1

Introductions

Melanie Mow Schumacher
Pure Water Soquel Program Director, Special Projects-Communications Manager

Becca Rubin –
Public Outreach Coordinator

2

Soquel Creek Water District

- California Special District, which is a local government agency that provides essential services
- Serve the areas of Aptos, La Selva Beach, Opal Cliffs, Rio Del Mar, Seascape, Soquel, and portions of Capitola
- 165+ miles of pipeline, 20 wells, 18 Tanks, 80 monitoring wells
- 48 Employees
- Governed by 5 elected officials who comprise our Board of Directors
- 16,000 Customers
- Produce about 3,300 acre-feet per year of water which equals over 90 million gallons per month

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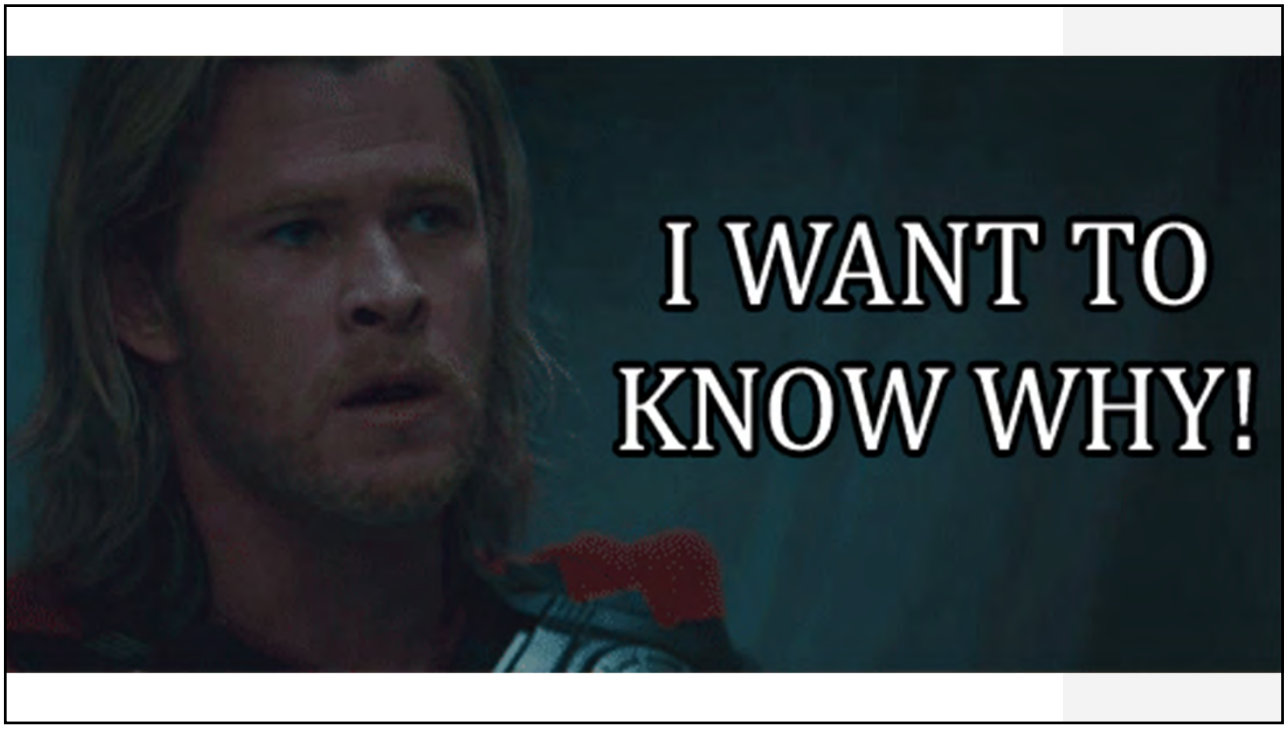

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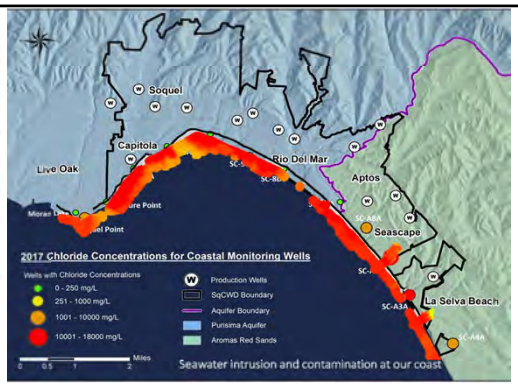
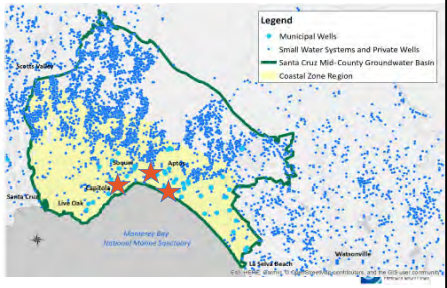
Our Water Challenge

- **Critically overdrafted** as identified by the State of California with a mandate to be sustainable by 2040
- **Groundwater** is the **only source** of water for Soquel Creek Water District and much of the SC Mid-County Region
- **Contaminated** with seawater intrusion along the coast





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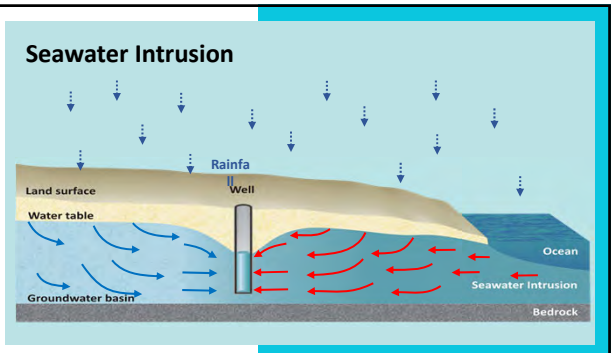
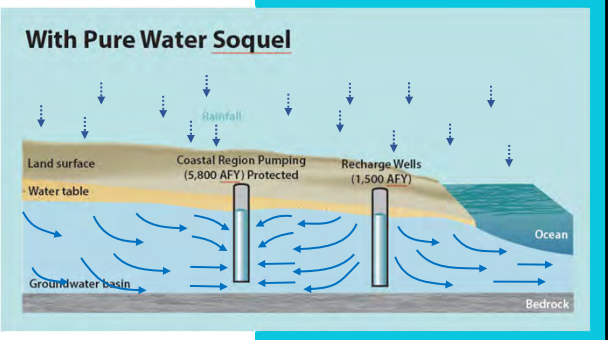
Our Primary Water Solution

PUREWater Soquel
Water Transformed

- Pure Water Soquel will **replenish the groundwater basin**
- Pure Water Soquel will **create a seawater intrusion barrier**
- Pure Water Soquel will **restore the Groundwater Basin to sustainable levels**





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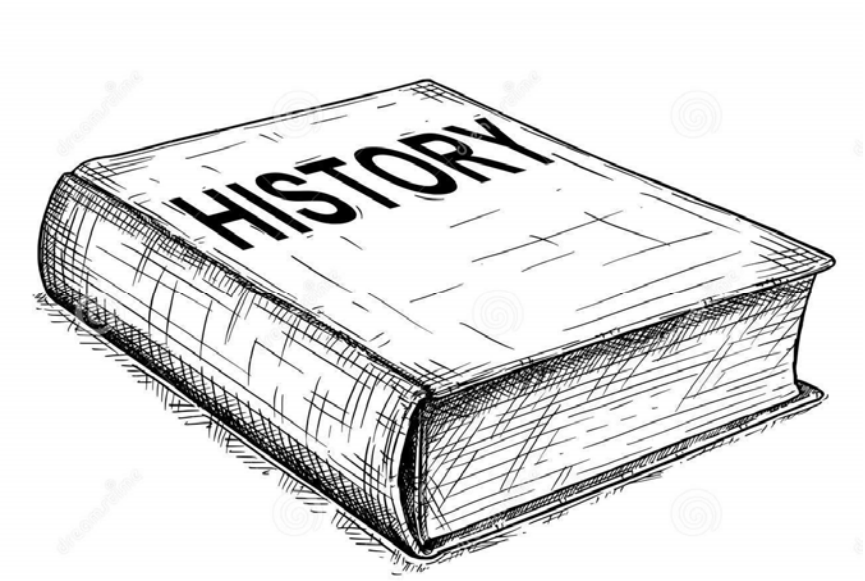


7

Looking Back…

2013-2014

scwd² Desalination Program put on hold

Water Supply Option Re-Evaluation

- *Conducted 13-month public process.*

State Mandate

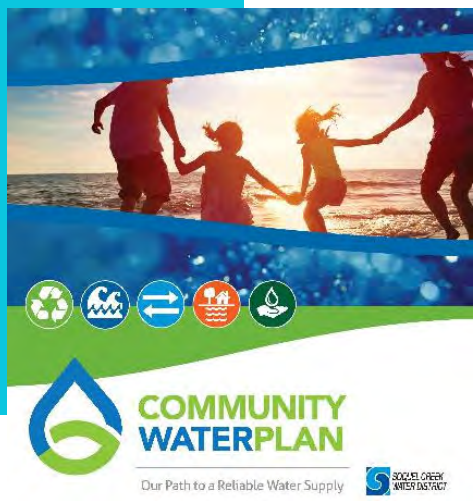
- *California passes Sustainable Groundwater Management Act which requires local Basin to be sustainable by 2040.*

2015

Initiate on-going Public Engagement and Project Evaluation

- *Develops Community Water Plan*
- *Through public process and input, Board directs staff to further evaluate recycled water, in addition to desalination and surface water.*

8



Community Water Plan

Created for Our Community,
With Our Community

Conservation + Groundwater Management + New Supplies

New Supplies

- Water Purification Pure Water Soquel
- Excess River Water Purchase
- Storm Water Capture

9

Signs of resistance…

Anonymous Phone Message:
"Melanie- I recommend you drink your own sewage water"

10

Inform the Community and Building Trust

11

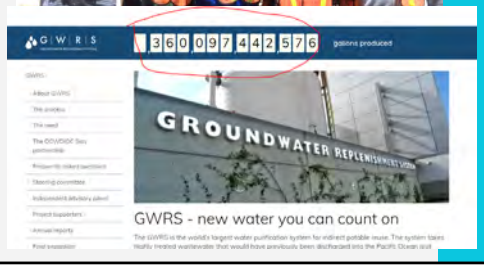
One-on-Ones, Presentations, and Lots of Information

12

#InThisTogether Campaign

13

Elected and Key Officials to Attend Tours and Conferences



14

Convened Independent Technical Advisory Panel

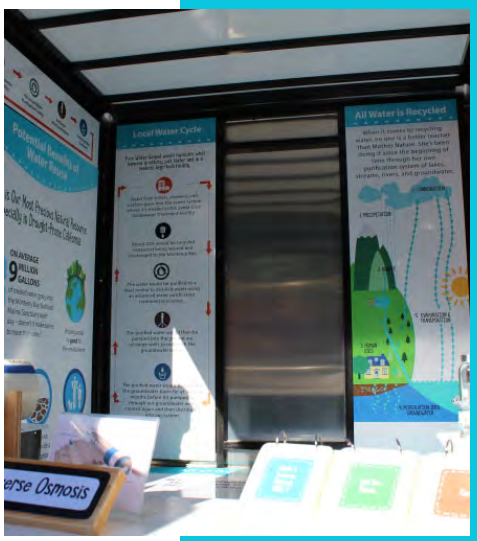

Santa Cruz Sentinel
WATER UTILITIES
National expert panel gives Soquel Creek recycled water plan thumbs up
By Jessica A. York, Santa Cruz Sentinel
SOQUEL >> Soquel Creek Water District's proposal to purify wastewater and inject it
If you go

NWRI Panel

- Chair: Channah Rock, Ph.D. (University of Arizona)
- Joseph Cotruvo, Ph.D., BCES (Joseph Cotruvo & Associates)
- Jason Dadakis, PG, CHG (Orange County Water District)
- Lynne Haber, Ph.D., DABT (University of Cincinnati)
- Kara Nelson, Ph.D. (University of California, Berkeley)
- Gordon Thrupp, Ph.D., PG, CHG (Geosyntec Consultants)

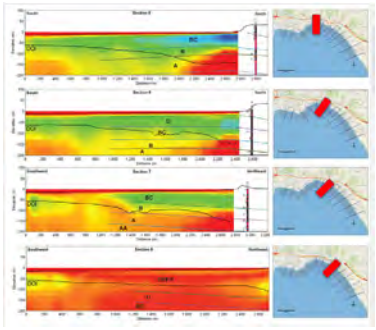
15

Created a Mobile Education Trailer



16

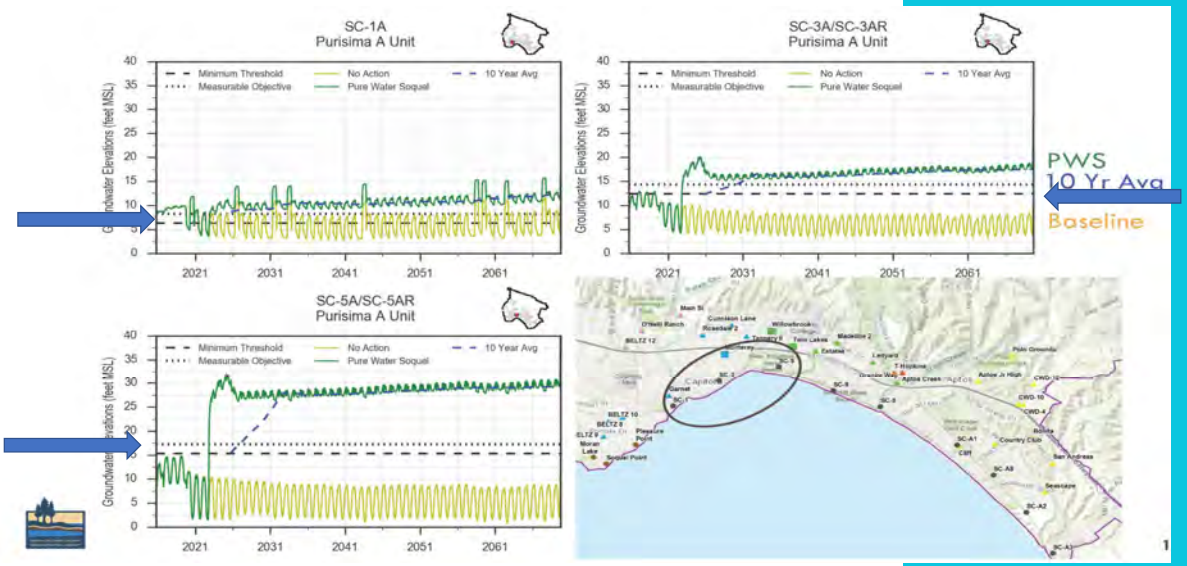
Data and Science: Salt-Fresh Water Interface Study



SkyTEM and Ramboll took a geophysical survey of the groundwater basin along the shore **to map the freshwater/seawater interface**.

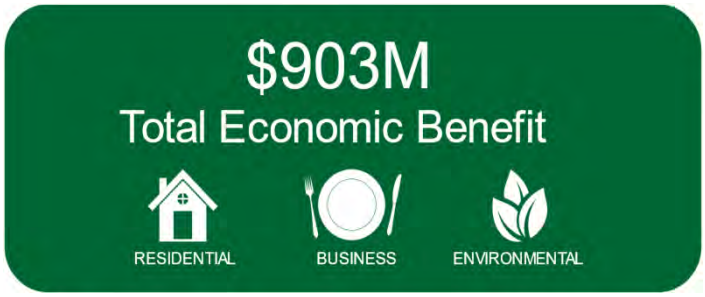
17

Data and Science: Groundwater Modeling



18

Data and Science: Economic Impacts Analysis



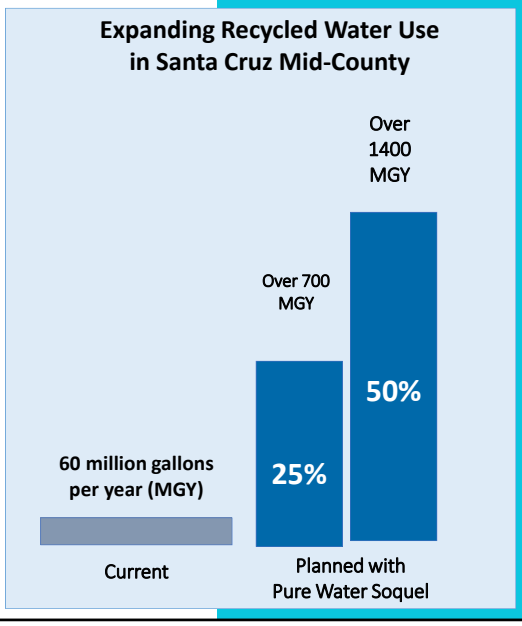
Dr. Brent Haddad
Associate Dean of Engineering for Technology Management and Professor of Environmental Studies

Center for Integrated Water Research
UNIVERSITY OF CALIFORNIA SANTA CRUZ

19

Protecting the Bay: Reducing Ocean Discharge

On average, **~8 million gallons per day** of treated wastewater currently goes out into the Monterey Bay National Marine Sanctuary



20

We Sought Community Input

Customers are comfortable with purified recycled water

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

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

Are **comfortable** with **Pure Water Soquel**

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

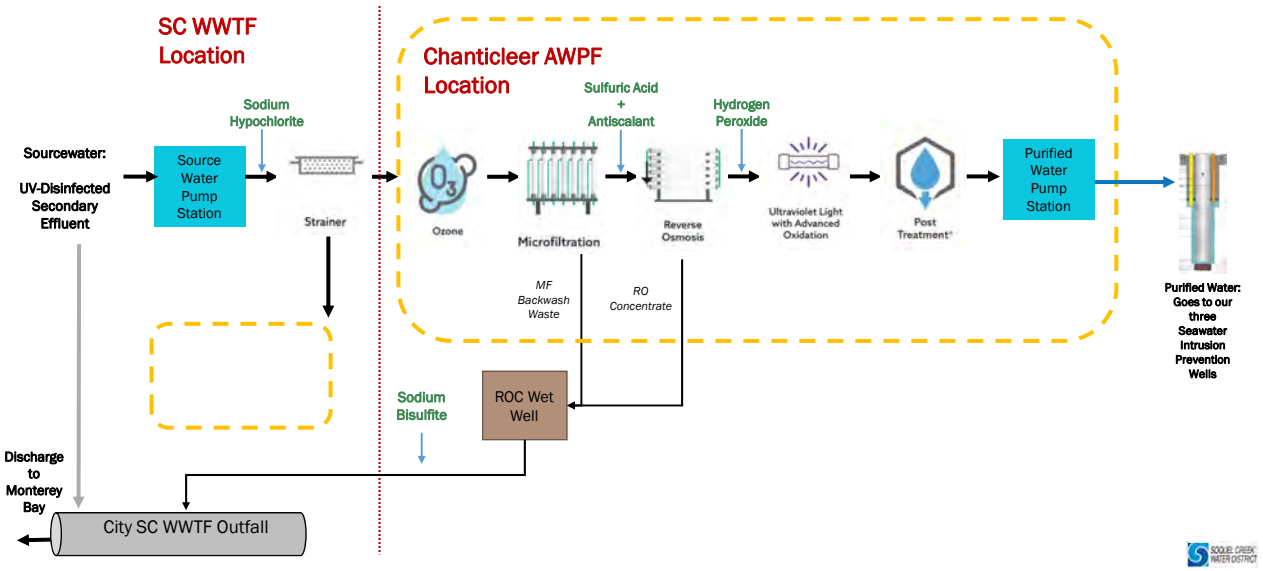
21

Pure Water Soquel Project Overview

PUREWater Soquel
Water Transformed

22

Pure Water Soquel – At a Glance



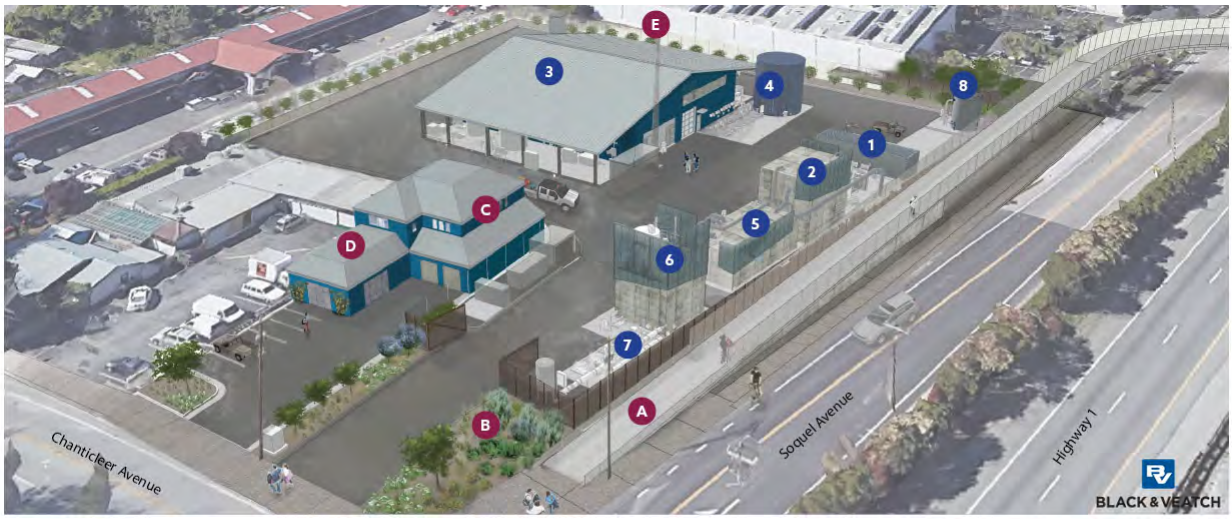
23

Pure Water Soquel Components at the Santa Cruz Waste Water Treatment Facility

1. Tertiary Treatment Facility (Strainers, Cloth Filter and UV Disinfection providing Non-Potable Reuse Water, Backup Title 22 Storage and Pumps)
2. PWS Source Water Pump Station
3. Communications Pole

24

Advanced Water Purification Center at Chanticleer Ave.



Process Flow

1. Ozone System
2. Ozone Contact/Membrane Filtration (MF) Feed Tank
3. MF, Reverse Osmosis (RO), Ultraviolet Light with Advanced Oxidation Process (UV/AOP) Building
4. RO Feed Tank
5. Reverse Osmosis Concentrate (ROC) Wet Well
6. Purified Water Tank and Decarbonation Unit
7. Purified Water Pump Station
8. Neutralization Tank

Other Components

A. Bike/Pedestrian Bridge (by RTC)
B. Demonstration Garden
C. Operations Offices
D. Education Center
E. Communications Pole

25

Financing the Project

Prop 218 Rates

- **Approved Rates** by our ratepayers
  Rate study included $90M with traditional borrowing (3%)

Grants

- **Awarded a Prop 1 Groundwater Grant** through State Water Resources Control Board (SWRCB) - Planning and Implementation
  - $50M Reimbursable Grant (50% match covering non-recycled water treatment components
- **Awarded a Title XVI Water Smart Grants** through US Bureau of Reclamation– Feasibility and Implementation
  - $30M Reimbursable Grant

Low-Interest Loans

- **Seawater Intrusion Control Loan** through SWRCB-
  Rate of 1.3% , 20 year
- **WIFIA Loan** through US EPA
  Rate of 1.34%, 30 year with 5-year deferral

Interim Financing

- **To Assist with Cashflow, a revolving line of Credit** through CoBANK
  - $75M

Construction Project Costs	Approx. Budget
Construction Mgmt/Proj. Mgmt	$7,000,000
Conveyance and Injection Wells	$64,000,000
Treatment Facilities	$70,000,000
Monitoring Wells	$1,500,000
Other (Planning, Design, Environmental, Project/Construction Mgmt., Outreach, Land Acquisition, Legal, Litigation, etc.)	$30,000,000
Contingency	5-10% of construction costs

26

Team Effort

27

Procurement

- Progressive Design Build
  - Conveyance Project
  - Treatment Project
- Traditional Design-Bid-Build
  - Seawater Intrusion Prevention/Injection Wells
  - Monitoring Wells
- OMAR (Operations-Management-At-Risk)

28

Agency Collaboration (Partner Agreements) & Community Support

29

Program Team Support and Implementation

30

Naming the Project and Creating a Logo

In 2016, the name Pure Water Soquel was selected. In 2020, the Butterfly Logo was designed.

PUREWater Soquel
Water Transformed

The new PWS logo with the butterfly has many symbolic representations.

Butterflies represent transition, endurance, change, hope, and life.

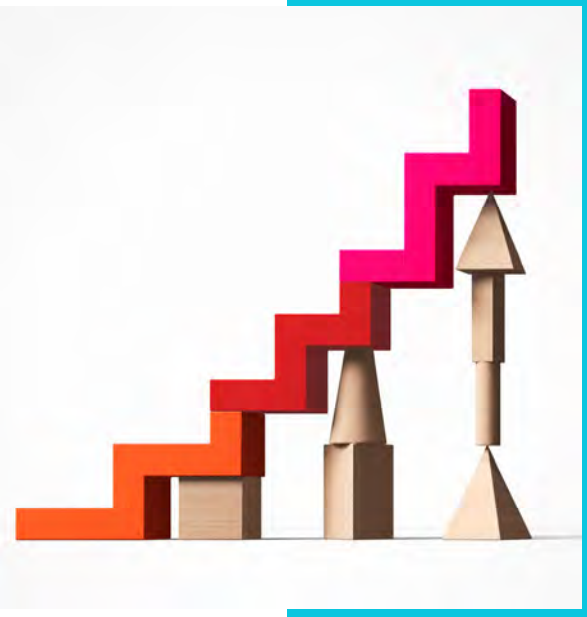
The PWS Project is like a butterfly.

- The PWS Project will transition and change the District's sole source of supply from an overdrafted groundwater basin.
- PWS will give the groundwater basin the endurance it needs to prevent further seawater intrusion which in turn gives us hope for a sustainable water supply for future generations. And, of course, water also represents life like a butterfly.
- The butterfly also represents the regional aspect of the PWS Project since they are special here in Santa Cruz County.
- And lastly the middle wing looks like a water drop symbolizing the water we are producing to protect our groundwater basin.

31

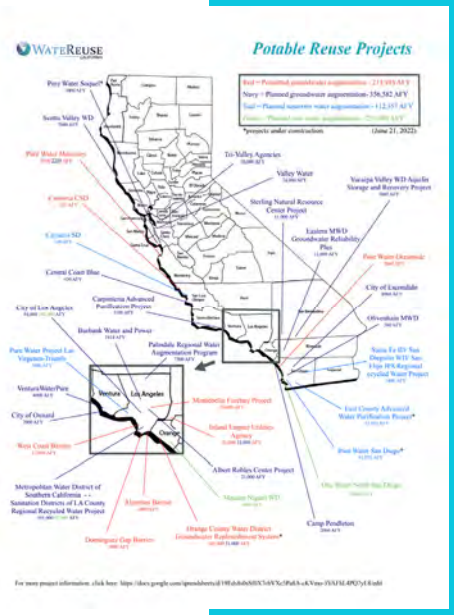
Increased Costs During a pandemic

- Project costs have increased which are reflective of actual contacts and bids vs original estimates and forecasting.
- This includes real impacts from COVID-19 supply chain challenges (material inflation, labor shortages, and transport limitations).
- With the project in active construction, cashflow stability is essential.



32

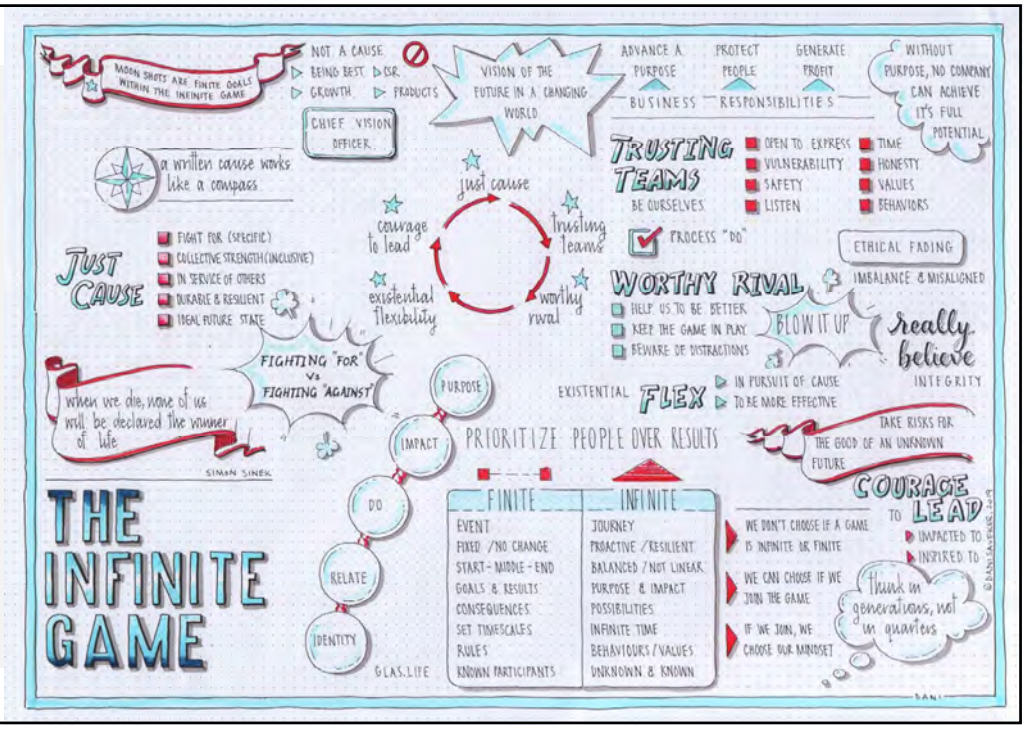
Newsom : California must boost water recycling, desalination (08.11.2022)



33

Tip:

Approach your project as an Infinite Game vs. Finite Game



34

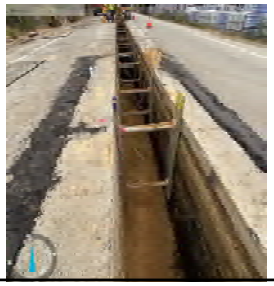
In 2021 Celebrated Milestones And Began Construction

35

In 2022… It's Construction…and More Construction

Seawater Intrusion and Prevention Wells and Monitoring Wells Construction
in Capitola and Aptos

Pipeline Installation
in Santa Cruz, Live Oak, Soquel, Capitola, Aptos



Treatment Facilities Construction
in Santa Cruz and Live Oak

36

We Continue to Celebrate the Transformation of Water

State Water Resources Control Board Chair Joaquin Esquivel

Traci Hart, SqCWD HR Mgr.

Dr. Tom LaHue (SqCWD President), Kent-Harris Repass (Congressman Panetta's Representative), Taj Dufour (SqCWD Engineering Mgr), and Kyle Graff (DDW Engr.)

Black and Veatch Construction Inc. Representatives

Dr. Bruce Jaffe, SqCWD Boardmember

37

We strive to be a Showcase Project for California on Groundwater Stewardship and Sustainability

….Something September 8, 2022

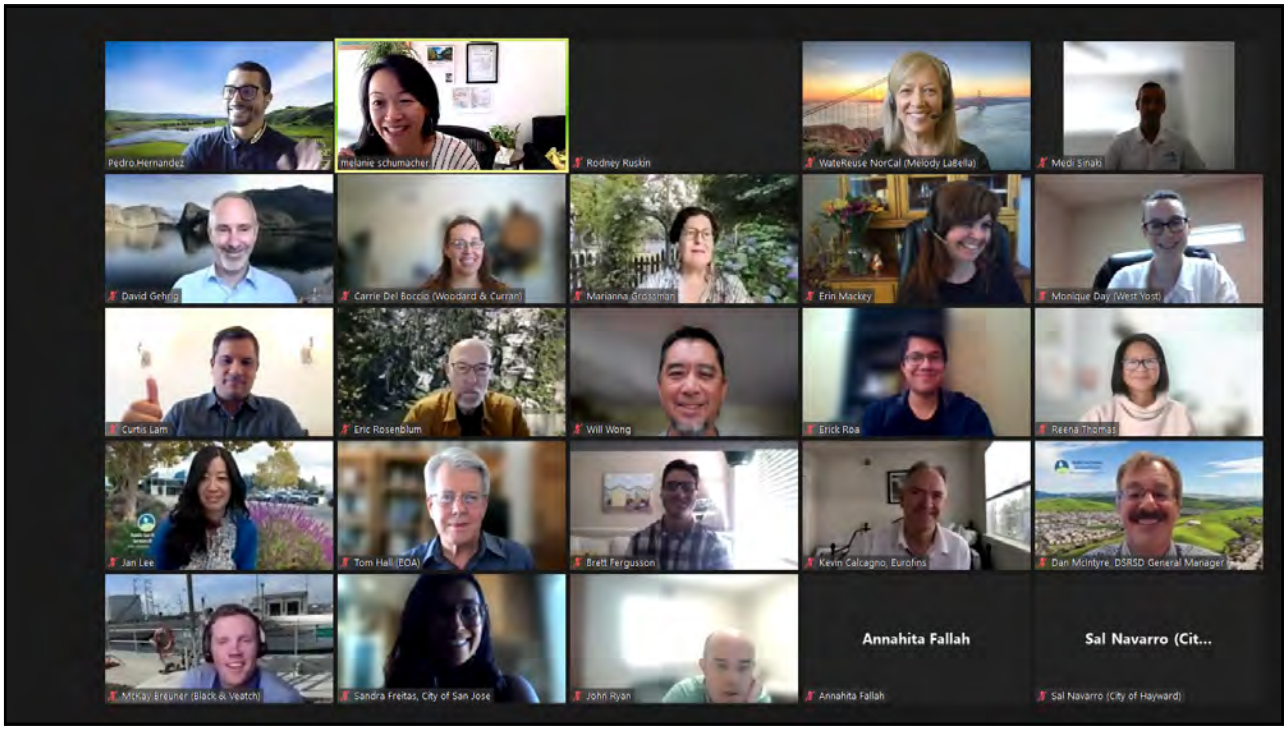
38

THANK YOU!

And, may we take a picture?

We appreciated the Opportunity to chat with you today!
Feel free to reach out to us:
Melanie (melanies@soquelcreekwater.org)
Becca (becca@soquelcreekwater.org)

39



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