Consolidated Farmers Canal Company Inverted Water Siphon Project

Project Overview

- Goal: Improve irrigation infrastructure and water management in the Lower Henry's Fork watershed
- Grant Request: $90,250 – Idaho Water Resource Board Aging Infrastructure Grant
- Partners: Consolidated Farmers Canal Company, Henry's Fork Foundation, Idaho Water Resource Board, FMID

About the Canal Company

- Organized in 1890
- Diverts water from the Henry's Fork of the Snake River
- Provides irrigation for 10,000+ acres
- Supports crops such as alfalfa, wheat, malt barley, and beef
- Maximum diversion capacity: 403 CFS
- Furthest downstream diversion on the Lower Henry's Fork

Importance of the Henry's Fork

- Supports irrigation for over 280,000 acres
- Generates over $100 million annually in agricultural production
- World-famous trout fishery
- Recreation economy generates about $29 million annually
- Balancing agriculture, fisheries, and water supply requires collaboration

Collaborative Watershed Management

- Henry's Fork Watershed Council founded in 1992
- Over 80 cooperating partners
- More than 55 watershed projects completed
- Henry's Fork Drought Management Plan coordinates reservoir releases
- Maintains river flow targets and protects fisheries

Existing Infrastructure Challenge

- Current metal culvert siphon installed in the 1960s
- Located 7 miles downstream from the diversion
- Infrastructure nearing the end of its useful life
- Restricted flow and flooding risks
- Failure could impact the Teton River ecosystem

Project Location

- Canal diverts near St. Anthony, Idaho
- Water flows 7 miles southwest
- Passes beneath the North Fork of the Teton River
- Continues toward Rexburg and Island Ward Canal
- Serves farms in Fremont and Madison Counties

Project Solution

- New inverted water siphon using 8 ft diameter culverts
- Concrete risers and headwalls
- New headgate control structure
- Remote monitoring and automation
- Improved water conveyance and reliability

Project Benefits

- Reliable irrigation water delivery
- Improved precision water distribution
- Reduced water losses
- Supports Henry’s Fork Drought Management Plan
- Allows more water storage in Island Park Reservoir

Cost Estimate

- Estimated total project cost: $300,833.88
- Precast culverts: $66,135
- Excavation and demolition: $48,600
- Assembly services: $28,000
- Concrete wing walls and caps: $50,000
- Automation equipment and additional infrastructure included

Funding Plan

- Idaho Water Resource Board Grant Request: $90,250
- Madison Soil & Water Conservation District Water Quality Program Grant: $75,000
- Consolidated Farmers Canal savings: $60,000
- In-kind project management: $5,000
- Financing project through AgWest Farm Credit

Implementation Timeline

- 2024: Stakeholder outreach, engineering design, monitoring
- 2025: Secure bids and construction preparation
- Fall 2025: Begin siphon construction after irrigation season
- 2026: Install automation equipment
- Five-year monitoring period to measure improvements

Role of Henry's Fork Foundation

- Supports project development and watershed collaboration
- Provides technical expertise and coordination
- Assists with grant management
- Daniel Wilcox – Farms & Fish Program Manager
- Helps align irrigation efficiency with conservation goals

Long-Term Outcomes

- Reduced irrigation water losses
- Improved drought resilience
- Increased carryover storage in Island Park Reservoir
- Protection for fisheries and river flows
- Strengthened cooperation between agriculture and conservation

Thank You

- Thanks to Henry's Fork Foundation
- Idaho Water Resource Board
- Consolidated Farmers Canal shareholders
- Daniel Wilcox and watershed partners
- Working together for sustainable water management