

Project Proposal: Johnson Road

**Salinas Valley Disadvantaged Community
Drinking Water and Wastewater Planning Project**

Introduction

The Johnson Road project area is in rural northern Monterey County east of Highway 1 and consists of approximately 85 homes, mainly along Johnson Road, McGinnis Road, and lower Live Oak Road. There are an estimated 50 privately owned domestic wells in the immediate area. There are six local small water systems within the project area under the regulatory authority of the County of Monterey, Environmental Health Bureau (EHB). Reported water quality deficiencies include consistent nitrate concentrations over the maximum contaminant level (MCL) in several of the small systems and private domestic wells, trending upward recently. Hexavalent chromium (chromium-6) has been detected in at least three small systems. The area is approximately one mile from a Las Lomas drinking water system which is owned and operated by Cal Water, a California Public Utility Commission (CPUC) regulated utility. All of the residences have on-site septic systems.

The Community Engineering Corps (CECorps) selected the Johnson Road project as a participating project for evaluation by the Kansas City Professional Chapter of Engineers Without Borders with Kevin Koines as the Project Lead. A Design Report was submitted to the Environmental Justice Coalition for Water (EJCW) in September, 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.

This Project Proposal update on October 13, 2017 incorporates additional comments from the Project Team and TAC as well as the outcome of consultations with property owners, Cal Water, Monterey County and other interested parties. The proposed solution for the community, preliminary scope of work, and schedule have been updated.

The consensus from community partners to date and the CECorps recommendation supports a plan to consolidate with Cal Water as the preferred alternative for a new potable water supply. However, community engagement and outreach work is continuing and the determination is subject to change. Cal Water is supportive of this project and interested in participating. However, it should be noted that Cal Water has not committed to apply for funding towards the cost of improvements to connect this area to the Las Lomas system at this time. Therefore, other possibilities for project sponsorship need to be explored.

Project: Johnson Road Water Project

Physical addresses:

Located on Johnson, McGinnis, and lower Live Oak Roads in Monterey County
Note: addresses are listed in Watsonville zip code 95076

General geographic location:

Unincorporated North Monterey County near Las Lomas, east of Highway 1, west of San Miguel Canyon Road and south of Hall Rd.

Water System Types: Local small water systems and individual domestic wells

Water System Identification Numbers:

JOHNSON RD WS #01	2700573
JOHNSON RD WS #03	2700231
MCGINNIS RD WS #01	2701653
LIVE OAK RD WS #02	2700632
LIVE OAK RD WS #07	2701493
LIVE OAK RD WS #15	2701606

Wastewater: On-site septic systems

Other:

APN: Multiple parcels
Zoning Designation: Coastal zone, generally Low Density Rural Residential some parcels Limited Agriculture
Planning Area: North Monterey County,
North Monterey County Coastal Land Use Plan
Fire District: North County Fire Protection District

1. Project Summary

Ownership:

Privately owned, individual water systems and property owners with domestic wells

Services:

Water and wastewater (on-site septic systems)

Connections:

Approximately 85 residential connections, 6 local small systems and 50 wells serving the community.

Known violations or restrictions:

Records available through the Monterey County EHB show several local small systems in the project area have reported nitrate contaminations above the MCL. The concentration is now at three times the MCL at one well. In addition, 31 houses in the area that rely on private domestic wells with nitrate above the MCL are currently receiving interim bottled water from a grant from the State Water Resources Control Board (SWRCB) Emergency Drinking Water Program while a long-term solution to the water contamination problem is being developed. Sampling in June 2016 at McGinnis Road Water System #01, Live Oak Road Water Systems #02 and #15 produced results greater than 10 ug/L for chromium-6, the latter at nearly double the MCL. Total dissolved solids (TDS) concentrations were over the secondary limit in one of two samples tested as part of the CECorps study.

2. Project Background

The Johnson Road Project Area was selected 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. Recent water quality monitoring samples have also tested for positive for chromium-6 with at least three systems reporting over the MCL. Please refer to the CECorps Report dated September 2016 for selected water quality testing data.

The Johnson Road Project Area is a rural, low-density residential neighborhood located in the North County Coastal Planning Area of Monterey County. Adjoining land uses consist of scattered agricultural fields, greenhouses and larger rural residential parcels on upper Live Oak Road. Johnson, McGinnis and Live Oak Roads are Monterey County maintained public roads within the project area. The community boundary for the project has not been clearly defined. It will depend on the outcome of outreach and engagement efforts and the property owners' level of interest.

EJCW conducted a water and wastewater needs assessment in 2015, identifying water and wastewater concerns in suspected disadvantaged communities. Eleven households in the Johnson Road neighborhood completed the water and wastewater assessment. All reported using bottled water for drinking and for cooking. Seven households reported poor quality tap water, four reported moderate quality tap water, and one preferred not to answer.

The Johnson Road area qualifies as a disadvantaged community per Proposition 1 Economically Distressed Area criteria. The 31 households currently receiving bottled water met the income (disadvantaged community criteria) limits of the SWRCB Emergency Drinking Water Program. EJCW is developing a work plan for Prop 1 Technical Assistance funding to conduct an MHI survey for this community.

Monterey County Public Works and Monterey One Water, formerly known as Monterey Regional Water Pollution Control Agency (MRWPCA), a joint powers wastewater treatment

provider, are planning a feasibility study for expansion of the service area for Monterey One Water. The Johnson Road neighborhood is not listed as a priority focus for the study. However, discussions with Monterey One Water and the County about other North County wastewater treatment needs may lead to a broader, long term expansion strategy.

EJCW is developing a work plan for Prop 1 Technical Assistance to continue community engagement work including conducting an MHI survey. If the work plan is approved, EJCW will facilitate conversations with Cal Water regarding consolidation and work with community members on other options should consolidation prove infeasible. No other applications for funding for this project are currently in progress. As mentioned previously, Cal Water has not committed at this time to sponsor a funding application to connect this area to the Las Lomas system.

3. CECorps Recommendations

The CECorps team considered the feasibility of several alternatives to address water quality concerns and completed cost estimates for each. The preferred alternatives are to consolidate with the Cal Water Las Lomas water system or to develop a Community Treatment Facility and construct two new wells. The selections were based on likelihood of success, feasibility, and cost of development and/or annual operations and management. Two alternatives were determined to be unacceptable as long-term solutions: Divided Treatment Facilities and Point of Entry Treatment, the first due to permitting issues; the second due to the difficulty of ensuring adequate maintenance by individual well owners.

The recommended alternatives are briefly summarized and CECorps report references are cited by page number.

Alternative 1: Consolidation with Cal Water Las Lomas Water System

Consolidation is the preferred alternative. It would connect the Johnson Road project area to the Las Lomas Water System by a pipeline on the south side of Hall Road running approximately 1.5 miles west of Johnson Road. The proposed scope of work would include construction of a 12" water main, installation of service lines, fire hydrants, individual meters and appurtenances. Connecting 4-5 homes on the southern-most portion of Johnson Road, which are located at a higher elevation, would require installation of a booster pump station and backup generator, adding to the cost of this option.

Reference: CECorps Report pages 12-15

Alternative 2: Community Treatment Facility and New Wells

Under Alternative 2, a community treatment facility would be constructed in conjunction with the installation of two new wells. Proposed treatment would consist

of an ion exchange system to remove nitrate and chromium-6 from produced groundwater. The new well locations would depend on the availability of property and suitability based on currently available data. The probable depth for the wells would be approximately 600 feet with a sanitary seal to a depth of 400 feet. In addition to the two installed wells, related pumps, treatment and monitoring systems, new distribution mains, a ground storage tank and backup generator would be included. The proposed configuration would create a parallel fire flow system as described in detail in the CECorps report.

Reference: CECorps Report pages 15- 17

Other Options – Not Recommended

The CECorps team evaluated two other options: Alternative 3-Divided Treatment Facilities and Alternative 4-Point of Entry Treatment.

The first option examined the feasibility of combining water service into five separate public water systems of 15 households each. Treatment would consist of an ion exchange system in conjunction with at least one existing well per system. An additional new well would be required for those where a second existing well was not available or was unsuitable. This option was not recommended and scored poorly in the CECorps team's non-economic evaluation.

Point of entry treatment, the least cost alternative, was not recommended as it was determined to be an unreliable solution over time. This alternative tied for the lowest score in the non-economic evaluation with Alternative 3.

Update (September 2017)

While POE systems are not currently approved under Monterey County ordinances, the County is reviewing new state regulations and considering guidelines for permitting. It is expected that a monitoring and maintenance plan will be required to ensure that installed POE treatment systems meet drinking water standards. Requirements will likely include scheduled water sampling, record keeping and reporting, and maintenance by an approved manager. It is difficult to assess the operation and maintenance costs for this option. This alternative should be revisited when the County's draft guidelines are available.

Reference: CECorps Report pages 17-20

4. CECorps Cost Estimates

An analysis of the CECorps team projections for capital costs and annual operations and maintenance expenses for each of the alternatives is included in Appendix E and summarized in Table 4 of the CECorps Report, page 20.

Alternative 1 - Consolidation with Cal Water for 80 houses

Capital Cost Estimate \$4,140,000

Annual Operations and Maintenance included in utility rates

Monthly Cost per household estimated at \$43 (not including surcharge, if any)

Alternative 1A - Consolidation with Cal Water for 85 houses (requires booster station)

Capital Cost Estimate \$4,850,000

Annual Operations and Maintenance included in utility rates

Monthly Cost per household estimated at \$48 (not including surcharge, if any)

Refer to CECorps Report Page 20 and Appendix E for detail

Alternative 2: Community Wells and Treatment Facility for 85 houses

Capital Cost Estimate \$5,181,000

Annual Operations and Maintenance \$238,000

Monthly estimated cost per household estimated at \$233

Refer to CECorps Report Page 20 and Appendix E for detail

5. Community Involvement

Approval of Alternative

The majority of residents and water system owners contacted to date are interested in connecting to a larger system for water service. However, not all attempted property owner contacts have been successful. EJCW plans to include additional outreach activities to Johnson and Live Oak Roads in the work plan for the Johnson Road Prop 1 Technical Assistance request.

Willingness to Proceed

The majority of residents and water system owners that EJCW has been in contact with have been supportive of ongoing efforts to engage with community members and service providers to select a preferred option. EJCW will continue a dialogue with the neighborhood leaders, property owners, and residents concerning opportunities and development constraints for system alternatives. Financing options will need particular attention as

individual parcel and water system owners have expressed that cost will determine their ability and interest in participating.

Financial Participation

It is unclear whether any financial contribution would be available from the property owners towards the cost of a potential project. The owners' ability and willingness to apply for conventional or below market rate financing will need to be explored further. USDA and other grant programs may be available to defray the cost of connecting to new services.

Further research is needed to determine whether tenants and local small water systems in the Johnson Road Project Area are charged by property or system owners for water services. Individual well owners are currently responsible for costs of operations and maintenance for the well and related equipment.

The residents would be charged the CPUC-approved water service rates in effect at the time of connection if the Cal Water consolidation alternative were selected. Cal Water has a Low Income Ratepayer Assistance program for income eligible customers. If the project does not qualify for 100% grant funding, some percentage of the development costs could be passed on to community members in the form of a surcharge to be added to individual bills.

Operations and maintenance costs, in addition to capital costs, would be expected to determine the rate structure for any other alternative. Post development rates would depend upon the cost to finance the project, reserve allocations, and operating and maintenance expenses for the option chosen. A rate study may be necessary to establish a reasonable rate to cover debt service and expenses for any alternative to the Cal Water consolidation.

The County of Monterey has not been approached about direct financial participation in this project. The County may be able to assist with the development of replacement water infrastructure through facilitation of funding applications or a subrecipient grant from its Community Development Block Grant allocation in 2018, subject to continuation of federal funding. Should the community decide to proceed with the Cal Water consolidation plan, it will be necessary to have a project sponsor or fiscal agent for the state and federal programs that offer favorable terms. The County of Monterey and Cal Water have been contacted to determine potential participation and these conversations are expected to continue.

6. Capacity

As existing local small water systems, a state certified operator is not required with the current number of connections for any of the six systems in the project area. Individual property owners are not required to document capacity to manage or maintain their wells.

For Alternative 1: Consolidation, institutional capacity is not a concern. Cal Water is a public utility regulated by the CPUC and the State. It has extensive experience managing water and wastewater systems in Monterey County and throughout the state. An assessment of the Las Lomas production and storage capacity would be required in order for the Johnson Road households to connect to the system. The system expansion plan and capacity assessment would be subject to approval. The CPUC reviews the financial stability of regulated utilities and establishes a rate structure that is adequate for operations, capital improvements, projected repair costs and emergency reserves.

Alternative 2: Community Wells and Treatment Facility would require formation of a legal entity, such as a mutual water company and development of organizational capacity. Management, monitoring, reporting and maintenance could be contracted with another entity or entities or the mutual could hire staff. Regionalization, where shared staff and expertise could benefit two or more small water or combined water and wastewater service areas should be considered for this alternative.

7. TAC Recommendation

The Technical Advisory Committee reviewed and approved the recommendation to designate the Johnson Road Project Area as a high priority community. At a December 2016 meeting, TAC members expressed support for the CECorps recommendation of a waterline extension to the Cal Water Las Lomas system. At its October 2017 meeting, the TAC reviewed the draft Salinas Valley Disadvantaged Community Water and Wastewater Plan. TAC suggestions will be addressed in the final plan to be adopted by the Greater Monterey Regional Water Management Group.

8. Institutional Barriers

Local Agency Formation Commission (LAFCO)

There are no known LAFCO barriers to the preferred alternative. Because Cal Water is a CPUC-regulated utility, LAFCO does not oversee Cal Water activities, nor would LAFCO review be necessary for consolidation of state and local small water systems, dissolution of existing small systems or formation of a new mutual water system for the Johnson Road area. LAFCO would become involved if the area were to be added to the service area of a municipal services provider such as Monterey One Water or Pajaro Sunny Mesa Community Services District.

Sponsorship

There are limited choices for sponsorship of funding applications. The County of Monterey has applied for funding as the applicant for Community Development Block Grant and SRF

funds to assist public water systems such as the San Lucas Water District, Chualar Water District before it was sold and for the Monterey County, and Boronda Sanitation District (San Jerardo). However, County staff has indicated that a similar level of support may not be available in the future. Securing an appropriate sponsor, applicant and fiscal agent is a major barrier for disadvantaged communities such as Johnson Road. Both Cal Water and Pajaro Sunny Mesa Community Service District (PSMCS) have mentioned past challenges administering State grants including delays in receiving reimbursements and the challenges in covering all costs associated with grant sponsorship. The Project Team has addressed this concern in the draft Salinas Valley Disadvantaged Community Plan under review by the TAC and Regional Water Management Group.

Monterey County Environmental Health Bureau (EHB)

The County EHB Drinking Water Program regulates the six small water systems at Johnson Road. EHB policy is to support consolidation with larger municipal and public water systems instead of encouraging new mutual water systems. As such, it is anticipated that consolidation with Cal Water would be most acceptable alternative to the County. EHB is the permitting entity for new well construction, plan review, and approval for system expansions or consolidations for systems with less than 200 connections. In addition, EHB oversees transfers of smaller systems and any well abandonments. Proposed modification or amendment of a local small system permit would also require EHB approval. If Monterey County adopts POU/POE guidelines, EHB would review applications for POU/POE treatment systems. It is expected that proposed POU/POE guidelines will be scheduled for consideration by the Monterey County Board of Supervisors in 2018.

County Resource Management Agency (RMA)-Planning Department and Public Works

The County of Monterey would typically act as lead agency for NEPA and CEQA determinations for Johnson Road due to its location in the unincorporated area of the County. However, SWRCB staff has indicated that environmental review of a Cal Water project application could be completed by SWRCB in-house. State lead agency review would not be an option under other scenarios. EHB staff has been supportive of an early determination of categorical exemption under CEQA based on Public Health and could, potentially, take responsibility for preparing or facilitating the necessary environmental determination documents if the state does not take responsibility for review for any reason. In that event, Planning Department staff would be responsible for circulating documents, notifying the State Clearinghouse and working with the Recorder's Office to record the Notice of Determination. If an application for USDA or SRF funding is considered, preparation of documentation and studies in accordance with NEPA will be incorporated in the project schedule.

RMA-Planning would be the lead agency for any proposed amendments to existing Coastal Area Permits for affected properties or systems.

An application to Public Works for an Encroachment Permit would be necessary to install the connecting pipelines and other improvements in the County's Road Rights of Way to facilitate the consolidation or for distribution pipelines. According to Public Works engineering staff, a complete set of plans with proposed trenching details would be needed. Typically, right of way easements would be in place prior to final approval of plans to install a pipeline extension and connection to services.

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

North Monterey County Fire Protection District

Fire protection services for the Johnson Road project area are provided by the North County Fire Protection District. Early consultation between the plans examiner, the EHB 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 backup power in connection with new development. Compliance with the District's specific fire protection requirements will be a condition of approval. Previous discussions with the Fire Marshall suggest that water storage and emergency backup equipment for the pumps and lift stations will be of primary concern.

9. Other Barriers

Language / Cultural

Some residents have limited English language skills and are primary Spanish language speakers. Outreach and needs assessment efforts to date have been conducted by bi-lingual staff with EJCW. Consumer health advisories relating to drinking water are provided in English and Spanish.

Technical, Managerial, and Financial (TMF) Issues

Local small water systems and individual owners at Johnson Road have operated and maintained their respective water supply wells, equipment and water distribution lines. Water treatment has been limited to application of chlorine when the County EHB issues a non-compliance letter to an individual water system owner. The County does not require a certified water or wastewater operator under current permitting for any of these systems.

With Alternative 1- Consolidation, Cal Water would assume responsibility for operating and maintaining the new system upon completion. Cal Water is regulated by the CPUC and the State. The CPUC monitors the financial health of the utility and sets rates. Compliance with California Public Health, Fire and Water Codes, other regulations and the provisions of the federal Safe Drinking Water Act are monitored through regulatory agencies at the state

level. Consolidation would offer the best potential to meet TMF of the alternatives considered.

Under Alternative 2-Community Treatment, a new entity such as a mutual water company would have to be formed and approved by the EHB and satisfy prospective funders of its fiscal resources, and managerial capabilities to operate a new treatment facility and distribution system. A capital improvement and replacement reserve plan would need to be in place and approved. Contracts with the treatment supplier and a qualified operator would need to be negotiated and ready to implement before TMF documentation would be submitted to the County EHB and funders. It would be appropriate to request Prop 1 Technical Assistance (TA) for assistance in developing a rate and reserve study and preparing TMF documents.

Other: Not applicable

10. Potential Funding Sources

The Johnson Road project would be considered potentially eligible as a consolidation under State Revolving Fund/Proposition 1 Guidelines as it will potentially meet disadvantaged community criteria, would result in safe drinking water and, for the Clean Water SRF program, potentially resolve wastewater system deficiencies for multiple septic systems. The project would be assigned to Category A-Immediate Health Risk for nitrate and chromium-6 in excess of MCL and Categories C and D for reliability and secondary notification levels for TDS. Additionally, upon verification of disadvantaged community qualification, the project would likely meet two other factors for priority over other projects in the same category: disadvantaged community status and as a project resulting in consolidation or extension of service to a disadvantaged community not served by a public water system. The cost per connection may be the primary consideration for potential funding of the consolidations plan. Other alternatives may not receive priority, depending on the system configuration and TMF.

This project is a potential candidate for Prop 1 TA funding for pre-development activities including environmental and hydrology studies, engineering, surveying and other pre-development costs. Should the community decide in favor of an option besides the preferred Alternative 1- Consolidation, then legal entity formation and TMF assistance should be pursued. Implementation funding and funding for connecting to main supply lines could be eligible for CDBG or USDA grants or loans.

The Greater Monterey County Regional Water Management Group is applying for Integrated Regional Water Management (IRWM) Disadvantaged Community Involvement Funding in conjunction with the Central Coast IRWM Region. The Greater Monterey Regional Water Management Group portion of the application includes project

development assistance for a limited number of disadvantaged community projects that are not receiving or are not eligible for Prop 1 Technical Assistance. If the application is successful, the Regional Water Management Group and Salinas Valley Disadvantaged Community Project Team will evaluate and select individual projects for participation. The Johnson Road project is not currently included in the IRWM Plan as a project that meets water supply and water quality objectives. However, the Regional Water Management Group has adopted a process for adding projects to the plan. Future IRWM project review would occur during each application cycle using the rating and ranking criteria established by the Regional Water Management Group for the next IRWM Implementation grant. As the project area is not currently owned by a qualifying agency under IRWM guidelines, an agency sponsor and program proponent would likely be needed in order for to qualify. PSMCSD or the County of Monterey would meet the sponsorship criteria.

11. Project Team Recommendations

The Project Team considered Johnson Road to be a high priority project and selected it for referral to the CECorps for an engineering evaluation. The Project Team supports the CECorps team and TAC recommendation of consolidation with Cal Water – Las Lomas. The immediate term goals are to identify a potential project sponsor and reach consensus among community members on the preferred long-term solution. This project may be a candidate for a Prop 1/SRF application once a grant sponsor is identified.

12. Action Plan

As described previously, the Project Team will engage Cal Water and County officials, potential funding organizations, and community members. EJCW will continue community engagement efforts with the goal of reaching all property owners in the Johnson Road project area as described in the Action Plan. See below.

Engineering - Drinking Water design on hold pending completion of Prop 1 TA related community engagement work. A FAAST application and/or Disadvantaged Community Involvement (DACI) funding for these costs may be indicated after establishing a community boundary and the community selecting a solution.

LAFCO - No action required at present

Consolidation - Maintain contact with Cal Water

Permitting - On hold

Referral to Potential Partners - Continue discussions with Cal Water, County, the Regional Water Management Group and Monterey One Water to determine financial and managerial participation and project prioritization.

Other:

EJCW will continue a dialogue with the property owners, Cal Water, and others regarding water system options upon approval of Prop 1 TA funding. Based on the outcome of discussions, the project will be considered for a potential Prop 1/SRF application, and/or DACI. Should the majority of community members in one area of the community decline to participate, project area boundaries may be adjusted or the scope of the project will be re-evaluated.

13. Schedule:

Conduct outreach to community and Cal Water	Nov 2017 – Mar 2018 (if Prop 1 TA or DACI Funding is available)
Determine community boundary based on response from community engagement	Nov 2017 - Jan 2018 (if Prop 1 TA or DACI Funding is available)
Conduct Median Household Income Survey	Jan – May 2018 Subject to continued funding
Submit FFAST application or planning grant application	TBD

14. Budget

There are a number of variables that would result in significant cost differentials between alternatives.

Alternative 1 – Consolidation, the recommended alternative is estimated at \$4.2 - \$4.9 million, depending on the interest of the 4-5 houses on upper Johnson Road.

Alternative 2 – Community Treatment is estimated at approximately \$5.19 million.

At such time as the community chooses a potential solution and an engineering study is completed, the budget projection will be refined. Consolidation cost estimates will depend upon a number of factors that have not been fully defined at this time. For the technical application for SRF and other programs, it will be necessary to engage a design engineer who would likely require input from a hydrologist, soils engineer and surveyor to develop preliminary plans and cost estimates.