



North Unity Irrigation District

Community Resilience Project

FAQ

Who is North Unit Irrigation District?

North Unit Irrigation District supplies irrigation water to 59,000 acres of farmland in Oregon's Jefferson County. Irrigation districts like North Unit are a type of special district, local governments created to meet a local need (e.g., school districts, park districts, irrigation districts). North Unit Irrigation District operates under contract with the U.S. Bureau of Reclamation to provide agricultural water to patrons of the district. In addition, the District is a part of the Deschutes Basin Board of Control, a consortium of eight irrigation districts that collaborate on water management in Central Oregon.

Who is Farmers Conservation Alliance?

Farmers Conservation Alliance (FCA) is a non-profit organization that helps irrigation districts, ditch companies, and agricultural water providers across the West modernize their infrastructure in a manner that provides agricultural, environmental, and community benefits. The organization provides irrigation modernization services by offering technical assistance, resources, and funding to help accelerate modernization efforts and realize their associated benefits at scale.

What will the project do?

By piping an 8,000 ft section of North Unit Irrigation District's main canal and constructing a power plant near the eastern edge of the Redmond Airport, the project will provide a backup power source for critical services in case of a large-scale power disruption. The pipeline will support the district's larger irrigation modernization efforts by saving water and improving water supplies for local farmers while also supporting broader community resilience.

What is the project timeline?

Designs are anticipated to be ready by February of 2023. The project is on track to begin construction in two to three years.

How can the public engage in the project?

We are committed to giving a voice to stakeholders to ensure that the project meets both its goals and community needs. Throughout the project process, we will be providing opportunities such as open houses, public meetings, and/or continued outreach sessions with agencies, organizations, and community members.

Why is North Unit Irrigation District developing this project?

Replacing open canals with buried pipelines can reduce the amount of water lost to evaporation and seepage, helping to ensure that more of the water diverted into a system reaches a farm or ranch. These changes improve agricultural water supply, especially in regions facing water scarcity or drought conditions. Integrating a hydropower turbine into the system allows North Unit Irrigation District to generate clean and renewable energy from the flowing water, providing an additional revenue stream while producing carbon-free energy. By embracing modernization measures, the district can enhance its operational efficiency, economic viability, and environmental stewardship, thereby creating a more resilient and forward-thinking irrigation infrastructure.



How will the public benefit from the project when it is not in use as an emergency response tool?

When complete, the project will provide a range of community benefits. These benefits include:

- Improved disaster preparedness resulting from a secure backup power generation source that can be activated during natural disasters and prolonged electrical grid failures.
- Improved water supply via modernization would create water savings that benefit farmers, fish, and wildlife.
- Generated economic activity through agricultural, construction and maintenance jobs.
- The projects inline hydroelectric generators will help meet the state's renewable energy goals by powering the irrigation district's systems while also supplying additional power that can be sold to local utilities and sent to utility customers.

How will the project be funded?

North Unit Irrigation District expects to finance the project through several funding sources, including grants that focus primarily on resiliency and/or agricultural production and forgivable loans.

Why include the microgrid/resiliency improvements?

The City of Redmond, where the project will be located, has been identified as the state's primary emergency response center in the event of a catastrophic earthquake in the Cascadia Subduction Zone. A catastrophic event is predicted to cause widespread loss of basic everyday services, including extended periods of electrical outages. Reliable backup power is an essential component to disaster preparedness and response for the region, regardless of the type of catastrophic event. The microgrid will help provide power to strategic services during an emergency.

How much will the project cost?

The project will cost an estimated \$15-20 million for all components, including hydropower generation, canal piping, and microgrid construction.

How much energy will the project produce?

The project will have a nameplate capacity of 1.4 MW and will generate an estimated 2240 MWhs (megawatt hours) annually during the irrigation season.

When will the facility operate during normal times?

The hydropower plant will operate during the irrigation season, which is around 200 days a year during late spring, summer, and early fall. However, in an emergency, water could be diverted to run the plant any time in the year. Irrigation season is usually from April to October.

Who will own the project including operations and maintenance?

The piping and hydropower portion of the project will be owned, operated, and maintained by North Unit Irrigation District. The microgrid portion of the project will be owned, operated, and maintained by the local electric utility.

Can other energy resiliency components be included in the project?

There may be the potential to pair the hydropower facility with battery storage to further improve energy resiliency. We are going to continue an open dialogue with Pacific Power, which supports statewide resiliency efforts. We will continue to evaluate additional resiliency options, and we will pursue those options as appropriate for this project.