An aerial photograph of a large, multi-section concrete dam with a reddish-brown finish. The dam is situated in a dry, hilly landscape with sparse vegetation. Behind the dam is a large reservoir of blue water. In the foreground, there are some buildings, a road, and a power line tower. The sky is clear and blue.

THE IMPORTANCE OF  
**WATER**  
RELIABILITY  
TO SAN DIEGO'S ECONOMY



# RELIABLE WATER INFRASTRUCTURE IS AN INVESTMENT IN THE REGIONAL ECONOMY

Clean, reliable water supplies provide numerous economic benefits to San Diego County. Direct investments in water infrastructure, such as the construction of pipelines, dams, or treatment plants, ripple throughout the entire economy by creating new jobs, expanding business opportunities, and fostering economic competitiveness.

This economic impact analysis evaluates how water infrastructure investments – developed by the San Diego County Water Authority – over the past 20 years have benefitted the region’s economy.

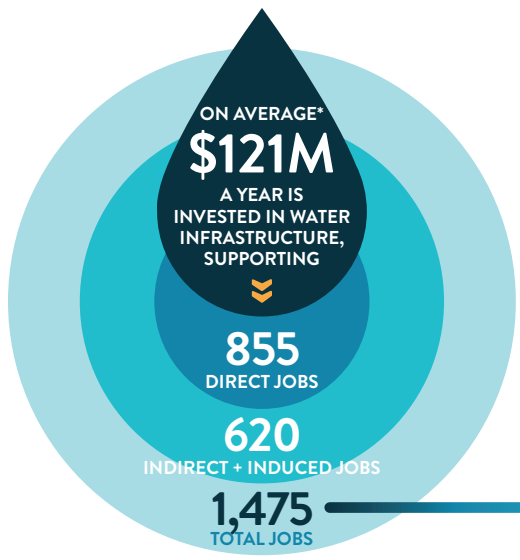


\*This analysis is limited to investments by the Water Authority in San Diego County

Every \$1 invested in water infrastructure results in a \$1.80 increase in the region’s gross regional product.

## IMPACT OF WATER INFRASTRUCTURE INVESTMENTS ON LOCAL JOBS

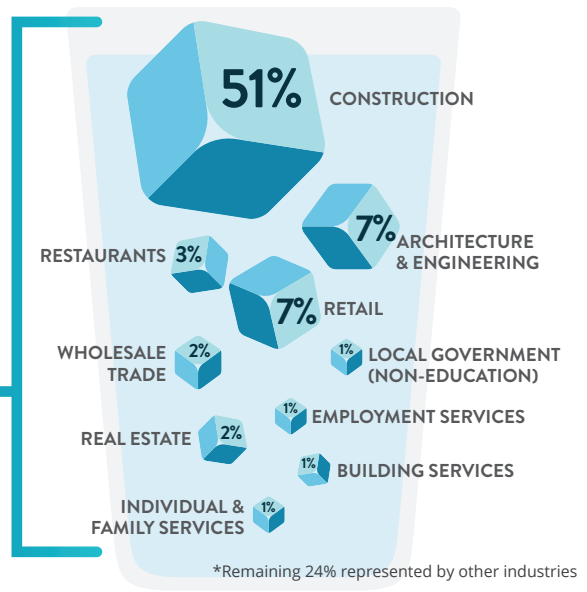
With the majority of investments spent on capital improvement projects, the construction industry comprises the largest share of supported jobs. Many other industries, ranging from local and professional services to real estate and education, also benefit.



### ANNUAL ECONOMIC IMPACT OF WATER INFRASTRUCTURE INVESTMENT

\*Annual average from 1997 to 2017

## JOBS SUPPORTED BY REGIONAL WATER INFRASTRUCTURE INVESTMENTS, TOP 10 INDUSTRIES



\*Remaining 24% represented by other industries

# MEETING SAN DIEGO'S WATER NEEDS TODAY

Every day, the Water Authority delivers an average of 426 million gallons of water to 24 member agencies that serve 1.1 million households and more than 98,000 businesses.\* Through a multi-billion dollar Capital Improvement Program, the Water Authority has improved San Diego's water infrastructure by developing a multitude of projects, including new reservoirs, the nation's largest seawater desalination plant, pipelines, pumps, and a regional water treatment facility.

\*In fiscal year 2017

## REGIONAL WATER INFRASTRUCTURE NETWORK AT A GLANCE

INFRASTRUCTURE →

7

PUMP STATIONS

5

PRIMARY PIPELINES

310

MILES OF LARGE-DIAMETER PIPELINE

1

SEAWATER DESALINATION PLANT

DELIVERING →

426M GALLONS PER DAY

TO →

1.1M HOUSEHOLDS

98K BUSINESSES

251K ACRES OF AGRICULTURE

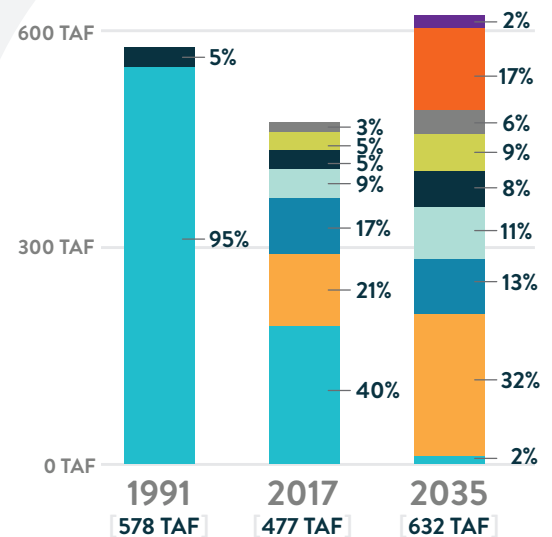
Receiving enough water

## MEETING SAN DIEGO'S WATER NEEDS TOMORROW

With an expected increase of more than 500,000 residents in the region by 2035, strategic resource management will play an even more vital role in meeting the water needs of a growing and thriving economy. Due to efforts by the Water Authority and its member agencies over the last two decades, the region has significantly reduced its reliance on a single supplier and increased the diversification of its water supply portfolio to enhance reliability. As California continues to experience challenging drought conditions, locally-developed water resources and increased conservation efforts ensure that the region will meet its water needs today and into the future.

Diversification efforts over the past two decades have helped the San Diego region significantly reduce its reliance on Metropolitan Water District from 95% in 1991 to 40% today, and a projected 11% in 2020 and 2% by 2035.

### SHIFT IN REGIONAL WATER SUPPLY SOURCES, 1991-2035



- SAN LUIS REY WATER TRANSFER
- POTABLE REUSE
- GROUNDWATER
- RECYCLED WATER
- LOCAL SURFACE WATER
- SEAWATER DESALINATION
- ALL AMERICAN & COACHELLA CANAL LINING
- IMPERIAL IRRIGATION DISTRICT TRANSFER
- METROPOLITAN WATER DISTRICT

An acre-foot is roughly 325,900 gallons; enough to submerge an entire football field in a foot of water. It's approximately the amount used by 2.5 single-family households of four people per year.



Note: TAF = thousand acre-feet

# THE IMPORTANCE OF WATER RELIABILITY TO SAN DIEGO'S ECONOMY

Supporting nearly 140,000 jobs, the region's innovation economy makes groundbreaking discoveries and produces high-value goods and services that change the way the world works. A reliable water supply and the infrastructure necessary to store, move, treat, and deliver it are essential to the development of an advanced economy. They are indispensable to scientists and doctors delivering personalized medicine, aerospace engineers designing aircraft that carry our troops, and breweries crafting the best beer in the nation. Interruptions of the region's water supply would have severe impacts on all local industries.

**\$482M**

TOTAL REGIONAL SALES SUPPORTED PER DAY DUE TO RELIABLE ACCESS TO WATER

THE EQUIVALENT OF 2.7 SAN DIEGO COMIC-CONS PER DAY

less than 10 inches of rain per year, San Diego has not had naturally occurring water to meet regional demand since 1946.

Sales represent the value of goods and services sold by an industry to other industries and consumers. In the absence of a reliable water source, an industry's production of goods or ability to deliver services would be seriously hindered. The industries profiled here have been highlighted because of their higher-than-average dependence on water.



## WATER DRIVES THE INNOVATION ECONOMY

### DAILY GROSS REGIONAL PRODUCT & SALES SUPPORTED BY A RELIABLE WATER SUPPLY

	LIFE SCIENCES	TECH	AEROSPACE	ACADEMIA	BREWERIES
<i>Industry Cluster</i>					
<i>Daily GRP Supported</i>	\$5M	\$3.4M	\$3M	\$779K	\$761K
<i>Daily Business Sales Supported</i>	\$10.3M	\$8M	\$7.7M	\$1.3M	\$2M

# SAN DIEGO'S WATER ECOSYSTEM

## THE WATER AUTHORITY'S ROLE AS A PUBLIC UTILITY

As public utilities, the Water Authority and its 24 member agencies are responsible for the management of water availability, quality, delivery, treatment, and monitoring. Their work can be broken down into three distinct segments:



### TREATMENT

Products and services that clean water using technologies such as desalination, filtration, purification, and disinfection.



### DELIVERY

Products and services for delivering water, such as pipes and pumps, along with related construction and maintenance activities.



### EFFICIENCY

Products and services that help measure and conserve water, including meters, controllers, and low-flow fixtures.

## WORKING IN WATER

The industry employs diverse skillsets and includes a variety of occupations.



## OCCUPATIONS THAT SUPPORT SAN DIEGO'S WATER INDUSTRY

San Diego's water industry provides career opportunities across all levels of educational attainment.

More than **2,800** people work in the water and wastewater sector at the Water Authority and its 24 member agencies.



## EDUCATIONAL PIPELINE FOR SAN DIEGO'S WATER INDUSTRY

» San Diego's colleges & universities offer 58 water-related academic programs, including:

### WATER & WASTEWATER TECHNOLOGY PROGRAM

*Cuyamaca College & Palomar College*

This two-year academic program provides pre-employment training as well as advanced courses in water and wastewater technology for students seeking certification for careers as water or wastewater operators.

### WATER MANAGEMENT & LEADERSHIP

*CSU San Marcos*

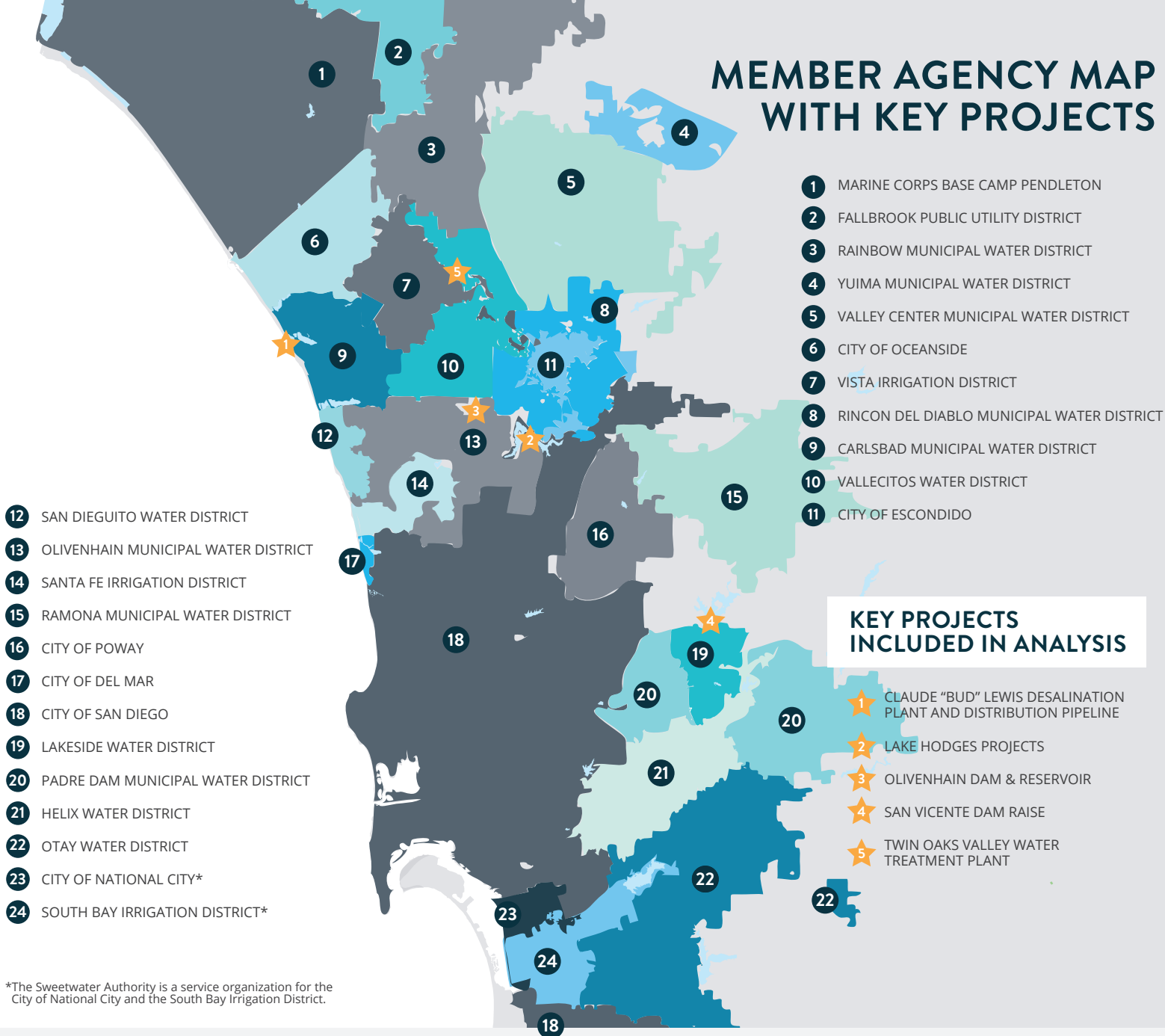
This intermediate-level certificate program is open to the general public but is geared toward water agency employees who wish to advance their supervisory skills and knowledge.

### REGIONAL WATER & WASTEWATER INTERNSHIP PROGRAM

*San Diego County Water Authority & member agencies*

Since 2006, the Water Authority – in partnership with its member agencies – has provided over 150 paid internships that teach technical skills required to operate and maintain water and wastewater systems, with around 80 percent earning full-time positions.

# MEMBER AGENCY MAP WITH KEY PROJECTS



## OTHER KEY INFRASTRUCTURE INVESTMENTS

This report provides an overview of economic impacts in the San Diego region created by major Water Authority infrastructure investments. It does not account for the Water Authority's \$447 million canal lining projects in the Imperial and Coachella valleys or investments made directly by the Water Authority's 24 member agencies.

## ABOUT THE SAN DIEGO COUNTY WATER AUTHORITY

Created in 1944, the San Diego County Water Authority is a public agency responsible for a delivering safe and reliable wholesale water supply at an affordable cost to 24 retail water agencies, including cities, special districts, and a military base. Through major infrastructure investments and forward-thinking policies that promote fiscal and environmental responsibility, the Water Authority sustains the regional economy through the provision of water for residents and businesses alike.

