

## Olivehurst Water Main Replacement OPUD-02

### I. Project Sponsor Contact Information

Lead Agency/Organization	Olivehurst Public Utility District (OPUD)
Name of Primary Contact(s)	Timothy Shaw, General Manager/ John Tillotson, Director of Public Works
Mailing Address	PO Box 670 Olivehurst, CA 95961
Email Address	<a href="mailto:opudmgr@opud.org">opudmgr@opud.org</a> / <a href="mailto:Jtillotson@opud.org">Jtillotson@opud.org</a>
Phone	530-743-0317 / 530-743-8573

### II. General Project Information

Project Title	Olivehurst Steel Water Main Replacement
Project Total Budget	<b><u>\$2,388,166</u></b> Phase 1, design - \$191,053 Phase 2, replace 7000 feet of steel water main - \$1,098,558 Phase 3, replace 7000 feet of steel water main - \$1,098,558
Project Funding Match	The community of Olivehurst is Disadvantaged Community (DAC). Because of the DAC designation, we are requesting OPUD have a 0% match for this project. OPUD is in the process of evaluating a rate increase to meet current regulatory demands. Grant funding for this project would significantly reduce the amount needed in the rate increase for this disadvantaged community.
Project Funding Request	<b><u>\$2,388,166</u></b> Phase 1, design - \$191,053 Phase 2, replace 7000 feet of steel water main - \$1,098,558 Phase 3, replace 7000 feet of steel water main - \$1,098,558
Can a detailed cost estimate be provided upon request?	Yes
Latitude	Varies – District Wide in Historic Olivehurst - (Water System # 5810003)
Longitude	Varies – District Wide in Historic Olivehurst - (Water System # 5810003)
Could you provide a map of the project location including boundaries upon request?	Yes
Project Location Description:	Unincorporated Yuba County, Olivehurst CA, Several locations
County	Yuba
City/Community	Olivehurst
Watershed/subwatershed	Yuba
Groundwater Basin	Yuba Groundwater Basin/South Yuba Sub-basin

Project Type	Planning Facility Construction
--------------	-----------------------------------

### III. Project Description

This project would replace 14,000 feet of steel water main with 8” diameter C-900 PVC plastic pipe. Additionally, the project would include 25 fire hydrants, 69 8” valves and 40 tie-in locations to existing water main lines. This project would serve the direct needs of residential customers only within the Olivehurst area by providing an adequate supply of safe and clean drinking water to these residents.

The project is in OPUD’s Capital Improvement Plan and is in the planning phase. A design would need to be completed before project construction.

This aged and outdated infrastructure serves approximately 10,000 residents in the disadvantaged community of Olivehurst which equates to about 50% of our customer base.

Additionally, OPUD would install water meters at all locations within the project area and replace some failing laterals (at OPUD’s expense) during this project as it would be very efficient to do this during the project construction. This would help promote water conservation.

This project will also increase fire flow by the upsizing of the mains and updating of the hydrants, making safety a key benefit of this project.

### IV. Project Rationale/Issues Statement

This aging infrastructure is in need of replacement. The first steel water mains were installed in 1948, with the majority of the steel water main s being installed in the 1940’s and 1950’s. These steel mains are in poor condition and have been in service well past their life expectancy.

There are water quality issues stemming from the steel mains. We frequently have calls of cloudiness and particles in the system by our customers. We send staff out to flush the system via fire hydrants in the areas of concern. This then becomes a water use efficiency and water conservation concern due to the frequent flushing. Additionally, less chlorine would be used due to system flushing.

The steel mains also leak frequently, requiring patch upon patch to keep the system operating. Replacement of the mains would help to conserve water. This can be readily verified by comparing the water use in this system to the water use in our Southern system which is new.

This project would help provide safe drinking water to a Disadvantaged Community by bringing a portion of the aging water system up to current regulatory standards. The project specifically addresses the following identified regional issues:

#### **Infrastructure**

replace and retrofit aging infrastructure to ensure adequate and reliable water supply and improved water quality

**Water Use Efficiency/**

**Water Conservation**

implement practices to increase water use efficiency *and* water conservation in municipal sectors

**Groundwater**

Protect groundwater and groundwater-dependent ecosystems, especially to address the projected impacts of climate change

**Regulatory Compliance**

Mitigate for the impacts of regulatory compliance on water management decision-making and processes, including increased costs

**V. Goals/Objectives/Performance Metrics**

Goals Addressed by the Project	<p><b>Goal 1:</b> Ensure adequate and reliable water supply that meets the diverse needs of the region;</p> <p><b>Goal 2:</b> Protect, restore and enhance water quality for water users and in support of healthy watersheds;</p> <p><b>Goal 6:</b> Address climate vulnerabilities and reduce greenhouse gas emissions;</p> <p><b>Goal 7:</b> Promote equitable distribution of resources to disadvantaged communities and tribes across the region.</p>
Objectives Addressed by Project	<p>1.1 Improve the water supply system capacity, flexibility and efficiency, including, but not limited to, optimizing existing water storage; upgrading and retrofitting aging infrastructure; and developing new infrastructure, where necessary;</p> <p>1.2 Promote water conservation and water use efficiency by instituting various techniques including, but not limited to, groundwater recharge, conjunctive management, irrigation efficiencies municipal water conservation, water recycling and reuse;</p> <p>2.6 Support regulatory compliance with current and future state and federal water quality standards;</p> <p>6.1 Support efforts to reduce greenhouse gas emissions in the region, particularly those related to water management operations;</p> <p>7.2 Prioritize ongoing participation of DACs in the Regional Water Management Group.</p>

What performance metrics will be used to demonstrate that objectives are being met? Wherever possible, provide a quantitative measurement reflecting successful project outcomes.	<ul style="list-style-type: none"> <li>• Number of flushing events reduced by 90%</li> <li>• 275 new water meters installed</li> <li>• Reduction in water treatment cost</li> <li>• Reduced rate increase to members of a disadvantaged community</li> </ul>
---	--

## VI. Resource Management Strategies

<b>Reduce Water Demand</b>	
Urban Water Use Efficiency	Replaces leaking steel mains with new plastic mains eliminating leaks
<b>Improve Operational Efficiency and Transfers</b>	
Conveyance—Regional/Local	Improves distribution throughout the system providing redundancy and increased flow by increasing water main sizes
<b>Increase Water Supply</b>	
Conjunctive Management and Groundwater	Conserves this resource by water metering, reduced flushing and elimination of leaks
<b>Improve Water Quality</b>	
Drinking Water Treatment and Distribution	Improves water quality by replacing deteriorating infrastructure with new infrastructure that meets current standards

## VII. Statewide Priorities

### Drought Preparedness

- Promote water conservation, conjunctive use, reuse and recycling
- Achieve long term reduction of water use

### Use and Reuse Water More Efficiently

- Increase urban water use efficiency measures such as conservation and recycling

### Climate Change Response Actions

- Adaptation to Climate Change: Use and reuse water more efficiently
- Reduce Energy Consumption: Water use efficiency
- Reduce Energy Consumption: Water system energy efficiency

### Ensure Equitable Distribution of Benefits

- Increase the participation of small and disadvantaged communities in the IRWM process

- Develop multi-benefit projects with consideration of affected disadvantaged communities and vulnerable populations
- Contain projects that address safe drinking water and wastewater treatment needs of DACs

**Climate Change Adaptation**

We would increase energy efficiency with the elimination of leaks, reducing flushing and with metered accounts. The staff hours needed to find and repair the leaks would be a minimal. The operations and maintenance in the area would be improved.

By the elimination of leaks, reducing flushing and with metered accounts we would conserve water that could be used in a drought.

**GHG Emissions Reduction**

Leaking drinking water distribution systems waste water and energy. A leaky system is energy inefficient because it requires the system to pump more water than is actually being used for beneficial uses. By replacing the water main, overall, system-wide energy use will be decreased significantly thereby reducing emissions substantially.

Additionally, the old, steel main needs to be flushed on a periodic basis to meet water quality standards. Such system flushing will not be required with the new main. Flushing pipes uses water that could otherwise be utilized for beneficial purposes and requires energy to pump the water. This current energy use will no longer be necessary with the new water mains in place.

**VIII. Project Status and Schedule**

Project Stage	Description of Activities in Each Project Stage	Planned/Actual Start Date	Planned/Actual Completion Date
Planning	Prop. 218 in process for rate increase	Dependent on 218 rate adjustment process or grant funding (consultant has been retained to begin the process- February, 2014)	Rate adjustment will be in place by July 2004 (for a three year adjustment) and/or grant funding
Design	As funding becomes available		
Environmental Documentation (CEQA/NEPA)	Exempt		
Permitting	TBD		
Tribal Consultation (if not applicable, indicate by N/A)	N/A		
Construction/	Through rate increases (vis-		

Implementation	à-vis proposition 218) and/or grant funding for DAC		
----------------	---	--	--

**IX. Project Technical Feasibility**

a. List the water planning documents that specifically identify this project.	OPUD Capital Improvement Plan
b. List the adopted planning documents the proposed project is consistent with (e.g., General Plans, UWMPs, GWMPs, Water Master Plans, Habitat Conservation Plans, etc.)	OPUD UWMP
c. List technical reports and studies supporting the feasibility of this project.	Previous pipeline replacement projects and direct experience with steel water main replacement – before and after maintenance requirements
<b>If you are an Urban Water Supplier:</b>	
1. Have you completed an Urban Water Management Plan and submitted to DWR?	Yes
2. Are you in compliance with AB1420?	Yes
3. Do you comply with the water meter requirements (CWC Section 525)?	Yes
4. If the answer to any of the questions above is “no,” do you intend to comply prior to receiving project funding?	
<b>If you are an Agricultural Water Supplier:</b>	
1. Have you completed and submitted an AWMP?	N/A
<b>If the project is related to groundwater:</b>	
1. Has GWMP been completed and submitted for the subject basin?	Yes