



*Butte Irrigation employees install PVC irrigation pipe on a farm served by North Side Pumping Co. in Hazelton. The contractor installed 88,000 linear feet of buried pipeline for the irrigation efficiency project. (photo by Steve Stuebner)*

## WQPA GRANT SUPPORTS \$4.1M NORTH SIDE PUMPING CO. IRRIGATION EFFICIENCY PROJECT

By Steve Stuebner

North Side Pumping Co., based in Hazelton, is putting the finishing touches on a \$4.1 million irrigation efficiency project that involves the installation of 16.8 miles of buried pipeline and 30 new pumping stations to benefit 30 farm producers the Magic Valley.

The 4,600-acre project was partially funded with a \$951,800 Leading Idaho Aging Infrastructure Grant from the Idaho Water Resource Board, a \$2 million grant from the

Bureau of Reclamation WaterSmart program, and a \$150,000 grant from the Water Quality Program for Agriculture (WQPA) program. Local producers provided \$213,588 in cost-share funds for the project.

North Side has natural flow water rights on the Snake River and storage water rights in Bureau of Reclamation reservoirs. Irrigation water is typically delivered for about 200 days each season to farmers raising primarily alfalfa, corn, grains, sugar beets and potatoes. Farms served by the North Side project are

located on both sides of Interstate 84, east of the Kimberly exit and west of Burley.

Converting the irrigation system from open canals with an antiquated pumping system to enclosed pipelines and new pumps outfitted with variable frequency drives (VFD) will save energy and an estimated 6,300 acre-feet of water per year, officials said. More than 16.3 miles of PVC pipe, ranging in diameter from 2 inches to 15 inches, were installed over the winter months. Utilities also had to install electric



*Butte Irrigation dug deep trenches for the pipeline installation in an area that locals say has fewer rocks under the ground than many areas in the valley, making it easier-going for the contractor. (Photo by Steve Stuebner)*

power to the new pumping stations. “This is a modernization plan we’ve had, three years in the making from the planning stages,” said Parley Hinton, Project Manager for North Side Pumping Co. “What we have is aging infrastructure that’s 100 years old, and it’s just falling apart.”

The new system will provide “water conservation, power savings, and it’s going to save 6,300 acre-feet of water per year,” Hinton said. “So our farmers are going to see power savings from this, I’d guess about 15-20 percent, and the water savings can be returned to the reservoir system. That’ll be used for carry-over and drought resilience.”

Hinton said the grant funding from all of the combined sources made the project possible. “Without

those grants, it wouldn’t have ever happened. We’d have been putting Band-Aids on an old system.”

Dean Stevenson, a member of the Idaho Water Resource Board and a Rupert farmer, toured the project Thursday and was pleased to see the improvements being made to North Side Pumping’s irrigation system.

“This is a great project,” Stevenson said. “It saves water, it makes it more efficient for the farmers on the system, and any water we can save and keep in the reservoir system is water we can have for next year. This is going to benefit the farmers forever.”

“We also are grateful to the governor and the Idaho Legislature for entrusting us with the grant funds to assist with these projects.”

The new irrigation system will allow North Side Pumping to retire 14.5 miles of irrigation lateral canals, eliminating the need for any maintenance on those laterals.

The old pumps, dating back to

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1929, required a lot of maintenance in the winter to keep them running, Hinton said. For instance, no parts were available off the shelf for the old pumps – they had to have local machine shops manufacture parts on a custom basis. Pumping Plants 1 and 3 will be retired as part of the project. The old brick pumphouses dating to 1919 will be left in place for now.

The 30 new, small-scale pump stations will be installed off of new water delivery headgates on portions of the open-channel irrigation laterals that remain active in the project area.

These laterals are owned and operated by the North Side Canal Company, a sister company to North Side Pumping Co.

Alan Hansten, general manager of North Side Canal, complimented Hinton for organizing local farmers served by the North Side Pumping Co. to work on the irrigation efficiency improvements. “That’s a huge undertaking to get all of the farmers together,” Hansten said.



*Project map shows the layout of canals and new pipelines installed. I-84 runs right through the middle of the project area. (courtesy North Side Pumping Co.)*

“That’s no easy lift.”

But everyone agreed that the project would set up the 30 producers in the North Side Pumping irrigation network for success with modern and more efficient irrigation system.

The WQPA grant helped with the costs of putting in the pump stations and the pipeline construction, said Jake Connelley, a water quality specialist for SWC. “Their system is

going to be more efficient with both water savings and energy savings, and it’s definitely going to improve water quality as well. So it easily checked all of our boxes for a WQPA grant,” he said.

One recent change to the WQPA grant program is that irrigation efficiency and water savings projects can qualify for funding. Projects that benefit water quality and



*New water pumping stations fitted with Variable Frequency Drives will run more efficiently than North Side Pumping’s old system, saving water and energy. Each pump serves a total of 30 producers in the project area. (photo by Steve S.)*

livestock best management practices also qualify. The Commission’s WQPA program has been funded by the Idaho Legislature the last three years in a row, adding a total of \$11M for conservation projects statewide.

**Benefits of Pumps with Variable Frequency Drives**

An additional project benefit is replacing the large-scale pumping plants with small-scale, variable frequency drive (VFD) pumps, ranging in size from 5-150 horsepower. That gives producers an improved ability to manage their overall irrigation delivery system, officials said.

The current pumping plant and lateral delivery system requires that North Side managers maintain excess flow in the irrigation laterals to ensure that the most downstream water user always has sufficient water to meet irrigation needs. North Side Pumping also had to deliver additional excess water through the pumping plants into the lateral system to account for significant ditch infiltration losses.

The VFD pumps, combined with in-pipe flow meters for each landowner, will create an irrigation system that can quickly and efficiently adjust water delivery rates based on actual irrigation demand, officials said.

When farmers need less water, they can turn off the pumps or reduce



North Side Pumping will retire these old pumps that date back to 1929. (photo by SS)

flows. “Your pump can be running at 20 percent or running at 100, it’s more of an on-demand system,” Hinton said. “When you don’t need the water, the pump goes to sleep.”

When combined with both past and proposed future water efficiency projects on the Snake River, these projects improve drought resiliency for the overall irrigation storage system in Southern and Eastern Idaho, he said.

“Water supplies are also showing evidence of becoming less reliable over time, making this type of project critical for the long-term continued success of agriculture in Southern Idaho and the associated economic benefits,” Hinton said.

The project manager credited a Paul-based company, Butte Irrigation, for doing the planning and construction work on the irrigation project. They started in late November and finished by the end of April.

“It was a really narrow window for construction,” he said. “They’ve done a fantastic job of moving through and working with the weather to lay 88,000 feet of pipe and get all the pump stations installed. It’s been quite a feat for them.”

*Steve Stuebner writes for Conservation the Idaho Way on a regular basis.*

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