

Project Proposal: Hudson Landing Road
Salinas Valley Disadvantaged Community
Drinking Water and Wastewater Planning Project

Introduction

The Hudson Landing project area is in rural northern Monterey County east of Highway 1 and consisting of approximately 80 homes, most served by individual domestic wells. There are approximately 50 wells in the immediate area. There are eight local small water systems and one state small water system within the Hudson Landing 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 some of the small systems. Hexavalent chromium (chromium-6) has been detected in at least three small systems. Several systems have reported coliform in the near term. The area is within the boundaries of the Pajaro Sunny Mesa Community Services District (PSMCSD) as approved by the Local Area Formation Commission (LAFCO). PSMCSD owns and operates the Sunny Mesa Water System located in close proximity to the project area. All of the residences have on-site septic systems.

The Community Engineering Corps (CECorps) selected Hudson Landing as a participating project for evaluation by a professional team with Phuc H. Vu, P.E. as the Engineer of Record. A Feasibility Report was submitted to the Environmental Justice Coalition for Water (EJCW) in December 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 has been updated to incorporate additional comments from the Project Team as well as the outcome of consultations with the property owners, PSMCSD, Monterey County and other interested parties to date. The schedule, financing and economic evaluations have been updated during this process. A consulting engineer reviewed the CECorps Report and updated the economic valuation for three alternatives: consolidation, new well, and two wellhead treatment configurations. Net present value and estimated monthly cost per household have been calculated for these options.

The consensus from the community respondents to date and the CECorps recommendation continues to support a plan to consolidate with PSMCSD as the preferred alternative for a new potable water supply.

Project: Hudson Landing Road Water

Physical addresses:

Located on Hudson Landing Rd., Fruitland Ave, Spring Rd, and Wells Rd.

Note: addresses are listed in Watsonville zip code 95076

General geographic location:

Unincorporated North Monterey County, east of Highway 1, west of Hall Rd between Elkhorn Slough Road to the south and Salinas/Pajaro Road to the north

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

Water System Identification Numbers and Connections:

HUDSON LANDING WS #01	2700605	4
HUDSON LANDING WS #03	2700918	2
HUDSON LANDING WS #04	2700919	2
HUDSON LANDING WS #08	2701436	13
HUDSON LANDING WS #10	2701669	4
HUDSON LANDING WS #11	2701700	2
HUDSON LANDING WS #12	2701843	2
HUDSON LANDING WS #13	2702306	2
SPRING RD WS #03	2700925	2

Wastewater: On-site septic systems

Other:

APN: Multiple parcels

Zoning Designation: Generally, LDR/2.5 Low Density Rural Residential

Planning Area: North Monterey County,

North Monterey County Coastal Protection 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 80 residential connections, 9 local and state small systems and 50 wells serving the community.

Known violations or restrictions:

Monterey County EHB records for a number of the small water systems in the project area include reported nitrate contamination above the maximum MCL. A 2015 sample from one local small water system indicated nitrate levels more than four times the MCL. Some wells also test positive for coliform periodically. Seawater intrusion also poses a threat to long-term water supplies in the Hudson Landing Road area as evidenced by increasing levels of total dissolved solids and chloride on the coastal side of the community in wells monitored by the Pajaro Valley Water Management Agency.

Recent sampling at Hudson Landing Water System #8 produced positive results for chromium-6 at more than double the former MCL for a state small water system that otherwise produces water meeting safe drinking water standards. Two additional local small water systems on Hudson Landing Road showed chromium-6 results of 14 ug/L and 15 ug/l. The chromium-6 standard was invalidated by a court order in May 2017. The State Water Resources Control Board (SWRCB) is developing new regulations. The process is estimated at 18-24 months from the August 2017 date of the SWRCB decision not to appeal the court's action. Therefore, while acknowledging potential delays in implementing a new MCL for chromium-6, planning efforts will take the public health goal for chromium-6 into account.

2. Project Background

Hudson Landing 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. Routine water quality monitoring samples have also tested positive for coliform bacteria. At least three systems exceeded the now-suspended MCL for chromium-6 according to data collected by Monterey County EHB.

Hudson Landing is a rural, low-density residential neighborhood located in the North County Coastal Planning Area of Monterey County. Adjoining land uses consist of a golf course, scattered agricultural fields and larger rural residential parcels in the near vicinity of the project area. The Elkhorn Slough Preserve is in close proximity. Wells in lower elevations are at risk of saltwater intrusion. Hudson Landing, Spring and Wells Roads are Monterey County maintained public roads within the project area.

The Hudson Landing area is listed as a suspected disadvantaged community in the Needs Assessment for the Salinas Valley Disadvantaged Community Planning Project. It should be noted that PSMCSD's Springfield Water System meets the criteria for "severely disadvantaged" designation and American Community Survey (ACS) data for the nearby Moss Landing area supports a presumption of disadvantaged community eligibility for Hudson Landing.

EJCW conducted a water and wastewater needs assessment in 2015, identifying water and wastewater concerns in suspected disadvantaged communities. Two (2) households were surveyed on Hudson Landing Road. One reported moderate tap water quality while the other resident reported poor quality. One of the residents reported using tap water for cooking and both reported using bottled water for drinking.

The CECorps report notes that the septic systems are a significant contributor to the problem of nitrate pollution. Residents have inquired about connecting to a nearby wastewater system as a potential solution to ongoing septic system concerns. Monterey County Public Works and Monterey One Water, formerly the Monterey Regional Water Pollution Control Agency, a joint powers wastewater treatment provider, have been consulted regarding this issue. The County and Monterey One Water are studying the feasibility of extending the JPA's services into new areas of the County. The Hudson Landing area is not currently specified as a focus area for the study but discussions with Monterey One Water and the County may lead to its inclusion in a subsequent phase of planning.

PSMCSD-owned wells have a total drinking water production capacity that would be more than adequate to accommodate the potential needs of the Hudson Landing residents upon completion of a planned connection between PSMCSD's Sunny Mesa and Pajaro systems. However, the project to connect the two systems is on hold until SWRCB guidance is available regarding the chromium-6 MCL for drinking water.

Discussions with PSMCSD and approval of a request from the community for an extension of service or consolidation with PSMCSD are predicated on completion of current construction and planning projects in various stages of development. The PSMCSD Board has directed staff to defer action on any additional planning and pre-development activities for proposed consolidations until administrative capacity is sufficient to accommodate the increase in resulting workload. The focus is to complete the State Revolving Fund (SRF)-funded Struve and Springfield improvements and to address Sunny Mesa well deficiencies (chromium-6 results over the MCL) once new regulations are approved, a process that is projected to take approximately two years.

It should be noted that a Proposition 218 election failed in 2006 that would have resulted in funding PSMCSD's costs to expand services to Hudson Landing through an assessment district. At the time, the financing was projected to derive from a bond issuance and costs would be paid through assessments on each parcel. During community outreach for this project, property owners reported that the projected annual assessments, ranging from \$1,891 to \$14,065 per parcel, were deemed unaffordable. The Engineer's Report for the assessment district is included in the CECorps Report Appendix. The preliminary assessment figures by parcel are located on pages 12-14.

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 PSMCSD water system or to develop a new well, treatment, and distribution system to serve all 80 households. The selections were based on likelihood of success, feasibility and cost of development and/or annual operations and management expense.

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

Alternative 1: Consolidation with Pajaro Sunny Mesa Community Services District

This preferred alternative would connect the Hudson Landing project area to the Pajaro Sunny Mesa system by a pipeline extension running approximately 3,200 feet to the Sunny Mesa wells and water storage line terminus. A distribution system within the community would add an additional 13,110 linear feet of pipeline to connect all 80 households in the Hudson Landing project boundary.

PSMCSD prepared an Engineer's Report for a proposed assessment district for this area in 2006. The Engineer's Report for the estimated cost of the improvements and financing at that point in time is included in the CECorps Report for reference.

Reference: CECorps Report pages 17-20 for Assessment and CECorps Report Appendix 8 pages 8-9

Alternative 2: New Well, Treatment, and Distribution System

A new deep well would be installed at the location determined to be most favorable based on currently available data. The probable depth would be in range of 300 to 400 feet. The CECorps Report assumed a depth of 300 feet. Note: the Sunny Mesa well nearby is estimated at 400 feet (to be confirmed upon receipt of the Engineer's Report). Treatment for chromium-6 was also included in the estimated cost for this alternative. A distribution system within the community would require 13,110 linear feet of pipeline to connect all 80 households to the new deep well.

Reference: CECorps Report page 20, Appendix 7 page 4 (proposed layout and location of new well), and Appendix 8 pages 5-6 (detailed cost information)

Other Options

The CECorps team evaluated the potential costs of wellhead treatment at individual existing wells in general. Each well would need to be tested and a treatment type selected based on the constituents that exceed the MCL. Estimated costs per well

would depend on the treatment and disposal method and would be based on the type of treatment technology as well as the method and location of disposal. Additionally, treatment options would generally require increased operations and maintenance costs for each well or system and operator certification in some circumstances. Point of entry and point of use treatment are not approved long-term solutions at the current time. However, the County is in the process of developing guidelines and an implementation ordinance to allow for temporary treatment under certain circumstances. As part of a future feasibility analysis for this project, temporary treatment options should be reconsidered.

Reference: CECorps Report pages 13-16, and Appendix 8, pgs 1-3

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

A summary of the CECorps team capital and annual operations and maintenance cost analysis for each of the three consolidation options is shown in Table 2 of the CECorps Report, page 14.

Alternative 1: Consolidation estimate: \$4,089,711

Annual Operations and Maintenance: \$93,686*

*See Appendix 4.9 and Appendix 4.14 for an updated calculation based on PSMCSD's 2018 water rates and 16 CCF of water usage per house per month for 80 households

Refer to CECorps Report Appendix 8, page 8-9 for detail

Alternative 2: New Deep Well, Treatment, and Distribution System estimate: \$2,899,285*
Annual Operations and Maintenance \$156,780

* The CECorps Team did not include costs to set up a legal entity to own and manage a new deep well or for billing and administration of the new legal entity.

Refer to CECorps Report Appendix 8, pages 5-6 for detail

Updated Estimates for Monthly Cost per Household

The consulting engineer updated the monthly costs per household based on the standardized methodology outlined in the Hudson Landing Design Report Appendix 4.7. Costs for the preferred alternative utilize the PSMCSD rate schedule for 2018. Costs of the alternative treatment systems are derived from the criteria for ion exchange treatment as outlined in the Engineer's Memorandum. Alternative 3a is based on a quote from Evoqua, Alternative 3b on a quote from Culligan. Both quotes assume treatment at all 50 wells.

Alternative 1 Consolidation: Estimated at \$98 per household per month

Alternative 2 New Well, Treatment and Distribution: Est. at \$163/month per household

Alternative 3a Wellhead Treatment-All Wells-Evoqua: Est. at \$174/month per household

Alternative 3b Wellhead Treatment-All Wells-Culligan: Est. at \$604/month per household

Net Present Value

The net present value for each of the alternatives is shown on page 1, Table 1 of the Design Report and the methodology is described on page 4.

5. Community Involvement

Approval of Alternative

Small water system managers in the Hudson Landing Road area contacted to date are interested in connecting to a larger system for water and potentially wastewater services. EJCW has included additional outreach activities to Hudson Landing Road in the request for Prop 1 TA work plan for the Salinas Valley Disadvantaged Community Planning Project Extension and the IRWM Disadvantaged Community Involvement grant program.

Willingness to Proceed

The 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 determine financing options for consolidation with PSMCSD. Financing options will need particular attention, as the cost to individual parcel and water system owners was the single most significant impediment to the previous water system improvement proposal.

PSMCSD has several grant-funded projects that are underway or recently completed including a SRF Planning Grant for a project that will include a new well to supply connections for the Moss Landing Manor Mobile Home Park, Springfield Water System and new infrastructure connecting residences along Giberson and Springfield Roads. An IRWM-funded project to replace the main storage tank at Pajaro is on hold as of October 2017 pending an addition of funds due to cost increases.

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.

The County of Monterey has not been approached specifically about financial participation in this project. However, the County 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, if that is determined to be necessary at a later time, or by acting as the project sponsor or fiscal agent. There would be an expectation of cost recovery for staff time and other expenses as eligible project planning and management budget categories.

The residents would be charged the PSMCSD water service rates in effect at the time of connection if the consolidation alternative were approved. Operation and maintenance costs, in addition to capital costs, would be expected to determine the rate structure for the selected alternative.

6. Capacity

A state certified operator is not required for the nine existing local and state small water systems (serving 2-14 connections) in the project area. Individual property owners are not required to document capacity to manage or maintain their wells.

The PSMSCD has experience managing its public water system and other community facilities. The LAFCO Municipal Service Area Report (March 2015) notes adequate financing and reserves for its current operations and proposed annexations for PSMCSD-owned and operated systems. Total water supply capacity, through a combination of non-contiguous drinking water systems and production wells is sufficient for anticipated growth. PSMCSD has state certifications for its water system operators and experienced management staff.

7. TAC Recommendation

The Technical Advisory Committee reviewed and approved the recommendation to designate Hudson Landing as a high priority community. TAC members have submitted written comments on the Hudson Landing CECorps report. The TAC met to consider the draft Salinas Valley Disadvantaged Community Water and Wastewater Plan and comments have been incorporated.

8. Institutional Barriers

Local Agency Formation Commission (LAFCO)

There are no known LAFCO barriers. As noted, a Municipal Services Area Report was complete in March 2015 for PSMCSD in connection with the approved annexation of PSMCD-owned and operated water systems. It is not anticipated that a sphere of influence or Service Area Boundary expansion would be required at this time.

Sponsorship

There are limited choices for sponsorship of funding applications. The CECorps team recommended PSMCSD consolidation as the preferred alternative. However, this option is predicated on obtaining approval of the PSMCD Board of Directors, removal of institutional constraints, and implementation of a compliance plan to address chromium-6 in the Sunny Mesa well once the new regulations are in place. The County of Monterey has applied for funding for Community Development Block Grants (CDBG) 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 Boronda Sanitation District (San Jerardo). However, County staff has indicated that a similar level of support may not be available in the future. The Project Team has recommended that a solution to sponsorship barriers for Hudson Landing and other small communities be considered by the County and other agencies.

Monterey County Environmental Health Bureau (EHB)

The County Drinking Water Program regulates the nine small systems at Hudson Landing. EHB staff has supports consolidation with larger systems as a matter of policy. EHB is the permitting entity for new well construction, plan review, and approval for system expansions or consolidations and well abandonment. Any proposed transfer of ownership or modification or amendment of a permit would also require EHB approval. Should consolidation with PSMCSD move forward, EHB staff would take the lead in CEQA environmental determinations and permitting.

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

The County of Monterey would act as lead agency for NEPA and CEQA determinations for Hudson Landing due to its location in the unincorporated area of the County. Environmental Health Bureau 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. 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.

RMA-Planning would also 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 new connecting pipeline and other improvements in the County's Road Right of Way to facilitate the consolidation or for supply 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 need to be in place prior to final approval of installation of a service line extension and connection to services.

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, including the Water Resource Agency, are coordinated by the RMA.

North Monterey County Fire Protection District

Fire protection services for the Hudson Landing 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 to resolve any confusion or inconsistencies that have occurred. Compliance with the District's specific fire protection requirements will be a condition of approval. Previous discussions with the Fire Marshal suggest that water storage and emergency backup equipment for the pumps and lift stations will be a concern. Construction of a PSMCSD new water storage tank may alleviate the water storage issue.

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 bilingual staff 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 Hudson Landing have been operated and maintained by property owners. Water treatment for bacterial contamination has been limited to application of chlorine when the County EHB issues a non-compliance letter to an individual water system. The County does not require a certified water or wastewater operator under current permitting. With consolidation, PSMCSD would assume responsibility for maintenance and operations to the meters. Consolidation would offer the best potential to meet TMF of the alternatives considered. PSMCSD has met TMF requirements in order to qualify for SRF funding on another project. Under any other alternative, the water system owner(s) would need to demonstrate the ability to meet TMF.

Other: Not applicable

10. Potential Funding Sources

The Hudson Landing project would be considered potentially eligible as a consolidation project under State Revolving Fund/Proposition 1 Guidelines for drinking water and wastewater as it will potentially meet disadvantaged community criteria, would result in safe drinking water, and potentially resolve incipient wastewater system deficiencies. The

drinking water project would be assigned to Category A-Immediate Health Risk for nitrate and, subject to adoption of a new MCL for chromium-6, exceedances over of the MCL for this contaminant and to Categories C and D for coliform/disinfection reliability and secondary notification TDS and chloride issues. 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. A new well or wellhead treatment alternatives may not receive priority, depending on the system configuration and other factors such as limitations on wellhead treatment under current regulations.

This project is a potential candidate for Prop 1 Technical Assistance funding for pre-development activities including MHI, environmental studies, preliminary engineering and Prop1/SRF application preparation. A Planning Grant from Prop 1/SRF would be a potential source of funding for feasibility studies, design engineering and predevelopment costs such as surveying, hydrology reports, testing and permitting. Implementation funding and/or funding for connecting homes to meters could potentially be eligible for CDBG or USDA grants or loans. The County of Monterey accepts applications for CDBG funding in November of each year. Funding for the CDBG program for 2018/2019 is uncertain due to federal budget cuts.

The Greater Monterey County Regional Water Management Group is applying for Disadvantaged Community Involvement Funding in conjunction with the other Central Coast IRWM Regions. The Greater Monterey County 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 the Project Team will evaluate and select individual projects for participation. The Hudson Landing project is not currently included in the Integrated Regional Water Management (IRWM) Plan. 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 Hudson Landing to be a high priority project and selected it for referral to the CECorps for an engineering evaluation. The Project Team will continue

the conversations with PSMCSD, the County, and Monterey One Water regarding drinking water system consolidation and wastewater service expansion. Depending on the outcome of an income survey, it is expected that the Project Team will formulate a recommendation concerning continued community engagement at Hudson Landing under Disadvantaged Community Involvement (DACI) or Prop 1 Technical Assistance.

12. Action Plan

As described previously, an MHI survey first needs to be conducted to confirm disadvantaged community qualifications. The goal of reaching all residents in the Hudson Landing project area is an important step in the Action Plan. See below.

Engineering - On hold pending household income survey and funding

LAFCO - No action required at present

Consolidation - Maintain contact with PSMCSD

Permitting - On hold

Referral to Potential Partners - Continue discussions with PSMCSD, County, and Monterey One Water to determine financial and managerial participation and project prioritization.

Other:

The Project Team will continue a dialogue with the property owners, PSMCSD, and the County regarding financing and organizational capacity gaps and opportunities over the next few months. Based on the outcome of discussions, the project may be recommended for consideration for an application either for Prop 1/SRF Planning or IRWM Disadvantaged Community Involvement funding. Should the majority of community members decline to participate, project area boundaries may be adjusted or the scope of the project will be re-evaluated.

13. Schedule:

Share information about potential project with community (mailers, door-to-door outreach, community meetings, etc.)	Jan-June 2018
Administer income survey (Disadvantaged Community Involvement Program or Prop 1 Technical Assistance)	Jan-June 2018
Apply for Prop 1/SRF planning grant with PSMCSD to fund both	June-Aug 2018

their immediate needs and consolidation with Hudson Landing Rd.	
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14. Budget

The development budget is estimated to be \$4,089,800 for consolidation with PSMCSD and \$2,899,285 for a new deep well, treatment and distribution system option. These figures are based on CECorps estimates and are subject to change.

At such time as the project becomes active and a solution is chosen by the community 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 example, if the project were to be developed in conjunction with mitigation planning for chromium-6 when new compliance standards and schedules are released by SWRCB at the Sunny Mesa well (PSMCSD), the costs could be shared between the two projects.