

**OWL MOUNTAIN PARTNERSHIP** 

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March 8, 2023 Colorado Water Conservation Board 1313 Sherman Street Room 718 Denver, Colorado 80203 cole.bedford@state.co.us

### Final Report: Purchase Order: CTGG1 2022-2388

The WSRF Grant, Jackson County Irrigation Infrastructure Improvement Project, is complete. The project focused on replacing old structures as well as installing new structures to improve water control on numerous ditches in Jackson County. The replaced structures were old, dilapidated, often wooden, and non-functional. Each new structure was designed and engineered by NRCS and meets their standards and specifications. The new structures improve irrigation water control, thus improving irrigation water efficiency, reducing erosion, and limiting sediment movement.

Task 1 – 969 Ditch: Replacement of a headgate structure and a measuring device.

- Task 2 Chapman Ditch: Replacement of a headgate structure.
- Task 3 Chapman Ditch: Replacement of a large check /turnout structure.
- Task 4 Squibob Ditch: Replacement of a water division structure.
- Task 5 Antelope Ditch: Installation of a check structure.
- Task 6 Antelope Ditch: Replacement of a measuring device.
- Task 7 Nairin Ditch: Replacement of a measuring device.
- Task 8 Darling Ditch: Replacement of a measuring device.
- Task 9 Willow Ditch: Installation of a set of check and turnout pipes.
- Task 10 Staples Ditch: Replaced of a set of check and turnout pipes.
- Task 11 Owl Mountain Partnership: Grant management and administration.

It has been the Owl Mountain Partnership's pleasure to work with the CWCB and the North Platte Basin Roundtable to improve irrigation water control and efficiency in Jackson County. Thank you for the opportunity to put water conservation on the ground! We look forward to continuing to work with you.

Sincerely,

Debbi Heeney

Debbi Heeney Owl Mountain Partnership Grant Administrator



Task 1 – 969 Ditch: Replaced Headgate Structure

Front and rear views of the new concrete structure that replaces the old, dilapidated wooden structure located on the 969 ditch. The 5 x 6 foot steel gate allows the water user to not only regulate and manage the irrigation water, but it also provides a positive shut-off at the water source. The concrete headwalls extending outward into the banks and footer under the structure prevent seepage around and under the structure.



# Task 1 – 969 Ditch: Replaced Measuring Device



This 6 foot wide steel measuring device replaces the old wooden structure on the 969 ditch. Located just below the new headgate, it allows the water user to properly measure the amount of water in the 969 ditch.



### Task 2 – Chapman Ditch: Replaced Headgate Structure

Front and rear views of the new concrete structure that replaces the old, dilapidated wooden structure located the Chapman ditch. The 4 x 5 foot steel gate allows the water user to regulate and manage the irrigation water, as well as provides a positive shut-off at the water source. Extra rip-rap in soils with a greater erosion risk reduces soil movement in the water and stabilizes the banks adjacent to the structure.



#### Task 3 – Chapman Ditch: Replaced Check/Turnout Structure



structure replaces the former, dilapidated, "pieced together" structures on the Chapman ditch. The 4 x 5 foot steel gate check in the ditch allows the water user to apply positive pressure on the turnout structure when needed. The turnout is a 36" x 40' short, ADS, pipeline, complete with a steel screw gate and a trash rack to prevent the pipe from obstruction. The pipeline is attached to the structure using a steel starter boot bolted to the concrete and inserted into the ADS pipe. The catwalk grate provides a safe location to set the level of flow in the ditch and pressure on the turnout.

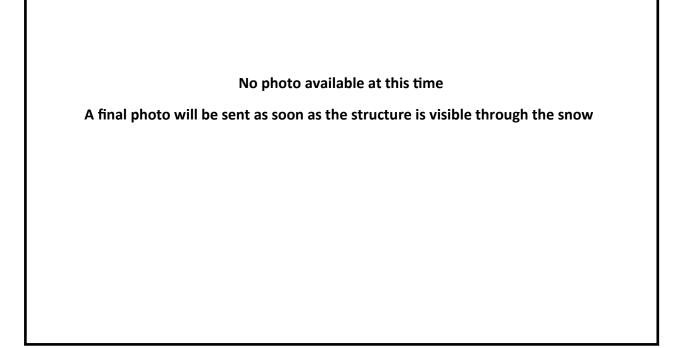


# Task 4 – Squibob Ditch: Replaced Water Division Structure





This steel headwall, with attached dual 24" x 40' ADS pipes, allows the water users to split the irrigation water and send it to two separate locations. The flow in each 24" pipe is controlled by checkboards inserted into the jointed 4 x 5 foot steel headwalls. Each pipe is attached to the headwall with a steel starter boot which prevents movement of the pipe, while the headwall controls seepage along the pipe.



This simple  $36'' \times 40'$  pipe check with  $5 \times 5$  foot headwall allows the water user to positively shut the irrigation water off in the ditch and direct it down a different ditch.



Task 6 – Antelope Ditch: Replaced Measuring Device

This 6 foot wide steel measuring device replaces the old rusted out structure on the Antelope ditch. Located less than 400 feet below the headgate, it allows the water user to properly measure the amount of water in the ditch.

### Task 7 – Nairin Ditch: Replaced Measuring Device



This 5 foot wide steel measuring device replaces the old rusted out structure on the Nairin ditch. Located directly the headgate, it allows the water user to properly measure the amount of water in the ditch.

## Task 8 – Darling Ditch: Replaced Measuring Device



This 30 inch wide steel measuring device replaces the old rusted out structure on the Darling ditch and allows the water user to properly measure the amount of water in the ditch.

### Task 9 – Willow Ditch: Replaced Check and Turnout Structures



This 24' x 20' new check and turnout pair, with aluminum slide gates, simplifies the water users effort to check and utilize the water in the Willow ditch more efficiently.

### Task 10 – Staples Ditch: Replaced Check and Turnout Structures



This 24' x 20' new check and turnout pair, with 4 x 4 steel headwall for check boards, simplifies the water users effort to check and utilize the water in the staples ditch more efficiently.