runoff containing topsoil, chemical fertilizer and bacteria into impacted water bodies.

**Water Quality:** The proposed project will directly benefit the Upper Santa Margarita and Santa Ana River watersheds by reducing the discharge of nutrients and sediment associated with over watering turf grass and other ornamental landscape plants. Currently, water bodies in both watersheds are adversely impacted by excessive nutrients, including nitrogen and phosphorous that are associated with runoff from urban landscape irrigation, and Total Maximum Daily Loads (TMDLs) for these nutrients have been established and are monitored by regulators. As a consequence of excessive nutrients, algae blooms and reduced dissolved oxygen have resulted in fish kills in Canyon Lake and Lake Elsinore.

**Water Supply Reliability:** The proposed project will increase water supply reliability by reducing non-essential water demand on 125,000 square feet of ornamental landscape from 50 residential properties by approximately 10 acre-feet per year. The long term goal of this project is to create a landscape water management system that can be widely adopted at EMWD's 135,000 residential customer properties.

**Habitat Protection:** The project will indirectly benefit endangered and threatened aquatic species and habitat by reducing the amount of water removed and imported to Southern California from the Sacramento River Delta and the Colorado River. The Sacramento River Delta provides habitat for the Delta Smelt, Chinook Salmon, Steelhead Salmon, and Green Sturgeon. The Colorado River provides habitat for the Humpback Chub, Squawfish, and Bonytail.

**Collaboration and Information Sharing:** EMWD actively collaborates on water resource management projects and shares information with the other water managers in the region including retail and wholesale water agencies, the Santa Ana Watershed Project Authority, California Department of Water Resources, Santa Ana Regional Water Quality Control Board and Lake Elsinore and San Jacinto Watersheds Authority. Each of these partner agencies have direct interests in solving the problem of urban runoff and water waste caused by excessive landscape irrigation. The results of this project will be shared with water purveyors at conferences, online trade publications, and in public testimony given to legislators.

## B. Planning Efforts Supporting the Project

Achieving greater levels of water efficiency for landscape irrigation is recognized by water purveyors as a critically important method for meeting sustainable water supply reliability goals. The fact that approximately fifty percent of all potable water consumption in the region is used to irrigate ornamental landscapes, and that thirty percent or more of that water is wasted due to inefficient application methods, makes the selection of this Project a priority. EMWD has prepared and adopted several regional resource management plans that support the goals of the proposed Project.

- Water Shortage Contingency Plan, adopted May 2013
- 2015 Urban Water Management Plan, adopted June 2015
- Water Use Efficiency Master Plan, adopted December 2015
- MWD Integrated Water Resources Plan, January 2016

**Water Shortage Contingency Plan:** On May 15, 2013, EMWD adopted a Water Shortage Contingency Plan (WSCP) in accordance with Water Code 10632 requirements. The WSCP regulated the delivery and consumption of water use during water shortages; in detail, the plan laid out which appropriate water conserving actions EMWD would take, based on current water conditions. As the most recent drought grew in severity, EMWD's response to the state emergency varied from Stage 1A, which suggested a voluntary reduction of up to 10% on an individual customer level, up to Stage 4C, a mandatory 100% reduction in outdoor water use. In response to EMWD's water stages and other mitigating factors, customer water demands decreased during the drought, in effect reducing the amount of water EMWD needed to import from MWD.

**2015 Urban Water Management Plan:** The Urban Water Management Plan Act (UWMP Act), adopted in 1983, requires every urban water supplier that provides water for municipal purposes to more than 3,000 connections or supplies more than 3,000 acre-feet of water annually to adopt and submit an Urban Water Management Plan (UWMP) to the California Department of Water Resources (DWR) every five years. The main purpose of developing and updating an UWMP is to forecast water demands and supplies under normal, single-dry, and multiple-dry year conditions; assess supply reliability; and describe methods of reducing demands under potential water shortages.

**Water Use Efficiency Master Plan:** EMWD completed an update to its conservation plan in December 2015 with funds awarded by USBR under the Water Conservation Field Services Grant Program, in 2014. The EMWD Water Use Efficiency Master Plan is a comprehensive evaluation of all water use categories, and identifies outdoor water use as the primary area for potential water savings. The proposed Project directly addresses the need to identify and implement the most effective methods to increase water conservation.

**MWD Integrated Water Resources Plan:** EMWD is one of 26 member agencies to MWD, and imports up to 54% of its potable water supply through MWD's Colorado River Aqueduct and State Water Project. MWD prepares for future water management with an evolving long-term water strategy known as the Integrated Water Resources Plan, or IRP. Southern California uses less imported water than it did a generation ago even though the

population has grown by five million people. The fundamental goal of the IRP is for Southern California to continue to have a reliable water system, given our future challenges.

### C. Project Implementation

#### *Estimated Project Schedule*

<b>Project Stage</b>	<b>Duration</b>	<b>Major Tasks</b>	<b>Milestones</b>	<b>Start Date</b>	<b>Completion Date</b>
Funding Award	4-8 Weeks	Execute USBR Agreement	<ul style="list-style-type: none"> <li>• Receive award letter</li> <li>• Respond to requests for information</li> <li>• Final signatures</li> </ul>	9/18	11/18
Phase 1: Participant Selection	12-16 Weeks	Customer selection	<ul style="list-style-type: none"> <li>• Analyze water records</li> <li>• Verify landscape areas</li> <li>• Mail invitation letters</li> <li>• Complete pre-project site inspections</li> <li>• Finalize group selections</li> </ul>	11/18	3/19
	6-8 Weeks	Consultant selection	<ul style="list-style-type: none"> <li>• Publish Request for Proposals</li> <li>• Review submittals</li> <li>• Interview and select consultant</li> <li>• Issue contract</li> </ul>	11/18	1/19
Phase 2: Site Work	4-8 Weeks	Customer/ Consultant meetings	<ul style="list-style-type: none"> <li>• Develop and distribute program materials</li> <li>• Facilitate site meetings</li> </ul>	1/19	3/19
	2-4 Weeks	Site Inventory	<ul style="list-style-type: none"> <li>• Complete detailed site inspections</li> <li>• Review consultant recommendations and authorize site work</li> </ul>	2/19	3/19
	4-8 Weeks	Irrigation System Upgrades	<ul style="list-style-type: none"> <li>• Complete upgrades</li> <li>• Inspect and verify work</li> <li>• Process invoices</li> </ul>	3/19	5/19
Phase 3: Monitor and Report		Track Water Use	<ul style="list-style-type: none"> <li>• Record AMI readings</li> <li>• Record irrigation system runtime and total flow data</li> </ul>	5/19	9/20
		Conduct monthly site inspections	<ul style="list-style-type: none"> <li>• Photo document</li> <li>• Assess landscape condition</li> <li>• Respond to customer requests</li> </ul>	5/19	9/20
		Submit Reports	<ul style="list-style-type: none"> <li>• Progress</li> <li>• Final</li> </ul>	3/19	11/20

**Required Permits:** No permits are expected to be required for the implementation of the proposed Project. The work performed by the consultant will be performed on existing

private residential properties and will be limited to the retrofit of existing irrigation equipment.

**Engineering or Design Work:** No engineering or design work will be performed to support the proposed Project. The work performed by the selected consultant will consist of repair and retrofit of existing residential irrigation systems using pre-selected equipment.

**Policies or Administrative Actions:** No new policies or administrative actions are required to implement the proposed Project. EMWD will implement the proposed Project following established policies and administrative procedures.

**Environmental Compliance:** EMWD has consulted with the District's responsible environmental officer. In the opinion of EMWD the proposed Project does not have the potential to cause a significant effect on the environment, or a reasonably foreseeable indirect physical change in the environment, and is therefore, not subject to the California Environmental Quality Act (CEQA), as defined by CEQA Guidelines Section 15378.

#### **D. Nexus to Reclamation**

MWD diverts water from the Colorado River at Lake Havasu and conveys it through the Colorado River Aqueduct to its terminus at Lake Mathews in Riverside County. EMWD purchases 54% of its water supply from MWD through connections to the Colorado Water Aqueduct and State Water Project. The proposed Project will not contribute water to the watershed basin, however it will reduce the amount of water removed from the basin where Reclamation facilities are located. All EMWD customers, including members of Indian Tribes and economically disadvantaged communities are eligible to participate in the proposed project.

#### **E. Department of the Interior Priorities**

The proposed Project utilizes crop science and advanced water technologies to identify best management practices that manage land and water resources. It will also promote regional and statewide collaboration of water conservation efforts that benefit the environment in the California and Colorado watersheds. The results of this project will be shared with water purveyors across this region at conferences, online trade publications, and in public testimony given to legislators.

### **4.0 Project Budget Narrative**

The non-federal share of project costs will be provided entirely by EMWD with funds from the District's FY 2019-20 budget; no donations or in-kind costs will be incurred or claimed before or after the anticipated project start date. EMWD's cost-share requirement will be met entirely with monetary contributions. No funding from any other Federal source has been requested or received for the costs of the proposed Project and there are no pending funding requests. The materials and supplies listed in the estimate project budget will be purchased by EMWD at the lowest wholesale price available and provided to the contractor for retrofit at the selected homes. EMWD will enter into a contractual agreement with a licensed landscape contractor to perform all necessary tasks related to the evaluation, coordination, equipment retrofit, and

water management at each of the 50 selected homes for one year after the equipment retrofits are completed.

**Summary of Non-Federal and Federal Funding Sources**

FUNDING SOURCES	AMOUNT
Non Federal Entities	
1. EMWD Cash Contributions	\$60,000
Other Federal Entities	
1. None	\$0
REQUESTED RECLAMATION FUNDING	\$60,000

**Estimated Project Budget**

Budget and Item Description	Computation			EMWD Funding	USBR Funding	Total Cost
	\$/Unit	Unit	Quantity			
					50%	
<b>Salaries and Wages</b>						
None Claimed	\$0	\$0	\$0	\$0	\$0	\$0
<b>Fringe Benefits</b>						
None Claimed	\$0	\$0	\$0	\$0	\$0	\$0
<b>Materials and Supplies</b>						
Irrigation Equipment: Controllers with flow meters	\$300	Per Site	50	\$7,500	\$7,500	\$15,000
Drip Irrigation	\$125	Per Site	50	\$3,125	\$3,125	\$6,250
High efficiency rotors	\$234	Per Site	50	\$5,850	\$5,850	\$11,700
<b>Contractual</b>						
Water management	\$1,200	Per Site	50	\$30,000	\$30,000	\$60,000
Irrigation Equipment Retrofit	\$541	Per Site	50	\$13,525	\$13,525	\$27,050
Environmental Compliance Costs	\$0	\$0	\$0	\$0	\$0	\$0
<b>TOTAL DIRECT COSTS</b>						\$120,000
<b>TOTAL INDIRECT COSTS</b>						\$0
<b>TOTAL ESTIMATED PROJECT COSTS</b>						<b>\$120,000</b>

**5.0 Environmental and Cultural Resources Compliance**

EMWD has consulted with the District’s responsible environmental officer. In the opinion of EMWD the proposed Project does not have the potential to cause a significant effect on the environment, or a reasonably foreseeable indirect physical change in the environment, and is therefore, not subject to the California Environmental Quality Act (CEQA), as defined by CEQA Guidelines Section 15378. No costs for environmental or cultural resources compliance are anticipated for this proposed Project.

<ul style="list-style-type: none"> <li>Will the proposed work impact the surrounding environment?</li> </ul>	No
<ul style="list-style-type: none"> <li>Are you aware of any species listed or proposed to be listed as a Federal threatened or endangered species, or designated critical habitat in the project area?</li> </ul>	No

• Are there wetlands in the project area?	No
• When was the water delivery system constructed?	N/A
• Will the project effect individual features of the irrigation system?	No
• Are any buildings, structures, or features in the irrigation District listed or eligible for listing on the National Register of Historic Places?	No
• Are there any known archeological sites in the proposed project area?	No
• Will the project have a disproportionately high and adverse effect on low income or minority populations?	No
• Will the project limit access to and ceremonial use of Indian sacred sites or result in other impacts on tribal lands?	No
• Will the project contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area?	No
• Environmental compliance costs have not been included in the budget. Only existing landscapes will be eligible for this program. No environmental or regulatory compliance is required and no costs are anticipated for EMWD.	

**Appendix A – Official Resolution**



**Board of Directors  
July 18, 2018**

**SUBJECT:**

Approve and Authorize Agreements and a Resolution for Turf Removal and Conservation Program Support Services, and Appropriation of \$100,000

**BACKGROUND:**

Over the past five years customers have replaced over 6 million square feet of non-functional turf grass with water efficient landscapes and participated in a wide range of Eastern Municipal Water District (EMWD) sponsored conservation incentive and educational programs. This item will present the results of recent program activities and discuss challenges, opportunities, and recommendations for next steps. Two specific projects are recommended for Board approval:

**Public Landscape Services Program**

To assist customers new to budget-based tiered rates and meet long term conservation goals, staff is proposing a Public Landscape Services Program. This program will provide no-cost support services including landscape design, water efficiency surveys, and irrigation management training to public agencies including cities and schools. After a competitive process of evaluating and ranking qualification of six proposals received, staff selected two firms to be recommended for contract award. Staff recommends that landscape design and survey services be awarded to Van Dyke Landscape Architects, Incorporated, and irrigation management training services be awarded to Blue Watchdog.

The funds for this proposed project are identified in the budget under Special Projects and Studies, Conservation Program Projects. A total of \$100,000 is available for this project over a two year period. The estimated cost of water saved by this project ranges from \$109-\$453 per-acre-foot, assuming a three year payback period.

**Residential Irrigation Efficiency Project**

The United States Bureau of Reclamation's (USBR) WaterSMART Grants: Small-Scale Water Efficiency Projects, offers cost share funding for water use efficiency activities that result in water savings, improve water management and energy efficiency, and directly support projects prioritized in an existing water management and conservation plan. Staff has identified the Residential Irrigation Efficiency Project (Project) as one that meets the objectives of this USBR funding opportunity.

The proposed project will upgrade the existing irrigation systems at 50 single family homes with high efficiency irrigation equipment and manage the watering schedules for a one year period. The equipment installation and watering management would be conducted by a qualified contractor. Staff will monitor water consumption via the District's automated meter

infrastructure system, and the homeowners would agree to keep their irrigation system in good working order for the duration of the project. A control group of 50 similar homes will be tracked and compared with the project participants to determine if there are significant differences in water use and landscape quality.

The Project has an estimated implementation cost of \$120,000. The requested grant amount to USBR is \$60,000. It is estimated that \$60,000 will be funded from EMWD's Special Projects and Studies, Conservation Program Projects. An official Resolution is required as part of the USBR's WaterSMART Grants: Small-Scale Water Efficiency Projects application submittal.

**FINANCIAL IMPACT:**

Funding for the proposed programs has been identified in the 2018-19 Special Projects and Studies, Conservation Program Projects budget.

**STRATEGIC PLANNING GOAL/OBJECTIVE:**

Water Use Efficiency: Promote efficient use of water resources through the implementation of industry-leading programs and practices combined with customer education and awareness.

**ENVIRONMENTAL IMPACT:**

This item is not a project as defined in the California Environmental Quality Act Code of Regulations, Title 14, Chapter 3, Section 15378.

**RECOMMENDATION:**

Approve and authorize the following:

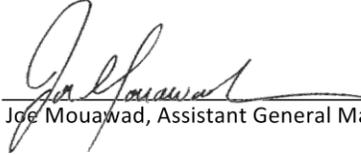
1. Execution by the General Manager, or his designee, of the District's standard form of contract with Van Dyke Landscape Architects, Incorporated, for up to \$75,000;
2. Execution by the General Manager, or his designee, of the District's standard form of contract with Blue Watchdog for up to \$25,000;
3. Appropriation of \$100,000 from the Special Projects and Studies, Conservation Program Projects budget for the Public Landscape Services Program;
4. Approve and adopt a Resolution in support of the District's application for the United States Bureau of Reclamation's (USBR) Small-Scale Water Efficiency Projects for the Residential Irrigation Efficiency Project; and
5. Designate the General Manager, or his designee, as an authorized representative, on behalf of Eastern Municipal Water District (EMWD), to sign the funding application.

**SUBMITTED BY:**



Paul D. Jones II, P.E., General Manager

7/6/2018



Joe Mouawad, Assistant General Manager

6/29/2018

**Attachment(s):**

*Exhibit A - Resolution  
Presentation*

History:

07/12/18 Board Planning Committee RECOMMENDED FOR APPROVAL  
07/18/18 Board Meeting

Staff Contact: Elizabeth Lovsted

**RESOLUTION NO. 2018-100**

**A RESOLUTION OF THE BOARD OF DIRECTORS OF EASTERN MUNICIPAL WATER DISTRICT TO SUPPORT THE SUBMITTAL OF AN APPLICATION TO THE U.S. BUREAU OF RECLAMATION'S SMALL-SCALE WATER EFFICIENCY PROJECTS GRANT: FOR THE RESIDENTIAL IRRIGATION EFFICIENCY PROJECT, AND DESIGNATE AN AUTHORIZED REPRESENTATIVE.**

**WHEREAS**, Eastern Municipal Water District (the "District") desires to finance a portion of the costs of the United States Bureau of Reclamation's (USBR) Small-Scale Water Efficiency Projects for the Residential Irrigation Efficiency Project (the "Project"); and

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

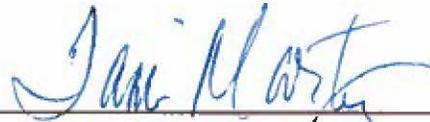
**NOW, THEREFORE, THE BOARD OF DIRECTORS OF EASTERN MUNICIPAL WATER DISTRICT DOES HEREBY RESOLVE, DETERMINE AND ORDER AS FOLLOWS:**

1. The General Manager (the "Authorized Representative") or his designee is hereby authorized and directed to sign and file, for and on behalf of the District, a Small-Scale Water Efficiency Projects Grant application for financing the implementation of the Project;
2. The Board of Directors has reviewed and supports the application submitted;
3. The District has the capacity to provide funding and/or in-kind contributions specified in the funding plan;
4. The District will work with Reclamation to meet established deadlines for entering into a cooperative agreement; and
5. This Resolution shall be effective upon its adoption.

STATE OF CALIFORNIA)  
 )ss.  
COUNTY OF RIVERSIDE)

I, TAMI MARTINEZ, Deputy Secretary to the Board of Directors of Eastern Municipal Water District, do hereby certify that the foregoing Resolution was duly adopted by the Board of Directors of said District at the Regular Meeting of said Board held on the 18th day of July 2018, and that it was so adopted by the following vote:

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



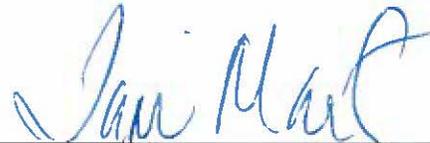
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Tami Martinez, Deputy Secretary of the  
Eastern Municipal Water District  
and to the Board of Directors thereof

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STATE OF CALIFORNIA)  
 )ss.  
COUNTY OF RIVERSIDE)

I, TAMI MARTINEZ Deputy Secretary to the Board of Directors of Eastern Municipal Water District, do hereby certify that the above and foregoing is a full, true and correct copy of Resolution No. 2018-100 of said Board, and that the same has not been amended or repealed.

DATE: July 18, 2018



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

(SEAL)

DATED: July 18, 2018

/s/David J. Slawson

David J. Slawson, 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 July 18, 2018.

ATTEST:

/s/Sheila Zelaya

Sheila Zelaya, Board Secretary

(SEAL)

**Appendix B – Unique Entity Identifier and System of Award  
Management Registration**

# Automated Standard Application for Payments Recipient Enrollment Status Inquiry - RO

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ALC/Region :  
DUNS : 047789870      EIN : 95-6004429  
ASAP ID :  
Enrollment Status : Completed

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Recipient Name : EASTERN MUNICIPAL WATER DISTRICT

DUNS : 047789870  
EIN : 95-6004429  
ASAP ID : 0629056

Federal Agency : BUREAU OF RECLAMATION  
ALC/Region : 14060905  
Status : Active      02/14/2013

<b>Enrollment Task</b>	<b>Business Days Remaining</b>	<b>Status</b>	<b>Date Completed</b>
EI Initiates RO and POC		Completed	01/08/2013
Point of Contact Names Organization Officials			
Head Of Organization Approves Officials			
Authorizing Official Defines Recipient Profile			
Authorizing Official Defines Recipient Organization Users			
Financial Official Defines Banking Information		Completed	02/13/2013

**Recipient Organization**

<b>Name :</b>	EASTERN MUNICIPAL WATER DISTRICT
<b>Recipient ID :</b>	0629056
<b>Organization Type :</b>	Local Government
<b>EIN :</b>	956004429
<b>DUNS Number :</b>	047789870
<b>Organization Short Name :</b>	EMWD
<b>Mailing Address :</b>	PO Box 8300 Perris, CA 92572-8300
<b>Is this Profile active? :</b>	Yes

[Exit  
Screen](#)[Help for this  
Page](#)

## Fabozzi, Lisa

---

**From:** Wright, Bonnie  
**Sent:** Tuesday, January 02, 2018 3:08 PM  
**To:** Fabozzi, Lisa  
**Subject:** FW: CONFIRMATION: Registration Submitted for EASTERN MUNICIPAL WATER DISTRICT / 047789870 / 49S99 in the U.S. Government's System for Award Management (SAM)

FYI

*Bonnie Wright*

Grants & Loan Manager | Eastern Municipal Water District  
(951) 928-3777, 4323 | Email: [wrightb@emwd.org](mailto:wrightb@emwd.org)

**From:** [notification@sam.gov](mailto:notification@sam.gov) [mailto:[notification@sam.gov](mailto:notification@sam.gov)]  
**Sent:** Tuesday, January 02, 2018 3:09 PM  
**To:** Wright, Bonnie  
**Subject:** CONFIRMATION: Registration Submitted for EASTERN MUNICIPAL WATER DISTRICT / 047789870 / 49S99 in the U.S. Government's System for Award Management (SAM)

*This email was sent by an automated administrator. Please do not reply to this message.*

Dear Bonnie Wright,

You successfully submitted the entity registration for EASTERN MUNICIPAL WATER DISTRICT / 047789870 / 49S99 in the U.S. Government's System for Award Management (SAM). This registration record will remain in Submitted status until all external validations are complete. What happens next?

1. If you provided a Taxpayer Identification Number (TIN), the Internal Revenue Service (IRS) will conduct a validation of your TIN and Taxpayer Name. This step can take two business days. You will get an email from @sam.gov when that review is complete.
2. Your registration will then be sent to the Defense Logistics Agency (DLA) Commercial and Government Entity (CAGE) Code system for assignment or validation of your CAGE Code. This step averages two business days, but the DLA CAGE team can take up to ten business days, or longer, in peak periods. You will get an email from @sam.gov when that review is complete.
3. If the DLA CAGE team has any questions, they will contact the individual you listed as the Government Business Point of Contact (POC) via email. The email will come from an @dla.mil address. Please tell your Government Business POC to respond right away to any requests from an @dla.mil email. If a timely response is not received, your registration will be returned to SAM and your registration status changed to Work in Progress. You will have to resubmit and provide the requested information to DLA CAGE to continue.
4. You will get an email from @sam.gov when your registration passes these external validations and becomes Active. While you are waiting, use the Check Status tab in the SAM main navigation bar to see where your registration is in the review process.

Remember, this process is entirely FREE to you. It is FREE to register and maintain your registration in SAM. It is FREE to get help with your registration. Contact our supporting Federal Service Desk at [www.fsd.gov](http://www.fsd.gov), or