

Yuba IRWMP – HIC-05

Project Short Form¹

Please fill out the following information to the best of your ability/knowledge. Contact Keri Rinne with questions: keri.rinne@gmail.com

PROJECT SPONSOR INFORMATION

Lead Agency/Organization	Hallwood Irrigation Company
Name of Primary Contact(s)	Mark Chandless
Mailing Address	P.O. Box 1349, Marysville, CA 95901
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Project Partners/Collaborators	Yuba Water Agency
YWA Liaison	Joanna Lessard; Ryan McNally

GENERAL PROJECT INFORMATION

Project Title	Flow Control Automation Upgrades
Project Total Budget (Attach detailed budget, if available)	\$1,240,000.
Budget Breakdown	Planning/Design Budget: \$240,000. Implementation Budget: 1,000,000
Project Funding Match , if any	TBD
Total Project Funding Need	TBD
Project Location (Attach map if available)	Hallwood, Yuba County
Watershed/subwatershed	
Groundwater Basin (Select one)	<input checked="" type="checkbox"/> North Yuba Subbasin <input type="checkbox"/> South Yuba Subbasin <input type="checkbox"/> Not Applicable
Supports Yuba Groundwater Sustainability Plan (GSP)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Measurable Objective(s) Benefit (Answer If 'Yes' above) (check <i>all</i> that apply)	<input checked="" type="checkbox"/> Chronic lowering of groundwater levels <input checked="" type="checkbox"/> Reduction of groundwater storage <input checked="" type="checkbox"/> Degraded water quality <input checked="" type="checkbox"/> Land subsidence <input checked="" type="checkbox"/> Depletions of interconnected surface waters
Project Priority (Select one)	<input checked="" type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low
Project Type (check <i>all</i> that apply)	<input type="checkbox"/> Conceptual <input type="checkbox"/> Feasibility Study <input type="checkbox"/> Study/Assessment <input type="checkbox"/> Planning <input checked="" type="checkbox"/> Engineering/Design <input type="checkbox"/> Permitting <input checked="" type="checkbox"/> CEQA/NEPA <input checked="" type="checkbox"/> Facility Construction <input type="checkbox"/> Restoration <input type="checkbox"/> Monitoring <input type="checkbox"/> Best Management Practices <input type="checkbox"/> Acquisition

¹ Completed Project Short Forms should be sent via email to Keri Rinne at keri.rinne@gmail.com

	<input type="checkbox"/> Demonstration/Pilot Project
Legal Authority	

Please select the *status* of the CEQA/NEPA/Permitting for this project:

CEQA (Select one)	<input checked="" type="checkbox"/> Exempt <input type="checkbox"/> Not Started <input type="checkbox"/> Initial Study <input type="checkbox"/> EIR <input type="checkbox"/> Determination <input type="checkbox"/> Unknown if Required
NEPA (Select one)	<input checked="" type="checkbox"/> Exempt <input type="checkbox"/> Not Started <input type="checkbox"/> Environmental Assessment <input type="checkbox"/> EIS <input type="checkbox"/> Record of Decision <input type="checkbox"/> Unknown if Required
Permitting (Select one)	<input checked="" type="checkbox"/> Not Required <input type="checkbox"/> Not started <input type="checkbox"/> Identified <input type="checkbox"/> Consultations Complete <input type="checkbox"/> Application Submitted <input type="checkbox"/> Complete <input type="checkbox"/> Unknown if Required

PROJECT DESCRIPTION

Write a narrative briefly describing the project components and/or characteristics (Suggest ~ 300 words).

The Hallwood Irrigation Company (HIC) received a Community Impact Grant from Yuba Water Agency (Yuba Water) for the HIC System Renovation Plan. The first phase of the Renovation Plan included the development of an irrigation system condition assessment, which was completed in December 2022. The condition assessment resulted in identification and prioritization of several needed improvements. The project proposed for Yuba Water funding was identified as the 2nd highest priority out of the 12 improvement projects recommended.

The HIC irrigation system is currently difficult to operate and requires considerable experience to adequately manage. Since the primary check structures throughout the system are simple weirs with wood flashboards, any sort of operational change or system failure can result in unexpected changes in water level that propagate downstream. This can then result in under or over-deliveries to irrigators and an excessive amount of return water to the Yuba or Feather River.

The heads of the West Ditch, Handy Ditch, Highway 20 Ditch, and 7-Mile House Ditch were identified as being configured such that making any changes in flow to accommodate downstream demands is difficult and can take some time, resulting in a potential lapse in service to downstream irrigators. This operational difficulty can lead to an excess of water being sent into the drains instead of being used.

To improve the operating conditions of HIC’s irrigation system, automated underflow control gates will be installed at the heads of Handy Ditch, Highway 20 Ditch, and 7-Mile House Ditch. The planned infrastructure upgrade includes installation of automated flow control gates with associated SCADA software allowing for remote operation of the flow control gates. The new equipment will allow for remote operation of the flow control structure and provide real-time flow rate data acquisition. This equipment upgrade will enable “smarter” operation of the flow control structure by providing more accurate and timely information on flow rates and allowing remote operation, which will increase HIC’s overall water use efficiency by allowing more precise water application and less waste. The condition assessment also recommends replacing the current flashboard check structures at key control points with long-crested weirs to maintain a high upstream water level and therefore make water deliveries more reliable.

This project would provide safe, reliable, and efficient water delivery for years to come. There will be significant water savings.

HIC has initiated the design and permitting efforts for the project with Yuba Water funding received through a previous Community Impact Grant.

PROJECT RATIONALE/ISSUES STATEMENT

Briefly describe the need for the project and the desired outcomes/deliverables (Suggest ~ 200 words). Include an explanation of benefits and how they would be evaluated.

The two main goals are to (1) improve the efficient use of Yuba River surface water supplies in the area of benefit in the North Yuba Subbasin and (2) improve the quality and quantity of flow rate data to allow more precise and accurate control of flows in and diversions from the Hallwood irrigation system.

The needs addressed are (1) a need for improved flow rate information at points along the Hallwood irrigation system to allow for better matching of diversion rates from the Yuba River with demands at irrigation turnouts and diversion ditches within Hallwood and (2) a need to utilize remote operation technology to more efficiently manage diversions (as opposed to the current practice of manual gate operation personnel, a practice which is susceptible to interruption due to accident, illness, or other loss of manpower and requires the personnel to drive to each gate location). The improved operations will also benefit worker productivity and safety and reduce greenhouse gas emissions through reduced vehicular travel.

The project is expected to realize the following quantifiable benefits:

1. Water supply savings resulting from avoidance of excess surface water diversion.
2. Improved groundwater conditions due to greater availability of surface water supplies and subsequent reduced demand for groundwater.

Improving operational control and making the system easier to manipulate can greatly increase the efficiency of the system and therefore reduce the amount of water diverted from the Yuba River. Such water savings and resiliency will allow for continued avoidance of “deficit pumping” by these agencies. Furthermore, the water savings from the project will improve water supply conditions that allow the Yuba Subbasins water suppliers to implement their groundwater substitution transfer program which provides benefits during dry years to water suppliers throughout the state.