

PROJECT TRACKER'S ONLINE!

<http://conservation.idaho.gov>

stories about projects, places, and people responsible for Idaho's voluntary conservation accomplishments



What's Tracker? It's a **conservation project tracking tool** that's an online story-telling website for stakeholders, decision makers, and the public to learn more about voluntary conservation projects being accomplished by state, local, and federal natural resource and agricultural agencies and groups.

A transparent and accessible window into Commission programs and technical assistance and deliverables provided to Idaho's 50 conservation districts on projects - time spent, time remaining, and deliverables.

A broad database containing (so far) 34 years of Conservation Commission project information, sortable in a variety of ways. Over time, the database will be significantly expanded by offering **free access to other conservation agencies and groups**. Entering project data is quick and easy. Agencies enter and maintain their own project information. The Commission pays Trackers' ongoing annual maintenance fees.

What's Next? So far, we've officially finished the first two phases of work on Project Tracker, a shared online story-telling tool. In Phase

Three, the Commission is reaching out to partners (districts, other state and federal agencies, and others) to utilize Project Tracker!

For more information, call us at 208-332-1790. ☐

PARTNER FEATURE:
Idaho's largest irrigation pipeline project moves toward completion

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NORTH FREMONT IRRIGATION PIPELINE MOVES TOWARD COMPLETION

The soon-to-be-completed, largest water-efficiency pipeline project in Idaho will involve about 24,000 acres of farmland and 120 landowners.

By Steve Stuebner

Water efficiency is an important concern among the farmers in the Ashton and Marysville areas, north of Rexburg, in Eastern Idaho.

Approximately 120 landowners are involved in the largest water-efficiency project in the state Idaho in the North Fremont Canal System, involving about 24,000 acres of farmland. The Ashton area is the largest certified seed-potato growing region in Idaho, meaning the crops are valuable and local farmers work to keep their input costs down to stay competitive.

In a five-phase project, the North Fremont Canal System is being converted from a surface water irrigation system to one that employs a series of gravity-pressurized pipelines that deliver water to farms throughout the project area. The pipelines save water, reduce pumping costs and prevent seepage from canals, officials said.

“It’s a real good project,” said Clen Atchley, one of the directors of the canal system and a local farmer. “We are delivering clean, gravity-fed water to our stockholders. Everybody loves this.”

In July, a number of farmers from the North Fremont Canal led a tour of the project area along with officials from the Natural Resources Conservation Service (NRCS), construction contractors and the Idaho Water Resource Board.

Construction is under way this summer on Phase 3 of the project, which involves converting 17.8 miles of open canals to 19 miles of gravity-pressured pipeline and removing 40 irrigation pumps that are no longer needed because of the new gravity-flow sys-



The Teton Range and Grand Teton loom above the farm fields in the Ashton area.

tem. The Idaho Water Resource Board provided a \$4.3 million loan to help finance the project, and NRCS and the North Fremont shareholders funded \$6.9 million as well.

Phase 3 follows the construction of Phases 1, 2, and 4 of the project, dating back to the first pipelines installed in 2008. The total cost of phases 1 and 2 was slightly over \$5 million, with the NRCS contributing \$3.38 million through two grants. Phase 4, completed in 2014, provides irrigation in enclosed pipelines to serve 5,270 acres of farmland. NRCS contributed \$6.6 million for that phase, and the board provided a \$2.5 million loan.

About 20,000 acres of farm land are now served by enclosed pipelines, officials said. After the Phase 5 is completed in the future, 24,000 acres will be converted to pipeline irrigation. The primary cash crop in the area is seed potatoes, following by malt, barley and alfalfa. A number of growers

have contracts with Anheuser-Busch in Idaho Falls for the malt and barley.

Atchley started the tour at a major diversion point, where the North Fremont Canal splits in three directions to serve farmland. The Marysville Irrigation Company, Farmers Own Ditch Company and Yellowstone Power and Irrigation Company recently merged to form the North Fremont Canal Company.

The water for the irrigation system comes primarily from Fall River as it flows off the west slope of the mountains above the farmland – with the Grand Teton and the Teton Mountain Range towering above.

Water for the irrigation system also comes from Island Park Reservoir.

The main canal is lined to prevent water losses, Atchley said, and pointed out the clarity of the water. “The Fall River can run brown in the springtime, but our canal stays clean,” he said.

PARTNER FEATURE: IDAHO WATER RESOURCE BOARD



Farmer Glen Atchley explains how the North Fremont pipeline system will work near Ashton.

Each pipeline saves about 30-35 percent of the water consumption from open canals, he said, stretching their water farther into the growing season. Farmers also are converting their fields to pivot irrigation and wheel lines to save water, he said.

Collectively, the North Fremont farmers saved about 20,000 acre-feet of water, and the power savings has amounted to about 4,000 kilowatts, officials said. Put another way, the pumping requirements for the irrigation system has been reduced by 5,250 horsepower for all of the farmers as a whole.

Jacob Owens, NRCS District Conservationist in Rexburg, said the farmers in the North Fremont project area were motivated by water savings and power savings in working toward a more efficient irrigation system.

“The growing season is so short over here, that the farmers wanted to save as much water as they could and put it directly on the crops where it needs to be,” Owens said. “We’re thrilled to be working on it.”

The growing season starts in mid-May, and by mid-August, temperatures can freeze at night, he said.

The Ashton and Marysville areas are located over the top of the Island Park Caldera, sandwiched between the Fall River and the Henrys Fork of the Snake River. Below the topsoil, volcanic bedrock lays below with cracks and fissures, explains Lance Eldridge, branch manager for Rain to Rent in Idaho Falls, one of the primary contractors working on the project. Under the old irrigation system, a lot of the canal water was lost in those cracks and fissures, he said.

“The water savings was a huge motivating factor,” Eldridge said.

“It’s definitely more of an efficient way to farm,” adds Atchley. “Yields have increased by 10-20 percent. The farmers put on the water when they need it.”

Phase 3 should be completed by mid-November, Eldridge said. Then, in 2020, NRCS and the North Fremont Canal shareholders are expected to

move ahead with Phase 5 to complete the irrigation system. That phase is expected to provide 18 miles of gravity-pressurized irrigation pipeline. The cost is in the range of \$11 million.

Rain for Rent has been the primary construction contractor for all phases of the project, Eldridge said. Hill & Sons is a subcontractor that’s doing all of the excavation work for the pipelines and putting the pipes into place. They are employing about 10-12 people on the crew, including excavator operators and laborers.

Chad Harding, who supervises the Hill & Sons crew, said they worked through the winter months to keep the project moving forward. The only limitation was when temperatures fell below 10 degrees Fahrenheit, he said. PVC pipe becomes too brittle at that point, and it could be subject to breakage.

“But the snow cover kept the ground soft,” he said, allowing them to dig without having to break through frozen ground.

The pipelines start out at a large diameter at the main diversion and then taper in size as the pipelines deliver water to farms and handle less volume. For example, in Phase 3, the

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pipes start out at a 54-inch diameter, and then drop to 36 inches as the pipeline moves to the west across the farm landscape, and then to 14 inches and 4 inches at the end of the line. “The pipes get smaller as you go down the line,” Harding notes.

Idaho Water Resource Board officials have been pleased with the performance of the North Fremont Canal System in terms of farmers keeping up on the schedule of payments for the loan contracts, officials said. “They have been staying current on their payments all the way along,” said Rick Collingwood, a board staff member.

Brian Patton, Chief of the Water Planning Bureau for the Idaho Water Resource Board, said the board has been supportive of the project because it lies outside of the Eastern Snake Plain Aquifer (ESPA) zone of influence north of St. Anthony. The North Fremont project overlies a separate local aquifer, he said.

“Otherwise, the board would have been concerned about a loss of seepage to the ESPA,” Patton said. “If it had been tied to the ESPA, we might

not have been one of the funding partners. There is a separate aquifer below the Ashton area.”

One interesting issue for construction contractors is that because the Ashton and Marysville areas are located in a certified seed potato area, any heavy equipment brought into the area for construction in the farm fields has to be sterilized in a hot wash prior to use.

“The whole excavator has to be sanitized before you can bring it into this area,” Harding said. “It’s sprayed with a chemical process to make sure it’s completely clean.”

Any risk of pathogens or nematodes has to be eliminated through the power wash, he said.

Overall, as the new pipelines go in, more and more farmers in the area are buying into the project, said Sean Maupin, a farmer with River Ranch Enterprises and a director of the North Fremont Canal System.



The view from inside a 54-inch diameter pipe.

In previous drought years, farmers have had to buy water from the rental pool, or they have had to use more storage water from Island Park Reservoir. With water efficiencies from the pipeline projects, they are using less storage water and rental water, he said.

In addition, the pipelines save money on canal maintenance. They don’t have to worry about canal safety issues with enclosed pipelines, and they don’t have to spend as much on noxious weed control along canal banks, he said.

“With the first couple of phases, people were a little skeptical,” Maupin said. “But over time, people can see the benefits. They’re saving on power costs, they’re saving on water costs, and they’re able to raise a better crop with more efficient use of the water. They’ve got constant water pressure and water supply. When you’re growing potatoes, you’ve gotta have water when you need it.” □

Steve Stuebner is a regular contributor to *Conservation the Idaho Way*.



An excavator digs a trench for the pipelines and places the pipes one at a time in July.

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