



Claude "Bud" Lewis  
Carlsbad Desalination Plant

# Carlsbad Desalination Plant Improving Overall San Diego System Water Quality

Not only does water produced at the Claude "Bud" Lewis Carlsbad Desalination Plant provide increased local control and climate resiliency to the San Diego region's water supply, a recent study found it is also improving overall water quality. Since desalinated water was introduced into the region's water supply in late 2015, water hardness has decreased, along with the total dissolved solids and chlorides. As a result, the current water supply is helping to prolong the lifespans of many household appliances, improve manufacturing and other industrial operations and support local agriculture.

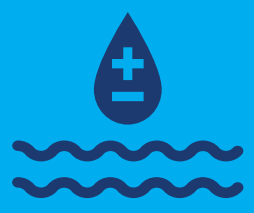
## KEY FINDINGS

### INCREASED OVERALL WATER QUALITY

# 29%

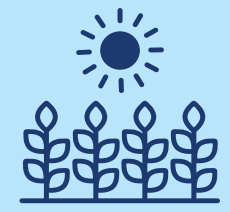
## Decrease in salinity

since 2015 with the influence of blended water supplies



### POSITIVE IMPACTS WERE PARTICULARLY APPARENT FOR FARMING INDUSTRY

With lower concentrations of salinity and chloride in treated water blends, growers use much less water, thereby simultaneously **decreasing both water demand and operating costs** associated with irrigation



# \$136 M

Avocado growers have an acute interest in water with lower chloride concentrations. Avocado production (which can be hindered at irrigation water chloride concentrations as low as 75 mg/L) contributed over \$136 million to the San Diego County economy in 2016

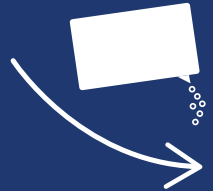
### IMPROVED WATER QUALITY IN RECYCLED WATER SUPPLIES



Since the Carlsbad Desalination Plant has lowered the regional water supply's salinity levels, water recycling facilities have observed a pass-through benefit of decreased salinity levels in their recycled water supplies.

The Vallecitos Water District observed a **reduction of nearly 50%** in total dissolved solids at one of its wastewater reclamation facilities since the introduction of desal water

### INTEGRATION OF DESAL WATER IS REDUCING OVERALL SALINITY (SALT) LEVELS



Carlsbad Desal Plant Salinity and Chloride concentrations are only about **half those of imported water**

Did you know?  
It only takes **2 hours**

for the desal plant to turn seawater into high-quality drinking water.



# Industry Testimonials

"High-quality water is the special ingredient behind San Diego's rise in the craft beer scene. Over the years we have been able to hold our position as such due to ease of access to clean, drinkable water. The addition of desal water into our region's distribution system has created a noticeable increase in overall water quality. It has also provided assurances that there will never be a shortage of high-quality water in this region – giving me piece of mind that we have a long and sustainable future for our business and our industry right here where we started."

– **Gina Marsaglia, Owner, Pizza Port Carlsbad**

The total dissolved solids (TDS) concentration of the The Otay Water District's water supply has historically been about 600 mg/L. "However, after the Carlsbad project began introducing its water into the blend, the TDS of our supply dropped as low as 250 mg/L. It has now stabilized at 300 to 350 mg/L. We have already received favorable comments from residents, and the low TDS is expected to have a positive impact on the life of residential household appliances and water heaters."

– **Mark Watton, General Manager, Otay Water District**

"With over 5,000 farms in San Diego County, our agriculture industry is acutely aware of any changes to the region's water supply. We appreciate that the desalination plant is and will continue providing a consistent water supply and drive sustainable long-term economic viability in our region for decades to come, helping us maintain our position as one of the nation's leading agricultural producers."

– **Hannah Gbeh, Executive Director, San Diego County Farm Bureau**

## About the Study

*The Water Research Foundation, a research-based nonprofit (501c3) organization, conducted the Carlsbad Desalinated Seawater Integration Study between 2014 and 2016 to compare data before and after the integration of desalinated water produced at the Claude "Bud" Lewis Carlsbad Desalination Plant into the water supply in San Diego County. The study is the first of its kind to provide full-scale analysis on the impacts of integrating desalinated water into existing regional supplies. By doing so, the study generated baseline data to support future assessment of the impact of desalinated water integration, providing a new resource for the water treatment industry to better anticipate outcomes when introducing new water sources.*