Alberta Conservation Association

2024/25 Project Summary Report

Project Name: Walleye Fisheries Enhancement

Fisheries Program Manager: Peter Aku

Project Leader: Brad Hurkett

Primary ACA Staff on Project: Jason Blackburn, Tyler Johns, Adam Peters, Kelly Riehl

Partnerships

Government of Alberta
Quattro Farms Incorporated
St. Mary River Irrigation District

Key Findings

- Forty Mile Coulee rearing pond received 90,000 sac-fry walleye on May 29, 2024, and were left to grow for 57 days until they grew to a fingerling size (greater than 50 mm).
- We successfully stocked 21,134 fingerling walleye from the rearing pond into Forty Mile Coulee Reservoir, resulting in a 23.5% survival rate.

Details

Following the Government of Alberta's (GoA) provincial stocking program in the 1980s and 1990s, walleye populations in several lakes across the province rebounded from previous declines. With this success, the stocking program was discontinued in the early 2000s but relaunched in 2021 to supplement walleye populations where recruitment is low, including those in Forty Mile Coulee Reservoir. The Forty Mile Coulee rearing pond was constructed as part of a habitat mitigation offset with the creation of the Forty Mile Coulee Reservoir in 1988 and used to grow fingerling walleye for stocking into the reservoir as part of the GoA stocking program. In 2023, we reactivated the rearing pond in partnership with the provincial stocking program to enhance the Forty Mile Coulee Reservoir walleye population. The drainable rearing pond is designed with a valved inflow pipe that fills the pond from an irrigation canal and a valved

outflow pipe that drains the water into a harvest kettle where fish are collected before being stocked. The pond is approximately 0.4 ha in area with a maximum depth of 3.5 m. In early May, we filled the pond with irrigation water up to full supply level. Before filling the pond, we cut down overgrown vegetation along the bottom to remove potential entanglements that could trap fish and prevent them from draining into the kettle. We fertilized the pond in May and June using alfalfa meal to stimulate production of fish forage organisms (primarily zooplankton). This year we stocked 90,000 sac-fry walleye in the rearing pond where they were left to grow to a fingerling size (approximately 50 mm). During the rearing period, we routinely monitored the pond to determine fish growth rates, dissolved oxygen and temperature conditions, and forage. Water quality conditions and fish forage densities remained suitable for walleye rearing over the entire rearing season. Walleye were left to grow in the pond for 57 days (May 29–August 1, 2024) before they were extracted during the draining process from the extraction kettle. The project was successful in rearing 21,134 walleye fingerlings (24% survival rate) that were collected and stocked into Forty Mile Coulee Reservoir. Because of the age and design of the pond, we encountered several issues with the draining system while extracting fish, but with the help of the St. Mary Irrigation District, we plan to make improvements to the infrastructure to increase our success for the 2025/26 rearing season.

Photos

Photo 1. Walleye fingerling raised in the rearing pond at Forty Coulee Reservoir, 2024. Photo: Brad Hurkett

Photo 2. ACA staff member Adam Peters stocking sac-fry walleye in rearing pond at Forty Mile Coulee Reservoir. Photo: Brad Hurkett

Photo 3. Water draining over drop boards in the fish extraction kettle at the Forty Mile walleye rearing pond. Photo: Brad Hurkett

Photo 4. ACA staff member setting up light trap to trap juvenile walleye. Photo: Brad Hurkett