

# Going Above and Beneath the Surface — OPTIMIZING WATER STORAGE AND SUPPLY



With the Truckee River as the main source, our diverse water supply also includes storage in upstream reservoirs and groundwater aquifers. Coordinating how and when sources are used is a key part of TMWA's Conjunctive Use strategy.

## CONJUNCTIVE USE HELPS MAINTAIN GROUNDWATER LEVELS AND AUGMENTS SURFACE WATER SUPPLIES.



### SURFACE WATER

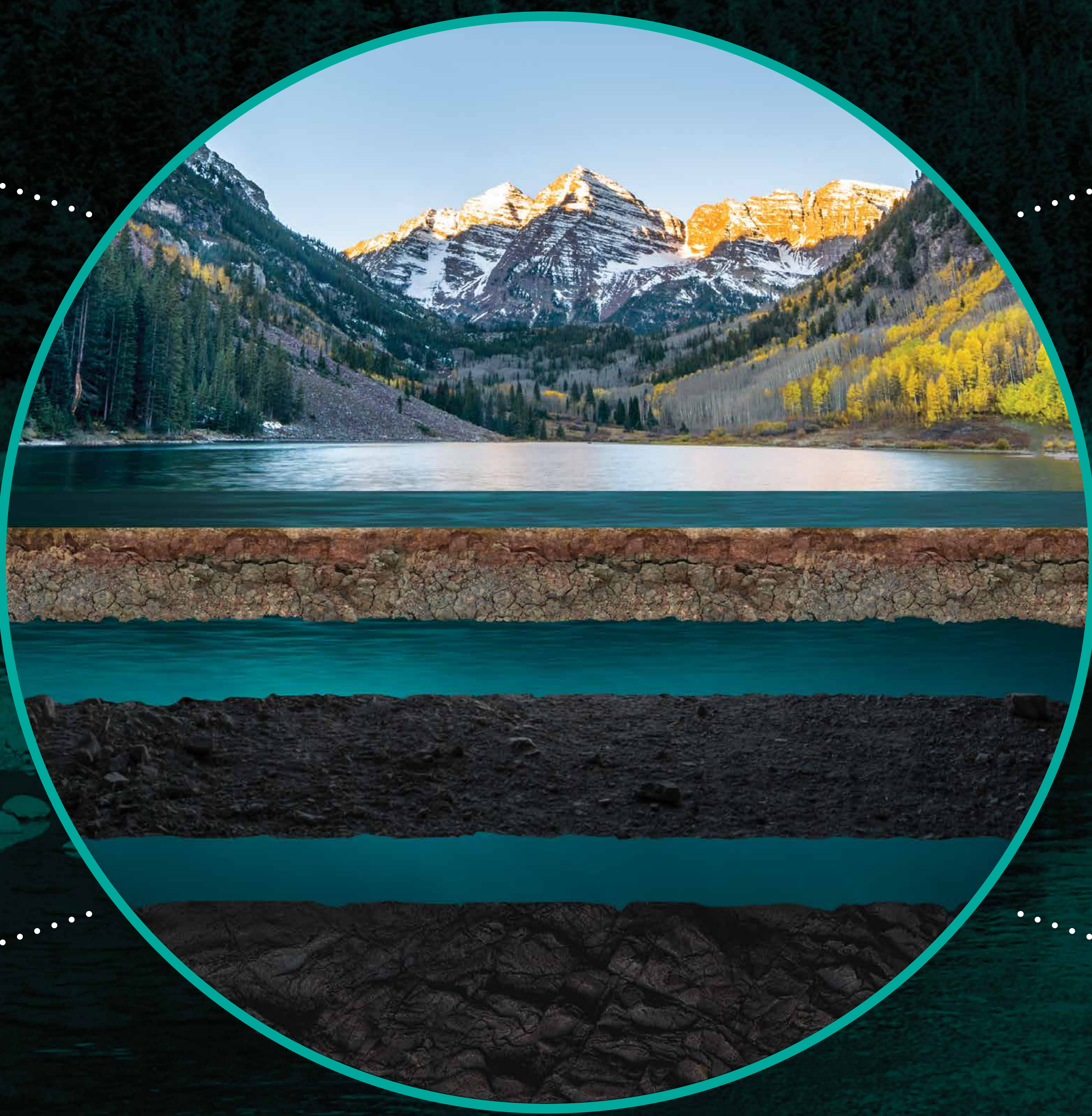
Water from Lake Tahoe and Boca Reservoir is used to maintain flows in the Truckee River. Approximately 85% of the region's municipal water supply comes directly from the river. In addition to the rights to divert water from the Truckee, TMWA has storage capacity (TMWA-owned) in both Donner and Independence Lakes. TMWA can also bank water in three reservoirs (Boca, Prosser and Stampede) and Lake Tahoe as part of the Truckee River Operating Agreement (TROA).

#### OPERATING THE TRUCKEE RIVER

The Federal Water Master regulates what flows from Lake Tahoe. Any stored surface water released is centrally administered by the Water Master through the Truckee River Operating Agreement (TROA). Since TROA was implemented in 2015, TMWA can significantly increase the amount of drought supplies to meet customer demand when river flows fall short. This is beyond what is stored in Donner and Independence lakes.

#### STEWARDSHIP OF THE SUPPLY

To maintain storage capacity at Donner Lake, TMWA has invested approximately \$3M in improvements to the dam and the outlet channel. At Independence Lake, TMWA has partnered with The Nature Conservancy and provided over \$700,000 for forest restoration and invasive species programs to help ensure lake water stays pristine.



#### PASSIVE RECHARGE OF GROUNDWATER

By resting production wells, groundwater has an opportunity to replenish. When wells are rested for an extended period of time, groundwater levels can recover.

Expanded distribution of surface water also helps with groundwater recovery. For example, recent interconnections to TMWA's distribution system have helped meet the needs of neighborhoods that formerly relied exclusively on groundwater. That's over 4,000 customers.\*

Did you know? In the Mt. Rose Fan area, recent wet winters and distribution of surface water has helped raise local groundwater levels 5-10 feet (measured in fall 2018).

#### ACTIVE RECHARGE OF GROUNDWATER

Active recharge, or injection, is the core of TMWA's Aquifer Storage & Recovery program, which provides additional storage options for future demand. TMWA has been injecting treated surface water into the ground for almost 20 years, effectively storing it for future use.

Case-in-point: Before active recharge, the central Truckee Meadows aquifer was declining at two to five feet per year. With active recharge, water levels in that aquifer rebounded 50 feet within a few years and have remained stable even during our driest years.

### GROUNDWATER

Groundwater management is central to TMWA's Conjunctive Use strategy. TMWA's service area includes nine distinct aquifers and over 80 production wells.

See today's water storage levels at [tmwastorage.com/reserves](http://tmwastorage.com/reserves)



## ONLINE SOON.. MT. ROSE WATER TREATMENT PLANT

When on-line, the plant will deliver previously untapped creek resources when available, further decreasing reliance on wells while protecting and restoring groundwater resources.

\*Washoe County Department of Water Resources and STMGID consolidation into TMWA.