

Dobbins Oregon House Canal Improvement Project NYWD-02

I. Project Sponsor Contact Information

Lead Agency/Organization	North Yuba Water District (District or NYWD)
Name of Primary Contact(s)	Jeff Maupin, General Manager
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II. General Project Information

Project Title	Dobbins Oregon House Canal Improvement Project
Project Total Budget	\$6,778,000
Project Funding Match	0%- The community of Dobbins is a Disadvantaged Community
Project Funding Request	\$6,778,000
Can a detailed cost estimate be provided upon request?	Yes
Latitude	39 27' 33" N
Longitude	121 16'42" W
Could you provide a map of the project location including boundaries upon request?	Yes
Project Location Description:	Yuba County foothills
County	Yuba
City/Community	Brownsville, Frenchtown, Dobbins and Oregon House
Watershed/subwatershed	Project is located in the Yuba River Watershed, but project water is diverted from the Feather River.
Groundwater Basin	Hard Rock Aquifer
Project Type	Facility Construction

III. Project Description

The North Yuba Water District currently diverts 3,840 acre-feet per year for use for agricultural water supply to its customers in Butte and Yuba Counties. The agricultural water is supplied primarily through the Dobbins Oregon House Canal, a 17-mile hillside canal with four piped inverted siphons, providing water to the Disadvantaged Communities in the vicinity of Brownsville, Frenchtown, Dobbins and Oregon House.

The existing canal is deteriorated and experiences significant water losses. The canal has reaches where weed removal and annual maintenance requirements has resulted in reduced bank height and reduced freeboard, and reaches where flows are slow, contributing to the high water losses of the system, which average approximately 60%. The project will improve the existing diversion structure and rehabilitate portions of the canal to reduce water losses by 50%. It will also increase the diversion capacity and capacity of the canal, with a decrease in water loss, allowing for an increase in agricultural water supplied to customers.

The project will include the following upgrades:

1. Diversion Structure Improvements – Increase diversion structure capacity.
2. Canal Restoration - Removal of debris accumulation including sediments, plant growth and reshaping approximately 20% of the canal length to restore the canal cross section and minimum freeboard.
3. Canal Improvements – Identification of segments of the canal with the highest water losses and identification of methods for minimizing water loss including consideration of which portions will be lined or piped. It is assumed that mitigating actions will result in a reduction in water losses to 30% of the diversion. Initial consideration assumed that 30% of the canal invert and 60% of the canal wall will be lined.
4. Siphon Replacement – Replacement of the four siphons to improve siphon condition and increase siphon capacity to match the restored canal capacity.

IV. Project Rationale/Issues Statement

The project addresses three (3) identified issues in the Region. How each issue is addressed is described below.

1. Infrastructure: This project will rehabilitate a 17-mile agricultural supply canal to provide an adequate and reliable water supply to the District’s customers.
2. Water Use Efficiency/Water Conservation: Currently the ditch loses approximately 60% of the water delivered to the diversion structure. These losses include seepage from the ditch, surge flows that are unable to be used and are passed downstream in the ditch, spills caused by failures of the ditch banks or other facility failures. This is expected to be reduced to 30% after ditch improvements.
3. Climate Change: This project responds to projected climate change impacts on water supply reliability.

V. Goals/Objectives/Performance Metrics

Goals Addressed by the Project	<p>Goal 1: This project will improve service to agricultural customers in the Region. Improvements to the ditch are expected to reduce water losses in the ditch from 60% to 30%.</p> <p>Goal 6: Improvements to the ditch are expected to reduce water losses from 60% to 30% which will improve the District’s ability to meet water demands, without additional water sources.</p> <p>Goal 7: Provision of agricultural water at an affordable rate to the customers in this area is important to the success of this project.</p>
Objectives Addressed by Project	<p>Objective 1.5: The project will reduce water losses in the Ditch therefore increasing available water for agricultural uses in the District.</p>

	<p>Objective 6.3: The project will improve the District’s resiliency to adapt to climate variability through a decrease in water loss in the ditch.</p> <p>Objective 7.1: The project will address water supply needs in a DAC.</p>
<p>What performance metrics will be used to demonstrate that objectives are being met? Wherever possible, provide a quantitative measurement reflecting successful project outcomes.</p>	<p>Objective 1.1: The performance metric used will be acre-feet per year (AFY) conserved. Average water loss in the canal between 2000-2010 was 1,400 AFY. Improvements to the canal would be expected to reduce this value by 50%, with a savings of approximately 700 AFY.</p> <p>Objective 6.3: The performance metric used will be implementation of the project.</p>

VI. Resource Management Strategies

Reduce Water Demand	
Agricultural Water Use Efficiency	The project will improve agricultural water use efficiency through a reduction in losses in the water supply system.
Improve Operational Efficiency and Transfers	
Conveyance—Regional/Local	Local and regional water conveyance would be significantly enhanced.
Increase Water Supply	
Surface Storage-- Regional/Local	Reduction of water losses in the system from 60% to 30%

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 and agricultural water use efficiency measures such as conservation and recycling

Climate Change Response Actions

- Adaptation to Climate Change: Use and reuse water more efficiently

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

The project helps the region adapt to the effects of climate change through conservation of water in the DOHC. The District currently loses approximately 60% of the water diverted into the canal. Modifications to the canal are expected to reduce this water loss by approximately 50%. The project is used in the summer months for agricultural diversions and is not expected to be largely affected by variations in weather events. Identification of climate change effects that could affect the canal capacity, water availability and other issues will be considered during the design of the canal improvements.

GHG Emissions Reduction

Considerations were made to select a project alternative that offers the greatest reduction in leakage and evaporation per mile among other project choices. Further construction-related GHG emissions reduction strategies will be considered in the design stage of project development.

VIII. Project Status and Schedule

Project Stage	Description of Activities in Each Project Stage	Planned/Actual Start Date	Planned/Actual Completion Date
Planning	Project Feasibility Study	January 2012	May 2012
Design	Drawings and Specifications	March 2015	October 2015
Environmental Documentation (CEQA/NEPA)	TBD- awaiting funding	March 2015	July 2016
Permitting	TBD- awaiting funding	March 2015	July 2016
Tribal Consultation (if not applicable, indicate by N/A)	N/A	N/A	N/A
Construction/ Implementation	TBD- awaiting funding	July 2016	November 2016

IX. Project Technical Feasibility

a. List the water planning documents that specifically identify this project.	North Yuba Water District Irrigation and Domestic Water Delivery Feasibility Study
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.)	
c. List technical reports and studies supporting the feasibility of this	North Yuba Water District Irrigation and Domestic Water Delivery Feasibility Study

project.	
If you are an Urban Water Supplier:	
1. Have you completed an Urban Water Management Plan and submitted to DWR?	NYWD supplies less than 3,000 AF to its domestic customers and has less than 3,000 domestic connections. Therefore, NYWD is not required to complete an UWMP.
2. Are you in compliance with AB1420?	N/A
3. Do you comply with the water meter requirements (CWC Section 525)?	N/A
4. If the answer to any of the questions above is "no," do you intend to comply prior to receiving project funding?	N/A
If you are an Agricultural Water Supplier:	
1. Have you completed and submitted an AWMP?	NYWD does not provide agricultural water supplies to over 10,000 acres and therefore is not required to complete an AWMP.
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?	N/A
2. If not, will the GWMP be completed within one year of the grant submittal date?	N/A