CITY OF SANTA BARBARA CHARLES E. MEYER DESALINATION PLANT TOUR

May 15, 2019
1:00 pm

Regional Board Member
William Von Blasingame

Regional Board Staff Member
Hope Smythe, Executive Officer
Lauma Willis, Environmental Program Manager

City of Santa Barbara Staff
Joshua Haggmark, Water Resources Manager

IDE America
Steve Wait, VP of Sales for IDE America

Public in Attendance
Jeff Theimer, Consilience
Kira Redmond, Santa Barbara Channelkeeper
Ray Hiemstra, Orange County Coastkeeper
Molly Troup, Santa Barbara Channelkeeper
Bill Hickman, Surfrider Foundation

Tour Summary

Mr. Haggmark provided an overview of water supplies for the City of Santa Barbara (City) and how the desalination facility fits into the City's portfolio (presentation attached). Mr. Haggmark indicated that the desalination facility utilizes an open ocean intake 2,500 feet offshore to draw in seawater passing through wedge wire screens at velocities of less than 0.5 feet per second. The seawater is then passed through a series of pre-treatment filters that remove sediment and solids and then undergoes reverse osmosis to remove bacteria, viruses, and minerals (including salt) to produce an ultra-pure water. The brine waste product from the desalination process is blended with the City's treated wastewater and is discharged into the ocean over a mile and a half offshore. Mr. Haggmark also discussed the City's voluntary Devereux Slough mitigation project.

The on-site tour of the facility conducted by Mr. Wait consisted of viewing the pre-treatment filters and the reverse osmosis filters.

Mr. Haggmark and Mr. Wait answered questions from the Regional Board and members of the public.

Public Comments

Kiri Redmond: Ms. Redmond indicated her organization wanted the City to use subsurface intakes. She indicated that their organization asked for a study to be conducted to analyze the feasibility of utilizing subsurface intakes, but the study results found it was not feasible. She expressed concern that the facility did not undergo the Water Code section 13142.5(b) analysis

because it was an existing facility even though it was not operational for some time. She expressed the opinion that it should have undergone the 13142.5(b) analysis when the permit was reissued.

Ray Hiemstra: Mr. Hiemstra indicated that the Santa Barbara facility was a unique facility in the State and that it was reasonable for the facility to use surface intakes. However, for future desalination plants, he expects full compliance with the Ocean Plan/Water Code.

Bill Hickman: Mr. Hickman indicated support of Ms. Redmond's comments.

The Tour ended at 3:30 pm

Respectively submitted,

Hope Smythe
Executive Officer

City of SANTA BARBARA

PUBLIC WORKS DEPARTMENT

WATER RESOURCES DIVISION

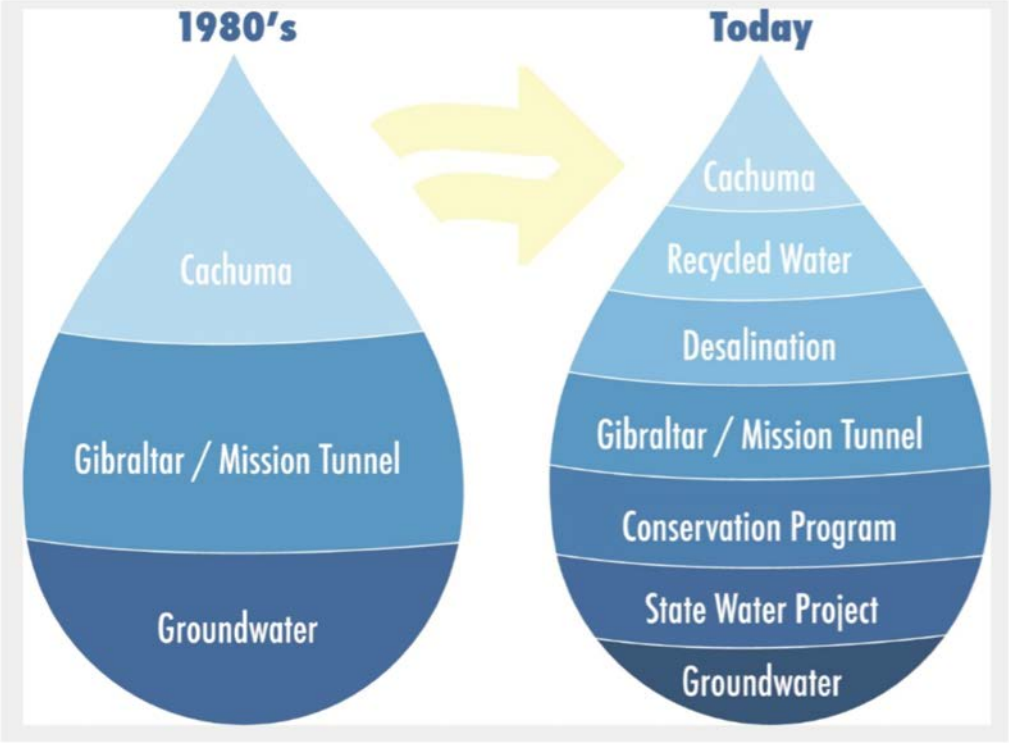
CHARLES E. MEYER SEAWATER DESALINATION PLANT

Santa Ana Regional Water Quality Control Board

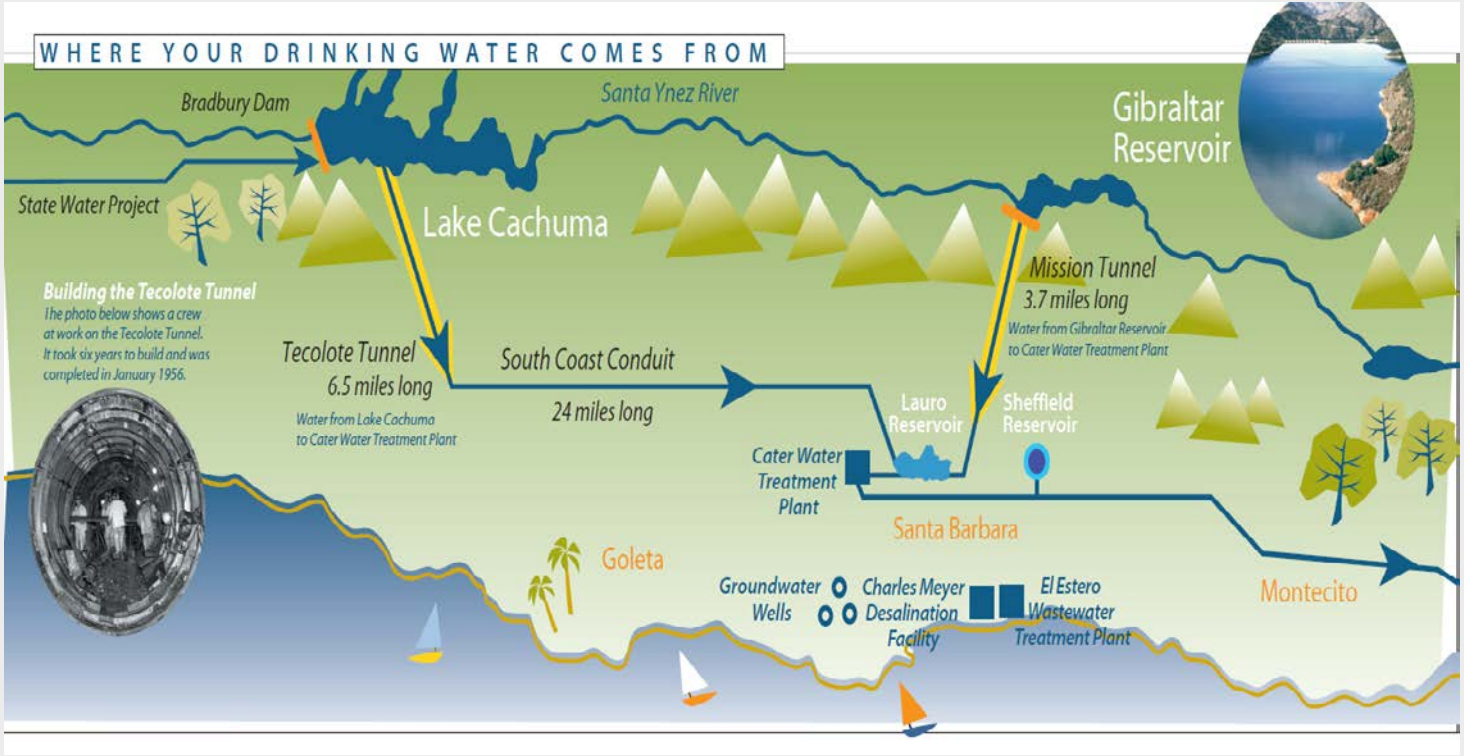
Joshua Haggmark, Water Resources Manager

May 15, 2019

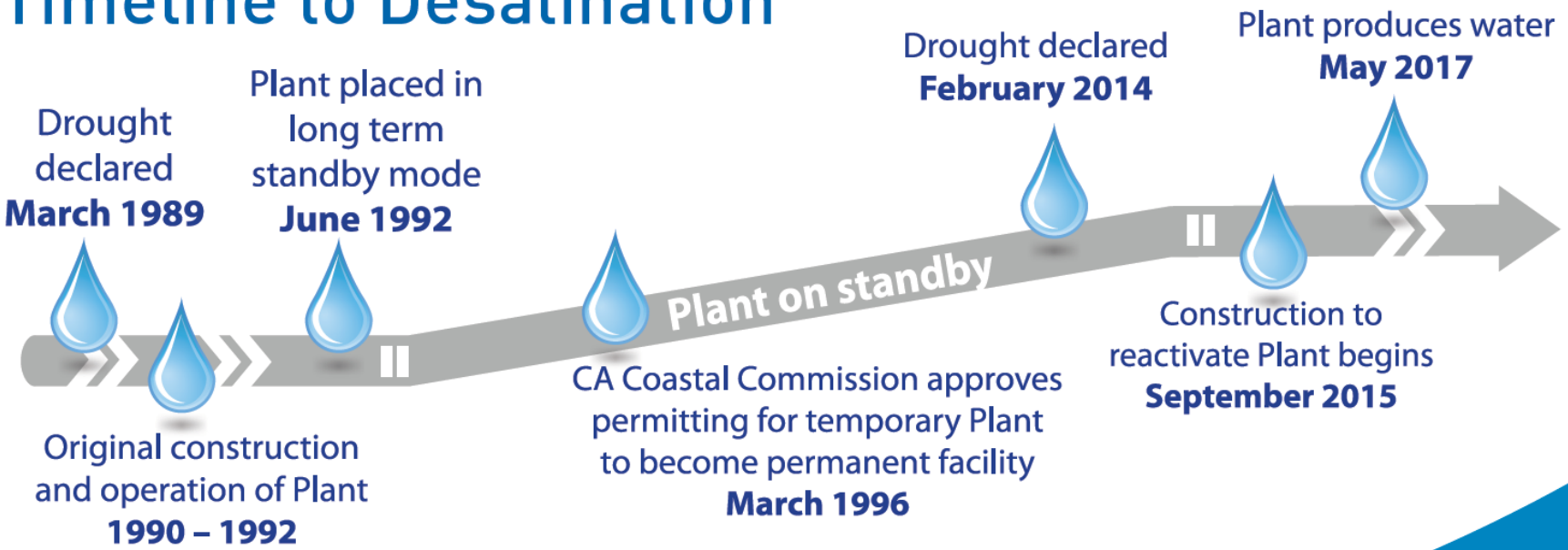
1806 Dam & Aqueduct

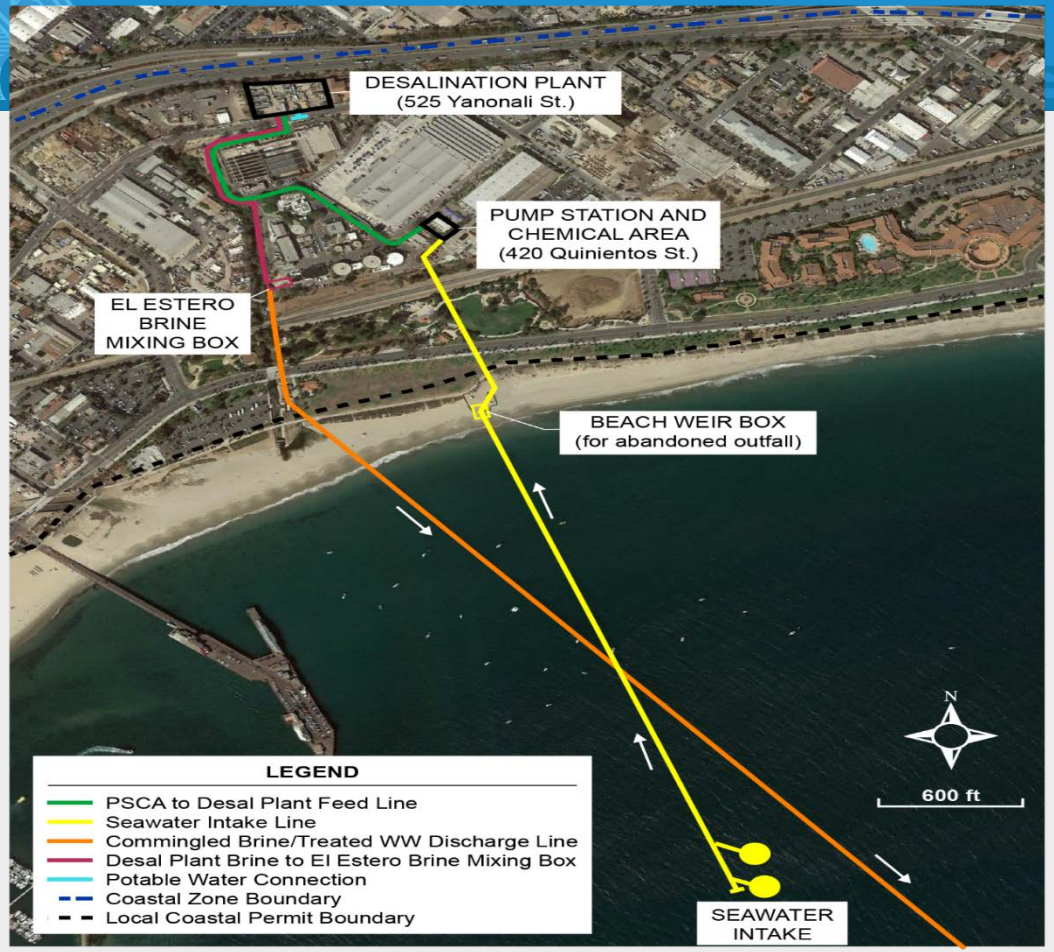

1980's
Cachuma
Gibraltar / Mission Tunnel
Groundwater
Today
Cachuma
Recycled Water
Desalination
Gibraltar / Mission Tunnel
Conservation Program
State Water Project
Groundwater

Water Supplies



Timeline to Desalination

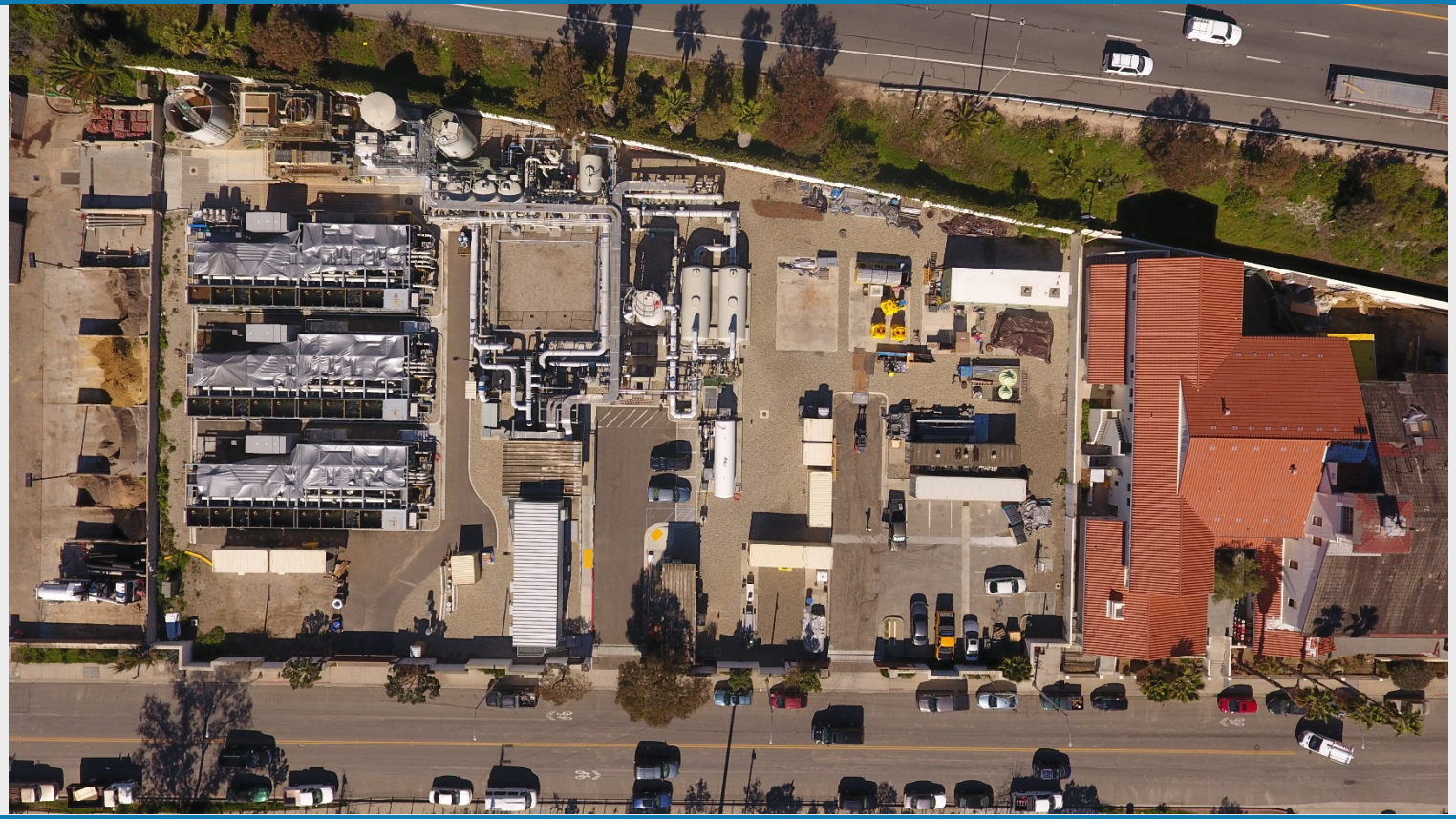



DESALINATION PLANT
(525 Yanonali St.)
PUMP STATION AND
CHEMICAL AREA
(420 Quinientos St.)
EL ESTERO
BRINE
MIXING BOX
BEACH WEIR BOX
(for abandoned outfall)
SEAWATER
INTAKE
N
600 ft
LEGEND
PSCA to Desal Plant Feed Line
Seawater Intake Line
Commingled Brine/Treated WW Discharge Line
Desal Plant Brine to El Estero Brine Mixing Box
Potable Water Connection
Coastal Zone Boundary
Local Coastal Permit Boundary

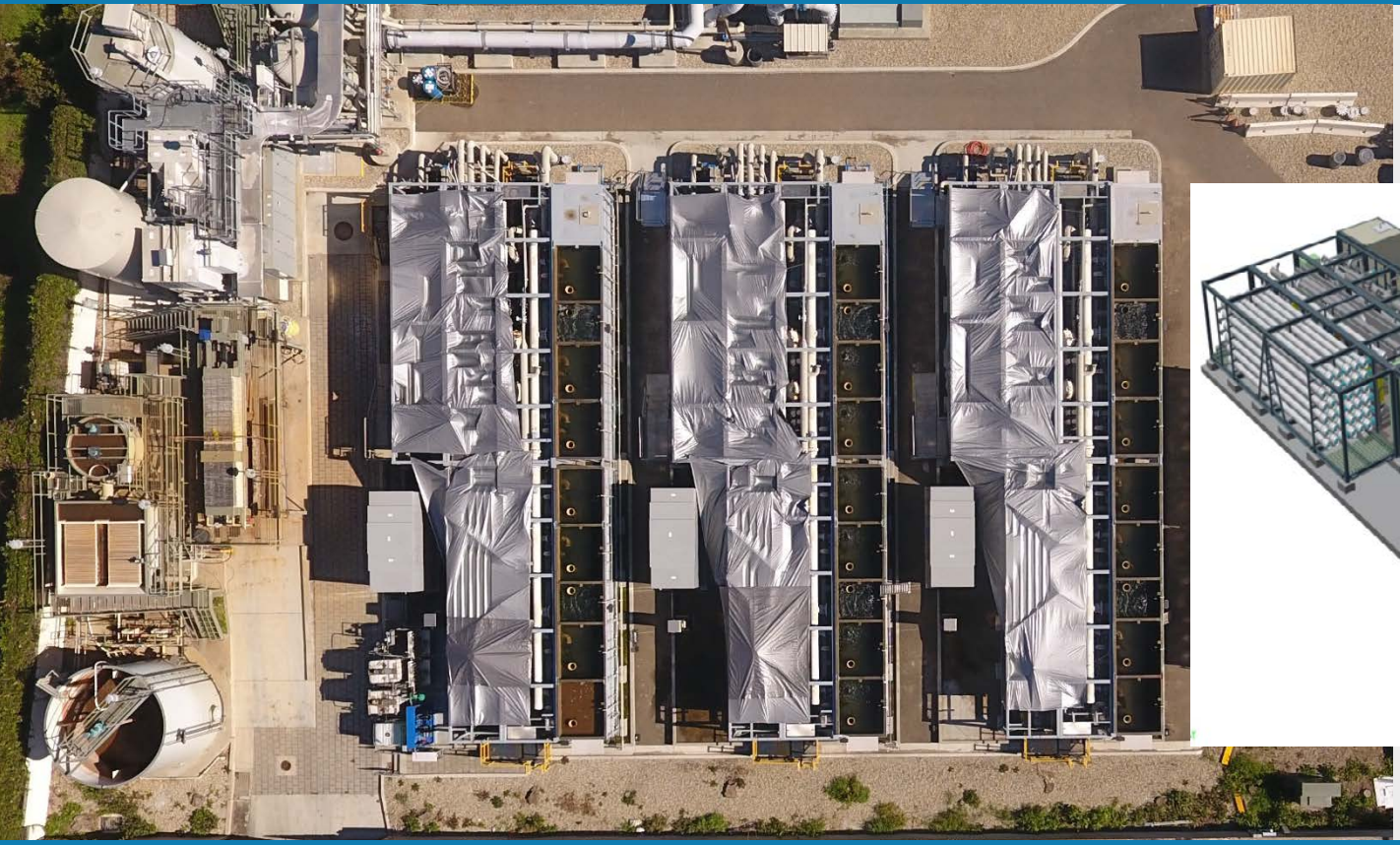
Drone Video

- Video Link

Intake Facility

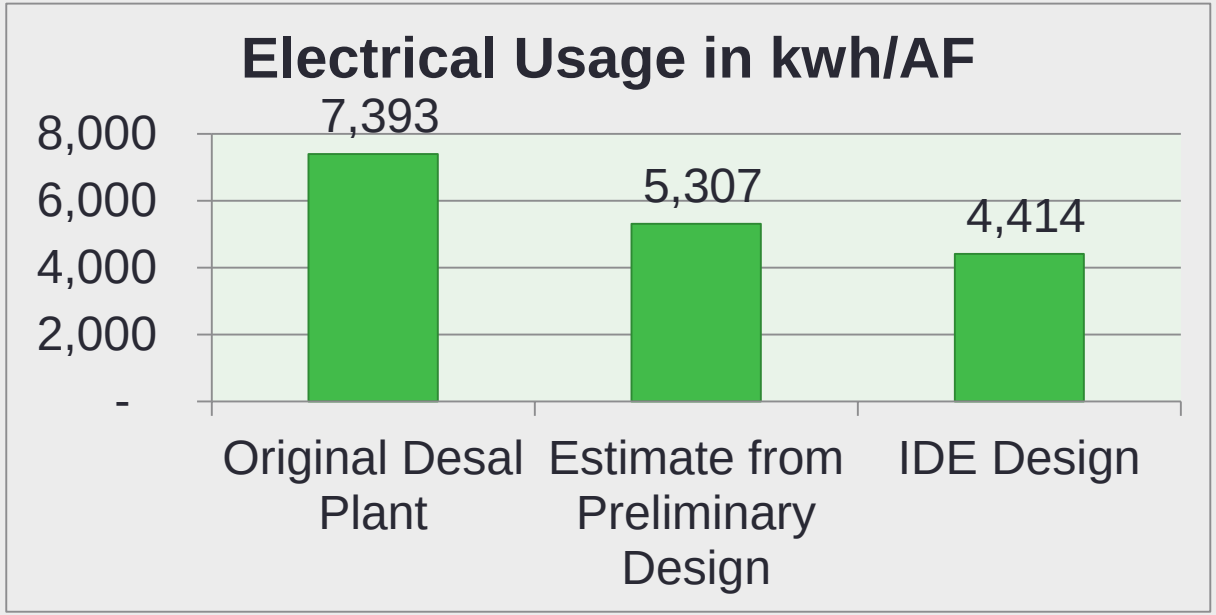


Seawater — Brine Waste — Finished Water



HAMBURG

Desal Electrical Usage

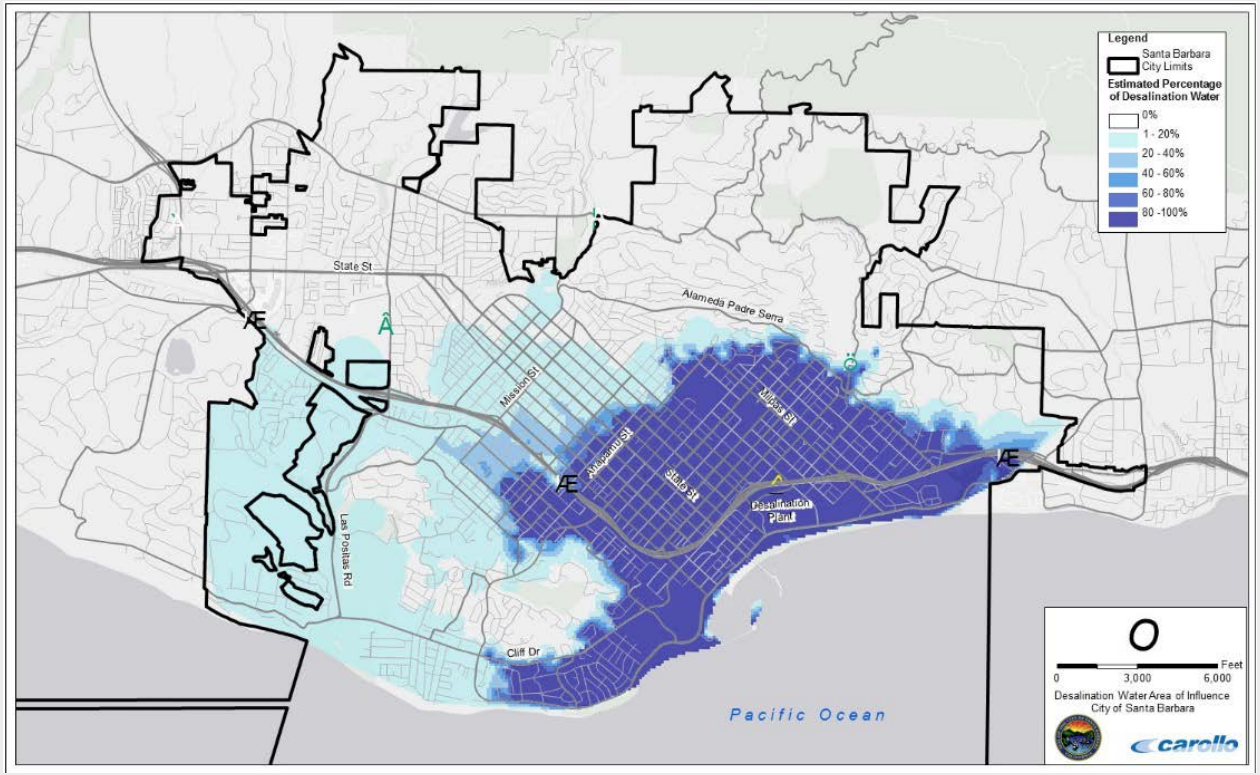


- Uses 40% less energy than original plant

Reactivation Costs

- Capital Cost ~$72 million (State Revolving Fund Loan)
  - *$4.2M/Year debt service over 20 years at 1.6% interest*
- Operational Costs
  - $1.5M/Year for Standby
  - $4.1M/Year for Operation at 3,125 AFY

Region and Estimated Percentage of Desalinated Water Customers May Receive



Questions