

Frequently Asked Questions: CADIZ NORTHERN PIPELINE

What is it?

In 2021, Cadiz completed the purchase of a retired oil and gas pipeline that had been held under option from El Paso Natural Gas (EPNG) since 2011. The pipeline was a segment of EPNG's 1,200-mile Line 1900 gas pipeline extending from Texas across four states and terminating in California near Bakersfield. The segment acquired by Cadiz extends east-west for 220-miles across San Bernardino and Kern Counties, as well as the California State Water Project, Los Angeles Aqueduct, Mojave River Pipeline and several underserved and disadvantaged communities. The conversion of the pipeline to water conveyance creates new opportunities to connect these communities to California's primary water delivery infrastructure.

Feasibility studies demonstrated that the 30" steel pipeline could convey approximately 25,000 AF per year (enough water for 200,000 people) between communities along the route, including a variety of rural, military, and agricultural areas directly serviceable from the pipeline. The pipeline is intended to be used to complement existing water conveyance infrastructure in California in an effort to help ameliorate the structural water supply and storage shortages facing the state. The pipeline was studied in Cadiz's 2012 EIR as a potential vehicle to deliver water to Cadiz for aquifer storage and recovery in dry years.

Why convert an oil/gas pipeline for water conveyance?

America's oil and gas pipeline network is extensive. When oil and gas conveyance infrastructure retires it creates an opportunity to repurpose these lines for water or other needed utility conveyance such as hydrogen or broadband. With the country moving toward renewable energy to address climate change, the extra capacity needed for other utilities and resources becomes available in the U.S. oil and gas pipeline system.

California's conveyance infrastructure has not seen significant updates in decades and does not equally serve or reach all California communities. There are more than 1 million Californians who lack reliable access to safe, clean water. California's drought crisis and water shortage unfairly burdens disadvantaged and rural communities as people with the fewest options receive less water during these times but typically at higher costs. Most of these Californians live in communities not accessible to the State's traditional mainline conveyance infrastructure. Additionally, Southern California presently relies heavily on water delivered via the State Water Project and Colorado River Aqueduct, yet both are at dangerously low levels. As those systems continue to face challenges, there are few options for conveying water between the two.

What condition is the pipeline in? What is required to convert it?

The pipeline began its retirement process by EPNG in 2005 and was subsequently cleaned and filled with a nitrogen gas blanket and sustained cathodic protection. Prior to moving water for municipal, agricultural uses, the pipeline would be further cleaned and will also require variety of air relief and other valves along the route. Once interested parties and sources of water are identified there may be additional appurtenances required on the pipeline depending on the use.

What are potential uses of the pipeline? What type of parties can put it to use?

The pipeline is engineered for oil and gas distribution, but it has been authorized to convey water. Water has already flushed through the pipeline for cleaning, and other uses, in various segments and across the entire route.

Cadiz plans to ready the 220-mile line for water conveyance in both directions. The pipeline crosses California's main North-South conveyance infrastructure, and several water agencies, including California State Water Contractors, agricultural districts, cities, farming, ranching, and groundwater basins that may benefit from swaps, trading, and storage. There are more than 20 state designated disadvantaged communities serviceable by the pipeline. In such a scenario, Cadiz would be the operator of the pipeline and wheel water for other parties.

Cadiz has also evaluated the pipeline as a potential conveyance facility to enable imported aquifer storage in the Cadiz groundwater basin. This opportunity was evaluated at a programmatic level in the Cadiz Water Project EIR.

Any use of the pipeline would be subject to additional regulatory review once sources of water and storing parties were identified.

What's next?

In December 2020, Cadiz secured from the federal government rights-of-way to operate the pipeline for water conveyance over 58 miles of federal lands and began engineering, design, testing, and cost analysis necessary to convert the entire pipeline to water conveyance. Testing and feasibility analysis have confirmed the pipeline's capacity to be repurposed to convey approximately 25,000 acre-feet in either direction.

In March 2021, environmental NGOs generally opposed to increasing California's water supply and conveyance system, filed lawsuits in federal court to challenge the federal rights-of-way granted to Cadiz. The federal government filed a motion for remand with the Court on Friday December 3rd, which could lead to additional environmental review of the use of the pipeline for water conveyance. Cadiz and plaintiffs in the case are scheduled to file opposition briefs in early 2022. There will be a hearing on the motion in March 2022.

The pipeline is presently available for consideration by any parties that may benefit from this additional infrastructure. If you are interested in more information about the Northern Pipeline, please contact cdegener@cadizinc.com.



SOURCE: ESA, 2021; DWR, 2021.

Cadiz - Northern Pipeline

Figure 1
Northern Pipeline Overview

