

Coachella Valley Integrated Regional Water Management 2019 IRWM Implementation Grant Proposal Work Plan

Attachment 4 consists of the following items:

- ✓ **Work Plan.** This attachment includes summaries of the tasks necessary to complete each project in the Proposal, including necessary deliverables, and the current status of each project.

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Project 1: Castro Mobile Home Park Water Consolidation

I. Introduction

Implementing Agency

Coachella Water Authority (CWA) will serve as the project sponsor for the *Castro Mobile Home Park (MHP) Water Consolidation*.

Project Description

History and Context

CWA provides potable water to the approximately 41,000 residents in the City of Coachella. Castro MHP, as shown on the map to the right, is located within the City of Coachella and within the existing water system service area. However, Castro MHP was not connected to the CWA water system and relied on its own well and was regulated as a small public water system by Riverside County Department of Environmental Health (DEH). As of DEH's 2017 *Small Water System Permit and Inspection Report*, the MHP's well was a 600-foot-deep well with a 3 horsepower (hp) submersible pump located on Tyler Street. The well was drilled in 1958 and pumped approximately 50 gallons per minute (gpm). The well pumped to a 1500 gallon hydropneumatic tank, then out into the MHP distribution system. The DEH Inspection Report notes a 2015 Water Quality Emergency Notification Plan and 2015 Bacteriological Sample Siting Plan, evidence of a long history of water quality contamination in this DAC. Coliform bacteria sampling was not satisfactory, and a Citation and Compliance Order (No. 05_63_16C_025) was issued to Castro MHP in October 2016.

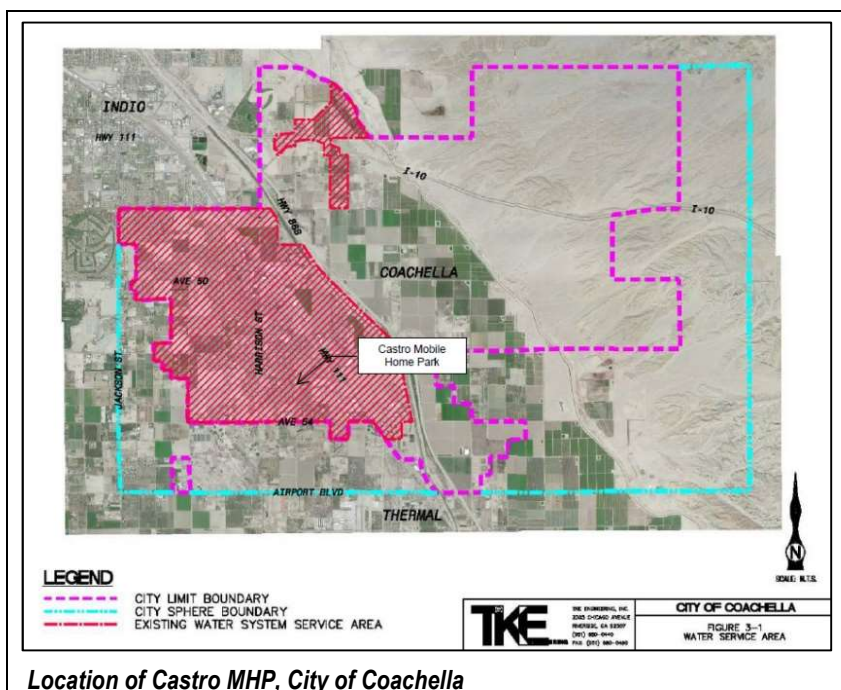
The DEH Inspection Report further explains that the well casing was severely deteriorating near the base of the well casing. There were small holes in the well casing where the casing and ground met. The operator applied duct tape over the holes at the time of the inspection, but the well casing was a source of contamination. There was also a leaking pressure relief valve located near the well sample tap, which caused water to pool at the base of the well head. Further, the electrical conduit box at the well was not properly sealed.

In March 2017, a second Citation and Compliance Order (No. 05_63_17R_001) was issued to Castro MHP for the deterioration of the well casing under the ground surface, as noted in the January 2017 inspection. This hole in the well casing has allowed shallow groundwater to enter the well and contaminate the drinking water supply for the 44 service connections in the Castro MHP. After witnessing the well failure in February 2017, DEH immediately installed a temporary connection to CWA's potable water system as an interim measure. Since then, the Castro MHP applied for grant funding from CVWD's Well Retrofit and Abandonment Rebate Program (funded through Proposition 84-Round 2) to seal and abandon the onsite well.

The goal of the *Castro MHP Water Consolidation* is to provide potable water that meets or exceeds drinking water quality standards. Currently, the community is relying on a temporary highline from a CWA construction meter as the former well is no longer able to provide any water for potable or for fire protection. In order to solve this issue, there were three alternatives considered. The first alternative was to consolidate with CWA. The second alternative was to repair the existing well and the third alternative was to

Project Readiness

- ✓ 90% Design – Complete
- ✓ CEQA – Categorical Exemption Prior to Grant Agreement
- ✓ Shovel Ready



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CWA has determined a useful project life of 50 years for the proposed potable water pipelines, which is an industry average for water and wastewater conveyance infrastructure. Over the 50-year life of this project, 1,600 AF of clean, safe drinking water will be served to this local DAC.

Applied water from small systems will load less arsenic and hexavalent chromium into the shallow aquifer which drains to the Salton Sea, thereby ultimately improving the water quality of the Salton Sea. These improvements in water quality will support the protection of the Salton Sea wetland habitat areas. By improving drinking water service to DACs, CWA supports these communities in avoiding environmental injustices. The costs to treat inorganic contaminants such as arsenic and hexavalent chromium are very high and consolidating small water systems (SWSs) into a larger system is usually the most cost-effective method to resolving the long-term issue.

Project Objectives

The 2018 Coachella Valley IRWM/SWR Plan explains that “there are many small DACs throughout... Eastern Coachella Valley, that are not connected to municipal water systems and rely on private groundwater wells...the majority of these communities have severe water quality and reliability issues”, and proposes implementation of water consolidation projects as a priority solution.¹ CWA’s efforts to consolidate MHPs with unreliable water sources is specifically referenced in the IRWM Plan in Resource Management Strategies.² The project contributes to IRWM Plan objectives in the following ways:

Objective A: Provide reliable water supply. This project provides a reliable and safe water supply by consolidating the Castro MHP’s SWS; a system with a failed groundwater well serving a severely DAC to the CWA potable water system.

Objective B: Manage groundwater levels. The project will reduce the amount of groundwater pumped in the basin to manage groundwater levels and reduce overdraft by converting SWSs that rely on contaminated groundwater to CWA’s potable water system, the SWSs would no longer be pumping from the shallow groundwater.

Objective E: Protect groundwater quality. This project protects the quality of the groundwater because the existing MHP well will be destroyed and therefore shallow groundwater will no longer be able to enter in the shallow portion of the casing and contaminate the lower portion of the aquifer.

Objective J: Maximize stakeholder involvement. CWA has been in contact with various DACs in and around its service area, including the owners of the Castro MHP. This project is a result of continued stakeholder involvement.

Objective L: Address water and sanitation needs of DACs. This project will provide a reliable and safe water supply by consolidating the Castro MHP’s SWS; a system with a failed groundwater well serving a severely DAC to the CWA potable water system.

Objective M: Maintain affordability of water. By consolidating the Castro MHP’s SWS to the bigger municipal public water system, customers would be paying more affordable water rates.

Completed Work

- Small Water System Permit and Inspection Report by County of Riverside DEH, January 2017
- Water Master Plan for Castro Mobile Home Park by MSA Consulting, dated October 30, 2017, which shows preliminary plan for locations for the distribution lines and the meter boxes.
- 90% Design Plans and Specifications by MSA Consulting, dated October 2019
- Biological Resources Technical Report for Castro Mobile Home Park by BioCon2, August 2019
- Cultural Resources Technical Report for Castro Mobile Home Park by CRM Tech, September 2019

II. Proposed Tasks

Budget Category (a): Project Administration

Task 1: Administration

1(a): Project Administration: This task consists of project management responsibilities associated with the *Castro MHP Water Consolidation* including managing the grant agreement, complying with grant requirements, preparing and submitting supporting grant documents, and coordinating with IRWM regional manager, CVWD. This task also consists of preparing invoices including relevant supporting documentation for submittal to DWR via CVWD. This task also includes administrative responsibilities associated with the project such as coordinating with partnering agencies and managing consultants/contractors.

¹ 2018 Coachella Valley IRWM/SWR Plan, Section 8 Resource Management Strategies, page 8-24.

² 2018 Coachella Valley IRWM/SWR Plan, Section 8 Resource Management Strategies, page 8-24.



1(b): Regional Administration: CVWD will assume all tasks associated with coordinating with DWR to execute the grant agreement and necessary amendments. This task includes managing the grant agreement including compliance with grant requirements, preparation and submission of supporting grant documents, and coordination with each local project sponsor. This task also consists of compiling invoices including relevant supporting documentation from each agency for submittal to DWR. This task also includes compiling a Regional Final Project Completion Report with summary of all projects and conducting administrative responsibilities associated with the project, such as coordinating with partnering agencies.

- Deliverables:**
- Environmental Information Form (EIF)
 - Financial Statements
 - Project 1 contribution to compilation of Regional Progress Reports and Invoices
 - Invoices
 - Other Applicable Project Deliverables
 - Project 1 contribution to compilation of Regional Project Completion Report

Task 2: Reporting: This task consists of preparing progress reports detailing work completed during the reporting period as outlined in Exhibit G of this Agreement. This task also includes submitting reports to CVWD for review and inclusion in a regional progress report to be submitted to DWR. Task 2 will also involve preparing draft Final Project Completion Report and submitting to DWR via CVWD for DWR Project Manager's comment and review no later than 90 days after project completion. CWA will also prepare the final Project Completion Report addressing CVWD/DWRs comments. The report shall be prepared and presented in accordance with the provision of Exhibit G.

- Deliverables:**
- Quarterly Project Progress Reports
 - Final Project Completion Report

Budget Category (b): Land Purchase/Easement

Task 3: Land Purchase: CWA's design consultant, MSA Consulting, will prepare legal descriptions and exhibits for processing of the easement necessary for the new 8-inch water main. Castro MHP has already agreed to grant the easement. The easement will be confirmed concurrently with 100% Design Plan approvals by the City of Coachella.

- Deliverables:**
- Legal Descriptions and Exhibits

Budget Category (c): Planning/Design/Engineering/Environmental Documentation

Task 4: Feasibility Studies – Not Applicable: Project Feasibility was assessed as part of the project development process, see Completed Work above.

Task 5: CEQA Documentation: Biological and cultural resources technical studies were prepared to ensure that there will be no environmental impacts associated with the Castro MHP project. Both resulted in findings of no adverse effects. As such, a CEQA Notice of Exemption (NOE) for Categorical Exemption Class 15303: New Construction or Conversion of Small Structures is underway for the *Castro MHP Water Consolidation* project and will be adopted prior to December 31, 2019. A Notice of Determination (NOD) will also be filed with the State Clearinghouse and County of Riverside immediately following grant award.

- Deliverables:**
- Notice of Exemption
 - Notice of Determination

Task 6: Permitting: This task consists of CWA applying for coverage from the County of Riverside, South Coast Air Quality Management District (SCQAMD), Regional Water Quality Control Board (RWQCB), and State Water Resources Control Board (SWRBC). CWA will apply for these permits prior to grant agreement execution.

- Deliverables:**
- Encroachment, Road and Construction Permit – City of Coachella - waived
 - Permit to Construct – SCAQMD
 - Fugitive Dust Control Plan – SCAQMD
 - General Permit for Construction Discharges – RWQCB, Colorado River
 - NPDES General Permit for Stormwater Discharge - SWRCB

Task 7: Design: CWA has hired a consultant, MSA Consulting, to complete the design of this project. The design consultant has already completed the 90% plans and specifications and will complete the 100% plans and specifications prior to December 31, 2019. Design plans and specifications must adhere to CWA design requirements and therefore will require review and approval by the City of Coachella.

- Deliverables:**
- 100% Design Plans and Specifications
 - Plan Review and Coordination with City of Coachella – updated Final Design plans if City modifies the 100% Design Plans and Specifications



Task 8: Project Performance Monitoring Plan: This task consists of developing and submitting a Project Performance Monitoring Plan (PPMP). The PPMP will include baseline conditions, a brief discussion of monitoring systems to be used, methodology of monitoring, frequency of monitoring, and location of monitoring points.

Deliverables:

- Project Performance Monitoring Plan

Budget Category (d): Construction/Implementation

Task 9: Contract Services: CWA will complete this task in-house. This task consists of solicitation for a construction contractor, which will involve advertisement for bids, holding a preconstruction meeting, bid opening, bid evaluations, CWA staff recommendations, CWA City Council approval, and awarding the construction contract, which includes confirming the contractor's insurance requirements and bonds. For each contract, CWA must issue a Request for Proposals, evaluate submitted proposals, and issue recommendations.

Deliverables:

- Bid Documents
- Proof of Advertisement
- Notice of Award
- Notice to Proceed

Task 10: Construction Administration: CWA will complete this task in-house. This task includes managing contractor submittal review, answering requests for information, and issuing work directives. Construction observer duties include: documenting of pre-construction conditions, daily construction diary, preparing change orders, addressing questions of contractors on site, reviewing/updating project schedule, reviewing contractor log submittals and pay requests, forecasting cash flow, notifying contractor if work is not acceptable. CWA will complete the inspection during construction.

Deliverables:

- Notice of Completion

Task 11: Construction/Implementation Activities: Construction activities are outlined below:

11(a): Pipeline Construction: Construction for the Castro MHP distribution system will consist of installing and furnishing approximately 832 LF of 8-inch DI Class 350 Water Main including all tees, joints and appurtenances. The pipeline will be installed in Tyler Lane and the other private streets within the MHP. Connection from the new 8-inch main to the existing CWA water system will involve isolating the CWA water system, cutting and installation of a tee into the CWA main and associated valves. The construction also consists of furnishing and installing a 6-inch fire hydrant assembly. From the distribution main, a one-inch water service with a meter box sized for a ¾-inch meter will be constructed to each unit. Installation will include saw-cutting, removal and disposal of existing pavement as necessary and surface restoration of pavement per City of Coachella standards.

11(b): Contingency: A construction contingency has been added for the construction cost in 11(a).

11(c): Impact Fees: CWA impact fees are included in implementation to cover the additional service capacity needed by CWA to serve these additional connections.

Deliverables:

- Photographic documentation
- Engineers Certification
- Performance testing results



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Project 2: CV Water Counts Regional Conservation Program

I. Introduction

Implementing Agency

CVWD will serve as the project sponsor for the *CV Water Counts Regional Conservation Program*, on behalf of CVWD, CWA, Desert Water Agency (DWA), Indio Water Authority (IWA), and Mission Springs Water District (MSWD).

Project Description

History and Context

The *CV Water Counts Regional Conservation Program (CV Water Counts)* was established by the Coachella Valley Regional Water Management Group (CVRWMG) in June 2015 conserve water in the Coachella Valley. *CV Water Counts* seeks to reduce water demand, increase the region's water supply, improve regional water quality, serve as stewards of our shared water resource, and improve efficiency and flexibility. The program website (<https://cvwatercounts.com/>) provides a wealth of information on what residents' can do to use water more efficiently and provides information on specific agency conservation programs.

The demand for groundwater pumped from the Coachella Valley Groundwater Basin (Indio and Mission Creek Subbasins) has annually exceed the limited natural recharge. Overdraft has caused groundwater levels to decrease in significant portions of the Coachella Valley. Groundwater overdraft has resulted in land subsidence in the East Valley, groundwater quality degradation due to reduced salt exports through the agricultural drains, and reduced water supply reliability. Subsidence also reduces long-term storage capacity in the aquifer. Over the last few years, implementation of the *Coachella Valley Water Management Plan (CVWMP)* and *Mission Creek-Garnet Hill Water Management Plan (MC-GHWMP)* have begun to reverse this trend. Several recharge facilities have been constructed to recharge the subbasins with imported water, a blended non-potable/recycled water system has been constructed, and the *CV Water Counts* program has deployed water conservation efforts throughout the Valley to reduce groundwater pumping volumes.

The *CVWMP* and *MC-GHWMP* are the foundational water management plans in the region, including recent approval by DWR as the Groundwater Sustainability Plan (GSP) Alternative Plans for the Valley's two subbasins. The *CVWMP* recognizes urban water use as a priority, noting water efficient landscaping as both an existing and potential new water conservation measure.³ Due to the Region's climate, outdoor water use has been considered a priority for urban conservation efforts.⁴ There is need to continue and expand CV Water Counts programs to address and limit outdoor water use throughout the Region.

The recent passage of Senate Bill 606 and Assembly Bill 1668 put water use efficiency at the forefront of local water supply planning. This pair of bills creates a framework for statewide water savings mandates that will take effect in 2022. The legislation establishes an indoor water use standard of 55 gallons per person per day until 2025 and eventually 50 gallons per person per day by 2030. AB 1668 also requires the State adopt long-term standards for the efficient use of water and performance measures for commercial, industrial, and institutional water use. *CV Water Counts* helps to manage water demands and associated groundwater pumping the Coachella Valley.

Project Readiness

- ✓ 100% Design – Complete Prior to Grant Agreement
- ✓ CEQA – Categorical Exemption(s) Prior to Grant Agreement
- ✓ Shovel Ready Prior to Grant Agreement



CV Water Counts Program

³ CVWD. 2010. *CVWMP 2010 Update*. December. Pg. 2-2 (2.2.1 Water Conservation).

⁴ CVWD. 2010. *CVWMP 2010 Update*. December. Pg. 2-9 (Table 2-2, Status of the 2002 Water Management Plan Implementation).



Project Description

This project includes multiple project components that are all implemented under the regional *CV Water Counts* program.

Turf Removal Program: The Turf Removal Program is a multifaceted program that will make turf rebates available throughout the CVRWMG's collective service area for a variety of water customers, including residential and multi-family sites. This program will assist the Region's water purveyors in effectively managing groundwater by reducing demands and groundwater pumping. The Turf Removal Program extends a grant-funded program that was established in 2015 to reduce water use in the Valley. All funds expended on the Turf Removal Program to date have been grants – there are no ongoing agency budgets associated with the program, except for in-kind staff labor and/or funding match associated with the grant-funded tasks. The CVRWMG agencies are requesting funding to offset costs for the removal of turf for their customers to reduce outdoor water demand. The Turf Removal Program will include use of local Conservation Corps labor to help low income and elderly applicants that request assistance. By removing turf, customers will use less water to irrigate and groundwater pumping can be reduced.

Conservation Incentives Program: The Conservation Incentives Program includes an emphasis on water use efficiency by different end users including residents, commercial, golf courses, and other large irrigators. This task includes toilet rebates for indoor water conservation, along with implementation of a micro-website about the conservation program with effort details and forms. The website will include draft design plans of water conservation projects, how-to assistance for efforts that residents can make at home, FAQs and other supporting documents.

Demonstration Gardens: The CVWD and DWA demonstration gardens will display the most water efficient irrigation systems, various ground covers, examples of how to maintain challenging slopes and microclimates, and encourage the selection of current desert friendly varieties of plant material reflecting the most recent edition of the Lush and Efficient book. The centrally located gardens will provide an educational space for self-guided and group tours. The design will provide an area so that educational workshops have the ability to provide real time demonstrations of topics such as pruning, vegetable gardening, selecting desert plants, and irrigation zones. The incorporation of technology is proposed into the gardens via a web/phone application interface that will allow visitors to be able to look up in real time plant species, rock types, and irrigation elements by simply downloading the application and scanning an identification marker. The demonstration gardens will educate the public on efficient outdoor water use, and visitors can apply efficient garden design in their own yards and therefore reduce water demands.

- CVWD's garden will be constructed along one of the CV Link5 Community Connectors (see **Figure 7-4 in Attachment 7**)
- DWA's garden will be constructed in partnership with the Palm Springs International Airport at main entrance on the airport property that receives 2 million visits each year (see **Figure 7-4 in Attachment 7**)

Project Benefits

CV Water Count's primary benefit is that the turf removal program will conserve water in the Coachella Valley. This project would remove approximately 511,700 square feet (sq ft) of turf, which would be replaced by desert landscaping. This assumes a \$2.00 rebate per sq ft of turf, which is the minimum rebate provided by the CVRWMG agencies, as shown in **Table 4-1**. Consistent with its Proposition 84-Round 3 grant, the CVRWMG has assumed irrigation savings associated with turf removal are estimated to be 55.8 gallons per year per sq ft of turf (based on Southern Nevada Water Authority [SNWA]. 2005. *Xeriscape Conversion Study: Final Report*. Pg. 60). In many cases, program customers convert a larger area of turf than available through the program rebate; though to be conservative, only the amount of turf involved in the Turf Removal Program has been quantified.

The *CV Water Counts* partners have determined a useful project life of 15 years. The National Association of Homebuilders⁶ estimates that average expected homeownership is 13 years. Given that drought-resistant landscapes can increase home values, coupled with the recent policy and cultural shifts to increased water use efficiency, it is unlikely that local landscapes will be converted back to turf if the houses are sold. As such, the CVRWMG concludes that the Turf Rebate Program will have a long-term water conservation benefit that exceeds 15 years. Water savings from the Turf Removal Program will be 88 AFY, which results in 1,314 AF over the life of the project.

The secondary benefit of this project is reduction in greenhouse gasses (GHGs) due to reduced future purchases of 1,314 of imported water to recharge the groundwater basin. CVWD and DWA are State Water Project (SWP) contractors who receive Colorado River water from Metropolitan Water District's Colorado River Aqueduct in an exchange for their SWP allotment. CVWD also receives Colorado River water via the Coachella Canal for use in their eastern service area. Conserving water would avoid

⁵ CV Link: <http://www.coachellavalleylink.com/> CV Link aims to create a 50 mile alternative transportation corridor for pedestrians, bicyclists, and low-speed electric vehicles (such as golf carts) along the Whitewater River and Tahquitz Creek that will stretch from Palm Springs to Coachella.

⁶ National Association of Home Builders: <http://nahbclassic.org/generic.aspx?genericContentID=194717>



60 tons of CO₂e per year in GHGs from purchase and recharge of Colorado River water. This assumes that the energy requirements associated with delivering Colorado River water (including Canal water) are 2.3 megawatt hours per acre foot (MWh/AF) and 600 pounds of CO₂e/AF (WaterReuse Association, 2011).

Table 4-1: Landscape Rebates by Agency

Agency	Rebate	Additional Information	Sq Ft of Turf	Gallons/Year	AFY	Total AF
CVWD	\$2 / sq ft	Maximum 10,000 sf per year for residential	104,100	5,808,780	17.8	267.4
DWA	\$2 / sq ft	Municipal are eligible for \$3 / sq ft	100,000	5,580,000	17.1	256.9
IWA	\$2 / sq ft	Municipal are eligible for \$3 / sq ft; Max 10,000 sq ft/year for residential and 30,000 sq ft for commercial	145,000	8,091,000	24.8	372.5
CWA	\$2 / sq ft	Commercial and municipal are eligible for \$3 / sq ft. Max 10,000 sq ft/year for residential and 30,000 sq ft for commercial and municipal	125,000	6,975,000	21.4	321.1
MSWD	\$2 / sq ft	Max of \$3,000 per residential property and \$10,000 per commercial or institutional project	37,600	2,092,500	6.4	96.3
TOTAL			511,700	28,547,280	88	1,314

The Turf Removal Program will reduce water demands for outdoor irrigation. This program is in high demand in Coachella Valley, as evidenced by all of DWA's Proposition 84-Round 3 rebates being exhausted in just over a year (5 quarterly invoice cycles). The Demonstration Gardens will show the public how they can use desert-friendly, drought tolerant plants in lieu of turf in order to decrease their water usage, while the Conservation Incentives Program will help reduce indoor water use by replacing aging, high-water use toilets. The water savings from all three programs will result in reduced groundwater pumping, reduced risk of groundwater basin overdraft, and reduced imported water usage and the associated energy requirements and GHG production.

Project Objectives

The 2018 Coachella Valley IRWM/SWR Plan explains that "water is a limited resource and that water conservation and use efficiency should be actively pursued".⁷ The CV Water Counts program is specifically referenced in the IRWM Plan in Region Description and Resource Management Strategies.⁸ The project contributes to IRWM Plan objectives in the following ways:

Objective A: Provide reliable water supply. This project is reducing water demands by removing turf, which is a "thirsty" plant that uses significant water. Removing turf and converting to desert landscaping will reduce pumping for irrigation supplies and therefore protect existing groundwater supplies.

Objective B: Manage groundwater levels to reduce overdraft. By reducing overall water use, the project will decrease the pumping of groundwater which will reduce the risk of overdraft, which has been a highlighted issue in the CVWMP.

Objective D: Maximize local supply opportunities. This project implements water conservation efforts in order to reduce overall water use throughout the Valley.

Objective F: Preserve and improve surface water quality. Turf conversion results in less pesticide and fertilizer application and less dry weather urban runoff.

Objective L: Address water and sanitation needs of disadvantaged communities. Almost the entire City of Coachella, CWA and MSWD service areas are comprised of DAC's, with some areas that qualify as SDACs. The CVRWMP project area and the community that CV Water Counts will serve is mapped by area as 58% DAC (see **Attachment 7**).

Completed Work

- Proposition 84 Round 3 – Regional Turf Reduction Program, total turf removed: 6.2⁹ million square feet
- Turf Removal Program Guidelines:
 - CVWD Lush and Efficient Landscape Gardening in the Coachella Valley, 2016
 - CVWD Residential Landscape Rebate Program, Program Year 7/1/19-6/30/20
 - IWA Commit 2 Conserve Outdoor Rebates Terms and Conditions and Application

⁷ 2018 Coachella Valley IRWM/SWR Plan, Section 2 Region Description, page 2-27.

⁸ 2018 Coachella Valley IRWM/SWR Plan, Section 2 Region Description, page 2-27; Section 8 Resource Management Strategies, page 8-11.

⁹ Source: Proposition 84 Round 3 Project Completion Report, November 2019



- DWA Rebates – Grass Removal Application and Terms and Conditions
- Hermann Design Group, Proposal for Landscape Design of CVWD Demonstration Garden in Palm Desert, 2017

II. Proposed Tasks

Budget Category (a): Project Administration

Task 1: Administration

1(a): Project Administration: This task includes managing the grant agreement including compliance with grant requirements, preparation and submission of supporting grant documents, and coordination with CVWD's overall grant administrator. This task also consists of preparing invoices including relevant supporting documentation for submittal to DWR via CVWD. This task also includes administrative responsibilities associated with the project, such as coordinating with partnering agencies and managing consultants/contractors.

1(b): Regional Administration: CVWD will assume all costs associated with coordinating with DWR to execute the grant agreement and necessary amendments. This task includes managing the grant agreement including compliance with grant requirements, preparation and submission of supporting grant documents, and coordination with each local project sponsor. This task also consists of compiling invoices including relevant supporting documentation from each agency for submittal to DWR. This task also includes compiling a Regional Final Project Completion Report with summary of all projects and conducting administrative responsibilities associated with the project, such as coordinating with partnering agencies.

- Deliverables:**
- Environmental Information Form (EIF)
 - Financial Statements
 - Project 2 contribution to compilation of Regional Progress Reports and Invoices
 - Invoices
 - Other Applicable Project Deliverables
 - Project 2 contribution to compilation of Regional Project Completion Report

Task 2: Reporting: This task includes preparing progress reports detailing work completed during the reporting period as outlined in Exhibit G of the DWR Agreement. This task also includes submitting reports to CVWD for review and inclusion in a regional progress report to be submitted to DWR. CVWD will prepare a draft Project Completion Report and submit to DWR for review no later than 90 days after project completion, then a final Project Completion Report addressing DWR's comments. The report shall be prepared and presented in accordance with the provisions of Exhibit G.

- Deliverables:**
- Quarterly Project Progress Reports
 - Final Project Completion Report

Budget Category (b): Land Purchase/Easement

Task 3: Land Purchase – Not Applicable: CV Water Counts does not require land purchases to complete.

Budget Category (c): Planning/Design/Engineering/Environmental Documentation

Task 4: Feasibility Studies – Not Applicable: Feasibility Studies are not necessary for the CV Water Counts program. Turf Removal Program guidelines have already been prepared for previous programs, see Completed Work above.

Task 5: CEQA Documentation: CVWD and DWA staff will file CEQA Notices of Exemption (NOE) for construction of the demonstration gardens. A Notice of Determination (NOD) will also be filed with the State Clearinghouse and County of Riverside. There is no CEQA required for the Turf Removal Program or for the Conservation Incentives Program because neither program qualifies as a "Project" under CEQA [Public Resources Code §21065].

- Deliverables:**
- NOE & NOD (Garden) – CVWD
 - NOE & NOD (Garden) - DWA

Task 6: Permitting: CVWD staff will apply for a building permit from the City of Palm Desert for their demonstration garden due to inclusion of a shade structure (Note: construction tasks or costs for the shade structure were not included in this grant application). The DWA demonstration garden will not require a building permit.

- Deliverables:**
- Building Permit (CVWD Demonstration Garden) – City of Palm Desert
 - Fugitive Dust Control Plan – SCAQMD
 - Permit to Construct – SCAQMD

Task 7: Demonstration Garden Design: Design for the demonstration gardens includes a topographical survey and irrigation plans. CVWD will hire a consultant to prepare a base map, plans and specifications for the demonstration garden. The design will include a grading and irrigation plan, as well as concrete work for a proposed shade structure. DWA will hire a consultant to prepare



a base map, plans and specifications for the demonstration garden. The design will include a grading and irrigation plan and will be prepared in coordination with the City of Palm Springs.

Deliverables:

- CVWD & DWA Site Map, Plans and Specifications

Task 8: Project Performance Monitoring Plan: The task consists of developing and submitting a PPMP. The PPMP will include baseline conditions, a brief discussion of monitoring systems to be used, methodology of monitoring, frequency of monitoring, and location of monitoring points.

Deliverables:

- Project Performance Monitoring Plan

Budget Category (d): Construction/Implementation

Task 9: Contract Services: This task includes the activities necessary to secure a contractor and award the contract, include: develop bid documents, prepare advertisement and contract documents for construction contract bidding, conduct pre-bid meeting, bid opening and evaluation, selection of contractor, award of contract, and issuance of notice to proceed. CVWD will hire a consultant to execute this task for the demonstration garden. The City of Palm Springs will handle contract services for the DWA demonstration garden.

Deliverables:

- Bid Documents
- Notice of Award
- Proof of Advertisement
- Notice to Proceed

Task 10: Construction Administration: This task includes managing contractor submittal review, answering requests for information, and issuing work directives. A full-time engineering construction observer will be on site for the duration of the project. Construction observer duties include: documenting of pre-construction conditions, daily construction diary, preparing change orders, addressing questions of contractors on site, reviewing/updating project schedule, reviewing contractor log submittals and pay requests, forecasting cash flow, notifying contractor if work is not acceptable. CVWD will hire a consultant to execute this task for the demonstration garden. The City of Palm Springs will handle construction administration for the DWA demonstration garden.

Deliverables:

- Notice of Completion

Task 11: Construction/Implementation Activities

11(a): Turf Removal Program: This task includes implementing the Turf Removal Program, including application review and approval, pre- and post-site visits to customer sites, verification of successful project completion, customer support, rebate check processing, and program website maintenance. This task also includes work to measure and report program progress and budgeted funds for materials and equipment necessary to implement the water-efficient landscape upgrades. Eligible costs include, but are not limited to: water-efficient plants, mulch, hardware (weather-based controllers, irrigation piping, meters, valves, etc.)

Deliverables:

- Site visit reports (pre and post) to measure water use and confirm installations
- Maps with geographic locations of program participants
- Original customer receipts for all materials involved in the program
- Report documenting compliance with water budgets (CVWD only)

11(b): Conservation Incentives Program: This task includes implementing the toilet rebate program and associated outreach materials for CWA and MSWD to raise awareness about water conservation and facilitate users in implementing available rebates and conservation tools. This task includes implementation of a micro-website about the conservation program with effort details and forms. The website will include draft design plans of water conservation projects, how-to assistance for efforts that residents can make at home, FAQs, and other supporting documents. The outreach program also includes implementing tools and materials like social media handles, mailers, newsletters, and press releases.

Deliverables:

- Toilet rebate documents and website
- Mailers, newsletters, and press releases

11(d): Demonstration Gardens Construction: This subtask includes construction of two gardens. CVWD's demonstration garden will include site grading and soil preparation, installation of irrigation equipment, planting of desert-friendly plants, and application of fertilizer and mulch to protect new growth. The demonstration garden will be constructed to be aesthetically pleasing and will be located along the CV Link Community Connector which is a high-traffic area of walking, bicycling and low speed electric vehicles. While CVWD's demonstration garden will also include the construction of a concrete shade structure, that project component is not included in this grant application. DWA's demonstration garden will include site grading and soil preparation, installation of irrigation equipment, planting of desert-friendly plants, and application of fertilizer and mulch to protect new growth. The demonstration garden will be constructed to be aesthetically pleasing and will be located at the Palm Springs International Airport.

Deliverables:

- Site visit reports (pre and post) to measure water use and confirm installations



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Project 3: East Coachella Valley Water Supply Project – Avenue 66 Phase 2B

I. Introduction

Implementing Agency

CVWD will serve as the project sponsor for the *East Coachella Valley Water Supply Project (ECVWSP) – Avenue 66 Phase 2B*.

Project Description

History and Context

CVWD is a potable water retailer that serves a region covering approximately 1,000 square miles, mostly within the Coachella Valley in Riverside County, California. In the eastern portion of its service area, a number of rural communities are not connected to CVWD's potable water system. These communities are classified as DACs, and they depend on local private wells connected to independent SWSs to supply their drinking water. The local groundwater supplies of several of the East Valley SWSs have shown elevated concentrations of arsenic and other constituents that are currently regulated by the State or may be in the near future, such as hexavalent chromium. This project will directly improve water quality and supply reliability for the DAC. This project addresses contamination per the requirements of AB 1249, as it provides safe drinking water to a small DAC (<10,000 people) with arsenic contamination.

The ECVWSP was initiated in early 2018 via a State Water Resources Control Board (SWRCB) grant to evaluate and prioritize the East Valley SWSs for potential consolidation and develop preliminary engineering and environmental compliance documents for the highest priority systems. CVWD is partnering with its DAC Infrastructure Task Force to implement the ECVWSP in coordination with other water and wastewater infrastructure projects in the eastern Coachella Valley.

The System Identification task of the ECVWSP identified the SWSs for potential consolidation into the CVWD potable system; evaluated the current and projected water demand for each SWS; infrastructure expansion and pump energy requirements to deliver the water; and developed associated planning level capital and operations and maintenance (O&M) costs. The 83 SWSs identified for consolidation were grouped into 43 projects based on relative proximity of the SWSs to one another. The projects have been named based on the largest SWS each consolidation project would connect.

Based on the criteria and weights determined from discussions, the highest priority project was determined to be the Saint Anthony MHP Water Consolidation Project. The Saint Anthony Project connects three independent SWSs: Manuela Garcia MHP, Seferino Huerta MHP, and Saint Anthony MHP. The pipeline constructed in this Phase 2B project will connect directly to Manuela Garcia MHP, and also provide reliability to the future connections to Seferino Huerta and Saint Anthony MHPs, which are both located in the DAC area to the east of Manuela Garcia MHP. As CVWD continues to connect mobile home parks and other neighborhoods to their water and wastewater systems, these communities will see an improvement in their water quality, water supply reliability, and cost affordability.

The Manuela Garcia MHP is a DEH permitted SWS located on the Torres-Martinez Band of Desert Cahuilla Indians tribal lands that serves a mobile home park with a total of 14 service connections. The SWS is reliant on an 8-inch diameter groundwater well that is 500 ft deep. The well has a submersible pump that delivers water to six pressure tanks to supply the potable water distribution system. There is also a second well with a 510 ft deep, 6-inch casing. This well was originally used for potable water but has since been repurposed for irrigation and is no longer connected to the potable water system. Per the *2019 Preliminary Engineering Report* prepared for the project, the system is operational although the potable water well appears to show signs of corrosion on

Project Readiness

- ✓ Preliminary Engineering Report – Complete
- ✓ CEQA – Mitigated Negative Declaration Complete
- ✓ Shovel Ready by 2023



Manuela Garcia MHP existing well and above-ground piping

the exterior. A separate fire suppression system consists of 4-inch PVC piping and two fire hydrants. The fire suppression system is gravity fed from three 5,000-gallon storage tanks. The fire suppression system is separated from the potable water distribution system via an air gap between the supply line and the tanks.

The 2018 DEH Inspection Report from February 2018 stated that the well exceeded the MCL for arsenic. Under the counter RO treatment units were installed in 2013 as an interim measure to reduce arsenic levels in this community's drinking water. The effluent from the treatment units was tested for arsenic in February 2018 and all treatment units met standards.

Proposed Project

This project is part of the overall "Saint Anthony MHP Consolidation," which will connect three small water systems: Manuela Garcia MHP, Seferino Huerta MHP and Saint Anthony MHP. The portion of the Saint Anthony Project being proposed for this round of grant funding is the ECVWSP - Avenue 66 Phase 2B, shown in the figure at right. The proposed project consists of the pipeline that would connect the Manuela Garcia MHP to the existing 24-inch CVWD pipeline at the intersection of Avenue 66 and Polk Street.

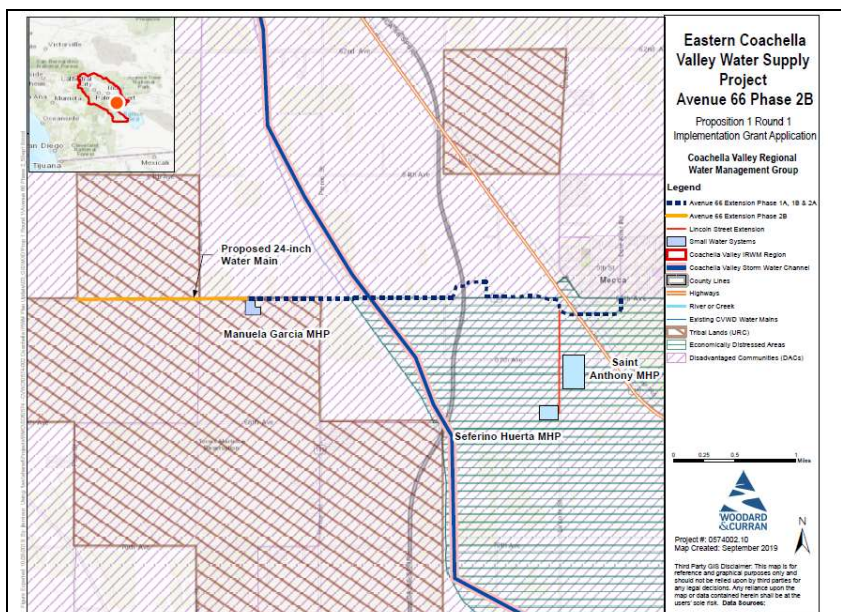
As shown below in this figure from the 2019 Preliminary Engineering Report, the existing potable water distribution system consists of 2-inch schedule 40 PVC pipelines. In 2013, the Manuela Garcia MHP SWS installed under the counter RO treatment units for each mobile home to remove arsenic which was present at concentrations exceeding the MCL of 10 ug/L.

The ECVWSP - Avenue 66 Phase 2B project will be 7,250 lf of 30-inch diameter ductile iron potable water pipeline from the connection at the Manuela Garcia MHP to the existing CVWD water system at the intersection of Avenue 66 and Polk Street to the west. The Avenue 66 Phase 2B pipeline is required to consolidate Manuela Garcia MHP.

Project Benefits

The primary benefit of this project is that it will provide 13 AFY (7.6 gallons per minute (gpm) Average Day Demand) of clean, safe, affordable and accessible water for human consumption, cooking and sanitary

purposes, per Assembly Bill 685 (Human Right to Water) to Manuela Garcia MHP. The current system relies on shallow, degraded groundwater wells. By improving drinking water service to DACs, CVWD supports these communities in avoiding environmental



ECVWSP Saint Anthony MHP Consolidation



Manuela Garcia MHP Onsite Facilities



injustices. Consolidating SWSs with water quality issues into large water systems is typically the most cost-effective way to reduce long term water costs to these DACs.

CVWD has determined a useful project life of 50 years for the proposed potable water pipelines, which is an industry average for water and wastewater conveyance infrastructure. Over the 50-year life of this project, 650 AF of clean, safe drinking water will be served to this local DAC on Torres-Martinez Band of Desert Cahuilla Indians tribal lands.

The secondary benefit is that this project will reduce the arsenic concentration in their drinking water by 24 (ug/L). CVWD potable water averages non-detect level of arsenic. The applied water from small systems will load less arsenic into the shallow groundwater aquifer, which drains to the Salton Sea, thereby ultimately improving the water quality in the Salton Sea. These improvements in water quality will support protection of the Salton Sea wetland habitat areas.

Project Objectives

The 2018 Coachella Valley IRWM/SWR Plan explains that “there are many small DACs throughout ...Eastern Coachella Valley, that are not connected to municipal water systems and rely on private groundwater wells...the majority of these communities have severe water quality and reliability issues” and proposes implementation of water consolidation projects as a priority solution.¹⁰ CVWD’s ECVWSP is specifically referenced in the IRWM Plan in Resource Management Strategies.¹¹ The project contributes to IRWM Plan objectives in the following ways:

Objective A: Provide reliable water supply. This project will provide a reliable and safe water supply by consolidating independent SWSs with impaired water quality in DACs to CVWD’s potable water system. Providing safe reliable drinking water to local DACs is a goal of multiple stakeholders.

Objective B: Manage groundwater levels. The project will reduce the amount of groundwater pumped in the basin to manage groundwater levels and reduce overdraft by converting SWSs that rely on contaminated groundwater to CVWD’s potable water system, the SWSs would no longer be pumping from the shallow groundwater.

Objective E: Protect groundwater quality. This project will protect the groundwater quality because Manuela Garcia MHP will no longer be pumping from the shallow aquifer.

Objective J: Maximize stakeholder involvement. This project will maximize stakeholder involvement and stewardship in water resource management because providing safe, reliable drinking water to local DACs is a goal of multiple stakeholders in the Coachella Valley.

Objective K: Address water-related needs of local Native American culture. This project will address water-related needs of the Torres-Martinez Desert Cahuilla Indians because the Manuela Garcia MHP is located on their reservation lands.

Objective L: Address water and sanitation needs of DACs. This project will provide a reliable, safe water supply by consolidating an individual SWS with impaired water quality in a DAC to CVWD’s potable water supply.

Objective M: Maintain affordability of water. This project helps to maintain the affordability of water because users will receive a monthly bill with consistent rates.

Completed Work

- Small Water System Inspection Report, Riverside County DEH, February 2018
- ECVWSP System Identification Technical Memorandum, June 2018
- ECVWSP System Prioritization Technical Memorandum, October 2018
- ECVWSP Saint Anthony MHP Water Consolidation Project Preliminary Engineering Report, Woodard & Curran, May 2019
- ECVWSP Consolidation Strategy Draft Technical Memorandum, July 2019
- ECVWSP Saint Anthony MHP Consolidation Project Final IS/MND, Woodard & Curran, September 2019

II. Proposed Tasks

Budget Category (a): Project Administration

Task 1: Administration

1(a): Project Administration: This task includes managing the grant agreement including compliance with grant requirements, and preparation and submission of supporting grant documents and coordination with IRWM regional manager, CVWD. This task

¹⁰ 2018 Coachella Valley IRWM/SWR Plan, Section 8 Resource Management Strategies, page 8-24.

¹¹ 2018 Coachella Valley IRWM/SWR Plan, Section 8 Resource Management Strategies, page 8-24.



also consists of preparing invoices including relevant supporting documentation for submittal to DWR via CVWD. This task also includes administrative responsibilities associated with the project such as coordinating with partnering agencies and managing consultants/contractors.

1(b): Regional Administration: CVWD will assume all costs associated with coordinating with DWR to execute the grant agreement and necessary amendments. This task includes managing the grant agreement including compliance with grant requirements, preparation and submission of supporting grant documents, and coordination with each local project sponsor. This task also consists of compiling invoices including relevant supporting documentation from each agency for submittal to DWR. This task also includes compiling a Regional Final Project Completion Report with summary of all projects and conducting administrative responsibilities associated with the project, such as coordinating with partnering agencies.

- Deliverables:**
- Environmental Information Form (EIF)
 - Financial Statements
 - Project 3 contribution to compilation of Regional Progress Reports and Invoices
 - Invoices
 - Other Applicable Project Deliverables
 - Project 3 contribution to compilation of Regional Project Completion Report

Task 2: Reporting: This task consists of preparing progress reports detailing work completed during the reporting period as outlined in Exhibit G of this Agreement. This task also includes submitting reports to CVWD for review and inclusion in a regional progress report to be submitted to DWR. CVWD will also prepare a draft Final Project Completion Report and submitting to DWR via CVWD for DWR Project Manager's comment and review no later than 90 days after project completion. CVWD will also prepare the Final Report addressing DWR's comments. The report shall be prepared and presented in accordance with the provision of Exhibit G.

- Deliverables:**
- Quarterly Project Progress Reports
 - Final Project Completion Report

Budget Category (b): Land Purchase/Easement

Task 3: Land Purchase: Easement acquisition is anticipated for up to 4 privately owned parcels directly adjacent to the north boundary line of Avenue 66 from Polk Street to the Manuela Garcia MHP. A licensed surveyor will prepare legal descriptions and exhibits for acquiring easements, some of which will be on the Torrez-Martinez Reservation. Land Title status will be determined by records in the Land Title and Records Office in consultation with the Riverside office of the Bureau of Indian Affairs (BIA). Once Tribal approval is received, CVWD's consultant will prepare the necessary appraisals and application to the BIA for a formal easement. Once all easements have been acquired, the land agent will prepare a certification of right of way for the project.

- Deliverables:**
- Descriptions and Easement Exhibits
 - Appraisal Reports
 - Purchase and Sale Agreements
 - Certification of Right of Way

Budget Category (c): Planning/Design/Engineering/Environmental Documentation

Task 4: Feasibility Studies – Not Applicable: Project Feasibility Studies were completed as part of the project development process, see Completed Work above.

Task 5: CEQA Documentation – Not Applicable: A CEQA Mitigated Negative Declaration was completed in September 2019, see Completed Work section above. A Notice of Determination has already been filed with the County clerk and the State Clearinghouse.

Task 6: Permitting: This task consists of CVWD applying for coverage from the County of Riverside, South Coast Air Quality Management District (SCAQMD), the RWQCB, and the State Water Resources Control Board (SWRCB). CVWD will apply for coverage from the SWRCB under the NPDES General Construction Permit, which requires preparation of a Stormwater Pollution Prevention Plan. CVWD will also apply for right-of-way Encroachment Permits from the County of Riverside. CVWD will apply for these permits prior to grant agreement execution.

- Deliverables:**
- Encroachment, Road and Construction Permit – County of Riverside
 - Permit to Construct – SCAQMD
 - Fugitive Dust Control Plan – SCAQMD
 - NPDES General Permit for Stormwater Discharge – SWRCB
 - General Permit for Construction Discharges – RWQCB, Colorado River

Task 7: Design: CVWD has hired a consultant to complete the design of this project. The design consultant will be responsible for the delivery of 30, 60, 90, and 100% plans and specifications for construction of the water pipeline and connection to the CVWD



system. Design plans and specifications must adhere to CVWD design requirements and therefore will require review and approval by CVWD. A Preliminary Engineering Report has been completed, see completed work above.

- Deliverables:**
- 30% Design Plans
 - 60% Design Plans
 - 90% Design Plans and Specifications
 - 100% Design Plans and Specifications
 - Plan Review and Coordination with CVWD
– updated Final Design Plans will be provided if CVWD modifies the 100% Design Plans and Specifications

Task 8: Project Performance Monitoring Plan: This task consists of developing and submitting a PPMP. The PPMP will include baseline conditions, a brief discussion of monitoring systems to be used, methodology of monitoring, frequency of monitoring, and location of monitoring points.

- Deliverables:**
- Project Performance Monitoring Plan

Budget Category (d): Construction/Implementation

Task 9: Contract Services: CVWD will hire a consultant to complete this task. This task consists of solicitation for a construction contractor, which will involve advertisement for bids, holding a preconstruction meeting, bid opening, bid evaluations, CVWD staff recommendations, CVWD Board of Directors approval, and awarding the construction contract, which includes confirming the contractor's insurance requirements and bonds. For each contract, CVWD must issue a Request for Proposals, evaluate submitted proposals, and issue recommendations.

- Deliverables:**
- Bid documents
 - Proof of Advertisement
 - Notice of Award
 - Notice to Proceed

Task 10: Construction Administration: CVWD will hire a consultant to complete this task. This task includes managing contractor submittal review, answering requests for information, and issuing work directives. Construction observer duties include: documenting of pre-construction conditions, daily construction diary, preparing change orders, addressing questions of contractors on site, reviewing/updating project schedule, reviewing contractor log submittals and pay requests, forecasting cash flow, notifying contractor if work is not acceptable. CVWD will complete the inspection during construction.

- Deliverables:**
- Notice of Completion

Task 11: Construction/Implementation Activities

11(a): Mobilization and Demobilization: Equipment delivery, SWPPP BMP installation, potholing, pavement grind and disposal, and potentially some clearing and grubbing at lateral connections. Performance testing shall be per CVWD Developer/Contractors Guidelines Handbook and per the project plans and specifications. Inspection and testing are required by the project specifications. Testing includes air pressure testing of the water lines and backfill compaction testing. Demobilization includes surplus materials and equipment removal.

11(b): Pipeline Construction: The preliminary *Avenue 66 Phase 2B* extension alignment will be constructed approximately 5 ft south from the northern pavement edge to allow for continued traffic along one lane of Avenue 66 during construction. Final alignment within the roadway is pending utility research, survey and mapping.

The following assumptions were also made at this preliminary stage of design for the 30-inch diameter pipe:

- The ductile iron pipeline installed will be Class 250 zinc-coated pipe with restrained type joints and polyethylene encasement (US Pipe TR Flex or equal) or may be C-905 PVC pipe depending on a corrosion investigation.
- The ductile iron pipeline installed will be wrapped in polyethylene "baggies". Additional corrosion protection may be required in certain areas; therefore, an allowance is provided for additional corrosion protection measures.
- The 24-inch tee, valve and 30-inch by 24-inch reducer will be installed to connect to the existing CVWD 24-inch pipeline on Polk Street to allow the connection of the 30-inch Phase 2 pipeline at the west end. The existing main will need to be temporarily taken out of service and dewatered for this connection.

In order to serve the Manuela Garcia MHP from the 30-inch pipeline, a water distribution pipeline and fire service pipeline will be constructed, along with service laterals to each MHP. However, this portion of the project is on the MHP site and thus costs are not included in this grant application. These costs will be paid by a Drinking Water State Revolving Fund loan or grant. In the interim, the MHP can be highlined with a backflow device, allowing CVWD potable water to serve the existing MHP distribution system, until funding is secured to replace the MHP distribution system.



Deliverables:

- Photographic documentation
- Engineers Certification
- Performance testing results



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Project 4: Groundwater Quality Protection Project Sub Area M2-1

I. Introduction

Implementing Agency

MSWD will serve as the project sponsor for the Groundwater Quality Protection Project Sub Area M2-1.

Project Description

History and Context

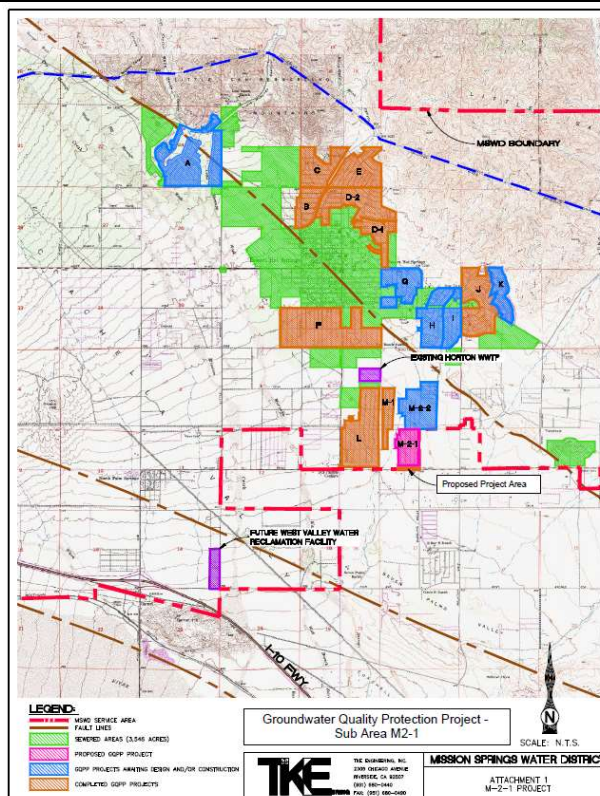
The Coachella Valley IRWM region lies within Region 7 (Colorado River Basin) of the California RWQCB. In 2006, the RWQCB adopted the Water Quality Control Plan for the Colorado River Basin (Basin Plan), outlining water quality objectives for the region and putting forth an Implementation Program that would assist in achieving those objectives. The Basin Plan notes Septic System Impacts to Groundwater Basins as a critical regional issue and that unsewered communities within Region 7 have the potential to negatively impact groundwater.¹² The Basin Plan specifically prohibits individual disposal systems on parcels (less than one-half acre) that overlie the Mission Creek and Desert Hot Springs groundwater aquifers and mandates connection to the municipal sewer system.¹³

Water quality in the Mission Creek Subbasin is being degraded by on-site wastewater disposal systems (septic systems) within the Mission Creek Subbasin and potentially from the neighboring Desert Hot Springs Subbasin, which contributes a small amount of inflow (approximately 1,800 AFY) to the unconfined Mission Creek aquifer. On-site disposal systems are increasing nitrate contamination levels in local water supply wells. The *Groundwater Quality Protection Project Sub Area M2-1* is a continuation of MSWD's Groundwater Quality Protection Program (GQPP), which aims to protect the quality of the groundwater by converting customers from individual septic systems to sewer service. As of 2019, MSWD had converted nearly 7,800 parcels and is scheduled to convert the remaining 3,200 parcels by 2025. The M2-1 portion of the project would eliminate septic tanks that threaten contamination of groundwater supplies, by expansion of MSWD wastewater collection system, and protect hot mineral water which is the economic basis of the community's spa industry. Engineering design has been completed for this project.

Over the last 24 years, the GQPP has abated 3,054 septic systems and connected 7,752 properties to the sewer system through 184,732 ft new sewer pipelines. This District-wide program has achieved conversion of 17 subareas to the sewer system, with 8 remaining to be connected. Because MSWD service area is 100% DAC, the cost of sewer construction is challenging. MSWD's voters established several assessment districts to support these conversions; more specifically, with Assessment District 15 established on 10/12/2017 MSWD has voter approved match funding in place to complete the M2-1 Project. DWR, via the Coachella Valley IRWM program, has also been a strong supporter of the GQPP. For construction,

Project Readiness

- ✓ 100% Design – Complete
- ✓ CEQA – Final EIR Complete
- ✓ Shovel Ready



Groundwater Quality Protection Program

¹² Colorado River RWQCB. 2006. *Water Quality Control Plan for the Colorado River Basin (Region 7)*. Includes Amendments through January 2019. Section III: Regional Board Issues, A: Septic System Impacts to Groundwater Basins, page 532. Section II. Point Source Controls, H: Septic Systems, page 4-6.

¹³ Colorado River RWQCB. 2006. *Water Quality Control Plan for the Colorado River Basin (Region 7)*. Includes Amendments through January 2019. Section II. Point Source Controls, H: Septic Systems, page 4-6.



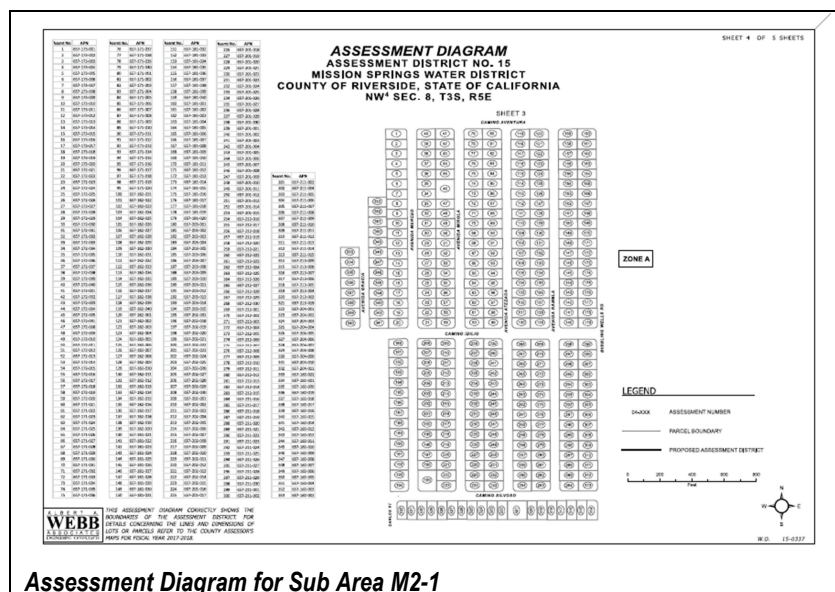
Sub Areas D1 and J1 were converted using a Prop 84-Round 1 grant, and Sub Area D2 was converted using a Prop 84-Round 2 grant. Additionally, Sub Areas H and I are currently under design using a Prop 1-DAC I grant.

MSWD's 2015 *Urban Water Management Plan* notes that the DHSSB is a hot-water basin, containing hot mineral water with temperatures exceeding 100 degrees Fahrenheit. This water serves as the economic basis of Desert Hot Springs because it draws visitors to the City's numerous spa resorts and hotels. Therefore, protecting the groundwater quality within the Desert Hot Springs aquifer will not only protect the local water supply but will also protect hot mineral water that is the economic basis of the community's spa industry. Water quality both in the water supply (Mission Creek) and hot water (Desert Hot Springs) subbasins are vital to the area's economic vitality. The *GQPP - Sub Area M2-1* project will capture and treat wastewater flows at MSWD's Horton Wastewater Treatment Plant (WWTP), and recharge to the MCSB. The project will result in groundwater quality protection by treating wastewater and preventing lesser treated septic effluent from entering the high-quality MCSB. In addition, because Desert Hot Springs qualifies as a DAC, this project will also protect residents of a DAC from significant costs that would result if treatment of the potable groundwater supply were necessary due to contamination of groundwater supplies.

Area M2-1 is part of Assessment District 15, which was approved by voters in 2017 and will provide \$1.95 million of match funding to complete the septic to sewer project. Engineering design, with the exception of repackaging the plans and specifications for bid, and CEQA for Sub Area M2-1 is complete, and the project is shovel ready.

Project Description

The Sub Area M2-1 collection system will connect 318 parcels to the MSWD sewer system and abate over 182 onsite septic systems. This project component envisions the installation of approximately 10,394 lf of 8-inch gravity sewer (VCP), 1,035 lf of 10-inch gravity sewer, and 735 lf of 12-inch gravity sewer. The sewer will be installed within existing right of way (ROW). Extension of onsite lateral connections from the sewer mains would be completed up to the ROW. Developed parcels could be connected immediately after the complete sewer collection system is connection to the sewer mains delivering wastewater to the treatment plant.



Average annual dry weather flow from the M2 area (406 septic systems) is estimated at approximately 105 AFY (approx. 231 gallons per day per household/septic tank). Flow from the M2-1 area should be approximately 47 AFY of septic discharge removed.

Long term MSWD plans to construct the West Valley Water Reclamation Facility (VWVRF) to the west of Sub Area M2-1 which will help offload its existing wastewater treatment facilities. The facility will percolate the treated wastewater into the Garnet Hills subbasin (GHSB), which is not under water quality discharge prohibitions by the RWQCB; however, MSWD is also planning to add tertiary treatment and develop a recycled water program from this facility in the future.

Project Benefits

The primary benefit of this project is the reduction of nitrate, an AB 1249 contaminant, from the water discharged to the Mission Creek Subbasin. Raw wastewater has a typical nitrogen value of 45 milligrams per liter (mg/L). After secondary treatment with nitrogen removal, the nitrogen value will be less than 3 mg/L (per RWQCB Board Order R7-2014-0049 for the Horton WWTP). This will reduce the level of nitrogen, of which nitrate is a component, by about 42 mg/L. This is a nitrogen load reduction of 123 pounds per day (lbs/day) (0.35 MGD x (45-3 mg/L) x 8.34 conversion factor) or 22 tons of nitrogen per year. By improving sewer service to DACs, MSWD supports these communities in avoiding environmental injustices. Consolidating septic systems with water quality issues into municipal sewer collection systems is typically the most cost-effective way to reduce groundwater quality degradation (nitrate and pathogen loading) to these DACs.



The secondary benefit of this project is that it will treat and recharge 42 AFY of treated wastewater to the Mission Creek Subbasin. This project will also allow wastewater that is currently discharged directly to the groundwater basin to be collected and used in a future recycled water project, which will reduce the amount of imported water needed in the region.

MSWD has determined a useful project life of 50 years for the proposed sewer collection pipelines, which is an industry average for water and wastewater conveyance infrastructure. Over the 50-year life of this project, 2,100 AF of wastewater will be collected, treated, and recharged with significantly better water quality in this DAC.

Project Objectives

The 2018 *Coachella Valley IRWM/SWR Plan* explains that “septic systems located in the western Coachella Valley have the potential to add nitrates or contaminants to the local groundwater basin” and proposes implementation of septic-to-sewer consolidation projects as a priority solution.¹⁴ MSWD’s GQPP is specifically referenced in the IRWM Plan in Region Description, Disadvantaged Communities, and Framework for Implementation.¹⁵ The project contributes to *IRWM Plan* objectives in the following ways:

Objective A: Provide reliable water supply for residential and commercial, agricultural community, and tourism needs. The MCSB is the primary source of domestic water supply for the western Coachella Valley. Septic systems can lead to nitrate, TDS, bacteria, sulfate and chloride contamination. When water quality in the MCSB showed upward trends for nitrate, the District initiated the GQPP in 1995 to remove septic systems and provide sewer collection and treatment services throughout its service area. The proposed project is a continuation of the GQPP.

Objective B: Manage groundwater levels to reduce overdraft, managed perched water, and minimize subsidence. The January 2013 *Mission Creek/Garnet Hill Water Management Plan* states that “to meet projected demands while managing groundwater overdraft, the coordinated use of local groundwater supplies with other water supplies is a critical element of this WMP.” This project will capture septic flows to the MCSB and give MSWD and the other WMP agencies the ability to recharge higher quality effluent to the MCSB.

Objective D: Maximize local supply opportunities, including water conservation, water recycling and source substitution, and capture and infiltration of runoff. The project will collect wastewater that is currently discharged to MCSB via septic systems without treatment and be percolated into the groundwater basin, helping MSWD to manage the groundwater basin. The flows from Sub Area M2-1 will initially be sent to the existing Horton WWTP for treatment and the treated effluent will be percolated into the MCSB. However, in the long term, flows will be sent to the planned WVWRF; in the long term MSWD will use the flows to this plant to support a water recycling program, which will reduce groundwater pumping.

Objective E: Protect groundwater quality and improve, where feasible. The project will collect wastewater that is discharged to existing septic systems and treat it at a WWTP which includes N removal, thus lowering the N and bacteria loading to the MCSB. As stated previously, it is estimated that 47 AFY (0.35 million gallons per day (MGD)) from Sub Area M2-1 will be sent for treatment at the Horton WWTP and that the N levels will be reduced from 45 mg/L to approximately 3 mg/L (a 42 mg/L reduction).

Objective G: Preserve water-related local environment and restore, where feasible. The management of the groundwater table and reduction in basin overdraft will help ensure the health and survival of the mesquite hummocks which are an important habitat for native species and migrating birds.

Objective J: Maximize stakeholder involvement and stewardship in water resource management. There has been and continues to be extensive public outreach and support in the planning, voter approval, and formation of Assessment Districts to mitigate septic impacts in MSWD’s service area. MSWD regularly updates customers on its website and through media as grant funding is secured for each phase of these GQPP projects.

Objective L: Address water and sanitation needs of disadvantaged communities, including those in remote areas. The construction of the wastewater collection system in Assessment District 15 Sub Area M2-1, will connect 318 parcels to the MSWD system and abate 182 on-site septic systems, which all qualify as DACs. All 318 parcels are located in a DAC area.

Objective M: Maintain affordability of water. By preventing nitrate and bacteria contamination in the MCSB, production wells used for domestic supply in the basin will avoid the costs for future nitrate removal treatment and increased disinfection. The project will also help MSWD manage the flows into and out of the MCSB and GHSB, which will allow MSWD to increase its oversight of the groundwater basin to reduce basin overdraft and the need for costly imported water supplies.

¹⁴ 2018 *Coachella Valley IRWM/SWR Plan*, Section 2 Region Description, page 2-24.

¹⁵ 2018 *Coachella Valley IRWM/SWR Plan*, Section 2 Region Description, page 2-24; Section 4 Disadvantaged Communities, page 4-42; Section 11 Framework for Implementation, page 11-8.



Completed Work

- Design drawings, specifications, and cost estimates for Sub Area M2
 - Upon securing grant funding, Sub-Area M2-1 will be broken out of the M2 design plan, specifications, and estimates, and repackaged for bidding and construction.
- Preliminary Design Report: MSWD West Valley Water Reclamation Facility by AECOM, December 2018
- West Valley Sewer Conveyance System Technical Memorandum by TKE Engineering, April 2019
- Final Program EIR for the West Valley Water Reclamation Program (SCH 2019029091) by Tom Dodson & Associates, August 2019 – this document covers the detailed sewer plan (Figure 3-10) for the M-2 Collection Zone
- Engineer's Report Assessment District No. 15 by Albert A. Webb Associates, July 2017.

II. Proposed Tasks

Budget Category (a): Project Administration

Task 1: Administration

1(a): Project Administration: This task consists of project management responsibilities associated with the *GQPP Sub Area M2-1*, including managing the grant agreement, complying with grant requirements, and preparing and submitting supporting grant documents and coordinating with IRWM regional manager, CVWD. This task also consists of preparing invoices including relevant supporting documentation for submittal to DWR via CVWD. This task also includes administrative responsibilities associated with the project such as coordinating with partnering agencies and managing consultants/contractors.

1(b): Regional Administration: CVWD will assume all costs associated with coordinating with DWR to execute the grant agreement and necessary amendments. This task includes managing the grant agreement including compliance with grant requirements, preparation and submission of supporting grant documents, and coordination with each local project sponsor. This task also consists of compiling invoices including relevant supporting documentation from each agency for submittal to DWR. This task also includes compiling a Regional Final Project Completion Report with summary of all projects and conducting administrative responsibilities associated with the project, such as coordinating with partnering agencies.

- Deliverables:**
- Environmental Information Form (EIF)
 - Financial Statements
 - Project 4 contribution to compilation of Regional Progress Reports and Invoices
 - Invoices
 - Other Applicable Project Deliverables
 - Project 4 contribution to compilation of Regional Project Completion Report

Task 2: Reporting: This task consists of preparing progress reports detailing work completed during the reporting period as outlined in Exhibit G of this Agreement. This task also includes submitting reports to CVWD for review and inclusion in a regional progress report to be submitted to DWR. Task 2 will also involve preparing draft Final Project Completion Report and submitting to DWR via CVWD for DWR Project Manager's comment and review no later than 90 days after project completion. MSWD will also prepare the Final Report addressing CVWD/DWR's comments. The report shall be prepared and presented in accordance with the provision of Exhibit G.

- Deliverables:**
- Quarterly Project Progress Reports
 - Final Project Completion Report

Budget Category (b): Land Purchase/Easement

Task 3: Land Purchase – Not Applicable: The *GQPP Sub Area M2-1* does not require land purchases or easements.

Budget Category (c): Planning/Design/Engineering/Environmental Documentation

Task 4: Feasibility Studies – Not Applicable: Project Feasibility Studies were completed as part of the project development process, see Completed Work section above.

Task 5: CEQA Documentation – Not Applicable: CEQA was completed for the *GQPP Sub Area M2-1* in August 2019. The Final Environmental Impact Report (FEIR) was adopted on August 19, 2019, see Completed Work section above. A Notice of Determination has already been filed with the County clerk and the State Clearinghouse.

Task 6: Permitting: This task consists of MSWD applying for coverage from the SWRCB under the NPDES General Construction Permit, which requires preparation of a SWPPP. MSWD will also apply for right-of-way Encroachment Permits from the County of Riverside. MSWD will apply for these permits prior to grant agreement execution.

- Deliverables:**
- Notice of Intent under General Order including SWPPP
 - Permit to Construct – SCAQMD
 - Fugitive Dust Control Plan – SCAQMD



- Encroachment Permit for County of Riverside
- General Construction Permit for SWRCB

Task 7: Design: Design drawings, specifications, and cost estimates for Area M2 were completed in 2010. Once draft funding award is received, MSWD will begin working to repackage the Final Plans and Specifications to the specific Sub Area M2-1, including updates to standard drawings, practices, policies, and other requirements since originally completed in 2010. Bids have not yet been solicited. The project does not require completion of any future phases to place the system into operation. MSWD, through the lead agency, will submit the repackaged contract documents (plans, specifications, and estimates) for review to DWR to verify consistency with program requirements.

- Deliverables:**
- Final Plans, Specifications and Cost Estimates

Task 8: Project Performance Monitoring Plan: This task consists of developing and submitting a PPMP. The PPMP will include baseline conditions, a brief discussion of monitoring systems to be used, methodology of monitoring, frequency of monitoring, and location of monitoring points.

- Deliverables:**
- Project Performance Monitoring Plan

Budget Category (d): Construction/Implementation

Task 9: Contract Services: This task consists of solicitation for a construction contractor, which will involve advertisement for bids, holding a preconstruction meeting, bid opening, bid evaluations, MSWD staff recommendations, MSWD Board of Directors approval, and awarding the construction contract, which includes confirming the contractor's insurance requirements and bonds. For each contract, MSWD must issue a Request for Proposals, evaluate submitted proposals, and issue recommendations.

- Deliverables:**
- Final Bid Documents
 - Notice of Award
 - Proof of Advertisement
 - Notice to Proceed

Task 10: Construction Administration: This task includes general construction management (administration, project-partner coordination, preconstruction conference coordination, construction progress meetings, invoicing, requests for information and requests for copy responses, change order execution, and other related management duties), materials testing, inspection, and construction staking. A consultant will be procured to help manage the aforementioned activities.

- Deliverables:**
- Construction management contract
 - Submittal Log
 - Inspection Reports
 - Payment Requests

Task 11: Construction/Implementation Activities: Construction activities are outlined below. It is anticipated that the entire construction can occur within one year from Notice to Proceed to the contractor.

11(a): Mobilization and Demobilization: Equipment delivery, SWPPP BMP installation, potholing, pavement grind and disposal, and potentially some clearing and grubbing at lateral connections. Performance testing shall be per MSWD Developer/Contractors Guidelines Handbook and per the project plans and specifications. Inspection and testing are required by the project specifications. Testing includes air pressure testing of the sewer lines and backfill compaction testing. Demobilization includes surplus materials and equipment removal.

11(b): Pipeline Construction: Installation of approximately 10,394 lf of 8-inch gravity sewer (VCP), 1,035 lf of 10-inch gravity sewer, and 735 lf of 12-inch gravity sewer, 35 concrete manholes, and all appurtenances. This task also includes traffic control, BMP management, pavement removal, trenching, shoring, bedding, pipe installation, manhole installation, lateral construction, backfilling, compaction, connections, pavement restoration, striping, and clean up. The contractor shall return construction and staging areas to as reasonable as possible to original or improved conditions as a result of construction activities, including newly paved streets.

The trench depths for the Sub Area M2-1 system are estimated to be between 7-ft to 18-ft in depth. Average trench widths are estimated to be 24-inches wide. The engineers estimate that approximately 200-400 lf of pipeline can be installed per team per day. A construction team consists of 1 excavator, 1 backhoe, 1 paver, 1 roller, 1 water truck, traffic control signage and devices, 10 dump/delivery trucks (80 miles round trip distance), and employees (11 members per team). Two teams will be installing pipelines for a maximum total of 800 lf per day. It is assumed that installation of the sewer line will occur over 16 days. The final activity associated with the sewer and force main installation is repaving of roads disturbed by the construction. This is anticipated to occur over a 24 day period.

- Deliverables:**
- Photographic documentation
 - Performance testing results
 - Engineers Certification



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Project 5: East Coachella Valley Septic to Sewer Conversions – Monroe Street

I. Introduction

Implementing Agency

CVWD will serve as the project sponsor for the *East Coachella Valley Septic to Sewer Conversions (ECVSSC) – Monroe Street*.

Project Description

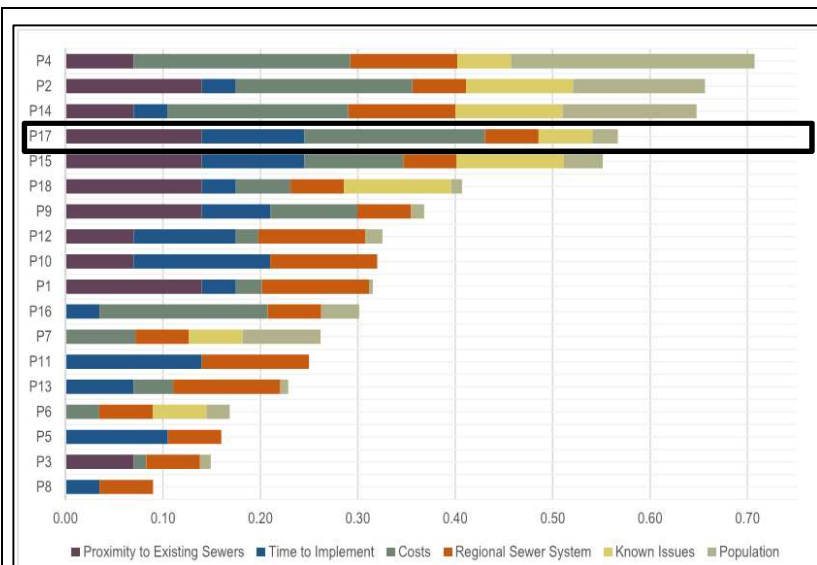
History and Context

CVWD provides water related services including wastewater collection and treatment throughout a region covering approximately 1,000 square miles, mostly within the Coachella Valley in Riverside County, California. In the East Coachella Valley region of its service area, there are a number of rural communities that are not connected to CVWD's sanitary sewer collection system. These communities are classified as DACs with MHIs less than 80 percent of the California statewide MHI and depend on onsite wastewater treatment systems (OWTS) and/or septic systems.

CVWD has evaluated the consolidation of individual septic systems within the Eastern Coachella Valley into CVWD's sanitary sewer system. CVWD partnered with its DAC Infrastructure Task Force to evaluate its Sanitation Priorities in coordination with other water and wastewater infrastructure projects in the Eastern Coachella Valley. A total of 89 septic systems were identified for potential sewer consolidation in the East Coachella Valley, including permitted and unpermitted systems. Approximately 55 out of the 89 individual septic systems identified for consolidation were grouped into 18 DAC centered projects and masterplan projects. The *ECVSSC-Monroe Street* project ranked fourth (see inset, Monroe Street is Project 17 or P17) based on proximity to existing sewers, time to implement, costs, regional sewer system, known issues and population. The three projects ranked higher will still be completed; however, the *ECVSSC - Monroe Street* project was chosen to be included in this grant application package as it was the farthest along in the planning and design process.

Project Readiness

- ✓ Preliminary Engineering - Complete
- ✓ CEQA – Categorical Exemption Complete Prior to Grant Agreement
- ✓ On-Site Construction – Complete
- ✓ Shovel Ready



Sanitation Priority Rankings in East Coachella Valley

In 2012, U.S. Indian Health Services (IHS) prepared a *Preliminary Engineering Report* evaluating proposed actions for wastewater management at the Torres-Martinez Band of Cahuilla Indians Avenue 64 housing subdivision. The report recommended construction of a sewer transmission main along Monroe Street to connect to CVWD's sanitary sewer system. As a follow-on, IHS prepared a *2019 Technical Memorandum* with updated information for the project. Septic systems in the Avenue 64 housing subdivision are failing and the lot sizes are insufficient for construction of replacement drainfields. Per the *2019 Technical Memorandum*, the *Monroe Street* project is needed for the protection of public health from the threat of exposure to pathogens in surfacing sewage and for the protection of the Tribe's drinking water wells from the threat of failed septic systems contaminating groundwater.

Project Description

The Torres-Martinez Band of Cahuilla Indians Avenue 64 housing subdivision consists of 33 Tribal homes, a community park, cemetery, and church all currently on failing septic systems. An onsite sewer collection system within the subdivision has already been constructed through a joint project with the Tribe, IHS, and the US Environmental Protection Agency (EPA).

The proposed project would connect the Tribe's new subdivision collection system to the existing CVWD sewer collection pipeline on Monroe Street north of Avenue 62. Approximately one mile of 10-inch VCP sewer main, with manholes located every 500 ft, would be constructed within the Monroe Street right of way and owned by CVWD. It would then be connected to an existing 33-inch VCP sewer main at the intersection of Monroe and Avenue 62. The new subdivision collection system, that is already constructed, entails 1,700 ft of 8-inch PVC sewer main with manholes located every 500 ft within the existing subdivision roads to serve all the homes; this portion was funded by EPA and is not considered part of the proposed project.

This project involves removing septic tanks from the perched groundwater, which flows to the local agricultural drainage system and the Salton Sea. The perched aquifer has documented high nitrate levels and septic tanks are currently contributing to this issue. This project would remove failing septic systems that could potentially cause disease by direct contact with sewage that has surfaced and may carry disease vectors. This consolidation project would reduce the potential to contaminate drinking water sources with septic system contaminants such as nitrate.

Project Benefits

The primary benefit to this project is the removal of nitrate, an AB 1249 contaminant, from the water that is currently discharged to the Indio Subbasin and ultimately to the Salton Sea. This will help to protect and improve groundwater quality by reducing bacteria and nitrate discharged from failing septic systems. Raw wastewater has a typical total nitrogen value of 45 mg/L and after secondary treatment the total nitrogen value will be less than 25 mg/L (based on CVWD effluent monitoring results for WRP-4; note that WRP-4 does not provide denitrification like Horton WWTP). This ultimately removes 20 mg/L of nitrogen, of which nitrate is a component, from the water currently discharged to the Indio Subbasin. By improving sewer service to DACs, CVWD supports these communities in avoiding environmental injustices. Consolidating septic systems with water quality issues into municipal sewer collection systems is typically the most cost-effective way to reduce groundwater quality degradation (nitrate and pathogen loading) to these DACs.

The secondary benefit of this project is that it will treat and recharge 19 AFY of treated wastewater to the Indio Subbasin. This project will also allow wastewater that is currently discharged directly to the groundwater basin to be collected and used in a future recycled water project, which will reduce the amount of imported water needed in the region.

CVWD has determined a useful project life of 50 years for the proposed sewer collection pipelines, which is an industry average for water and wastewater conveyance infrastructure. Over the 50-year life of this project, 950 AF of wastewater will be collected, treated, and recharged with significantly better water quality in this DAC.

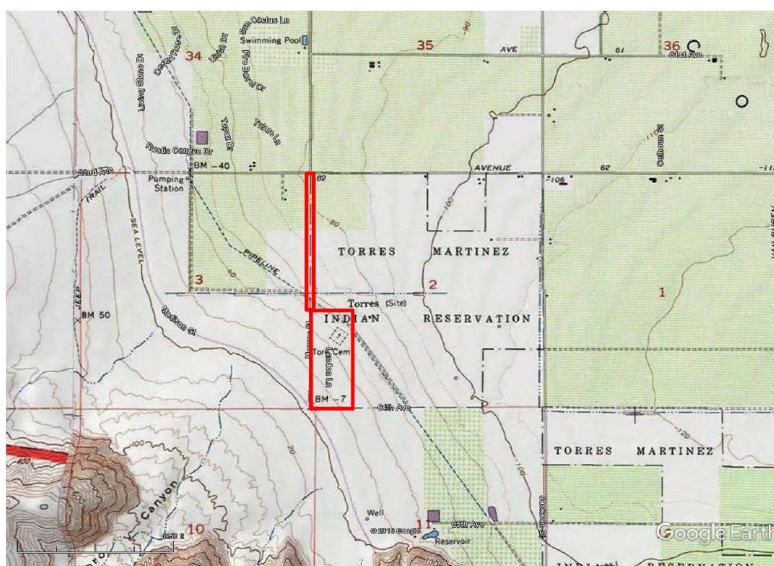


Figure 2: USGS topographical map of project location.

Location of Proposed Monroe Street Consolidation



Figure 3: Aerial Image of project location with phase descriptions.

Proposed Monroe Street Project



Project Objectives

The 2018 Coachella Valley IRWM/SWR Plan explains that “flows from septic systems in the shallow aquifer of the eastern Coachella Valley do not readily percolate due to high groundwater levels and have the potential to migrate to agricultural drains and eventually to the Salton Sea” and proposes implementation of septic-to-sewer consolidation projects as a priority solution.¹⁶ The project contributes to IRWM Plan objectives in the following ways:

Objective E: Preserve groundwater quality. This project involves removing septic tanks from the perched groundwater which flows to the local agricultural drainage system and the Salton Sea. The perched aquifer has documented high nitrate levels that are contributed from leaching septic tanks.

Objective F: Preserve and improve surface water quality. This project will protect and improve surface water and groundwater quality by reducing surface water runoff pollution from failing septic systems.

Objective J: Maximize stakeholder involvement. The project maximizes stakeholder involvement since it is the result of DAC Infrastructure Task Force prioritization to benefit the eastern Coachella Valley's DAC's.

Objective K: Address water related needs of local Native American culture. The ECVSSC - Monroe Street connects a community on the Torres Martinez Desert Cahuilla Indians Reservation to CVWD's sanitary sewer system.

Objective L: Address water and sanitation needs of disadvantaged communities. The project addresses the sanitation needs of the Torres Martinez Desert Cahuilla Indians, the reservation lands lie within a designated DAC, see project map. The project will also prevent the Tribe's drinking water wells from being impacted by bacteria and/or N discharges from the failing sewage systems.

Objective M: Maintain affordability of water. The project would help maintain the affordability of water by providing MHP residents with a known monthly cost for sewer as opposed to burdening them with the unpredictable costs associated with failing septic systems.

Completed Work

- CVWD Sanitation Priorities Task Order Technical Memorandum, by Woodard & Curran, August 2019
- Special Sanitation Installation Agreement between CVWD and Torres Martinez DCI. Riverside County No. 2017-0345827
- EPA Award Letter of Funding of Monroe Street Onsite Sewer and Memorandum of Agreement and Project Summary for IHS Project No. 19-E79 (pending execution as of 8/21/19)
- Engineering Reports:
 - Preliminary Engineering Report – CVWD Sewer Main Extension to Avenue 64 Housing Subdivision, by Indian Health Services, 2012
 - Technical Memorandum N. 1 to the 2012 Preliminary Engineering Report – CVWD Sewer Main Extension to Avenue 64 Housing Subdivision, by Indian Health Services, August 2019
- Environmental Documentation:
 - Biological Assessment for Plants and Animals, Botany and Wildlife Report for the Torres Martinez Indian Reservation Sewer and Water Line Improvement Project by L&L Environmental, Inc, April 2013
 - An Archaeological Record Search and Survey Report for the for the Torres Martinez Water and Sewer Project by L&L Environmental, Inc., April 2013
 - Notice of Exemption for Avenue 64 Sewer Improvement Project, August 26, 2019

The on-site sewer collection system within Avenue 64 Housing Subdivision construction was completed in early 2019; however, the homes will continue to use their septic systems until the transmission main is constructed.

II. Proposed Tasks

Budget Category (a): Project Administration

Task 1: Administration

1(a): Project Administration: This task consists of project management responsibilities associated with the ECVSSC – Monroe Street including managing the grant agreement, complying with grant requirements, and preparing and submitting supporting grant documents and coordinating with IRWM regional manager, CVWD. This task also consists of preparing invoices including relevant supporting documentation for submittal to DWR via CVWD. This task also includes administrative responsibilities associated with the project such as coordinating with partnering agencies and managing consultants/contractors.

¹⁶ 2018 Coachella Valley IRWM/SWR Plan, Section 2 Region Description, page 2-24.



1(b): Regional Administration: CVWD will assume all costs associated with coordinating with DWR to execute the grant agreement and necessary amendments. This task includes managing the grant agreement including compliance with grant requirements, preparation and submission of supporting grant documents, and coordination with each local project sponsor. This task also consists of compiling invoices including relevant supporting documentation from each agency for submittal to DWR. This task also includes compiling a Regional Final Project Completion Report with summary of all projects and conducting administrative responsibilities associated with the project, such as coordinating with partnering agencies.

- Deliverables:**
- Environmental Information Form (EIF)
 - Financial Statements
 - Project 5 contribution to compilation of Regional Progress Reports and Invoices
 - Invoices
 - Other Applicable Project Deliverables
 - Project 5 contribution to compilation of Regional Project Completion Report

Task 2: Reporting: This task consists of preparing progress reports detailing work completed during the reporting period as outlined in Exhibit G of this Agreement. This task also includes submitting reports to CVWD for review and inclusion in a regional progress report to be submitted to DWR.

Task 2 will also involve preparing draft Final Project Completion Report and submitting to DWR via CVWD for DWR Project Manager's comment and review no later than 90 days after project completion. CVWD will also prepare the Final Report addressing CVWD/DWRs comments. The report shall be prepared and presented in accordance with the provision of Exhibit G.

- Deliverables:**
- Quarterly Project Progress Reports
 - Final Project Completion Report

Budget Category (b): Land Purchase/Easement

Task 3: Land Purchase – Not Applicable: The ECVSSC – *Monroe Street* does not require land purchases or easements to complete.

Budget Category (c): Planning/Design/Engineering/Environmental Documentation

Task 4: Feasibility Studies – Not Applicable: Project Feasibility Studies were completed as part of the project development process, see Completed Work above.

Task 5: CEQA Documentation: Biological and cultural resources technical studies were prepared to ensure that there will be no environmental impacts associated with the Monroe Street project. Both resulted in findings of no adverse effects. As such, a CEQA Notice of Exemption (NOE) is underway and will be completed prior to grant award. A Notice of Determination (NOD) will also be filed with the State Clearinghouse and County of Riverside immediately following grant award.

- Deliverables:**
- Notice of Exemption
 - Notice of Determination

Task 6: Permitting: This task consists of CVWD applying for coverage from the State Water Resources Control Board under the NPDES General Construction Permit, which requires preparation of a SWPPP. CVWD will also apply for right-of-way Encroachment Permits from the County of Riverside for construction within Monroe Street. CVWD will apply for these permits prior to grant agreement execution. The Tribe and CVWD already have a Special Sanitation System Installation Agreement that was executed in August 2017 and recorded with the County. No additional tribal permits are needed.

- Deliverables:**
- Encroachment, Road and Construction Permit, County of Riverside
 - Permit to Construct, SCAQMD
 - Fugitive Dust Control Plan, SCAQMD
 - General Permit for Construction Discharges, RWQCB – Colorado River

Task 7: Design: IHS is completing the design for the Monroe Street Transmission Main. The design will be updated and finalized in July 2020 and will take approximately three months.

- Deliverables:**
- 100% Design Documents

Task 8: Project Performance Monitoring Plan: This task consists of developing and submitting a PPMP. The PPMP will include baseline conditions, a brief discussion of monitoring systems to be used, methodology of monitoring, frequency of monitoring, and location of monitoring points.

- Deliverables:**
- Project Performance Monitoring Plan

Budget Category (d): Construction/Implementation

Task 9: Contract Services: This task consists of solicitation for a construction contractor, which will involve advertisement for bids, holding a preconstruction meeting, bid opening, bid evaluations, CVWD staff recommendations, CVWD Board of Directors



approval, and awarding the construction contract, which includes confirming the contractor's insurance requirements and bonds. For each contract, CVWD must issue a Request for Proposals, evaluate submitted proposals, and issue recommendations.

- Deliverables:**
- Final Bid Documents
 - Notice of Award
 - Proof of Advertisement
 - Notice to Proceed

Task 10: Construction Administration: This task includes general construction management (administration, project-partner coordination, preconstruction conference coordination, construction progress meetings, invoicing, requests for information and requests for copy responses, change order execution, and other related management duties), materials testing, inspection, and construction staking. CVWD will be responsible for the Construction Administration and will track their time accordingly.

- Deliverables:**
- Notice of Completion

Task 11: Construction/Implementation Activities: Construction activities are outlined below:

11(a): Mobilization and Demobilization: Equipment delivery, SWPPP BMP installation, potholing, pavement grind and disposal, and potentially some clearing and grubbing at lateral connections. A preconstruction biological survey is required as outlined in the environmental documents. It will occur in approximately January 2021 and is estimated at approximately one-month duration. Performance testing shall be per CVWD Developer/Contractors Guidelines Handbook and per the project plans and specifications. Inspection and testing are required by the project specifications. Testing includes air pressure testing of the sewer lines and backfill compaction testing. Demobilization includes surplus materials and equipment removal.

11(b): Pipeline Construction: Project construction for this project includes the installation of approximately 4,100 lf of 8-inch PVC heavy wall (SDR 26) gravity sewer, 12 manholes and all appurtenances. This task also includes traffic control, BMP management, pavement removal, trenching, shoring, bedding, pipe installation, backfilling, rock removal, compaction, connection to the existing CVWD collection system via an existing manhole at the north end of Avenue 62, connection to the existing on-site collection system via a new manhole at the northwest corner of the Avenue 64 subdivision, pavement restoration, striping and clean up. The contractor shall return construction and staging areas to as reasonable as possible to original or improved conditions as well as a result of construction activities include newly paved streets.

The trench depths are estimated to be between 7-ft to 21-ft in depth. Average trench widths are estimated to be 12-inches wide. It is anticipated that material procurement will occur starting in October 2020 and will take three months. Construction will begin in February 2021 and will last nine months.

The engineers estimate that approximately 200-400 lf of pipeline can be installed per day. A construction team consists of 1 excavator, 1 backhoe, 1 paver, 1 roller, 1 water truck, traffic control signage and devices, 10 dump/delivery trucks (80 miles round trip distance), and employees (11 members per team). One team will be installing pipelines for a maximum total of 800 lf per day. It is assumed that installation of the sewer line will occur over 16 days. The final activity associated with the sewer and force main installation is repaving of roads disturbed by the construction. This is anticipated to occur over a 24-day period.

After the transmission main is constructed, the final connections to the houses will be made. Costs for this are included in the "Other Cost Share" category as they will be funded by EPA under IHS project CA 19-E79.

- Deliverables:**
- Photographic documentation
 - Pre-Construction Biological Survey
 - Engineers Certification



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Project 6: Non-Potable Water System – Hovley Lane East

I. Introduction

Implementing Agency

CVWD will serve as the project sponsor for the *Non-Potable Water (NPW) System – Hovley Lane East*.

Project Description

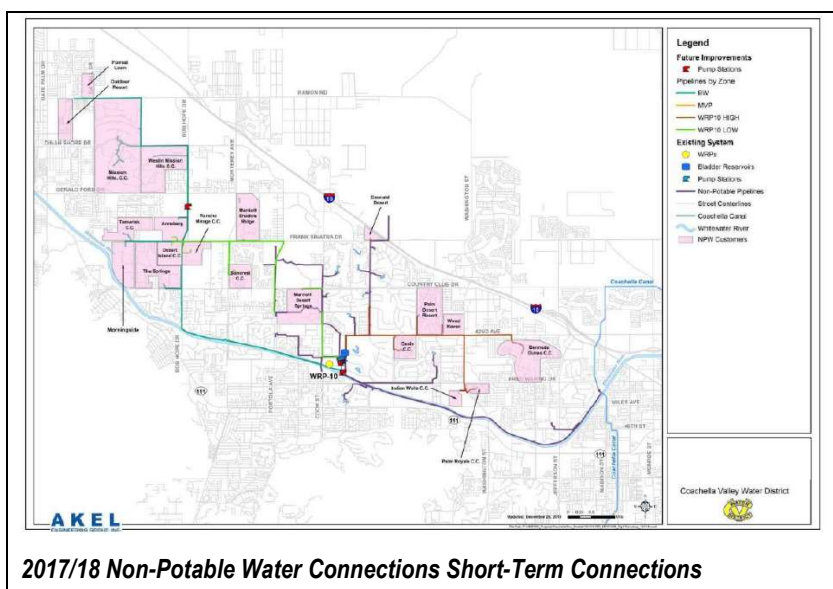
History and Setting

CVWD lies within the Whitewater River watershed in the Coachella Valley, which is located within Riverside County, California. The Coachella Valley climate is characterized by low precipitation and high summer daytime temperatures. Urban water supply for the Coachella Valley is primarily groundwater pumped from two sub-basins of the Coachella Valley Groundwater Basin: the Indio Subbasin and the Mission Creek-Garnet Hill Subbasin and is recharged with Colorado River water. CVWD's service area covers several incorporated cities, including Palm Springs, Cathedral City, Palm Desert, Rancho Mirage, Indian Wells, and La Quinta.

CVWD delivers water for domestic consumption, landscape and agricultural irrigation, and fire protection across approximately 1,000 square miles of service area within the Coachella Valley. CVWD also collects and treats wastewater, provides stormwater protection, replenishes the groundwater basin, and promotes water conservation. CVWD overlies the Indio Subbasin, which is used as its primary source of domestic water supply. Imported Colorado River water is used for irrigation and groundwater replenishment. Additionally, CVWD serves tertiary treated municipal wastewater for irrigation use.

Project Readiness

- ✓ 90% Design – Complete
- ✓ CEQA – Mitigated Negative Declaration Complete
- ✓ Shovel Ready



The CVWMP and MC-GHWMP are the foundational water management plans in the region, including recent approval by DWR as the GSP Alternative Plans for the Valley's two subbasins. The CVWMP recognizes source substitution, which involves delivery of alternative water supplies such as recycled water in place of groundwater pumping, as a key component of its basin management strategy.¹⁷ Given the emphasis on basin sustainability in the SGMA process, there is need to continue and expand the MPW system to offset groundwater pumping by large irrigators.

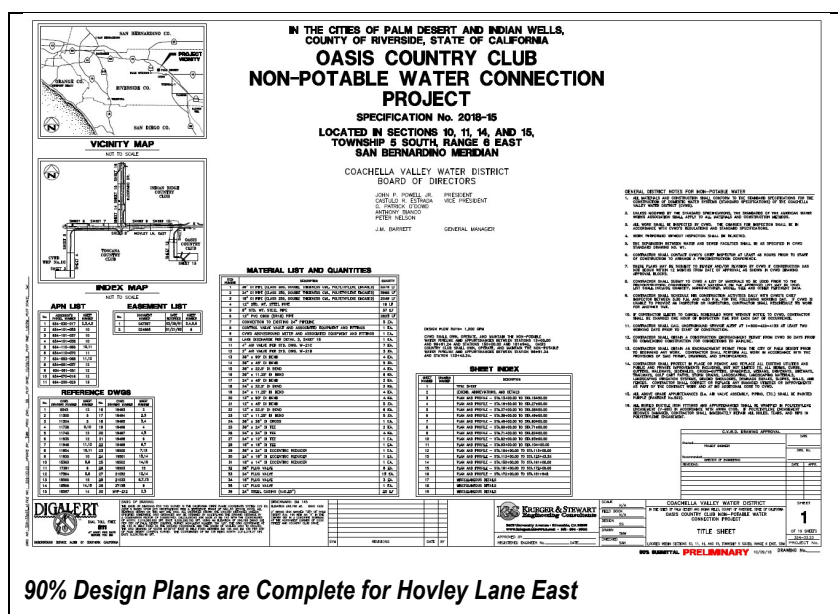
NPW Expansion Program

CVWD currently owns and operates approximately 1,100 miles of wastewater collection system piping and a total of five treatment plants which treat approximately 20 MGD with a total capacity of 30.6 MGD. The five WRPs are referred to as WRP-1, WRP-2, WRP-4, WRP-7, and WRP-10. WRP-7 and WRP-10 treat to tertiary levels and CVWD distributes approximately 8.0 MGD of recycled water produced at the two WRPs for golf course and municipal irrigation. WRP-10 is the largest WRP and is located in the City of Palm Desert. WRP-10 began delivering recycled water in 1987 and, since 2009, is also capable of blending recycled water with raw canal water from the Mid Valley Pipeline (MVP) to serve to non-potable customers. WRP-10 currently has an average annual tertiary production of 9.1 MGD; however, only 6 MGD is recycled and the remainder is discharged via onsite percolation ponds, primarily in winter months, when non-potable demand is less than the available supply. During the irrigation season, when irrigation demand exceeds available recycled water supply, the recycled water is blended with raw canal water

¹⁷ CVWD. 2010. CVWMP 2010 Update. December. Pg. 2-4 (2.2.3 Source Substitution).

Only the portion of the High Pressure System along Hovley Lane East from WRP-10 to the first connection at Oasis Country Club is proposed to be funded in this Prop 1 Round 1 Implementation Grant application.

This proposed *Hovley Lane East* project for this grant application consists of constructing high pressure zone piping to connect an additional customer who currently irrigates with groundwater. The Oasis Country Club pumps approximately 654 AFY groundwater to irrigate its turf areas. This pipeline and connection are the basis for the overall High Pressure NPW expansion effort that will ultimately connect five new customers (Bermuda Dunes Country Club, Emerald Desert, Palm Desert Resort Country Club and Woodhaven Country Club) and achieve approximately 3,740 AFY in NPW deliveries and associated reductions in groundwater pumping. The *Hovley Lane East* project would allow for distribution



The proposed project only includes the recycled water pipelines up to the Oasis Country Club meter; therefore, no easements are needed. Although onsite work is NOT included in this grant application, Oasis Country Club will construct a pipeline from the meter



to the northerly side of the on-site lake located approximately 300 ft south of Virginia Avenue, an above grade discharge with air gap, one control valve vault for use by Oasis Country Club, and three six inch above grade lake discharge pipes. Oasis Country Club has committed to building its onsite improvements to connect to CVWD's NPW system (see Non-Potable Water Agreement in **Attachment 7**).

The proposed *Hovley Lane East* project specifically targets connection of the Oasis Country Club. Grant funding is needed to support expansion of the NPW system because existing private pumpers currently have no incentive to retrofit their properties – the cost of pumping groundwater is significantly lower than the cost of purchasing NPW. However, managing the Indio Subbasin to a sustainable yield is essential for long-term basin management and CVWD will continue to pursue conversion of large irrigators to the NPW system. The Indio Subbasin is a medium priority basin under the Sustainable Groundwater Management Act (SGMA) and NPW conversions are a key management action in the Indio Subbasin Alternative Plan – the CVWMP.

Project Benefits

The primary benefit of this project is that the use of the NPW decreases groundwater pumping by large irrigators, which allows the groundwater to remain in storage. Under the CVWMP, expansion of the recycled water system is a high priority. The project would decrease the amount of groundwater pumping by 654 AFY.

CVWD has determined a useful project life of 50 years for the proposed recycled water pipelines, which is an industry average for water and wastewater conveyance infrastructure. Over the 50-year life of this project, 32,700 AF of recycled water will be served, contributing substantially to the CVWMP's basin management strategy.

The secondary benefit of this project is the reduction of nitrate from the water discharged to the aquifer. WRP-10 effluent has an average total nitrogen at 15 mg/L (per RWQCB Board Order R7-2018-0001) and excess effluent is currently percolated to the groundwater basin. Use of recycled water containing nitrogen, of which nitrate is a component, for irrigation reduces fertilizer application needs. With 654 AFY (0.5 MGD) being recycled at Oasis Country Club, the nitrogen load reduction due to decreased fertilizer use is 62.5 lbs/day (0.5 MGD x (15 mg/L) x 8.34 conversion factor) or 11.4 tons of nitrogen per year.

Project Objectives

The 2018 *Coachella Valley IRWM/SWR Plan* explains “the importance of using non-potable water to offset groundwater pumping in the Region” and proposes implementation of CVWD's NPW system expansion as a priority solution in the Region Description, Issues and Needs, Resource Management Strategies, and Agency Coordination.¹⁸ The project contributes to *IRWM Plan* objectives in the following ways:

Objective A: Provide reliable water supply. This project provides a more reliable water portfolio by diversifying regional supply with additional NPW service. Additionally, this project reduces the amount of groundwater extraction by private parties, which allows groundwater to remain in storage, which reduces the need to import additional water for groundwater recharge purposes.

Objective B: Manage groundwater levels. By optimizing the use of the NPW, there will be less groundwater pumping which will avoid overdraft in the basin.

Objective D: Maximize local supply opportunities. This project provides a local supply opportunity by using the non-potable recycled water in lieu of groundwater pumping.

Objective E: Protect groundwater quality. This project provides the groundwater quality because it reduces the amount of groundwater extraction, which allows the groundwater to remain in storage and lowers the risk of overdraft. This project also helps to reduce the amount of N from the water discharged to the aquifer due to decreased fertilizer use.

Objective I: Optimize conjunctive use of available water resources. This project also optimizes conjunctive use of available water resources by increasing the use of the NPW and Colorado River water supplies in lieu of groundwater pumping.

Objective J: Maximize stakeholder involvement. This project maximizes stakeholder involvement by involving the golf course superintendents in water resource management. Outreach will be conducted through the Golf and Water Task Force.

Objective M: Maintain affordability of water. Expanding NPW service will reduce the amount of imported water required for groundwater replenishment, which will help keep potable water costs low throughout the region, including for DACs.

Completed Work

- CVWD Non-Potable Water Master Plan, prepared by GEI Consultants, June 2017

¹⁸ 2018 *Coachella Valley IRWM/SWR Plan*, Section 2 Region Description, page 2-26; Section 3 Issues and Needs, page 3-14; Section 8 Resource Management Strategies, page 8-13 and 8-20; Section 10 Agency Coordination, page 10-37.



- CVWD Non-Potable Water System WRP-10 NPW System Expansion, prepared by AKEL Engineering Group, Inc., August 2018
- CVWD Preliminary Design Report for WRP 10 T-1 Pump Station Replacement by Krieger and Stewart Engineering Consultants, November 2018
- CVWD Asset Management Master Plan, prepared by CDM Smith, September 2017
- Oasis Country Club Non-Potable Water Connection Project, Preliminary 90% Submittal Drawings by Krieger and Stewart Engineering Consultants, dated October 9, 2018
- Mitigated Negative Declaration for the 2017/18 Non-Potable Water Connections Project (SCH#2018051031), by Rincon Consultants, August 2018

II. Proposed Tasks

Budget Category (a): Project Administration

Task 1: Administration

1(a): Project Administration: This task includes managing the grant agreement including compliance with grant requirements, and preparation and submission of supporting grant documents and coordination with IRWM regional manager, CVWD. This task also consists of preparing invoices including relevant supporting documentation for submittal to DWR via CVWD. This task also includes administrative responsibilities associated with the project such as coordinating with partnering agencies and managing consultants/contractors.

1(b): Regional Administration: CVWD will assume all costs associated with coordinating with DWR to execute the grant agreement and necessary amendments. This task includes managing the grant agreement including compliance with grant requirements, preparation and submission of supporting grant documents, and coordination with each local project sponsor. This task also consists of compiling invoices including relevant supporting documentation from each agency for submittal to DWR. This task also includes compiling a Regional Final Project Completion Report with summary of all projects and conducting administrative responsibilities associated with the project, such as coordinating with partnering agencies.

Deliverables:

- Environmental Information Form (EIF)
- Financial Statements
- Project 6 contribution to compilation of Regional Progress Reports and Invoices
- Invoices
- Other Applicable Project Deliverables
- Project 6 contribution to compilation of Regional Project Completion Report

Task 2: Reporting: This task includes preparing progress reports detailing work completed during the reporting period as outlined in Exhibit G of this Agreement. This task also includes submitting reports to CVWD for review and inclusion in a regional progress report to be submitted to DWR. CVWD will also prepare a draft Final Project Completion Report and submit to DWR via CVWD for DWR Project Manager's comment and review no later than 90 days after project completion. CVWD will also prepare the Final Report addressing DWR's comments. The report shall be prepared and presented in accordance with the provision of Exhibit G.

Deliverables:

- Quarterly Project Progress Reports
- Final Project Completion Report

Budget Category (b): Land Purchase/Easement

Task 3: Land Purchase – Not Applicable: There are no easements or land purchases necessary to complete this project, as the recycled water pipeline will only extend to CVWD's meter in the public ROW.

Budget Category (c): Planning/Design/Engineering/Environmental Documentation

Task 4: Feasibility Studies – Not Applicable: Project Feasibility Studies were completed as part of the project development process, see Completed Work section above.

Task 5: CEQA Documentation – Not Applicable: CEQA has been completed, see Completed Work section above. A Notice of Determination has already been filed with the County clerk and the State Clearinghouse.

Task 6: Permitting: CVWD will apply for coverage from the State Water Resources Control Board under the NPDES General Construction Permit, which requires preparation of a SWPPP. CVWD will also apply for right-of-way Encroachment Permits from the County of Riverside and City of Palm Desert. CVWD will apply for these permits within four months of final award.

Deliverables:

- NPDES Construction General Permit, RWQCB
- Encroachment Permit, City of Indian Wells
- Encroachment Permit, City of Palm Desert
- Fugitive Dust Control Plan, SCAQMD



Task 7: Design: CVWD's consultant, Krieger and Stewart, prepared 90% design for the proposed pipeline connection to the WRP-10 NPW system. These preliminary assessments considered various alternative alignments and provided recommendations regarding final design for the connections. After initiation of the grant agreement, final design will be required to solidify design of the pipeline alignment and connection. This design will be completed by CVWD's consultant. The remainder of the design includes revising the diameter of the current air gap at the lake discharge. The consultant will be revising the lake discharge details from a single 12-inch diameter discharge with a 24-inch air gap to a 6-inch piping manifold with three 6-inch pipes and a 12-inch airgap.

Deliverables:

- 100% Design Plans and Specifications

Task 8: Project Performance Monitoring Plan: The task consists of developing and submitting a PPMP. The PPMP will include baseline conditions, a brief discussion of monitoring systems to be used, methodology of monitoring, frequency of monitoring, and location of monitoring points.

Deliverables:

- Project Performance Monitoring Plan

Budget Category (d): Construction/Implementation

Task 9: Contract Services: This task includes the activities necessary to secure a contractor and award the contract, include: develop bid documents, prepare advertisement and contract documents for construction contract bidding, conduct pre-bid meeting, bid opening and evaluation, selection of contractor, award of contract, and issuance of notice to proceed.

Deliverables:

- Bid documents
- Proof of Advertisement
- Notice of Award
- Notice to Proceed

Task 10: Construction Administration: This task includes managing contractor submittal review, answering requests for information, and issuing work directives. A full-time engineering construction observer will be on site for the duration of the project. Construction observer duties include: documenting of pre-construction conditions, daily construction diary, preparing change orders, addressing questions of contractors on site, reviewing/updating project schedule, reviewing contractor log submittals and pay requests, forecasting cash flow, notifying contractor if work is not acceptable.

Deliverables:

- Notice of Completion

Task 11: Construction/Implementation Activities: Construction activities must include mobilization and site preparation, construction of project components and demobilization.

11(a): Mobilization and Demobilization: Mobilization and site preparation will include equipment delivery, pavement grind and disposal, and potentially some clearing and grubbing at connections. Pavement grinding will consist of removing approximately six inches of asphalt along the pipeline alignment in paved areas. Demobilization will include performance testing shall be per CVWD, developer/contractors' guidelines handbook and per the project plans and specifications. Inspection and testing are required by the project specifications. Testing includes air pressure testing of the sewer lines and backfill compaction testing. Demobilization includes surplus materials and equipment removal.

11(b): Pipeline Construction: Project construction will include installation of the following pipeline alignments to serve the Oasis Country Club:

- 5,376 LF of 36-inch DIP pipe installed from the WRP-10 site along CVWD property to Hovley Lane East, which serves as the High Pressure System backbone to serve the recycled water to large irrigators in the vicinity; and
- 3,968 LF of 24-inch DIP pipe on Hovley Lane East to the new recycled water meter at Oasis Country Club.

The proposed project only includes the recycled water pipelines up to the Oasis Country Club meter; therefore, no easements are needed. Project construction will also involve the installation of a new CVWD meter, valve, and programable logic controller (PLC).

Pipeline construction will consist of open trenching a five-foot wide by up to eight feet deep trench, placing six inches of clean gravel for pipe bedding, pipeline installation, and backfill and compaction of the trench. Where the alignment occurs in an unpaved area, the grade will be restored. Where the alignment occurs in a paved area, aggregate base will be installed followed by repaving as per the City of Palm Desert's required paving standards.

Deliverables:

- Photographic documentation
- Engineers Certification



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