

Linda Engle Introduction: Sustainable Idaho is brought to you by the Portneuf Resource Council.

Madison Long: Welcome to Sustainable Idaho. I'm your host Madison Long and today I talked with Wade Egan, to discuss the newly-finished Hawkins pipeline project in Arimo. Egan owns a family farm and ranch in southern Bannock County, where he works as the secretary, treasurer, and project manager for Marsh Creek Irrigation district and the Hawkins pipeline project.

Wade Egan: The Hawkins pipeline project is nine and a half miles of buried irrigation pipeline. Most of it's 18 inches in diameter. Its purpose is to conserve water, energy, and water quality. When Hawkins reservoir was built, our water rights were established in the late 1800s when the first settlers came. They built the dam with this good sized irrigating system with ditches miraculously level all over the drainage.

ML: Located off I-15 and west of the town of Virginia, the Hawkins Reservoir is known to Southern Idaho residents as a fishing spot, campground, and a place for fun on the water. However, its primary and original purpose is for irrigation. And as presented to the Idaho Water Resource Board in late 2023, the Hawkins Reservoir and distribution system carried water across 3,220 acres and 12 shareholders without any substantial upgrades since its original construction. Those unaltered canal conditions created an equation for flash flooding, increased sediment loads, water contamination, and bank blowouts.

WE: What we've discovered over my lifetime and my kids' lifetime is that that system is kind of a disaster. Those little ditches and laterals that go out of that, waste a lot of water. The ditches plug the one line, and you have to shovel them out. Water running everywhere, movement of noxious weeds.

One of our pieces of ground is at the end of five miles of winding ditch. The water master would go to the reservoir, and he would open up the amount of water you need. You measure it, turn it into that ditch, and then you wait about eight or nine hours.

Our irrigation equipment is hooked to telecommunications equipment so it tells us when it's working or not. So you get it all started and running and then all of a sudden you start seeing low pressure alerts.

Before we did the pipeline, you've got to wake up the water master in the middle of the night and go turn off the reservoir, which is dangerous. It takes less time to turn it off, but you're losing the eight hours again to get the water to it.

ML: According to Egan's interview with the Idaho State Journal, if shareholders at the end of the pipeline requested 1,300 gallons of water a minute, 2,500 gallons a minute had to be released in order to compensate for surface evaporation and ground seepage along the ditches.

However, after an estimated \$2 million cost, the entire ditch system has been replaced with buried pipe, allowing all center pivot lines and wheel lines to be gravity-fed. This further reduces pump maintenance and replacement expenses.

Partial aid for this project came from a Department of Environmental Quality State Agricultural Best Management Practices program grant that supports water quality improvements state-wide. The Natural Resource Conservation Service, a government agency of the U.S. Department of Agriculture that focuses on conserving, protecting, and enhancing natural resources was tasked with the engineering and design of the pipe.

WE: Now as water comes out of Hawkins we can use to irrigate with. When it gets to the producer, they've got water that's clean, under pressure, and pretty stinking reliable. We don't know quite what the water savings is going to be. We know it's north of 30%. It's like raising Hawkins Reservoir 30% at a minimum because we use the water more effectively.

Now this is what happens. I call the water master, he runs up to the reservoir in about 30 minutes. He calls me and says, Wade, turn on your water. It's all ready to go. So from my phone now, I click a button and the water comes on.

We don't lose any water. If he wants to turn the water off, he just turns it off. The pipeline stays full. And when we're ready to go, we turn it right back on again. My big fear is that the rising generation is going to go, "oh this is how it's always been." No, there has been some real trouble. This has been this pretty miraculous project. Besides that, we no longer use any pumps, so we've taken the load off the power grid because the water comes down, falling inside a tube. The head pressure is sufficient that it just comes and squirts on its own.

ML: What was normally taking days of consistent labor to clean the ditch, has now been replaced by coanada self-cleaning screens that remove debris and solids. Now shareholders receive clean water, and animals drinking from the open ditches do not consume noxious weeds floating in the water.

However, these open ditches were utilized by several species of bird, and large animals like deer. How are you ensuring that wildlife conservation and clean water recreation are able to co-exist harmoniously?

WE: What we've done in place of the ditch is we have installed water troughs and water facilities for our animals. And I am pretty confident the other animals use them. Some conservation projects that have been funded by NRCS fence the animals, our cattle, off of the main channel of Hawkins Creek because animals like birds need cover, feed, a lack of predators. For the most part, we've seen our game bird populations have increased.

One of our future plans, and we've had preliminary meetings with this, is to restore Wiregrass Reservoir. Marsh Center Irrigating Company has that as part of their portfolio of water. It's been in disrepair for a number of years, and we met with BLM, Fish and Game, and Portneuf Soil

and Water, and our hope is that we'll be able to take some of our water and move it from one reservoir to the other and create a place there for recreation and camping.

ML: Several community partners helped develop the Hawkins Pipeline, including Four Trax Excavation of Arimo to weld the pipes together, Morrison Fabrication for steel fabrication, and Hydero Irrigation provided parts and fixtures for the system.

To finish up the two-year build, the rest of the open ditches will be dozed over and reseeded with native species and crops. This will assist in reviving the soil and preventing wind erosion on the topsoil.

WE: It's kind of amazing because we had a big open house on this project in May, and a lot of people ask, "Where is this pipeline?" You've been driving past it for the last 10 miles.

We live in a day of increasing populations, increasing demands on agricultural space. We're going to have to do moving forward is figure out ways to use the space and the resources we have as efficiently as possible. Every drop of water has to be allocated to its purpose. But a lot of times we get stuck in the way we've always done it.

I was blessed to be in a family of a grandfather who got to the eighth grade. He was a very successful farmer and rancher in the community, but he was fairly progressive. Anything that would come along new he would just try. Maybe that's in my genetics. When it comes to agriculture we need to adopt new things. That's what I do. I go and find someone and say, "have you done this before? I want to know how this works." What we face in ag today, we have to be to look and think outside the box we've been in.

These projects have a huge impact, I think, for generations. The Hawkins pipeline, it's probably as important as building the dam.

ML Outro: Thank you to Wade Egan, the project lead of the Hawkins Pipeline, for sharing more about how this system change created lasting benefits for water resources, energy conservation, wildlife habitat, and the people who live, work, irrigate, and recreate around Hawkins Reservoir.

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