

OC WATER RELIABILITY STUDY

(THE STUDY)



A COMPREHENSIVE STUDY OF ORANGE COUNTY'S LONG TERM WATER RELIABILITY PROVIDES VALUABLE INFORMATION TO KEY DECISION MAKERS

Where Southern California Gets Water



NEARLY 1/2 OF ALL ORANGE COUNTY'S WATER SUPPLY IS IMPORTED

About 50% of Orange County's total water supply comes from an underground aquifer known as the Orange County Basin. This aquifer is located in the northern portion of the county. The remaining half is imported from the Colorado River and through the State Water Project in the north. South Orange County is nearly 100% dependent on imported water.

THE FOLLOWING FACTORS WERE CONSIDERED IN THE STUDY:

- Current Water Supplies • Water Demands • New Water Supplies

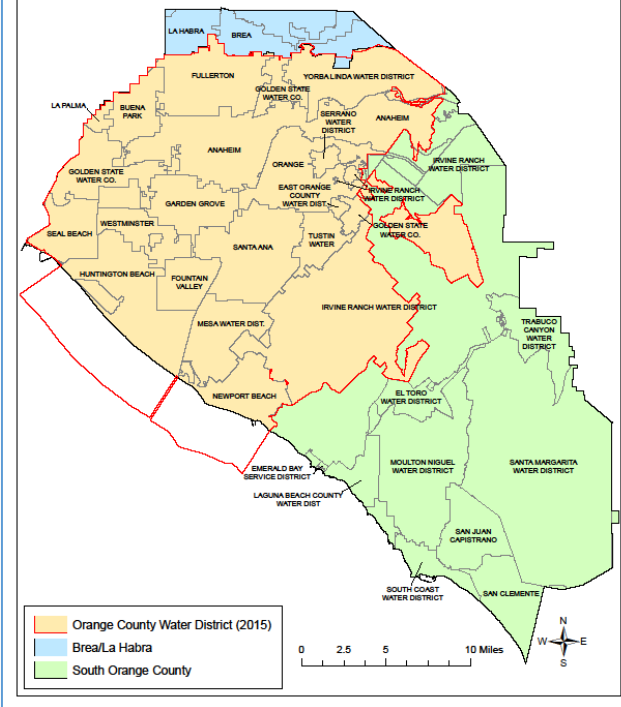
WATER RELIABILITY STUDY COMPLETED IN 2016

MWD OC completed the first comprehensive study of Orange County's long-term water reliability in 2016. "Being Reliable" refers to having sufficient water to avoid shortages whether from droughts, earthquakes or other emergencies. It means not permanently impacting our economy or way of life when there is not enough water to meet demands.



3 PORTIONS OF THE COUNTY INDEPENDENTLY ANALYZED

Three Study Regions in Orange County Based on Mix of Local and Imported Water Sources



The need for imported water varies from 10% to 95% depending on which part of the County is being served. Due to a large variation in local supplies, three portions of the county were analyzed independently- Brea/La Habra, the areas served by the Orange County Water District, and South Orange County.



Southern California water reliability is tied to the success of Metropolitan Water District of Southern California's (MWD) Integrated Water Resources Plan which calls for investments in imported water, and the development of new local water supplies.

EMERGENCY WATER SUPPLY For emergency outages due to earthquakes or other catastrophes, The Study set a benchmark to meet demands for up to 60-days without receiving imported water. Brea and North County cities need only to add emergency generators to meet that standard. South Orange County however, will need new local supplies and/or new emergency supplies.



THE STUDY: KEY FINDINGS

- Without any *new* investments in southern California water, either imported or local, Orange County will face water shortages in eight of 10 years by 2040.
- South Orange County *needs* new water investments, while North Orange County has sufficient local resources to manage through potential shortages.
- Any local supply investments and water use efficiency investments will help improve reliability for all of Southern California.
- One single investment, The California WaterFix (WaterFix), can cut shortages down to 3 in 10 years by 2040. The WaterFix is the single most cost effective large-scale reliability improvement for Southern California.
- With the WaterFix and significant local investments, Orange County is 100 percent reliable.



The California WaterFix and California EcoRestore are a real solution to modernize, repair and stabilize California's aging water delivery system in the north. Two 40-foot wide tunnels, up to 150 feet underground and approximately 35 miles long, have been designed to secure and protect this vital water supply that 19 million Californians rely on. Had we already had this plan in place, there would have been no need to implement water shortage allocations due to drought conditions these past few years, because Southern California would have had enough water in storage to meet demands.

Without the WaterFix and EcoRestore, Southern California water reliability can still be achieved however, it will take *substantial* investments in multiple projects including new water transfers, recycled water and ocean desalination. Water rates will be significantly higher without the WaterFix and EcoRestore.



When a new local water supply project or water conservation measure is implemented anywhere in Southern California, our imported water supply becomes more reliable because the demand for imported water itself has lessened. When there is a shortage of imported water available, supply is allocated among hundreds of agencies based on their water demands that year. This relationship between local reliability and allocations, keeps Southern California agencies working together to improve reliability for the entire region.

ADDITIONAL FINDING: By 2040 the County's population will grow by about 10%, but if we continue to use water efficiently, total consumption will remain nearly the same as it is today.



NEXT STEPS Making investments in projects that supply water to South Orange County will be necessary. Work is underway on the San Juan Watershed Project to capture water from natural and recycled systems. Progress is also being made on the Doheny Desalination project to tap the ocean. Other projects are being explored such as improvements to emergency water sharing, and adding more water recycling and conservation projects to our overall water supply portfolio.

