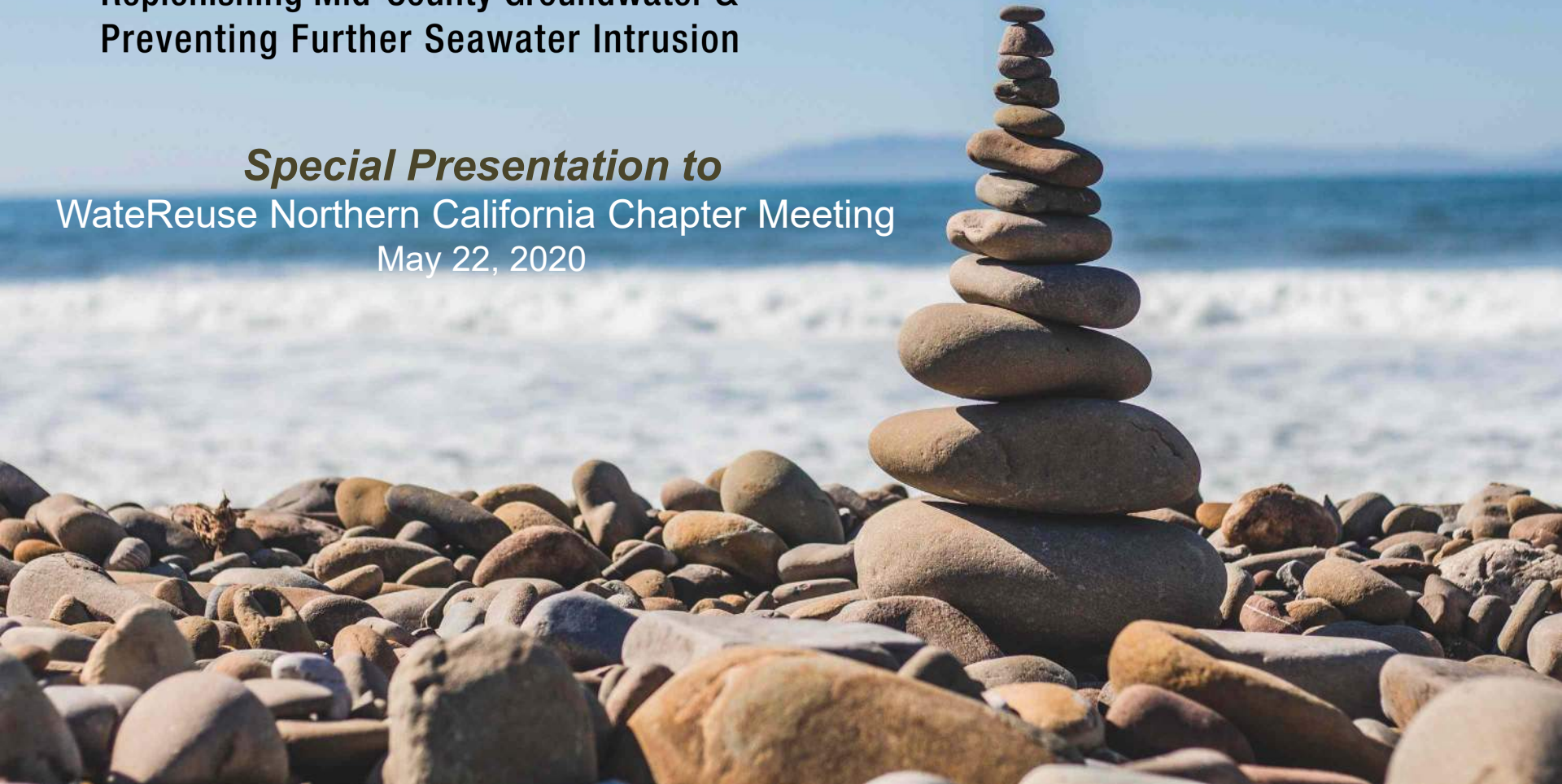


PUREWater Soquel

Replenishing Mid-County Groundwater &
Preventing Further Seawater Intrusion

Special Presentation to

WaterReuse Northern California Chapter Meeting
May 22, 2020



SOQUEL CREEK
WATER DISTRICT

Who We Are



Melanie Mow Schumacher
Special Projects-
Communications Manager

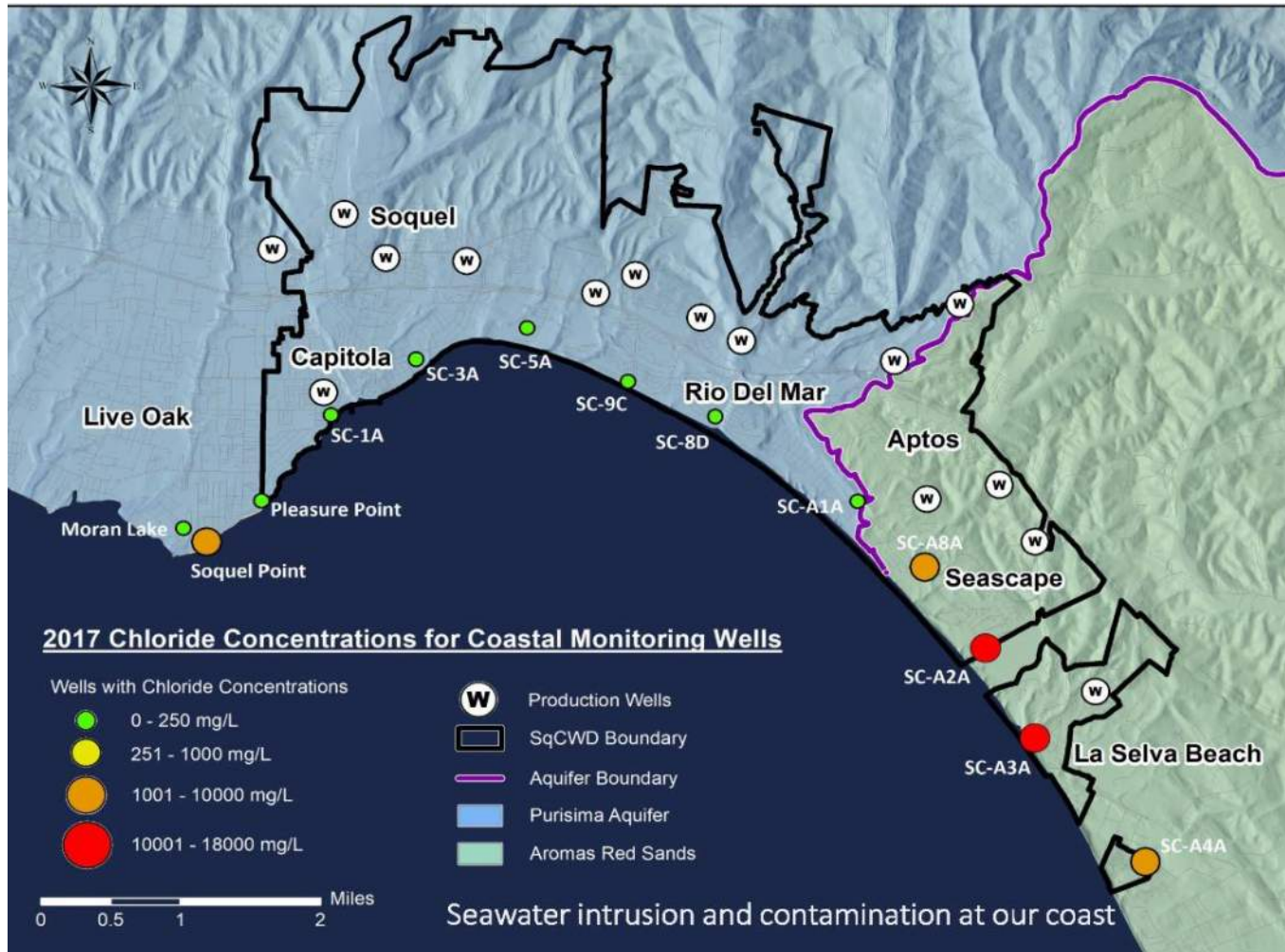


Where We Are



Our Three Primary Groundwater Problems:

1. Basin is Critically Overdrafted – depressed groundwater levels
2. Basin is contaminated with seawater intrusion along the coast
3. Basin is our ONLY source of supply – no imported “Delta” water possible



The Problem is Real and Measurable: From State Designation to Locally 'Felt'

Critically Overdrafted Groundwater Basins – January 2016
— North Central and South Central Regions

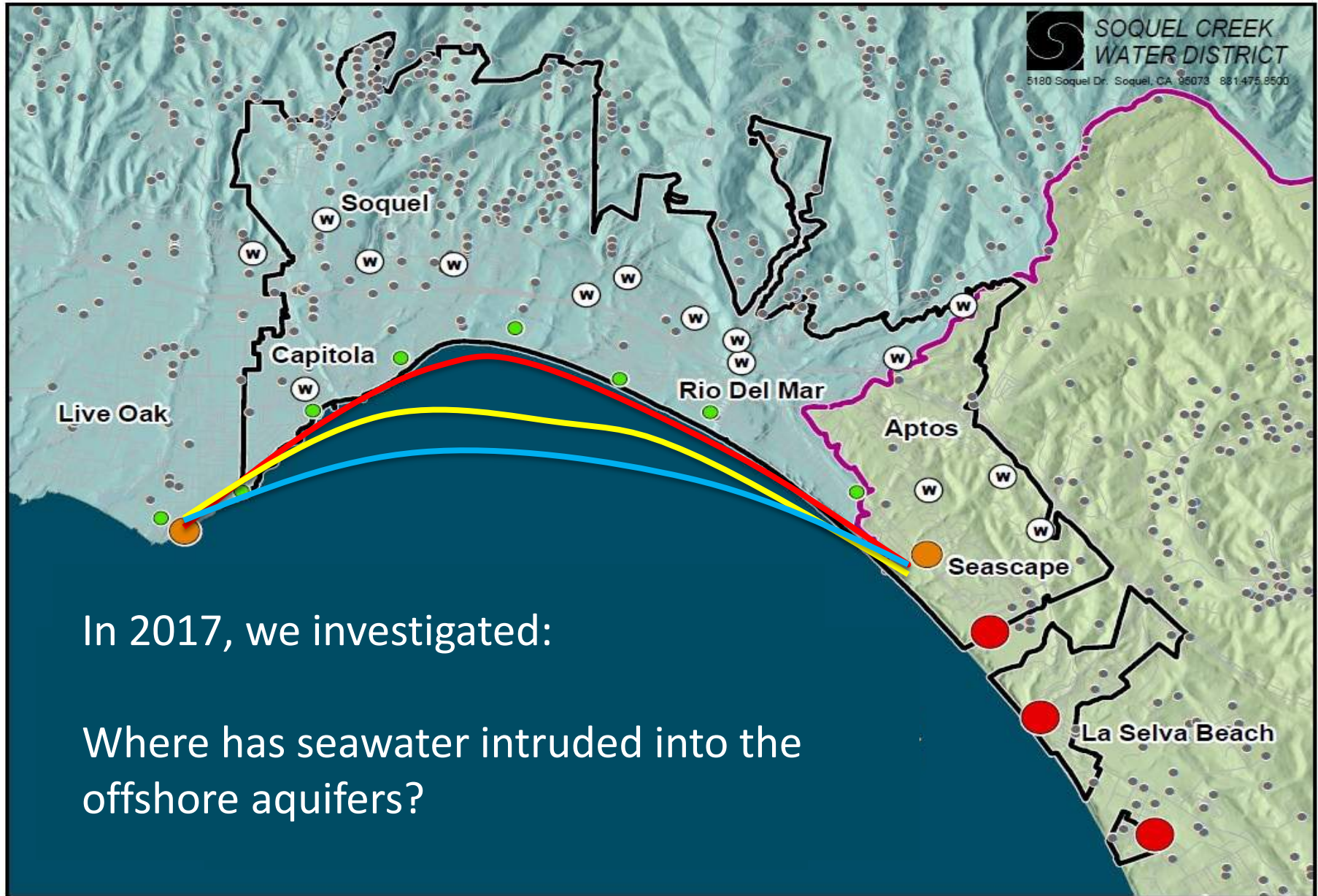


Identified by State of CA in 2014
as Critically Overdrafted



This customer in the La Selva Beach Area
who HAD a productive farm in 2016.
Seawater intrusion is actively progressing.

How close is seawater intrusion?

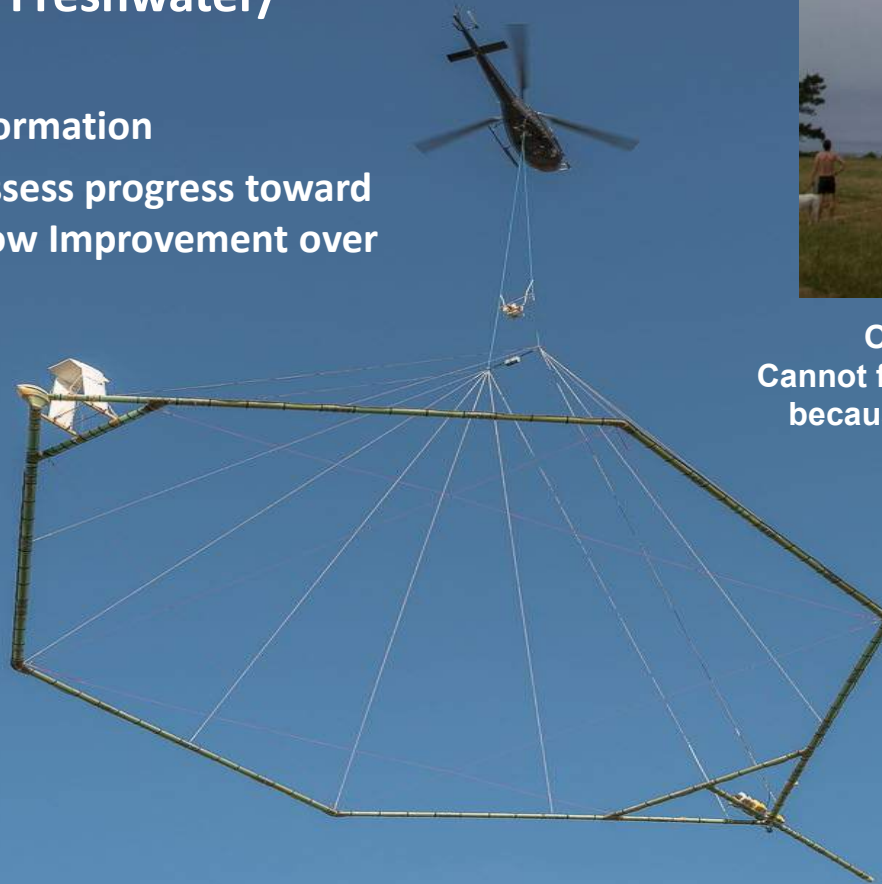


Innovative Technology:

SkyTEM “helicopter” Survey, May 2017

Goals: Map and Identify Freshwater/ Seawater Interface

- Provides Baseline Information
- Future surveys will assess progress toward sustainability and show Improvement over time



Operational limitations:
Cannot fly above buildings and traffic
because of safety and data quality

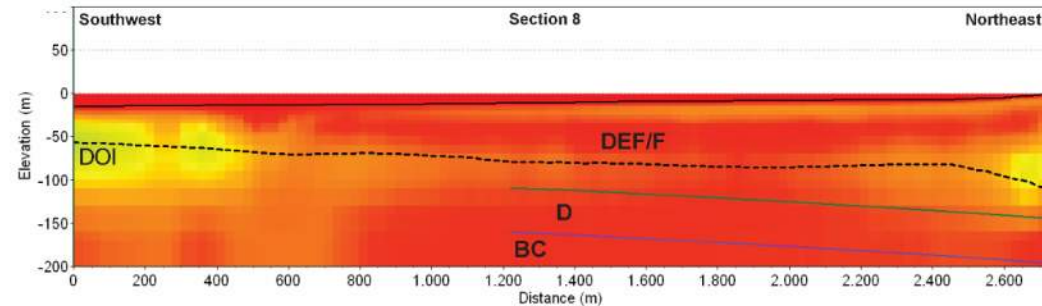
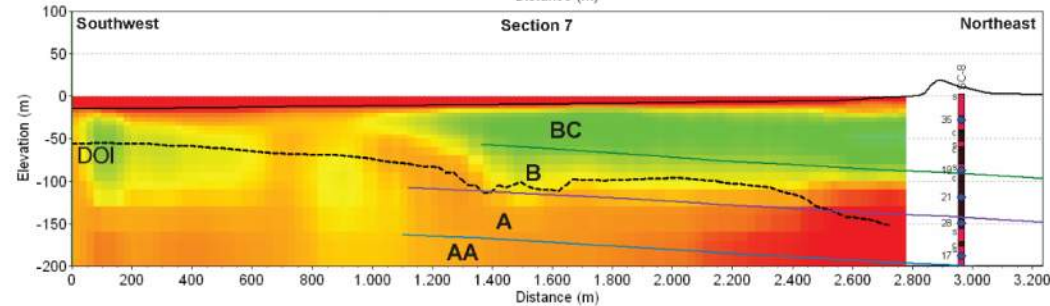
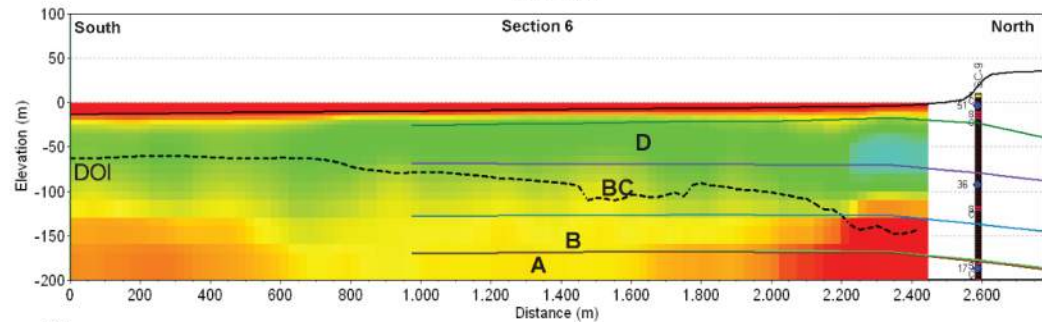
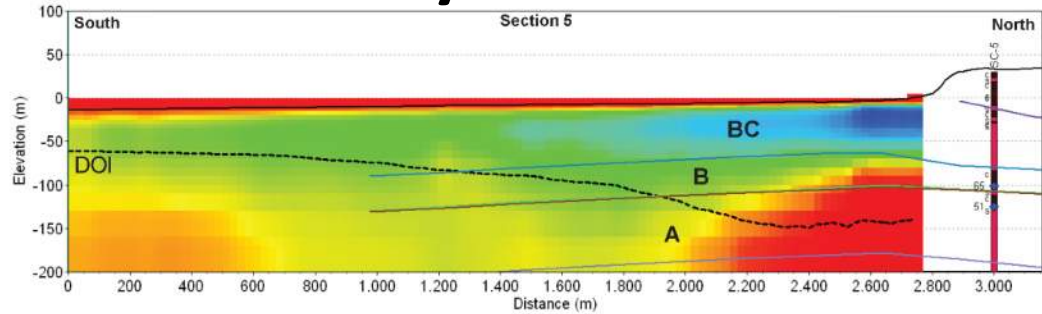
- TEM=Transient Electro Magnetic



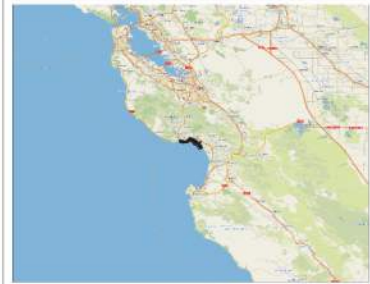
Depth of investigation:

- Close to the coast ~ 600ft
- 1 mile of shore 250ft
- In-land >1000ft

SkyTEM Cross Sections



Santa Cruz Mid-County
Groundwater Agency



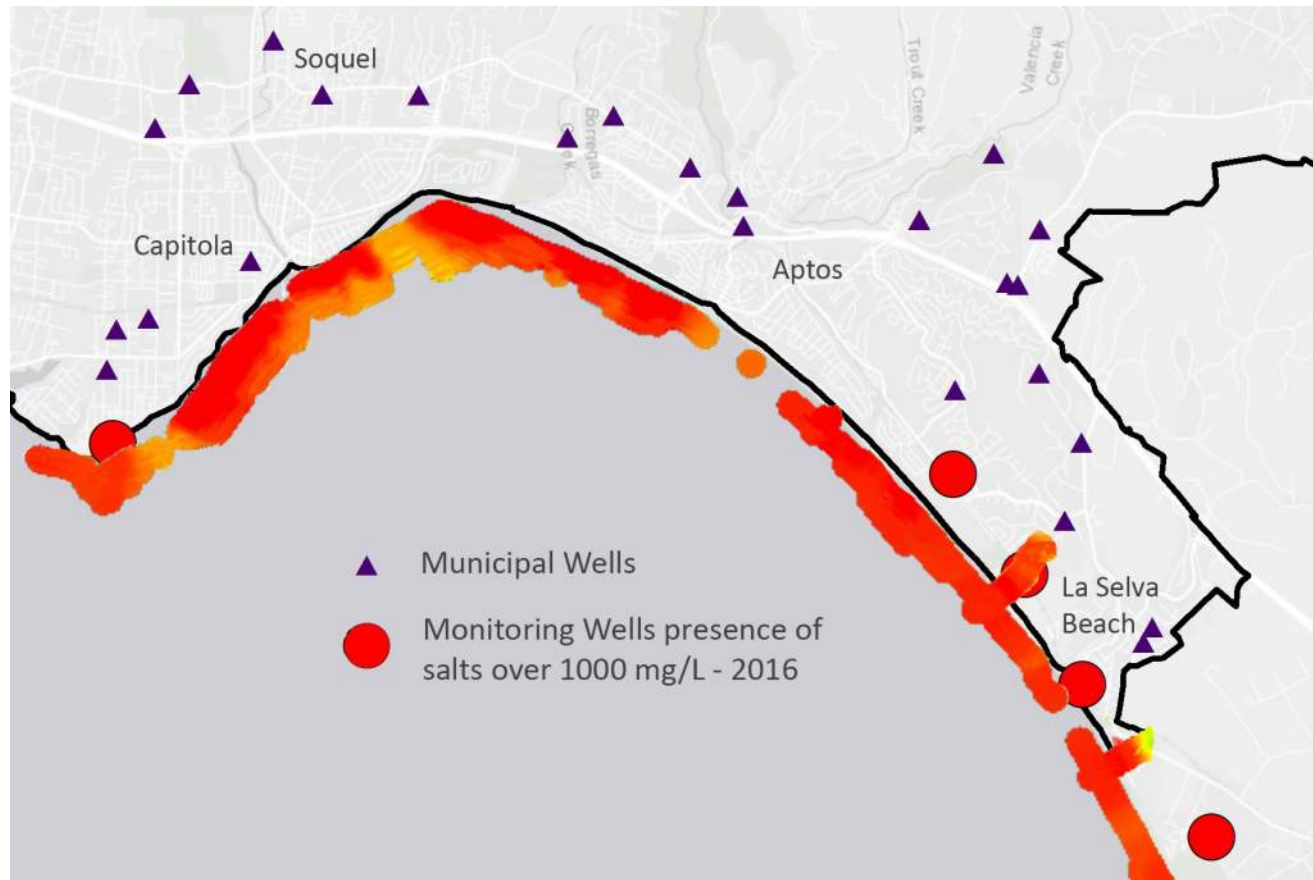
Rev.: 01
Date: 2017-10-10
By: PRT
QC: MAXH
Project: 1100028721

Annex 2.02

**Model sections and
hydrostratigraphic units**

Soquel creek

With SkyTEM Results, What we NOW know: Freshwater-Seawater Interface is Already Onshore and Right at the Coastline



The Problem is Real and Measurable: From Santa Cruz to Monterey



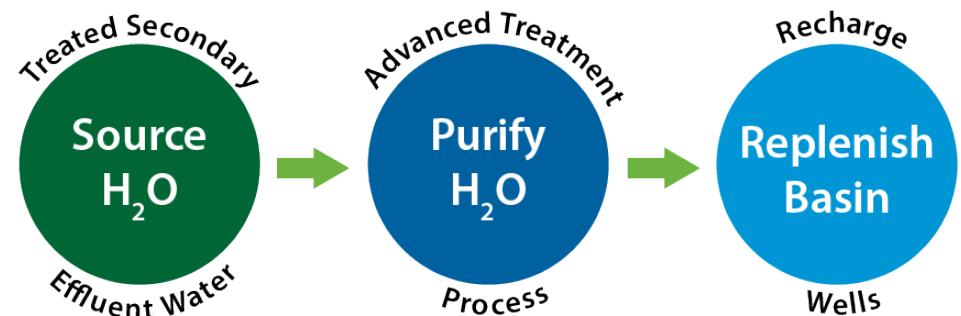
PROJECT LOCATIONS

PUREWater Soquel

Replenishing Mid-County Groundwater



Recycle 25% of the ~8 million gallons per day of treated wastewater that goes out into the Monterey Bay National Marine Sanctuary



PUREWater Soquel

Replenishing Mid-County Groundwater & Preventing Further Seawater Intrusion



SOQUEL CREEK
WATER DISTRICT

Pure Water Soquel

Conceptual Renderings of Facilities

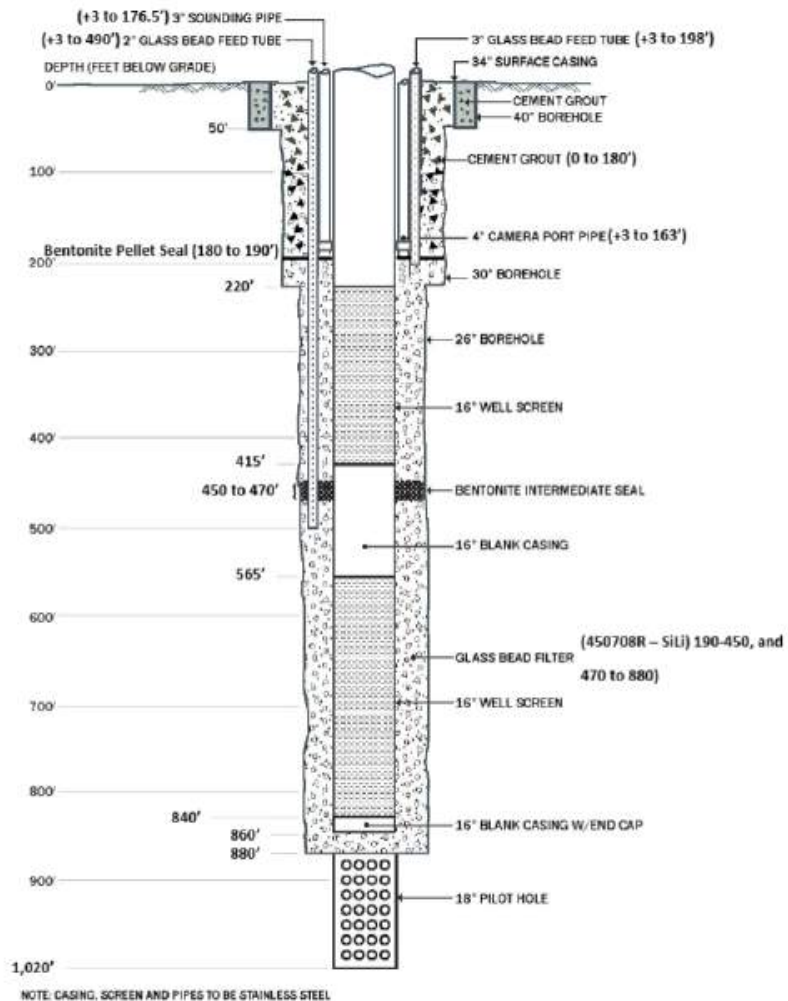
Tertiary Water Treatment located at Existing SC Waste Water Treatment Facility



Advanced Water Purification Facility (AWPF) located at Chanticleer Property (off Highway 1)



Pure Water Soquel Seawater Intrusion Prevention (SWIP) Wells



Well Design for Twin Lakes Church Pilot Recharge Well

Pure Water Soquel Timeline

**Evaluate:
2015-2018**

**CEQA
Certified
Dec. 18,
2018**

**Permit, Design,
& Construct:
2019-2022**

**Goal to Replenish
the Basin:
2040**

Current and Upcoming Project Activities:

All Components are on Track for Procurement

- June 2018: Awarded Design Contract for SWIP Wells Project
- February 2020: Awarded Progressive Design Build Contract for Conveyance Project
- March 2020: Awarded Progressive Design Build Contract for Treatment Project
- April 2020: Awarded Professional Services Contract for Operations and Maintenance At Risk Contract for the Water Purification Facility
- June 2020: To Award Construction Contract for SWIP Wells Project

Pure Water Soquel Financing

Planning Grants

Over \$2M State and
Federal (US BOR Title XVI)

Rates

Customers approved 5-year Water
Rates (2019-2023)



Implementation Funding

Awarded

- **\$50M Prop 1 Groundwater Grant** from CA State Water Resources Control Board
- **\$36M Low-Interest Loan** from **CA Seawater Intrusion Control Loan Program**

Selected in 2019 and Now Applying for

- **Low-Interest Loan** from **EPA WIFIA Program** (for balance of PWS Project Costs, including contingency)
 - Saves rate payers \$47.4M over traditional bond financing

What are customers are saying:

91%

Support **investment in infrastructure** to ensure a safe, reliable water supply

89%

Support taking **strong action now** to address the issues of over-drafting and seawater contamination of the local groundwater

73%

Are **comfortable with Pure Water Soquel**

SqCWD Phone and On-Line Survey, January 2020, performed by FM3



www.soquelcreekwater.org

THANK YOU!

Melanie Mow Schumacher
Special Projects/
Communications Manager
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