CITY OF VENTURA

Special STUDIES for Santa Clara River Estuary

PRESENTATION

July 2012

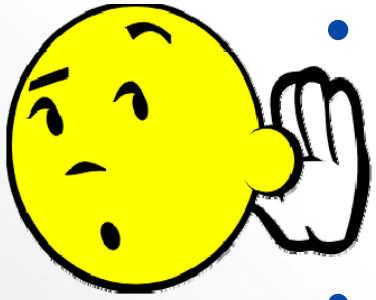
carollo
Engineers...Working Wonders With Water®

Stillwater Sciences

Intent of the special studies is to answer…

…What is the best use of the treated water resources from the Ventura Water Reclamation Facilities to protect the health of the Santa Clara River Estuary?

This is a Stakeholder Driven Process – What does that mean for you?



- Actively Listen!
  - We want you to understand the issues and alternatives under consideration.
- Actively Participate!
  - Please contribute ideas and concerns.
  - Stakeholder contributions expressed at these workshops shape the project and approach.
  - Your comments will be documented and posted on the City Website.

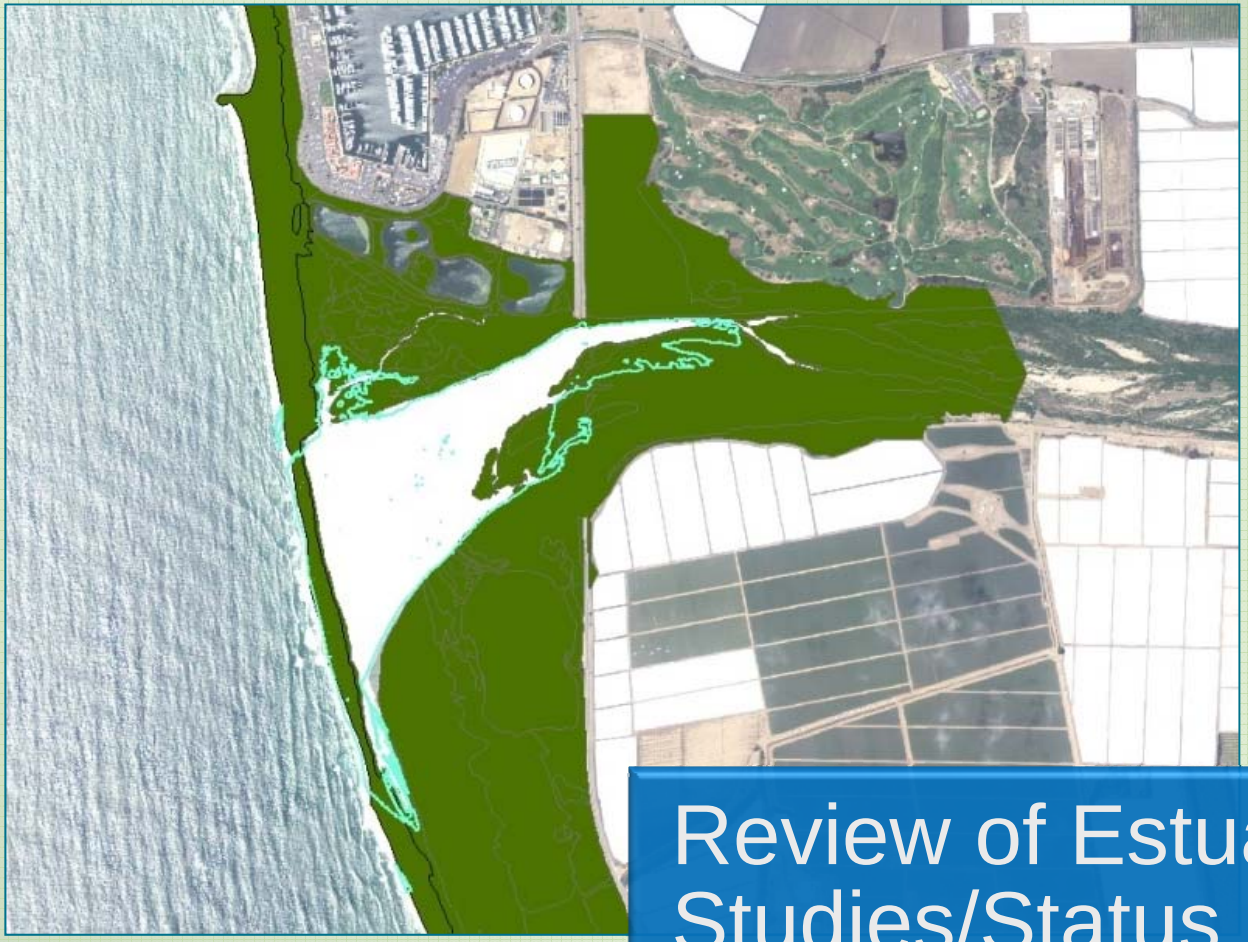
Agenda for the day

- Introductions
- Review of Project and Status Updates
- NPDES Permit
- Phase 2 Study
  - Study Elements
  - Schedule
  - Progress and Preliminary Findings
- Breakout Sessions on Alternatives
- Next Steps

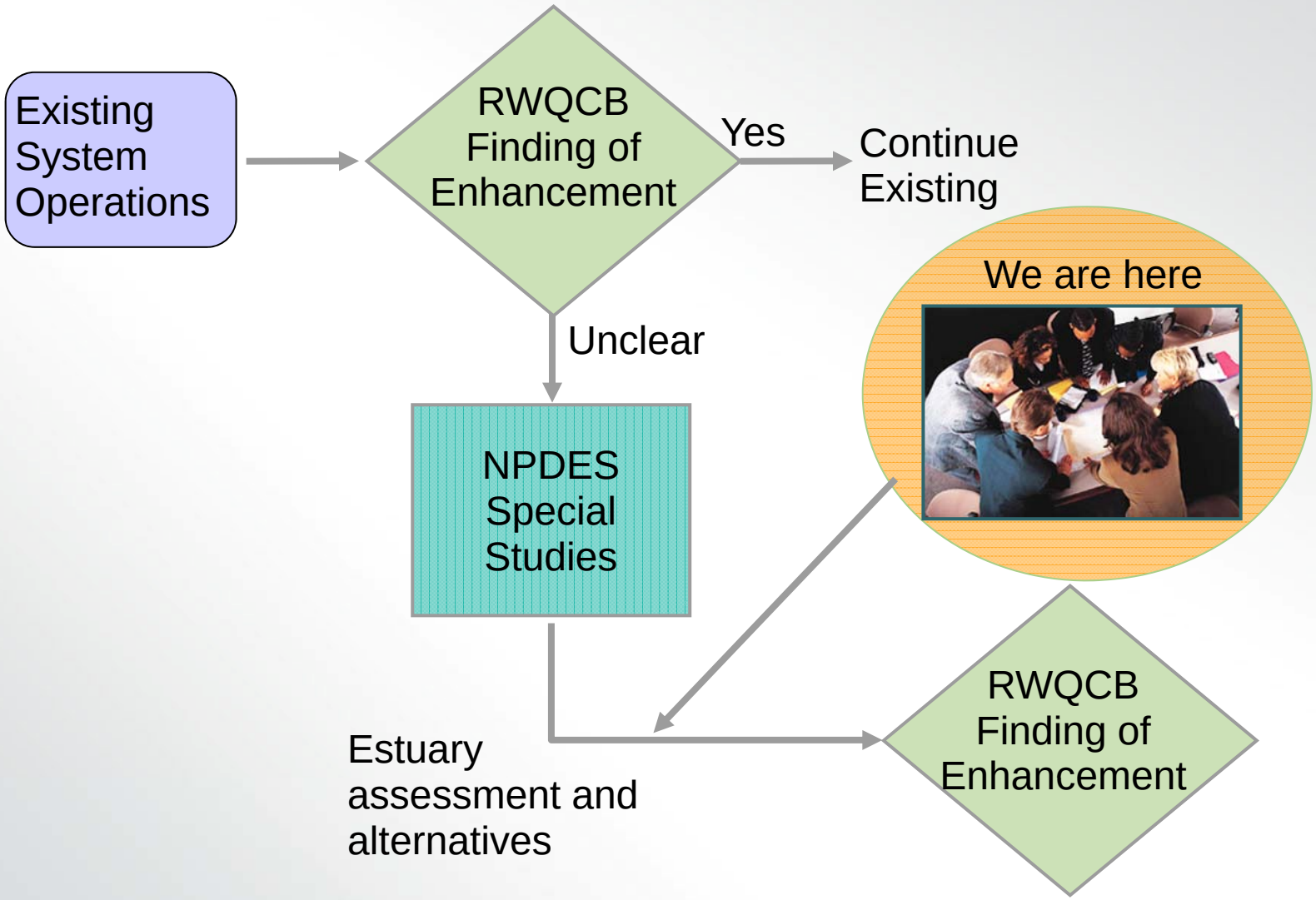
Introductions

Please introduce yourself...

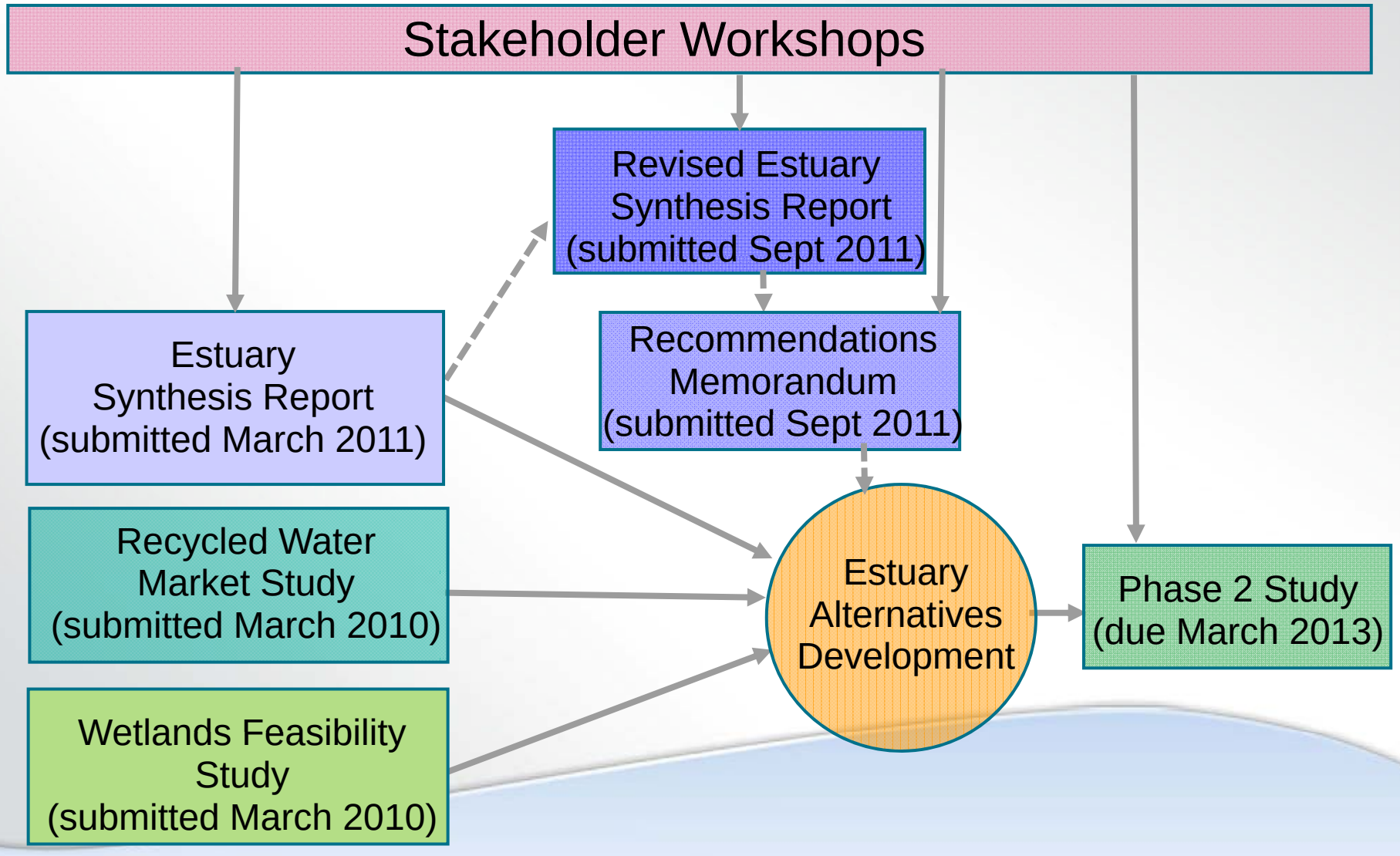
- Name
- Organization Representing
- Interest



Review of Estuary Studies/Status Update


Existing System Operations
RWQCB Finding of Enhancement
Yes
Continue Existing
We are here
Unclear
NPDES Special Studies
Estuary assessment and alternatives
RWQCB Finding of Enhancement

Three studies were required by the NPDES permit followed by a Phase 2



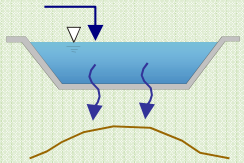
Phase 1 Recycled Water Market Study Identified:

- Recycled Water Opportunities/Demands
  - expansion of the City's RW service area
  - other areas within five miles of the VWRF.

Types of recycled water considered:

Urban Irrigation

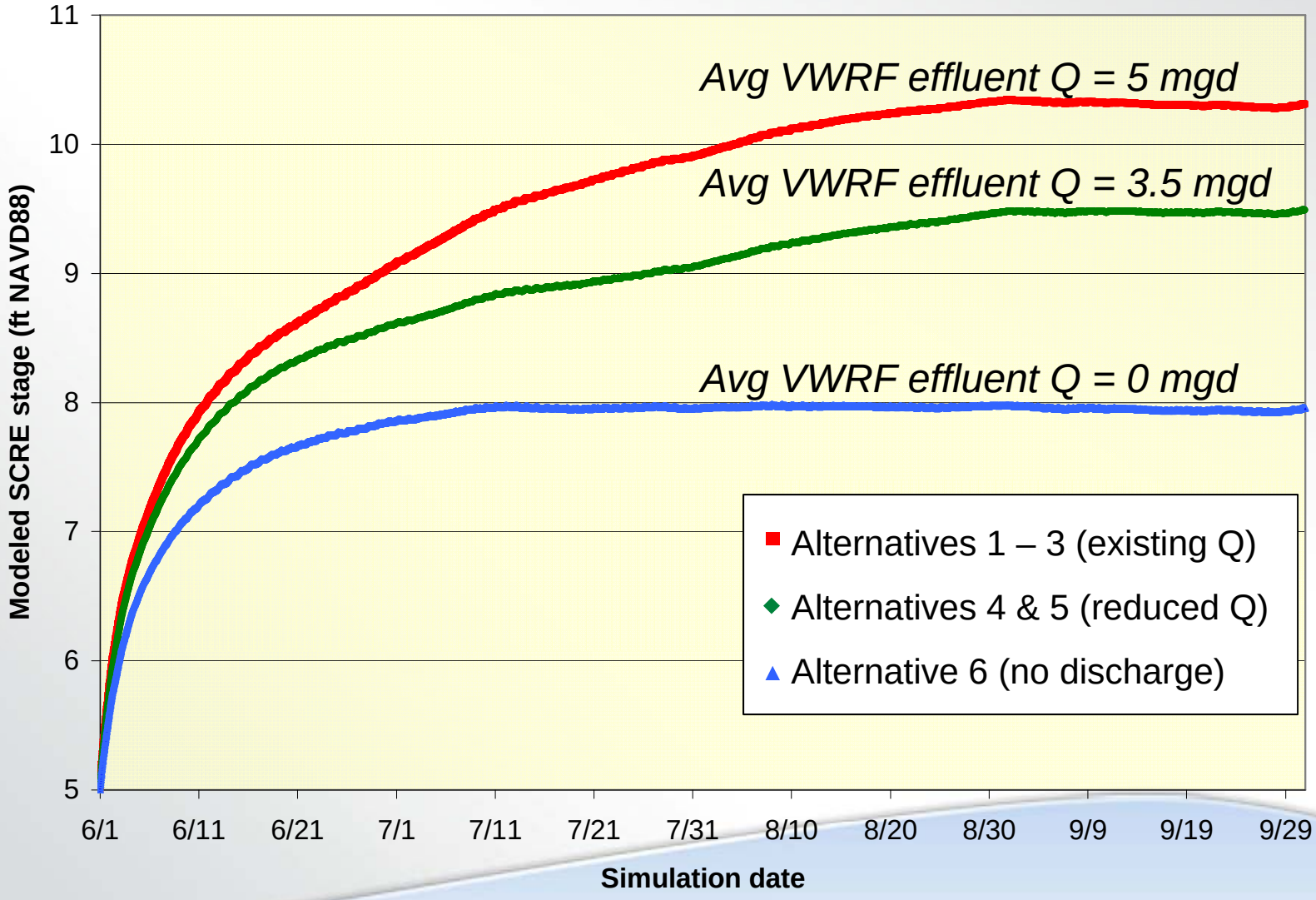
Agricultural Irrigation



Recharge

Phase 1 Wetlands Feasibility Study Identified Onsite and Offsite Opportunities

Estuary Synthesis Report Modeled Discharge Alternatives during Summer…



…and Assessed Impacts of Alternatives

	Focal Species Habitat					Recreational Opportunity
	Habitat Area				Water Quality Conditions	
	Tidewater goby	Steelhead	Plover & Tern Nesting	Tern Foraging		
Alternative 1 Existing Conditions	=	=	=	=	=	=
Alternative 2 Planned upgrades	=	=	=	=	↑	=
Alternative 3 enhanced dentirification	=	=	=	=	↑↑	=
Alternative 4 flow reduction	=	↓	↑	=	↑	↑
Alternative 5 flow reduction with enhanced denitrification	=	↓	↑	=	↑↑↑	↑
Alternative 6a Complete effluent removal	↓	↓↓	↑	↓	↑↑↑	↑↓

Recommendations Memo - Findings

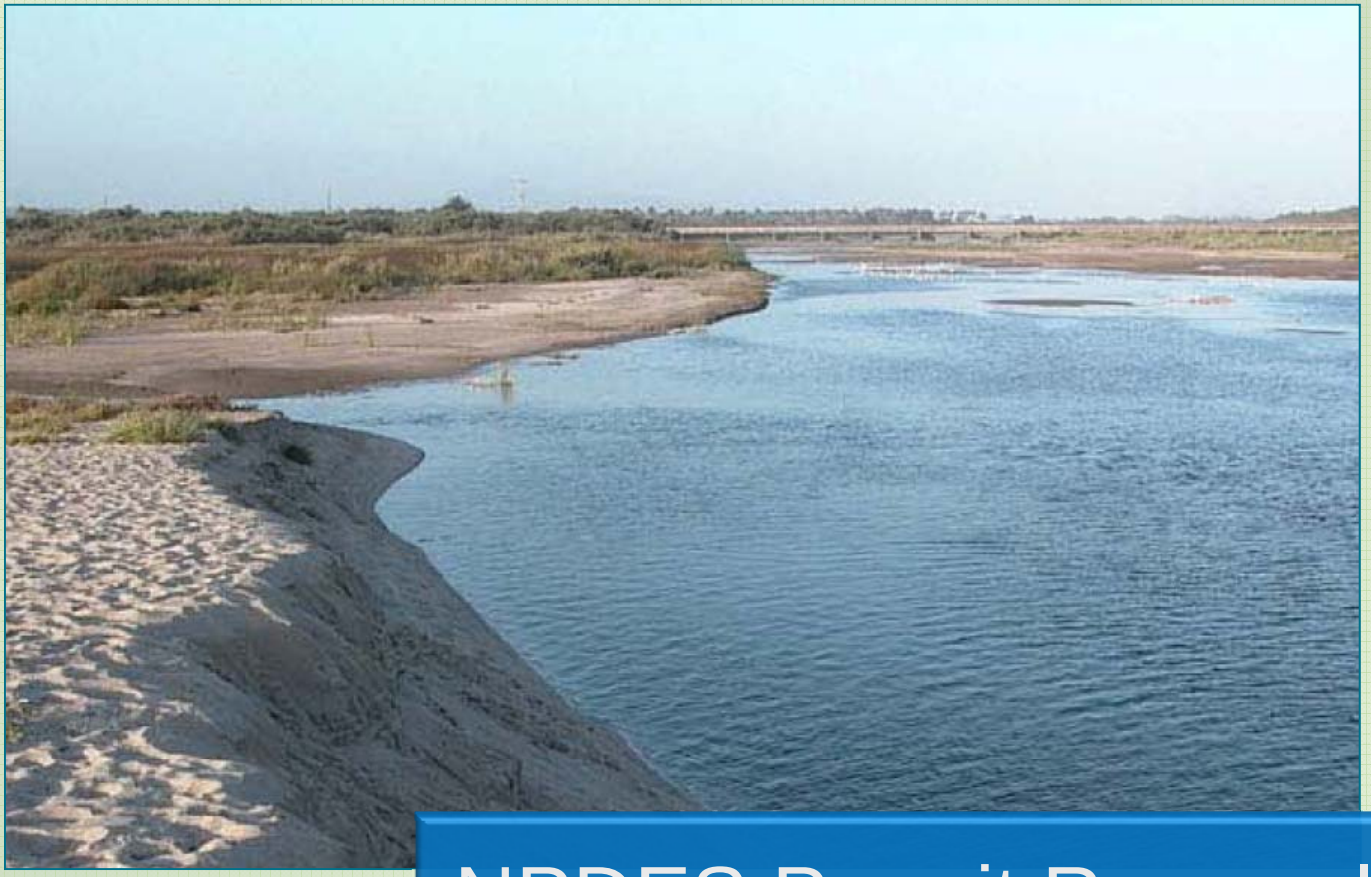
- Major Findings (currently available scientific information):
  - Current flows to the estuary provides a fuller realization of beneficial uses as compared to zero discharge (additional habitat for tidewater goby and steelhead)
  - Opportunity to further improve /optimize beneficial use
- What can be done to optimize the discharge?
  - Less flow in summer to reduce unseasonal breeching
  - Improve water quality to reduce nutrients

Recommendations (with Stakeholder input)

- Evaluate other alternatives and combinations
- Estuary Study - additional data collection on:
  - SCRE water balance
  - Water quality data upstream and in SCRE
  - Groundwater elevations, gradients and quality
  - Other species evaluation and more detailed analysis
- Wetlands & Recycled Water – Phase 2
  - Re-evaluate wetlands siting to include new TNC site
  - Evaluate reuse for urban, agricultural and recharge
  - Evaluate costs, benefits, permitting, CEQA….

Status Update - Since the last Stakeholder Workshop in August 2011:

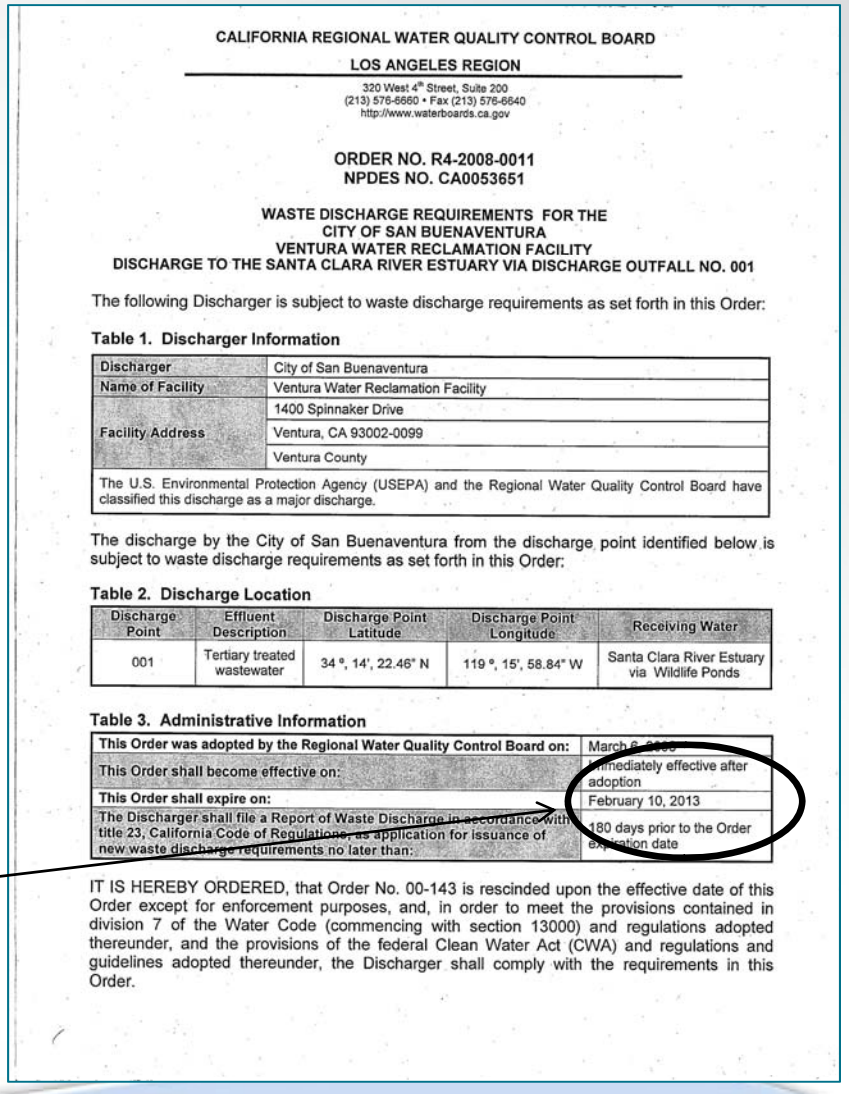
- Settlement Agreement
- Revised Estuary Report/Recommendations Memo - submitted Sept 2011
- Developed Phase 2 scope
- Obtained Grant Funding for Phase 2 Study
  - USBR - $150,000
  - SWRCB - $75,000
- Passed Estuary Protection Fund
- Developed Sampling/Monitoring Plan for more data collection in Estuary
- Submitted Report of Waste Discharge



NPDES Permit Renewal

NPDES Discharge Permit

- Discharge is regulated by a permit from LA Regional Water Board
  - Quality and quantity
  - To be protective of beneficial uses
- Expires and is renewed every 5 years
- Existing permit expires Feb 2013



CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

LOS ANGELES REGION

320 West 4th Street, Suite 200
(213) 576-6660 • Fax (213) 576-6640
http://www.waterboards.ca.gov

ORDER NO. R4-2008-0011
NPDES NO. CA0053651

WASTE DISCHARGE REQUIREMENTS FOR THE
CITY OF SAN BUENAVENTURA
VENTURA WATER RECLAMATION FACILITY
DISCHARGE TO THE SANTA CLARA RIVER ESTUARY VIA DISCHARGE OUTFALL NO. 001

The following Discharger is subject to waste discharge requirements as set forth in this Order:

Table 1. Discharger Information

Discharger	City of San Buenaventura
Name of Facility	Ventura Water Reclamation Facility
Facility Address	1400 Spinnaker Drive
	Ventura, CA 93002-0099
	Ventura County
The U.S. Environmental Protection Agency (USEPA) and the Regional Water Quality Control Board have classified this discharge as a major discharge.	

The discharge by the City of San Buenaventura from the discharge point identified below is subject to waste discharge requirements as set forth in this Order:

Table 2. Discharge Location

Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
001	Tertiary treated wastewater	34 °, 14', 22.46" N	119 °, 15', 58.84" W	Santa Clara River Estuary via Wildlife Ponds

Table 3. Administrative Information

This Order was adopted by the Regional Water Quality Control Board on:	March 6, 2008
This Order shall become effective on:	Immediately effective after adoption
This Order shall expire on:	February 10, 2013
The Discharger shall file a Report of Waste Discharge in accordance with title 23, California Code of Regulations, as application for issuance of new waste discharge requirements no later than:	180 days prior to the Order expiration date

IT IS HEREBY ORDERED, that Order No. 00-143 is rescinded upon the effective date of this Order except for enforcement purposes, and, in order to meet the provisions contained in division 7 of the Water Code (commencing with section 13000) and regulations adopted thereunder, and the provisions of the federal Clean Water Act (CWA) and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order.

NPDES Permit Renewal Schedule

Description	2012	2013
	J F M A M J J A S O N D	J F M A M J J A S O N D
Report of Waste Discharge complete		
Preparation of NPDES permit		
Draft Permit to EPA Public Tentative Permit		
Board hearing, TBD		

Key Issues for NPDES Permit Renewal

- How to address a Finding of Enhancement to allow continued discharge until optimization
  - Requirements of “Inland Bays and Estuaries Policy”
- Will establish tasks and dates of completion for the City to continue working on optimizing discharge – maximum ecologically protective diversion volume (MEPDV) and preferred diversion infrastructure alternatives.

Phase 2 Study

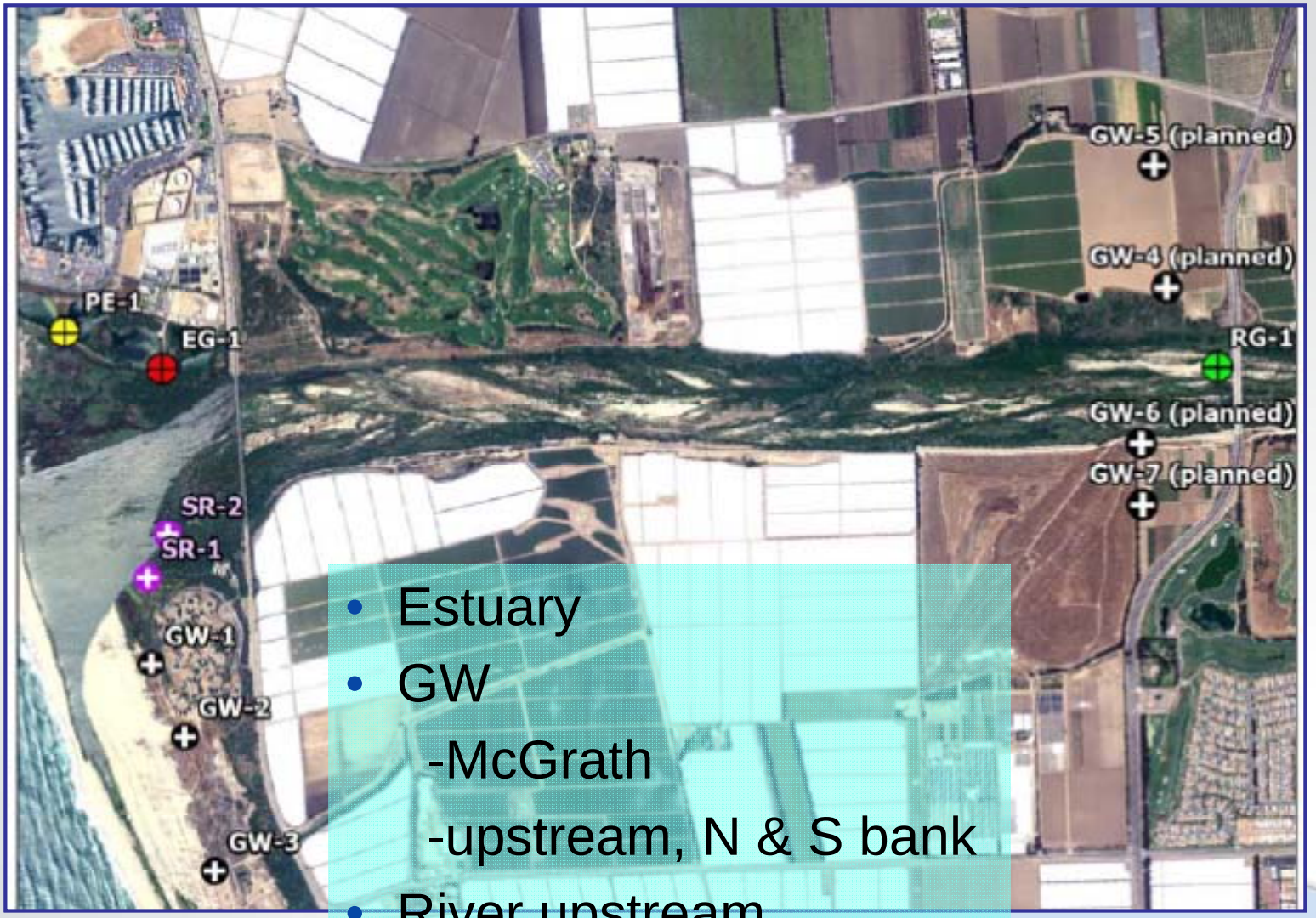
Phase 2 Study Elements and Project Schedule

Task Description	2012	2013
	J F M A M J J A S O N D	J F M A M J J A S O N D
Estuary Subwatershed Study		
Recycled Water and Wetlands Study		Report due 3/6/13
Stakeholder Workshops		
Phase 3 Study		

Conduct additional Estuary monitoring and data analysis

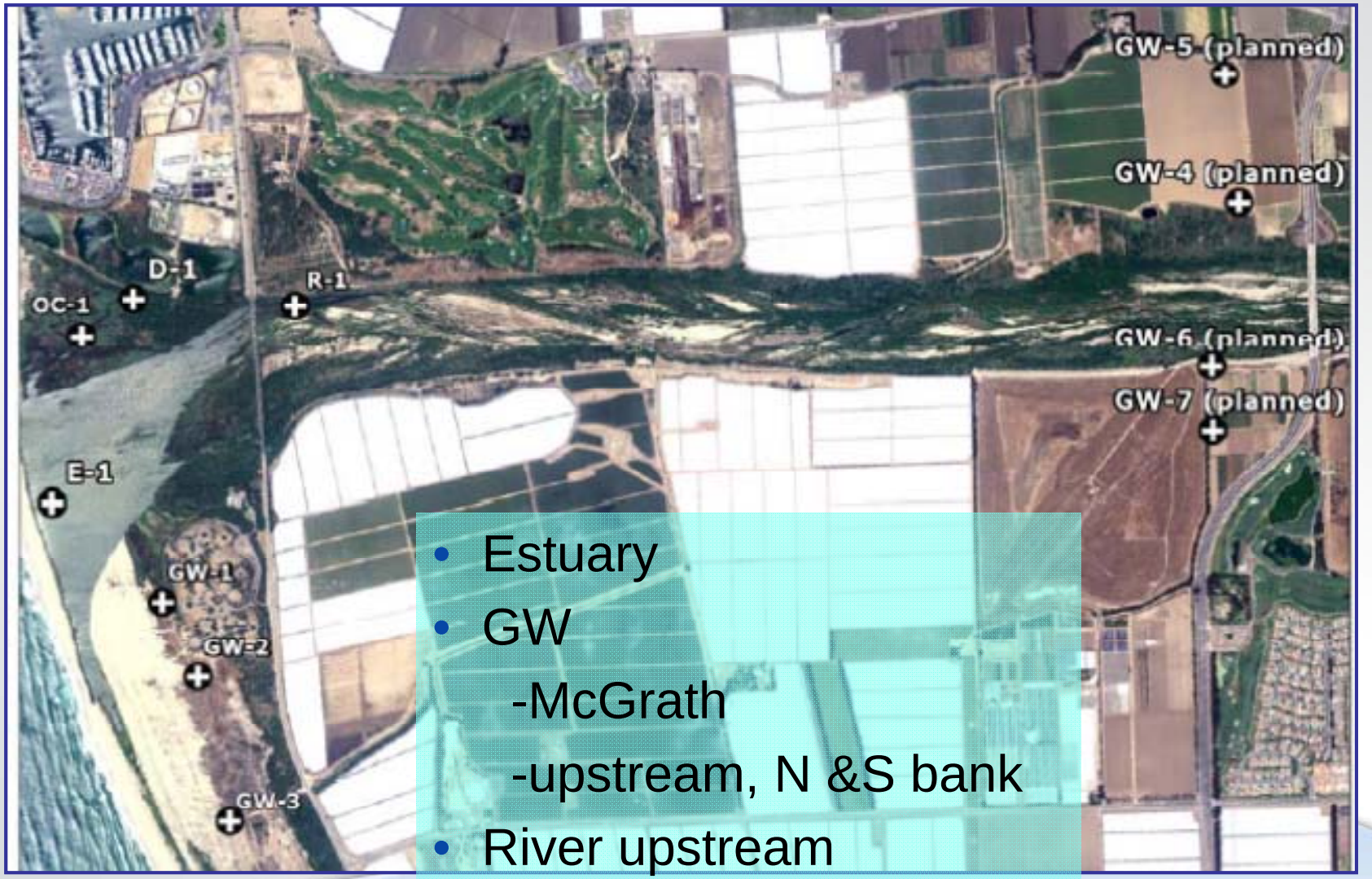
- Hydrologic monitoring
- Water quality monitoring
- Habitat and species monitoring

Hydrologic survey monitoring sites



- Estuary
- GW
  - -McGrath
  - -upstream, N & S bank
- River upstream
- VRWF effluent

Water quality survey monitoring sites



- Estuary
- GW
  - -McGrath
  - -upstream, N &S bank
- River upstream
- VRWF effluent, outfall

Phase 2 Recycled Water and Wetlands

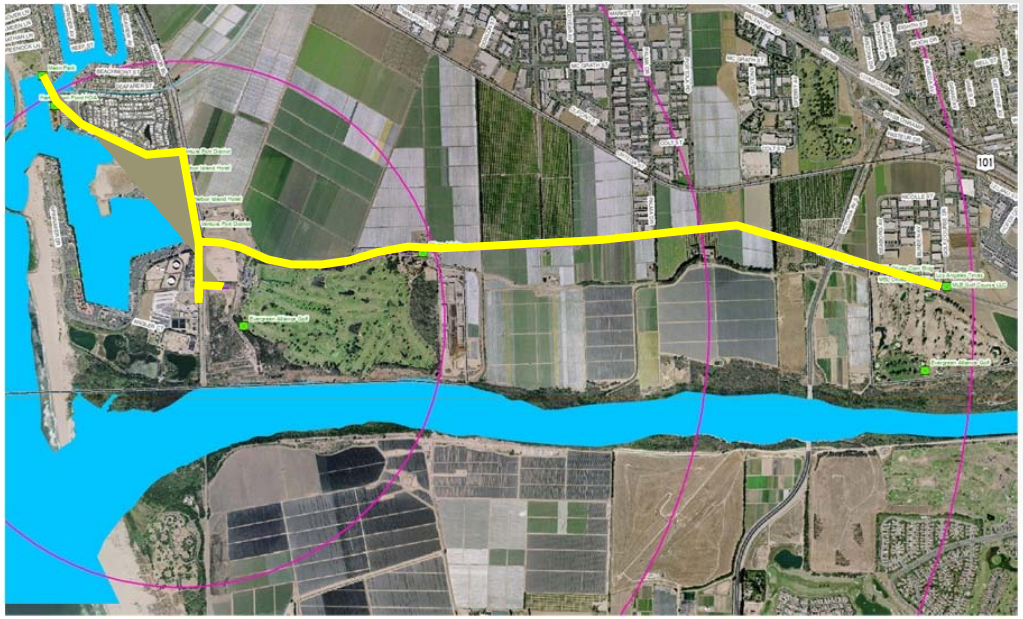
- Recycled Water
  - Revisit Urban Reuse
  - Revisit Agricultural Reuse
  - Revisit Groundwater Recharge/Indirect Potable in more detail
  - Consider Decentralized Treatment
  - Consider Direct Potable Reuse
- Wetlands
  - Revisit Wetlands alternatives
  - Consider wetlands paired with perched aquifer recharge

Update on Phase 2 Efforts

- Grouping Alternatives (for small group breakout sessions) into:
  - Urban/Ag Reuse
  - Groundwater Recharge
  - Wetlands
- Held meetings on June 12, 2012
  - United Water CD
  - Nature Conservancy
  - Farm Bureau

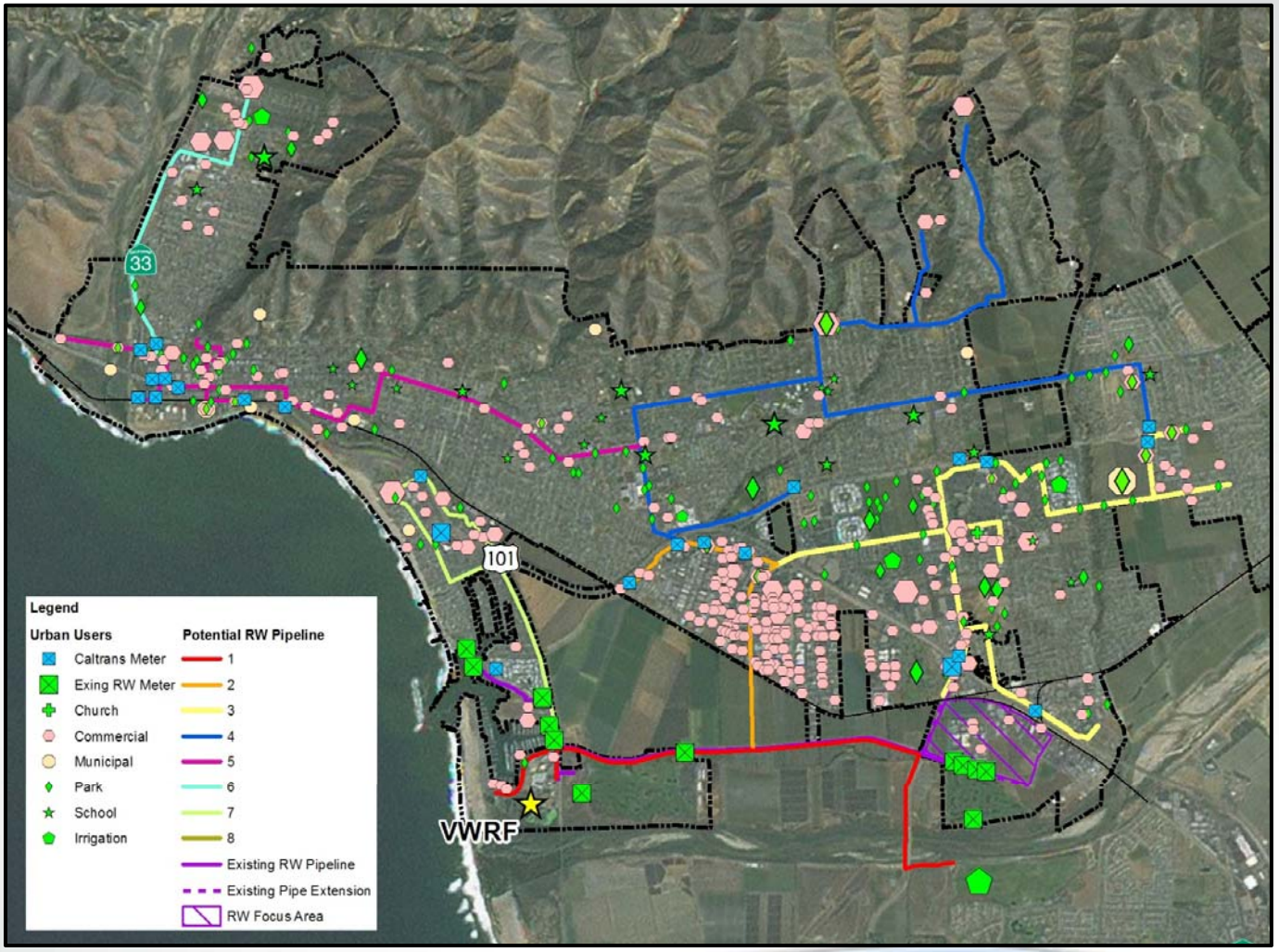
Draft Urban and Agricultural Reuse Options

- Expand Urban Reuse
- Ag Reuse w/RO
- Ag Reuse with Blending
- Scalping Plant to North
- Scalping Plant to East
- Direct Potable Reuse



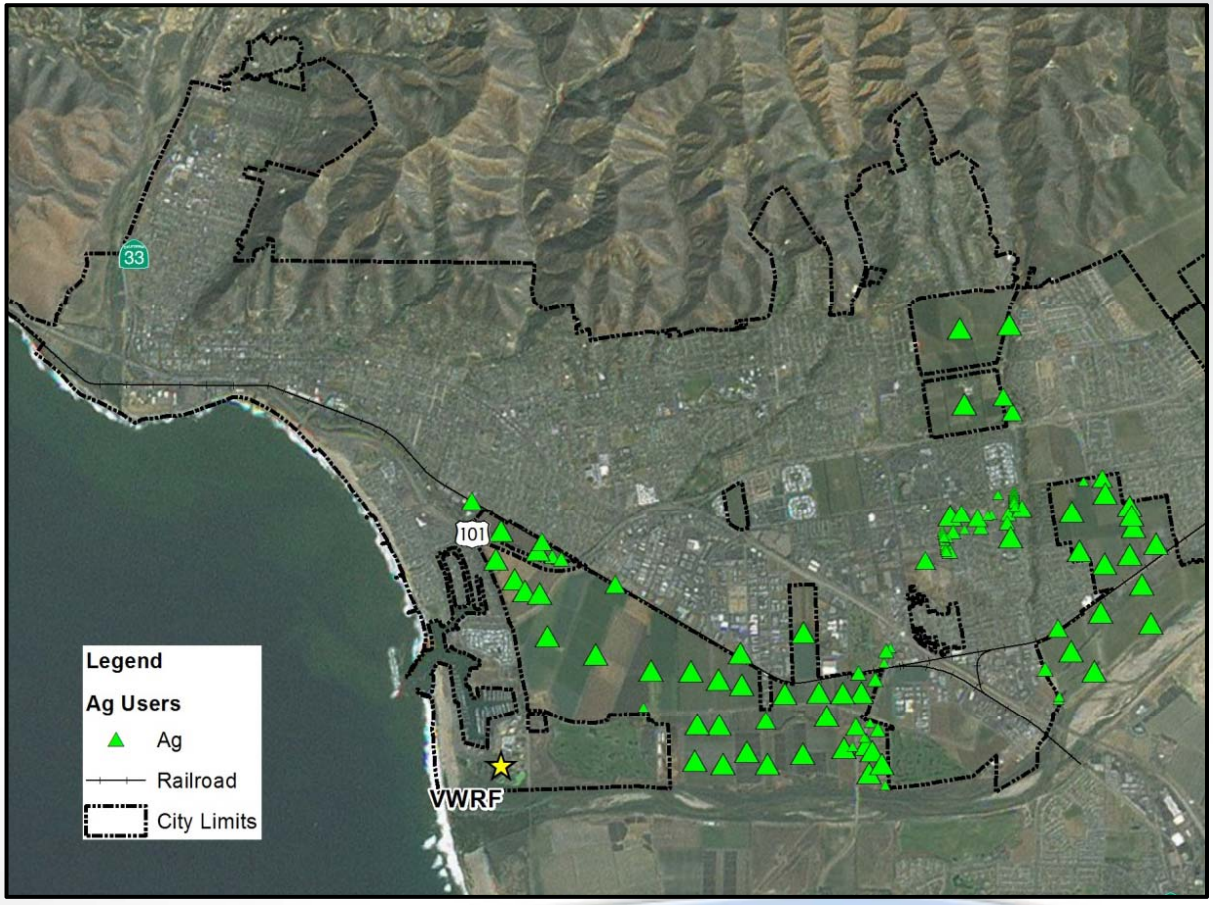
Urban Irrigation Issues to Address

- Small demands
- Disperse locations
- Requires extensive piping



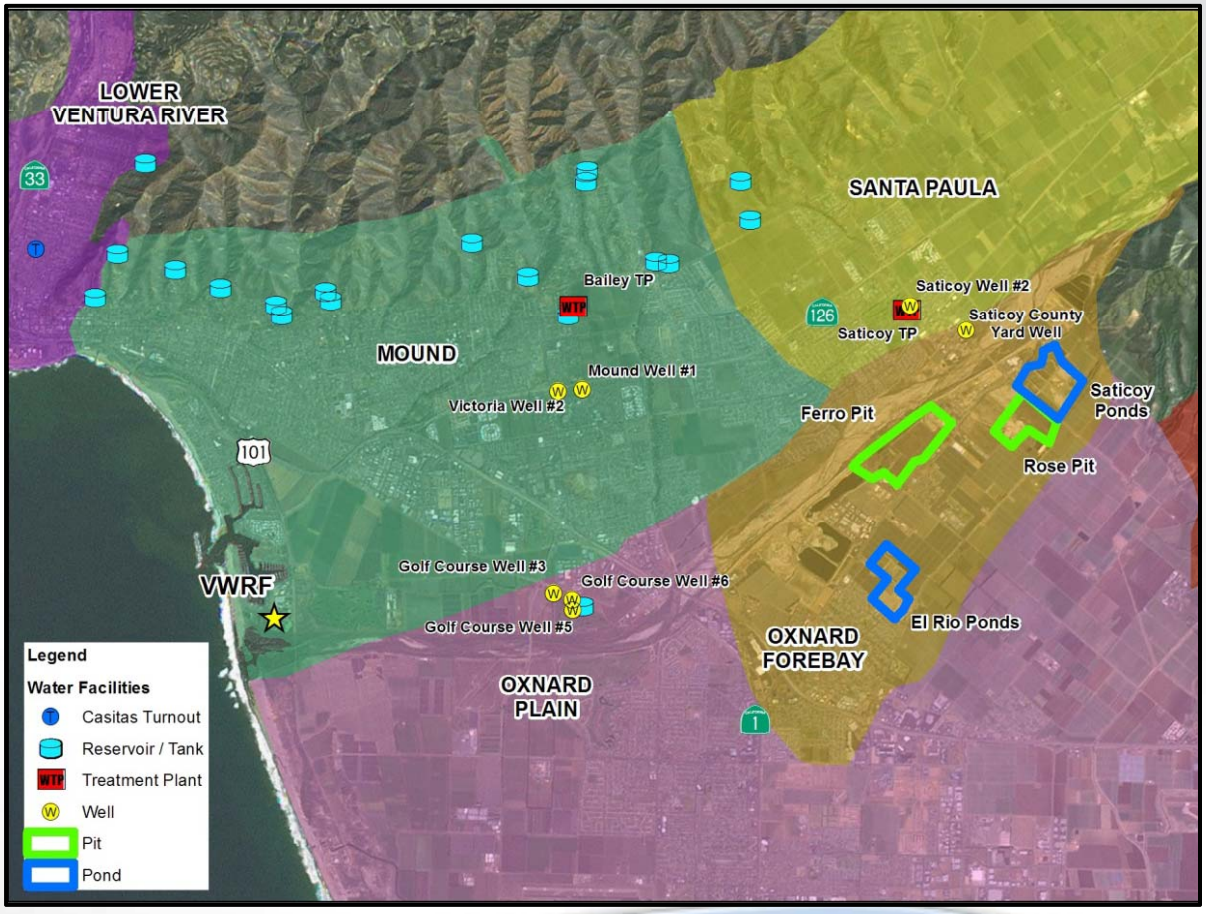
Agricultural Irrigation Issues to Address

- Acceptance of recycled water
- Water Quality - Chloride, TDS & sodium exceed crop specific tolerance levels



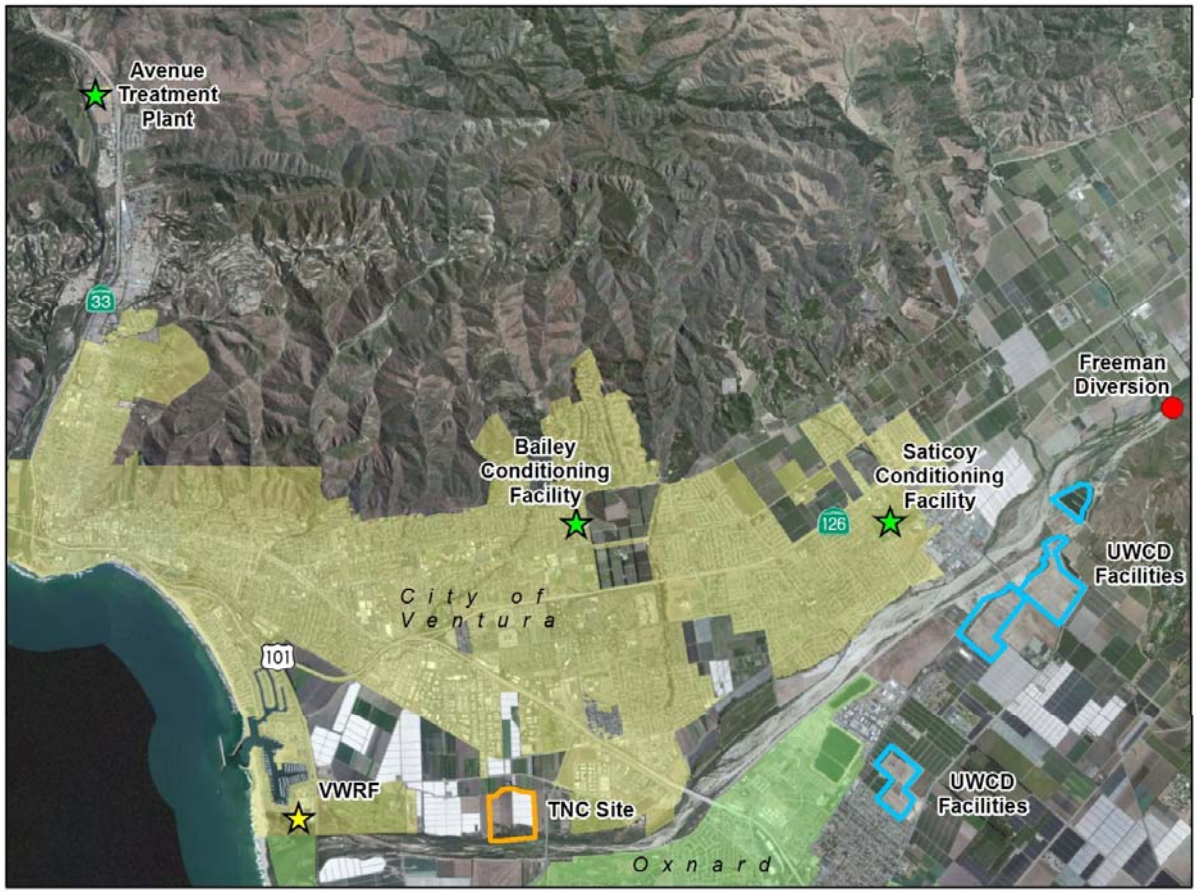
Draft Recharge Options

- Mound GW Basin
- Oxnard Forebay
- At UWCD facilities
- At UWCD with blend
- Oxnard WWTP



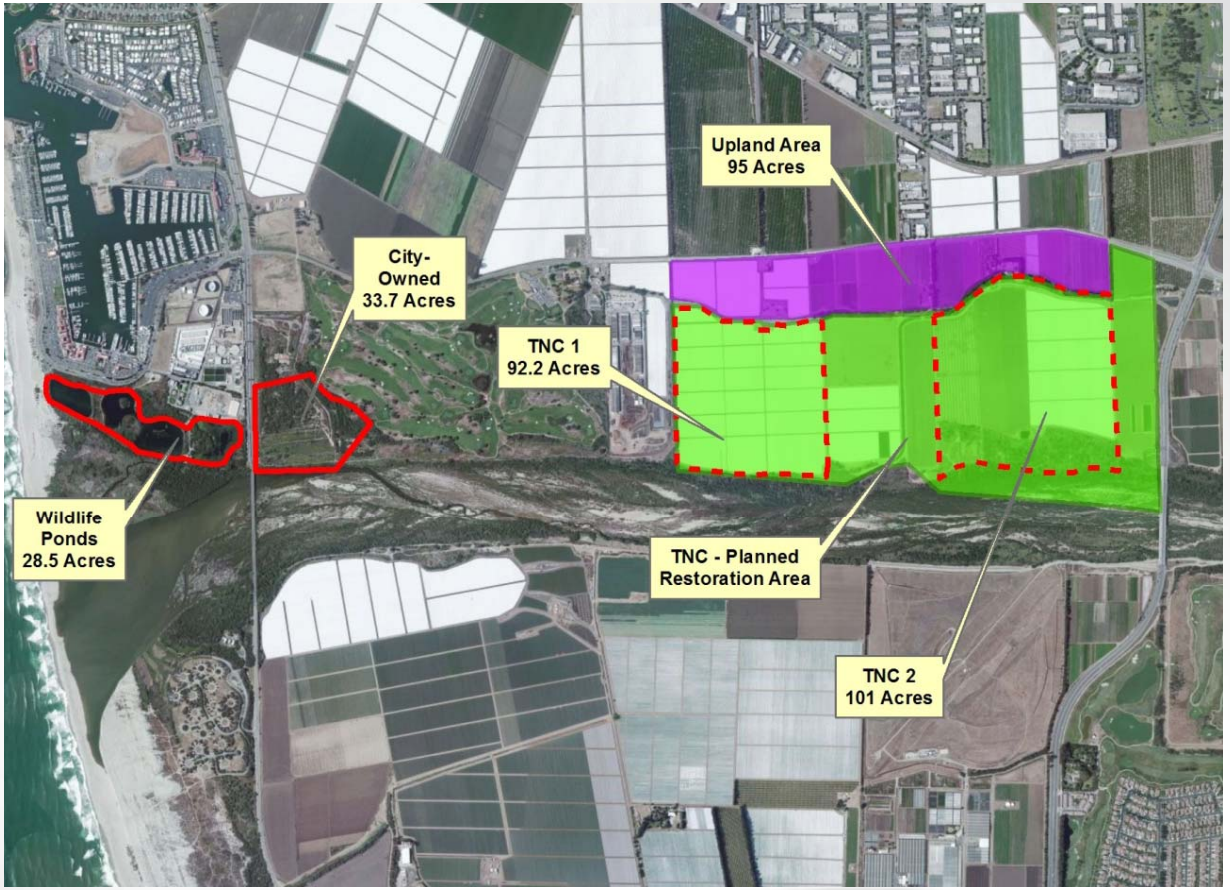
Groundwater Recharge/Indirect Potable Reuse Issues to address

- Surface spreading vs. injection
- Water quality needed
- New recharge regulations
- Location



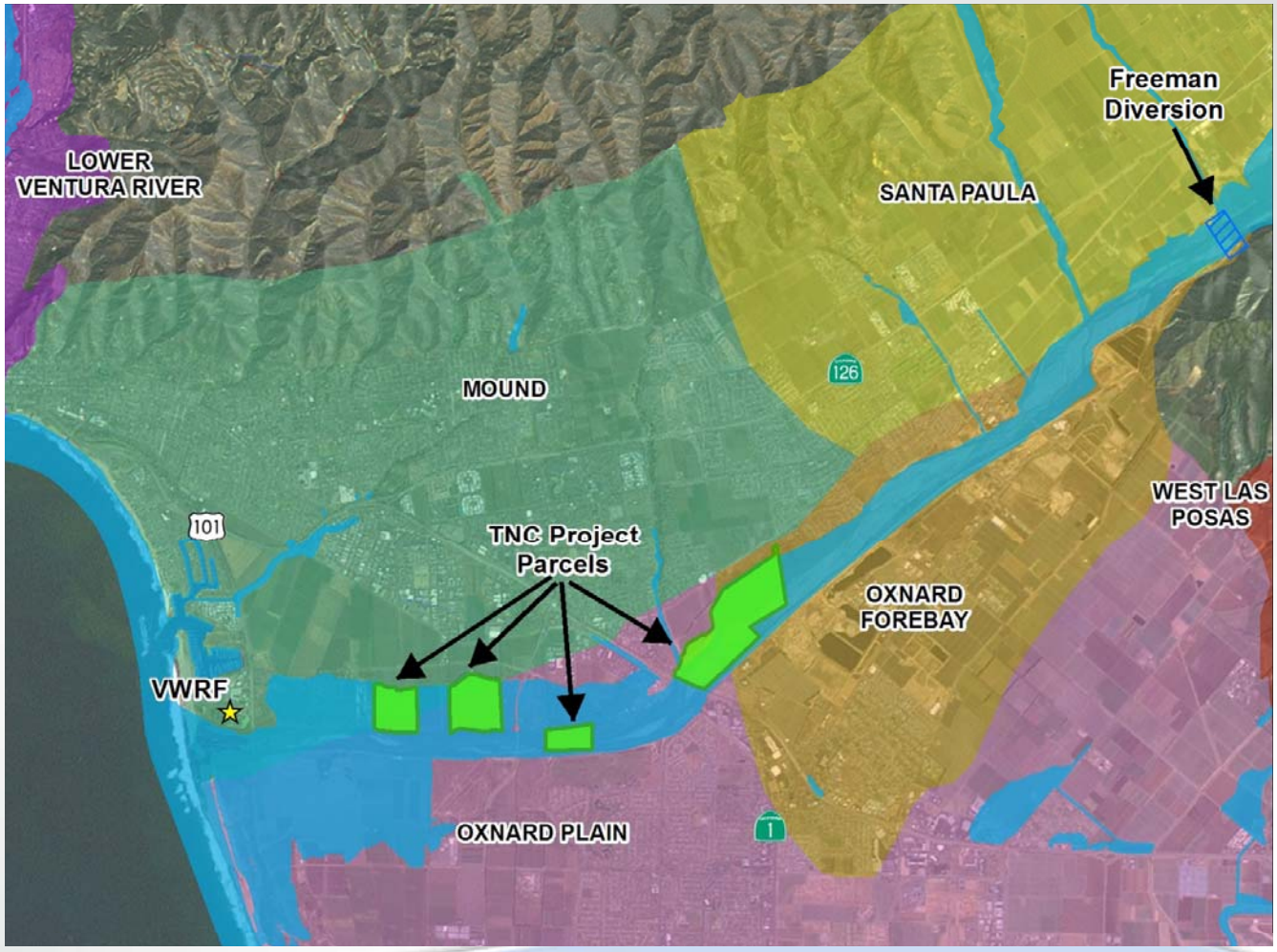
Draft Wetlands Options

- Existing Ponds
- City Owned Property
- TNC Property
- Uplands (above TNC property)
- Perched Recharge to River
- Brine Treatment



Wetlands Issues to address

- TNC Plans to restore floodplain along river
- Lack of undeveloped land
- Ability to use Brine in wetlands?



Breakout into Smaller Groups

- Wetlands Alternatives – Left Side of room
- Reuse Alternatives – Right Side of room
- Recharge Alternatives – Back of room

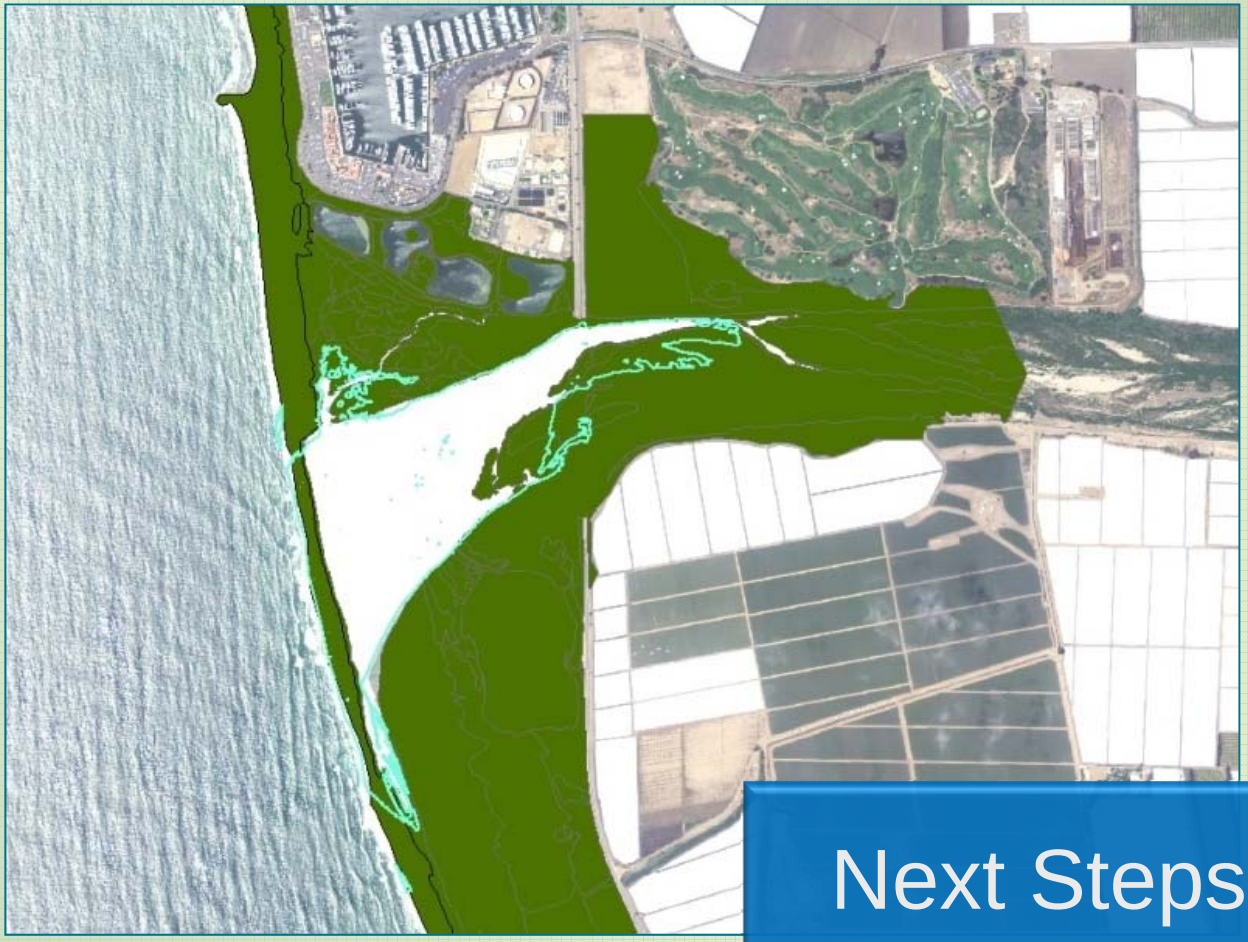
Small Group Discussions

- Introduce and review the alternatives
- Open discussion on the alternatives
  - Any comments or questions?
  - Pros/cons of alternatives?
- Can we put aside any alternatives?
- Are there any other alternatives we should consider?

You will be reporting back to larger group

Report Back from Smaller Groups

- Wetlands Alternatives
- Reuse Alternatives
- Recharge Alternatives



Next Steps

Next Steps

- Compile your comments into meeting notes
- Continue evaluating reuse, recharge and wetlands options
- Continue Estuary sampling over summer/fall
- Report of Waste Discharge to be found complete by Aug 10
- Stakeholder meeting in late Oct
- Supplemental information to ROWD to be provided to RWQCB in Fall, as needed