Recycled Water Distribution System

OPUD-01

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	opudmgr@opud.org / Jtillotson@opud.org
Phone	530-743-0317 / 530-743-8573

II. General Project Information

Project Title	Recycled Water Distribution System
Project Total Budget	$3,352,978 Phase 1, feasibility study and design - $410,298 Phase 2, ½ project construction - $1,471,340 Phase 3, ½ project construction -$1,471,340
Project Funding Match	The community of Olivehurst is a Disadvantaged Community (DAC). Because of the DAC designation, we are requesting OPUD have a 0% match for this project.
Project Funding Request	$3,352,978 Phase 1, feasibility study and design - $410,298 Phase 2, ½ project construction - $1,471,340 Phase 3, ½ project construction -$1,471,340
Can a detailed cost estimate be provided upon request?	Yes
Latitude	Varies – District Wide
Longitude	Varies – District Wide
Could you provide a map of the project location including boundaries upon request?	Yes
Project Location Description:	Unincorporated, 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

OPUD is committed to Wastewater Management and Water Use Efficiency. Our project would improve the wastewater management and manage water quality while we increase our water efficiency and water conservation by creating a Recycled Water Distribution System. This project is to plan, design, and construct the recycled water distribution system to irrigate parks, streetscapes, and additional areas within the OPUD service area**.**

OPUD's Wastewater Treatment Plant (WWTP) currently discharges tertiary treated effluent to the Western Pacific Interceptor Canal. The OPUD WWTP currently has capacity of 3 mg (million gallons) per day with plans and permitting to expand to 5 mg per day. The water quality meets Title 22 requirements for unrestricted irrigation. Currently, there is no infrastructure in place to utilize the recycled water. The largest benefit of recycled water may be achieved by irrigating parks, large landscaped areas, and streetscapes. Reuse of the effluent was considered during the WWTP plant upgrade, but 100% reuse was not cost effective due to winter time storage; however, a partial reuse scenario can be used to meet the summer irrigation needs in the area.

The project would be phased as follows:

Phase I – Recycle Water Feasibility Study. This effort would look at pipeline routes and high demand users.

Phase II – Nexus Study. The phase would evaluate the funding mechanisms between OPUD, Yuba County, and future development to share the capital costs based on the benefits received.

Phase III – Design of Recycled Distribution System.

Phase IV – Construction of Recycled Water Distribution System.

IV. Project Rationale/Issues Statement

Recycled Water Distribution System project would address many of the conflicts and issues that are a priority in the region. This project would improve wastewater management by utilizing the recycled water instead of discharging into the waterways. This water would be used for irrigation. Therefore, water use would be more efficient and the groundwater would not be overused.

This project would conserve water due to reductions in peak potable water treatment and distribution during dry seasons, reduce wastewater discharge compliance costs and provide a reliable source of irrigation water. The project specifically addresses the following identified regional issues:

Infrastructure
Develop new infrastructure as well as repair, replace and retrofit aging infrastructure to ensure adequate and reliable water supply

Wastewater Management
Improve wastewater management and manage water quality impacts from spills and discharges while addressing the rising costs of operation and regulatory compliance.

Water Use Efficiency/

Water Conservation
Promote and implement policies and practices to increase water use efficiency *and* water conservation in municipal sector

Water Quality Contamination: Effluent Discharge
Maintain and improve water quality by mitigating the impacts of effluent discharge

Groundwater
Minimizes dependency and potential over-use of groundwater

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

Climate Change
Respond to projected climate change impacts on water supply reliability and water quality

V. Goals/Objectives/Performance Metrics

Goals Addressed by the Project	**Goal 1:** Ensure adequate and reliable water supply that meets the diverse needs of the region; **Goal 2:** Protect, restore and enhance water quality for water users and in support of healthy watersheds; **Goal 6:** Address climate vulnerabilities and reduce greenhouse gas emissions; **Goal 7:** Promote equitable distribution of resources to disadvantaged communities and tribes across the region.
Objectives Addressed by Project	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, were necessary; 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; 2.2 Minimize water quality impacts from effluent discharge 6.3 Increase system flexibility and resiliency to adapt to climate variability.
What performance metrics will be used to demonstrate that objectives are being met? Wherever possible, provide a quantitative measurement	Groundwater savings with current parks, schools and landscape in the area would be about 100 million gallons annually. Once the area builds out it would easily be double that.

reflecting successful project outcomes.	

VI. Resource Management Strategies

Increase Water Supply	
Recycled Municipal Water	Recycle municipal wastewater for use in irrigation of parkland, schools and landscaping
Improve Water Quality	
Matching Water Quality to Use	Reuse municipal water for non-potable irrigation purposes
Pollution Prevention	Decrease water quality impacts from effluent discharge

VII. Statewide Priorities

Drought Preparedness

- Promote water conservation, conjunctive use, reuse and recycling
- Improve landscape efficiencies
- 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 recycling
- 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

Climate Change Adaptation

This project will adapt to climate change by using recycled water for irrigation of parks, schools and landscape areas thereby saving groundwater for use in a drought. Additionally, groundwater is pumped twice before use while the recycled water system could be designed to pump once saving energy.

GHG Emissions Reduction

This project increases conservation and reduces water use by developing a municipal water recycling program and, therefore, reducing the energy and emissions related to water delivery with increased metering, rate incentives for conservation and education included with utility bills to reduce consumption.

VIII. Project Status and Schedule

Project Stage	Description of Activities in Each Project Stage	Planned/Actual Start Date	Planned/Actual Completion Date
Planning	Preliminary conceptual planning for feasibility of reclaimed water		2012
Design	TBD- awaiting funding		
Environmental Documentation (CEQA/NEPA)	TBD- awaiting funding		
Permitting	TBD- awaiting funding		
Tribal Consultation (if not applicable, indicate by N/A)	N/A		
Construction/ Implementation	Awaiting Funding		

IX. Project Technical Feasibility

a. List the water planning documents that specifically identify this project.	Urban Water Management 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.)	Urban Water Management Plan Yuba County Groundwater Management Plan
c. List technical reports and studies supporting the feasibility of this project.	Study commissioned by CH2MHill
If you are an Urban Water Supplier:	
1. Have you completed an Urban Water Management Plan and submitted to DWR?	Yes
2. Are you in compliance with	Yes

AB1420?	
3. Do you comply with the water meter requirements (CWC Section 525)?	Yes
If you are an Agricultural Water Supplier:	
1. Have you completed and submitted an AWMP?	N/A
2. If not, will you complete an AWMP prior to receiving project funding?	N/A
If the project is related to groundwater:	
1. Has GWMP been completed and submitted for the subject basin?	Yes

GHG Reduction Considerations for Project Design and Alternatives

IRWM Guidelines suggest that common emissions sources from projects are related to:

- Operations of construction equipment
- Passenger vehicle trips during construction and operation
- Transportation of construction materials and equipment
- Transportation of material inputs for O&M
- Transportation of material outputs or production
- Generation of electricity used for operation of projects
- Waste generation and disposal of materials during construction and operation

Reduction strategies during project design and project mitigations under CEQA/NEPA review could include any of the applicable measures listed below:

Project construction-related transportation

- Offer local contractor preference and local purchase of construction materials where possible to reduce transportation-related emissions
- Encourage or require carpooling within construction contracts
- Encourage use of B20 fuels in construction equipment and other diesel machinery
- Restrict inappropriate OHV use, particularly in sensitive or restored areas where project investments have been made

Project construction-related emissions

- Encourage or require recycling of construction waste, such as brick, concrete, lumber, metal, and dry wall, as may be required within Shasta County from the proposed Lumber Waste Diversion Ordinance
- Pursue projects in this Plan that would use biomass from fuels reduction projects
- Capture sequestration opportunities with forest, sage-steppe, riparian, and grassland revegetation, stabilization, and restoration projects

Water supply and water efficiency improvements

- Select project components and upgrades, such as pumps, based on energy efficiency
- Schedule pumping to reduce peak hour (12:00 to 5:00, highest carbon output) energy use

- Select projects that offer the best water conservation options among project choices (e.g., greatest reuse/recycling, greatest reduction in leakage or evaporation per mile)
- Install solar generation equipment for pumping and other energy-generation needs to reduce both emissions and long-term O&M costs
- Increase conservation/reduce water use (and thus the energy and emissions related to its delivery) with increased metering, favorable rate incentives for conservation, and education within utility bills