APPENDIX 4.6

Project Proposal for Santa Teresa Village

Prepared by Nilsen and Associates

October 2017

Project Proposal: Santa Teresa

Salinas Valley Disadvantaged Community
Drinking Water and Wastewater Planning Project

Introduction

Santa Teresa Village is a ten-unit, older residential development near the City of Soledad in southern Monterey County. A median household income (MHI) survey conducted in 2015 established that residents' incomes were within the disadvantaged community definition of 80 percent of statewide household median income. The Santa Teresa property is served by a domestic well and an on-site septic system. Water quality deficiencies include consistent excess nitrate concentrations and periodic detection of coliform in water supply samples. The septic system is aging and at risk of drain field failure according to Monterey County Environmental Health Bureau staff.

The Community Engineering Corps (CECorps) selected Santa Teresa as a participating project for evaluation by a team from CSU-Ohio and its Supervising Engineer. A Design Report was submitted to the Environmental Justice Coalition for Water (EJCW) on November 14, 2016 and was reviewed by the Salinas Valley Disadvantaged Community Drinking Water and Wastewater Planning Project Team (Project Team) and Technical Advisory Committee (TAC). The CECorps Report has been submitted as a deliverable for this grant.

The Project Proposal was updated in October 2017 to incorporate additional information regarding the project since the initial report was completed in March 2017. Costs were reviewed by an engineering consultant in order to establish a consistent framework for all high priority Salinas Valley Disadvantaged Community Planning projects. Updated information is summarized within the CECorps sections of this proposal. As described further in the description of the UCLA Pilot Project section of this proposal, cost information for the potential drinking water treatment solution for the community will be unavailable until 1-2 years after the conclusion of the Salinas Valley Disadvantaged Community Planning process and thus, is not included in this update.

Project: Santa Teresa Village Water and Wastewater Systems

Physical address:
32300 San Vicente Rd. Soledad CA 93960

General geographic location:
Unincorporated southern Monterey County, northeast of Soledad

System name and number, type:
Water: San Vicente #1;
WS ID 2700774
State small water system
Wastewater: On-site septic system

Other: APN: 257-081-023;
GIS: 36.668419, 121.314551
Zoning Designation: F/40
Planning Area: Central Salinas Valley
Fire District: Mission Soledad Rural Fire Protection District

1. Project Summary

Ownership:
Privately owned

Owner:
Roque Martinez P.O. Box 1309 Gonzales CA 93960

Services:
Water and wastewater

Connections:
Ten residential connections; nine occupied units and one vacant unit

Known violations or restrictions:
A bottled water notice from the Monterey County Environmental Health Bureau has been in place since 2008 for excess nitrate and beginning in 2006 the presence of coliform has been detected periodically. Units are posted with Do Not Drink Water notices.

2. Project Background

Santa Teresa Village is a ten-unit residential development that was identified as a high priority project by the Project Team and the TAC due to water quality concerns. The primary water quality issue is nitrate contamination. Routine water quality monitoring samples have also tested positive for coliform bacteria. Please refer to the CECorps Report dated November 14, 2016 (page 8, Table 2: Historical Data) for selected laboratory sampling results.

Santa Teresa is located in an unincorporated area of southern Monterey County with surrounding agricultural land uses consisting primarily of row crops. San Vicente Road, a Monterey County owned and maintained roadway, borders the southern lot line. An agricultural field on the south side of San Vicente Road has the potential for future subdivision development and annexation to Soledad. The domestic well is located to the north of the parcel on an adjacent agricultural property. A recorded easement encompasses the well and related appurtenances and the transmission pipeline.

California Rural Legal Assistance (CRLA) conducted a MHI survey in 2014 documenting the disadvantaged community status of Santa Teresa Village which has an MHI of $40,000. State Water Resources Control Board (SWRCB) staff approved the MHI survey in 2016. EJCW conducted a water and wastewater needs assessment in 2015, identifying water and wastewater concerns of residents in 7 of the 9 occupied homes. All residents rated their tap water as being of “poor quality” and reported using bottled water for drinking and cooking.

Monterey County Environmental Health Bureau staff has been consulted regarding the approximate age of the septic system and known problems with system performance. According to the County, there are significant constraints to drain field expansion because of setback requirements from the property line and existing structures and septic system components in place.

Well production issues in the immediate area could potentially impact development of a new well. The property owner has expressed concerns regarding dwindling well production and the potential for drought-related water shortages. Neighboring farms have imported water from the City of Soledad for agricultural uses due to declining well production. The Director of Public Works stated that most City of Soledad water use by agricultural interests is for produce wash water and agricultural well-produced water is limited to irrigation.

Bottled water deliveries at Santa Teresa began in 2016 under the SWRCB Emergency Drinking Water Program. Bottled water delivery coordination and responsibility has been transferred to the Coalition for Urban/Rural Environmental Stewardship (CURES), a project funded by Monterey County agricultural interests as part of a Settlement Agreement with the State Water Resources Control Board’s Office of Enforcement and the Central Coast Regional Water Resources Quality Control Board (CCRWQCB).

Supplemental water was delivered to the on-site storage tank by a private trucking service intermittently from 2015-2017 to augment water capacity. Soledad’s Director of Public Works verified that a metered water supply connection is located at the eastern city boundary at San Vicente Road. Potable water is available for bulk purchase and delivery by a private water tanker through an arrangement with the City of Soledad. City-owned wells are continuing to produce at more than adequate levels.

The owner has executed an Agreement to install a treatment system to reduce excess nitrate in conjunction with a University of California, Los Angeles (UCLA) pilot project funded by a four-year grant from the SWRCB. The system combines a reverse osmosis nitrate removal treatment unit with remote data monitoring, tracking and control. In addition to providing safe drinking water to selected communities, the UCLA pilot is intended to test costs of remote monitoring and control and determine whether the need for on-site operations and management can be reduced for small rural communities with nitrate contaminated drinking water. The economies of scale in utilizing a single operator to monitor multiple sites will be calculated. A monitoring plan for discharge of brine waste products was recently approved by the CCRWQCB. The Monterey County Environmental Health Bureau will review the monitoring plan and the specifications of the equipment to be installed prior to a determination regarding the proposed amendment of the permit for the drinking water system. Preliminary capital cost estimates are expected to be available in 2018. Operations and maintenance costs will be available the following year.

This project was included in a proposed Disadvantaged Community Water and Wastewater Improvement Program selected by the Greater Monterey County Regional Water Management Group to apply for the 2014 round of Integrated Regional Water Management (IRWM) Implementation funding. San Jerardo Cooperative, Inc. the lead proponent was unable to proceed in the lead capacity and therefore, work on the application was tabled in an early stage. No applications for funding are in progress.

3. CECorps Recommendations and Consulting Engineer's Memorandum

CECorps Design Report

The CECorps team considered the feasibility of four alternatives to address water quality concerns and completed cost estimates for each. The preferred alternative is to consolidate with the City of Soledad's water system. The selection was based on likelihood of success, feasibility and cost. The team did not evaluate wastewater system options.

Alternatives are briefly summarized below; the CECorps report and coversheet references are cited by page number. See Appendix 4.7 for the Santa Teresa CECorps report and coversheet.

<u>Alternative 1: Consolidation with Soledad water service</u>

The preferred alternative would connect Santa Teresa Village to the City of Soledad's water system with a pipeline running approximately one eighth of a mile (0.8) and include upgrades to the existing internal distribution lines, new meters and fire hydrants on the property.

Reference: CECorps Report pages 11-13

Alternative 2: Replacement well
A replacement well would be installed at a new, undetermined location at a probable depth of 600-800 feet. Purchase of an easement for a new well may be required.

Reference: CECorps Report pages 13-15

Alternative 3: Wellhead Treatment
Three alternative wellhead treatment options were evaluated. This option was not recommended by the CECorps because of significant but unspecified operating, maintenance, and waste disposal costs as well as the potential requirement for a certified operator.

As noted above in Section 2, Project Background, a pilot wellhead treatment project will be installed and operated by UCLA under a grant from the SWRCB at Santa Teresa. The installation of the pilot treatment system requires approval of an amendment to the current water system permit by the Environmental Health Bureau (EHB) of the Monterey County Health Department. Installation cost information is expected to be available by the end of 2017. Operation, maintenance, and waste disposal costs are estimated to be available in 2018 for the ongoing pilot project. The CECorps team did not consider the UCLA project as an alternative or evaluate its feasibility.

Reference: CECorps Report pages 15-18

Alternative 4: Water Importation
Under this alternative, water would be transported by truck from the City of Soledad distribution outlet to new water storage tanks on the Santa Teresa Village site.

Reference: CECorps Report pages 18-19

Consulting Engineer's Memoranda
In response to a recommendation from the TAC to develop a consistent methodology to determine and then present water demand and cost calculations for each system, the Project Team worked with Consulting Engineer Peter Waugh to develop a draft format for the projects. The Consulting Engineer contacted a number of local contract water system operators, TAC committee members and others to address the TAC recommendation and reviewed data available from water purveyors regarding water usage. Appendix 4.14: Engineer's Memorandum includes: 1) Estimating Water Demand, 2) Estimating Operator Costs, 3) Summary Operations and Maintenance Costs. The latter two review costs for an ion exchange system with chlorine based disinfection as associated with nitrate removal for state and local small systems.

Reference: Appendix 4.14: Engineer's Memoranda

4. Cost Estimates from CECorps Design Report with Project Team Updates

Alternative 1: Consolidation with Soledad and the preferred alternative has the highest estimated cost of $1,740,314.
Refer to Table 3 of the CECorps Report, page 13.

Alternative 2: New Well estimate $370,720
Annual Operations and Maintenance $24,000
Refer to CECorps Report page 15 for detail

Alternative 3a: Wellhead Treatment estimate $39,947
Annual Operations and Maintenance $22,800
Refer to Appendix 4.7 Santa Teresa Design Report coversheet for detail
Note: UCLA Pilot Project cost data will become available late in 2018 for installation and in 2019 for O&M.

Alternative 4: Water Importation estimate $5,040
Annual Operations and Maintenance unknown
Refer to CECorps Report

Engineer's Estimate for Operations-Treatment
The Engineer's Operations estimate under a standard nitrate treatment with haul away brine disposal was calculated at $22,800 annually for Santa Teresa, including $10,800 per year to haul and dispose of waste and $12,000 for a contract treatment operator. The cost per household would be approximately $190 per month and would not include capital or financing expenses nor operating and replacement reserves. The estimate does not include a comparison with the UCLA Pilot Project as information is not currently available for the UCLA treatment system.

Refer to Appendix 4.14 Engineer's Memorandum and Appendix 4.7 Santa Teresa Design Report coversheet for detail.

5. Community Involvement

Approval of Alternative
The property owner's preference is to consolidate with the City of Soledad's water and wastewater services at the conclusion of the UCLA Pilot Project. EJCW conducted door-to-door outreach to all residents in October 2015 with five households responding. Residents in two households expressed a preference to connect to the City of Soledad's water system,

residents in two other households did not express a preference for a long-term solution, and a resident in one household suggested "monitoring farmers" as a long-term solution to ensure better water quality.

The owner has executed an Agreement to install a treatment system to remove excess nitrate in conjunction with the UCLA pilot program. The treatment system is expected to be installed in late 2017 or 2018 subject to approval of an amendment of the Drinking Water System Permit by the Monterey County EHB. The project costs will be reported to the SWRCB in 2018 (installation and equipment costs) and 2018/2019 (remote operating and maintenance expenses).

Willingness to Proceed

The property owner does not want to take any action that would jeopardize the arrangements with UCLA for the pilot treatment system or violate the terms of the signed agreement. The SWRCB has requested that applications for funding and/or permitting for other long-term options be put on hold while costs are determined for the UCLA pilot project.

The City of Soledad is willing to proceed with an application to LAFCO for a service extension upon request. A conditional "Can and Will Serve" letter from Soledad, valid through July 20, 2017, has expired. In the event that consolidation is determined to be the preferred alternative at the conclusion of the UCLA Pilot Project, it will be necessary to confirm the City's willingness to pursue a request for LAFCO approval and obtain a new "Can and Will Serve" letter. The City has been willing to consider annexation of the property should a nearby property owner proceed with annexation plans and permitting for a residential subdivision. It is likely that an annexation plan would not be entertained by the City of Soledad until the UCLA Pilot Project has been completed and results have been analyzed due to the projected timeframe for the phasing of the subdivision currently under discussion.

Financial Participation

In early conversations with CRLA staff and during the IRWM application preparation, the property owner stated he was unable to contribute to the cost of consolidation with the City of Soledad. It is unclear whether any financial contribution would be available from the owner for another alternative. The owner's ability and willingness to apply for conventional or below-market rate financing will need to be explored further. Note: the UCLA Pilot system installation does not require an owner contribution.

Tenants are charged for water services currently. Future charges would depend upon the alternative selected. Depending on the alternative selected and the amount and type of funding requested, a rate study may be necessary.

City of Soledad is unable to fund the project as it is located outside of the current City limits boundary. However, the City may be able to assist with the development of replacement water and wastewater infrastructure through facilitation of funding applications and the Local Agency Formation process, acting as the project sponsor or fiscal agent and performing construction management services. With the exception of the application to LAFCO for an extra territorial service agreement, there would be an expectation of cost recovery for City staff time and other expenses as eligible project management budget categories.

The residents would be charged the City's water and wastewater service rates in effect at the time of connection if the consolidation alternative were approved.

6. Capacity

The owner has managed the existing water and wastewater systems since the property was purchased in 1989. However, he has not been certified as a water or wastewater system operator and the question of intent to pursue such certification has not been explored. San Vicente Water System #1 is a state small water system, which does not require the services of a state certified operator.

The City of Soledad has experience managing a large public water system and wastewater treatment facility. The LAFCO Municipal Service Area Report notes additional capacity for wastewater treatment. Total water supply capacity, through a combination of drinking water production wells and water recycling, is sufficient for a consolidation with Santa Teresa. The City of Soledad's Water Quality Control Division has experienced, certified water and wastewater operators and management staff.

7. TAC Recommendation

The Technical Advisory Committee reviewed and approved the recommendation to designate Santa Teresa Village as a high priority community. In December 2016, the CECorps Report was forwarded to TAC members for review. TAC members requested that a consistent format be developed for purposes of determining costs and operating expenses for alternatives evaluated by the CECorps teams. The Project Team and a consulting engineer developed a framework along these lines for Santa Teresa and others. A TAC member representing the SWRCB requested that applications for funding and/or permitting for other long-term options be put on hold while costs are determined for the UCLA pilot project.

8. Institutional Barriers

Local Agency Formation Commission (LAFCO)

There have been a series of discussions with LAFCO staff regarding the procedures for several alternatives that would allow consolidation with Soledad services: annexation, extension of the sphere of influence and an extraterritorial agreement. On December 22, 2016, LAFCO analyst Darren McBain confirmed that processing a request from Soledad for a sphere of influence or annexation request would likely take one to two years, depending on the need for environmental review.

There have been conversations with a developer and the City of Soledad regarding the proposed Miravalle III subdivision, which would be in close proximity to Santa Teresa Village although no application has been submitted to date. Therefore, any development that would potentially benefit Santa Teresa could take from two to five years for annexation, permitting and construction according to LAFCO staff. Soledad staff estimates full build out of the subdivision could take up to 20 years. An alternate route for water and sewer service extension has been discussed with the developer. If the alternate route is chosen, the subdivision plan and timing would not have any effect on a proposed connection for Santa Teresa nor would cost savings materialize from a delay in consolidation planning and construction.

Sponsorship

The City of Soledad is willing to act as the applicant to LAFCO for approval of an Out of Service Area Agreement. The Director of Public Works, Don Wilcox, has indicated that staff would consider sponsoring an application for funding subject to review and approval of the terms by the City Council.

Monterey County Environmental Health Bureau (EHB)

EHB staff has expressed interest in seeing the project configured as a consolidation with City of Soledad water and wastewater services. An amendment to the current drinking water system permit would need to be approved by EHB staff prior to installation of the UCLA Pilot Project treatment system. The review would include equipment specifications and testing and the CCRWQCB approved monitoring plan. EHB will inspect during installation and monitor water test results during the pilot project. In general, the County prefers to have a plan in place for a permanent safe drinking water solution for the community following the UCLA Pilot. However, County EHB staff is proceeding with the development of recommendations for temporary Point of Entry and Point of Use (POE/POU) treatment when a cost-effective permanent plan to address water quality issues is infeasible. Santa Teresa may qualify under this category depending upon the criteria established by the County. The schedule for the County to adopt a new ordinance authorizing temporary drinking water treatment is currently under discussion at the staff level.

For all alternatives, the EHB would need to review and approve any well drilling or well abandonment permit requests as well as any changes to the existing County water or wastewater system permitting.

County Resource Management Agency (RMA)-Planning Department and Public Works
The County of Monterey would act as lead agency for CEQA determinations for Santa Teresa Village due to its location in the unincorporated area of the County. EHB staff has been supportive of an early determination of categorical exemption based on Public Health and could, potentially, take responsibility for preparing the necessary environmental determination documents. Planning Department staff would be responsible for circulating documents, notifying the State Clearinghouse and working with the Recorders Office to record the Notice of Determination.

An application to Public Works for an Encroachment Permit would be necessary to install the new connecting pipeline and other improvements in the San Vicente Road Right of Way to facilitate the consolidation. According to Public Works engineering staff, a complete set of plans with proposed trenching details would be needed. The "Can and Will Serve" letter, now expired, from the City of Soledad specifies that right-of-way easements must be approved prior to installation of a service line extension.

The Planning and Building Departments would need to review and approve any grading, water efficiency improvements, electrical, plumbing and structural modifications or new construction permit requests. Sign-offs from other County departments are coordinated by the RMA.

City of Soledad
There are several potential barriers to consolidation of the Santa Teresa Village and Soledad systems that would need to be resolved: obtaining staff recommendations for City Council approval of an application to LAFCO for an Out of Service Area Agreement and applications for any proposed project financing, identification of City costs associated with grants and construction management and further review of City policies regarding service extensions to ensure conformance with the terms of project financing.

Mission-Soledad Fire District
Fire protection services for Santa Teresa are provided by the Mission-Soledad Fire Protection District. The District contracts with a firm for fire safety inspections, plan examination and fire plan processing services. Early consultation between the plans examiner, the City of Soledad, and the engineer selected for the project will be necessary to resolve issues around water storage, adequacy of existing fire hydrants and the proposed diameter of transmission lines to resolve any confusion or inconsistencies that have occurred. The City's "Can and Will Serve" letter specified that a letter from the Fire District stating fire protection requirements must be supplied as a condition of approval.

9. Other Barriers

Language / Cultural
The property owner and some residents have limited English language skills and are primarily Spanish language speakers. Outreach and needs assessment efforts to date have been conducted by bi-lingual staff initially with CRLA and more recently with EJCW. Consumer health advisories relating to drinking water are provided in English and Spanish.

Technical, Managerial, and Financial (TMF) Issues
To date, the water and wastewater systems at Santa Teresa have been operated and maintained by the property owner. Water treatment has been limited to application of chlorine when the County Environmental Health Bureau issues a non-compliance letter. The County does not require a certified water or wastewater operator under the current permit. With consolidation, the City of Soledad would assume responsibility for maintenance and operations to the meter. Consolidation would offer the best potential to meet TMF of the alternatives considered. It is assumed that a Prop 1 TA request would need to be submitted to assist with TMF for alternatives to consolidation.

A water storage tank was installed and water has been trucked in as needed to ensure temporary potable water supply. However, it is likely that any upgrade to the water system other than consolidation would necessitate a larger storage tank for fire flows, blending or to store treated water.

Other: Not applicable

10. Potential Funding Sources

The Santa Teresa project would be considered potentially eligible as a consolidation under State Revolving Fund/Proposition 1 Guidelines as it meets the disadvantaged community criteria, would result in safe drinking water and potentially resolve incipient wastewater system deficiencies. The project would be assigned to Category A-Immediate Health Risk for nitrate in excess of MCL and Categories C and D for coliform/disinfection reliability issues. Additionally, the project would meet the two other factors for priority over other projects in the same category: disadvantaged community status and resulting in consolidation or extension of service to a disadvantaged community not served by a public water system. The cost per connection may be a consideration for potential funding. Santa Teresa does not meet the requirement to qualify as a Public Water System as specified under current SRF/ Prop1 Intended Use Plan guidelines. The Project Team will consider potential recommendations around this subject as it may be a barrier for many small disadvantaged communities.

As noted, the Greater Monterey County Regional Water Management Group selected this project to advance for an IRWM Implementation grant application in a prior funding round. It is currently included in the IRWM plan as a disadvantaged community project that meets water supply and water quality objectives. However, the Regional Water Management Group is in the process of updating the IRWM Plan and is soliciting project proposals. In order to remain in the Plan update, existing projects must reapply. There will be a competitive process for determining projects to include in each IRWM application cycle and a project proposal for Santa Teresa would be ranked against other proposals using the rating and ranking criteria established for the next IRWM grant and any adopted changes in local priorities. As Santa Teresa is under private ownership, an agency sponsor and program proponent would be needed in order for it to qualify for an IRWM application. Prop 1 IRWM Disadvantaged Community Involvement funds may be available to assist in project development and an application for Disadvantaged Community Implementation funds in a future round of funding.

11. Project Team Recommendations

The Project Team considered Santa Teresa to be a high priority project and selected it for referral to the CECorps for an engineering evaluation. The Project Team recommends moving this project to inactive status as no immediate action is needed. The UCLA Pilot Treatment Project is expected to be in place in 2018 to address water quality issues, and there is not an urgent need to replace the wastewater system.

12. Action Plan

As described previously, the SWRCB has requested that this project be put temporarily on hold pending the results of the UCLA pilot project. See below.

Engineering - On hold

LAFCO - On hold

Consolidation - On hold

Permitting - On hold

Referral to Potential Partners - On hold

Other - Review for IRWM Disadvantaged Community Involvement grant funds

13. Schedule:

Review UCLA Pilot Project installation costs	Dec 2018
Review O&M costs for UCLA Pilot Project when available	Dec 2018
Property owner, project team and SWRCB decision re: long-term drinking water solution and FAAST application submission	Dec 2019
End of UCLA pilot project, transition to owner management and/or alternative long-term solution	Dec 2019

14. Budget

The UCLA pilot project will identify upfront and long-term costs associated with their wellhead treatment and remote monitoring system.

The estimated budget for the preferred alternative of consolidation with Soledad is $1,740,314 based on CECorps estimates (See Table 3 of the CECorps Report, page 13). Consolidation cost estimates will depend upon a number of factors that have not been fully defined at this time. At such time as the project becomes active and a long-term solution is chosen by the owner and the community the budget projection will be refined.