

**CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)
INITIAL STUDY/PROPOSED MITIGATED NEGATIVE DECLARATION**

for the

**Palermo Clean Water Consolidation Project
Palermo, California**

December 2021



Prepared for:
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**CALIFORNIA ENVIRONMENTAL QUALITY ACT
INITIAL STUDY/PROPOSED MITIGATED NEGATIVE DECLARATION
for the
PALERMO CLEAN WATER CONSOLIDATION PROJECT**

Project Title: Palermo Clean Water Consolidation Project

Lead Agency Name and Address: Butte County
Department of Water and Resource Conservation
308 Nelson Avenue
Oroville, CA 95965-3302

Lead Agency Contact Person: Christina Buck, Ph.D.
(530) 552-3593; cbuck@buttecounty.net

Project Location: Palermo, Butte County, CA

General Plan Designation: Low Density Residential (LDR)

1.0 Introduction

The unincorporated community of Palermo is located approximately five miles south of the City of Oroville. Palermo consists of approximately 490 parcels and a population of 5,000 residents and qualifies as a severely disadvantaged community. The proposed Palermo Clean Water Consolidation Project would allow Butte County (County) to address the drinking water quality issues faced by the Palermo community (Fig. 1). The County and South Feather Water and Power Agency (SFWPA) are pursuing 100% grant funding for the Palermo Clean Water Consolidation Project.

The majority of the parcels within the Palermo community are served by individual water wells for their potable water supply. In addition, all parcels are served by on-site septic systems for wastewater treatment and disposal. Flooding, high groundwater levels and continued septic system failures have resulted in cross contamination of the existing wells and possibly contamination of the groundwater aquifer. On November 17, 2021 a Town Hall meeting was held in Palermo to discuss a solution to provide clean, reliable and affordable water to the community. On November 17, 2021 a Town Hall meeting was held in Palermo to discuss a long-term solution for clean and reliable water in the community. The Palermo Clean Water Consolidation Project Fact Sheet and Postcard announcing the Town Hall meeting are included in Appendix A. The County has also developed a project website at http://buttecounty.net/waterresourceconservation/Palermo_Clean_Water.

The County would like to resolve these drinking water quality issues by reorganizing the remainder of the community of Palermo into the South Feather Water and Power Agency (SFWPA) surface water treated system. There are a total of 490 parcels within the Palermo Clean Water Consolidation project footprint of which 110 parcels currently receive treated surface water from the SFWPA. The remainder of the community within the proposed project limits relies on groundwater for residential use. The consolidation project would bring all parcels Safe Drinking Water Act (SDWA) compliant clean treated potable water to the community and eliminate any future potential health and safety issues.

The project consists of constructing new 6-inch and 12-inch water mains, gate valves, fire hydrants, water services, water meters, water meter boxes, and abandoning existing domestic wells. Approximately 40,000 lineal feet (7.6 lineal miles) of new pipeline, services lines and meter boxes will be installed in the existing road right-of-way and parcels (Fig. 2).

This Initial Study has been prepared in accordance with the California Environmental Quality Act (CEQA) and State CEQA Guidelines, Title 14 California Code of Regulations (CCR) 15000 *et seq.* An Initial Study is prepared by a lead agency to determine if a project may have a significant effect on the environment. The lead agency for the proposed project is Butte County Department of Water and Resource Conservation.

2.0 Project Location

Palermo is an unincorporated community in Butte County with a population of approximately 5,000 people located about five (5) miles south of the City of Oroville and east of Highway 70 (Fig. 1). The community is located within a portion of the northwest quarter of Section 5 of Township 18 North, Range 4 East section 5, of the USGS Palermo, California (1970), 7.5 Series Quad.

The proposed boundary limits for the Palermo Clean Water Consolidation Project are: Messina Avenue on the north, Upper Palermo Road on the east, South Villa Avenue on the south and Railroad Avenue on the west as shown in Figure 2. The project area is rural in nature consisting of small homesteads, houses, utility installations, and rural farmlands including livestock grazing, agricultural croplands and orchards. Photos 1 through 55 provide views of the project area.

The climate is characterized by hot, dry summers and mild, wet winters. Current winter temperatures have highs around 54 degrees Fahrenheit, and current summer temperatures have highs around 97 degrees Fahrenheit.

3.0 South Feather River Water and Power Agency (SFWPA)

The SFWPA dates back to 1919 when it was called the Oroville-Wyandotte Irrigation District. Today, the SFWPA consists of a service area of approximately 31,000 acres within Butte County. SFWPA has surface water rights from the South Fork of the Feather River and Slate Creek (a tributary of the North Fork of the Yuba River). SFWPA operates a series of reservoirs with a combined storage capacity of 164,577 acre-feet.

Water is treated at the Miner's Ranch Treatment Plant which has a capacity of 14.5 million gallons per day (MGD). SFWPA supplies treated surface water to 6,931 service connections and irrigation water to over 500 customers (SFWPA 2020 Urban Water Management Plan, 2021) within Butte County, including an existing 110 connections within the project area. In 2020, SFWPA supplied 1,737 million gallons of treated surface water or 4.76 MGD. A Memorandum of Understanding (MOU) between Butte County and SFWPA for the Palermo Clean Water Consolidation Project is included in Appendix B.

4.0 Proposed Project Elements

The following elements for the proposed Palermo Clean Water Consolidation project consist of:

- The proposed project will connect to SFWPA's existing water system with 6-inch and 12-inch C-900 PVC water mains within the project limits to provide a looped water system for the Palermo community. Approximately 40,000 lineal feet of new pipelines and services lines will be installed (see Fig. 2).

- Fire hydrants will be installed per code requirements of 800-1,000 feet apart within the system.
- Meter boxes with advanced metering infrastructure (AMI) smart water meters will be installed at each parcel to automate future meter reading services which is in compliance with AB 2572 that requires all water suppliers to install water meters on all customer connections by January 1, 2025. Services lines will be run from the meter to each customer home.

Well destruction is discussed in Section 7.0 of this Initial Study. SFWPA will be responsible for the operation and maintenance of the water distribution system improvements associated with project implementation.

5.0 Palermo Water Quality Testing

The County with assistance from SFWPA reached out to the Palermo Community through a Town Hall meeting held on June 15, 2021. The County surveyed the residents within the proposed Palermo Clean Water Consolidation project boundary to see who would be willing to have the County/SFWPA obtain a water sample from a hose bib outside their home. As a result of the Town Hall meeting and survey, 25 residents agreed to have their water tested for Total Coliform, E. Coli and Nitrate as N. On July 15, 2021, SFWPA staff collected water quality samples and sent them to the lab for water quality testing. Water Quality test results are included in Appendix D. To prevent future drinking water contamination, a water system consolidation is recommended that would connect the Palermo community with the SFWPA water supply infrastructure.

As discussed in the Palermo Water Quality Testing Results Technical Memorandum (TM) prepared by Luhdorff & Scalmanini Consulting Engineers (LSCE) (see Appendix D), the 2021 water quality results indicated that 24% of the wells sampled tested positive for Total Coliform. This is consistent with the 2007 water quality testing that resulted in 29% of wells sampled testing positive for Total Coliform. Projecting the 2021 water quality results over the remaining 380 parcels within the project boundary indicates that approximately 91 wells could be at risk of having Total Coliform present and approximately 15 wells could be at risk of having E-Coli present. Additionally, a small percentage of wells could be at or above the primary drinking water MCL for Nitrates as N. These pollutants could result in various health issues, including urinary tract infections, diarrheas and stomach pains due to poor water quality from groundwater sources. The County and SFWPA are planning additional testing for the Community.

6.0 Project Water Demand and SFWPA Supply Analysis

There are 490 parcels within the boundary limits shown in Figure 2, of which 110 are currently provided water by SFWPA. Assuming an average occupancy rate of 3 people per dwelling unit (pdu) and 490 parcels, the projected population is 1,470. Assuming a water usage of 200 gallons per capita per day (GPCD) the average day demand (ADD) would be 294,000 gallons. Per the State Water Resources Control Board (SWRCB) Division of Drinking Water's (DDW) Title 22 California Regulations Related to Drinking Water Chapter 16, California Waterworks Standards, the maximum day demand (MDD) shall be calculated by multiplying the ADD by 2.25 and the peak hour demand (PHD) shall be calculated by multiplying the MDD by 1.5. This results in a MDD of 661,500 gallons (0.66 MGD) and a PHD of 992,250 gallons (0.99 MGD) for the project area customer base.

In 2020, the SFWPA had a MDD of 11.6 MGD and a PHD of 16.6 MGD. The SFWPA has a water treatment plant capacity of 21 MGD. Table 1 below shows that SFWPA has sufficient water treatment plant capacity to meet the additional demand from the project. In addition, SFWPA is able to meet the

minimum fire protection requirement of 1,000 gpm for fire duration of 2-hours with existing water system fire protection capacity. No additional storage or source capacity is planned (SFWPA 2020 UWMP).

Table 1. Palermo Clean Water Consolidation Project and SFWPA water system demands and plant capacity in millions gallon day (MGD).

Palermo Max Day Water Demand	0.66
SFWPA Max Day Water Demand	11.60
SFWPA + Palermo Max Day Demand	12.26
Residential Fire Requirement = 1,000 gpm@2 hours	0.12
Average TOTAL MGD + fire flows	12.38
SFWPA Water Treatment Plant Capacity	21.00

7.0 Well Destruction

Well destruction is an eligible project cost for water consolidation projects (such as the Palermo Clean Water Consolidation Project) in particular where older groundwater system infrastructure is being destroyed and converted to a treated surface water supply as part of the consolidation improvements. Drinking Water State Revolving Fund (DWSRF) policy supports well destruction as being included as part of a water consolidation project where older well destruction would likely be required or necessitated by well operation and/or Safe Drinking Water Act (SDWA) compliance related issues.

The project partners are pursuing 100% grant funding for the Palermo Clean Water Consolidation Project and will inform Palermo residents within the project boundary connecting to the SFWPA water system when grant funds are available for well destruction costs per County well destruction standards. The majority of the residents within Palermo have individual groundwater wells (the majority of existing domestic wells are a depth of 75-125 feet).

Palermo customers who do not take advantage of well destruction grant funds as part of Palermo Clean Water Consolidation Project implementation and decide to destroy their wells in the future may have to pay for their well destruction costs (post-Project). The project partners will provide Palermo residents the opportunity to properly destroy existing wells using grant funds once connected to the SFWPA system.

8.0 SFWPA Proposed Annexation: Palermo Clean Water Consolidation Project

In order for the County to pursue the water system consolidation option with DDW-SRF funding, the parcels within the Palermo Clean Water Consolidation Project area will be required to annex into the SFWPA for service. Some parcels within the community have already chosen to annex into SFWPA to obtain services. Typically, landowners request annexation into SFWPA, and the Agency facilitates the parcel annexation process from start to finish in coordination with the Butte County Local Agency Formation Commission (LAFCo). For the Palermo Clean Water Consolidation Project, the remaining unserved landowners will have to agree to be annexed through the County process in order to be served water by the SFWPA and agree to pay the SFWPA water rates (described further below, Section 9.0).

In summary, SFWPA first develops the required annexation documentation (including environmental compliance) and takes the documentation with corresponding resolution to the SFWPA Board to authorize submittal of proposed annexation applications to the Butte Local Agency Formation Commission (LAFCo) for review and adoption by their Board. An individual annexation application will

need to be developed for each landowner who is not already annexed within the SFWPA. Legal descriptions will need to be obtained for each parcel which will be included in project cost estimates. A copy of the Property Owner’s Statement of Understanding and Interest for Connection to SFWPA is included as Appendix D.

9.0 Water Service Rates

SFWPA charges a monthly service charge of \$19.73 per month plus \$0.42/billing unit for the first 100 units (10,000 cubic feet) and \$0.31/unit after the first 100 units (over 10,000 cubic feet). Oversized meters are charged an additional fee each month. The majority of Palermo customers annexed under the proposed project would pay the monthly service charge for their ¾-inch service plus water consumption charges with their expected demand to be within the first 100 units at \$0.42/billing unit.

Palermo customers are paying affordable rates upon converting to SFWPA water service in comparison to State-wide average or EPA Rate Affordability Criteria. Table 2 below provides perspective based on approximately 110 Palermo accounts who have already converted to SFWPA water service for calendar year 2020 water use and associated water billing.

Table 2. Palermo Clean Water Consolidation Project Comparative Average Water Rates.

State-wide Average*	\$960/year	\$80.00/month
EPA Rate Affordability Criteria	\$844/year	\$70.38/month
Avg. SFWPA Palermo Account	\$420/year	\$34.28/month

*State-wide average bill assumes 20 ccf of water consumption similar to SFWPA per capita water use target.

10.0 Project Implementation Schedule

An implementation schedule for the Palermo Clean Water System Consolidation project is shown in Appendix A. Funding and annexation can take up to 6-months to complete. The remaining phases of design (e.g., 60% and 100% design plans and specification submittals) will take between 9 to 12-months. Construction of the project is expected to last between 15 to 18-months.

11.0 Alternatives to the Proposed Project

The best long-term solution to the health and safety issues being faced by the Palermo community is to consolidate the water system of the community (ground water) with the SFWPA (surface water). SFWPA currently supplies drinking water to 110 of the 490 parcels within the community. The community has experienced high rates of septic failures during periods of high rainfall which has resulted in stormwater and upper aquifer contamination. If left unresolved, individual wells will continue to experience cross contamination issues and pose a risk to the groundwater aquifer due to seasonal flooding, high groundwater levels and continued septic system failures. In addition, any existing wells that fail or must be retired from service would need to be replaced with wells meeting current well construction standards including deeper seals to at least a 100-foot depth and may need to be drilled to a greater depth as well. Existing wells taken out of service would need to be properly destroyed in accordance with County and State well standards. The proposed project as outlined in this Initial Study is the preferred alternative.

12.0 Public Participation

This Initial Study is available for a 30-day public review period beginning December 13, 2021 and ending on January 12, 2022. Written comments may be submitted by 4:00 p.m. on January 12, 2022 to:

Christina Buck, Ph.D.
Butte County
Department of Water and Resource Conservation
308 Nelson Avenue
Oroville, CA 95965-3302

13.0 Required Public Agency Permits and Approvals

The following agency approvals and/or permits are anticipated for the proposed project:

- Butte County Department of Water and Resource Conservation - Project approval and adoption of the CEQA Initial Study/Mitigated Negative Declaration.
- Regional Water Quality Control Board - Any water associated with construction will be required to meet the requirements for waste discharges.
- Butte County LAFCo - Project Annexation
- Butte County Right-of-Way Encroachment Permit

14.0 Environmental Factors Potentially Affected by the Proposed Project

Section 15.0 of this Initial Study contains the Environmental Checklist that identifies potential environmental impacts by subject area and a determination of each impact that would result from the Palermo Clean Water Consolidation Project. Based on the Environmental Checklist and supporting analysis provided in Section 15.0 and respective Appendices, the project would result in the following impacts:

- **No Impact:** aesthetics, agricultural resources, mineral resources, land use and planning, population, public services, recreation, and utilities and service systems.
- **Less-than-Significant Impacts:** geology and soils, and transportation/traffic.
- **Less-than-Significant Impacts with Mitigation Incorporated:** air quality, biological resources, cultural resources, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, noise, and tribal cultural resources.
- **Potentially Significant Impact:** None.

In accordance with State CEQA Guidelines 15070, a Mitigated Negative Declaration may be prepared if there is no substantial evidence that the proposed project would have a significant effect on the environment with mitigation measures incorporated into the project to reduce potential environmental impacts. Therefore, a Mitigated Negative Declaration is proposed to be adopted in accordance with State CEQA Guidelines. A Mitigation Monitoring and Reporting Program (MMRP) is included as Appendix H.

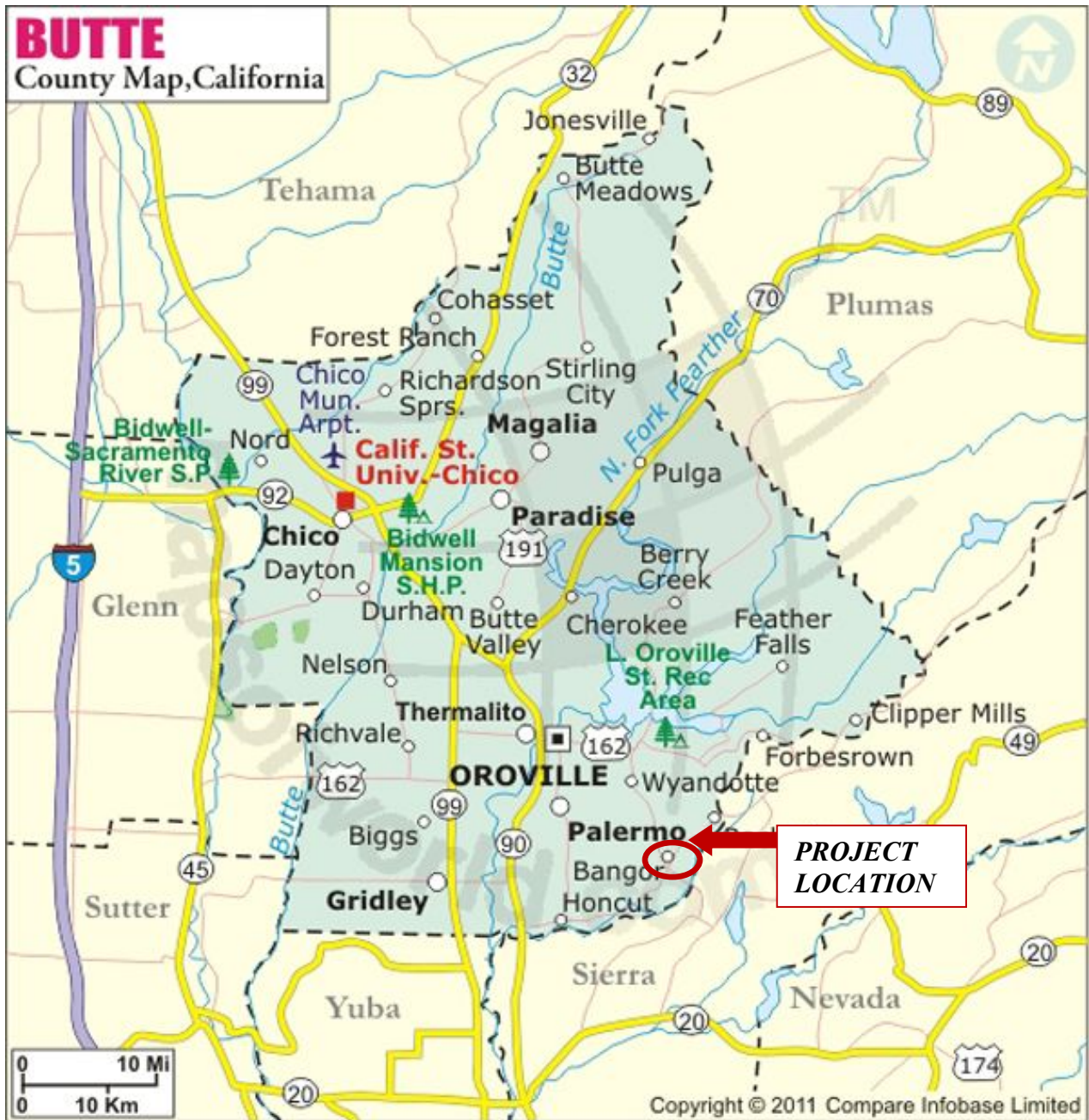


Figure 1: The County of Butte, CA and community of Palermo circled in red.

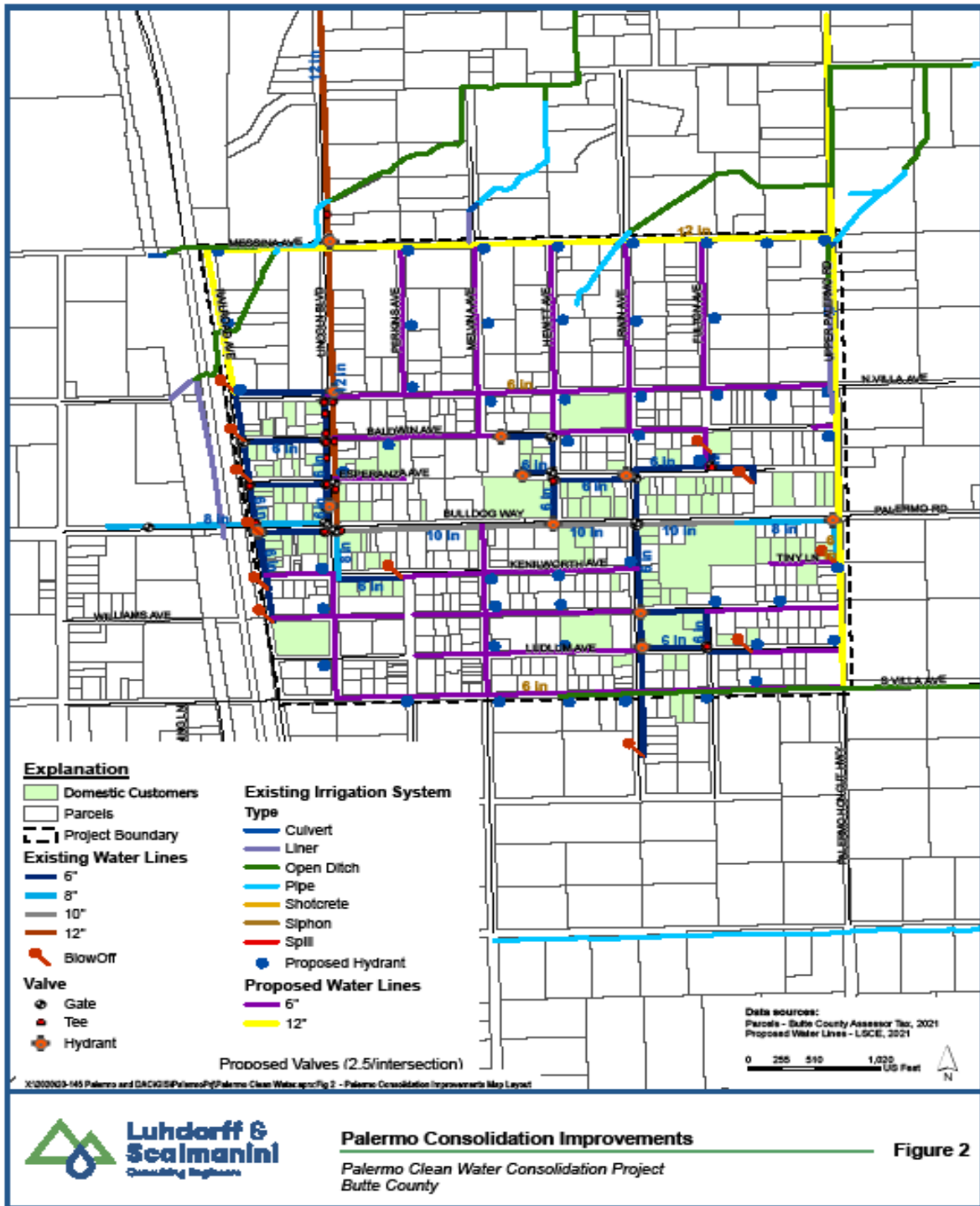


Figure 2: Proposed Palermo Clean Water Consolidation Project Area.

Photo log Palermo – October 6, 2021

Photo # Description








1	Palermo town sign	44	Messina and Irwin south
2	Messina and Lincoln south	45	Messina and Fulton south
3	Messina and Lincoln west	46	Messina and Fulton north
4	Messina and Lincoln east	47	Ludlum and Irwin west
5	North Villa and Lincoln west	48	Ludlum and Irwin east
6	North Villa and Lincoln east	49	Irwin and Williams west
7	Baldwin and Lincoln west	50	Irwin and Williams east
8	Baldwin and Lincoln east	51	Irwin and Palermo west
9	Esperanza and Lincoln west	52	Irwin and Palermo east
10	Esperanza and Lincoln east	53	Hewitt and Esperanza west
11	Palermo and Lincoln north	54	Hewitt and Esperanza east
12	Palermo and Lincoln west	55	Hewitt and Baldwin west
13	Palermo and Lincoln south		
14	Palermo and Lincoln east		
15	Kenilworth and Lincoln west		
16	Kenilworth and Lincoln east		
17	Williams and Lincoln west		
18	Williams and Lincoln east		
19	Railroad and S Villa east		
20	Railroad and S Villa north		
21	canal crossing between Railroad Avenue and Melvina		
22	Irwin and S Villa north		
23	Irwin and S Villa west		
24	Fulton and S Villa west		
25	Ludlum and Upper Palermo (UP) west		
26	Ludlum and UP north		
27	Williams and Up west		
28	Tiny Lane west		
29	Palermo Rd and up west		
30	Palermo Rd and UP north		
31	North Villa and UP west		
32	Messina and UP south		
33	Messina and UP west		
34	Messina and UP north		
35	Bohemia and UP south		
36	Esperanza and Railroad south		
37	Railroad near Messina north		
38	Messina/Railroad corner east ditch on right side		
39	wide ditch along north side of Messina east of Railroad Avenue		
40	Messina and Perkins south		
41	Messina and Perkins east		
42	Messina and Perkins west		
43	wetland just west of Hewitt along Messina		









		
49	50	51
		
52	53	54
		
55		

15.0 Evaluation of Environmental Impacts

The California Environmental Quality Act (CEQA) Guidelines direct lead agencies to use an Initial Study checklist to determine the potential impacts of a proposed project on the physical environment. The checklist provides a list of questions concerning 17 environmental topic areas potentially affected by a project.

There are four possible answers to the environmental checklist questions. All answers must take into account the whole action involved, including off-site as well as on-site, cumulative, as well as project-level, indirect as well as direct, and construction as well as operational impacts. Each possible answer is explained herein:

1) A **“Potentially Significant Impact”** answer is appropriate if there is enough relevant information and reasonable inferences from that information that a fair argument can be made to support a conclusion that a substantial or potentially substantial adverse change may occur to any of the physical conditions within the area affected by the Proposed Project. When one or more “Potentially Significant Impact” entries are made, an EIR is required.

2) A **“Less Than Significant With Mitigation Incorporated”** answer is appropriate when the Applicant has agreed to incorporate a mitigation measure to reduce an impact from “Potentially Significant” to “Less Than Significant.” The lead agency must describe the mitigation measures, and briefly explain how the measures would reduce the impact to a “Less Than Significant Level.”

3) A **“Less Than Significant Impact”** answer is appropriate if there is evidence that one or more environmental impacts may occur, but the impacts are determined to be less than significant or the application of development policies and standards to the project will reduce the impact(s) to a “Less Than Significant Level”.

4) A **“No Impact”** answer is appropriate where it can be clearly seen that the impact at hand does not have the potential to adversely affect the environment. For example, a project in the center of an urbanized area will clearly not have an adverse effect on agricultural resources or operations.

15.1 AESTHETICS -- Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock croppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Response to Questions:

a-b): The proposed project area will not have a substantial adverse effect on a scenic vista as there are no designated scenic vistas within the construction footprint. Existing land uses adjacent to the project area consist of rural residential houses, agricultural fields and natural open space. There are no historic buildings within a state-designated scenic highway. Therefore, there would be *No Impact*.

c): The proposed project entails installation of approximately 40,000 lineal feet of pipelines, service lines and meter boxes in existing roadways and parcels. These construction activities will not degrade the visual quality of the surrounding area. Therefore, there would be *No Impact*.

d): The proposed project would not include any facility components that could substantially increase glare or adversely affect nighttime views in the area. Therefore, there would be *No Impact*.

Mitigation Measure(s) - None Required

15.2 AGRICULTURAL RESOURCES -- In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Convert Prime farmland, Unique farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Involve other changes in the existing environment, which due to their location or nature, could result in conversion of farmland, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Response to Questions:

a-c): The proposed project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. The project would not conflict with a Williamson Act contract or involve any changes that could result in conversion of farmland to non-agricultural use. The proposed project entails installation of approximately 40,000 lineal feet of pipelines, services lines and meter boxes in existing roadways and parcels. Therefore, there would be *No Impact*.

Mitigation Measure(s) - None Required

15.3 AIR QUALITY -- Where applicable, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Response to Questions:

a-c): Air quality is determined primarily by the type and amount of contaminants emitted into the atmosphere, the size and topography of the local air basin, and the pollutant dispersing properties of local weather patterns. The project area is in the Northern Sacramento Valley Air Basin (NSVAB), which includes the counties of Butte, Colusa, Glenn, Shasta, Sutter, Tehama and Yuba (Butte County Air Management District, 2004). Butte County currently meets federal and state air quality standards for pollutants such as carbon monoxide and sulfur dioxide but does not meet ozone and PM₁₀ standards (<http://generalplan.co.butte.ca.us>).

Ozone is an invisible pollutant formed by chemical reactions involving nitrogen oxides, reactive hydrocarbons and sunlight. It is a powerful respiratory irritant that can cause coughing, shortness of breath, headaches, fatigue and lung damage. Particulate matter (PM₁₀) is the fine mineral, metal, soot, smoke and dust particles suspended in the air. Inhaling particulate matter less than 10 microns in diameter (PM₁₀), can cause respiratory and other health problems.

During pipeline, services lines and meter box installation use of an excavator, grader, dozer and haul trucks would temporarily operate along the roadways which can generate fugitive dust that can be a nuisance to local residents and businesses near a construction site. Mitigation measures outlined below will be required throughout the duration of the construction activities.

Short-term exhaust emissions would be generated over the course of project activities. The estimated emission levels for equipment used during the construction phase of the project are presented in Appendix E. The emission levels are quantified for a 200-day construction period and include ozone, carbon monoxide, oxides of nitrogen, Reactive Organic Gases, Volatile Organic Compounds, Lead, Particulate

Matter <2.5 microns in diameter and <10 microns in diameter, and sulfur dioxide. These project construction emission levels with mitigation would not exceed an applicable threshold of significance for air pollutants or conflict with an applicable air quality plan, violate any air quality standard or contribute substantially to an existing air quality violation that would individually or cumulatively impact local or regional air quality.

Contractors will perform all ground disturbance activities in accordance with County and SFWPA guidelines and staff shall routinely inspect the construction area. Implementation of the mitigation measures below would ensure the proposed project will not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment. Construction emissions are a temporary one-time release and would not substantially contribute to the concentration of any pollutant of concern. The totals for the various pollutant constituents provided in Appendix E are within the range of standard pipeline construction projects using similar heavy equipment. Therefore, impacts would be ***Less Than Significant with Mitigation Incorporated***.

d-e): Sensitive receptors in the vicinity of the proposed project area include 490 parcels along the proposed boundary limits of Messina Avenue on the north, Upper Palermo Road on the east, South Villa Avenue on the south and Railroad Avenue on the west as shown in Figure 2. The project site is in a relatively small geographic area and would not create objectionable odors affecting a substantial number of people. During construction, emissions from heavy equipment would be temporary and sensitive receptors would not be exposed to long-term concentrations of emissions. Once construction activities are complete, these odors would cease. Impacts to air quality associated with the construction of the project would be ***Less Than Significant***.

Mitigation Measure(s)

15.3 (a-c) - The following mitigation measures shall be incorporated into the project to reduce impacts to air quality during construction activities and include:

- All construction equipment shall be maintained in proper tune according to the manufacturer's specifications. Equipment shall be checked by a certified mechanic and determined to be running in proper condition before the start of work.
- All mobile and stationary Toxic Air Contaminants (TACs) sources shall comply with applicable Airborne Toxic Control Measures (ATCMs) promulgated by the California Air Resources Board (CARB) throughout the life of the project.
- Dust control measures shall be implemented during project construction. Use of water trucks or sprinkler systems shall be used in sufficient quantities to prevent airborne dust from leaving the project sites.
- All stockpiled material will be sufficiently covered when not in use to prevent sediment and other potential pollutants from leaving the project sites.
- Streets shall be swept at the end of each working day if visible soil, sand or other construction related debris is present.
- Construction activities will be conducted so that no track-out from the project area is visible on any paved roadway.

- All trucks hauling dirt, sand, soil, or other loose material transported to and from the construction areas shall be securely covered to avoid spilling.
- All roadways, driveways, sidewalks, etc. shall be repaved immediately after pipeline, services lines and meter boxes installation is complete.
- County and SFWPA field inspectors shall ensure compliance with Butte County Air Pollution Control District regulations.
- Signs shall be placed along construction areas with contact information to report air quality violations to Butte County Air Quality Management District at (530) 332-9400.

15.4 BIOLOGICAL RESOURCES - Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife US Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native residents or migratory wildlife corridors or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local regional or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Biological Resources Setting:

The Biological Resources responses are based on the comprehensive Biological Resources Assessment of the project area conducted by Golden Hills Biological Consulting based in Oroville. The Biological Resources Assessment is provided as Appendix F.

Several species of plants and animals within the state of California have low populations and limited distributions. State and federal endangered species legislation has provided the California Department of Fish and Wildlife (CDFW) and the U.S. Fish and Wildlife Service (USFWS) with a mechanism for conserving and protecting the diversity of plant and animal species native to the state. Many species have been formally designated as Threatened or Endangered or otherwise afforded special legal status.

According to the CEQA, “Significant effect on the environment” means a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including fauna and flora. Any project which would affect the continued existence of an endangered or threatened species or a special status species is considered to be a significant impact. Species listed as threatened or endangered, candidate species for listing, state species of special concern, and plants listed by the California Native Plant Society (CNPS) are defined as meeting specific criteria including but not limited to:

- plant and wildlife species that are listed, or proposed for listing as threatened or endangered under the California Endangered Species Act (California Administrative Code, Title 14, Section 670.5) or listed or proposed for listing under the federal Endangered Species Act (ESA);
- plant and wildlife species identified by the CDFW or USFWS as special-status or Species of Special Concern; and
- species protected under other regulations (e.g. Migratory Bird Treaty Act).

Species Database Research

Prior to initiating field surveys, an office review of relevant biological databases for special-status plant and wildlife species was carried out to develop a target list of potentially occurring special-status species and sensitive habitats in the project area including a review of the California Natural Diversity Data Base (CNDDB 2021) and CNPS rare plant inventory. A list of threatened and endangered species and species of concern and/or proposed or final Critical Habitat as designated under the ESA was also obtained from the USFWS Sacramento Field Office web site for the Palermo Clean Water Consolidation Project on September 29, 2021 (see Appendix F).

Field Surveys

Biologists conducted field surveys of the project area on October 6, 2021. Conditions were clear during the survey with temperatures of 75° F and light (0-3 mph) winds. A systematic walking survey along each roadway within the project area, along with a project buffer area, was carried out by two biologists searching for any evidence of special status plant and animal species that had documented occurrences near the Palermo project vicinity. Wildlife sign including tracks, feathers, burrows and scat were interpreted to detect species occurrences not seen.

Visual observations for target raptor, migratory bird and/or other or special-status avian species that may inhabit the area included examining the tree, shrub, and ground cover layers for nests and any active sign, such as molted feathers, whitewash, and prey remains. The presence/absence of potentially occurring special-status bat species was determined by surveying for suitable maternal, day, or night roosting habitat, such as natural cavities found in the boles of trees or dead limbs. Habitat notes and a list of flora and fauna found on the project site while conducting the survey is also provided in Appendix F. Observed wildlife species include Scrub jay, Turkey vulture, Song sparrow, Mockingbird and Mourning dove.

Response to Questions:

a;d): There are no special-status species present within the Biological Survey Area (BSA) based on the CNDDDB, USFWS IPaC species lists and the CNPS list of rare and endangered plants. Table 3 identifies the target list of 22 special-status species potentially occurring in the project area and includes the common name and scientific name for each species, regulatory status (state, federal, local, CNPS) and habitat descriptions. No natural communities were listed on the CNDDDB, CNPS and USFWS databases. The 22 species includes 6 plants, 3 invertebrates, 3 fish, 5 amphibians, 3 birds, and 2 insects.

The target special-status species identified in the Biological Resources Assessment (see Table 3) were assessed for their likelihood to occur within the project area based upon their habitat requirements, and the quality and extent of any suitable habitat within the project area. The following set of criteria was used to determine each species' potential for occurrence on the site:

- **Present:** Species is known to occur, based on CNDDDB, CNPS and/or USFWS records, and/or was observed onsite during the field survey(s).
- **May occur:** Species is known to occur on or near the project area (based on occurrence records within 5 miles and there is suitable habitat onsite).
- **Unlikely to occur:** Species is known to occur in the vicinity of the project area; however, there is poor quality or marginal habitat on site or in adjacent lands and the species was not observed during surveys. If these species were to occur at the site, they would likely be migrants, and are not likely to be resident or reproduce at the site due to a lack of appropriate habitat or outside of their known breeding range.
- **None:** Species is not known to occur on or in the vicinity of the project area and there is no suitable habitat for the species -OR- Species was surveyed for during the appropriate season with negative results for species occurrence.

The site contains no suitable habitat for any species that are of concern to the CDFW, CNPS and/or USFWS. Based on field observations by local biologist and literature review, no state or federal threatened or endangered plant or wildlife or special-status species would be impacted by project activities.

The project would not interfere substantially with the movement of any native resident or migratory wildlife species or migratory corridor or reduce the use of native wildlife nursery sites. The project does not threaten to eliminate any plant and/or wildlife community inhabiting this portion of Butte County.

Birds of prey (i.e., raptors) are protected in California under provisions of the State Fish and Wildlife Code, Section 3503.5, which states that it is “unlawful to take, possess, or destroy any birds in the Order Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto”. The Federal Migratory Bird Treaty Act (FMBTA: 16 U.S.C., sec. 703, Supp. I, 1989) prohibit killing, possessing, or trading in migratory birds, except in accordance with regulations prescribed by the Secretary of the Interior. Raptor nests are protected under the Migratory Bird Treaty Act (MBTA) and by Section 3503.5 of the California Fish and Game Code.

Raptors and migratory birds do forage and nest in various habitats throughout the Sierra Nevada foothills throughout spring and summer. The proposed project is planned for construction over consecutive years during the raptor and migratory bird nesting seasons (March 1-September 15). To mitigate potential impacts a qualified biologist will conduct multiple surveys over the course of the project and no earlier than two weeks prior to construction along planned roadways and visually assessing for active nests within 500 ft (150 m) of the project area, which is a CDFW recommended boundary. If an active nest is located the survey biologist will immediately consult with Butte County Department of Water and Resource Conservation and CDFW to avoid and/or minimize potential impacts such as establishing buffers. Other special-status species with a potential to occur in the project areas would be considered during the pre-construction survey. Therefore, potential impacts would be ***Less Than Significant with Mitigation Incorporated.***

Table 3. Special-status species and their potential to occur in the Biological Survey Area (BSA) of Palermo, Butte County.

Common Name <i>(Scientific Name)</i>	Status Fed/State/CNPS	Associated Habitats	Potential for Occurrence
CRITICAL HABITATS			There are no critical habitats within the BSA.
PLANTS			
Ahart’s dwarf rush <i>(Juncus leiospermus var. ahartii)</i>	_/_/1B.2	Vernal pools in valley/foothill grasslands.	None. There is no suitable habitat within the BSA.
Mexican mosquito fern <i>(Azolla microphylla)</i>	_/_/4.2	Marshes and swamps	None. There is no suitable habitat within the BSA.
Bristly leptosiphon <i>(Leptosiphon acicularis)</i>		Chaparral, cismontane woodland	None. There is no suitable habitat within the BSA.
Wooly meadowfoam <i>(Limnanthes floccosa ssp. floccosa)</i>	_/_/4.2	Valley and foothill grassland	None. There is no suitable habitat within the BSA.
Slender Orcutt grass <i>(Orcuttia tenuis)</i>	FT/SE/1B.1	Vernal pools, typically deep.	None. There is no suitable habitat within the BSA.
Brazilian watermeal <i>(Wolffia brasiliensis)</i>	_/_/2B.3	Marshes and swamps	None. There is no suitable habitat within the BSA.

Common Name <i>(Scientific Name)</i>	Status Fed/State/CNPS	Associated Habitats	Potential for Occurrence
INVERTEBRATES			
Vernal pool fairy shrimp <i>(Branchinecta lynchi)</i>	FT/ / _	Vernal pools.	None. There are no vernal pools within the BSA.
Vernal pool tadpole shrimp <i>(Lepidurus packardi)</i>	FE/ / _	Vernal pools.	None. There are no vernal pools within the BSA.
California linderiella <i>(Linderiella occidentalis)</i>	_ /SSC/ _	Vernal pools	None. There are no vernal pools within the BSA.
FISH			
Chinook salmon Central Valley spring-run <i>(Oncorhynchus tshawytscha)</i>	FT/ / _	Sacramento River and its tributaries.	None. There are no creeks of sufficient size with a hydrologic connection to the Feather River.
Steelhead Central Valley DPS <i>(Oncorhynchus mykiss)</i>	FT/SE/ _	Sacramento River and its tributaries.	None. There are no creeks or drainages of sufficient size with a hydrologic connection to the Feather River.
Delta smelt <i>(Oncorhynchus mykiss)</i>	FT/SE/ _	Found only from the San Pablo Bay upstream through the Delta to Yolo County.	None. There are no creeks or drainages of sufficient size with a hydrologic connection to the Feather River.
HERPTILES			
California red-legged frog <i>(Rana draytonii)</i>	FT/SSC/ _	Ponds in humid forests, woodlands, grasslands, coastal scrub, and stream sides with plant cover.	None. California red-legged frogs have been extirpated from the Central Valley since the 1960s.
Foothill yellow-legged frog Feather River clade <i>(Rana boylei)</i>	_ /ST/ _	Partly shaded, shallow streams and riffles with rocky substrates, often found in canyons and narrow streams.	None. The BSA does not contain suitable aquatic habitat during the FYLF breeding period.
Giant garter snake <i>(Thamnophis gigas)</i>	FT/ST/ _	Prefers freshwater marsh and low gradient streams.	None. There is no suitable habitat within the BSA.
Western pond turtle <i>(Emys marmorata)</i>	_ /SSC/ _	Perennial to intermittent bodies of water with pools.	None. There is no suitable habitat present within the BSA.

Common Name <i>(Scientific Name)</i>	Status Fed/State/CNPS	Associated Habitats	Potential for Occurrence
Western spadefoot <i>(Spea hammondi)</i>	_ /SSC/ _	Occurs in seasonal waterways used for breeding.	None. There is no suitable habitat within the BSA.
BIRDS			
California black rail <i>(Laterallus jamaicensis coturniculus)</i>	_ /ST, FP/ _	Brackish and fresh emergent wetlands with dense vegetation (e.g., bulrushes)	None. There is no suitable habitat within or adjacent to the BSA.
Tricolored blackbird <i>(Agelaius tricolor)</i>	_ /ST/ _	Colonial nester in large fresh water marshes. Forages in open habitats such as farm fields, pastures, cattle pens and lawns.	None. Although stands of cattails do exist adjacent to the project, these are too small and separated to be adequate habitat.
Yellow-billed cuckoo <i>(Coccyzus americanus)</i>	T/ _/ _	Riparian forests with cottonwood-willows. Requires a dense understory for nesting.	None. There is no suitable habitat within or adjacent to the BSA.
INSECTS			
Monarch butterfly <i>(Danaus plexippus)</i>	Candidate/ _/ _	Larval host plants are members of the milkweed family (Asclepidaceae).	None. There is no suitable habitat within or adjacent to the BSA.
Valley elderberry longhorn beetle <i>(Desmocerus californicus dimorphus)</i>	T/ _/ _	Larval host plant is the elderberry.	None. There is no suitable habitat within or adjacent to the BSA. No elderberry bushes seen.
CODE DESIGNATIONS			
FE or FT = Federally listed as Endangered or Threatened FC = Federal Candidate Species SE or ST = State listed as Endangered or Threatened SC = State Candidate Species SR = State Rare Species SSC = State Species of Special Concern FP = State Fully Protected Species SNC = CDFW Sensitive Natural Community		CNPS California Rare Plant Rank (CRPR): CRPR 1B = Rare or Endangered in California or elsewhere CRPR 2 = Rare or Endangered in California, more common elsewhere CRPR 3 = More information is needed CRPR 4 = Plants with limited distribution 0.1 = Seriously Threatened 0.2 = Fairly Threatened 0.3 = Not very Threatened	
Potential for Occurrence: for plants it is considered the potential to occur during the survey period; for birds and bats it is considered the potential to breed, forage, roost, or over-winter in the BSA during migration. Any bird or bat species could fly over the BSA, but this is not considered a potential occurrence.			

b-c): Natural stream channels, wetlands, and other seasonal or permanent water features are protected by state (CDFW) and federal laws, the latter under the jurisdiction of the U.S. Army Corps of Engineers (USACE). Within sections of the stormwater conveyance ditches and underneath bridge crossings, fresh emergent wetland occurs where there is seasonal and semi-perennial water flow. Species encountered include cattails (*Typha angustifolia*), common tule (*Schoenoplectus acutus*), primrose-willow (*Ludwigia peploides*), dotted smartweed (*Persicaria punctata*), and water plantain (*Alismalan ceolatum*). These plant species are all obligate hydrophytes. The wetlands are tightly limited to within relatively short lengths of certain roadside ditch channels and do not extend beyond. They occur infrequently within the community, being seen in the mid-northern half of the community, or near the southwest portion of the community. Locations of these seasonal wetland features are shown below and an example of the bridge crossing between Railroad Avenue and Melvina Avenue where all planned construction will take place within the roadway right-of-way.

Although no disturbance to these wetland features or seasonal channels under bridge crossings is planned, care would be taken during pipeline installation so that fill or discharge into these roadside stormwater conveyance ditches and semi-aquatic features/wetland areas does not occur. Water main construction will take place within existing roadway right-of-way. Mitigation measures outlined below and in Section 15.10 Hydrology and Water Quality would avoid significant impacts. The project would not have a substantial adverse effect on any sensitive habitat identified in local or regional plans, policies or regulations, or by CDFW or USFWS. The project would not affect federally protected wetlands. Therefore, these potential impacts would be ***Less Than Significant with Mitigation Incorporated***.

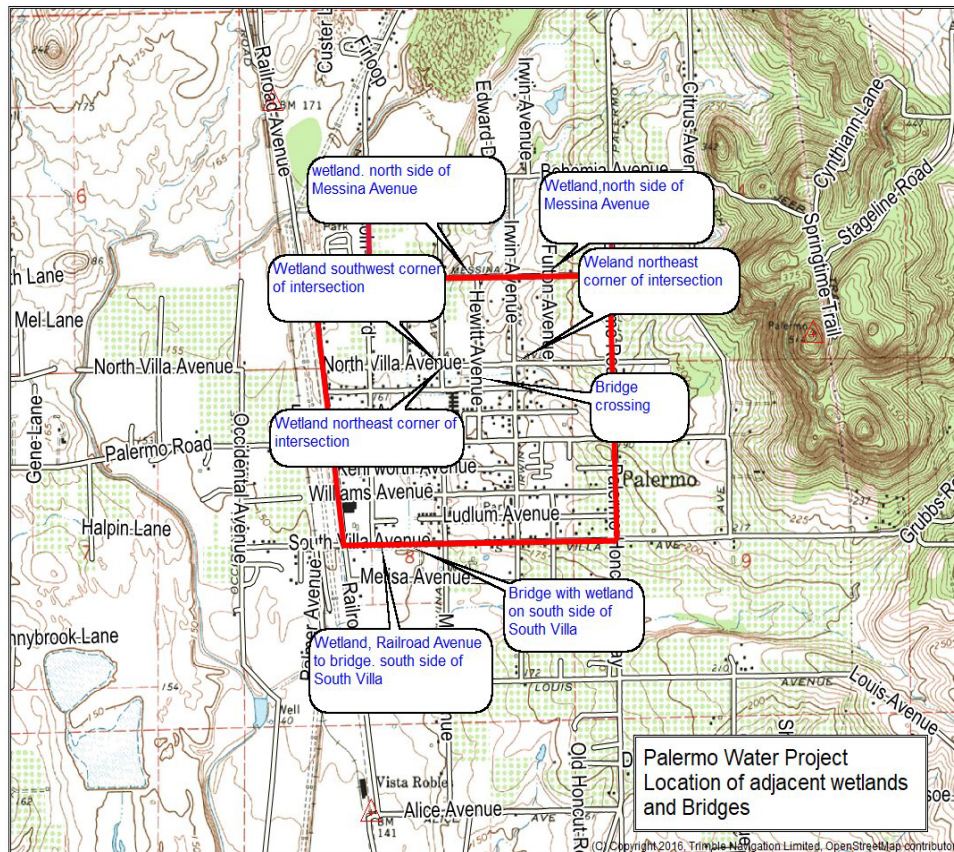




Photo 1. Bridge crossing over seasonal channel between Railroad Avenue and Melvina Avenue. All planned construction will take place within the roadway right-of-way.

e-f): The project would not conflict with the provisions of a Habitat Conservation Plan or Natural Community Conservation Plan. The proposed project will not have a significant impact on rare, endangered, threatened, or other special-status species identified in regional plans, policies, or regulations or by CDFW or USFWS. The proposed project will not have an effect upon any Designated Critical Habitat as defined in the ESA. Therefore, there would be *No Impact*.

Mitigation Measure(s)

15.4 (a;d) - The following mitigation measure shall be incorporated into the project to avoid impacts to raptors, migratory birds and other special-status species.

The proposed project is planned for construction over consecutive years during the raptor and migratory bird nesting seasons (March 1- September 15). To mitigate potential impacts a qualified biologist will conduct multiple surveys over the course of the project and no earlier than two weeks prior to construction along planned roadways and visually assessing for active nests within 500 ft (150 m) of the project area, which is a CDFW recommended boundary. If an active nest is located the survey biologist will immediately consult with Butte County Department of Water and Resource Conservation and CDFW to avoid and/or minimize potential impacts such as establishing buffers. Other special-status species with a potential to occur in the project areas would be considered during the pre-construction survey. Therefore, potential impacts would be *Less Than Significant with Mitigation Incorporated*.

15.4 (b-c) - The following mitigation measures shall be incorporated into the project to avoid impacts to stormwater conveyance ditches.

- Contractor shall have sediment control measures including silt fencing and wattles around all roadside ditches to avoid sediment entering these water features.
- Contractor shall ensure that all spoil piles are stabilized and covered with heavy-duty plastic sheeting when not in use or during any precipitation event.
- All soils disturbed during construction will be stabilized immediately following construction.

- Water that may be needed to flush and pressure test the pipelines will be properly discharged according to applicable waste discharge requirements. No water will be discharged to any perennial or ephemeral surface waters.
- All equipment will be inspected for leaks prior to and during construction operations.
- The contractor will have on-site, at all times, a Spill Containment Kit for immediate deployment in the case of a sudden and unexpected spill of pollutants.
- All temporary and permanent BMPs implemented for this project will be properly maintained by the contractor to ensure their effectiveness.
- The contractor will conduct inspections of the site on a daily basis and more frequently prior to and after storm events. Equipment, materials, and workers will be available for immediate repairs and rapid response to emergencies if needed.

15.5 CULTURAL RESOURCES -- Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Cultural Resources Setting:

Butte County contains a rich diversity of archaeological, prehistoric and historical resources. The General Plan 2030 EIR observes that the “archaeological sensitivity of Butte County is generally considered high, particularly in areas near water sources or on terraces along water courses”. The Cultural Resources responses are based on a systematic archaeological pedestrian survey of the project Area of Potential Effect (APE) conducted by Ms. Lori Harrington , Cultural Resource Associates, Chico. The Cultural Resources Assessment is provided as Appendix G.

Response to Questions:

a-d): A records search was performed by the Northeast Information Center (NEIC) at Chico State University, Chico, California on October 6, 2021. The results indicated that two previous surveys have been conducted within the project area (839 and 14341). These surveys were negative for resources and

no resources have been located within the project area. There are three known resources within ¼ of the project area (04-004575, 51-000222, 51-000223) all of which are transmission lines. These resources will not be impacted by the proposed project.

A pedestrian survey, which entails the inspection of all land surfaces that can reasonably be expected to contain cultural resources was performed on September 29, 2021. The ground, was examined for artifacts (e.g., flaked stone tools, tool-making debris, stone milling tools, baked clay items, fire-affected rock), soil discoloration that might indicate the presence of a cultural midden, soil depressions, and features indicative of the former presence of structures or buildings (e.g., postholes, foundations) or historic debris (e.g., metal, glass, ceramics).

The pedestrian survey was negative for cultural content. There was no surface evidence of historic or prehistoric sites, features, artifacts or isolates. The project area has undergone extensive disruption due to grading and construction activities. The potential for subsurface deposits being encountered is very unlikely. Cultural sensitivity for this project area is considered *low*.

Based on the results of the pedestrian survey and Records Search, the sensitivity for finding cultural resources at the project site is unlikely. No cultural resources were identified either through background research or by a surface inspection of the APE, and no historic properties are present within the project APE. The project will have no effect on historical, archaeological, paleontological, or other cultural resources. There are no known formal cemeteries within the project area. Potential impacts to cultural resources with mitigation measures presented below are *Less Than Significant With Mitigation Incorporated*.

Mitigation Measure(s) – The following mitigation measures shall be incorporated into the project to avoid impacts to Cultural Resources.

15.5 (a-d): Should unanticipated cultural resource be encountered during construction activities, work must cease, and a qualified archaeologist contacted immediately to determine appropriate measures to mitigate any adverse impacts to the discovered resources. If human remains are discovered during construction-related activities notification of the Butte County Coroner is required. If the Butte County Coroner determines that the discovered remains are those of Native American ancestry, then the Native American Heritage Commission must be notified by telephone within 24 hours. Sections 5097.94 and 5097.98 of the Public Resources Code describe the procedures to be followed after the notification of the Native American Heritage Commission.

15.6 ENERGY -- Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Response to Questions:

a) The Butte County General Plan (<http://generalplan.co.butte.ca.us>) establishes goals and policies to achieve energy conservation and increase use of cleaner, renewable, and locally controlled energy sources. These goals include increasing the use of sustainable energy sources and reducing reliance on non-sustainable energy sources to the extent possible.

Construction activities associated with the proposed project require the use of energy (e.g., fuel and electricity) for various purposes such as the operation of construction equipment and tools, as well as excavation, grading, and construction vehicle travel. These activities are not significant impacts related to wasteful, inefficient, or unnecessary consumption of energy resources. Therefore, these impacts would be **Less Than Significant**.

b) The proposed project would not conflict with or obstruct implementation of a state or local plan for renewable energy or energy efficiency. Therefore, there would be **No Impact**.

Mitigation Measure(s) - None Required

15.7 GEOLOGY AND SOILS -- Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Expose people or structures to potential substantial adverse effects including the risk of loss injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known Fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Expose people or structures to potential substantial adverse effects including the risk of loss injury, or death involving strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Expose people or structures to potential substantial adverse effects including the risk of loss injury, or death involving seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Expose people or structures to potential substantial adverse effects including the risk of loss, injury, or death involving landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
e) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Be located on expansive soil, as defined in Table 18-1-B of the uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Response to Questions:

a-g): The project is limited to consolidation of the Palermo water system (groundwater) with SFWPA surface treated water. There is no aspect of the project that would expose people or property to increased risk during strong seismic ground shaking or ground failure. The project would not expose people or structures to potential adverse effects from landslides nor will the pipelines, services laterals and meter boxes be placed on unstable soils or present significant potential for soil erosion.

Other hazards, such as lateral spreading, a phenomenon associated with liquefaction, subsidence, or other geologic or soil conditions that could create unstable subsurface conditions is not a significant hazard from the project activities. The project site would not expose people to risk related to potential geologic impacts. BMPs and erosion control measures will be in place during all construction activity. These impacts would be *Less Than Significant*.

h): There are no demands for wastewater disposal systems required for the project. Therefore, there would be *No Impact*.

Mitigation Measure(s) - None Required

15.8 GREENHOUSE GAS EMISSIONS -- Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Response to Questions:

a) The Butte County Climate Action Plan (CAP) was adopted on February 25, 2014 and provides goals, policies, and programs to reduce GHG emissions, address climate change adaptation, and improve quality of life in the county. Programs and actions in the CAP are intended to help the County sustain its natural resources, grow efficiently, ensure long-term resiliency to a changing environmental and economic climate, and improve transportation. Measures and actions identified in the CAP lay the groundwork to achieve the adopted General Plan goals related to climate change.

The proposed project entails installation of pipelines, service lines and meter boxes in existing roadways and parcels. These construction activities would not involve a substantial increase in mobile, stationary, or operational emissions. The only increase in GHG emissions generated would occur during the construction phase. Due to the relatively small size of the project and short duration construction time period (i.e., 200 days), the GHG emissions resulting would not significantly contribute to the cumulative levels in the area. Therefore, with the mitigation measures outlined in Section 15.3-Air Quality these impacts would be *Less Than Significant with Mitigation Incorporated*.

b): The Butte County General Plan and Butte County Climate Action Plan establish numerous policies relative to greenhouse gases. The proposed project would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases. The anticipated increase in emissions from construction activities would not conflict with the applicable with policies adopted for the purpose of reducing GHG emissions. Therefore, there would be *No Impact*.

Mitigation Measure(s) The following mitigation measures shall be incorporated into the project.

15.8 (a): All mitigation measures outlined in section 15.3 Air Quality shall be implemented throughout the course of construction activities to minimize Greenhouse Gas Emissions.

15.9 HAZARDS AND HAZARDOUS MATERIALS -- Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Emit hazardous emissions or handles hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working within the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Response to Questions:

a-b): The proposed project activities would involve the use of heavy equipment which would contain fuels, oils, and lubricants, and solvents to operate. Implementation of the mitigation measures outlined below during construction activities would not create a significant hazard to the public or the environment through the transport, use, or disposal of hazardous materials, and would not result in conditions involving the release of hazardous materials into the environment. Therefore, these potential impacts would be *Less Than Significant with Mitigation Incorporated*.

c): The nearest school to the project area is the Palermo Middle School at 7350 Bulldog Way, Palermo 95968 and a section located within 1,000 feet of the project site. However, with proper implementation of mitigation measures outlined below, the project would not generate any hazardous emissions or

substances or waste that would adversely impact the environment. Therefore, impacts would be **Significant with Mitigation Incorporated**.

d): No known hazardous sites or material were observed within the immediate vicinity of the proposed project area construction activities would not create a significant hazard to the public or the environment. Therefore, there would be **No Impact**.

e-f): The project area is not located within an airport land use plan area or within the vicinity of a private airstrip or safety zone. Therefore, there would be **No Impact**.

g): The proposed project will not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Therefore, there would be **No Impact**.

h): The project would not expose people or structures to a significant loss, injury, or death attributable to wildfires. Implementation of the mitigation measures below would reduce the risk of fire due to construction equipment or activities and minimize a source of construction-related fire. Therefore, impacts are **Less Than Significant**.

Mitigation Measure(s)

15.9 (a-c) - The following mitigation measures shall be incorporated into the project to avoid impacts from hazards and hazardous materials.

- Fueling and application of lubricants and fluids will be performed in a designated area with appropriate BMPs.
- All construction equipment shall be maintained in proper tune according to the manufacturer’s specifications. Equipment shall be checked by a certified mechanic and determined to be running in proper condition before the start of work.
- Fluids, oils, lubricants, and trash will be disposed according to County guidelines in order to prevent any potentially hazardous materials impact.

15.10 HYDROLOGY AND WATER QUALITY -- Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local ground water table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner, which would result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Create or contribute runoff water, which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Place housing within a 100-year flood hazard area as mapped on a federal Flood hazard Boundary or Flood Insurance rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Place structure within a 100-year flood hazard area, which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Expose people or structures to a significant loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i) Inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Response to Questions:

a;e) Runoff from ground-disturbing activities could contain sediment and other pollutants with the potential to affect the environment. All ground disturbance activities will be performed in accordance with Butte County and SFPWA requirements. The project area shall be routinely inspected to verify that Best Management Practices (BMPs) are properly implemented and maintained. On completion of the work, the area will be left in a condition that would provide for proper drainage and prevent erosion. Implementation of the mitigation measures would ensure that the project does not have the potential to cause any degradation to water quality or violate any water quality standards or waste discharge requirements. Therefore, these impacts would be ***Less Than Significant with Mitigation Incorporated***.

b): The proposed project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge. On the contrary, the project would result in less use of groundwater from

consolidation with SFWPA. The Butte County General Plan (<http://generalplan.co.butte.ca.us>) encourages residents/parcels to connect to a community system. Therefore, there would be **No Impact**.

c): Construction of the proposed project would not substantially alter the existing drainage pattern of the area that would result in substantial erosion or siltation or substantially increase the rate or amount of surface runoff resulting in flooding on- or off-site or otherwise substantially degrade water quality. Therefore, there would be **No Impact**.

d): The project would not result in a substantial increase in the amount of runoff from the site. The project is not designed to result in sources of pollutants that would degrade water quality. Therefore, there would be **No Impact**.

f, g): The proposed project is not located within a 100-year flood zone, as designated by the Federal Emergency Management Agency (FEMA) and would not place housing in special flood hazard areas. Thus, there would be no impact related to placement of a structure in a 100-year flood hazard area. All construction will be performed according to applicable standard construction and safety codes and would not create a public safety hazard; or result in any increase in offsite water surface elevations. Therefore, there would be **No Impact**.

h): The proposed project area is not within a designated flood inundation area and would not involve the construction of occupied structures. There would be no substantial risk of loss, injury, or death in the event of flooding at the project site. Therefore, there would be **No Impact**.

i): The project site is not located near an ocean coast or enclosed body of water that could produce a seiche or tsunami, nor is the site in a area that would create mudflows. Therefore, there would be **No Impact**.

j): The proposed project area is located inland. Consequently, there is no risk of a seiche or tsunami. There is no risk related to mudflow hazard from construction activities. Therefore, there would be **No Impact**.

Mitigation Measure(s)

15.10 - The following mitigation measures shall be incorporated into the project to minimize impacts to hydrology and water quality.

1. Retain soil and sediment on the construction site

- Construction activities shall have sediment control measures including silt fencing and wattles as needed around the project perimeter for the duration of construction to avoid sediment runoff especially during and after storm events.
- Contractor shall ensure that all spoil piles are stabilized and covered with heavy-duty plastic sheeting when not in use or during any precipitation event.
- In order to reduce the potential to release fugitive dust associated with project activities, dust control measures will be carried out as needed including sweeping and watering.
- All soils disturbed during construction will be stabilized immediately following construction.

2. Non-Storm Water Management

- Water that may be needed to flush and pressure test the pipelines will be properly discharged according to applicable waste discharge requirements. No water will be discharged to any perennial or ephemeral surface waters.

3. Spill Prevention and Control

- All equipment will be inspected for leaks prior to and during construction operations.
- The contractor will have on-site, at all times, a Spill Containment Kit for immediate deployment in the case of a sudden and unexpected spill of pollutants.

4. Maintenance, Inspection, and Repair

- All temporary and permanent BMPs implemented for this project will be properly maintained by the contractor to ensure their effectiveness.
- The contractor will conduct inspections of the site on a daily basis and more frequently prior to and after storm events. Equipment, materials, and workers will be available for immediate repairs and rapid response to emergencies if needed.

15.11 LAND USE AND PLANNING -- Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with any applicable Habitat Conservation Plan or Natural Community Conservation Plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Response to Questions:

a-c): The Butte County General Plan 2030 Update provides a comprehensive, long-term plan for the physical development of the County related to planning. The General Plan consists of development policies that set forth objectives, principles and standards that guide land use decisions within the County. The project would not physically divide an established community. The proposed project is consistent with the land use and zoning designation within the area and would not conflict with a local or regional

land use policy. The proposed project area is not affected by a Habitat Conservation Plan or Natural Community Conservation Plan. Therefore, there would be *No Impact*.

Mitigation Measure(s) - None Required

15.12 MINERAL RESOURCES -- Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Response to Questions:

a-b): The proposed project area is not in a County designated mineral resource area. No demands for mineral resources are required with this project. Implementation of the project would not result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan. Therefore, there would be *No Impact*.

Mitigation Measure(s) - None Required

15.13 NOISE -- Would the project result in:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration noise levels?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

e) For a project located within an airport land use plan or, where such a plan has not been adopted within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project ex-pose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Response to Questions:

a-b;d): Butte County has a noise ordinance and noise is a concern throughout the County, especially in the vicinity of noise-sensitive uses such as residences, schools and churches. Places where people live, sleep, recreate, worship and study are generally considered to be sensitive to noise because intrusive noise can be disruptive to these activities. The County General Plan Noise Element prescribes policies that lead to the preservation and enhancement of the quality of life for the residents of Butte County by securing and maintaining an environment free from hazardous and annoying noise.

The existing noise environment in the vicinity of the project area is largely residential and light commercial traffic. Noise impacts associated with the project would be a source of temporary increases in ambient noise levels that could be audible to nearby land uses. Equipment to be used may include an excavator, backhoe, dump truck, contractor vehicles and power tools. Construction would occur over approximately 200 working days. The temporary increase in noise levels during project construction would not expose people to substantial noise levels in excess of standards established in the County general plan or applicable standards of other agencies. The proposed project would not expose persons to excessive groundborne vibration noise levels.

Construction activities are limited to the hours listed below. The noise increase would be short-term and no substantial long-term operational noise would be associated with the project. Implementation of the mitigation measures below would reduce these impacts to ***Less Than Significant with Mitigation Incorporated.***

c): The proposed project will not result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project. Therefore, there would be ***No Impact.***

e-f): The proposed project is not located within the vicinity of an airport land use plan and would not result in people living or working within the vicinity of the project area to be exposed to excessive noise levels from airport/aircraft operations. Therefore, there would be ***No Impact.***

Mitigation Measure(s)

15.12 (a-b;d) - The following mitigation measures shall be incorporated into the project to minimize construction related noise impacts.

- All internal combustion engine driven equipment with intake and exhaust mufflers shall be in good running condition and appropriate for the equipment.

- Stationary noise-generating equipment shall be located as far as possible from sensitive receptors when sensitive receptors adjoin or are near a construction project site.
- Project activities will be limited to daytime hours between 7:00 a.m. and 7:00 p.m. on weekdays and Saturdays between 8:00 a.m. and 6:00 p.m.
- Unnecessary motorized idling of equipment will be avoided.
- Signs shall be placed along construction areas with contact information to report noise violations to Butte County Development Services/Code Enforcement at (530) 538-7601.

15.14 POPULATION -- Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Induce substantial population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through the extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Response to Questions:

a): The Butte County General Plan 2030 Update provides a comprehensive, long-term plan of the physical development of the County related to planning. The proposed project is not intended to support additional growth within the service area. The project would not affect local population centers or demand for new housing or businesses that would induce substantial direct growth in the area. Future development of the surrounding area would be planned in accordance with zoning and land usage. Therefore, there would be *No Impact*.

b-c): The proposed project would not result in the displacement of any existing housing units or people. Consequently, there are no population and/or housing displacement impacts associated with the proposed project. Therefore, there would be *No Impact*.

Mitigation Measure(s) - None Required

15.15 PUBLIC SERVICES -- Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response time or other performance objectives for any of the public services:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Police Protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Response to Questions:

a-e): The proposed project involves the installation of new pipelines, services lines and meter boxes and would not affect local population centers or increase Fire or Police Department staffing to serve the project. The project would not result in a population increase that would require schools, parks or other public facilities. Therefore, there would be **No Impact**.

Mitigation Measure(s) - None Required

15.16 RECREATION --				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Response to Questions:

a-b): The Palermo Park is within the project area. However, the proposed project would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial

physical deterioration of a facility would occur or be accelerated. The project would not involve creation of new housing or otherwise generate additional demand for recreational facilities. Therefore, there would be *No Impact*.

Mitigation Measure(s) - None Required

15.17 TRANSPORTATION/TRAFFIC -- Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause an increase in traffic, which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase on either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at inter-sections)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Result in a change in traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Result in inadequate parking capacity?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (bus turnouts, bicycle racks)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Response to Questions:

a): The proposed project would not conflict with the local traffic circulation system. There will be an increase in vehicle trips to the project site associated with the contractor's activities but would not result in changes in vehicle circulation patterns or alter the design of any roadways. Transportation of construction equipment and material will take place on public roadways and will not exceed roadway capacity. The project would not result in impacts related to transportation, circulation, parking, or transportation policies, plans, or programs. Therefore, these impacts would be *Less Than Significant*.

b-c): The project would not exceed a level of service standard established by the County or result in a change in traffic patterns that results in substantial safety risks. The project would not result in physical changes to roadways, and therefore, would not result in impacts related to transportation, circulation, parking, or transportation policies, plans, or programs. The project would not generate substantial traffic, such that alternative transportation modes would be needed. Therefore, there would be **No Impact**.

d): The project does not include any design features that could result in increased safety hazards. Therefore, there would be **No Impact**.

e): Construction activities would involve temporary road or lane closures during pipeline installation but no emergency access routes would be affected by the project. Therefore, this impact would be **Less Than Significant**.

f): The project would not conflict with the County’s overall transportation service goal. Therefore, there would be **No Impact**.

g): The project would not generate substantial traffic, such that alternative transportation modes would be needed. Therefore, there would be **No Impact**.

Mitigation Measure(s) - None Required

15.18 TRIBAL CULTURAL RESOURCES -- Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

As of July 1, 2015, California Assembly Bill 52 (AB 52) was enacted and expanded CEQA by establishing a formal consultation process for California tribes within the CEQA process. The bill specifies that any project may affect or cause a substantial adverse change in the significance of a tribal cultural resource would require a lead agency to “begin consultation with a California Native American tribe that is traditional and culturally affiliated with the geographic area of the proposed project.” Section 21074 of AB 52 also defines a new category of resources under CEQA called “tribal cultural resources.” Tribal cultural resources are defined as “sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe” and is either listed on or eligible for the California Register of Historical Resources or a local historic register, or if the lead agency chooses to treat the resource as a tribal cultural resource.

A substantial adverse change upon a tribal cultural resource would be one wherein the resource is demolished or materially altered so that it no longer conveys its historic or cultural significance. Cultural resources include prehistoric and historic period archaeological sites; historical features, such as rock walls, water ditches and flumes, and cemeteries; and architectural features. Often such sites are found in foothill areas, areas with high bluffs, rock outcroppings, areas overlooking deer migratory corridors, or near bodies of water.

Response to Questions:

a-b): In compliance with AB 52, notification letters were distributed to numerous Native American tribes notifying each tribe of the opportunity to provide a determination regarding the proposed project. The tribes were identified based on a list provided by the Native American Heritage Commission (NAHC). The NAHC indicated that there are no Sacred Land listings for the project area or adjacent lands. The contact list from the NAHC were contacted and requested to supply any information they might have concerning prehistoric sites or traditional use areas within the project area (see Appendix G).

One response was received from Creig Marcus, Tribal Administrator for the Estome Yumeka Tribe of the Enterprise Rancheria who stated:

“...Thank you for the notification. After a thorough examination of the project and discussions with our cultural site monitor, we have determined that this project is in the aboriginal territory of the Estom Yumeka Maidu Tribe. Our records search failed to locate any known cultural sites within the project boundaries. However, the Tribe retains the right to consult should any post review discoveries be made.”

Given the level of previous disturbance within the project area, it is not expected that any tribal cultural resources remain within the proposed project area. However, construction of the proposed project would require grading and excavation activities and may have the potential to encounter native soils, which may contain undiscovered tribal cultural resources. Implementation of mitigation measure outlined in Section 15.5- Cultural Resources would avoid potential impacts to undiscovered prehistoric resources, historic resources, and human remains that may be uncovered during construction activities and reduce potential impacts to ***Less Than Significant with Mitigation Incorporated***.

Mitigation Measure(s) The following mitigation measures shall be incorporated into the project to minimize construction related impacts to Tribal Cultural Resources.

15.18 a-b): In the unlikely event tribal resources are discovered during ground disturbing activities, compliance with the mitigation measures outlined in Section 15.5 CULTURAL RESOURCES provides instructions in the event a material of potential cultural significance is uncovered.

15.19 UTILITIES AND SERVICE SYSTEMS_-- Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand and to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Response to Questions:

a-b): The proposed project would result in the reorganization of the Palermo community's domestic well users into a community surface water supply owned and operated by the SFWPA. The proposed project does not include the construction of any wastewater generating uses or wastewater flows that would exceed wastewater treatment requirements of Regional Water Quality Control Board. The project would not result in the need for new or expanded wastewater facilities and would not have an adverse effect on wastewater treatment requirements as the community relies entirely on on-site wastewater systems. Therefore, there would be *No Impact*.

c): The project will not substantially increase drainage runoff. There is no need for substantial construction of stormwater infrastructure related to project development. Therefore, there would be *No Impact*.

d-e): The project is aimed at reorganizing the Palermo water system into the SFWPA. The project would not result in the need for new or expanded water supplies. There are sufficient surface water supplies and treatment capacity to service the community from SFWPA. The project would not affect the capacity of a wastewater treatment provider nor require a landfill. All solid waste disposal needs would comply with all federal, state, and local regulations related to solid waste. Therefore, there would be **No Impact**.

f- g): Project activities may generate construction debris and excavated soil. This would not affect landfill capacity because the amounts would not be substantial and would occur only during the construction period. Contractors will have a plan in place to store and dispose of all construction debris, according to relevant state, federal, and local statutes. Therefore, there would be **No Impact**.

Mitigation Measure(s) - None Required

15.20 WILDFIRE -- If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Due to slope, prevailing winds, and other factors exacerbate wildfire risk, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Require the installation of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may be exacerbate fire risk or that may result in temporary or on-going impacts to the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Expose people or structures to significant risk, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

The project is not located in or near state responsibility areas or lands classified as very high fire hazard severity zones; therefore, it will not substantially impair an adopted emergency response plan or emergency evacuation plan, exacerbate wildfire risks, require the installation or maintenance of associated infrastructure, or expose people or structures to significant risks. The Project site is identified as an area outside of Cal Fire’s ‘Very High Fire Hazard Severity Zone’. The project site is located in a Local Responsibility Area (LRA) pursuant to the Fire Hazard Severity. The nearest fire station (Cal Fire/Butte County Fire Station #72) is located at 2290 Palermo Road next to the Palermo School and within the immediate proposed project area.

Response to Questions:

a) Specific roadways would have lane closures during pipeline installation but there would be no lane closures involved in the proposed project that would constrict emergency access or interfere with an emergency evacuation plan. Therefore, there would be **No Impact**.

b) The project site is not located in an area that is susceptible to wildland fires. Workers associated with the construction activities work in specific residential roadways for a short duration. No conditions or factors have been identified in the project area that would exacerbate wildfire risks. Therefore, there would be **No Impact**.

c) The topography of the project site is generally level. The project area is not in a flood area or landslide potential. Therefore, there would be **No Impact**.

d) The *proposed project would not expose* people or structures to significant risk, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. Therefore, there would be **No Impact**.

15.21 MANDATORY FINDINGS OF SIGNIFICANCE	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probably future projects)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environment effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Response to Questions:

a): The proposed project does not have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal. The project will not adversely affect any species identified as a candidate for sensitive or special status species, in local or regional plans, policies or regulations, or by California Department of Fish and Wildlife or United States Fish and Wildlife Service. The project would not eliminate important examples of the major periods of California history or prehistory.

Potentially significant impacts have been identified in the areas of Air Quality, Biological Resources, Cultural Resources, Greenhouse Gases, Hydrology and Water Quality, Noise, Transportation and Traffic, and Tribal Cultural Resources. Many of these impacts have been reduced to Less Than Significant through application of the required mitigation measures provided in those sections and summarized in the Mitigation Monitoring and Reporting Program (Appendix H). Therefore, impacts would be ***Less Than Significant with Mitigation Incorporated***.

b): The proposed Palermo Clean Water Consolidation Project would allow Butte County (County) to address the drinking water quality issues faced by the Palermo community. There are a total of 490 parcels within the Palermo Clean Water Consolidation project footprint of which 110 parcels currently receive treated surface water from the SFWPA. The remainder of the community within the proposed project limits relies on groundwater for residential use. The consolidation project would bring all parcels Safe Drinking Water Act (SDWA) compliant clean treated potable water to the community and eliminate any future potential health issues. The Butte County General Plan (<http://generalplan.co.butte.ca.us>) encourages residents/parcels to connect to a community system.

The project would not induce population growth or result in the development of new housing or employment-generating uses and would not create a cumulative effect related to increased demand for services or utilities, the expansion of which could result in significant environmental effects. The project would not result in irreversible environmental damage. Therefore, impacts would be ***Less Than Significant***.

c): As described throughout the preceding checklist sections, the project is designed to consolidate the Palermo groundwater supplied community into the SFWPA. The implementation of the project would reduce the potential health and safety issues associated with wastewater contamination of domestic wells. The project does not have environment effects which will cause substantial adverse effects on human beings, either directly or indirectly. Therefore, there would be ***No Impact***.

Report Preparation

This Initial Study was prepared for Lohdorff & Scalmanini Consulting Engineers, Inc. by Inland Ecosystems, Inc. Principal author was Glenn Merron (gmerron@inlandecosystems.com).

References Cited

Butte County General Plan 2030 Update. www.buttecounty

Butte County Air Management District. 2004. www.bcaqmd.org

South Feather Water and Power Agency. 2020 Urban Water Management Plan.

APPENDIX A

**Palermo Clean Water Consolidation Project
Draft Fact Sheet Flyer and Announcement to
attend November 17, 2021 Town Hall meeting**



PALERMO CLEAN WATER CONSOLIDATION PROJECT



Butte County Department
of Water and Resource
Conservation

South Feather Water
and Power Agency

Butte County and the South Feather Water and Power Agency (SFWPA) are working together to find solutions to bring safe and reliable drinking water to the Palermo Community!

Current Problems and Challenges

- Most lots in Palermo have both a well and septic.
- Because many wells were installed years ago, they have deteriorated over time.
- During periods of heavy rain, there are many wells that are being cross-contaminated with septic effluent.
- This contamination is not just in the wells, it has moved into the upper aquifer.
- Well samples taken in 2007 and again in 2021 show that up to 25% of the sampled wells in Palermo have coliform contamination above safe levels to consume.
- Operating your well requires a dependable power source and has electricity costs.

Current Solutions and Benefits

- Connecting current well owners to SFWPA infrastructure means a safe and reliable supply of water for your family and outdoor use.
- Reducing the use of wells means a reduction of contamination moving into the aquifer.
- Expanding the SFWPA infrastructure throughout Palermo means a reliable water source for fire suppression, and more fire hydrants.
- SFWPA water rates are very budget friendly.

PROJECT DESCRIPTION

Butte County and SFWPA have partnered through a Memorandum of Understanding to develop and find funding for the Palermo Clean Water Consolidation Project. SFWPA already provides treated surface water from the Feather River to more than one hundred parcels within the Palermo community. This Project would connect your property to existing SFWPA infrastructure and install new water mains, valves, fire hydrants, and meters for those not adjacent to the existing SFWPA water facilities.

PROJECT SCHEDULE AND TIMELINE

If grant funding is awarded for the Project in 2022, the goal is to have the Project completed by mid-2024.

PALERMO CLEAN WATER PROJECT LOCATION

The Project will provide a clean and reliable source of drinking water to Palermo residents within the service area enclosed by Messina Avenue to the north, South Villa Avenue to the south, the railroad to the west and Upper Palermo Road to the east.



WHAT WILL IT COST ME TO CONNECT?

The County and SFWPA are applying for grant dollars to cover all of the Project costs defined in the preliminary Project schedule and timelines. Grant funding would pay for project construction and for residential service connections to connect households within the project area to the SFWPA water system infrastructure. Once connected, the resident/household would become a SFWPA water customer, and would be subject to paying current SFWPA water rate charges.

HOW DO I PARTICIPATE IN THE PROJECT?

We would like to get your support to include in the grant application, so please fill out the provided Letter of Interest and return to the County ASAP! Having a high level of resident interest in Project participation will help the County and SFWPA secure grant funds to cover all of the Project costs.

For additional information, please contact Christina Buck at (530) 552-3593 or bcwater@buttecounty.net or Kristen McKillop at (530) 534-1221 or kmkillop@southfeather.com.

For more detailed Project information please visit:

https://www.buttecounty.net/waterresourceconservation/Palermo_Clean_Water



PALERMO CLEAN WATER CONSOLIDATION PROJECT

Join us for a Palermo Town Hall meeting:

Wednesday, November 17 at 6:00 p.m.

Palermo Grange

7600 Irwin Ave, Palermo, CA 95968

How important is clean drinking water to you?

A solution for clean and reliable water in Palermo is in the works.

Please come hear updates and find out how important you are for next steps!

For more information visit: www.buttecounty.net, or call 530.352.3595

Exhibit D

PALERMO CLEAN WATER CONSOLIDATION PROJECT

308 Nelson Avenue, Oroville, CA
ph: 530.552.3595, fax: 530.538.3807
email: bcwater@buttecounty.net
website: https://www.buttecounty.net/water-resourceconservation/Palermo_Clean_Water

Project Boundary

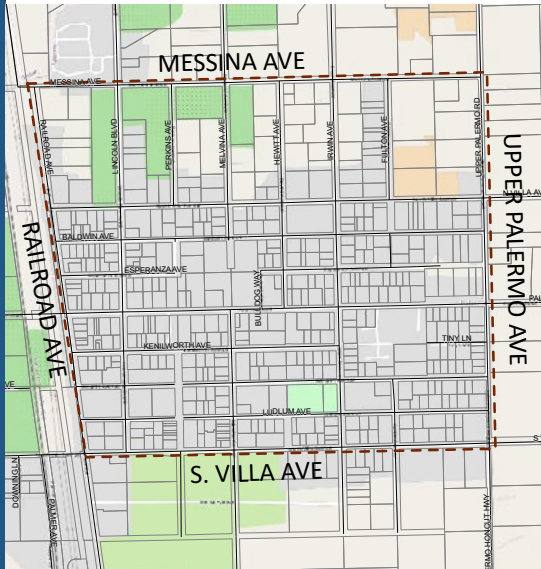


Exhibit D

APPENDIX B

**Memorandum of Understanding (MOU)
Palermo Clean Water Consolidation Project**



Butte County Board of Supervisors Agenda Transmittal

Clerk of the Board Use Only

Agenda Item:

4.09

Subject: Memorandum of Understanding (MOU) with South Feather Water and Power Agency (SFWPA) for the Palermo Clean Water Consolidation Project for the Drinking Water State Revolving Fund (DWSRF) Application

Department: Water and Resource Conservation

Meeting Date Requested: September 28, 2021

Contact: Christina Buck

Phone: 530.552.3595

Regular Agenda

Consent Agenda

Department Summary: *(Information provided in this section will be included on the agenda. Attach explanatory memorandum and other background as necessary).*

The majority of residents within Palermo have individual groundwater wells for potable water supply and on-site septic systems for wastewater treatment and disposal. Flooding, high groundwater levels and continuous septic system failures have resulted in cross contamination of the existing wells and possibly contamination of the groundwater aquifer. If left unresolved, individual wells will continue to experience cross contamination issues and pose a risk to the groundwater aquifer due to seasonal flooding, high groundwater levels and continued septic system failures.

The County received technical assistance funds in the Northern Sacramento Valley Integrated Regional Water Management Plan Mountain County Funding Area to help understand the needs in Palermo. A technical memorandum was developed documenting a draft scope for the Palermo Clean Water Consolidation Project (Project) and identifying funding sources. The Project would connect 380 parcels in the Palermo community to the South Feather Water and Power Agency's (SFWPA) water system within the boundaries of Messina Avenue on the north, Upper Palermo Road on the east, South Villa Avenue on the south, and Railroad Avenue on the west. The SFWPA is the logical choice for the Palermo community given the existing distribution system in the area, which already serves 110 parcels. The estimated cost for the project is \$12.4 million.

Multiple sources of funding may be necessary to fully fund the Project. The Drinking Water State Revolving Fund (DWSRF) is a likely source of funding for the Project. An MOU between the County and SFWPA is needed to submit an application to the DWSRF. The proposed MOU outlines the roles and responsibilities for the County and SFWPA from grant application to project implementation. The County would be the grant applicant and administrator as well as fully participate in all outreach for the Project. SFWPA would oversee the project implementation including construction. The Water and Resource Conservation Department recommends entering into an MOU with SFWPA outlining each agency's role in acquiring funding and implementing the Project.

Fiscal Impact:

The MOU with SFWPA is non-monetary and there is no fiscal impact.

Personnel Impact:

Does not apply.

Action Requested:

Approve MOU and authorize the Chair to sign.

Administrative Office Review: Casey Hatcher, Deputy Chief Administrative Officer

**MEMORANDUM OF UNDERSTANDING
BETWEEN
THE COUNTY OF BUTTE
AND
THE SOUTH FEATHER WATER AND POWER AGENCY**

**REGARDING DEVELOPMENT, IMPLEMENTATION, AND ADMINISTRATION OF
THE PALERMO CLEAN WATER CONSOLIDATION PROJECT**

THIS MEMORANDUM OF UNDERSTANDING (“MOU”) is dated September 28, 2021 and made between the **COUNTY OF BUTTE**, a political subdivision of the State of California (“County”) and the **SOUTH FEATHER WATER AND POWER AGENCY**, an independent special district (“Agency”). This MOU is made in reference to the following facts:

RECITALS

Whereas the community of Palermo is located in the southern portion of Butte County with a population of approximately 5,000 residents;

Whereas the majority of the residents within Palermo have individual groundwater wells for potable water supply and on-site septic systems for wastewater treatment and disposal;

Whereas flooding, high groundwater levels and continuous septic system failures have resulted in cross contamination of the existing wells and possibly contamination of the groundwater aquifer;

Whereas the community of Palermo has experienced high rates of septic failures during periods of high rainfall, which has resulted in stormwater and upper aquifer contamination;

Whereas if left unresolved, individual wells will continue to experience cross contamination issues and pose a risk to the groundwater aquifer due to seasonal flooding, high groundwater levels and continued septic system failures;

Whereas the County has explored solutions for drinking water and wastewater in the Palermo community for years;

Whereas the County received technical assistance funds to help address small community water/wastewater systems within the Northern Sacramento Valley (NSV) Integrated Regional Water Management (IRWM) Plan region in the Mountain County Funding Area (MCFA), including Palermo and contracted with Luhdorff & Scalmanini Consulting Engineers to develop a technical memorandum documenting a draft project scope and identifying funding sources for the project;

Whereas SFWPA is a California Irrigation District, formed and existing under the California Water Code which operates with a high Technical, Managerial and Financial

(TMF) Capacity to provide treated water service to communities in southeast Butte County;

Whereas the Agency currently serves 110 parcels in the Palermo community;

Whereas the Agency is the logical choice for consolidation with Palermo given the existing distribution system in the area as illustrated in the service area map included as Exhibit A, and the County and Agency agree it will benefit the residents and the parties for the Agency to expand infrastructure to serve a broader area of the Palermo community;

Whereas the Palermo Clean Water Consolidation Project (Project) would connect 380 parcels in the Palermo community to the Agency's existing and expanded water system within the boundaries of Messina Avenue on the north, Upper Palermo Road on the east, South Villa Avenue on the south, and Railroad Avenue on the west, as reflected on the map attached as Exhibit B;

Whereas currently, the estimated costs for the Project are approximately twelve million four hundred and forty thousand dollars (\$12,440,000), as reflected in the preliminary construction estimate attached as Exhibit C;

Whereas various funding sources may be available for the Project including the State Water Resources Control Board Drinking Water State Revolving Fund (DWSRF), NSV IRWM grant funding, and federal and State drought mitigation funding; and

Whereas the County and Agency plan to apply to various funding sources to fully fund the Project.

NOW THEREFORE, in consideration of the foregoing and mutual covenants contained herein, the County and Agency do hereby agree as follows:

1. Recitals Incorporated. The above recitals are true and correct, and are hereby incorporated into this MOU.
2. Responsibilities of County.
 - a. *Funding Applications*. The County will prepare and submit applications to all applicable and likely federal and State funding sources for the Project, including the development of all required application elements (i.e., general, financial, technical and environmental packages).
 - b. *Funding Award*. In the event the County is awarded funding for the Project, the County will provide:
 - i. grant administration, including required project and fiscal reporting to respective funding agencies;
 - ii. development of a subrecipient agreement with the Agency;
 - iii. monitoring of subrecipient's (Agency) work for the Project;
 - iv. support for public outreach and community relations related to the Project, including, but not limited to, participation in the selection of the subrecipients/subcontractors, use of County logo and branding

on Project materials, staff review of public outreach plans and materials, and staff point of contact for community engagement.

3. Responsibilities of Agency.

- a. *Funding Applications.* The Agency will support the County's funding applications for the Project including, but not limited to, a statement of support and providing the County with the data necessary to complete the application packages.
- b. *Funding Award.* In the event the County is awarded funding for the Project, the Agency will partner with the County as a subrecipient of funds to carry out the Project. The Agency will execute the required subrecipient agreement and hire a subcontractor for the management and implementation of each line item and subsequent tasks for the Project in accordance with the estimated timeline attached as Exhibit D including, but not limited to:
 - i. Public outreach and community engagement;
 - ii. Annexation of parcels in the Project area, as outlined in the annexation scheduled attached as Exhibit E;
 - iii. Installation of public water infrastructure;
 - iv. Installation of private water infrastructure (meter to dwelling); and
 - v. Decommissioning of private wells as needed.

The Agency's assigned Project Manager will complete Project and financial reporting as required by the County.

- c. Upon completion of the Project as defined, the Agency will establish service accounts with each newly connected customer, and shall bill according to established rates and charges for service of domestic water delivery as fixed by the Agency's Board of Directors.
4. Funding. In the event the County is awarded funding for the Project, it will not be construed to commit the County or the Agency to additional funding for the project.
5. Term. This MOU shall become effective as of the last date signed by both parties, and shall remain in effect until execution of a subrecipient agreement(s) by the County and Agency for all necessary funds for the Project.
6. Termination/Modification of Practices/Amendment of MOU. Either party may terminate this MOU with or without cause by providing 30 days' advance written notice to the other party. The parties shall cooperate reasonably to modify their practices and amend this MOU to reflect any changes in applicable law. No amendment to this MOU is valid except in writing executed by all parties to this MOU.

7. Liability to Third Parties; Indemnification. To the extent applicable, each party shall defend, indemnify, and hold the other harmless, to the maximum extent permitted by law, from claims, damages, expenses, and liabilities, including attorney fees and costs, that arise out of its duties or obligations, and those of its governing board members, officers, employees, representatives, or agents, under this MOU, or from the negligence or willful misconduct of itself or any of the foregoing. The parties' duties of indemnity do not apply to the extent a claim, damage, expense, or liability arises out of an indemnified party's failure to perform this MOU, or an indemnified party's negligence or willful misconduct. The right to be indemnified extends to an indemnified party's officers, board members, employees, representatives, and agents.
8. Compliance with Laws. Notwithstanding any provision to the contrary contained in this MOU, the parties agree that no provision of this MOU shall require any party to violate any applicable statute, rule of law or regulation.
9. Insurance. The County and Agency shall each secure and maintain in full force and effect during the full term of this MOU commercial general liability insurance or participation in a self-insurance program, including coverage for owned and non-owned automobiles and other insurance necessary to protect the public, with limits of liability of not less than \$1 million combined single limit bodily injury and property damage. Policies shall be written by carriers reasonably satisfactory to each party. On request, a certificate evidencing the insurance requirements of this paragraph shall be provided.
10. No Third-Party Beneficiary. Nothing in this MOU shall be construed to create any rights of any kind or nature in any other party not a named party to this MOU.
11. Authorization. Each party executing this MOU and each person executing this MOU in any representative capacity, hereby fully and completely warrants to all other parties that he or she has full and complete authority to bind the person or entity on whose behalf the signing party is purporting to act.
12. Entire Agreement/Amendments. This MOU supersedes all previous agreements or understandings, and constitutes the entire understanding between the parties with respect to the above referenced services, terms of compensation, and otherwise. This MOU shall not be amended, except in a writing that is executed by authorized representatives of both parties.
13. Governing Law and Venue. This MOU shall be deemed to be made in, and shall be governed by and construed in accordance with the laws of the State of California (excepting any conflict of laws provisions which would serve to defeat application of California substantive law). Venue for any action arising from this MOU shall be in Butte County, California.

///

This MOU, which is effective on the date set forth above, is executed by the parties on the dates indicated below.

COUNTY

South Feather Water and Power Agency

Bill Connelly Date
Chair, Butte County Board of
Supervisors

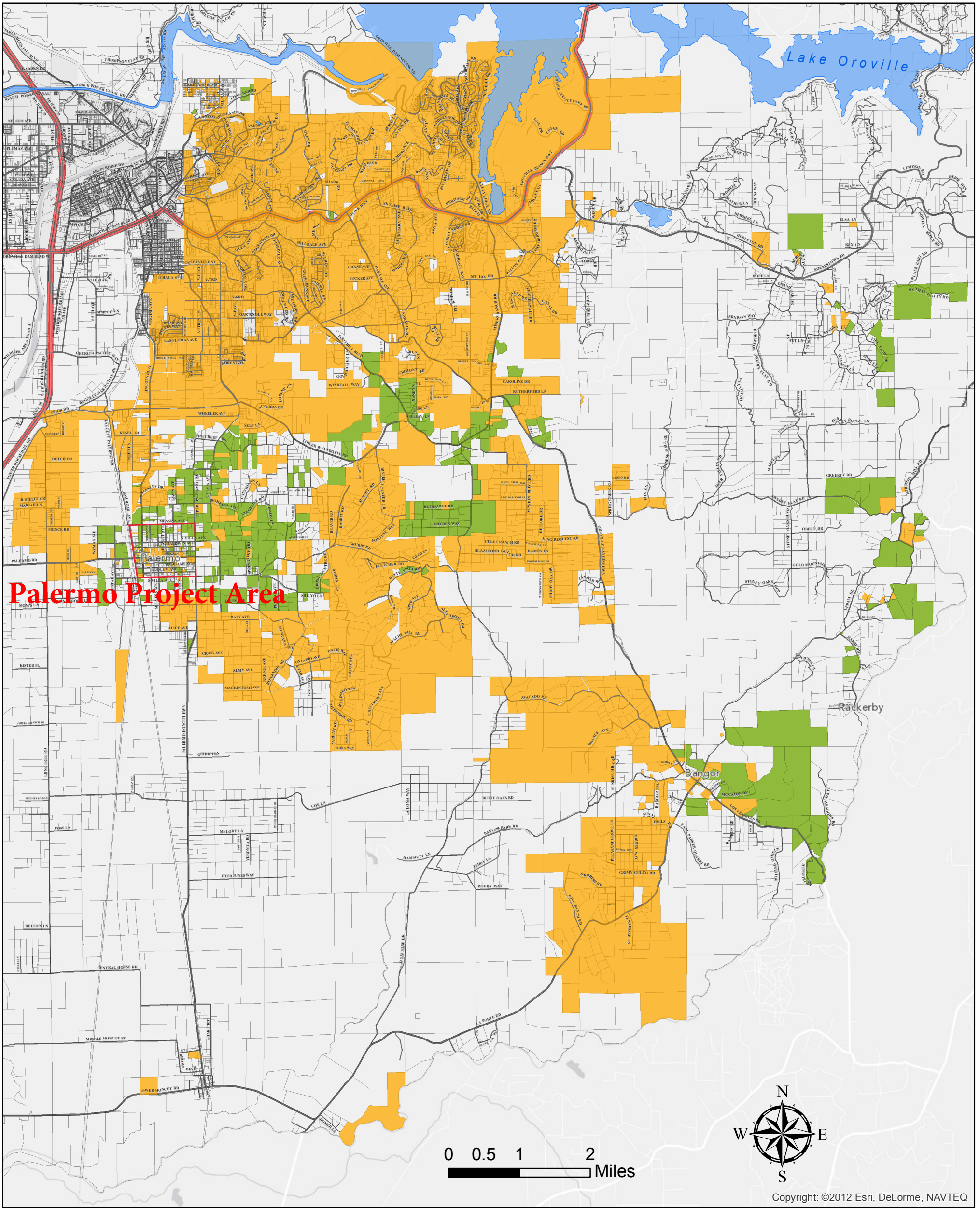
Date

REVIEWED FOR CONTRACT POLICY COMPLIANCE
General Services Contracts Division

REVIEWED AS TO FORM
BRUCE S. ALPERT
Butte County Counsel


By Date

By Date



Copyright: ©2012 Esri, DeLorme, NAVTEQ

SFWPA Boundary Map

	Annexed & Original
	Parcels With Rights To Non-Potable Service Only

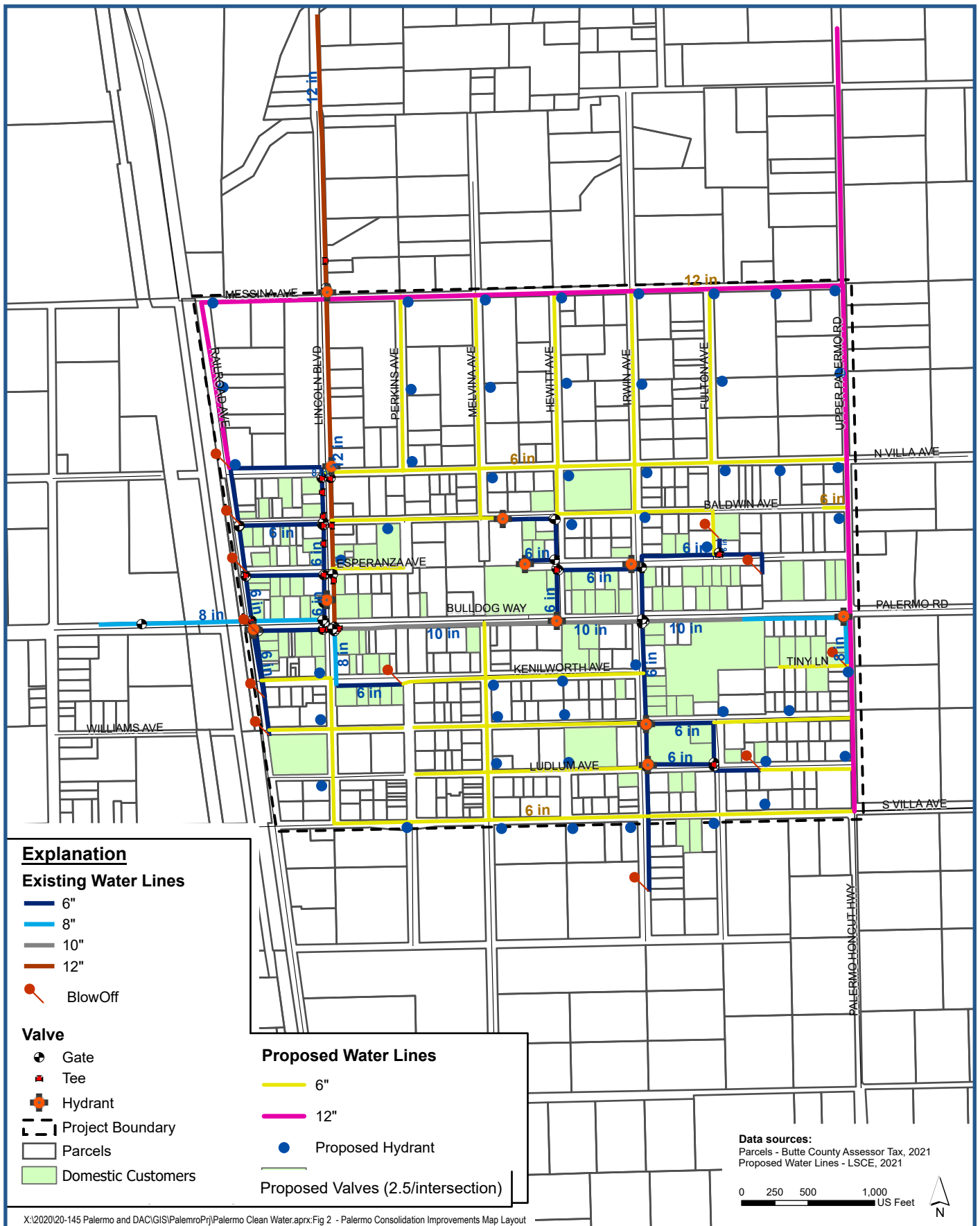
SOURCES:
This map was prepared by Leroy A. Christophersen March 2016. Parcel data obtained from BCAG - Feb 2016.

DISCLAIMER:
Areas depicted by this map are not accurate to engineering or surveying standards. Map is provided for illustration purposes only.

South Feather Water and Power Agency(SFWPA) has made every effort to ensure the accuracy, correctness and timeliness of materials provided but assumes no responsibility for errors or omissions.

In no event shall SFWPA become liable to users of these data, or any other party, for any loss or direct, special, incidental, or consequential damages, including but not limited to time, money, or goodwill, arising from the use or modification of the data.

EXHIBIT B - PRELIMINARY PROJECT BOUNDARY MAP



Explanation

Existing Water Lines

- 6"
- 8"
- 10"
- 12"
- BlowOff

Valve

- ⊕ Gate
- ⊕ Tee
- ⊕ Hydrant
- Project Boundary
- Parcels
- Domestic Customers

Proposed Water Lines

- 6"
- 12"
- Proposed Hydrant
- ⊕ Proposed Valves (2.5/intersection)

Data sources:
 Parcels - Butte County Assessor Tax, 2021
 Proposed Water Lines - LSCE, 2021

0 250 500 1,000
 US Feet



X:\2020\20-145 Palermo and DAC\GIS\PalermoPrj\Palermo Clean Water.aprx:Fig 2 - Palermo Consolidation Improvements Map Layout



Palermo Consolidation Improvements

Palermo Clean Water Consolidation Project
 Butte County

Figure 2

EXHIBIT C

PRELIMINARY CONSTRUCTION COST ESTIMATE

Bid Item No.	Bid Item Description	Estimated Quantity	Unit of Measure	Unit Cost	Total Estimated Cost	
1	12-inch Water Main, C-900 ^a	10,000	LF	\$75	\$750,000	
2	6-inch Water Main, C-900 ^a	30,000	LF	\$60	\$1,800,000	
3	6-inch & 12-inch Valves	150	EA	\$3,000	\$450,000	
4	3/4-inch Water Service Line	380	EA	\$2,000	\$760,000	
5	Meters/Meter Boxes	380	EA	\$1,000	\$380,000	
6	Parcel Plumbing (Meter to Home)	380	EA	\$1,000	\$380,000	
7	Fire Hydrants	30	EA	\$5,000	\$150,000	
8	Paving (Trench Restoration)	105,000	SF	\$15	\$1,575,000	
9	Testing and Disinfection	1	LS	\$25,000	\$25,000	
Bid Item Total:					\$6,270,000	
SUBTOTAL:					\$6,270,000	
				Mobilization	1%	\$62,700
				Contingency	12%	\$721,050
Planning, Surveying, Engineering, Design, Outreach and Annexation					13%	\$815,100
				Construction Management	3%	\$188,100
				Traffic Control	1%	\$62,700
				CEQA/NEPA/Permitting	1%	\$62,700
TOTAL CONSTRUCTION					\$8,182,350	
10	Decommission Existing Wells	380	EA	\$5,000	\$1,900,000	
11	Connection Fees	380	EA	\$4,363	\$1,657,940	
TOTAL PROJECT					\$11,740,290	
SFWPA In-kind Services ^b					\$700,000	
TOTAL w/In-Kind					\$12,440,290	
Palermo Clean Water Consolidation Project					\$32,737.61	
Total Project Cost/Connection						

Notes:

a) Reduced construction cost based on SFWPA crews performing work

b) SFWPA in-kind services based on bid item construction cost savings

EXHIBIT E PROPOSED ANNEXATION SCHEDULE

ID	Task	2021					2022										2023													
		A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
1	Butte County/SFWPA Project MOU Approval																													
2	Distribute/Collect Project Letters of Support																													
3	Complete Project Annexation Legal Descriptions and Plat Maps																													
4	Public Annexation - Public Meeting #1																													
5	Prepare SFWPA Board Project Annexation Item																													
6	SFWPA Board Approval - Project Annexation Item																													
7	SFWPA submits Annexation Application to Butte County LAFCo																													
8	Project Annexation - Public Meeting #2																													
9	Butte County LAFCo Approval - Project Annexation Item																													
10	Approved Annexation Filed with State																													
**	Submit DWSRF Construction Funding Application																													
**	DWSRF Construction Application Added to FY22-23 Fundable List																													
**	Projected DWSRF Construction Funding Agreement Execution																													

APPENDIX C

**Property Owner's Statement of Understanding and
Interest for Connection to SFWPA (October 2021)**

PROPERTY OWNER'S STATEMENT OF INTEREST FOR CONNECTION TO SOUTH FEATHER WATER AND POWER AGENCY WATER SYSTEM [November 2021]



I understand that Butte County intends to submit applications to the State Water Resources Control Board to obtain funding to construct the infrastructure required to provide safe drinking water to my property. Benefits to me and the community include:

- Provides reliable water service to meet maximum daily demands
- Addresses public health risk
- Provides protection against Public Safety Power Shutoff (PSPS) events
- Provides fire protection
- Provides economies of scale for future improvements
- Negates the need to maintain existing domestic well and associated costs

Please initial ONE of the following choices below indicating your interest in becoming a customer of the SFWPA water system.

____ (initial) I want to become a customer of the SFWPA water system when a water distribution pipeline and service lateral is constructed adjacent to my property and is fully funded at no cost to me. If Butte County is unsuccessful in obtaining 100 percent grant funding for the project and financial contribution is necessary, I will be re-consulted about my interest in connecting to the SFWPA water system.

_____ (initial) I plan to continue to use my well for outdoor use.

_____ (initial) I plan to no longer use my well for outdoor use and would like my well properly destroyed (in accordance with CA Water Code) at no cost to me.

OR

____ (initial) I do not want to be connected to the SFWPA water system. I understand that if I choose to become a customer when grant funding is no longer available, I will be solely responsible for all costs to connect to the SFWPA water system, including, but not limited to: installation of a water main, service lateral, a water meter and box, connection from your water system to meter box, and the SFWPA water connection fee. By not connecting, I remain responsible for my household water supply and the maintenance and associated costs of my domestic well.

Property Owner Signature: _____ Date: _____ Phone: _____

Name of Property Owner: _____

Address: _____, [City], CA _____

Mailing Address if different: _____

Please return this letter of interest to:

*Butte County Department of Water and Resource Conservation
308 Nelson Avenue
Oroville, CA 95965
Attn. Christina Buck, Assistant Director*

If you have additional questions or concerns, please contact Christina Buck at 530-552-3595 or bcwater@buttecounty.net.

For additional information on the current water construction projects, please contact: Kristen McKillop, Regulatory Compliance Manager at South Feather Water and Power at 530-534-1221.

More details regarding the project are available online at:

https://www.buttecounty.net/waterresourceconservation/Palermo_Clean_Water

Thank you for completing this letter of interest. Both Butte County and South Feather Water and Power Agency looks forward to the opportunity to provide the Palermo Community with a safe reliable water supply in the future and will keep you apprised of grant funding status and project construction activities. Keep an eye out for future meetings to keep you updated on this project.

Palermo Clean Water Consolidation Project



Background Information

The purpose of this Letter of Interest is to gather input from landowners in Palermo on their interest in receiving treated surface water supply from the South Feather Water and Power Agency (SFWPA). Butte County is pursuing grant funds in partnership with SFWPA from the State of California to fully fund the project. If funded, building the infrastructure to connect households to the SFWPA water system would occur at no cost to landowners. Broad community support and expressed interest in becoming a SFWPA customer will help the project be awarded grant funding.

How does this affect me?

The water currently flowing to your house may not be safe to drink. Your domestic well is subject to repair and maintenance needs, and is susceptible to water quality degradation from septic sewer systems in the vicinity. Many wells in the Palermo area also have detections of coliform bacteria and nitrate concentrations that exceed Safe Drinking Water Act primary drinking water standards.

As a long-term solution option, your property can be connected to the SFWPA water system to receive a permanent, safe, and reliable water supply. Butte County, in partnership with SFWPA, is applying for SFWPA water system construction project improvement grant funds to serve your area. Your property can be included in the project scope of work if you are interested.

If you choose to participate, upon connection, you would become a SFWPA water customer subject to current water rate charges. The current average monthly water bill for those who have already connected to the SFWPA system is less than the electricity cost of running your existing well.

What about my well?

Well destruction will not be a requirement to hook up to the SFWPA water system. However, inactive wells pose a serious threat to groundwater quality and a safety hazard to humans and animals. It is strongly recommended that any onsite wells are properly destroyed as part of the SFWPA water system connection process. A well is considered "abandoned" or permanently inactive if it has not been used or maintained for a period of one year. Abandoned wells are required to be destroyed in accordance with the California Well Standards. Please contact Butte County Public Health, Environmental Health Division at (530) 552.3880 or BCLandUse@buttecounty.net for information on well destruction requirements.

APPENDIX D

**Palermo Clean Water Consolidation Project
Final Technical Memorandum prepared by Lohdorff &
Scalmanini Consulting Engineers**



FINAL TECHNICAL MEMORANDUM

DATE: August 16, 2021 Project No.:20-2-145

TO: Christina Buck, PhD, Interim Director
Department of Water and Resource Conservation, Butte County

CC: Rath Moseley, General Manager
South Feather Water and Power Agency
Kristen McKillop, Regulatory Compliance Coordinator
South Feather Water and Power Agency

FROM: Oscar Serrano, PE, Senior Engineer, LSCE
Eddy Teasdale, PG, CGH, Supervising Hydrogeologist, LSCE
Jacques DeBra, Principal, Water Resource Management Services

SUBJECT: PALERMO CLEAN WATER CONSOLIDATION PROJECT

INTRODUCTION

Luhdorff & Scalmanini, Consulting Engineers (LSCE) prepared this Technical Memorandum (TM) for the Palermo Clean Water Consolidation Project for the Butte County Department of Water and Resource Conservation (County). The goal of the TM is to define a scope of work for consolidation of the Palermo community with the South Feather Water and Power Agency (SFWPA) to address existing health and safety issues within the Palermo community. LSCE and Water Resources Management Services (WRMS) will also be assisting the County with pursuing funding for construction of the Palermo Clean Water Consolidation Project.

BACKGROUND

The County would like to address the health and safety issues being faced by the Palermo community. The majority of the parcels within the Palermo community are served by individual water wells for their potable water supply and by on-site septic systems for wastewater treatment and disposal. Flooding, high groundwater levels and continued septic system failures have resulted in cross contamination of the existing wells and possibly contamination of the groundwater aquifer. The County would like to resolve these water issues by pursuing a water system consolidation with the SFWPA. The SFWPA already provides treated surface water to several parcels within Palermo. The County has already taken steps to address the health issues within Palermo by submitting the project for inclusion in the Northern Sacramento Valley (NSV) Integrated Regional Water Management (IRWM) Plan which opens up an array of funding opportunities.

PALERMO

Palermo is a small severely disadvantaged community in Butte County with a population of over 5,000 people located about five (5) miles south of the City of Oroville and east of Highway 70. According to the most recent census data, the median household income is \$42,227. The majority of the residents within Palermo have individual groundwater wells (the majority of existing domestic wells are a depth of 75-125 feet). The community has experienced high rates of septic failures during periods of high rainfall which has resulted in stormwater and upper aquifer contamination. The area has poor surface drainage and soils are slow to absorb water from on-site septic drain fields (Lumos, 2010). To prevent future contamination, a water system consolidation is recommended for the Palermo community and the logical partner is the SFWPA which has existing facilities within the community with 110 of the 490 parcels targeted for consolidation already receiving water service through SFWPA's water system.

Previous Studies

In 2007, the County Public Health Department, Division of Environmental Health, completed the Palermo Sanitary Survey report. For the study, the County surveyed residents within the Palermo community, performed field inspections, water sampling, reviewed well and septic systems, etc. The study found that of the 35 individual wells that were sampled, ten (10) tested positive for total coliform and some were close to the primary drinking water MCL for Nitrates. Environmental Health worked with local engineering firms to produce technical assessments of the existing conditions and the results obtained during the Sanitary Survey.

In 2010, Lumos and Associates prepared the Palermo Wastewater Study Preliminary Engineering Report which looked at alternatives to solve the community's septic system problems. The report recommended installation of a wastewater collection system and construction of a wastewater treatment plant. The cost of the recommended alternative was \$28.4 million in 2010 dollars and assumed a wastewater treatment facility providing secondary treatment, filtration, and disinfection with wastewater storage ponds.

In 2012, NorthStar Engineering produced a summary review of data available (including a study done by Cook Associates Engineering Consultants - *Pollution Study, Palermo, Butte County, 1987*) regarding municipal sewer service versus onsite wastewater treatment to service the Palermo community. This review also documents the high cost for sewer infrastructure and the alternative of a community system due to the required connection fees to the wastewater treatment plant. Even if financially feasible with possible grants or loans to defray costs, these wastewater options would still not remedy the issue of contaminated source water for consumption.

Water Quality

Recently, the County and SFWPA completed water quality testing within the Palermo community. As discussed in the TM prepared by LSCE titled Palermo Water Quality Testing Results (see **Appendix A**), the 2021 water quality results indicated that 24% of the wells sampled tested positive for Total Coliform which is consistent with the 2007 water quality testing results by the County which resulted in 29% of the wells testing positive. The Palermo Clean Water Consolidation project would bring Safe Drinking Water Act

(SDWA) compliant treated potable water to the Palermo community and eliminate any future potential health and safety issues.

SOUTH FEATHER WATER AND POWER AGENCY

The SFWPA dates back to 1919 when it was called the Oroville-Wyandotte Irrigation District. Today, the SFWPA consists of a service area of approximately 31,000 acres within Butte County. SFWPA has surface water rights from the South Fork of the Feather River and Slate Creek (a tributary of the North Fork of the Yuba River). SFWPA operates a series of reservoirs with a combined storage capacity of 164,577 acre-feet. Water is treated at the Miner's Ranch Treatment Plant which has a capacity of 14.5 million gallons per day (MGD). SFWPA supplies treated surface water to 6,931 service connections and irrigation water to over 500 customers (SFWPA 2020 Urban Water Management Plan, 2021) within Butte County. In 2020, SFWPA supplied 1,737 million gallons of treated surface water or 4.76 MGD.

SFWPA is the logical choice for consolidation with Palermo as SFWPA has existing water distribution facilities within the vicinity of Palermo and currently supplies drinking water to 110 parcels within the Palermo community as shown in **Figure 1**.

PALERMO ALTERNATIVE ANALYSIS

The best long-term solution to the health and safety issues being faced by the Palermo community and the local groundwater aquifer is a water system consolidation with SFWPA. If left unresolved, individual wells will continue to experience cross contamination issues and pose a risk to the groundwater aquifer due to seasonal flooding, high groundwater levels and continued septic system failures. In addition, any existing wells that fail or must be retired from service would need to be replaced with wells meeting current well construction standards including deeper seals to at a least 100-foot depth and may need to be drilled to a greater depth as well. Existing wells taken out of service would need to be properly abandoned in accordance with County and State well standards.

PREFERRED PROJECT – PALERMO CLEAN WATER CONSOLIDATION PROJECT

Project Description

The proposed boundary limits for the Palermo Clean Water Consolidation Project are: Messina Avenue on the north, Upper Palermo Road on the east, South Villa Avenue on the south and Railroad Avenue on the west as shown in **Figure 2**.

Project Demand and Supply Analysis

There are 490 parcels within the boundary limits shown in **Figure 2**, of which 110 are currently provided water by SFWPA. Assuming an average occupancy rate of 3 people per dwelling unit (pdu) and 490 parcels, the projected population is 1,470. Assuming a water usage of 200 gallons per capita per day (GPCD) the average day demand (ADD) would be 294,000 gallons. Per the State Water Resources Control Board (SWRCB) Division of Drinking Water's (DDW) Title 22 California Regulations Related to Drinking Water Chapter 16, California Waterworks Standards, the maximum day demand (MDD) shall be calculated by

multiplying the ADD by 2.25 and the peak hour demand (PHD) shall be calculated by multiplying the MDD by 1.5. This results in a MDD of 661,500 gallons (0.66 MGD) and a PHD of 992,250 gallons (0.99 MGD) for the project area customer base.

In 2020, the SFWPA had a MDD of 11.6 MGD and a PHD of 16.6 MGD. The SFWPA has a water treatment plant capacity of 21 MGD. **Table 1** below shows that SFWPA has sufficient water treatment plant capacity to meet the additional demand from Palermo Clean Water Consolidation Project. SFWPA is able to meet the minimum fire protection requirement of 1,000 gpm for a fire duration of 2-hours with existing water system fire protection capacity. No additional storage or source capacity is recommended/needed SFWPA 2020 UWMP.

Table 1. Supply and Demand Analysis	
Demand Scenario	Water Demand (MGD)
Palermo Max Day Water Demands	0.66
SFWPA Max Day Water Demand	11.6
SFWPA + Palermo Max Day Demand	12.26
SFWPA Water Treatment Plant Capacity	21.0

Project Design Criteria

The project will connect to SFWPA’s existing water system with 6-inch and 12-inch C-900 PVC water mains within the project limits to provide a looped water system for the Palermo community. Fire hydrants will be installed per code requirements within the system. Meter boxes with advanced metering infrastructure (AMI) smart water meters will be installed at each parcel to automate future meter reading services. Services lines will be run from the meter to each customer home. Well abandonment is discussed in the subsequent section. SFWPA will be responsible for the operation and maintenance of the water distribution system improvements associated with project implementation.

A summary of the design criteria is provided below in **Table 2** and the proposed improvements are shown in **Figure 2**.

Table 2. Project Design Criteria	
Parcels	490
Average Occupancy Rate (People per Dwelling Unit)	3
Population Projection	1,470
Gallons per Capita per Day (GPCD)	200

Water Demands	Gallons	MGD
Average Day Demand	294,000	0.29
Maximum Day Demand	661,500	0.66
Peak Hour Demand	992,250	0.99

Storage Capacity	Gallons	MGD
Residential Fire Requirement = 1,000gpm*2 hours	120,00	0.12

Water Distribution System	
Water Mains	6-inch to 12-inch, PVC C-900
Valves	2 per intersection
Fire Hydrant	800-1,000 feet apart
Water Meters	AMI Technology
Water Services	Minimum ¾-inch

Well Abandonment

Well Abandonment is an eligible project cost for water consolidation projects (such as the Palermo Clean Water Consolidation Project) in particular where older groundwater system infrastructure is being abandoned and converted to a treated surface water supply as part of the consolidation improvements. DDW supports well abandonment as being included as part of a water consolidation project where older well abandonments would likely be required or necessitated by well operation and/or Safe Drinking Water Act (SDWA) compliance related issues. This is consistent with Drinking Water State Revolving Fund (DWSRF) policy related to water consolidation projects allowing for well abandonment as part of eligible project costs. The partners are pursuing 100% grant funding for the Palermo Clean Water Consolidation Project and will make grant funds available to Palermo residents within the project boundary connecting to the SFWPA water system including well abandonment costs per County well abandonment standards. The partners will inform Palermo residents of available grant funding for well abandonment and the window during which such grant funds are available for this purpose. Palermo customers who do not take advantage of well abandonment grant funds as part of Palermo Clean Water Consolidation Project implementation may have to pay for their well abandonment costs in the future (post-Project). The project partners will pursue other grant funds as necessary to afford all Palermo residents the opportunity to properly abandon existing wells using grant funds once hooked up to the SFWPA water system.

Annexation

In order for the County to pursue the water system consolidation option, the parcels within the Palermo Clean Water Consolidation Project area will be required to annex into the SFWPA for service. Some parcels within the community have already chosen to annex into SFWPA to obtain services. Typically, landowners request annexation into SFWPA, and the Agency facilitates the parcel annexation process from start to finish in coordination with Butte County. For the Palermo Clean Water Consolidation Project, the remaining landowners will have to agree to be annexed through the County process in order to be served water by the SFWPA and agree to pay the SFWPA water rates.

In summary, SFWPA first develops the required documentation (including environmental compliance) and takes the documentation with corresponding resolution to the SFWPA Board to authorize submittal of proposed annexation applications to Butte County for processing. All applications are then submitted to the Butte Local Agency Formation Commission (LAFCo) for review and adoption by their Board. The Butte LAFCo has historically not accepted grouped landowner annexation applications thus an individual annexation application will need to be developed for each landowner who is not already annexed within the SFWPA. Legal descriptions will need to be obtained for each parcel which will be included in project cost estimates. See proposed annexation schedule in **Table 3** below which would be included as part of the DWSRF Construction Scope of Work.

Table 3. Proposed Annexation Schedule

ID	Task	2021					2022										2023													
		A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
1	Butte County/SFWPA Project MOU Approval																													
2	Distribute/Collect Project Letters of Support																													
3	Complete Project Annexation Legal Descriptions and Plat Maps																													
4	Public Annexation - Public Meeting #1																													
5	Prepare SFWPA Board Project Annexation Item																													
6	SFWPA Board Approval - Project Annexation Item																													
7	SFWPA submits Annexation Application to Butte County LAFCo																													
8	Project Annexation - Public Meeting #2																													
9	Butte County LAFCo Approval - Project Annexation Item																													
10	Approved Annexation Filed with State																													
**	Submit DWSRF Construction Funding Application																													
**	DWSRF Construction Application Added to FY22-23 Fundable List																													
**	Projected DWSRF Construction Funding Agreement Execution																													

SFWPA Water Rates

SFWPA charges a monthly service charge of \$19.73 per month plus \$0.42/billing unit for the first 100 units (10,000 cubic feet) and \$0.31/unit after the first 100 units (over 10,000 cubic feet). Oversized meters are charged an additional fee each month. The majority of Palermo customers annexed under the proposed project would pay the monthly service charge for their ¾-inch service plus water consumption charges with their expected demand to be within the first 100 units at \$0.42/billing unit.

Palermo customers are paying affordable rates upon converting to SFWPA water service. **Table 4** below provides perspective based on approximately 110 Palermo accounts who have already converted to SFWPA water service based on calendar year 2020 water use and associated water billing.

Table 4. Comparative Average Water Rates

Annual Water Charge Item	Annual Water Charge Amount	Average Monthly Bill
State-wide Average	\$960/year	\$80.00/month
EPA Rate Affordability Criteria	\$844/year	\$70.38/month
Avg. SFWPA Palermo Account	\$420/year	\$34.28/month

- State-wide average bill assumes 20 ccf of water consumption similar to SFWPA per capita water use target.

CEQA

The project will be required to go through the California Environmental Quality Act (CEQA) process. It is expected that an Initial Study/Mitigated Negative Declaration (IS/MND) with mitigation measures will be required to meet CEQA guidelines and facilitate project and funding approvals. Mitigation measures would be incorporated into the project to reduce potential environmental impacts as needed. The IS would include a biological resources survey and assessment and a cultural resource survey and assessment to comply with CEQA plus requirements related to project funding approvals.

PROJECT IMPLEMENTATION SCHEDULE

An implementation schedule for the Palermo Water System Consolidation project is shown in **Table 5**. Funding, annexation and the environmental process can take up to 6-months to complete. The remaining phases of design (e.g., 90% and 100% design plans and specification submittals) will take between 9 to 12-months including State reviews. Construction of the project is expected to last between 15 to 18-months.

Table 5. Project Implementation Schedule

Task	2021												2022												2023												2024					
	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J		
Planning																																										
Funding (Full Application)																																										
Environmental																																										
60% Design																																										
State Funding Review																																										
State Funding Priority List																																										
100% Design																																										
Annexation Process																																										
Construction Agreement																																										
Construction																																										

PROJECT COST ESTIMATE

LSCE's preliminary cost estimate is based upon the conceptual design information discussed above for the Palermo Clean Water Consolidation Project. The preliminary cost estimate presented below provides a Project planning level cost estimate based upon SFWPA construction assistance and our experience with other projects of similar size and complexity. The preliminary planning level construction cost estimate is presented on the following page in **Table 6**. Construction costs assume SFWPA will construct the pipeline project and thus provide an in-kind service.

- **Planning Level Construction Cost: \$11.6 million** (2021 dollars)
 - Assumes contingency of 12% and 60% design submittal for funding approval.
 - Assumes IS/MND for CEQA compliance with Biological and Cultural Resource Assessments required for CEQA Plus compliance.
 - Assumes final annexation process approvals completed in parallel with State funding agreement execution process.
 - Assumes Project MOU approved between SFWPA and Butte County in 2021.
 - Assumes 100% Project grant funding through multiple funding sources.

Table 6. Preliminary Construction Cost Estimate

Bid Item No.	Bid Item Description	Estimated Quantity	Unit of Measure	Unit Cost	Total Estimated Cost	
1	12-inch Water Main, C-900 ^a	10,000	LF	\$75	\$750,000	
2	6-inch Water Main, C-900 ^a	30,000	LF	\$60	\$1,800,000	
3	6-inch & 12-inch Valves	150	EA	\$3,000	\$450,000	
4	3/4-inch Water Service Line	380	EA	\$2,000	\$760,000	
5	Meters/Meter Boxes	380	EA	\$1,000	\$380,000	
6	Parcel Plumbing (Meter to Home)	380	EA	\$1,000	\$380,000	
7	Fire Hydrants	30	EA	\$5,000	\$150,000	
8	Paving (Trench Restoration)	105,000	SF	\$15	\$1,575,000	
9	Testing and Disinfection	1	LS	\$25,000	\$25,000	
Bid Item Total:					\$6,270,000	
SUBTOTAL:					\$6,270,000	
				Mobilization	1%	\$62,700
				Contingency	12%	\$721,050
Planning, Surveying, Engineering, Design, Outreach and Annexation					13%	\$815,100
				Construction Management	3%	\$188,100
				Traffic Control	1%	\$62,700
				CEQA/NEPA/Permitting	1%	\$62,700
TOTAL CONSTRUCTION					\$8,182,350	
10	Decommission Existing Wells	380	EA	\$5,000	\$1,900,000	
11	Connection Fees	380	EA	\$4,363	\$1,657,940	
TOTAL PROJECT					\$11,740,290	
SFWPA In-kind Services ^b					\$700,000	
TOTAL w/In-Kind					\$12,440,290	
Palermo Clean Water Consolidation Project						
Total Project Cost/Connection					\$32,737.61	

Notes:

- a) Reduced construction cost based on SFWPA crews performing work
- b) SFWPA in-kind services based on bid item construction cost savings

REFERENCES

Butte County Public Health Department, Palermo Sanitary Survey Report (April 2007).

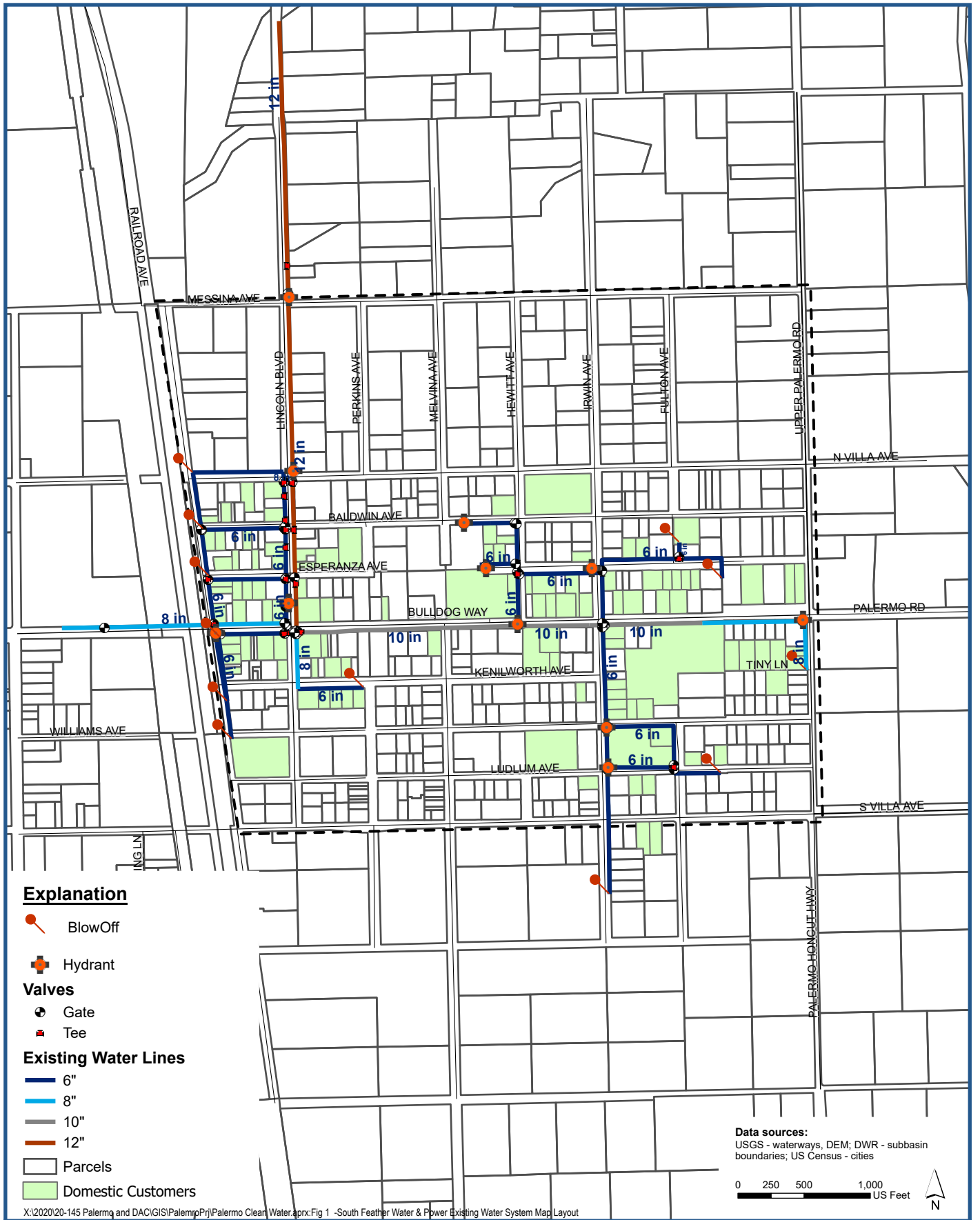
Lumos and Associates, Palermo Wastewater Study Preliminary Engineering Report (April 2010).

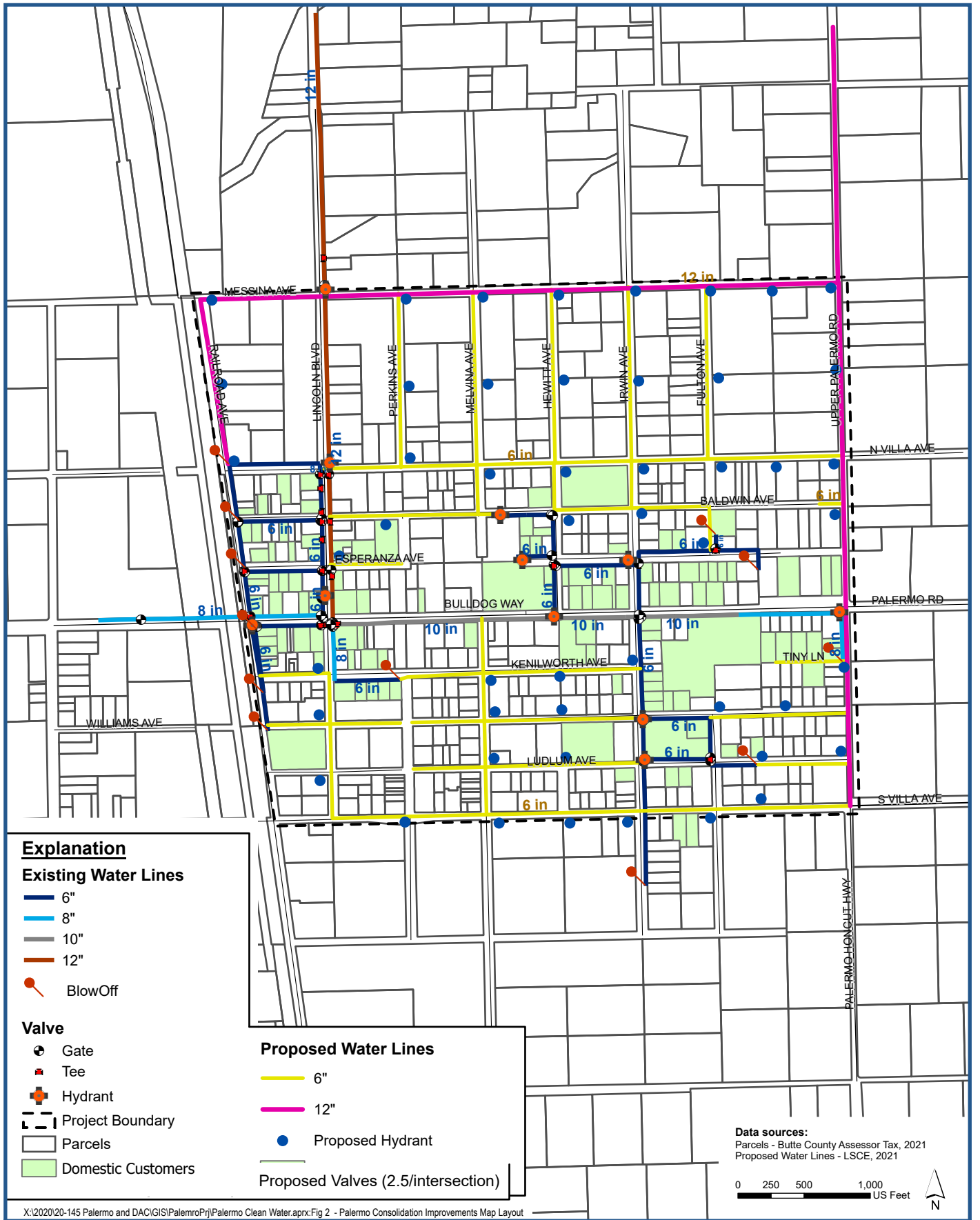
South Feather Water and Power Agency, 2020 Urban Water Management Plan (July 2021).

South Feather Water and Power Agency, Development Standards Treated Water System (July 2005).

State Water Resources Control Board - Division of Drinking Water, Title 22 California Regulations Related to Drinking Water (April 2019).

FIGURES





APPENDIX A

FINAL TECHNICAL MEMORANDUM

DATE: August 11, 2021 Project No.:20-2-145

TO: Christina Buck, PhD, Interim Director
Department of Water and Resource Conservation, Butte County

CC: Rath Moseley, General Manager
South Feather Water and Power Agency
Kristen McKillop, Regulatory Compliance Coordinator
South Feather Water and Power Agency

FROM: Oscar Serrano, PE, Senior Engineer, LSCE
Eddy Teasdale, PG, CGH, Supervising Hydrogeologist, LSCE
Jacques DeBra, Principal, Water Resource Management Services

SUBJECT: PALERMO WATER QUALITY TESTING RESULTS

INTRODUCTION

Luhdorff & Scalmanini, Consulting Engineers (LSCE) prepared this Palermo Water Quality Testing Results Technical Memorandum (TM) for the Butte County Department of Water and Resource Conservation (County). The TM summarizes recent water quality testing results and compares it to previous test results. The results show that the Palermo Community continues to experience health and safety concerns due to water quality.

BACKGROUND

In 2007, the County Public Health Department completed the Palermo Sanitary Survey report. For the report, the County surveyed residents within the Palermo community, performed field inspections, water sampling, reviewed well and septic systems, etc. The study found that of the 35 individual wells that were sampled, ten (10) tested positive for total coliform and some were close to the primary drinking water MCL for Nitrates.

PALERMO WATER QUALITY TESTING

Recently, the County with assistance from the South Feather Water and Power Agency (SFWPA) reached out to the Palermo Community through a Town Hall meeting. The County surveyed the residents within the proposed Palermo Clean Water Consolidation project boundary to see who would be willing to have the County/SFWPA obtain a water sample from a hose bib outside their home. As a result of the Town Hall meeting and survey, 25 residents agreed to have their water tested for Total Coliform, E. Coli and Nitrate as N. On July 15, 2021, SFWPA staff collected water quality samples and sent them to the lab for water quality testing. Water Quality test results are included in **Attachment A** and **Table 1** below shows a summary of the water quality test results.

Table 1. Water Quality Testing Summary

	Wells Sampled	Total Coliform		E-Coli	
		Present	% of Wells Sampled	Present	% of Wells Sampled
2021	25	6	24%	1	4%
2007	35	10	29%	0	0%

	Wells Sampled	Nitrates as N (mg/L)	
		Low*	High
2021	25	ND	8.38

*Non-Detect

	Wells Sampled	Nitrates	
		Low	High
2007	14	5.3	31.7

CONCLUSION

There are a total of 490 parcels within the Palermo Clean Water Consolidation project of which 110 parcels currently receive treated surface water from the SFWPA. The rest of the community within the proposed project limits relies on groundwater for residential use. A project like the Palermo Clean Water Consolidation project would bring Safe Drinking Water Act (SDWA) compliant clean treated potable water to the Palermo community and eliminate any future potential health and safety issues.

The 2021 water quality data presented above shows that 24% of the water tested from residential wells in the Palermo community tested positive for Total Coliform. This is consistent with the 2007 water quality testing that resulted in 29% of wells sampled testing positive for Total Coliform. Projecting the 2021 water quality results over the remaining 380 parcels within the project boundary indicates that approximately 91 accounts could be at risk of having Total Coliform present and approximately 15 accounts could be at risk of having E-Coli present. Additionally, a small percentage of accounts could be at or above the primary drinking water MCL for Nitrates as N.

Since the completion of the updated water quality testing, additional residents within the project boundary of the Palermo Clean Water Consolidation project have requested to have their water tested. Subsequently, the County and SFWPA are planning additional testing for the Community at which time this memo can be updated.

ATTACHMENT A

