

Denver Water Aquifer Storage and Recovery Study

July 2, 2021

Dear Neighbor,

We are writing to inform you about a project coming to your neighborhood this fall.

Denver Water is exploring how Aquifer Storage and Recovery (ASR) may contribute to delivering high-quality drinking water for our customers far into the future. As part of this study, crews will drill an exploratory test well and collect data on the underlying aquifer at Denver Water's facility in Congress Park.

What: Denver Water crews will drill an exploratory borehole to evaluate water quality and water production capability from a potential future ASR wells at the pump station site. ASR has been proven successful for other utilities in the front range, but more study is needed to learn about the aquifers under our feet in Denver. This program will help us learn more as we try to determine if pursuing ASR is a smart long-term investment for Denver Water.

When: We expect the project to start in fall 2021. Notifications, including the full project schedule, will be sent out later this summer.

Where: Denver Water's Capitol Hill facility in Congress Park.

Why: Aquifer Storage and Recovery, or ASR, is the storage of clean, potable water in an aquifer for later recovery and use. It's like a savings account — water "deposits" can be made during wet years and stored indefinitely. During periods of dry weather, "withdrawals" can ease the burden on other water supplies.

Impacts: Out of respect for our neighbors, Denver Water pledges to minimize noise impacts to the neighborhood during this project. Work will be conducted around-the-clock for six to eight weeks, and Denver Water is obtaining a variance to the City and County of Denver's noise ordinance. Noise mitigation will include sound walls to limit audible noise levels to a hum comparable the sound of a dishwasher running in the next room.

During the project, you will see a drilling rig on-site, along with increased activity in the area. Frequently asked questions are included in this letter. Visit denverwater.org/ASR for more information about ASR.

Contact: For questions directly related to this project, please contact Gianna Lombardi at 303-634-3724 or by email at gianna.lombardi@denverwater.org. For general questions, please call Denver Water Customer Care at 303-893-2444 (Monday–Friday, 7:30 a.m.–5:30 p.m.).

DENVER WATER'S GOOD NEIGHBOR COMMITMENT: Denver Water is committed to being a good neighbor during construction. Please visit denverwater.org/GoodNeighbor for more information on safety, equipment placement, construction hours, water interruption and other project impacts.

Aquifer Storage and Recovery FAQ

What is Aquifer Storage and Recovery (ASR)?

Aquifer Storage and Recovery, or ASR, is the storage of clean, potable water in an aquifer for later recovery and use. Many liken the concept to a savings account — water “deposits” can be made during wet years and stored indefinitely. During periods of dry weather, “withdrawals” can ease the burden on other water supplies.

That’s fracking, right?

No. The use of hydraulic pressure to increase the yield of a petroleum well (known as “fracking”) is as different from ASR as night and day. Whereas petroleum wells are sometimes injected with a mix of water, sand and other chemicals, ASR stores only clean, potable water in permeable rock formations that hold water naturally. Also, the depth of the average petroleum well is between 6,000 and 10,000 feet, while the water aquifers we would use for ASR are at an average depth of 500 to 2,000 feet.

What will this specific project involve?

Starting in fall 2021, we will drill a test well at Denver Water’s Capitol Hill facility in Congress Park. We will then perform tests to help us understand how well the aquifer stores water, what happens to water quality after it has been stored in the aquifer, how easily water can be withdrawn, etc.



Drilling sounds like it will be disruptive. Will it?

While drilling will create noise, Denver Water is committed to minimizing this impact and inconvenience to nearby residences and public areas. We are working closely with the City and County of Denver to secure a variance to the city's noise ordinance. We will perform our work under its regulations and oversight. This will include installation of 30- to 40-foot sound walls around the work area to minimize noise and work site lighting impacts to our neighbors. The walls will limit audible noise levels comparable to the sound of a dishwasher running in the next room. Construction traffic will enter through the existing facility entrance.

When will drilling begin?

We expect the project to start in fall 2021. Notifications, including the full project schedule, will be sent out later this summer. Neighbors can expect drilling to occur 24 hours a day, seven days a week for approximately six to eight weeks.

Why is Denver Water exploring the possible use of ASR?

Denver Water is responsible for securing reliable sources of water to meet our customers' future needs. Experts suggest ASR has advantages over other long-term supply options as it tends to be comparatively less costly, less impactful to communities and less challenging from a permitting standpoint. Studying the feasibility of using ASR is part of our "all of the above" strategy, which includes conservation, expanding sources of supply, recycling water and more to ensure we can meet the future needs of customers in our service area.

***Note:** Aquifer Storage and Recover is in the long-term plans for Denver Water as a possible additional water storage option, and this work and research on Denver's aquifers is preliminary. ASR is not viewed as an alternative to water storage projects like the Gross Reservoir Expansion Project.*

Where does this project fit in the overall ASR exploration process?

ASR has been successful for other utilities in the Front Range, but more study is needed to learn about the aquifers under our feet in Denver. This program will help us learn more as we determine if pursuing ASR is a smart long-term investment for Denver Water. More study will likely be needed after this project is complete, but it is an important step.

What happens to water that has been stored in an aquifer? Does it come out at the same quality as it went in?

That is something this project will help us learn. No matter what, ensuring our customers receive the highest quality of water is our primary goal. Water extracted from an aquifer would be treated to meet or go beyond our quality standards before going to customers.

What will be done with the site after drilling is complete?

A small 2-by-1-foot concrete pad and 2-foot-tall monitoring well will remain on site after we are finished.