

WATER TOPICS IN OUR COMMUNITY: CONJUNCTIVE USE

WHAT IS CONJUNCTIVE USE?

The term Conjunctive Use describes the practice of storing surface water in a groundwater basin—often referred to as an aquifer. Truckee Meadows Water Authority (TMWA) employs a conjunctive use approach when there is enough surface water supplied by the Truckee River to allow us to rest many of our production wells. Conjunctive use can benefit the aquifer in two ways: passive groundwater recharge and active groundwater recharge.



WHAT IS PASSIVE RECHARGE?

Passive recharge describes the natural process of groundwater levels rising due to water entering the ground via precipitation and other hydrological actions. This process can be accelerated when piped-in surface water is available to our customers, allowing wells to be idled.

WHAT IS ACTIVE RECHARGE?

TMWA's active recharge program, known as Aquifer Storage and Recovery (ASR), pipes treated surface water into existing wells. This treated, surface water is injected into the aquifer through several wells throughout TMWA's service area. The process occurs during fall and winter when water use drops to one-fourth of the summer average usage and surface water is available. The stored water can then be accessed during drought periods, if necessary. The earlier in the fall TMWA starts injecting treated water into our wells, the more water we will be able to store and have available for use in below-normal precipitation years. We use the replenished aquifers like underground reservoirs from which water can be withdrawn in the event of reduced availability of river supplies.

KEY THINGS TO KNOW

- Conjunctive use is the efficient management of both surface water and groundwater resources.

QUICK FACTS

About TMWA:

Truckee Meadows Water Authority (TMWA) is a not-for-profit water utility, overseen by elected officials from Reno, Sparks and Washoe County. TMWA employs a highly skilled team who ensure the treatment, delivery and availability of high-quality drinking water around the clock for more than 385,000 residents of the Truckee Meadows.

About this series:

"Water Topics in Our Community" is a series of papers designed to provide the citizens of the Truckee Meadows information about key water topics in this region.

To access all of the papers, go to www.tmwa.com/topics.

About TMWA's Board of Directors:

The TMWA Board welcomes you to attend and comment at any board meeting. Meeting schedules are posted at

www.tmwa.com/meetings.

To send a question to the Board, visit us online at

www.tmwa.com/comment.

Questions or feedback?

We'd like to hear from you. Please call our Community Communications line with any remaining questions you have on this topic or other water topics. The number is **(775) 834-8290**.



Scan to save.

- Conjunctive use maximizes the supply of surface water when it's available, thereby reducing groundwater pumping.
- TMWA will rest and recharge specific wells when Truckee River and creek water is available.
- Reduced groundwater pumping and recharge of the aquifer will help sustain groundwater levels.

WHY DOES TMWA STORE WATER UNDERGROUND?

During low water years and in abundant snow years, Truckee Meadows Water Authority (TMWA) carefully manages our water resources. Our water supply depends on annual snowpack and reservoir levels. Since we can't predict how much snow we will get in any given winter, this is stored water that the community can use if there is a drought. This benefits everyone in the Truckee Meadows. One of those resources is our capacity to store water underground in the aquifer; this storage is in addition to upstream reservoir storage. Both surface and groundwater resources can be tapped in the event of a drought. By injecting treated surface water into some of its wells, TMWA recharges the underground aquifer annually.

HOW MUCH WATER HAS TMWA RECHARGED?

Since recharge began in 1993, ASR has successfully injected tens of thousands of acre-feet of water into local aquifer. An acre foot is the volume of water necessary to cover one acre of surface area to a depth of one foot, or 325,851 gallons.

HOW DOES RECHARGING WELLS AFFECT THE WATER QUALITY?

The treated water injected into the aquifer remains at high quality, meeting all drinking water standards and even improving the aquifer's water quality in the process.

RECHARGE IS PART OF ONGOING WATER MANAGEMENT STRATEGIES

As a community-owned water utility, we are constantly working to manage water resources in ways that benefit our residential and business customers. We will continue to look for programs such as recharge that make sense for the community's future.

HOW MUCH WATER WAS RECHARGED IN 2015?

During the 2015 recharge season, about 10 million gallons per day were injected into 21 different well sites across the Truckee Meadows. This allowed us to store 4,000 acre feet of water (more than 1.3 billion gallons).

DID YOU KNOW:

The recharge program is evaluated on an annual basis and modified as needed to provide maximum benefit to the aquifer, water quality and drought storage.



TMWA has received the "Directors Award of Recognition" from the Partnership for Safe Water. With this award, TMWA's Chalk Bluff Water Treatment Plant's quality is recognized as ranking among the top two percent of water treatment plants in the country, producing high quality water for more than 385,000 residents in the Reno-Sparks area.

Learn More at:
www.tmwa.com/psw