

The Bay Area Water Supply in 2050: What Can We Do Now to Lay the Foundation for a Resilient Water Future?

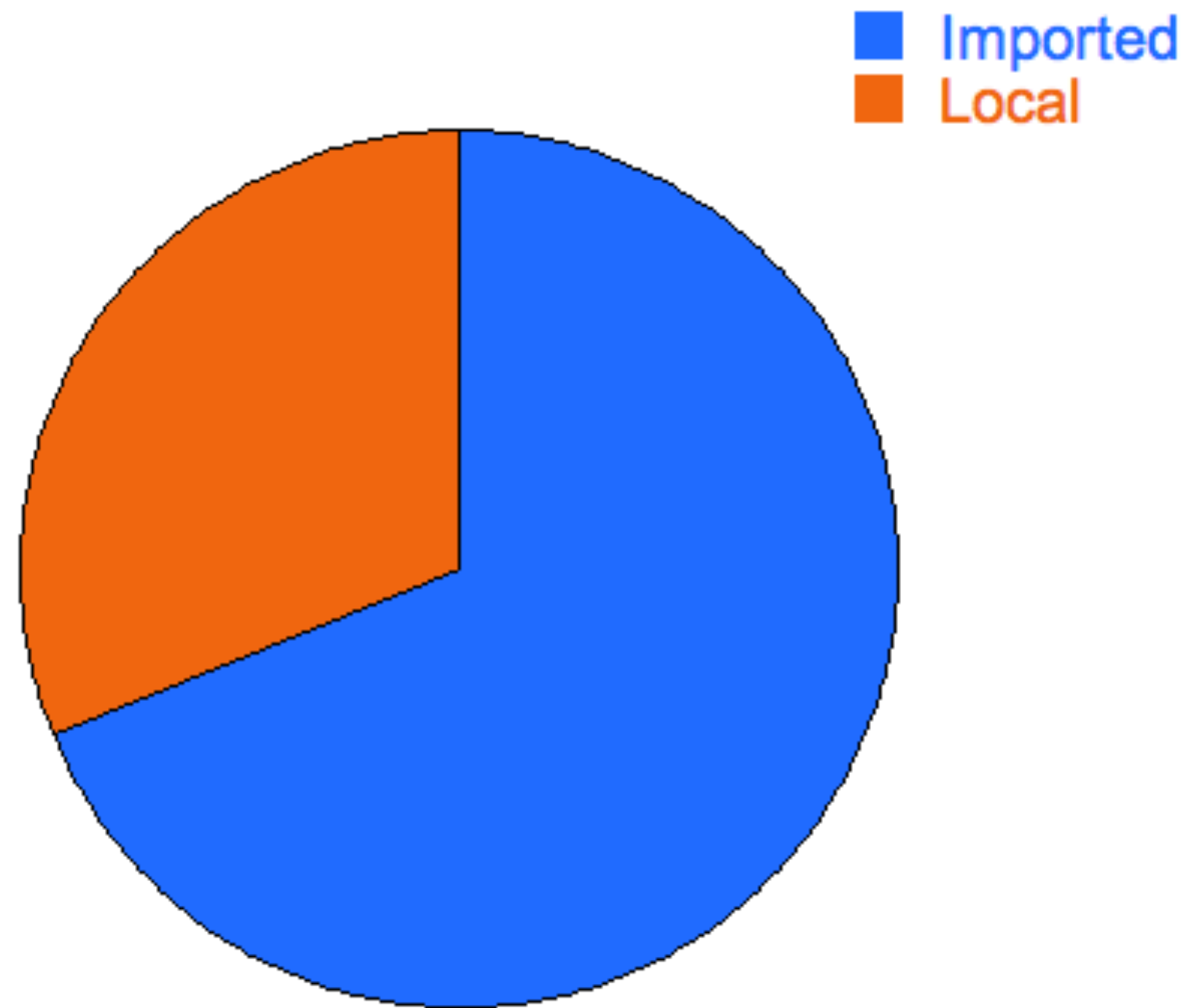
David L. Sedlak
UC Berkeley

Bay Area One Water Network
October 1, 2020



The Bay Area's Water Portfolio

2016 Water Portfolio



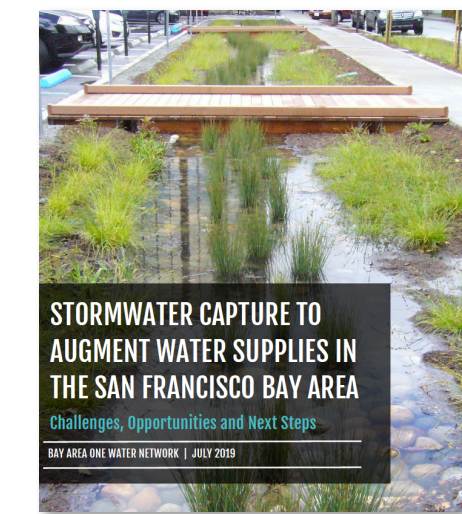
Total = 1.3 billion gallons/day



Imported Water



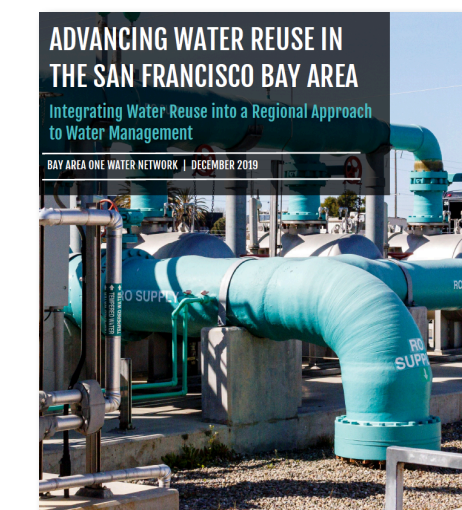
Local Supplies



Demand Management

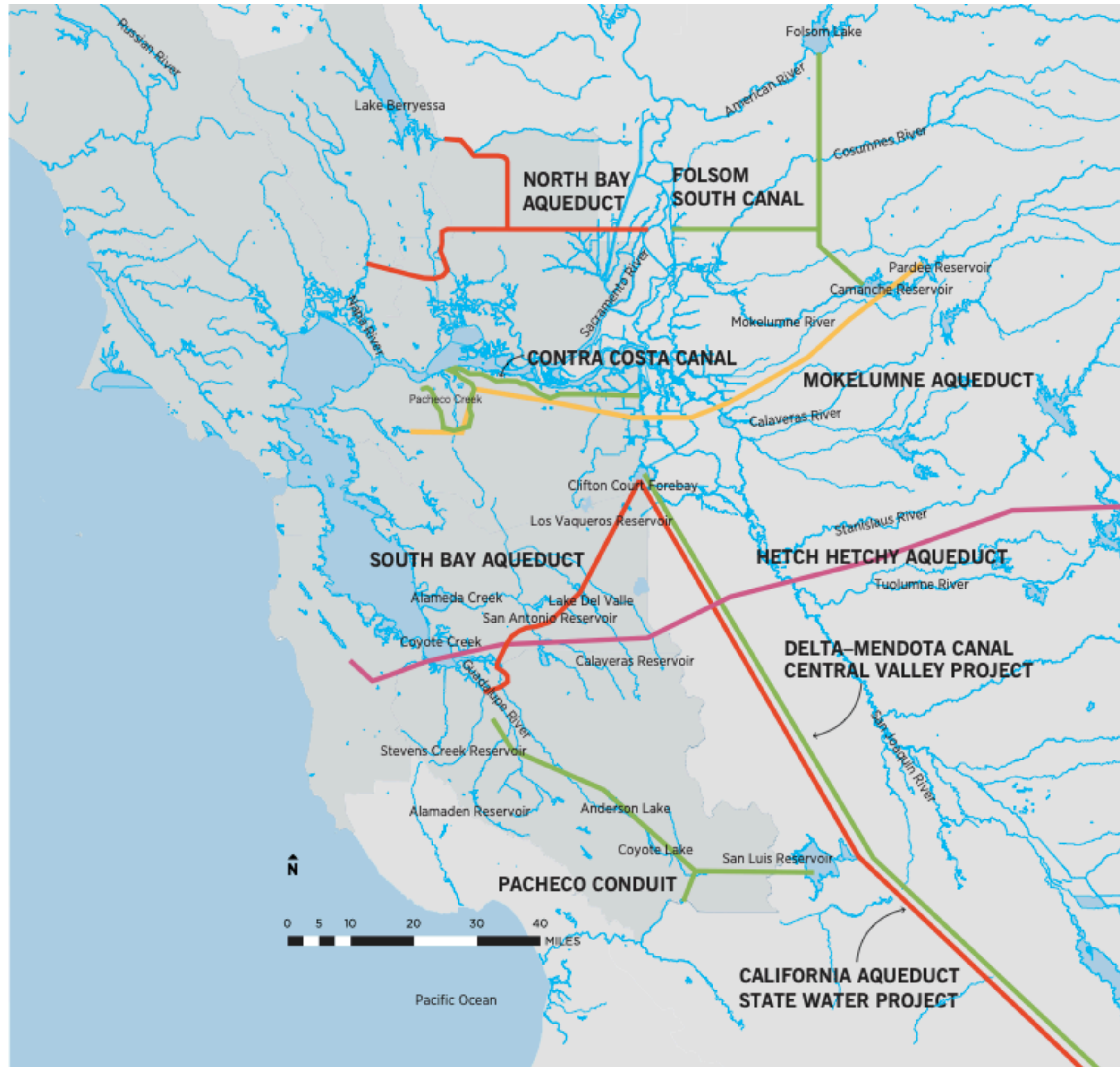


Water Reuse



Desalination

Driver 1: Less Imported Water



Source: SPUR map with data from: Cal-Atlas, PG&E, Santa Clara Valley Water District, Bay Area Integrated Regional Water Management Plan

NEWS · CALIFORNIA NEWS · News

Santa Clara Valley Water District files suit challenging state plan to divert water for fish

The state has said water flow to the Delta must increase to protect endangered fish, but that could impact the local water supply



Rich Pedroncelli/Associated Press archives

FILE — In this Feb. 25, 2016 file photo, water flows through an irrigation canal to crops near Lemoore, Calif. The powerful Metropolitan Water District voted Tuesday, Oct. 10, 2017 to pay its share of the \$16 billion project to build two massive tunnels to pipe water from Northern California to Southern California cities. The vote gives Gov. Jerry Brown's ambitious project an important boost of support after an influential agricultural group withdrew its support last month. The tunnels, which have been discussed in one form or another for generations, would pipe water around the Sacramento-San Joaquin Delta — where Sierra Nevada water flows toward the sea — to a system of canals that deliver water to farms and residents mostly in the southern half of the state. (AP Photo/Rich Pedroncelli, File)

By **EMILY DERUY** | ederuy@bayareanewsgroup.com | Bay Area News Group
 PUBLISHED: January 14, 2019 at 11:10 a.m. | UPDATED: January 14, 2019 at 3:46 p.m.

In an attempt to block the state's plan to divert more water toward the Sacramento-San Joaquin River Delta and away from the Bay Area, the Santa Clara Valley Water District has filed a lawsuit arguing the project could significantly reduce the local water supply.

If the plan advances, the water district might have to spend millions of dollars to obtain alternate water supplies and pull up more groundwater.

In December, the State Water Resources Control Board said more water needs to flow through the San Joaquin River and the rivers that flow into it to protect endangered and threatened fish species in the delta. But if that happens, the San Francisco Public Utilities Commission (SFPUC) would see a significant decrease in water, leaving its customers, including some in Santa Clara County, relying more heavily on the water district.

Driver 2: Limits on Ocean Discharge

NEWS

See all that water flowing into the ocean? Bill by Sen. Hertzberg aims to save it



In a file photo, California state Sen. Bob Hertzberg, D-Van Nuys, talks about a transportation proposal benefiting Cal State Northridge students and faculty. (Photo by David Crane/SCNG)

By **KEVIN MODESTI** | kmodesti@scng.com | Daily News
PUBLISHED: February 20, 2019 at 4:57 p.m. | UPDATED: February 21, 2019 at 8:52 a.m.



“... locally generated pollution has the potential to accelerate the rate at which coastal waters are acidifying, especially in semi-enclosed waters like estuaries and bays.”

OCTOBER 2018

Driver 3: Easier Desalination/Reuse

National Water Reuse Action Plan

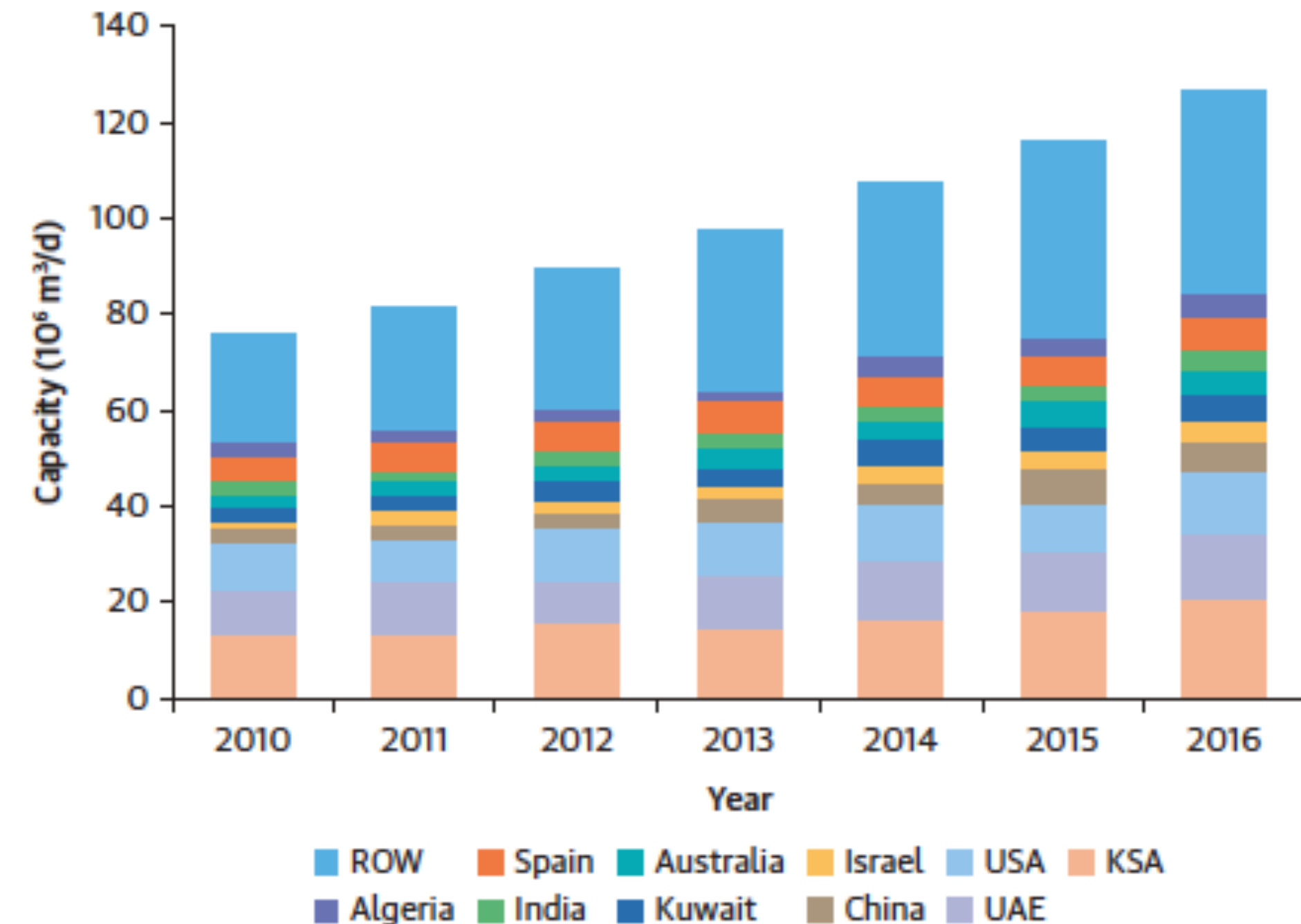
Improving the Security, Sustainability, and Resilience of Our Nation's Water Resources

Collaborative Implementation (Version 1)



February 2020

FIGURE 2.2. Global Installed Desalination Capacity, 2010-16



Source: DesalData 2017.

Note: KSA = Kingdom of Saudi Arabia; UAE = United Arab Emirates; ROW = rest of the world; USA = United States of America.

The World Bank (2019)

Driver 4: Urban Adaptation Investments

Urban Greening Bay Area

🕒 JUNE 14, 2017



SAN FRANCISCO
ESTUARY
PARTNERSHIP

PROJECT AT A GLANCE

FUNDERS

Environmental Protection Agency

PARTNERS

City of San Mateo

City of Richmond

Contra Costa County

Bay Area Stormwater Management Agencies Association

Association of Bay Area Governments

City of Sunnyvale

Environmental Protection Agency

City of Oakland

City of San Jose

San Francisco Estuary Institute

San Francisco Bay Regional Water Quality Control Board

Urban Greening Bay Area is a collaborative effort to re-envision Bay Area urban landscapes with widespread green infrastructure in order to:

- Improve water quality by treating urban and stormwater runoff
- Reduce local flooding by impounding stormwater and releasing it slowly
- Help mitigate anticipated climate change impacts

With SF Bay Area population growth projections from seven to nine million people by 2040, many water-related challenges are emerging. These challenges include competition for safe, reliable drinking water, on-going environmental impacts of chemical products (past, present, and future), and continued development pressure.

The San Francisco Estuary Partnership (SFEP) is working with the San Francisco Estuary Institute (SFEI) and several Bay Area municipalities to advance regional capacity for Green Infrastructure in a programmatic approach with three tracks: [Planning](#), [Implementation](#), and [Tracking](#). The US EPA is funding Phase 2 of the project, expected to complete on December 30, 2019. The initial [Phase 1](#), which began on July 1, 2015, was funded by the State Water Resources Control Board.

On the Front Lines of Sea-Level Rise, Sewage Treatment Plants Adapt

WATER DEEPLY

Some coastal sewage treatment plants are beginning to experience challenges from climate change, such as backflow from seawater and potential discharge problems. Two experts explain how facilities in the San Francisco Bay Area are addressing these risks.

WRITTEN BY
Matt Weiser

PUBLISHED ON
Feb. 26, 2018

READ TIME
Approx. 4 minutes



This so-called "horizontal levee" was built along the San Francisco Bay shoreline in a partnership with Oro Loma

Expectations (2020-2050)



- Predicted population growth will be matched by improved water use efficiency (~25% for each).
- Climate change will stress water resources and drive investments in adaptation.
- Water providers will continue to face other issues related to decaying infrastructure, earthquakes, costs, etc.

Breakout Discussions

- **What** are the key issues that need to be addressed now to assure a resilient water supply for the Bay Area in the future?
- **How** can a regional, science-driven group (i.e., BAOWN) advance progress on these issues?
- **Who** are the other stakeholders that could advance future discussions?