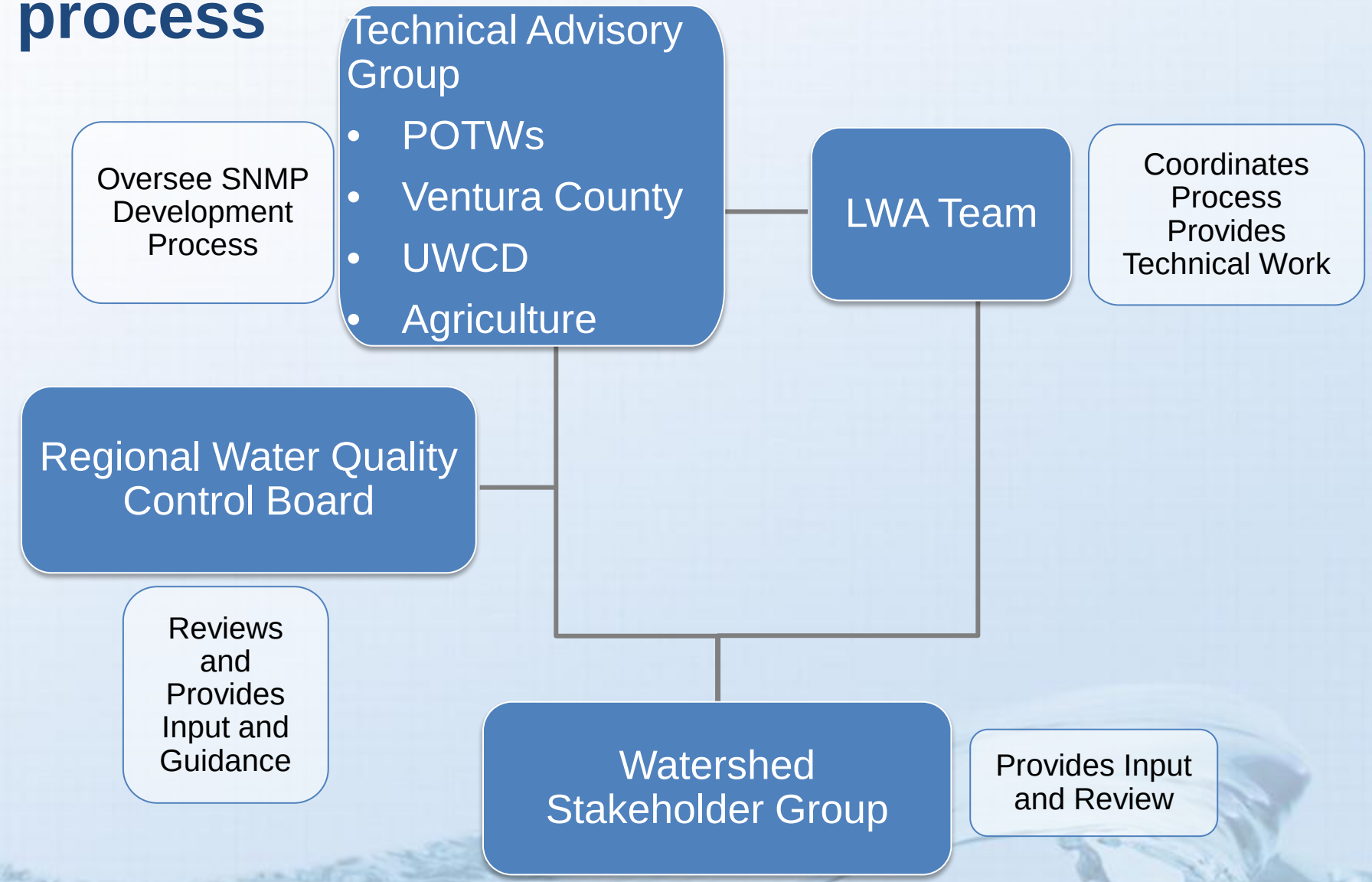
Lower Santa Clara River Status Update

Who We Are – Lower Santa Clara River SNMP Group

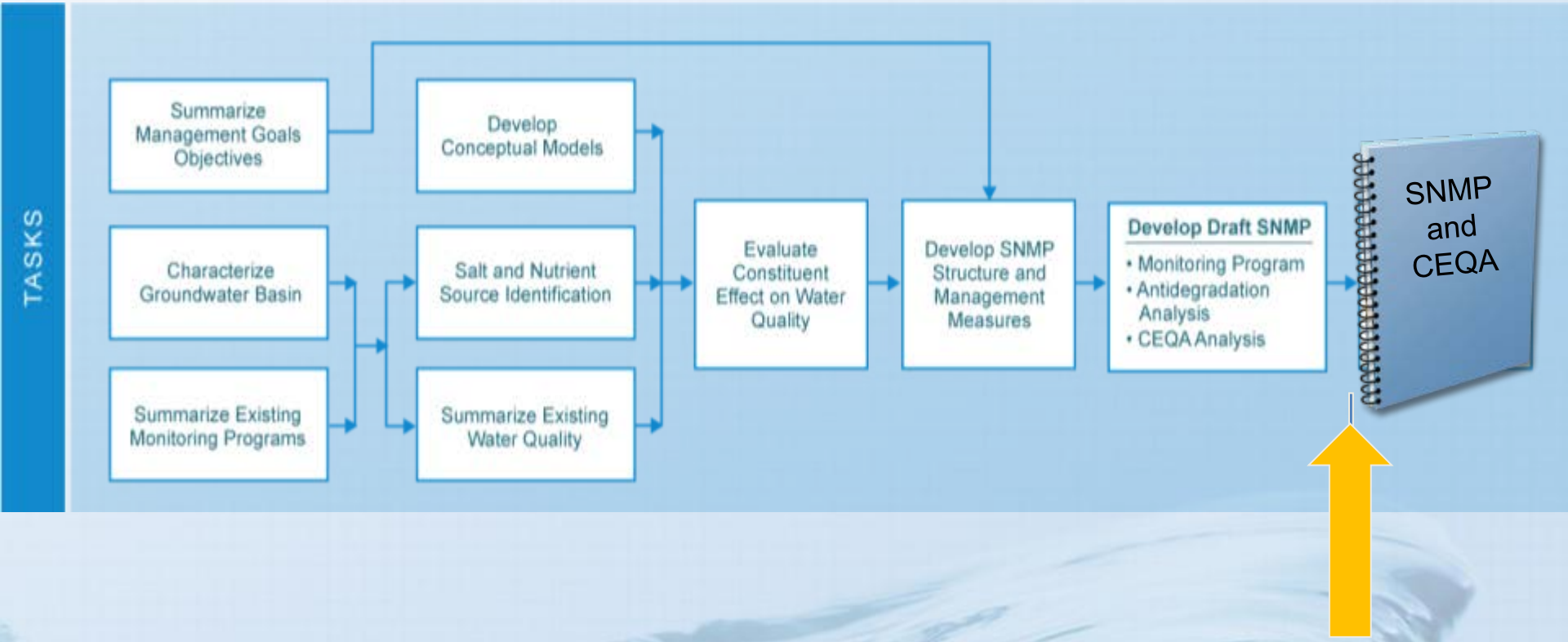
- Group Established in August 2011
- Hold Quarterly Meetings – District is Adminstrative/Technical/Grant Lead
- Cost Sharing Memorandum of Agreement
- $397,000 in Proposition 84 DWR Grant Funding
- Total Project Budget = $531,530
- Multi-Disciplinary Consultant Team

SNMP developed through a stakeholder process



Where We Are – Near End of Project Workplan

Data Gathering Data Analysis Develop SNMP



We are here

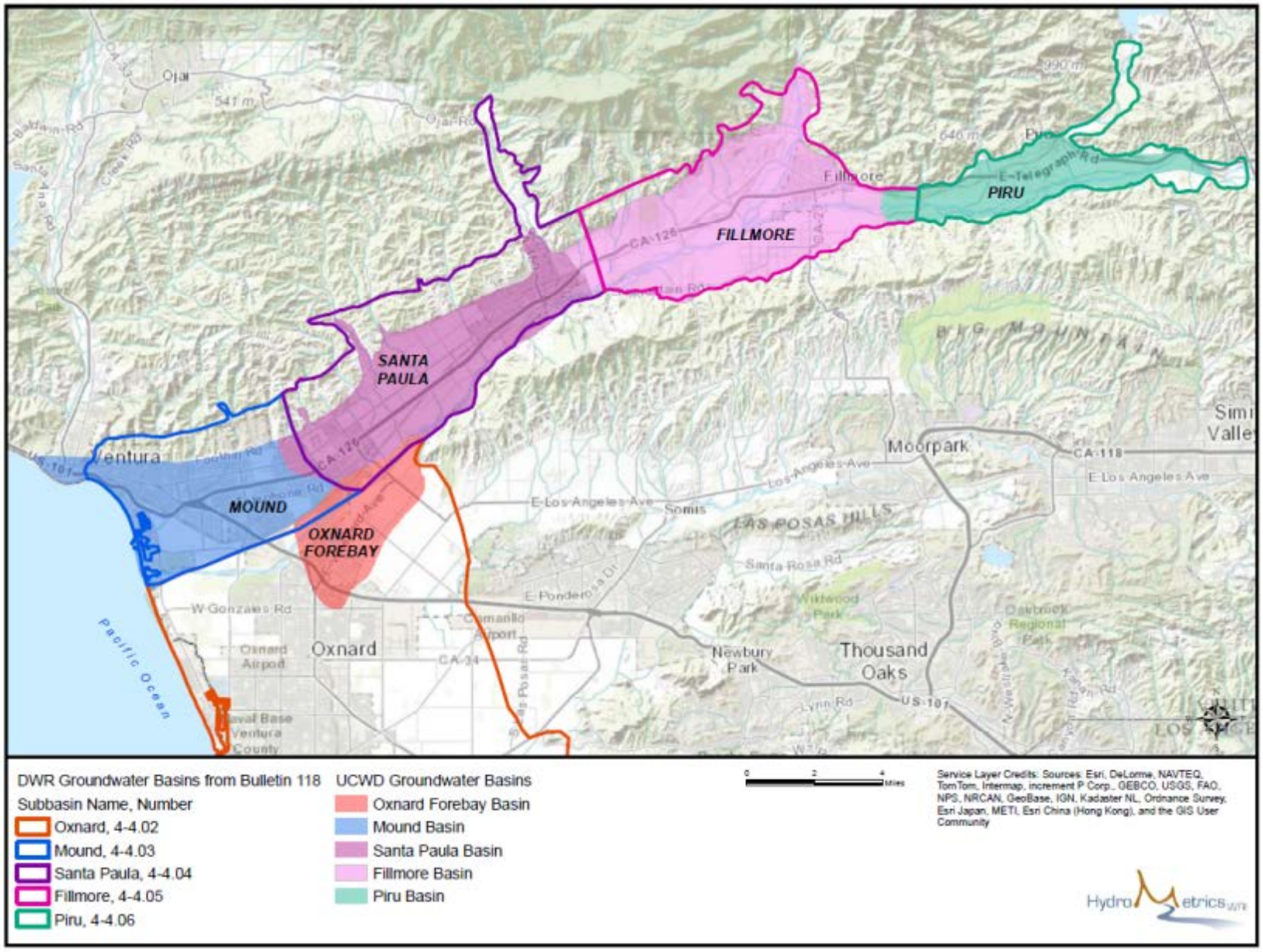
Characteristics of the LSCR basin

- Groundwater protection is important to community
  - Large portion of local water supply

- Need flexible SNMP to provide analysis and process to support implementation of projects in future
  - Analysis of status of groundwater basins
  - Process for evaluating projects
  - Management measures

Focus of SNMP is on management of increased recycled water use in the basin

LSCR SNMP planning area



Sources Overview

- 8 Small POTWs
  - All Discharge to Percolation Ponds except Ventura
  - Several Recently Upgraded, but No Salt Removal
  - Flows have been Stable or Decreasing
- Agriculture
- Urban areas
- Upper Santa Clara River loadings

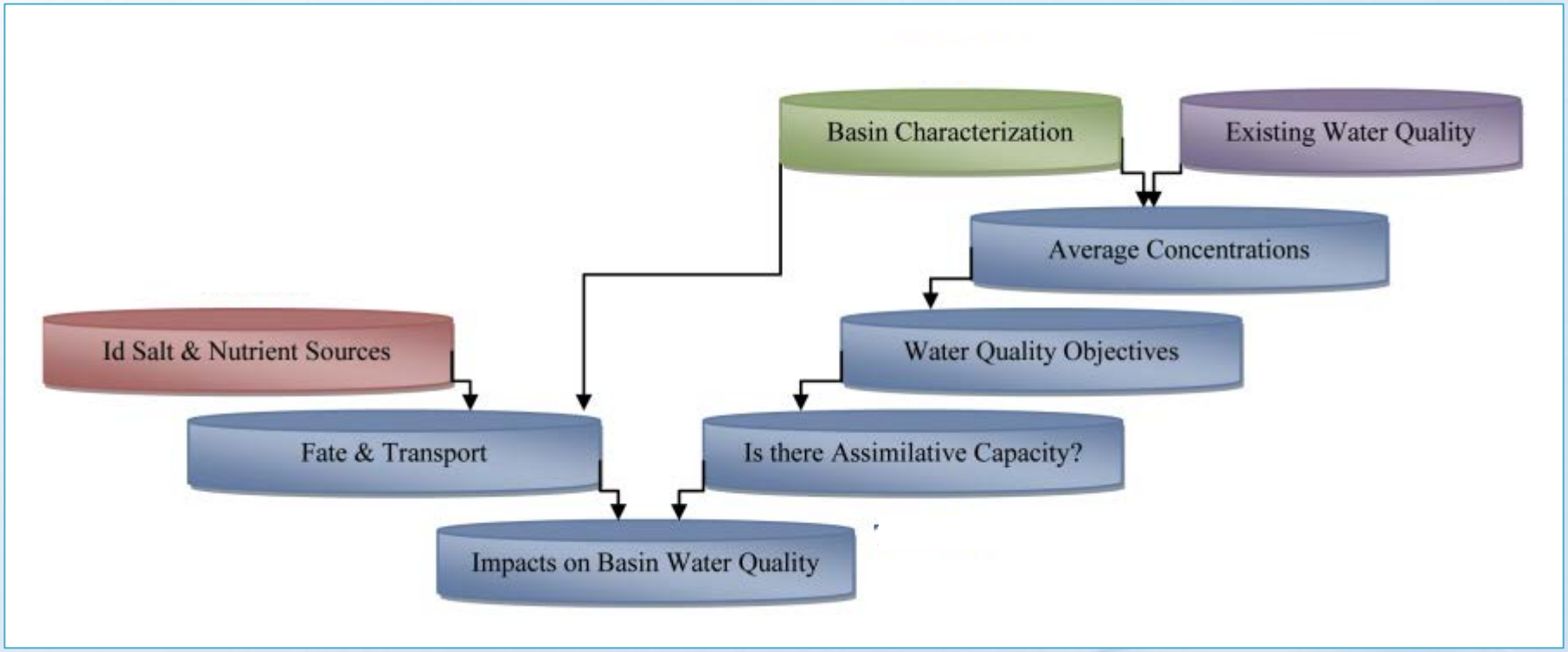
POTW	Built	Upgraded	Current Flow
Santa Paula	1939	2010	2 MGD
Fillmore	1955	2009	1 MGD
Piru	1974	2010	0.2 MGD
Ventura	1960	2011	9 MGD

Future sources anticipated to be unchanged or improved

Proactively implementing management measures

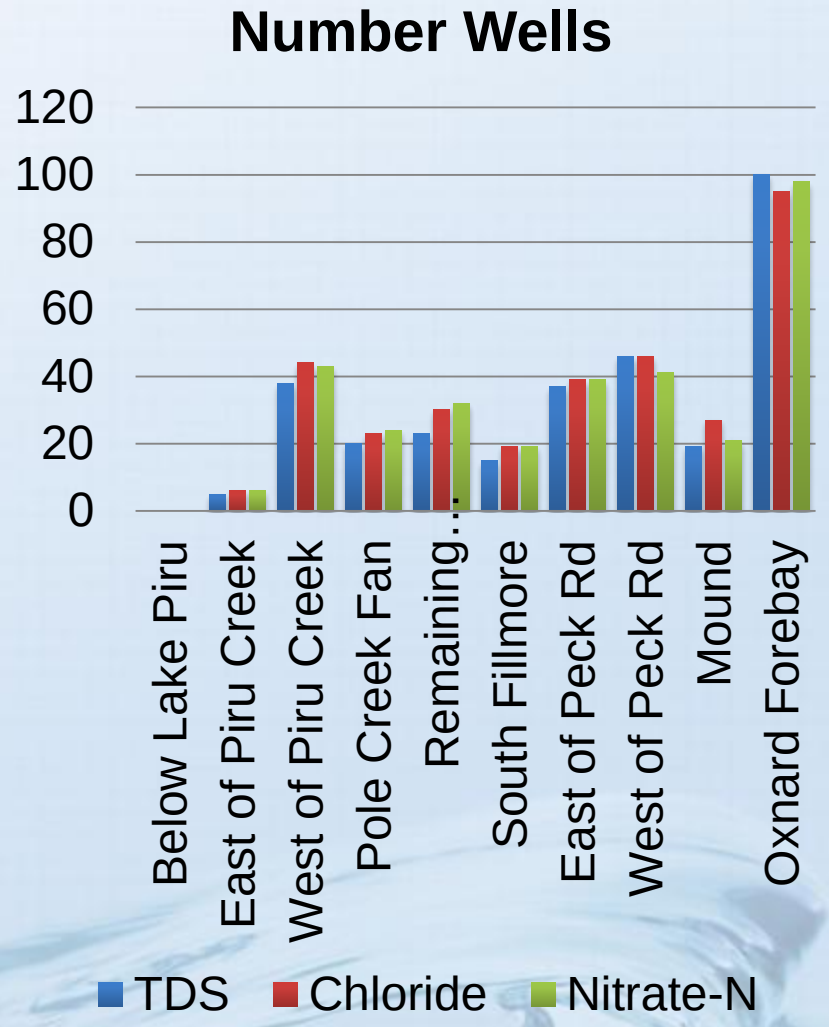
- New water softener prohibitions/Incentives to remove water softeners
- Upgrades to and construction of new WWTPs
- Commercial and industrial brine discharge prohibition
- Septic tank policy
- Agricultural BMPs
- Infiltrate stormwater

Using Existing Data & Models To Characterize Basins, & Identify Assimilative Capacity

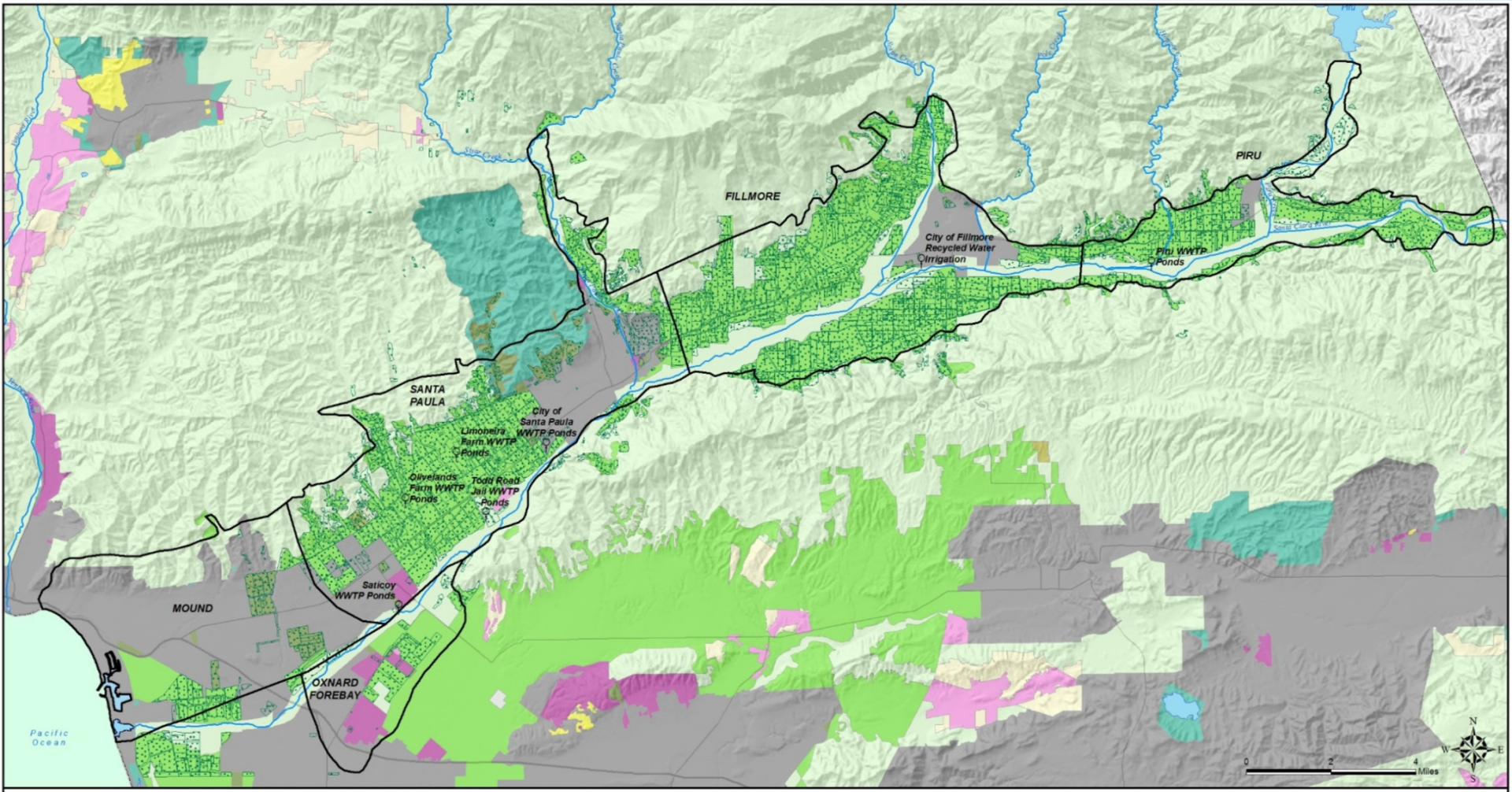


Data Review

- Utilized all available well data
  - 1997-2012 period for analysis
- Looked at trends over time through box plots
- Evaluated variation in individual wells
  - Compared the median and 90th percentile of wells with >10 data points



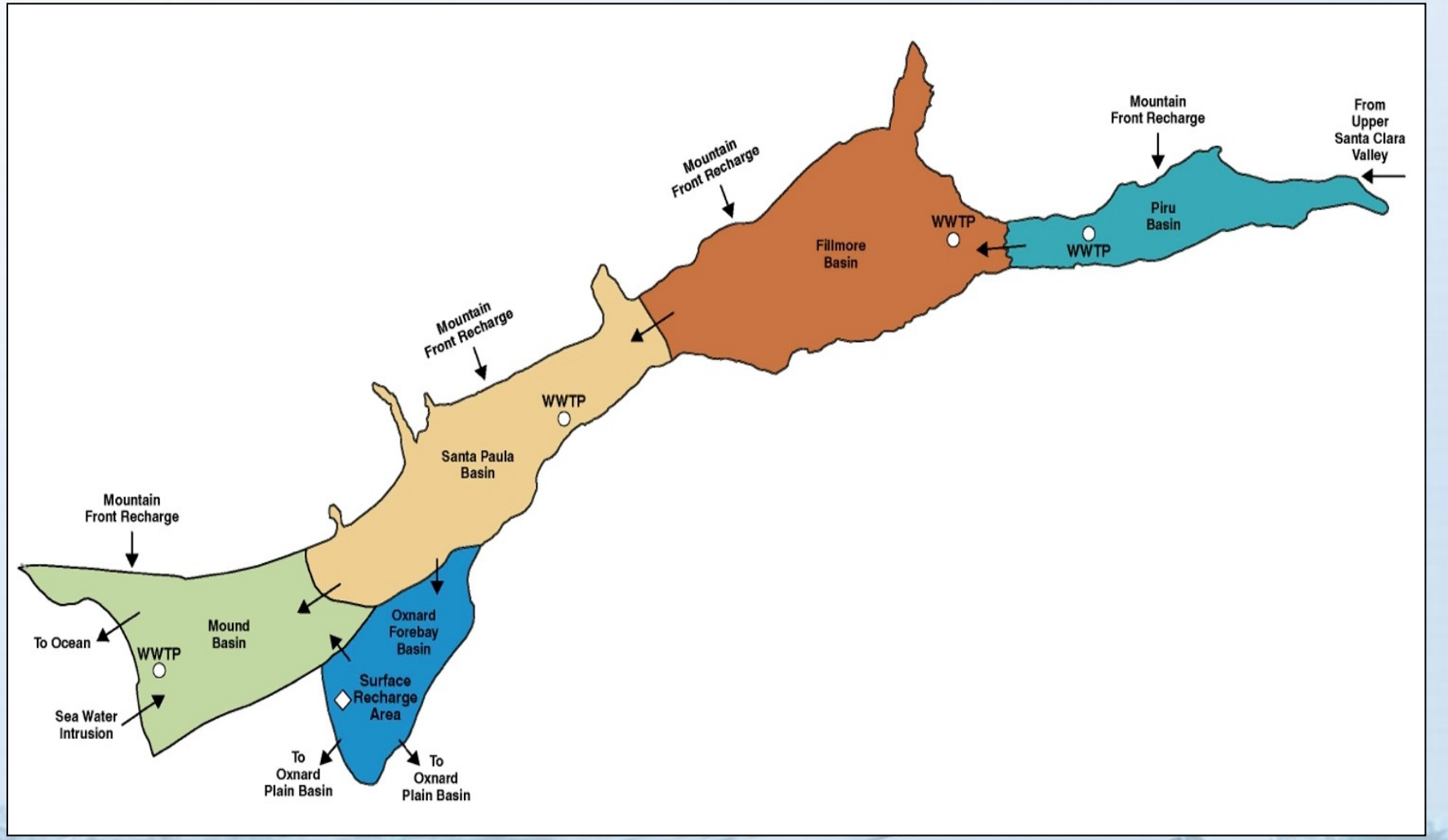
Land Use



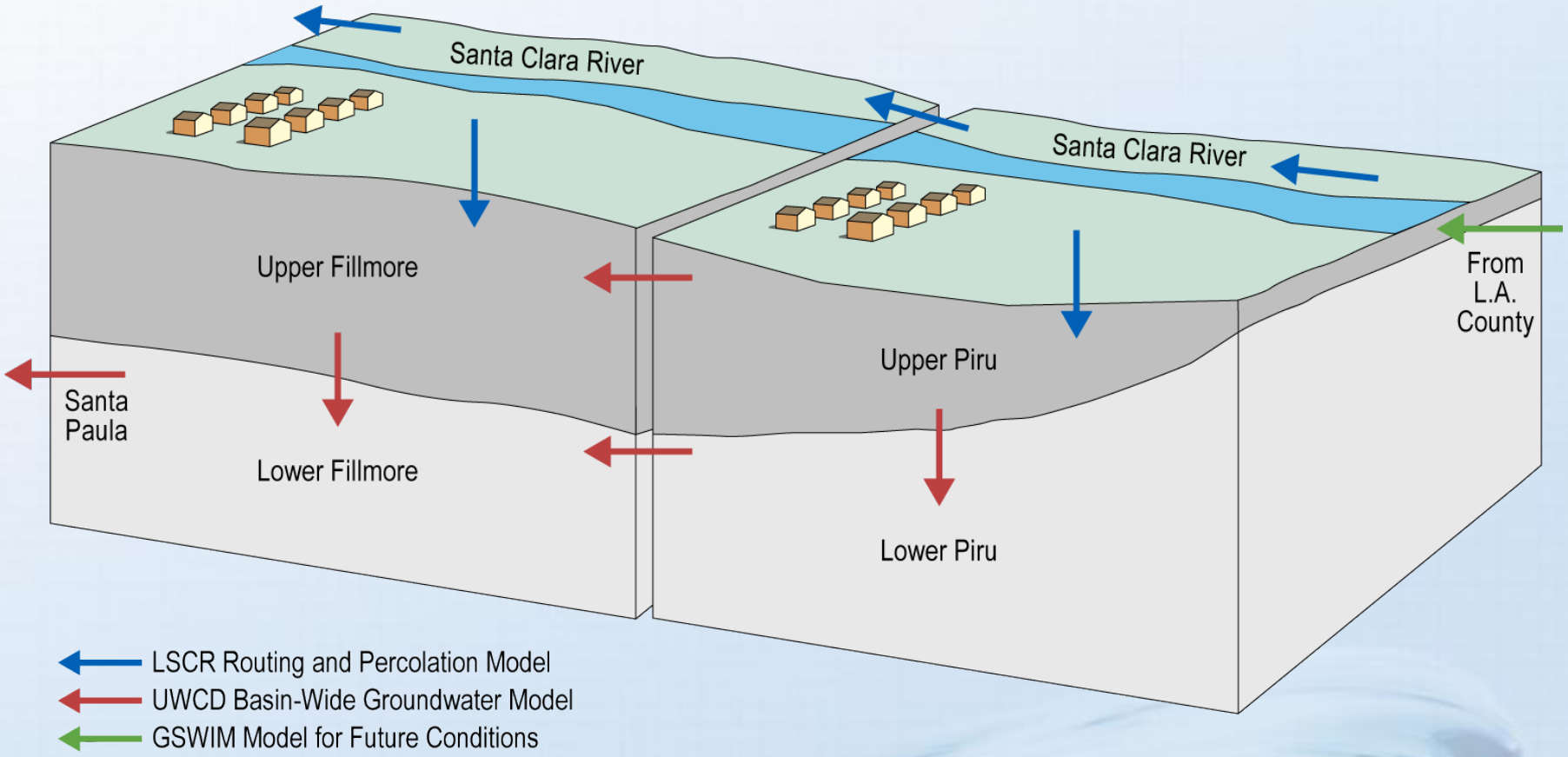
Study Planning Area
Selected Rivers and Creeks
Cropped Areas (May 2012)
Ventura County General Plan (2011)
Agricultural
Agricultural - Urban Reserve
Existing Community
Existing Community - Urban Reserve
Open Space
Open Space - Urban Reserve
Rural
Rural - Urban Reserve
Rural 5 Acre Minimum
Urban
Ventura Harbor
WWTP Percolation Ponds

HydroMetrics WRI

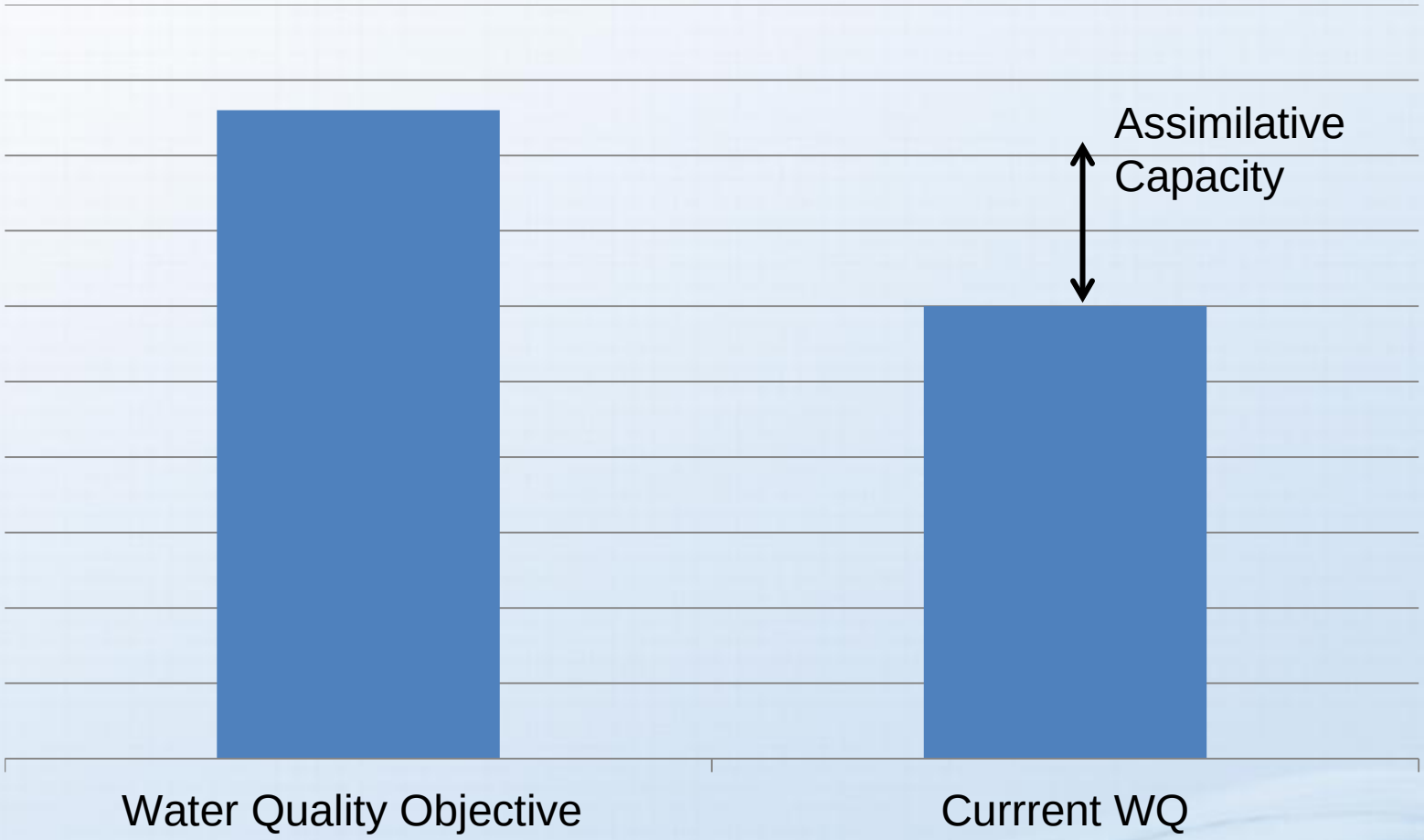
Conceptual Flow Model



Fate and transport analysis uses a simple box model of the sub-basins

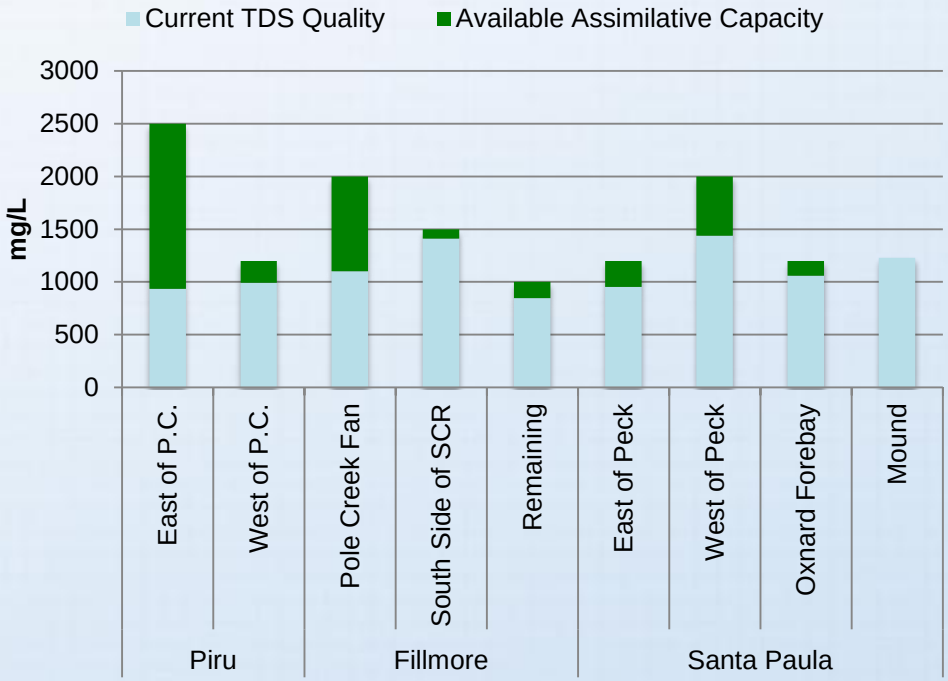


What is Assimilative Capacity?

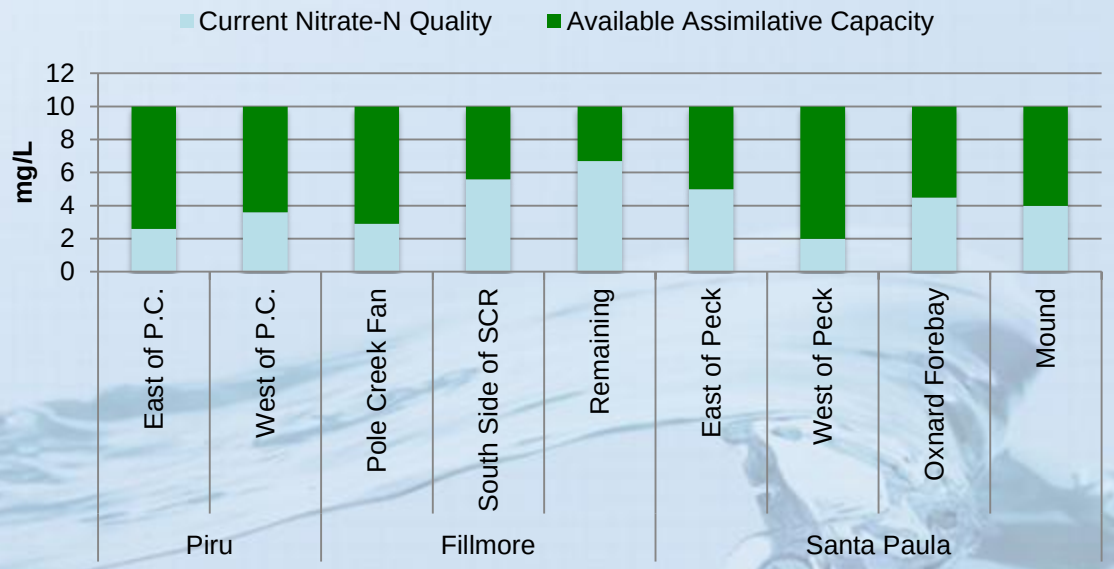


Chloride Assimilative Capacity

TDS Assimilative Capacity



Nitrate-N Assimilative Capacity



Area Weighted Avg Concentration **Demonstrate Existing Assimilative Capacity in All but One Sub-basin**

		Scenario 1 (lbs/d)		Scenario 2 (lbs/d)		Scenario 3 (lbs/d)		Scenario 4 (lbs/d)
		Piru Basin-Lower Area West of Piru Creek						
Piru Estimated Project Load	TDS	167		3,312		3,312		
	Chloride	22		433		433		
	Nitrate	0.1		3		3		
		Fillmore Basin-Pole Creek Fan Area						
Fillmore Estimated Project Load	TDS	0		0		12,724		
	Chloride	0		0		1,066		
	Nitrate	0		0		36		
		Santa Paula Basin						
		West of Peck Road	East of Peck Road	West of Peck Road	East of Peck Road	West of Peck Road	East of Peck Road	
Santa Paula Estimated Project Load	TDS	0	3,580	0	14,515	15,235	34,078	
	Chloride	0	447	0	1,811	1,901	4,253	
	Nitrate	0	20	0	80	84	187	
		Mound Basin						
Ventura Estimated Project Load	TDS	665		16,629		49,076		32,447
	Chloride	130		3,239		9,598		6,359
	Nitrate	4		89		252		163

Notes:

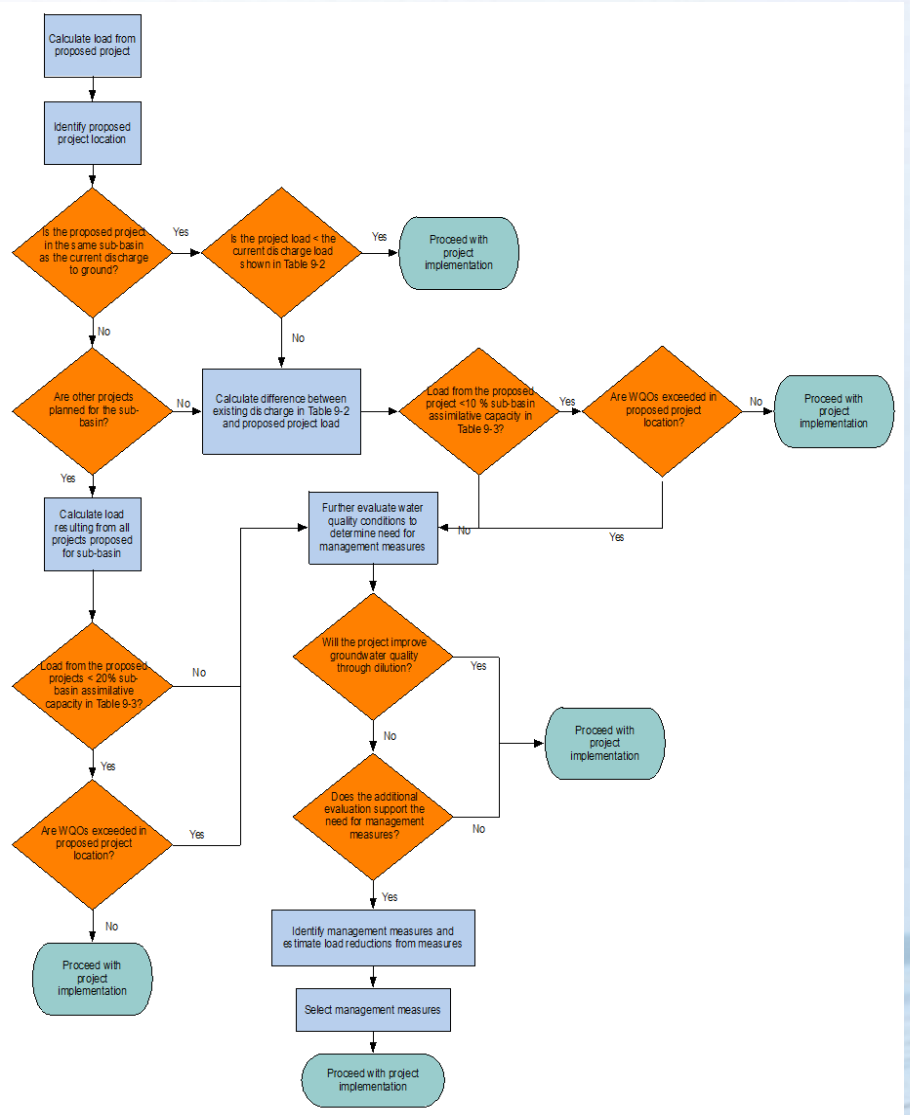
Green boxes indicate the project load is below the 10% assimilative capacity threshold.

Yellow boxes indicate the project load is between the 10% and 20% assimilative capacity thresholds.

Orange boxes indicate the project load is above the 20% assimilative capacity threshold.

Red boxes indicate that no assimilative capacity is available.

Process Flow Chart – To Evaluating Future Projects & Identify Potential Management Strategies



- Calculate loading
- Compare to available capacity
- Evaluate local conditions
- Conduct additional evaluation if needed
- Select management measures
- Consider other conditions

Potential Future Management Measures

- Source control
  - Additional water softener restrictions
  - Local limit modifications
- Septic system conversion program
- Source water treatment
  - Softening to reduce water softener needs
  - Treatment to remove salts
- Wastewater treatment to remove salts
- Stormwater recharge
- Additional agricultural BMPs

Schedule of Key Milestones

Milestone	Date
• Background information gathering and evaluation	Oct 2013
• 1st Stakeholder Meeting	Oct 2013
• SNMP Approach Document and Management Measures	Mar 2014
• 2nd Stakeholder Meeting	April 2014
• Release of Draft SNMP	Nov 2014
• 3rd Stakeholder Meeting	Feb 2015
• CEQA Scoping Meeting	Feb 2015
• Final SNMP and Response to Comments	Spring 2015
• Regional Board hearing presentation on SNMP	Summer 2015

Questions