

## Conservation Implementation Strategy Project

# Rapid Creek Water Restoration



### This Project At-A-Glance

#### Partners

Pennington County  
Conservation District

Pennington County Weed and  
Pest

**Funding** for this project is provided by the EQIP Program and partners with financial and in-kind contributions.

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The Conservation Implementation Strategy (CIS) is a new phased-in approach to deliver conservation programs to farmers and ranchers across South Dakota. Funding for CIS comes through the Environmental Quality Incentives Program (EQIP). Funding and support from other agencies and groups can be leveraged and coordinated to focus on mutual issues of the highest priority.

#### Background

Pennington County has seven irrigation ditches along Highway 44 between Rapid City and Farmingdale. They are all unique as some are owned by the producers through shares and some have dissolved due to the development around Rapid City and are now owned by the county. The St. Germain Irrigation Ditch was created in the 1890s. The ditch is owned by the surrounding producers through shares. The St. Germain Ditch starts just west of Caputa and stretches east for about 5 miles, all located on the north side of Highway 44. The St. Germain ditch is also the furthest ditch to the east of Rapid City, which makes it less appealing to develop in the future compared to the other ditches. The current delivery of water to the fields is open ditches to flood irrigate fields.

In the past, Pennington County had the highest per capita cases of West Nile in the nation. A contributing factor was the breeding grounds that have been created by the irrigation ditches. The two water suppliers are Pactola and Deerfield. Both of these are used for recreational use for locals and tourists. Pactola and Deerfield are important to the community and tourists because of the beautiful scenery, fishing, camping, swimming, and boating. Converting the St. Germain Ditch to a pipeline would in return conserve water for both Pactola and Deerfield.

#### Goals

This is part of a larger effort of restoring Rapid Creek and the surrounding area. Rapid Creek needs to be restored because of the current management practices around it, the storm water runoff from Rapid City, and the invasive species such as Russian Olives that are taking over. The main objective with this proposal is to reduce the sheet erosion, reduce plant pest pressure, increase soil health and organic

matter, and improve water delivery within the St. Germain Irrigation Ditch. Addressing those resource concerns will reduce flooding and soil health depletion on the higher and the lower table levels. At that point, we will be able to focus on the lower levels surrounding Rapid Creek.

#### Desired Outcomes

The main resource concern to be addressed with this project is excess or insufficient water: Inefficient use of irrigation water is caused by utilizing open ditches to transport water. Once the ditch is converted to a pipeline, the problems of seeping, erosion, and insufficient usage of water will be reduced. It will also help get rid of the mosquito breeding grounds because the amount of water seeping through the ditch and sitting on the ground will be reduced.

Secondly, if the invasive species are removed, water will be conserved. Invasive species are known to take a lot of water out of the ground.

Lastly, helping cost-share cover crops will help the soil health which in return will improve the infiltration. Minimizing the amount of water seeping through the ditch will not only reduce mosquito breeding grounds, it will also improve plant conditions around the ditch.

South Dakota  
**Natural  
Resources  
Conservation  
Service**



**Resource Concerns: Excess or insufficient water, inefficient irrigation water, sheet soil erosion, undesirable plant productivity and health, excessive plant pest pressure, and organic matter depletion and compaction.**

Core Practices	Supporting Practices
Conservation Crop Rotation (328)	
Cover Crops (340)	
Forage and Biomass Planting (512)	
*Irrigation Pipeline (430)	
Irrigation Water Management (449)	
Residue Management - No-Till/Reduced Till (329)	

\*Irrigation Pipeline must be completed prior to the implementation of other practices.

**Time Table of Project**

- **Batching Date: April 1, 2022**

