PASADENA Water&Power

SERVING THE COMMUNITY SINCE 1906

Spray-to-Drip (S2D) Residential Irrigation Conversion Program

WaterSMART Small-Scale Water Efficiency Projects Grant

PREPARED FOR:

Bureau of Reclamation
Financial Assistance Support Section
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April 24, 2019

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(Start 15-page Technical Proposal)

SECTION 1. TECHNICAL PROPOSAL

A. EXECUTIVE SUMMARY

Date: April 24, 2019
Applicant Name: City of Pasadena Water and Power (PWP) Department
City: Pasadena
County: Los Angeles
State: California

One Paragraph Project Summary. PWP requests $75,000 for the proposed Spray-to-Drip (S2D) Residential Irrigation Conversion Program. The total project cost is estimated at $150,015. The purpose of the proposed project is to encourage PWP's residential customers to retrofit their irrigation systems from wasteful spray systems to more efficient drip systems. The proposed project will provide funding for 600 Drip Kits for PWP residential customers to install, marketing and promotion of the program, technical assistance (one-on-one and quarterly workshops), PWP inspections on a sample of customer installations, and project performance monitoring. PWP seeks to convert a total of 240,000 square feet of residential landscape from spray to drip irrigation resulting in both water and energy savings, and reduced runoff and pollution of surface and groundwaters. The project is directly aligned with the goals and objectives of this BOR program: A noteworthy 70% of residential water use is related to irrigation, representing a significant opportunity to reduce pressure on local water supplies through conservation efforts. PWP is under more pressure than ever to encourage the public to save water, and to expand water conservation infrastructure.

Project Timeline. The project is anticipated to begin in October 2019 and will be complete by September 2021, for a total of 24 months.

Federal Facility. The proposed project is not located on a federal facility. All project activities will take place within the PWP service territory, which includes all of Pasadena, California, and parts of unincorporated Los Angeles County. All proposed irrigation retrofits will be implemented by PWP's customers on private residential land. PWP receives approximately 60% of its water from the Metropolitan Water District of Southern California (Metropolitan), which is the designated contractor for the Colorado River Aqueduct and the State Water Project. Both the Colorado River Aqueduct and the State Water Project are Bureau of Reclamation facilities.

B. BACKGROUND DATA

Location and Background of Organization

PWP is located in the City of Pasadena, within Los Angeles County in Southern California. Please refer to page ii for a map showing the organization and project location. PWP was initiated by City Ordinance in 1906, and in 1912 Pasadena municipalized its water service. PWP's water service area covers 26 square miles, with a service area population of 169,868,

and 38,000 water accounts resulting in 89.3 gallons-per-capita per day of residential usage. PWP customers use, in total, approximately 27 million gallons of water each day.

Fig. 1: PWP's Sunset Reservoir

PWP relies on two main sources of water supply: 1) local groundwater from the Raymond Basin, a 40-square-mile natural aquifer underlying Pasadena and neighboring cities, and 2) imported water purchased from the Metropolitan Water District of Southern California (Metropolitan). The supply mix has historically averaged 60% imported and 40% local. Rainfall is the main source of water that replenishes the Raymond Basin. PWP and other water agencies only pump water out of the Raymond Basin that is equal to what is naturally replenished. During a drought, however, the groundwater levels slowly drop because there is little or no rainwater or mountain runoff to replenish the basin. PWP has 17 wells that tap into the Raymond Basin at depths of 300-400 feet, drawing out 13 million gallons of groundwater or more per day, on average. These wells feed groundwater into 14 reservoirs that have a storage capacity of 110 million gallons. The reservoirs also hold purchased water from Metropolitan. Jones Reservoir, PWP's largest reservoir, can hold about 50 million gallons of water and Lida Reservoir is the smallest with a 0.43-million-gallon capacity. PWP also has 19 booster stations, and one treatment plan (Monk Hill). Water is disinfected and blended in the reservoirs then distributed to the customers through a pipeline network of 520 miles of mains throughout the city. Recent infrastructure improvements completed by PWP include: replacement of approximately two miles of water mains; 2,650 water meters replaced to improve billing accuracy; 10 water meter boxes and vaults replaced; designed the Arroyo Booster Station upgrades with construction to be completed in 2019; and completed the preliminary design report for the Sunset Reservoir replacement project

Current Water Users

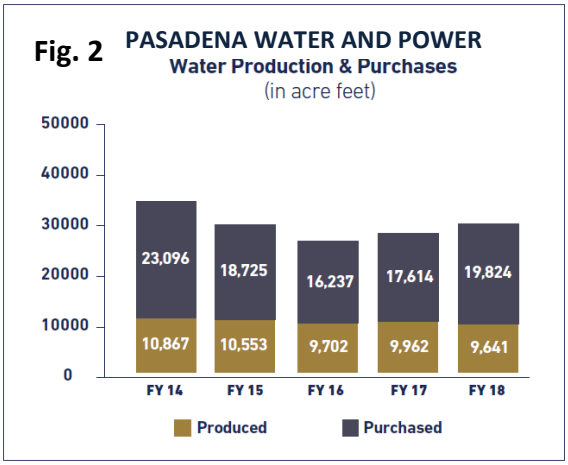
According to PWP's 2015 Urban Water Management Plan, residential water use accounted for 61% of PWP's overall water use (46% single family and 15% multi-family), followed by commercial and industrial uses (29%). Institutional/governmental uses (2%), other uses (1%), and water losses (8%) accounted for the remaining water uses.

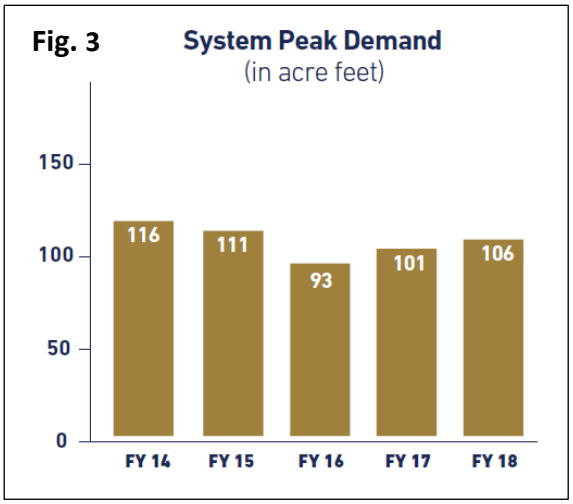
Current and Projected Water Demand

In FY 2018, PWP's total water production was 29,465 acre feet (AF), consisting of 19,824 AF of water purchased from Metropolitan and 9,641 AF produced from groundwater. FY 2018 total production was 13% less than FY 2014 (and similar to demand in the 1950s) due to PWP's aggressive ongoing water conservation efforts (described in the next section). PWP's 2015 Urban Water Management Plan estimates projected water demand through the year 2040 is 33,000 AFY or a 12% increase from FY 2018, which could eliminate gains made to-date.

Potential Shortfalls in Water Supply

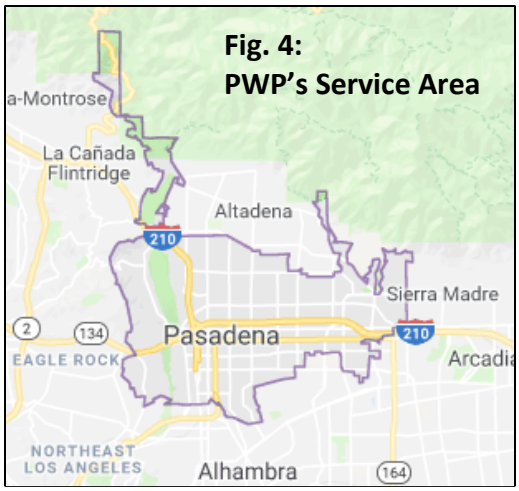
California's historic seven-year drought was proclaimed to be officially over as of March 2019. However, due to California's climate, droughts are common and dry conditions should be expected. PWP will remain vigilant and continue to aggressively promote conservation programs and strategies. For instance, the City will continue to limit outdoor watering to one day per week during the winter and no more than three days per week during the summer. PWP will also continue to identify conservation strategies to add to its portfolio, such as the proposed project, which will take advantage of recent rains to encourage project participants to convert their landscapes from turf to drought-tolerant plantings.





Past Working Relationships with Reclamation

In 2016, PWP was awarded a $100,000 grant from BOR's Water Conservation Field Services Program (Lower Colorado Region – FY 2016) to expand its Greywater Program (total project cost = $284,977). This successful project (*Laundry-to-Landscape Greywater Recycling Program Expansion*) is ongoing, and offers vouchers for greywater kits to an expanded number of PWP customers, the direct installation of systems for low-income customers, and onsite technical consults for program participants. By reusing water for irrigation that would normally go down the drain, PWP's greywater recycling program makes more efficient use of existing water supplies and promotes water conservation. BOR's support allowed PWP to bring this important conservation approach to more residents, including low-income families.



C. PROJECT LOCATION

The proposed project will be located primarily in the City of Pasadena, California, in Los Angeles County. The Drip Kits will be available to PWP's residential customers who reside in single family homes within PWP's 26-square mile service area (see Fig. 4), which also includes a small number of customers in unincorporated Los Angeles County. The project's representative latitude is 34° 08' N and longitude is 118° 08' W (which is the location of City Hall, a central location within the city limits).

D. TECHNICAL PROJECT DESCRIPTION AND MILESTONES

Problems, Needs, and Connection to the Proposed Project

Residential Irrigation Systems Waste Water. Most residential irrigation systems still use traditional spray systems that are inefficient. As much as 50% of water use in traditional systems are lost to wind, evaporation, and run-off. As seen in Fig. 5, PWP staff observes countless instances of inefficient residential irrigation that results in water waste and runoff. The two pictured residences are ideal candidates for PWP's proposed project. The runoff includes sediment, pesticides, fertilizer, and other pollutants that end up in storm drains and eventually in local surface and groundwaters.

Fig. 5: Examples of Irrigation Water Waste (Two PWP Residential Customers)

Groundwater Levels Are Low. Despite recent rains, groundwater levels across the state remain low, including Pasadena's local groundwater from the Raymond Basin, a 40-square-mile natural aquifer that accounts for 40% of PWP's water supply. Water spread in the Raymond Basin decreased 59% from 2016-17 (4,538 AF) to 2017-18 (1,867 AF). According to the Raymond Basin Management Board Annual Report for 2017-18, the water levels in the Basin have been fluctuating, but the Basin's Pasadena Subarea is on the decline, and the Pasadena Subarea has used 100% of the long-term storage. One wet year will not compensate for the recent 10 dry years, and the drought's impact on the Basin will linger for many years.

***The Source of Imported Water is Vulnerable*.** Approximately 60% of PWP's water is imported from Metropolitan, which imports water from the State Water Project (30% of Metropolitan's supply) and the Colorado River (15% of its supply). The Colorado River Basin recently experienced the worst drought in its history, and is suffering from a long-term and possibly irreversible decline in capacity. During the first five years of that drought, the Colorado River reservoir storage decreased significantly, dropping 30 million acre feet (MAF), or from nearly full to half capacity. Currently, the system remains at half-full. Lake Mead, one of the essential water supplies of the Basin and therefore source of water to Southern California, is currently at its lowest level since 1960. At the end of FY 2017, Lake Mead was approximately 39% full. Restrictions on State Water Project deliveries by federal court orders due to endangered Delta smelt and salmon have further increased pressure on Metropolitan's ability to meet demands and refill regional storage. Metropolitan is currently tapping into reserves in order to maintain deliveries to PWP and the rest of their 26 member agencies. They recently announced a goal of saving 180,000 AF by

2040, and their Turf Removal Program (and support of PWP's proposed Drip Kits project) is one of many efforts that will support their water savings objective.

Water Demand is on the Rise. Though demand dropped 13% from FY 2014 to FY 2018, demand in FY 2017 and 2018 is rising. Fig. 2 illustrates that total production in FY 2018 increased slightly from FY 2017. FY 2018 water purchases were 12.5% higher than the prior fiscal year, representing 31.8% of PWP's operating funds. Fig. 3 shows that peak system demand decreased in the last five years, but is creeping back up.

Connection to the Proposed Project. A noteworthy 70% of residential water use is related to irrigation, representing a significant opportunity to reduce pressure on local water supplies through conservation efforts. Conservation and demand management are critical to ensuring the sustainability of Pasadena's water supply. The conditions described above illustrate that PWP is now under more pressure than ever to encourage the public to save water, and to expand water conservation infrastructure. The timing for the proposed project is ideal: current wet conditions will support establishment of more drought-tolerant landscapes in anticipation of dry and drought conditions, which are certain to return.

Purpose and Objectives of Proposed Project

Purpose and Goal. The purpose of proposed project is to encourage PWP's residential customers to retrofit their irrigation systems from wasteful spray systems to more efficient drip systems, and to participate in Metropolitan's expanded turf removal program. The goal of the project is to achieve quantifiable and sustainable water savings. The proposed project will provide funding to retrofit 600 residential systems.

Objectives.

1) Promote the Availability of the Drip Kits via Three Outreach Methods;
2) Provide 600 Drip Kits to PWP Customers;
3) Provide Quarterly Workshops to Assist Customers;
4) Provide Additional Technical Assistance, As Needed;
5) Conduct Inspections on a Sample of Customer Installations; and
6) Monitor Program Performance.

Expected Outcomes. The project's expected outcomes include:

1) Conversion of 240,000 square feet of residential landscape from spray irrigation to more-efficient drip irrigation;
2) Increased participation in Metropolitan's Turf Removal Program and conversion of residential turf to drought-tolerant and water-wise landscapes;
3) Water savings (34.67 AF per year; 347 AF Lifetime);
4) Energy savings related to reduced water delivery (54,536 kWh per year; 545,369 kWh Lifetime);
5) Reduced runoff and pollution of surface and groundwaters; and

6) PWP customers' enhanced stewardship of water resources including an estimated 400 residents receiving technical assistance/training from the project (8 workshops x 50 participants = 400 residents with enhanced knowledge).

These outcomes, calculations, and other project benefits are described in detail in Evaluation Criterion A (Project Benefits).

Project Description and Work Plan

Background. PWP seeks to encourage its residential customers to replace inefficient, wasteful irrigation spray heads with more efficient, water-saving drip irrigation to promote Pasadena's goal to reduce water use by 20% by 2020. The proposed project will leverage an expanded Turf Removal Program that is being offered in 2019 by Metropolitan, which will provide rebates of $2 per square foot (doubled from 2018's $1 per square foot rebate) to encourage and incentivize residents in their member districts to replace turf grass with more water-efficient, and native landscaping. The Turf Removal Program requires participants to utilize efficient irrigation systems. PWP's proposed irrigation retrofit project dovetails with Metropolitan's program; it will incentivize participation in both programs to maximize water savings. Metropolitan's letter of support is included in this application. PWP conferred with other local municipalities that have successfully implemented similar projects to identify best practices; the recommendations of these neighboring municipalities helped to shape the proposed scope of work.

Participant Eligibility. Eligibility will be limited to PWP's 28,000 single-family residential customers who submit a complete application. PWP will urge potential applicants to participate in both PWP's Drip Kit Program and Metropolitan's Turf Removal Program to maximize their water savings. A complete application will include data about the resident's current and proposed landscape, square footage of the irrigation area, water usage, etc., and will also include photographs that show the current irrigation system in use and identifying features to confirm that the photographs are for the resident's property.

Project Marketing. PWP will promote the project via robust social media outreach, utility bill inserts, posting of flyers at locations throughout the City, and including information about the project in a variety of PWP reports and newsletters. PWP will hire a graphic designer (see Task 2: Procurement, below) to produce promotional materials and messaging, and the graphic designer will work with PWP's proposed Marketing Coordinator on design. The Marketing Coordinator will be responsible for dissemination. Promotional materials will focus on: potential significant water savings and water bill reduction via joint participation in PWP and Metropolitan's programs; the importance of individual stewardship in reducing water waste; the ease of participation, application, and installation; and information about the project's quarterly technical assistance workshops which will provide a wide range of technical assistance (discussed below).

Drip Kit Installation and Technical Assistance. PWP will identify a local vendor to provide the Drip Kits to approved participants. Approved participants will present their voucher

to the vendor to receive their Drip Kit. Alternatively, participants can bring their completed application to one of the project's quarterly workshop (discussed below) for same-day processing, and receive their Drip Kit the same day (assuming they are approved). Participants will be responsible for installation of the Drip Kit. PWP will hire a consultant with specialized expertise in residential irrigation retrofits to provide technical assistance.

PWP will implement a two-year project to promote the new program, manage the application process, distribute Drip Kits to eligible customers, provide technical assistance, and conduct inspections. The specific tasks are described below.

Task 1: Grant Administration and Performance Monitoring

PWP has identified experienced staff to manage the grant and project, including executing the grant agreement, and managing reimbursement requests and semi-annual and final performance reporting to BOR. PWP will monitor project performance throughout the project period, including monitoring critical milestones (see Fig. 6), and making real-time project implementation adjustments as needed. The proposed Project Coordinator will develop a database in MS Excel to compile data from participating customers that will allow staff to run performance reports, as needed. Metrics that will be monitored include number of applications received and processed, number of drip kits distributed, total square footage of the conversion area, water savings (AFY and 10-year lifetime), energy savings (per year and 10-year lifetime), number of workshop participants, number of technical assistance calls, and number of on-site technical assistance visits. Data will be collected from participants' applications, PWP's own residential water usage reports, and other data collected by PWP staff related to technical assistance activities.

Fig. 6: Critical Milestones

- Year 1 Procurement Complete (Month 4)
- Marketing/Promotional Designs Complete (Month 4)
- 200 Drip Kits Distributed by end of Year 1 (Month 12)
- Year 2 Procurement Complete (Month 14)
- 600 Drip Kits Distributed by end of Year 2 (Month 24)
- Semi-Annual and Final Performance Reporting

Task 2: Procurement

PWP will procure services from the following vendors:

Drip Kits Vendor. PWP will select a local vendor to provide the 600 Drip Kits described below in Task 4. In Year 1, PWP will request a minimum of three quotes from local providers, and issue a purchase order to the selected vendor, with the goal of issuing 199 Kits (estimated to cost $24,875). In Year 2, PWP will issue a Request for Proposals (RFP) to select the vendor for the remaining 401 Kits. The difference in procurement process from Year 1 to Year 2 is intentional: it allows PWP to accelerate project launch, begin implementation within one month, and incorporate lessons learned and other important information in the RFP. Procurement in Year 2 will require issuing an RFP because the estimated value of the Drip Kits will meet the City's threshold (i.e., goods and services estimated to cost $25,000 or more).

Technical Assistance Provider and Graphic Designer. PWP will procure the services of the technical assistance provider (who will conduct the quarterly technical assistance workshops and provide on-site technical assistance) and the graphic designer (who will design the messaging and graphics for the marketing and promotional materials) by requesting a minimum of three written quotes for each. PWP will issue a purchase order to selected vendors.

Task 3: Project Promotion and Marketing

The Graphic Designer will design project messaging and graphics and will work with PWP's Marketing Coordinator who will oversee and assist with the design process. The Marketing Coordinator will be responsible for dissemination. Dissemination will include:

Social Media. The project will target PWP's own social media channels including Facebook (1,500 followers) and Twitter (2,000 followers), as well as those of the City of Pasadena and Metropolitan. PWP's Twitter account just recently retweeted Metropolitan's flyer for their Turf Removal Program (see Fig. 7), and PWP will seek to cross-promote the Drip Kits project in a similar fashion.

Fig. 7: PWP's Retweet of a Flyer for Metropolitan's Turf Removal Program

Posted and Distributed Flyers. Color flyers will be printed for posting in PWP's offices and other locations, and to distribute to customers who are interested in the program (e.g., to take from PWP's offices or from the technical assistance workshops) or to other entities that wish to promote the project (e.g., City Community Centers).

Utility Bill Inserts. PWP will issue utility bill inserts to all 28,000 of its single-family residential customers once in Year 1 and once in Year 2. The color inserts will be envelope sized.

Other Dissemination. Information about the project will also be shared via PWP's *Watts* e-Newsletter, Home Water Reports mailed to residential customers four times per year, and on PWP's web banners. Project information will also be included twice per year in the City's *Pasadena-in-Focus* newsletters that are mailed to all Pasadena residents every two months.

Task 4: Drip Kit Distribution and Customer Installation

PWP staff will develop the project application using forms from similar programs operated by PWP. Applications will be available in hard copy for pickup in PWP's office, via e-mail by request, or online via PWP's WaterSmart customer portal. Completed applications will be accepted online, via e-mail, or in hard copy. The proposed Project Coordinator will be responsible for reviewing applications, logging information and data for all received applications into a dedicated MS Excel project database, and issuing voucher packets (the

voucher and instructions) to approved applicants (voucher packets will be available in hard copy or via e-mail).

PWP selected a Drip Kit based on consultation with other nearby municipalities that have already implemented similar projects. PWP selected the Rain Bird Planter Bed Spray-to-Drip Retrofit Kit. The kit will convert a conventional pop-up spray sprinkler zone to water-efficient low-volume drip irrigation. Each kit will cover an area of 250 to 400 square feet. The kit includes a special tool for easy installation of fittings. Each kit contains:

(2 rolls) 100 ft. of XFCV Dripline	(40) Galvanized Tie-down Stakes
(1 roll) 100 ft. of Blank Drip Tubing	(1) Retrofit Kit with 200 mesh filter and 30 psi regulator
(10) 17mm TEE Fittings	(1) ½" FPT x Barb Tee Fitting
(4) 17mm Elbow Fittings	(1) ½" FPT x Barb Elbow Fitting
(10) 17mm Coupler Fittings	(10) XC-1800 Close-off Caps
(2) Dripline Insertion Tool	(2) Coupling fittings with flush caps

The selected vendor will make the kit available at their retail location and at the planned quarterly technical assistance workshops. Participants will have 90 days from when they receive the Drip Kit to install the system. PWP will work with participants if extensions are needed. Participants must provide installation confirmation to PWP within the 90-day period, which includes the submission of photographs to demonstrate the Drip Kit installation (instructions for the confirmation process will be provided with the Drip Kit, and also available on PWP's website). Participants who fail to install the system will be required to return the Drip Kit to PWP (or the cost of the Drip Kit will be added to their monthly bill).

Task 5: Technical Assistance

Technical assistance will be available via: 1) the quarterly workshops noted above, 2) on-site technical assistance and troubleshooting (limited availability), and 3) telephone assistance provided by the Project Coordinator (and assisted by other PWP staff as needed). The quarterly workshops will be the centerpiece of the technical assistance effort, and will offer information about the project and potential water savings, information about Metropolitan's complementary program and information for accessing their rebate program, assistance with filling out the Drip Kit application, same-day processing of the application and the availability of Drip Kits for approved applicants, and guidance on installation and trouble-shooting.

Task 6: Inspections of Customer Installations

PWP staff will conduct on-site inspections on a random 10% sample of participant installations, following the recommendations of other cities that have implemented similar programs. The inspector will make recommendations for system adjustments, as needed, to maximize efficiency and water savings.

Readiness and Related Experience

PWP implements a number of residential programs focused on water and energy savings. In FY 2018, customers received almost $5 million in rebates, incentives, and efficient technology direct installation services which resulted in 16,569 MWh of energy savings, reduction in peak demand of 2.08 MW, and 387 acre feet of water savings. These successful programs illustrate PWP's experience implementing projects of similar scope and size to the proposed project. These programs include: 1) PWP's popular Laundry-to-Landscape ("L2L") Program, an ongoing BOR-funded project that expanded **PWP's Greywater Program** and encourages water-efficient irrigation through the use of greywater from washing machines (voucher program). The program has provided 26 technical assistance workshops, to-date; 2) the **Weather-Based Irrigation Controller Pilot Program** (2016-17), a direct-install program for residential customers, which provided 90 controllers over a 12-month period; and 3) the **Multi-Family Water Efficiency Program** (2015-16), which provided water-efficient self-install showerheads and aerators for residential customers in properties with four or more units. The program has had 95% compliance out of 4,091 properties. PWP's conservation efforts were recognized with invitations to speak about their programs at the *WaterSmart Innovations Conference and Exposition*. PWP submitted abstracts and was selected in 2016 to present about the Greywater Program and in 2018 to present about the Controller Pilot Program. PWP was also invited to speak about the Greywater Program at the *Localizing California Waters 2017 Conference.*

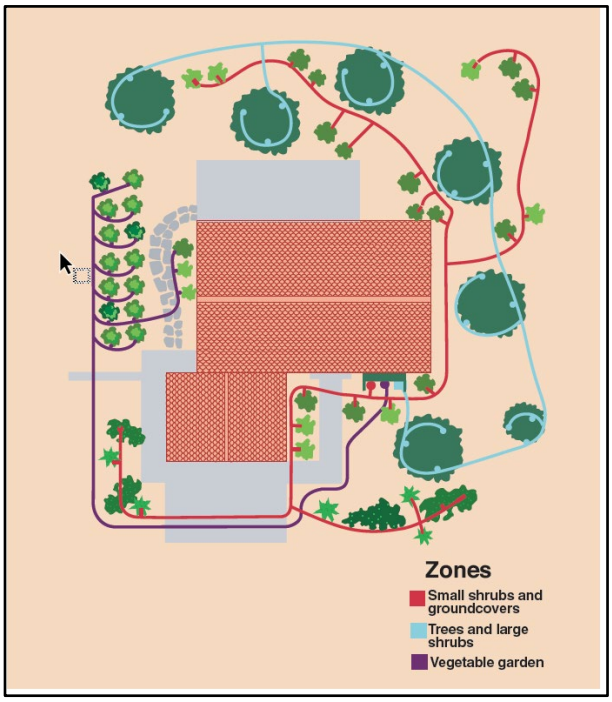


Fig. 8: Example of a Drip Irrigation System Layout on a Residential Property

E. EVALUATION CRITERIA

A. Project Benefits

The proposed project has multiple benefits that will have impacts across the spectrum, from positive impacts on PWP's water supply and reliability to positive impacts on residential customers' water bills.

1. Water Savings (34.67 AFY/347 AF Lifetime) and Reduced Residential Water Bills.

The project will retrofit 600 residential irrigation systems that water approximately 240,000 square feet of landscape (400 sq. ft average per residential customer x 600 customer irrigation system retrofits). Conversion to drip irrigation saves an average of 18,832 gallons per customer

per year[1], for a total of 11,299,200 gallons total per year (18,832 gallons x 600 retrofits = 11,299,200 gallons or 34.67 acre feet per year). These savings will be significant for participants who could see their water bills reduced by as much 30%.

2. Energy Savings (54,536 kWh per year/545,369 kWh Lifetime). The anticipated water savings (34.67 AFY) will eliminate PWP's energy costs for distributing that water. The local energy savings is estimated as follows: 34.67 AFY water savings x 40% (local supply) x 1,117kWh/AF[2]= 15,579 kWh per year, and 155,799 kWh saved over the 10-year life of the proposed retrofits. In addition to the energy intensity of PWP's water supply operations, it is important to also consider energy intensity embedded in the imported supply entering PWP's service area. In 2015, Metropolitan's intensity corresponded to 1,862 kWh/AF[3], which equates to an additional 38,957 kWh/year saved by the proposed project, and 389,570 kWh saved over the 10-year life of the proposed retrofits. (34.67 AFY x 60% (imported supply) x 1,862 kWh = 38,957 kWh/year, and 389,570 kWh saved over the 10-year life of the proposed retrofits.)

Local Energy Savings:	15,579 kWh/year (155,799 kWh lifetime)
Imported Water Energy Savings:	38,957 kWh/year (389,570 kWh lifetime)
TOTAL ANNUAL ENERGY SAVINGS:	54,536 kWh/year (545,369 kWh lifetime)

3. Reduced Runoff. Approximately 50% of residential spray irrigation is lost to runoff, wind, and evaporation. The runoff collects pollutants and runs unimpeded into storm drains, rivers, creeks, groundwaters, and the ocean. By eliminating runoff, the proposed project will prevent further pollution of these water bodies. Converting irrigation systems from spray to drip is considered a Best Management Practice.

4. Improved Water Supply Reliability. As described earlier in the application, both sources of PWP's water supply (groundwater and imported water) are in jeopardy and are vulnerable, despite the ending of the drought. Though the rains have finally come, the Raymond Basin and the Colorado River have not recovered, and it will be many years before these water sources return to their pre-drought conditions. Local efforts to conserve water (such as the proposed project) help reduce overall demand, and reduce pressure on these finite water resources. PWP's approach has been to maintain their Level 1 Water Shortage classification and aggressively pursue water conservation strategies, knowing that dry and drought conditions will return.

5. Promotion of Water Conservation and Stewardship of Water Resources. Both PWP and Metropolitan are focusing water conservation efforts on residential landscapes to leverage the 'multiplier effect' where neighbors see neighbors retrofit their irrigation systems and

[1] Based on BeWaterWise Watering Calculator for Pasadena Sandy Loam Soil, 12 GPM sprinkler station, 150 0.90 GPH drip emitters for drip system (http://www.bewaterwise.com/calculator.html).
[2] Based on PWP's calculated system-wide intensity of water supply; calculated using recommendations from the California Department of Water Resources as detailed in PWP's 2015 Urban Water Management Plan.
[3] Based on an average of data from 2013 (1,786 kWh/AF) and 2014 (1,938 kWh/AF).

replace their turf grass, and they want to do the same. Locating water conservation projects in landscapes, including front yards, across the City promotes water conservation and wise stewardship of our water resources. The project's technical assistance workshop will also educate participants on the importance of water conservation, irrigation retrofits, and promote their embrace of these ideals beyond the scope of the proposed project.

B. Planning Efforts Supporting the Project

The proposed project is aligned with two local planning documents: PWP's Urban Water Management Plan and their Water Integrated Resources Plan (WIRP). Though similar, the WIRP is a planning tool solely for Pasadena, while the Urban Water Management Plan is required of all water utilities by the California Department of Water Resources, and helps the state ensure an adequate supply for all California communities. The proposed project is directly aligned with the objectives of PWP's **2015 Urban Water Management Plan**[4] (adopted 2016). Key Objectives of the Plan that are aligned with the proposed project include:

- Reduce baseline daily per capita water use by 20% by 2020 to 168 gallons gpcd;
- Implement water use efficiency programs (active conservation) to balance supplies and demands; and
- Implement additional water conservation BMPs in addition to current conservation efforts.

Further, the project is considered a priority because the Plan calls specifically for "Implementing a spray-to-drip irrigation retrofit incentive" as a specific conservation measure to increase supply reliability (p. 5-24).

The **Water Integrated Resources Plan (WIRP)**[5] adopted by PWP in 2011 is Pasadena's blueprint for ensuring reliable, cost-effective and environmentally responsible water supply for the next 25 years. Key objectives of the WIRP that are aligned with the proposed project include:

- Protect receiving waters and the environment;
- Maximize efficiency of water use; and
- Reduce energy footprint for water operations.

The WIRP called for increased local conservation programs within PWP's service area, and recommends: "Convert about 70 percent of existing single family homes to comply with California Model Landscape Ordinance (requires a combination of irrigation efficiency measures and turf replacement to warm season grass) – through PWP rebates and rate structure enhancements" (p. 7-10). The WIRP estimated that even moderate levels of conservation, such as those promoted in the WIRP and the Urban Water Management Plan, have the potential to save over 5,000 AFY by the year 2035.

[4]https://ww5.cityofpasadena.net/water-and-power/wp-ontent/uploads/sites/54/2017/08/2015_Final_UWMP.pdf
[5] https://ww5.cityofpasadena.net/water-and-power/waterirp/

C. Project Implementation

The project is simple and straight-forward, requires no permitting, no engineering or design work, and no new policies or administrative actions. PWP can begin implementation of the proposed two-year project immediately upon grant award. PWP's water conservation program portfolio includes a number of voucher and rebate programs of similar size and scope to the proposed project. PWP will leverage existing procedures, materials, forms, etc., from these similar projects which will accelerate start-up and implementation.

Implementation Plan and Schedule. See Table 1, below. Major project milestones include:

- Year 1 Procurement Complete (Month 4)
- Marketing/Promotional Designs Complete (Month 4)
- 200 Drip Kits Distributed by end of Year 1 (Month 12)
- Year 2 Procurement Complete (Month 14)
- 600 Drip Kits Distributed by end of Year 2 (Month 24)
- Semi-Annual and Final Performance Reporting

Environmental Compliance Estimate. On March 25, 2019, PWP staff met via telephone with BOR Environmental Protection Specialist Doug McPherson to discuss the proposed project and anticipated environmental compliance costs. Mr. McPherson indicated that the proposed project would present no environmental issues or impacts, and would be classified as a "Categorical Exemption". He advised to include $1,000 in the project budget to complete paperwork; the proposed project budget reflects this recommendation. Participating PWP staff included the proposed Project Director (Ursula Schmidt) and Project Coordinator (Priscilla Echeverry).

TABLE 1: WORK PLAN AND SCHEDULE (24-Month Project)

No.	Milestone/Task/Activity	Evaluation Technique	Start/End Dates
1.0	**Task #1: Grant Administration and Performance Monitoring**		
1.1	Grant Award and Fully Executed Grant Agreement.	Grant agreement executed by BOR and PWP.	Month 1
1.2	Develop Performance Monitoring Database (MS Excel)	List of database fields.	Months 2-3
1.3	Grant Administration and Performance Monitoring	Final grant payment.	Months 1-24
1.4	Submit Request for Reimbursements.	Request for reimbursement approved by BOR.	Months 6, 12, 18, 24
1.5	Submit Semi-Annual Progress Reports. **MILESTONE**	Progress reports submitted by PWP.	Months 6, 12, 18
1.6	Complete Final Performance Report and Final Payment Request (within 90 days after end of project) **MILESTONE**	Final report approved by BOR.	Months 19-27
1.7	Records Retention (3 years after final payment is made by BOR).	PWP to retain records for three years.	Month 24 + 3 years

No.	Milestone/Task/Activity	Evaluation Technique	Start/End Dates
2.0	**Task #2: Procurement**		
2.1	Select Drip Kit Vendor **MILESTONE** (Yr 1: Request for Quotes; Yr 2: Request for Proposals	Request for Quotes and Request for Proposal; submissions by selected vendors/consultants.	Yr 1: Months 1-4 Yr. 2: Months 11-14
2.2	Select Technical Assistance Provider and Graphic Designer and Issue Purchase Orders **MILESTONE**	Final Purchase Orders.	Months 1-2
3.0	**Task #3: Project Promotion and Marketing**		
3.1	Promotion and Marketing Design **MILESTONE**	Copies of final designs and messages	Months 2-4
3.2	Social Media Outreach.	Total number of postings, channels targeted, and 10% sample of the postings.	Months 4-24
3.3	Utility Bill Inserts	Number of inserts mailed and copy of the insert.	Yr. 1: Mo. 6 Yr. 2: Mo. 14
3.4	Flyers Posted at High-Value Locations	Number of flyers posted, list of posting locales, and copy of flyers.	Months 4-24
3.5	Other Dissemination (newsletters, web banners, etc.)	Copies of disseminations and postings.	Months 4-24
4.0	**Task #4: Drip Kit Distribution and Customer Installation**		
4.1	Develop, Review, and Process Applications; Issue Vouchers	Number of vouchers issued; copies of completed applications.	To come
4.2	Vendor Distributes Drip Kits	Number of Drip Kits issued.	Months 4-24
4.3	Customers Install Drip Kits **MILESTONE**	Number of customer installation confirmations; and percent of issued Drip Kits confirmed as installed.	Months 4-24
5.0	**Task #5: Technical Assistance**		
5.1	Quarterly Technical Assistance Workshops	Workshop agendas, participant lists, and photos.	Months: 3, 6, 9, 12, 15, 18, 21, 24
5.2	On-site Technical Assistance	Log of on-site visits with description of needed TA and resolution.	Months 4-24
5.3	Telephone Consultation (as needed)	Log of telephone consultations with description of needed TA and resolution.	Months 2-24
6.0	**Task #6: Inspections of Customer Installations**		
6.1	Conduct Inspections of 10% of Customer Installations	Log of inspections including findings and required follow-up actions.	Months 4-24

D. Nexus to Reclamation

PWP receives approximately 60% of its water from the Metropolitan Water District of Southern California, which is the designated contractor for the Colorado River Aqueduct and the State Water Project. Both the Colorado River Aqueduct and the State Water Project are Bureau of Reclamation facilities. PWP has a City Agreement #22,109 for purchase of system water provided by Metropolitan. The term of the agreement is for 10 years from January 1, 2015 to December 31, 2024.

E. Department of the Interior Priorities

The proposed project aligns with the following Department of the Interior Priorities:

1. Creating a conservation stewardship legacy second only to Teddy Roosevelt

a. ***Utilize science to identify best practices to manage land and water resources and adapt to changes in the environment.*** The proposed project is an **identified best management practice for water conservation and eliminating runoff**[6] by the U.S. Environmental Protection Agency.

b. ***Review DOI water storage, transportation, and distribution systems to identify opportunities to resolve conflicts and expand capacity.*** The project will reduce water waste and runoff, reduce water demand, and reduce pressure on imported supplies (which are sourced from BOR facilities, as described above).

2. Restoring trust with local communities

a. Expand the lines of communication with Governors, state natural resource offices, Fish and Wildlife offices, water authorities, county commissioners, Tribes, and local communities. The proposed project will have larger scale impacts (e.g., supporting reliability of water supplies), but will also impact the local community, and specifically residential customers. The project will lower residential participants' water bills and provide information about water conservation approaches that residents can use immediately and in the long-term. The project continues PWP's proven record of establishing and maintaining strong connections with their residential customers, and providing support to them whenever possible. The project also offers an additional opportunity for PWP to strengthen its ongoing relationship with Metropolitan (the regional water agency), by "combining forces" to cross-promote the Drip Kits project and Metropolitan's Turf Removal Program. While each program has significant potential benefits, participants who use both programs can maximize water savings.

3. Modernizing our infrastructure

a. ***Support the White House Public/Private Partnership Initiative to modernize U.S. infrastructure.*** The proposed project is a small-scale effort to modernize residential irrigation infrastructure to make it more efficient and water-wise. The project represents PWP and its customers' (public/private partnership) efforts to bring the City's infrastructure into the 21st century.

(End 15-page Technical Proposal)

[6] https://www.epa.gov/sites/production/files/2017-02/documents/watersense-at-work_final_508c3.pdf

SECTION 2. PROJECT BUDGET

A. FUNDING PLAN

Source of Non-Federal Cost Share. PWP will provide all of the non-federal cost share ($75,015). As shown in Table 3 (Budget Proposal), these costs consist of:

1) Salaries and associated fringe benefits for PWP staff who will administer the project, administer marketing and promotion activities, and conduct inspections;
2) Costs associated with marketing and promotion, including costs for the graphic designer and dissemination;
3) Costs for the technical assistance provider who will conduct quarterly workshops and a limited number of on-site technical assistance events; and
4) Environmental compliance costs (as recommended by BOR staff).

In-kind contributions will include PWP staff time and supplies/materials. PWP's water conservation fund will pay for the vendors, consultants, and environmental compliance.

There are no third party in-kind or other federal costs. The funding requested from BOR ($75,000) will pay for the proposed 600 Drip Kits.

Costs Incurred Prior to Award. No costs for the proposed project have been incurred to date.

B. LETTERS OF COMMITMENT

Not applicable. There are no third-party funding sources for the proposed project.

C. BUDGET PROPOSAL

TABLE 2: TOTAL PROJECT COST TABLE

Funding sources	Amount
Reimbursed with Requested Federal Funding	$75,000
Costs to be Paid by the Applicant	$75,015
Value of Third Party Contributions	$0
Total Project Cost	$150,015

TABLE 3: BUDGET PROPOSAL

Budget Item Description	Computation			Recipient Funding	BOR Funding	Total Cost
	$/Unit	Unit	Quantity			
Salaries and Wages						
Project Director (Conservation Programs Manager)	$ 60.43	Per Hour	108	$ 6,526	$ -	$ 6,526
Project Coordinator (Conservation Programs Analyst)	$ 33.46	Per Hour	600	$ 20,076	$ -	$ 20,076
Inspector (Conservation Programs Specialist)	$ 25.13	Per Hour	75	$ 1,885	$ -	$ 1,885
Marketing Coordinator (Public Information Coordinator	$ 35.36	Per Hour	200	$ 7,072	$ -	$ 7,072
Fringe Benefits						
Project Director (Conservation Programs Manager)	$ 29.07	Per Hour	108	$ 3,140	$ -	$ 3,140
Project Coordinator (Conservation Programs Analyst)	$ 13.95	Per Hour	600	$ 8,370	$ -	$ 8,370
Inspector (Conservation Programs Specialist)	$ 11.94	Per Hour	75	$ 896	$ -	$ 896
Marketing Coordinator (Public Information Coordinator	$ 13.40	Per Hour	200	$ 2,680	$ -	$ 2,680
Equipment						
None						
Supplies/Materials						
Drip Kits (packaged and ready to provide to customer)	$ 125	Per Kit	600	$ -	$ 75,000	$ 75,000
Printing for Flyers and Applications	$ 0.25	Per Color Page	1,000	$ 250	$ -	$ 250
Bill Inserts (to all 28,000 residents in Year 1 and 2)	$ 0.07	Per Color Insert	56,000	$ 3,920	$ -	$ 3,920
Contractual/Consultant						
Quarterly Workshops ($650/workshop x 8 workshops)	$ 650	Per Workshop	8	$ 5,200	$ -	$ 5,200
Onsite Technical Assistance	$ 130	Per Hour	100	$ 13,000	$ -	$ 13,000
Graphic Designer	$ 100	Per Hour	10	$ 1,000	$ -	$ 1,000
Environmental						
BOR Filing of Required Compliance Paperwork (estimate provided by D. McPherson of BOR on 03/25/19)	$ 1,000	Lump Sum	1	$ 1,000	$ -	$ 1,000
Other						
None				$ -	$ -	$ -
Total Project Costs				**$ 75,015**	**$ 75,000**	**$ 150,015**

D. BUDGET NARRATIVE

Salaries and Wages

The labor rates noted below represent the actual labor rates of the identified personnel. Total salaries of $35,559 are anticipated for the following staff over the two-year project period:

1) **Project Director - Ursula Schmidt (PWP Water Conservation Programs Manager)** – Ms. Schmidt will spend 2.5% of her time (approximately 4.5 hours per month) to provide executive-level oversight to the project. She will supervise the Project Coordinator who will have day-to-day responsibility for the project; oversee project monitoring activities and advise on implementation adjustments as needed; provide oversight for procurement activities; liaison with upper-level PWP staff on project activities and outcomes; provide quality control reviews of project performance reports; and serve as the main point of contact with BOR. Anticipated cost: $60.43 per hour x 108 hours = $6,526.

2) **Project Coordinator – Priscilla Echeverry (PWP Water Conservation Programs Analyst)** – Ms. Echeverry will spend approximately 15% of her time on day-to-day project monitoring and coordination. She will monitor and track the project budget and schedule; implement procurement activities and supervise vendors and consultants; assist with scheduling and implementing the quarterly workshops; develop the project performance reports; develop and process program applications; develop and maintain the MS Excel database; and provide telephone technical assistance to program applicants, as needed.
Anticipated cost: $33.46 per hour x 600 hours = $20,076.

3) **Inspector (PWP Water Conservation Programs Specialist)** – The Inspector will conduct inspections on a random sample of 10% of customer installations, and provide recommendations to participants so they can achieve maximum water savings.
Anticipated cost: 600 Drip Kit installations x 10% sample = 60 inspections; Each inspection = 1.25 hours x 60 inspections = 75 hours; $25.13 per hour x 75 hours = $1,885.

4) **Marketing Coordinator (PWP Public Information Coordinator) –** The Marketing Coordinator will spend approximately 5% of her time on marketing and promotional activities including assisting with hiring the Graphic Designer and working with that vendor to develop graphics and messaging. The Marketing Coordinator will be responsible for all dissemination activities including coordinating logistics for utility bill inserts, posting of social media messages and hard copy flyers, and including information in newsletters, web banners, etc. Anticipated cost: $35.36 per hour x 200 hours = $7,072.

Fringe Benefits

Fringe benefits for the staff identified above average 42% of salaries for a total cost of $15,086. Fringe benefits include health insurance, group term life coverage, education reimbursement, childcare and assistance reimbursement, and employee discounts.

1) Project Director: 108 hours x $29.07 (48% fringe rate) = $3,140
2) Project Coordinator: 600 hours x $13.95 (42% fringe rate) = $8,370
3) Inspector: 75 hours x $11.94 (48% fringe rate) = $896
4) Marketing Coordinator: 200 hours x $13.40 (38% fringe rate) = $2,680

Travel – Not applicable.

Equipment – Not applicable.

Materials and Supplies

Total costs for materials and supplies are estimated at $79,170.

1) Drip Kits: Based on conversations with other nearby cities who have implemented similar irrigation retrofit incentive programs, PWP selected the **Rain Bird Planter Bed Spray-to-Drip Retrofit Kit**. The kit will convert a conventional pop-up spray sprinkler zone to water-efficient low-volume drip irrigation. Each kit will cover an area of 250 to 400 square feet. The kit includes a special tool for easy installation of fittings.
   Anticipated cost: $125/kit x 600 kits = $75,000
   Procurement method:
   PWP will select a local vendor to provide the Drip Kits. In Year 1, PWP will request a minimum of three quotes from local providers, and issue a purchase order to the selected vendor, with the goal of issuing 199 Kits (estimated to cost $24,875). In Year 2, PWP will issue a Request for Proposals (RFP) to select the vendor for the remaining 401 Kits. The difference in procurement process from Year 1 to Year 2 is intentional: it allows PWP to accelerate project launch, begin implementation within one month, and incorporate lessons learned and other important information in the RFP. Procurement in Year 2 will require issuing an RFP because the estimated value of the Drip Kits will meet the City's threshold (i.e., goods and services estimated to cost $25,000 or more).
2) Color Printing for Flyers and Applications: Anticipated cost: $0.25/page x 1,000 pages = $250.
3) Color Printing for Utility Bill Inserts: As a promotional activity, PWP will issue utility bill inserts to all 28,000 of its single-family residential customers once in Year 1 and once in Year 2. The color inserts will be envelope sized. Costs were estimated based on previous use of utility bill inserts for promotional purposes.
   Anticipated cost: $0.07/insert x 28,000 customer bills x 2 years = $3,920.

Contractual/Consultant

Total costs for contractual/consultant work is estimated at $19,200.

1) Technical Assistance Provider – Quarterly Workshops: A wide array of technical assistance will be available at the quarterly workshops. Prospective applicants can get assistance filling out the application or drop off their completed application and pick up their Drip Kit; the workshop will provide information about the Drip Kits, potential water savings, instructions for installation and troubleshooting, and more.

- Anticipated cost: 8 workshops x $650/workshop = $5,200
- How cost was estimated: The estimated cost is based on recent previous experience conducting technical assistance workshops for projects of similar size and scope.
- Procurement method: PWP will request a minimum of three written quotes and will issue a purchase order to the selected vendor.

2) Technical Assistance Provider – On-site TA: The technical assistance provider will conduct a limited number of on-site visits to assist with installation or troubleshooting.
   - Anticipated cost: $130 per hour x 100 hours (100 on-site visits) = $13,000
   - How cost was estimated: The estimated cost is based on recent previous experience conducting on-site technical assistance for projects of similar size and scope.
   - Procurement method: PWP will request a minimum of three written quotes and will issue a purchase order to the selected vendor.

3) Graphic Artist: The Graphic Artist will design graphics and messaging for the marketing and promotional materials.
   - Anticipated cost: $100 per hour x 10 hours = $1,000
   - How cost was estimated: The estimated cost is based on recent previous experience engaging Graphic Artists for PWP projects.
   - Procurement method: PWP will request a minimum of three written quotes and will issue a purchase order to the selected vendor.

Third-Party In-Kind Contributions – Not applicable.

Environmental and Regulatory Compliance Costs – Total = $1,000.
On March 25, 2019, PWP staff met via telephone with BOR Environmental Protection Specialist Doug McPherson to discuss the proposed project and anticipated environmental compliance costs. Mr. McPherson indicated that the proposed project would present no environmental issues or impacts, and would be classified as a "Categorical Exemption". He advised to include $1,000 in the project budget to complete paperwork; the proposed cost reflects this recommendation.

Other Expenses – Not applicable.

Indirect Costs – Not applicable.

Total Costs - Total project costs including the Federal and non-Federal cost-share amounts are estimated to be $150,015.

SECTION 3. ENVIRONMENTAL/REGULATORY COMPLIANCE INFORMATION

Impact on Surrounding Environment:
The proposed project will not have any adverse impacts to air or animal habitat. Installation of the drip kits will require only minor soil disturbances in private residential yards, and will not meet the threshold of cumulative environmental impacts. The proposed project will actually provide a significant benefit to the surrounding environment as follows: 1) Irrigation retrofits will eliminate wasteful and harmful runoff to the street, storm drains, and surface waters; 2) water conservation will support the City's water supply via increased percolation and infiltration to the groundwater, and via decreased pressure on Metropolitan (our water importer); and 3) Smart irrigation approaches connect residents to conservation efforts in a meaningful and hands-on way, thus promoting long-term water conservation and stewardship.

Threatened or Endangered Species:
No species listed or proposed to be listed as a Federal threatened or endangered species, or designated critical habitat in the project area will be affected by any activities associated with the proposed project because all irrigation retrofits will be implemented on private property.

Impact to Wetlands or Surface Waters:
No wetlands are included within the City of Pasadena. However, there are surface waters within the City of Pasadena including:

- Raymond Basin (the source of the City's groundwater supply);
- Arroyo Seco Watershed and River (the river is a 24.9-mile-long seasonal river); and
- Eaton Wash Watershed.

The proposed project will have a significant positive impact on all of these surface waters by eliminating irrigation-related run-off which picks up pollutants that accumulate on the ground like dirt, bacteria, pesticides and fertilizer, trash, and motor oil, and flow into the nearest storm drain or local surface waters.

Age of Water Delivery System:
The City began providing municipal water services in 1912. The oldest components of the water delivery system were constructed in 1888 (i.e., Sunset Reservoir). The most recent upgrades (FY2018) to the system include replacement of approximately two miles of water mains, replacement of 2,650 water meters, and replacement of 110 water meter boxes and vaults.

Modification of or Effects to an Irrigation System:
The proposed project will not affect any public irrigation systems because all activities will occur in private residential yards.

Buildings, Structures, or Features on the National Register of Historic Places:
The proposed project will not affect any public buildings, structures, or features that are listed or eligible for listing on the National Register of Historic Places because all activities will occur in private residential yards.

Archeological Sites:
There are no known archeological sites in the proposed project area. Installation of the drip kits will take place in private residential yards where turf has been replaced and ground has already been disturbed.

Adverse Effects on Low-Income or Minority Populations:
The proposed project will not have any negative or adverse effect on low income or minority populations. In fact, the City's low income and minority populations will benefit significantly from both turf removal and irrigation retrofits, which together will result in noticeable savings on their water bill.

Access to and Use of Indian Sacred Sites or Tribal Impacts:
The proposed project will occur on private residential land. There will be no impact to sacred or tribal lands.

Noxious Weeds and Invasive Species:
The proposed project will not contribute to noxious weeds or invasive species. In fact, the proposed irrigation retrofits in conjunction with turf removal and replacement with native and water-wise species will actually prevent the spread of invasive and noxious species because the area between plants is not irrigated and the increased health of the landscape will help prevent weeds.

SECTION 4. REQUIRED PERMITS OR APPROVALS

No permits or approvals will be required for City residents to retrofit their personal irrigation systems, nor for PWP to purchase or distribute the drip kits.

SECTION 5. LETTERS OF PROJECT SUPPORT

THE METROPOLITAN WATER DISTRICT
OF SOUTHERN CALIFORNIA

Office of the General Manager

April 4, 2019

Commissioner Brenda Burman
Bureau of Reclamation
U.S. Department of the Interior
P.O. Box 25007
Denver, CO 80225

Support for the City of Pasadena's
Application to BOR's Small-Scale Water Efficiency Grant Program

Dear Commissioner Burman:

The Metropolitan Water District of Southern California (Metropolitan) is pleased to support The City of Pasadena Water and Power Department's (PWP) proposed project to provide irrigation retrofit kits to its customers who participate in Metropolitan's turf removal program. Metropolitan is a regional wholesaler that delivers water to 26 public member agencies which, in turn, provide water to more than 19 million people in Los Angeles, Orange, Riverside, San Bernardino, San Diego, and Ventura counties. We currently deliver an average of 1.7 billion gallons of water per day to a 5,200-square-mile service area. We import water from the Feather River in Northern California via the State Water Project and the Colorado River to supplement local supplies. We also help our member agencies develop water recycling, storage and other local resource programs to provide additional supplies and conservation programs to reduce regional demands.

Starting in 2019, Metropolitan will expand its turf removal program by increasing the rebate amount from $1 per square foot to $2, to encourage and incentivize swapping turf grass for more water-efficient landscaping. The program requires participants to utilize efficient irrigation systems. PWP proposes to provide irrigation retrofit kits (i.e., 'drip kits') to their customers who participate in Metropolitan's turf removal program to help them meet this requirement. PWP customers who participate in Metropolitan's turf removal program and PWP's irrigation retrofit program will maximize water savings. During the most recent drought, Metropolitan's turf removal program spurred the removal of 160 million square feet of grass across Southern California, saving 21,500-acre-feet of water which was enough to serve nearly 64,000 households. The program has been extremely successful thanks, in part, to PWP and our other partner agencies who devise and implement complementary programs that maximize the potential of our efforts. For this reason, we strongly support PWP's proposed project and urge you to provide favorable consideration to their grant request.

Sincerely,

William P. McDonnell
Water Efficiency Manager

700 N. Alameda Street, Los Angeles, California 90012 • Mailing Address: Box 54153, Los Angeles, California 90054-0153 • Telephone (213) 217-6000

CALIFORNIA Water Boards

GAVIN NEWSOM GOVERNOR

JARED BLUMENFELD SECRETARY FOR ENVIRONMENTAL PROTECTION

Los Angeles Regional Water Quality Control Board

April 15, 2019

Commissioner Brenda Burman
Bureau of Reclamation
U.S. Department of the Interior
P.O. Box 25007
Denver, CO 80225

LETTER OF SUPPORT FOR THE CITY OF PASADENA'S BUREAU OF RECLAMATION "DRIP KITS" PROJECT

Dear Commissioner Burman:

On behalf of the Los Angeles Regional Water Quality Control Board (Los Angeles Water Board), please accept this letter of support for the City of Pasadena (City) Water and Power Department's Drip Kits project. Responsibility for the protection of surface water and groundwater quality in California rests with the State Water Resources Control Board and nine Regional Water Quality Control Boards. The City's proposed project is directly aligned with and supports several objectives outlined in the Los Angeles Water Board's Basin Plan, which seeks to preserve and enhance water quality and protect the beneficial uses of all regional waters.

The Drip Kits project has a positive impact on water quality. Drip systems reduce irrigation runoff and mitigate pollution by reducing dry weather flows. As dry weather runoff moves, it picks up and carries pollutants and deposits them into storm drains, lakes, rivers, wetlands, groundwater, and other inland and coastal waters. Several municipalities and watershed management groups in our region have identified residential irrigation as a source of pollutants during dry weather. Local irrigation water management efforts such as the proposed project may be small in scope, but collectively, these types of local projects can have larger-scale impacts.

In addition, the project contributes to other local and regional efforts to ensure the long-term sustainability of local water supplies by focusing on residential irrigation. The Los Angeles region's dependence on imported waters leaves it vulnerable during periods of drought. The City's proactive efforts to implement a water conservation project, that complements and builds on the Metropolitan Water District of Southern California's Turf Replacement Program, is the type of integrated program that will help meet the State's water demand

reduction goals, while also protecting water quality. The Los Angeles Water Board strongly supports the City of Pasadena's project, and we thank you, in advance, for your support.

Sincerely,

Executive Officer

SECTION 6. OFFICIAL RESOLUTION

The resolution will be considered at the City Council meeting on May 6, 2019. The City will forward the signed resolution to BOR as soon as it is available, and before the 30-day post-application submission deadline. The draft resolution is provided below.

RESOLUTION NO. _____

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF PASADENA AUTHORIZING THE SUBMITTAL OF A GRANT APPLICATION TO THE U.S. DEPARTMENT OF THE INTERIOR – BUREAU OF RECLAMATION TO OBTAIN A FISCAL YEAR 2019 SMALL-SCALE WATER EFFICIENCY PROJECTS GRANT

WHEREAS, the City of Pasadena is a municipal corporation which exercises governmental functions and powers, and is a Charter City organized and existing under the laws of the State of California; and

WHEREAS, the City of Pasadena Water and Power Department seeks to provide to residential customers kits to retrofit residential landscape irrigation systems to reduce water usage ("Drip Kits"), and provide associated technical assistance on installation procedures, at no cost to the customer; and

WHEREAS, it is in the interest of the City of Pasadena to offer the Drip Kits to our customers including those who participate in the Metropolitan Water District of Southern California's (Metropolitan) Turf Replacement Program, which offers rebates to Pasadena residents who replace their residential turf with drought-tolerant landscaping with the requirement that they utilize a water-efficient irrigation system; and

WHEREAS, the proposed distribution of Drip Kits combined with the replacement of turf to drought-tolerant landscape will result in significant residential water savings, thus supporting the City and Metropolitan's water conservation goals; and

WHEREAS, the U.S. Department of the Interior – Bureau of Reclamation (funding agency) issued Funding Opportunity Announcement No. BOR-DO-19-F005 for the "WaterSMART Grants: Small-Scale Water Efficiency Projects for Fiscal Year 2019" which appropriated $3 million in funding for small-scale water efficiency projects; and

WHEREAS, the City of Pasadena desires to apply for the "WaterSMART Grants: Small-Scale Water Efficiency Projects for Fiscal Year 2019".

NOW, THEREFORE, BE IT RESOLVED by the Pasadena City Council as follows:

1) The General Manager of the City of Pasadena Water and Power Department is hereby authorized and directed to make application and submit a proposal to the funding agency to obtain a "WaterSMART Grants: Small-Scale Water Efficiency Projects for Fiscal Year 2019" grant in an amount up to $75,000, to support the distribution of Drip Kits (and associated technical assistance) to customers including those who participate in Metropolitan's Turf Removal Program.

2) The City Manager of the City of Pasadena, or designee, is hereby authorized to enter into an agreement, and any amendments thereto, with the funding agency to receive a 2019 Small-Scale Water Efficiency grant in an amount up to $75,000.

3) The General Manager of the City of Pasadena Water and Power Department is hereby authorized and directed to prepare the necessary data, conduct investigations, file such

application, sign invoices with the funding agency, and perform any other actions necessary to administer the grant agreement on behalf of the City.

4) The City certifies that it will work with the funding agency to meet established deadlines for entering into a grant or cooperative agreement.

5) The City certifies that it is capable of providing the amount of matching funding specified in the application.

Adopted at the regular meeting of the Pasadena City Council on the XXth day of XXXXXX, 2019, by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

_____
MARK JOMSKY, CMC
CITY CLERK

APPROVED AS TO FORM:

_____
THERESA E. FUENTES
ASSISTANT CITY ATTORNEY