

DRAFT Technical Memorandum



Subject: Project Summary Report - DRAFT
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1 Summary

The Coachella Valley Regional Water Management Group (CVRWMG), with review from the Planning Partners, is tasked with selecting and approving Coachella Valley Disadvantaged Community (DAC) Outreach Program project concepts that are top candidates for additional engineering and program management development. Final DAC Outreach Program projects will be selected and further developed (e.g. planning document, concept-level drawings, schematics, cost estimates). The selected projects are to be approved by DWR.

1.1 Project Concept Overview

In June of 2013 the CVRWMG and non-profit partners that were hired to work on the Coachella Valley DAC Outreach Program worked together to determine general project concepts that would address the major issues in the Coachella Valley pertaining to water resources management for DACs. Those three concepts include the following:

Table 1: Project Concepts

Project Concept	Background/Issue Statement	Project Description
Onsite Groundwater Treatment	There is an identified need to address localized groundwater quality issues, particularly in groundwater wells that pump from the shallow aquifer in the eastern Coachella Valley. Identified constituents in groundwater wells include fluoride, arsenic, uranium, nitrate, and total dissolved solids (TDS). Although not currently considered a constituent of concern, it is possible that hexavalent chromium (chromium VI) will need to be treated from local groundwater wells due to pending water quality regulations.	Onsite point-of-use (POU), point-of-entry (POE), or wellhead treatment systems have been proven successful in treating constituents such as arsenic that impact water quality for DACs in the eastern Coachella Valley. Due to the success of existing POU/POE/wellhead treatment projects and the proven technological success of membrane separation systems (reverse osmosis) in removing multiple constituents, these systems can continue to be installed to treat groundwater for residents in areas with known water quality issues. Such small-scale, onsite treatment projects are particularly favorable in areas that are located at far distances from existing municipal water systems and in communities where more costly options such as drilling deeper groundwater wells are not economically feasible. The proposed project would include development of a ready-to-proceed onsite treatment program for use by local non-governmental organizations and other interested parties. The program would articulate appropriate environmental conditions, preferred systems/vendors, installation recommendations, and operation protocols for onsite treatment.

Project Concept	Background/Issue Statement	Project Description
Septic System Rehabilitation or Replacement	<p>Aging or failing septic systems have been cited as a potential source of water quality constituents such as bacteria and nitrates in local groundwater. Due to the importance of local groundwater quality throughout the Coachella Valley, there is a need to rehabilitate or replace aging or failing septic systems to protect the Region's groundwater supplies and prevent constituents of concern from entering the Salton Sea in areas where failing septic systems are located in the shallow groundwater aquifer. Stakeholders in the Region, particularly in the eastern Coachella Valley, have noted that failing septic systems (those with overflow issues) may not be properly sized and therefore experience overflows and leaks because they cannot handle the amount of flows needed to serve residents. Stakeholders have also noted that regular maintenance of septic systems may not occur due to cost and ownership issues in cases where property owners are unwilling to pay to maintain the systems.</p>	<p>Septic systems can provide a reliable and sanitary method for disposing of wastewater, provided that systems are appropriately designed and engineered and properly maintained. Due to the extensive nature of septic systems throughout the Coachella Valley, it is possible that septic system rehabilitation or replacement projects could be implemented to: 1) assess current issues with failing septic systems (determine why they are failing), and 2) implement actions necessary to resolve septic system issues – replacing, rehabilitating, or completing maintenance on the systems, based on identified issues. Septic system rehabilitation and replacement projects are optimal in areas that are located at far distances from municipal sewer systems, and in communities where connecting to the municipal sewer system may be too costly for residents or not desired by landowners.</p> <p>The proposed project would include development of a septic system rehabilitation program for use by local non-governmental organizations and other interested parties. The program would articulate appropriate environmental conditions, sizing procedures, preferred retrofit/rehabilitation techniques and recommendations, and maintenance protocols for septic systems.</p>
Flood Control	<p>The 2010 IRWM Plan identified areas within the Region, particularly in the eastern Coachella Valley, that are not protected by the regional flood control system and are therefore subject to alluvial-fan flash flooding from surrounding mountain ranges. Further information from stakeholders has indicated that small, onsite flood control projects such as detention basins can be difficult to permit due to potential issues with disease vectors such as mosquitoes. Due to the large costs associated with regional flood control projects, and the potential permitting issues associated with small-scale flood control projects, there is a regional need to identify flood-prone areas and coordinate with regional regulatory agencies to determine economically and technically feasible projects that minimize or prevent property damage from occurring during flash flood events.</p>	<p>Extensive flood mapping is currently being conducted as part of the Coachella Valley IRWM Plan Update and the DAC Outreach Program. While these efforts will identify flood-prone areas, there is still a need to coordinate with regulatory agencies and stakeholders to identify projects that can mitigate flood events in an economically-efficient manner.</p> <p>The proposed project would clarify the specific location of flooding hot spots and complete concept-level engineering to resolve those flooding issues. This concept design would address the necessary sizing and retention capacity of the flood structure.</p>

1.2 Review of Project Concepts

The project concepts listed in Table 1 were presented to stakeholders during several meetings and outreach efforts conducted in May and June of 2013. Information received through those outreach efforts was used to gather input on the proposed project concepts, and potentially refine those concepts to create refined concepts that will be considered by the CVRWGM for additional funding through the Coachella Valley DAC Outreach Program.

The refined project concepts described in the following table result from data collected through the DAC Outreach Program. The data sources include:

1. Data from the DAC outreach characterization and mapping survey questionnaire administered from May through June 2013;
2. Data from the forms distributed at the two DAC community workshops on June 18 and June 20, 2013;
3. Results from the community mapping exercise administered at the DAC workshops on June 18 and June 20, 2013;
4. Personal reports from conversations and interviews with community members, CVRWGM members, and other individuals, and
5. Weekly conference calls with DAC non-profits agencies and other project processes.

In addition to input received from the aforementioned outreach efforts, the refined project concepts included in Table 2 were screened through a series of selection criteria. These criteria are a combination of both the project prioritization and evaluation process identified in the 2010 Coachella Valley IRWM Plan and the preliminary project selection criteria include in the DAC Outreach Program Work Plan submitted to DWR in April of 2012. Those criteria include:

- Does the project concept address an identified DAC issue?
 - Determined based upon whether or not the project fits into one of the project concepts identified in Table 1.
- Does the project concept have support at the community level?
 - Determined based upon input received from stakeholders either during the survey process or DAC outreach workshops.
- Does the project concept have a potential implementing organization that could move the project forward through implementation in the future?
- Does the project concept address a critical water quality or water supply issue in an identified disadvantaged community?
- Is the project concept consistent with the 2010 IRWM Plan Objectives?
- Could the project concept outcomes potentially be leveraged for additional funding?
- Is the resulting project cost-effective?

Table 2: Refined Project Concepts

Project Name/Location and Sponsor(s)	Data Source	Project Description	Resources Needed (Engineering or Planning Work)	Additional Notes
<p><u>1. Drinking Water and Wastewater</u></p> <p>Educational Materials for Permitted Water and Wastewater Systems</p>	<p>Surveys, workshops, Interviews</p>	<p>Create bilingual educational materials for DACs that are located within permitted housing areas that are experiencing substantial water quality or wastewater issues. The purpose of this project would be to provide resources to residents so that they work to resolve issues that can be addressed by local agencies.</p> <p>Step 1: Create a comprehensive informational document that explains: 1) relevant code regulations regarding water and wastewater systems, 2) who to contact if a housing area is out of code, and 3) residents' rights pertaining to payment responsibilities to upgrade systems.</p> <p>Step 2: Create a comprehensive informational document that explains the Valley's water and wastewater systems.</p> <p>Step 3: Translate informational document into Spanish.</p> <p>Step 4: Disperse materials to local organizations with information about outreach to local communities.</p> <p>Step 5: Coordinate with local organizations to input information into the existing system to report problems/code enforcement http://ivan-coachella.org/</p>	<p>Water planning, graphic artist, outreach coordination with local entities</p>	<ul style="list-style-type: none"> • This project would help to address the primary issues identified in the West Valley pertaining to unmaintained/improperly cared for water and wastewater systems. • The outreach information compiled as part of this project would need to be periodically updated to reflect changes to municipality service areas and contact information changes. • CVRWMG agencies have expressed potential concern with the advocacy nature of this project. Need to determine who would be appropriate to implement this project, and if it is appropriate to fund this work through the DAC Outreach Program. • Need to discuss if water quality testing should be included in this project.

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<p>2. Drinking Water and Wastewater Mapping study to identify potential connections</p>	<p>Surveys, workshops, Interviews</p>	<p>Conduct study to identify clusters of DACs that are not connected to municipal water or wastewater services, but are within proximity to existing infrastructure. This analysis would potentially consider future development that may increase the cost-effectiveness of connecting to the municipal system.</p> <p>Step 1: Use information regarding population and housing units gathered from the survey in conjunction with existing mapping data to create a comprehensive map that shows 1) DACs in the Coachella Valley that are not served by municipal water or wastewater services 2) existing and planned water and wastewater infrastructure.</p> <p>Step 2: Conduct further research to determine specific connection distances and populations that would be served by connecting nearby communities to the municipal system. Use this information to develop \$/EDU or \$/AFY projections for each potential connection.</p> <p>Step 3: Work with relevant local agencies to present the information and inform agencies about funding options available for connecting residents to the municipal system.</p>	<p>Water planning, GIS mapping, outreach coordination with local entities</p>	<ul style="list-style-type: none"> Process could potentially consider other factors regarding connection potential, including but not limited to: owner's willingness to connect, capacity available to support additional connections, resident outreach and education to discuss the willingness to pay fees for municipal services, etc.

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<p>3. Drinking Water and Wastewater</p> <p>Pilot Project - Polanco parks in the Eastern Coachella Valley</p>	<p>Interviews, surveys, non-profit partners</p>	<p>Conduct planning and preliminary engineering work for a single Polanco Park for septic system rehabilitation and installation of an onsite water treatment system. The purpose of this project would be to provide materials necessary to move forward with implementation of a comprehensive water resources management project that addresses water quality and wastewater issues and provides education and training to a Polanco park to address onsite water and wastewater issues. Given the amount of Polanco parks in the Coachella Valley, the planning and engineering reports could potentially be applied to other sites. Additionally, work products created from this project could potentially be used as the basis to leverage additional funding (USDA, CDPH, etc.)</p> <p>Step 1: Work with the NGOs to determine a representative Polanco park site - a site with average conditions that could be considered representative of other parks in the East Valley.</p> <p>Step 2: Prepare planning documents and preliminary engineering reports for the representative site. Documents would determine: 1) how to rehabilitate existing onsite septic systems to achieve code compliance (include analysis of non-traditional septic systems) and 2) what onsite water treatment systems (make, model, type, capacity, etc.) could be installed to address drinking water quality concerns. Given the goal of replicating this design throughout other Polanco parks, design and engineering</p>	<ul style="list-style-type: none"> • Water planning and outreach for representative site selection • Complete geological reports (soils/percolation test and will design of the capacity of a septic system with approval of the geological engineer) • Prepare draft work plan, budget, schedule, system schematics, compliance documents (Riverside County Environmental Health Dept) that could be utilized by any Polanco park • Identify potential funding sources to complete project • Coordinate with San Jose Learning Ctr. and PUCDC CODESA training program regarding education on how to successfully operate and maintain systems 	<ul style="list-style-type: none"> • Create bilingual educational materials for DACs that are located within permitted housing areas that are experiencing substantial water quality or wastewater issues. • The purpose of this project would be to provide resources to residents so that they work to resolve issues that can be addressed by local agencies.

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		<p>documents would not only be site specific, but would also indicate potential rehabilitation and treatment options for a range of onsite conditions.</p> <p>Step 3: Prepare operations and maintenance information in the form of a manual or memo that discusses actions that would need to be taken on a regular basis to operate and maintain functioning water and wastewater systems.</p> <p>Step 4: Translate study results into education/outreach and training materials that will be administered at the Polanco park to inform residents and owners about BMPs and O&M requirements for operating and maintaining the proposed systems.</p>		