Outline of Tonight’s Discussion

- Review of District’s Water Shortage Problem
- Overview of District’s Long Term Planning Efforts
- How District is Addressing Water Shortage Issues
- Developing a Supplemental Water Supply
  - Exploring Back up Options
  - Tonight’s focus on Desalination Options
  - Future meetings will cover other potential options
Primary Water Shortage Issue: Seawater Intrusion

![Diagram showing seawater intrusion](image_url)
Seawater Intrusion: Big Picture

Europe

Salt water intrusion due to groundwater overexploitation

- Red: Salt water intrusion
- Orange: Groundwater overexploitation
- Blue: No groundwater overexploitation
- No data
- Outside data coverage
Seawater Intrusion: Florida Miami
Seawater Intrusion: California
Southern Monterey Bay, Moss Landing to Seaside

**Slowing seawater intrusion**
Narrowing bands representing brackish water reflect actions to conserve groundwater in Monterey County.

Source: Monterey County Water Resources Agency
BAY AREA NEWS GROUP
Seawater Intrusion: California
Pajaro Valley (Just south of Soquel Creek WD)
Seawater Intrusion: Our Community
Soquel Creek Water District’s service area

2011 Chloride Concentrations for Coastal Monitoring Wells

- 0 - 250 mg/L
- 251 - 1000 mg/L
- 1001 - 10000 mg/L
- 10001 - 18000 mg/L

- Production Wells
- SoCWD Boundary
- Aquifer Boundary
- Purisima Aquifer
- Aromas Red Sands

Miles
Groundwater Levels are Below Sea-Level
Soquel Creek Water District’s service area

Figure 3-3 (2012): Groundwater Elevation Contours, Purisima A-Unit, Fall 2012
Public Process for Long-Term Water Planning

1999
Developed with a Public Advisory Committee of more than 20 individuals

2006
Updated with newer information on supply & demands

2012
- Updated with newer information on supply and demand and re-evaluated 10 different alternatives
Supply and Demand for Soquel Creek Water District

Projected Community Water Demand: 4790 afy

- Water Shortage: 1,360 afy (30%)
  - Limit groundwater pumping to no more than 2,900 afy
    - Based on groundwater modeling
    - 70th percentile goal of achieving groundwater levels and outflows to protect against seawater intrusion
    - Recovery time estimated to be at least 20 years
- Conservation: 530 afy (10%)
- Groundwater Supply: 2,900 afy (60%)
  - Continue to maximize and increase water conservation savings
    - Set goal to reduce overall use by 15% (720 afy) by 2030
Addressing Water Shortage Issues: Shared Groundwater Basin

- Groundwater Basin is used by many: District, City of SC, Central WD, small mutuals, and private pumpers

- Creation of a Groundwater Stakeholder Committee

- Looking into a Groundwater Replenishment District
Addressing Water Shortage Issues: Development

- Residential and commercial development is occurring in our service area.

- District increased the water demand offset (WDO) factor from 1.2 to 1.6 in July 2013.

- Goal is to stretch existing supplies and achieve 200% savings by retrofitting existing homes with conservation fixtures and apply these savings to new development.
Addressing Water Shortage Issues: More Conservation

- Maximizing and Prioritizing Water Conservation in our Community.
- Goal is to achieve an additional 15% by 2030.

- Summertime cutbacks and continued call for water conservation year-round
- District pilot tested Water Smart program and No-Des flushing machine
- Continue to expanded and add new rebates
- Initiate monthly billing
Addressing Water Shortage Issues:
Water Quality

- Changing Water Quality Requirements: Hexavalent Chromium

- Working on treatment upgrades at affected wells

- Looking into emergency water purchases from nearby agencies
Addressing Water Shortage Issues: Securing a Supplemental Supply

- District is actively pursuing a supplemental water supply
- Continuing to evaluate scwd² Seawater Desalination Project
- Looking at other back-up option
  - Desalination
  - Surface Water
  - Mandatory Water Rationing
  - Recycled Water
Looking Closer at Back-up Options

- **Exploring Desalination** *(October 15)*
  - Deep Water Desal
  - District only Desal

- **Exploring Surface Water** *(November 5)*
  - SC County Water Transfer Study Update
  - Surface Water Rights
  - Presentations by Public Individuals
    (Bill Smallman and Jerry Paul)

- **Mandatory Water Rationing** *(January)*

- **Recycled Water** *(February)*
Tonight

- Exploring Desalination
  - Presentation by Deep Water Desal
  - Presentation on District only Desal