



THE TRUCKEE RIVER OPERATING AGREEMENT: *Provides Solutions for Worse-than-Worst-Case Droughts*

The now-in effect Truckee River Operating Agreement (TROA) allows the Reno-Sparks area to weather a “worse-than-worst case” drought with room to spare, according to a recent study prepared by the Truckee Meadows Water Authority (TMWA).

After 2015 produced the fourth straight year of drought conditions and the driest year in 115 years of record, the water provider for the Truckee Meadows, TMWA, decided to take a look at how the area’s water supplies would stand up if similar drought conditions lasted another five years.

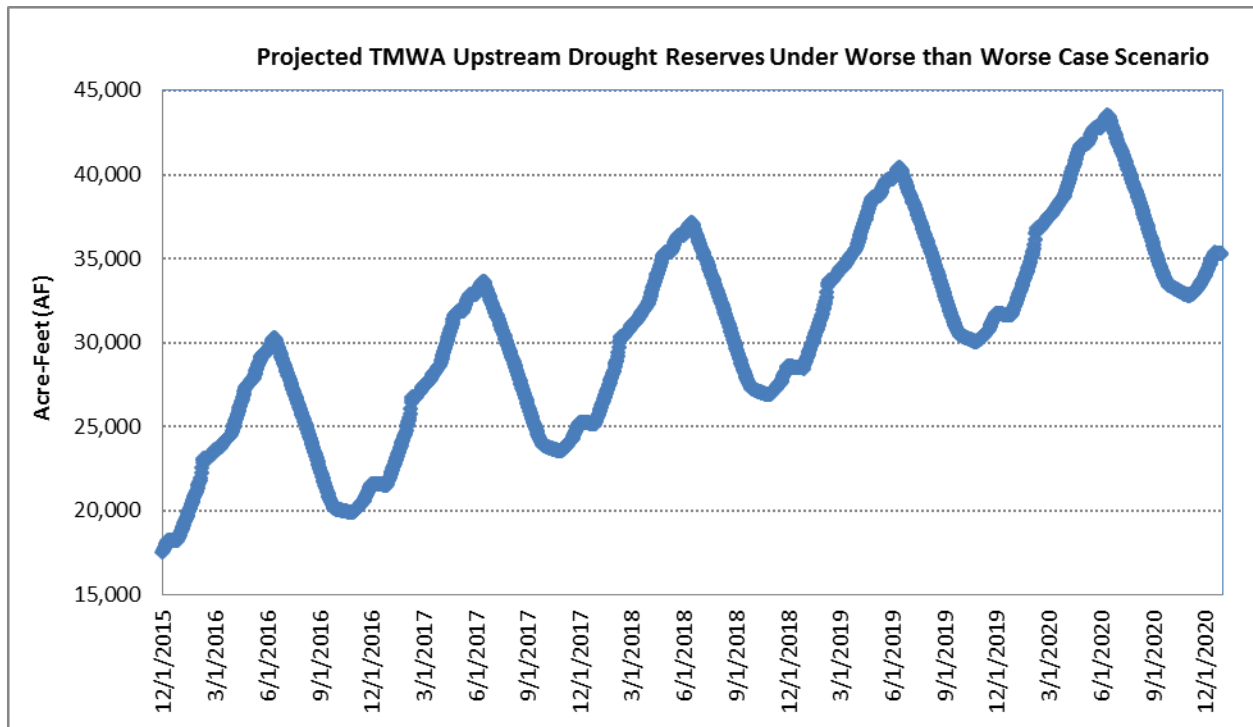
The model prepared by experts envisioned the current drought from 2012 to 2015, with another five years tacked on with hydrologic, or water supply, conditions identical to those experienced during the winter of 2015. The water year of 2015 was 12 percent drier than the previous record drought year of 1977 and was “by any definition the worst water year on record,” said Bill Hauck, TMWA’s senior hydrologist. .

The modeled drought would essentially be two times more severe than the last major drought that hit the Reno-Tahoe area, which lasted from 1987 to 1994.

This epic drought study under historic conditions was envisioned under two scenarios: (1) river operations with TROA implemented, and (2) river operations, with the Truckee River’s waters managed under strict court decrees in place since the 1930s and 1940s and in place until now.

Under the old system, the federal water master was required to release water from upstream reservoirs year-round to provide legally required flows in the Truckee River at the California-Nevada state line, just upstream of Reno. During the modeled worse-than-worst-case drought, Lake Tahoe – the area’s largest and most important reservoir – would remain below its natural rim and provide no flow or discharge into the river. By the fifth added year in December 2020 the estimated lake level would drop to eight feet below its natural outlet.

The results make clear the value of TROA when it comes to weathering an extended drought. TROA allows for more water to be stored in upstream reservoirs – not released automatically into the river – for later use when needed during summer drought conditions. TROA allows additional water to be stored in Stampede, Boca and Prosser Creek reservoirs--even during dry winters.



The above graph shows five more years of hydrologic conditions identical to 2015, but with the river managed under TROA.

“River management under TROA would boost drought reserves by more than 11,000 acre feet of water for every successive year of the five additional hypothetical years of drought,” Hauck said. “This is water which the utility had a right to divert but was not needed to meet customer demand. So water historically just flowed on past TMWA’s treatment plant intakes and was never able to be utilized,” he added. By the summer of 2020, the model shows that TMWA would have close to 45,000 acre feet of drought reserves available for use – water and storage that would not be there if not for TROA. Supplies would be more than sufficient to meet summer water demand throughout the period.



“Basically, TROA allows us to store water during times of the year we don’t need it and then release it when we really do need it to meet customer demands primarily during drought years when river flows are exceptionally low,” Hauck said. “We could withstand another five years of worse-than-worst-case drought conditions and still build up reserves at TMWA’s current demand levels, which is pretty amazing.”

Without TROA in place, the modeled worse-than-worst-case drought would offer a much more dire scenario. Under the non-TROA scenario, drought reserves would be expected to “begin falling short” by late September 2017 and become exhausted during the summer of 2018. TMWA would not be able to meet the demand for water during the peak summer months from 2018 through 2020 without requiring some sort of mandatory conservation measures. “We’d be scraping bottom,” Hauck said. “This really shows how important TROA is. It provides us a lot more flexibility in how we manage our water supply, allowing us to make the most efficient use of TMWA’s water resources,” Hauck added.

By: Jeff Delong
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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.