



Regional Water Supply Planning

State Water Resources Control Board

April 1, 2008



SVWP Update

- SVWP objectives
- Background
- Project elements
- SVWP Status
- Regional Water Supply Planning

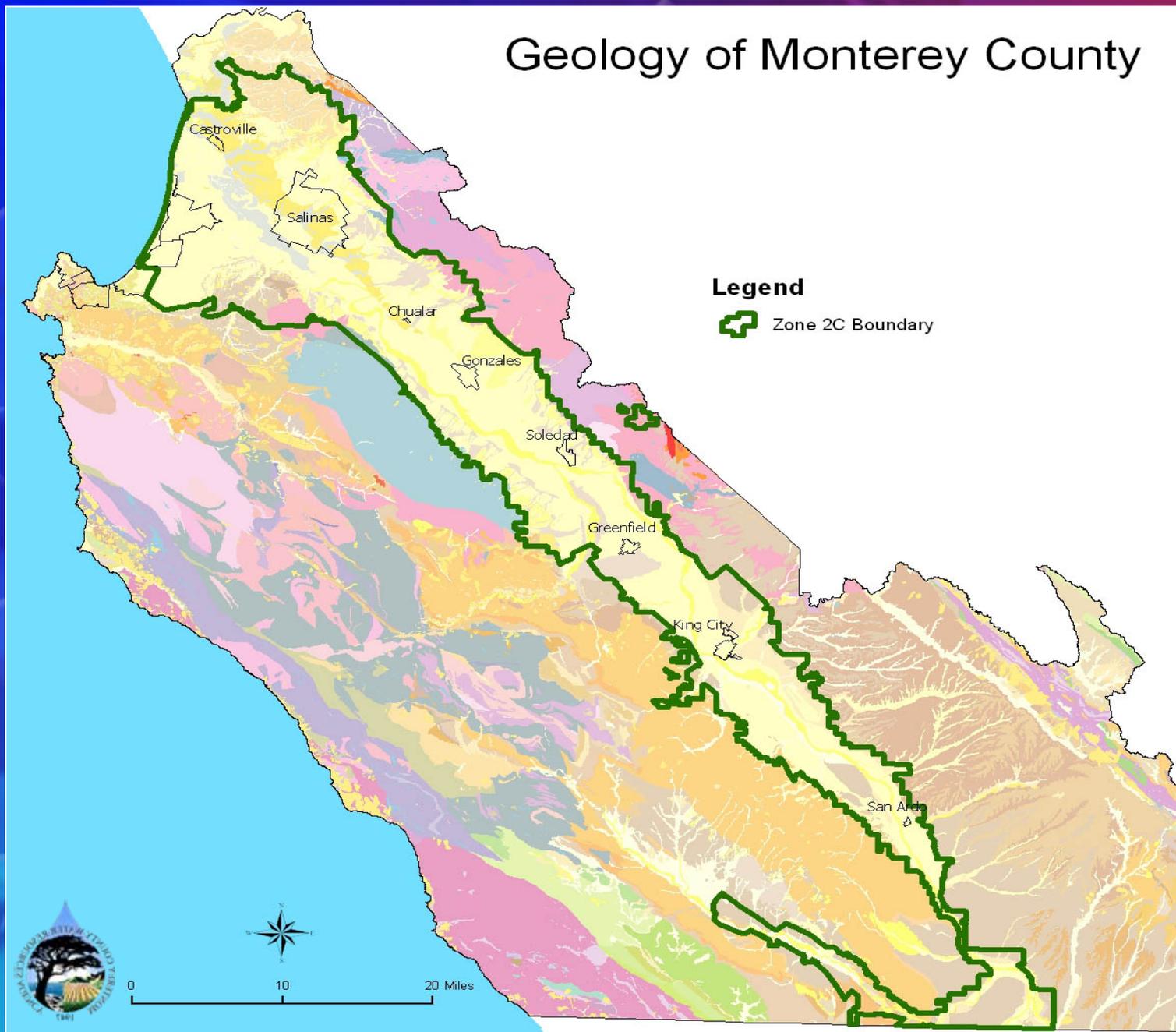


SVWP Objectives

- Stop Sea Water Intrusion
- Balance the Ground Water Basin
- Provide Water Supply for 2030



Geology of Monterey County



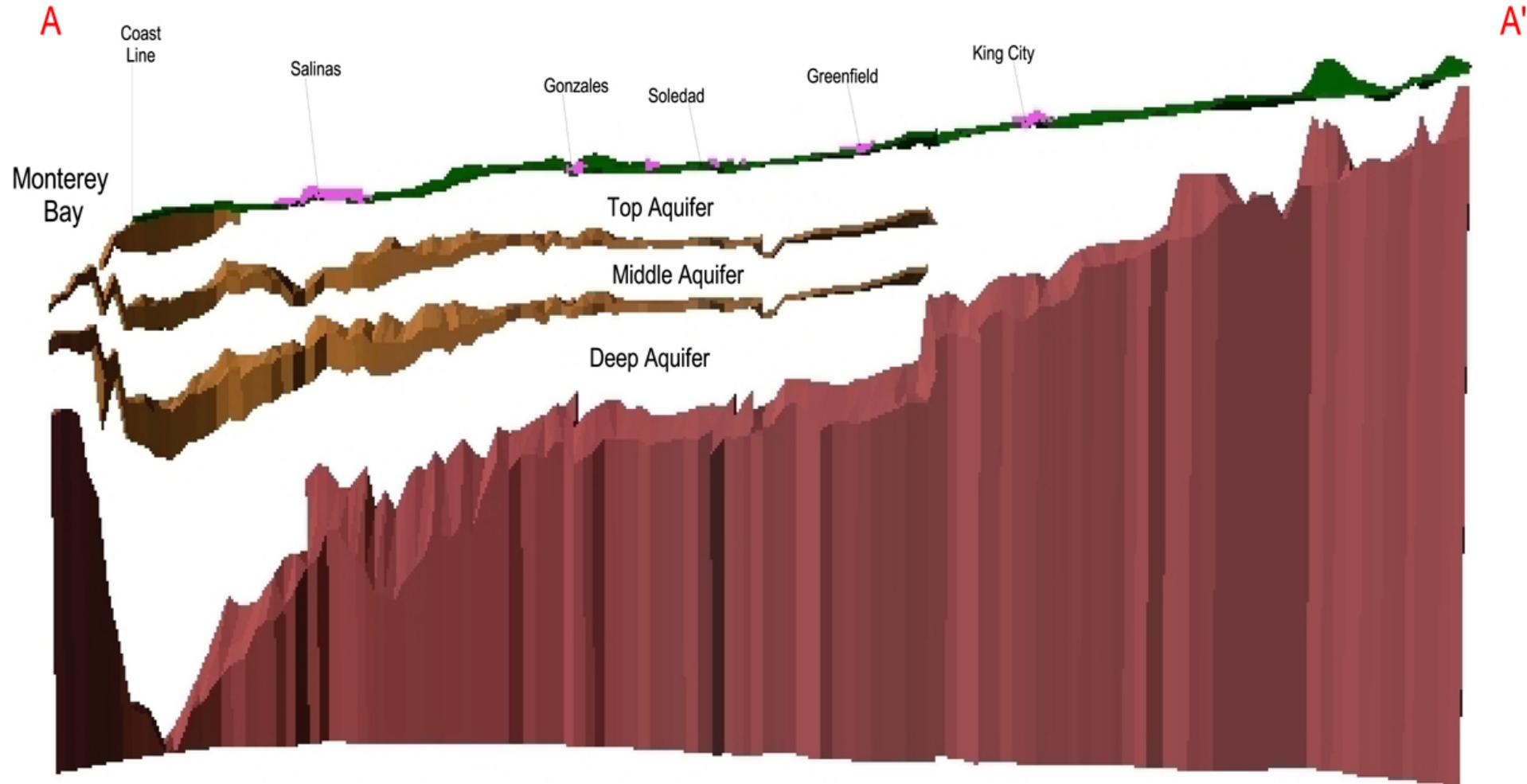
Legend

 Zone 2C Boundary

0 10 20 Miles

Aquifer Cross-Section A-A' Northwest to Southeast

SVIGSM Data

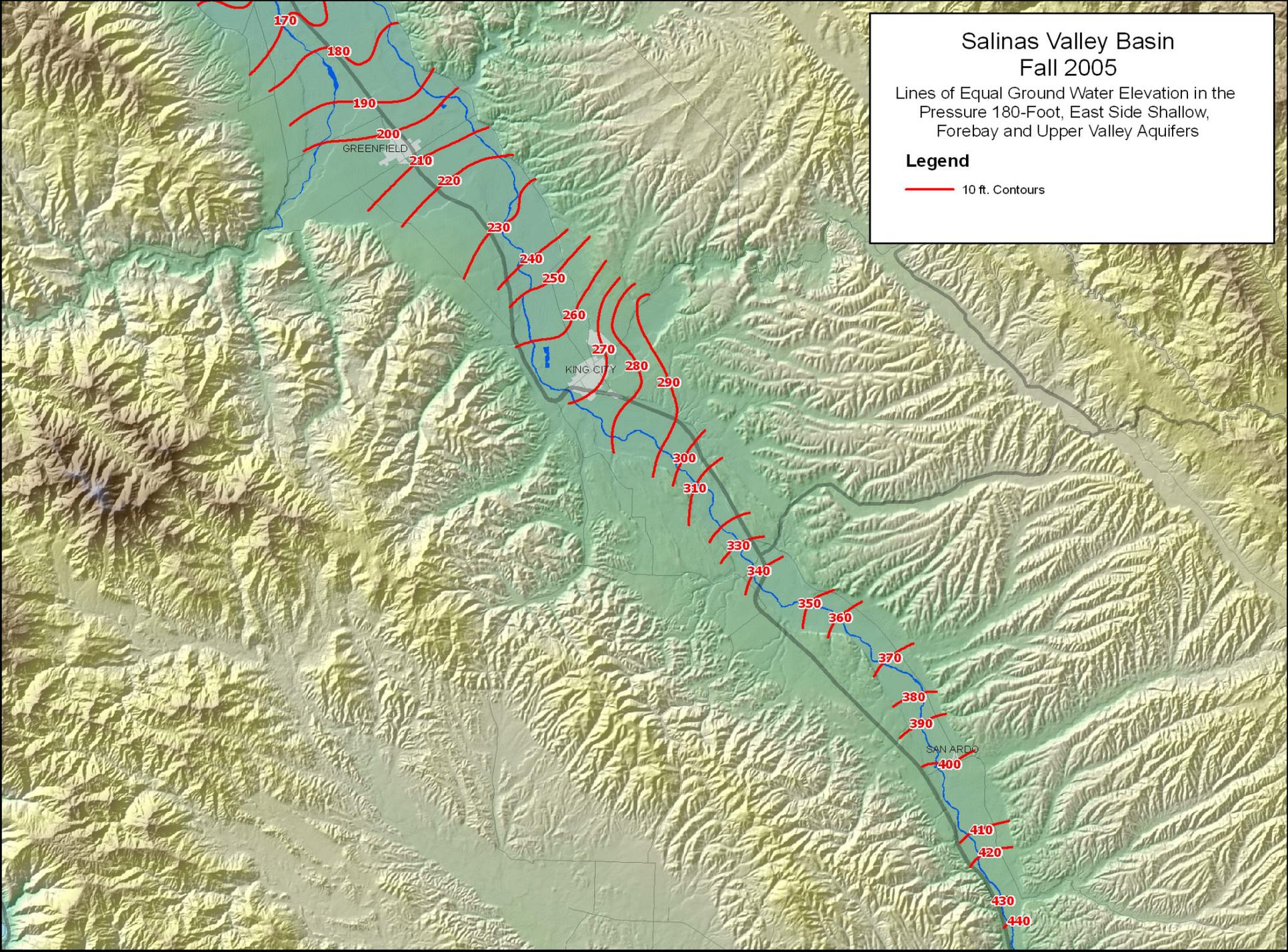


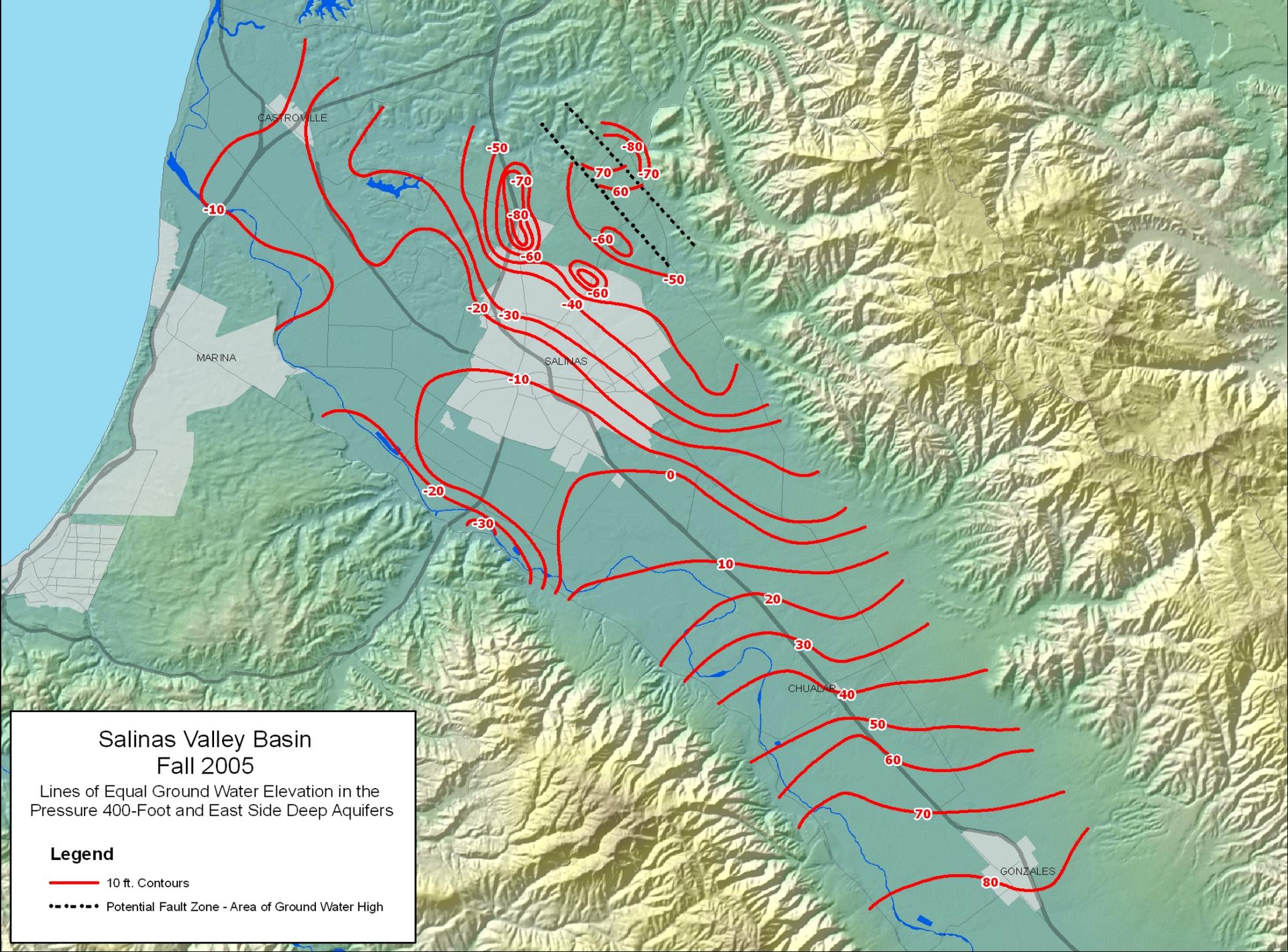
Salinas Valley Basin Fall 2005

Lines of Equal Ground Water Elevation in the
Pressure 180-Foot, East Side Shallow,
Forebay and Upper Valley Aquifers

Legend

— 10 ft. Contours





Salinas Valley Basin Fall 2005

Lines of Equal Ground Water Elevation in the
Pressure 400-Foot and East Side Deep Aquifers

Legend

-  10 ft. Contours
-  Potential Fault Zone - Area of Ground Water High

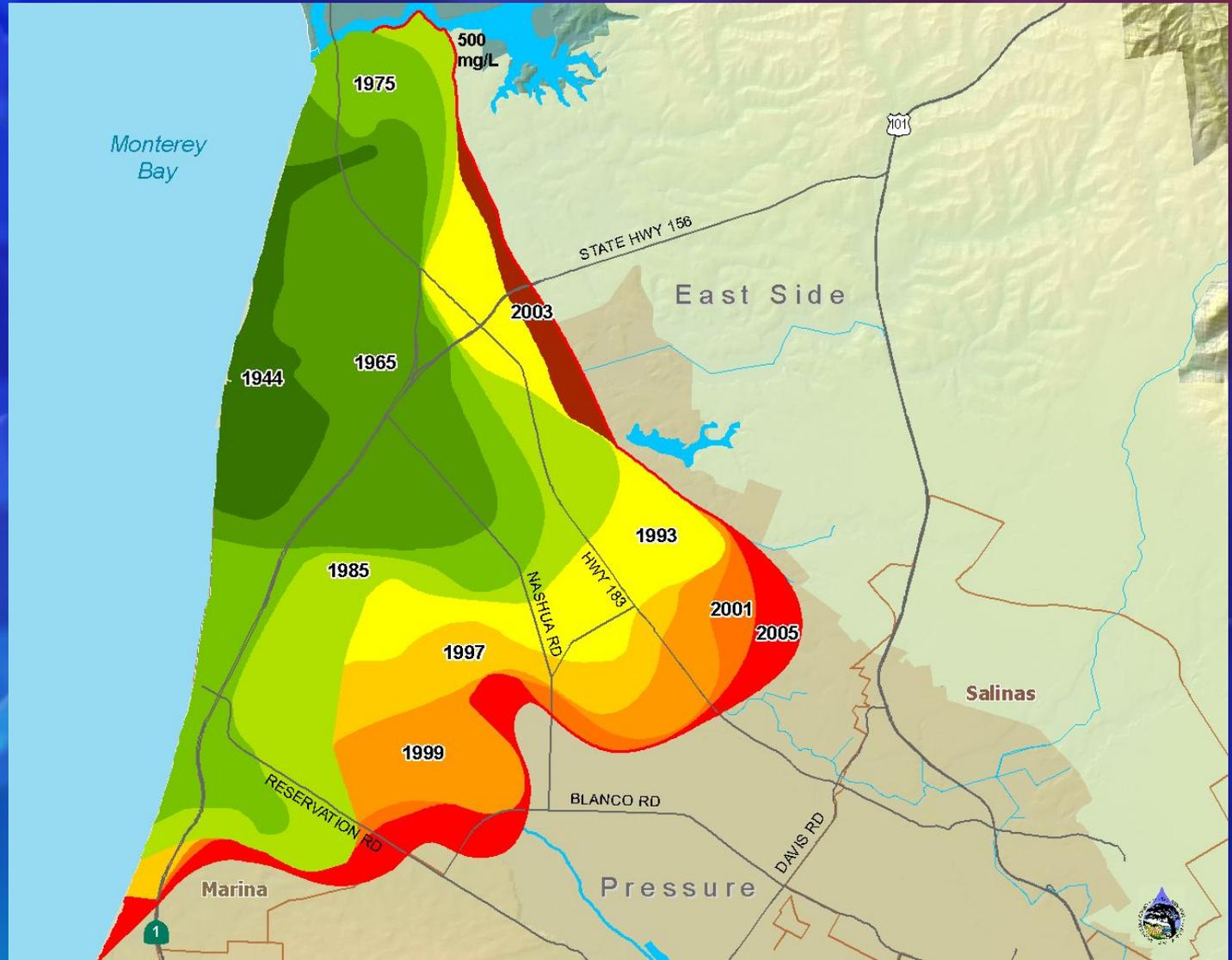


Salinas Groundwater Basin

- 550,000 acft pumped annually
- Seawater intrusion acknowledged in 1940's
- Reservoirs constructed 1957 and 1967
- 160,000 acft released annually
- Multi-year planning effort
- Ten years of successful operation or the Agency's recycled water projects
- Overdraft for the Basin 9,000 acft



Historical Seawater Intrusion Front Pressure 180-Foot Aquifer 500 mg/L Chloride Contour



Source: MCWRA

Date: May 2006

Note: The scale and configuration of all information shown herein are approximate and are not intended as a guide for design or survey work.

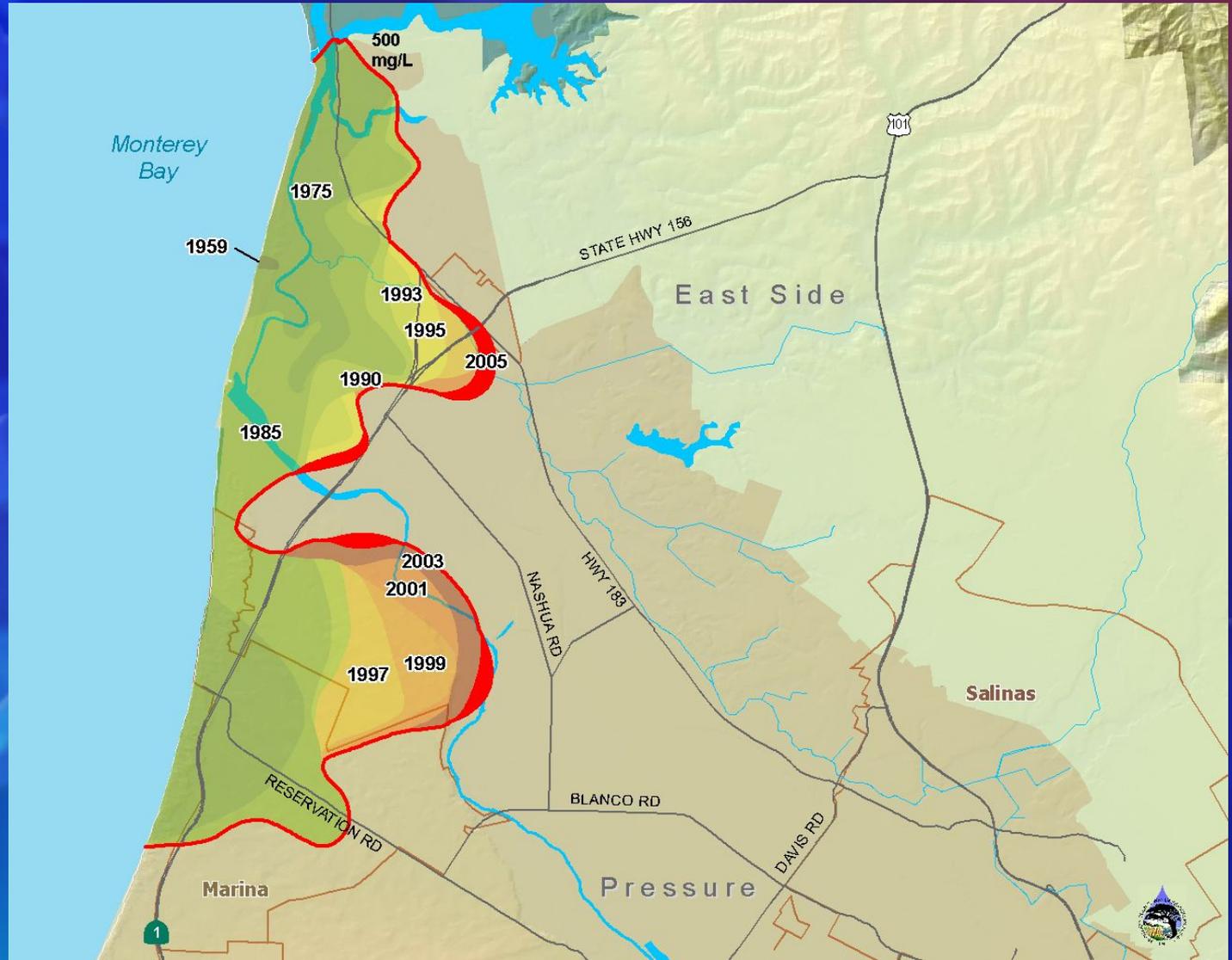


Historical Seawater Intrusion Front Pressure 400-Foot Aquifer 500 mg/L Chloride Contour

Source: MCWRA

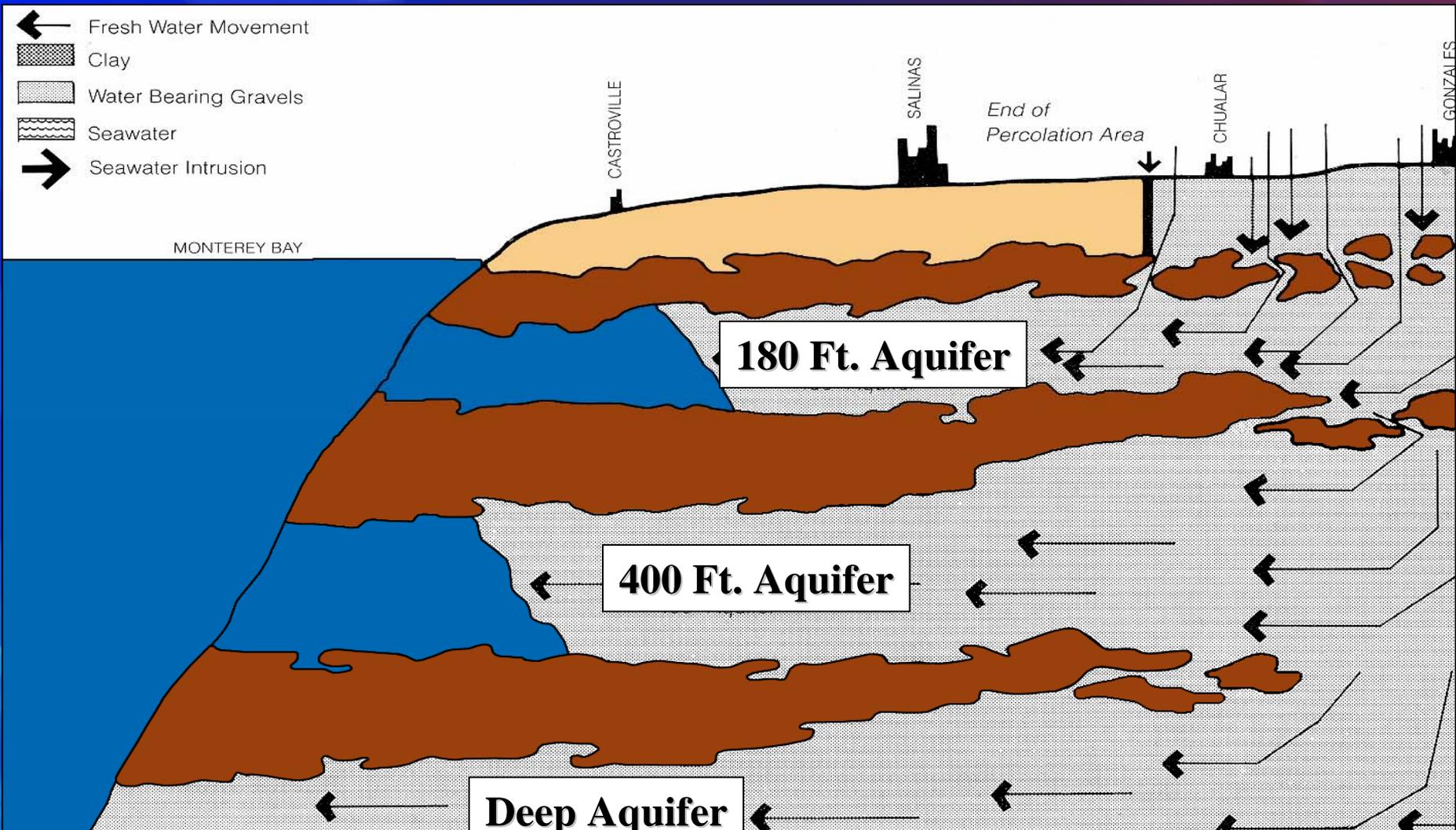
Date: May 2006

Note: The scale and configuration of all information shown herein are approximate and are not intended as a guide for design or survey work.

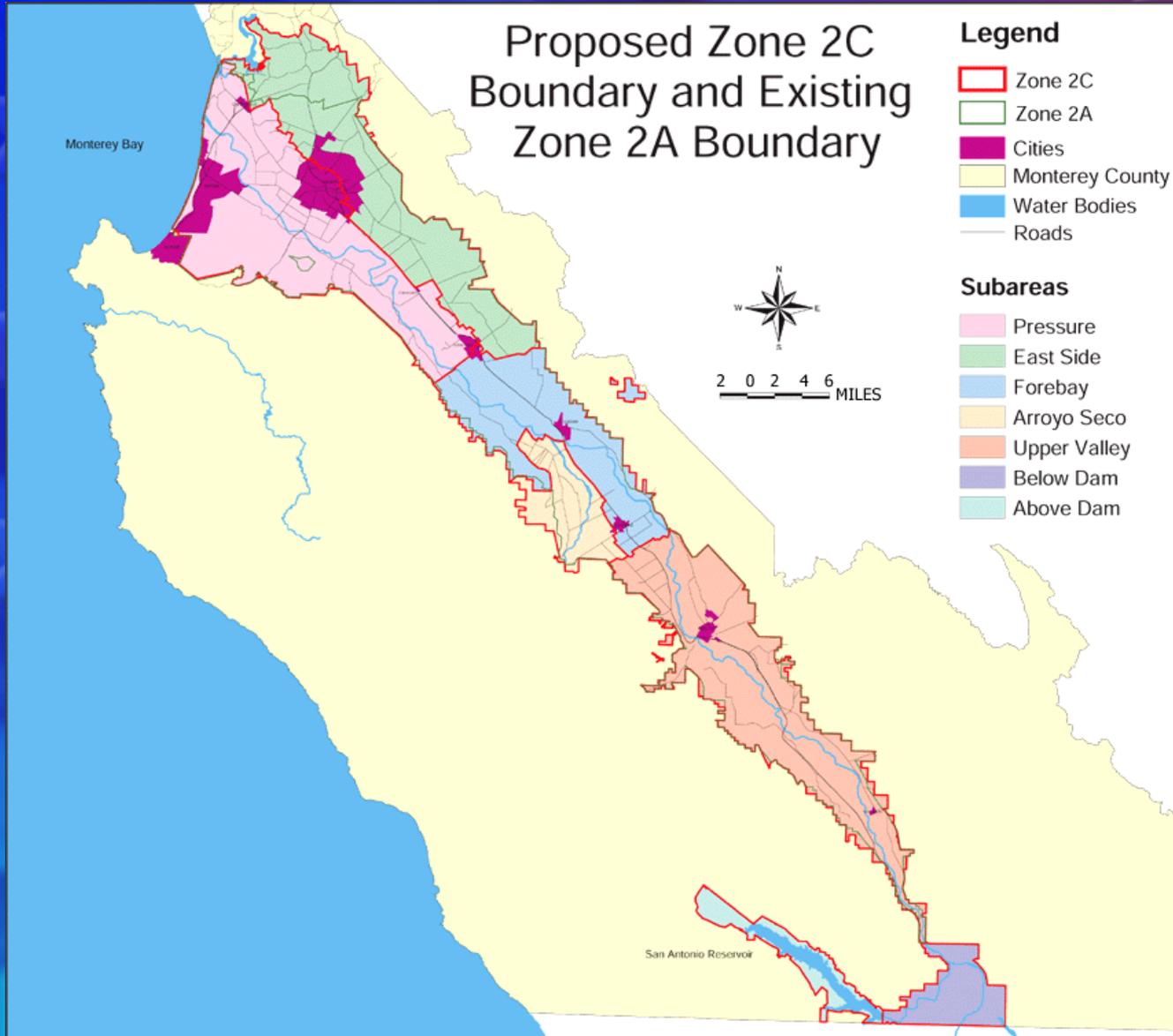




What Causes Seawater Intrusion ?



Zone 2C Boundary





Groundwater is the Primary Source of Supply and Storage





Salinas Valley Water Project



- Critically needed infrastructure
- Maximizes Existing Infrastructure
- Spillway Modification
- Surface Diversion
- Reservoir Re-op
- Cost \$37 million



Lake Nacimiento



- Completed in 1957
- Lake Capacity
377,900 AF



Lake San Antonio

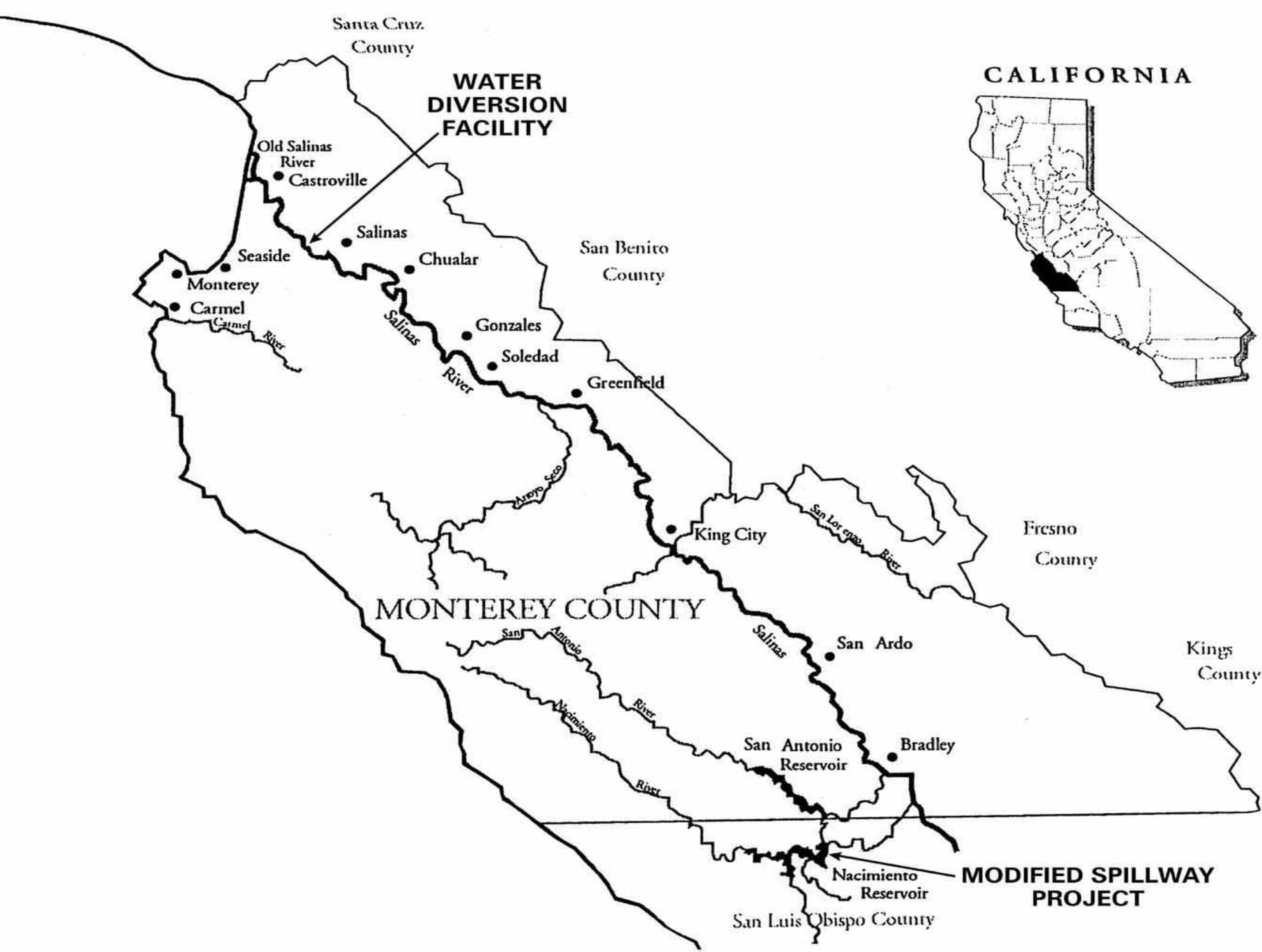


- Completed in 1965
- Lake Capacity
335,000 AF



CSIP Service Area





Santa Cruz
County

**WATER
DIVERSION
FACILITY**

CALIFORNIA

Old Salinas
River
• Castroville

• Salinas

• Chualar

San Benito
County

• Seaside

• Monterey

• Carmel

Carmel River

Salinas
River

• Gonzales

• Soledad

• Greenfield

Aroyo Seco

• King City

San Lorenzo River

Fresno
County

MONTEREY COUNTY

San Antonio
River
Nacimiento
River

• San Ardo

Kings
County

San Antonio
Reservoir

• Bradley

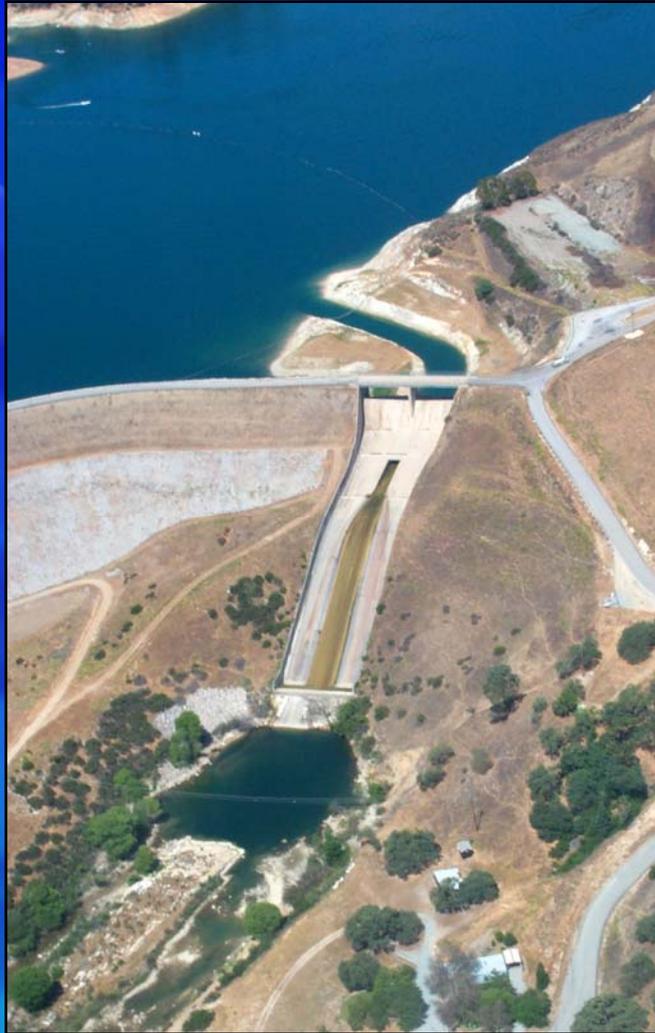
Nacimiento
Reservoir

**MODIFIED SPILLWAY
PROJECT**

San Luis Obispo County



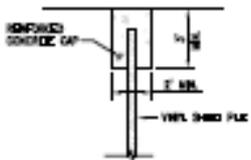
Nacimiento Spillway Modification



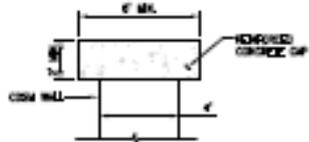
- Modify Spillway to accommodate the Probable Maximum Flood (PMF)
- No increase in spillway height
- Maximum storage volume unchanged



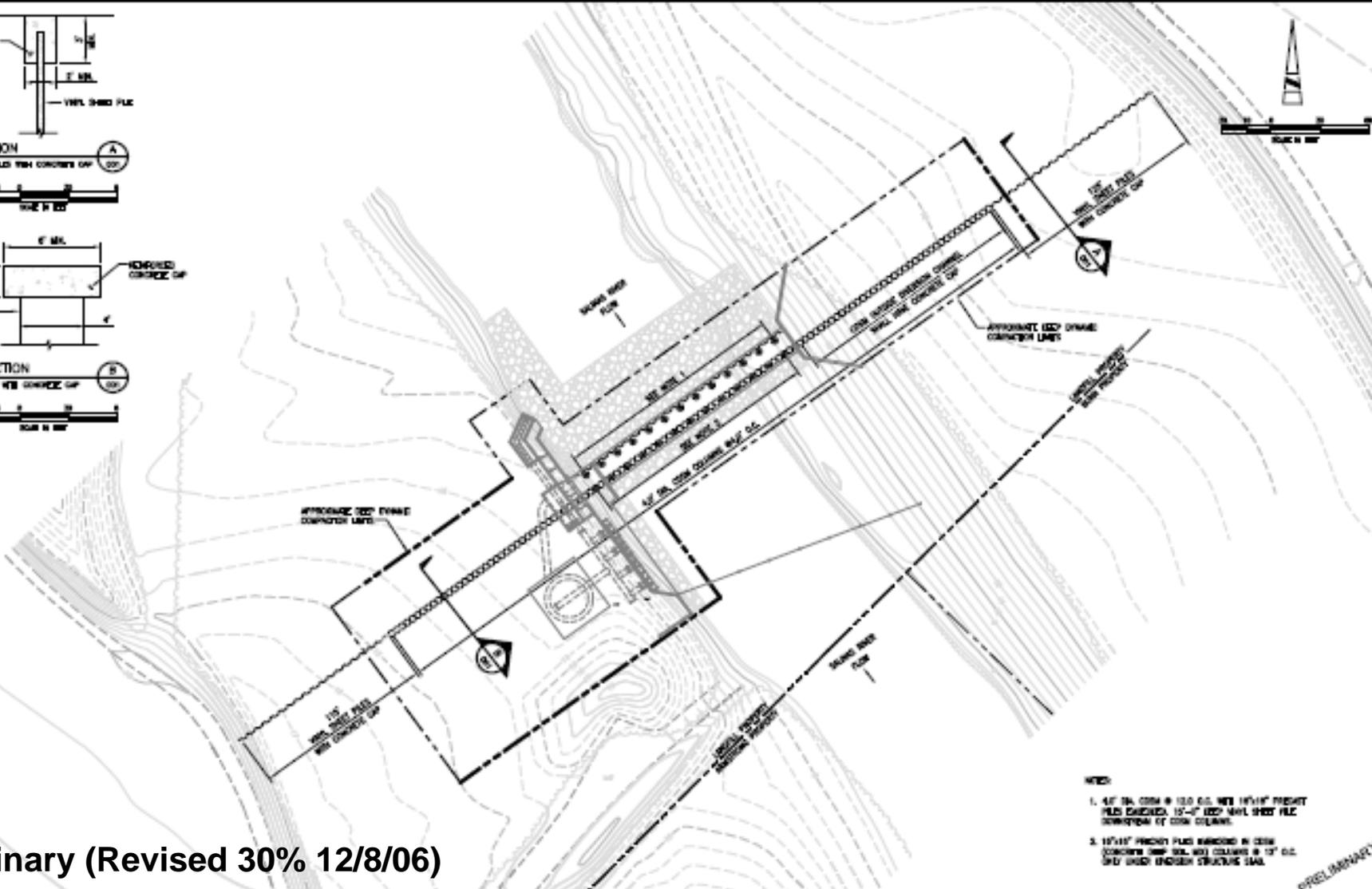




SECTION A
15'x15' PRECAST PILES WITH CONCRETE CAP



SECTION B
CONCRETE PILES WITH CONCRETE CAP



Preliminary (Revised 30% 12/8/06)

- NOTES:
1. 41" DIA. COIL IN 150' DIA. WITH 15'x15' PRECAST PILES EMBEDDED 15'-0" INTO MAJOR ROAD FLUX CORRECTION OF COIL COLUMN.
 2. 15'x15' PRECAST PILES EMBEDDED IN COIL CONCRETE SHALL BE 101' DIA. COILS AND 101' DIA. COILS SHALL BE 101' DIA. COILS.

PRELIMINARY

NO.	DATE	BY	CHKD.	DESCRIPTION

PROJECT NO. 12-9-06

PROJECT NAME: SALINAS RIVER DIVERSION FACILITY
 PROJECT NO.: 12-9-06
 PROJECT LOCATION: 12-9-06

PROJECT NO. 12-9-06

BOYLE
 CONSULTING ENGINEERS
 1200 N. 1st Street, Suite 100
 Stockton, CA 95210
 (209) 943-1100
 www.boyle-engineers.com

URS



SALINAS RIVER DIVERSION FACILITY
 DIVERSION FACILITY
 FOUNDATION PLAN

PROJECT NO. C-LP-200
 SHEET NO. 001
 DATE: 12-8-06



Surface Diversion Simulation



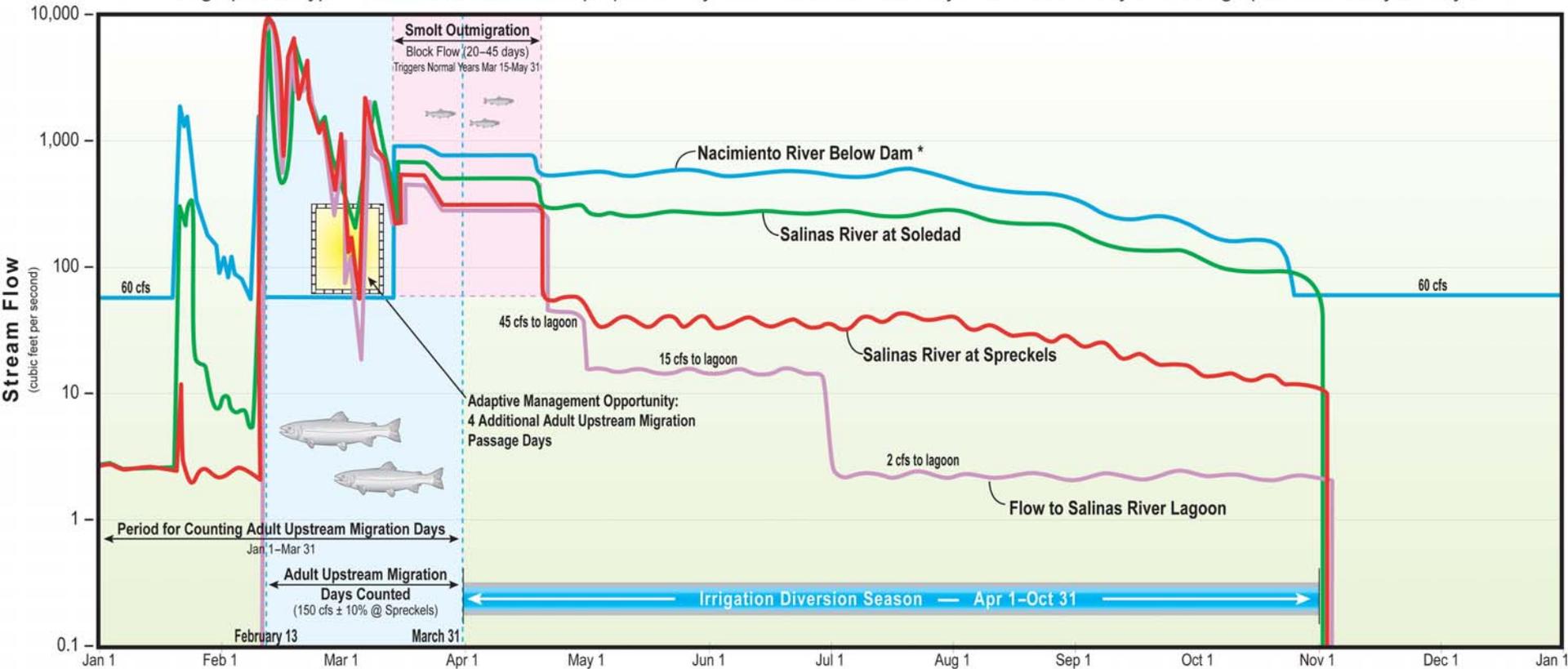


SVWP Status

- Granite Construction has mobilized to begin the spillway modification
- Anderson Pacific awarded contract 3/31 for the surface diversion
- Financing Plan in place
- Change in place petition is close to complete
- Prop 50 grant in process with SWRCB staff
- Corps of Engrs 404 permit complete – 11/07
 - Non-jeopardy NMFS opinion

Illustrative Example of Salinas Valley Water Project Stream Flows

This graphic is hypothetical and for illustrative purposes only. Actual stream flows may differ substantially from this graphic and from year to year.



* For illustrative simplicity, flow contribution from San Antonio Reservoir is not shown.



Sustainable Water Supply Program for Monterey County



Center for Integrated Water Research
UC Santa Cruz

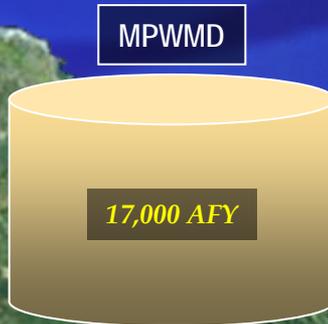
RMC



Regional Managers Have Been Meeting with the Following Results....

- A regional plan that is
 - Implementable
 - Sustainable
 - Publicly and politically acceptable
 - Less expensive than a desalination plant at Moss Landing
 - Solves many issues with the same investment
 - Protective of agricultural water supply

Regional Water Supply Plan Addresses Gaps in Northern Monterey County Water Supplies





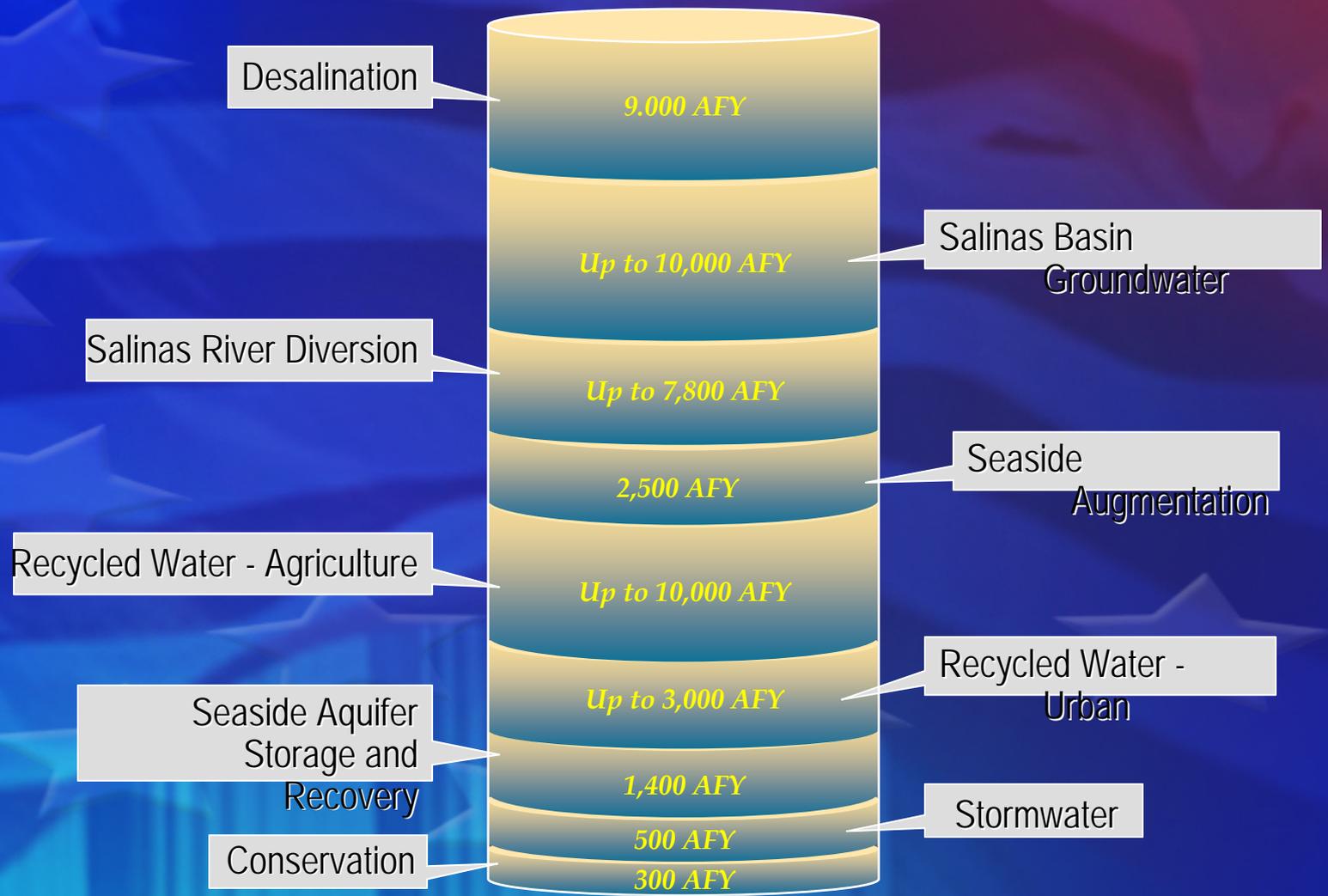
Recommended Program Builds Upon Previous and On-Going Efforts

- Seaside ASR
- City of Sand City
- Desal
- Marina Coast Desal
- Seaside ASR/ ILR
- Recycled Water
- ▲ Salinas Basin GW
- Salinas Basin GW
- Seaside Replenish
- Salinas River
- Diversion
- Regional
- Desalination



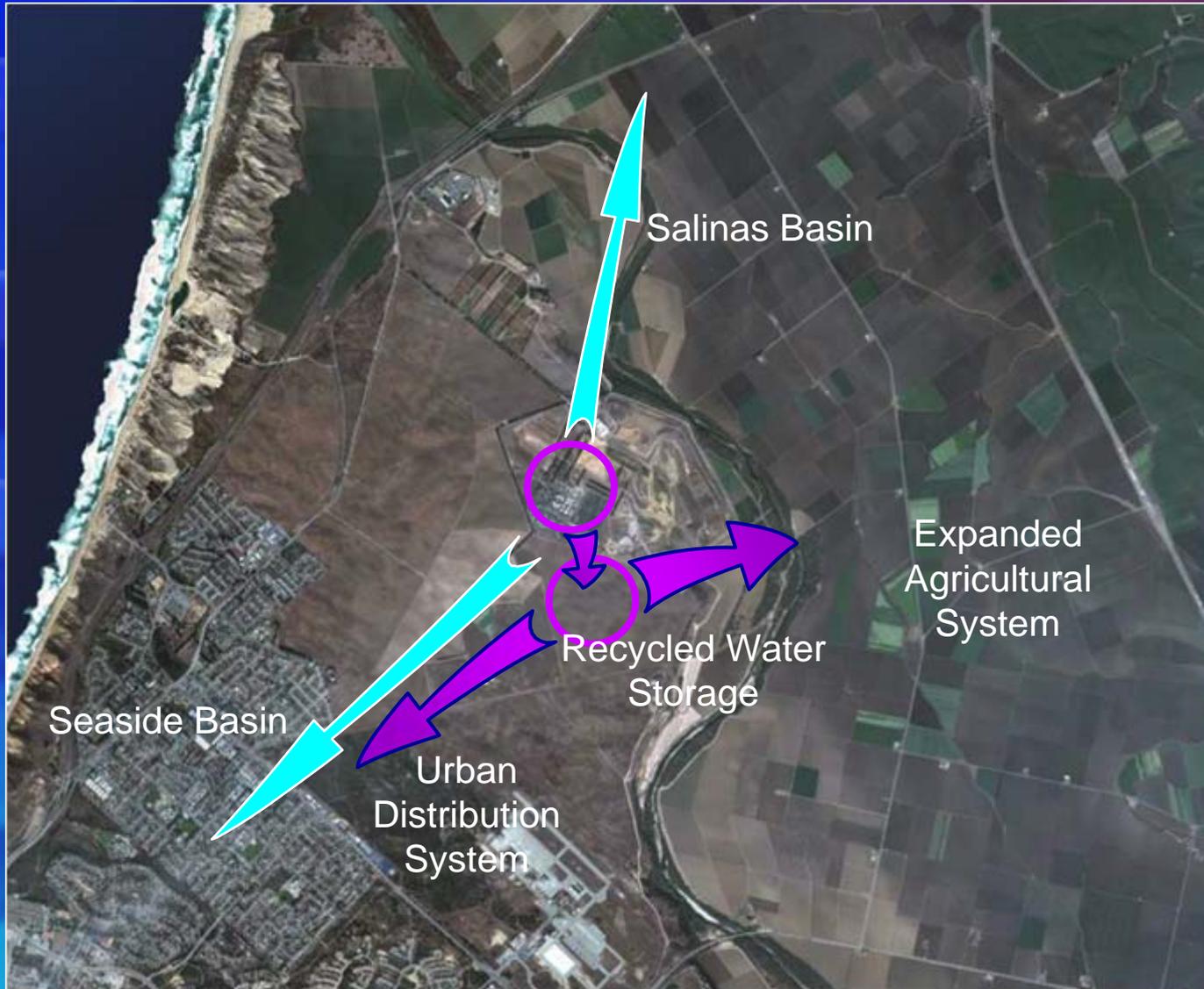


Recommended Program Provides Incremental Implementation, Building on Early Successes





Total Program Makes Highest Use of All Available Recycled Water Supplies





Total Program Provides a Sustainable Supply that Meets Regional Needs





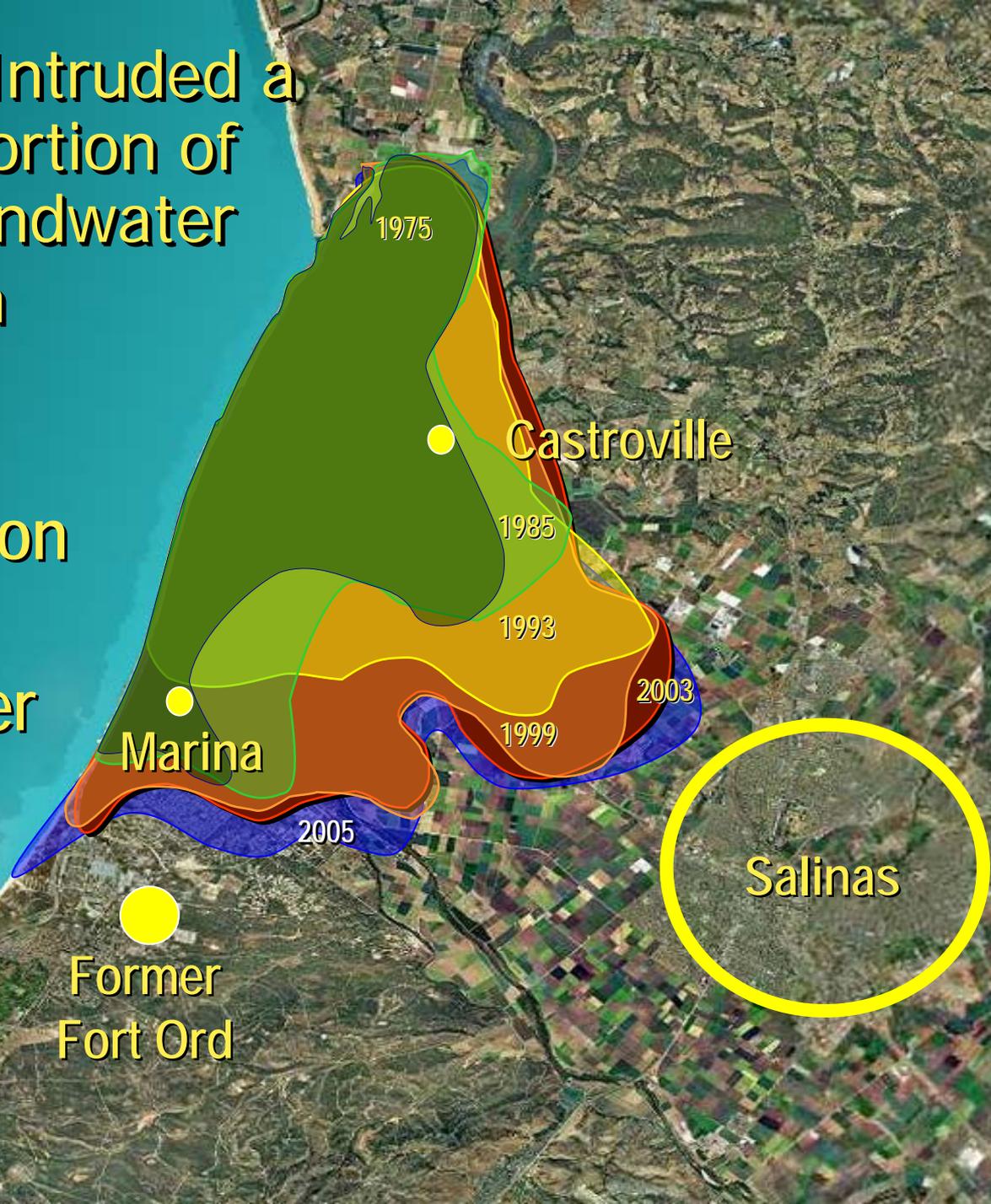
Use of Existing Outfall Saves Ratepayers



Seawater has Intruded a Significant Portion of Salinas Groundwater Basin

Monterey Bay

Seawater Intrusion in the 180 Foot Aquifer



Seawater has Intruded a Significant Portion of Salinas Groundwater Basin

Monterey Bay

Seawater Intrusion in the 180 Foot Aquifer

Seawater Intrusion Reduced thru Regional Plan

Castroville

Salinas

Former Fort Ord

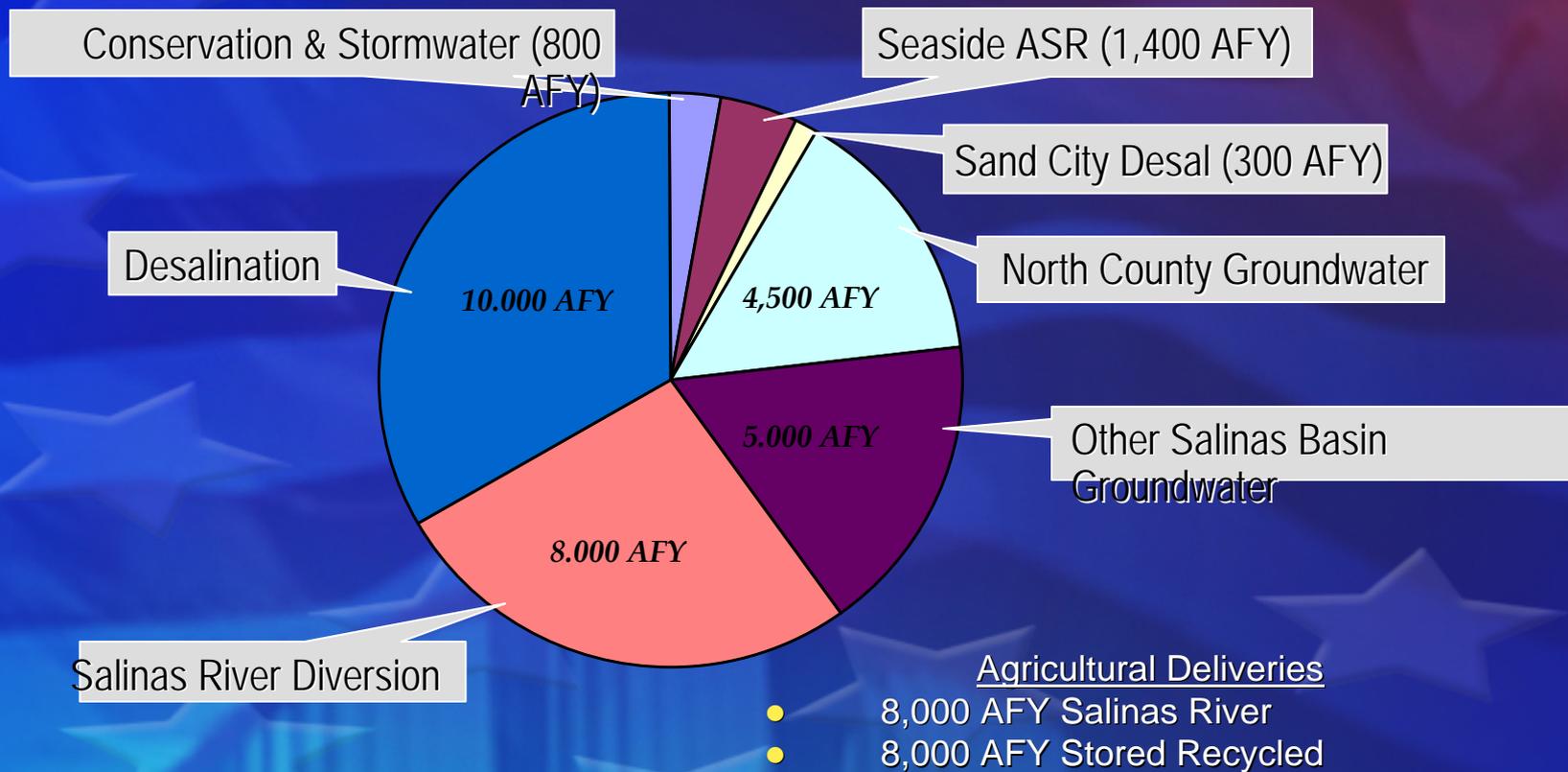


Success Hinges on Maintaining Hydrologic Balance and Protecting Salinas Basin

- Provide Expanded Agricultural Delivery
 - Expanded Delivery Area
 - Combination of Salinas River and Stored Recycled
- Create Inverse Barrier at Coast
- Ensure Intruded Groundwater Pumping Less than Expanded Agricultural Delivery
- Obtain a Net Increase in Groundwater Levels



Potential Program Components to Address Urban Water Needs



Use of Landfill Cogeneration Provides Sustainable, Reliable Power Supply





The Regional Program Provides Significant Regional Water Benefits...

- Meets urban water supply needs
- Improves agricultural water supplies
- Enhances protection of Salinas Groundwater Basin
- Utilizes 100% of available recycled water
- Utilizes available surface water



..While Enhancing Regional Sustainability

- Potential to create Environmental Park
- Reduces nutrient discharge to Monterey Bay National Marine Sanctuary
- Reduces environmental impacts
- Reduces incremental cost of water
- Predictable energy supply from Regional Landfill
 - Reduces costs and emissions
 - Creates a locally controlled energy supply
- Reduces carbon footprint



California PUC and Cal Am Now Have Three Alternatives . . .

- 12,500 AFY facility at Moss Landing
 - 12,500 AFY facility at North Marina
 - Regional Plan
-

. . . If Local Entities Commit to

- Regional cooperation
- Developing the proposed Regional Plan



What Are The Next Steps?

