Local Area Management Plan (LAMP)

Public Meeting- June 23

How to Participate

- Presentation is being recorded and will be posted on the Environmental Health website
- Questions can be typed into the chat function
- The aim is to answer the questions posted in the chat during the meeting
- The chat content will be posted on the website after all questions are answered
- All verbal questions will be taken at the end of all the presentations.

Meeting Overview

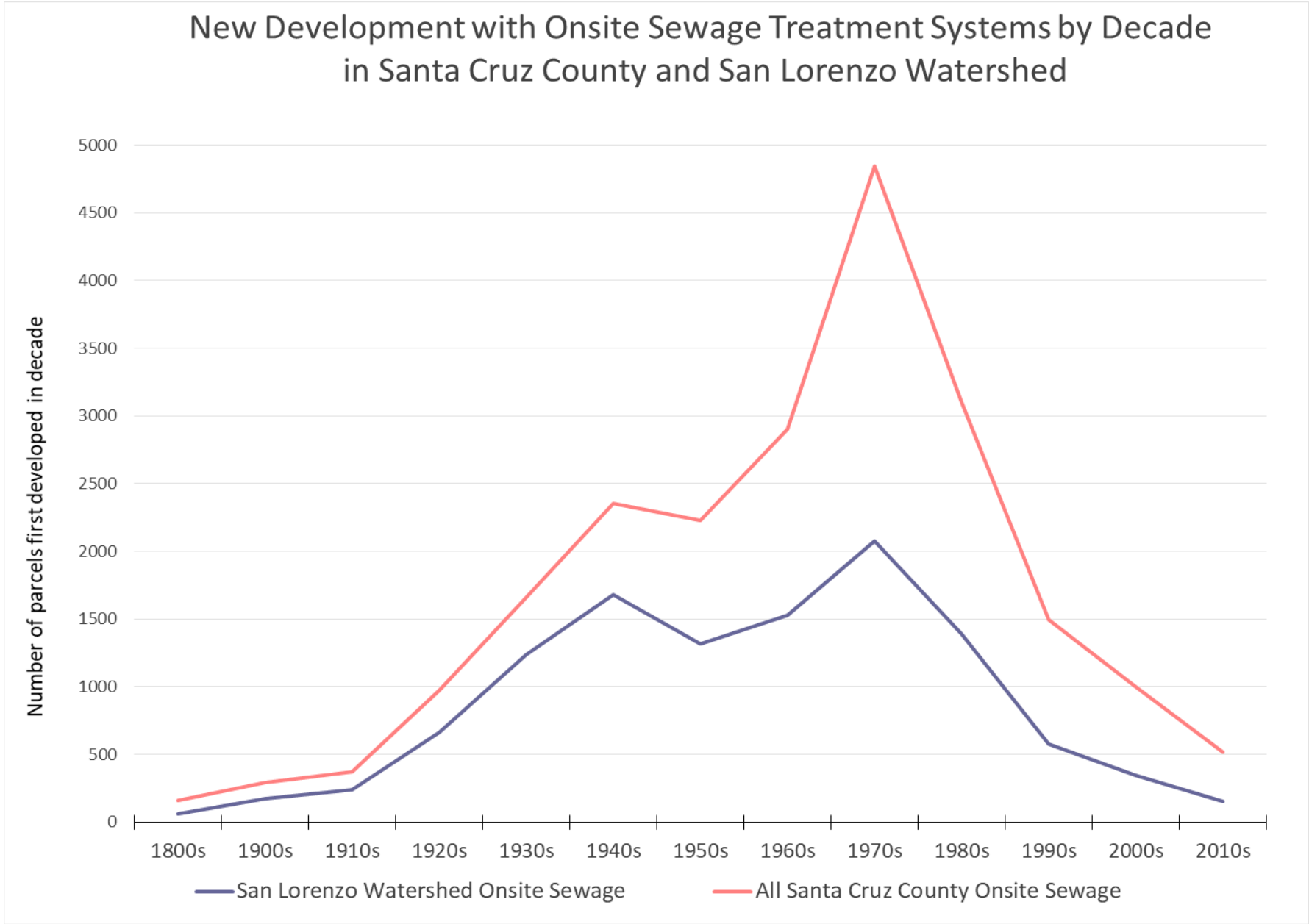
- Importance of Regulating Onsite Wastewater Treatment Systems (OWTS)- Marilyn C Underwood, PhD, Santa Cruz County Environmental Health
- State Law and Central Coast Regional Water Quality Control Board Review- Jennifer Epp, P.E., Central Coast Regional Water Quality Control Board
- The LAMP- What is Changing- John Ricker, consultant to Santa Cruz County
- Next Steps- Dr. Underwood and Ms. Epp
- Question and Answer

Terms

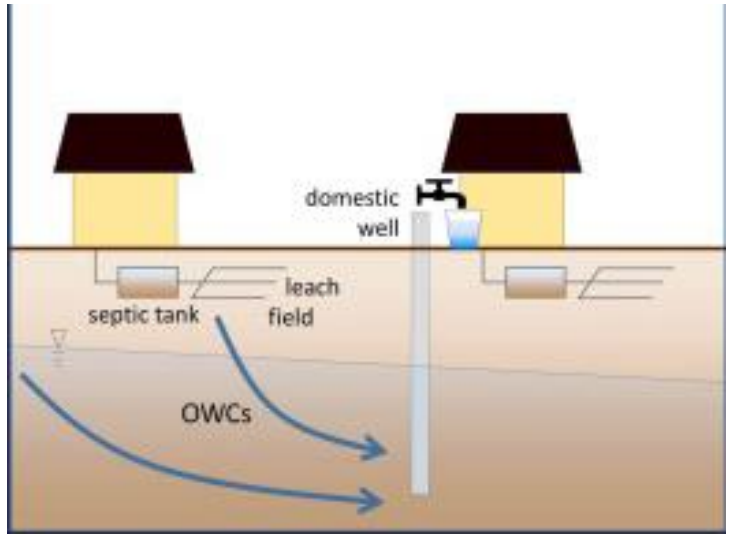
Local Agency Management Program (LAMP)

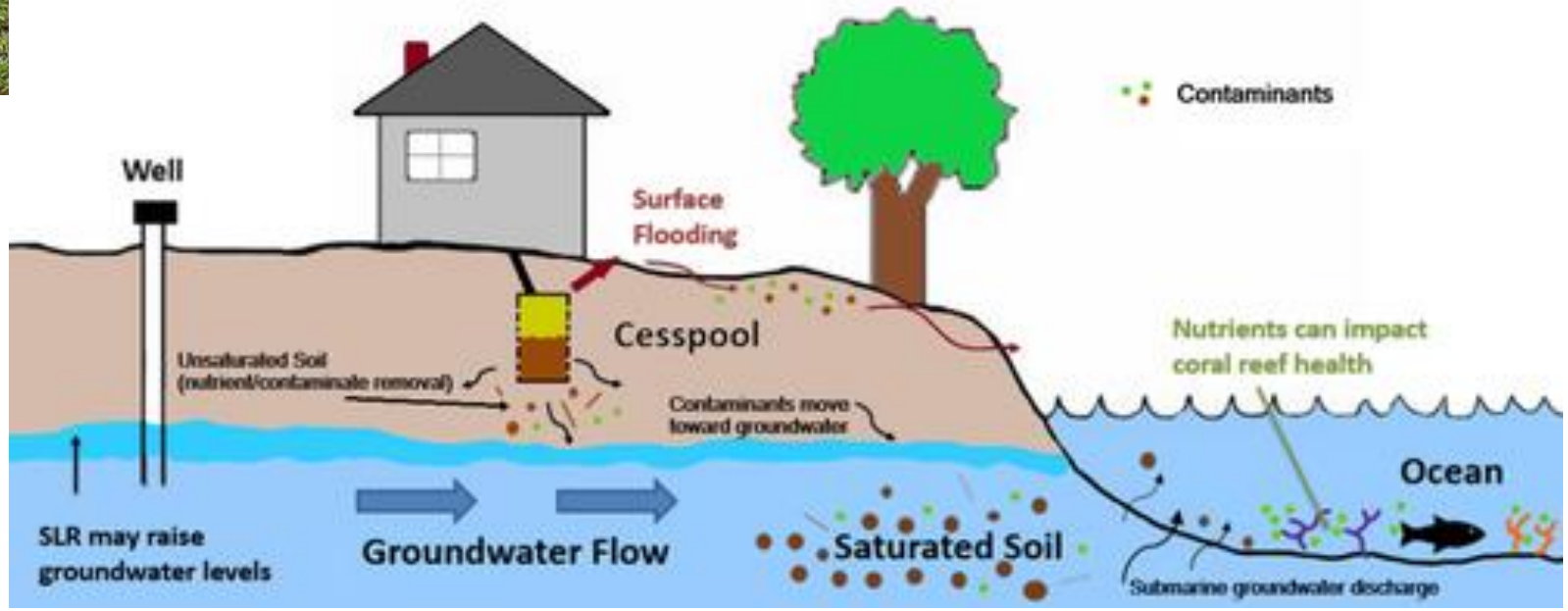
Onsite Wastewater Treatment System (OWTS, or septic systems)

Local Agency- Santa Cruz County Environmental Health

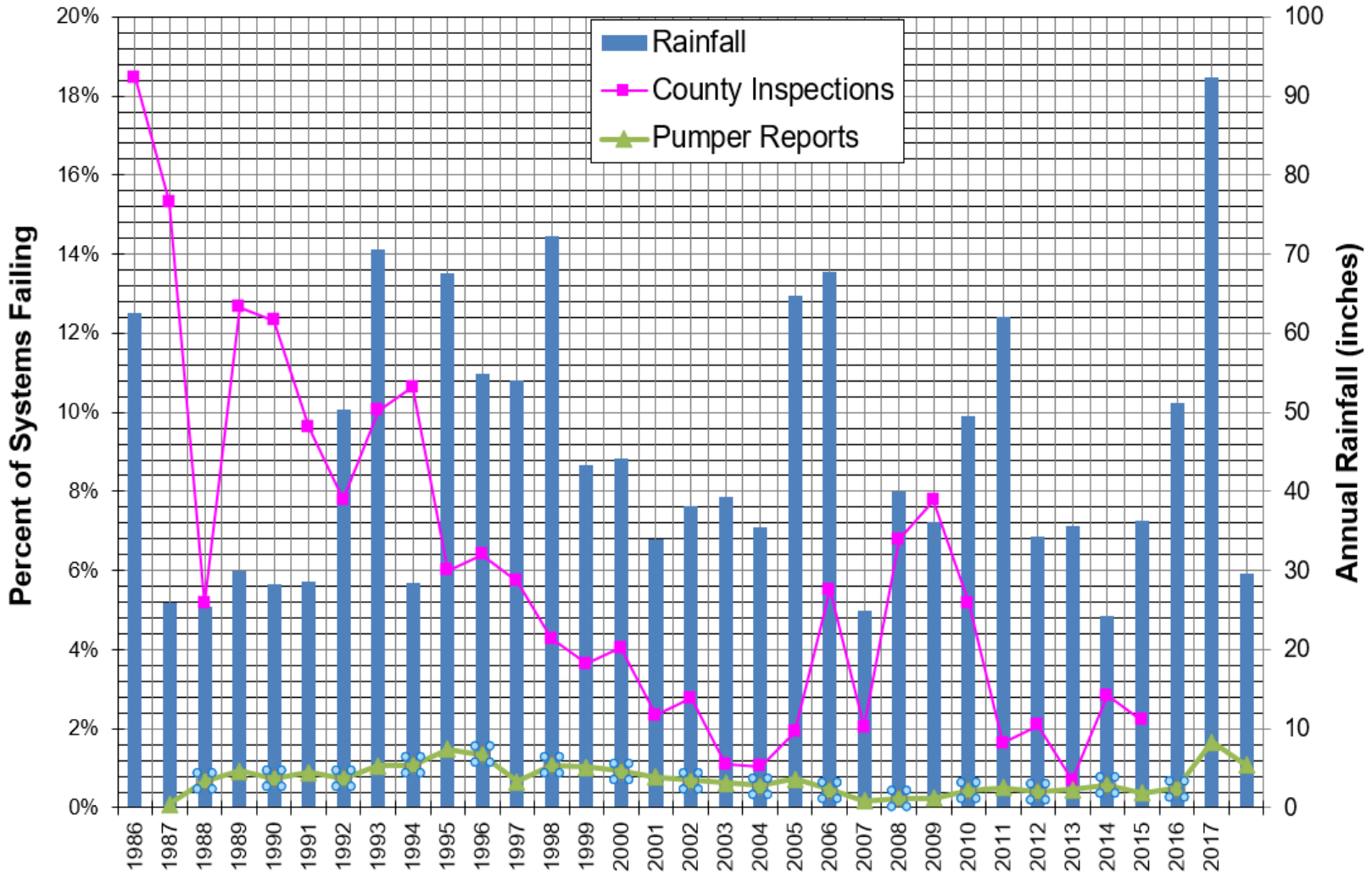

New Development with Onsite Sewage Treatment Systems by Decade in Santa Cruz County and San Lorenzo Watershed
Number of parcels first developed in decade
5000
4500
4000
3500
3000
2500
2000
1500
1000
500
0
1800s
1900s
1910s
1920s
1930s
1940s
1950s
1960s
1970s
1980s
1990s
2000s
2010s
San Lorenzo Watershed Onsite Sewage
All Santa Cruz County Onsite Sewage

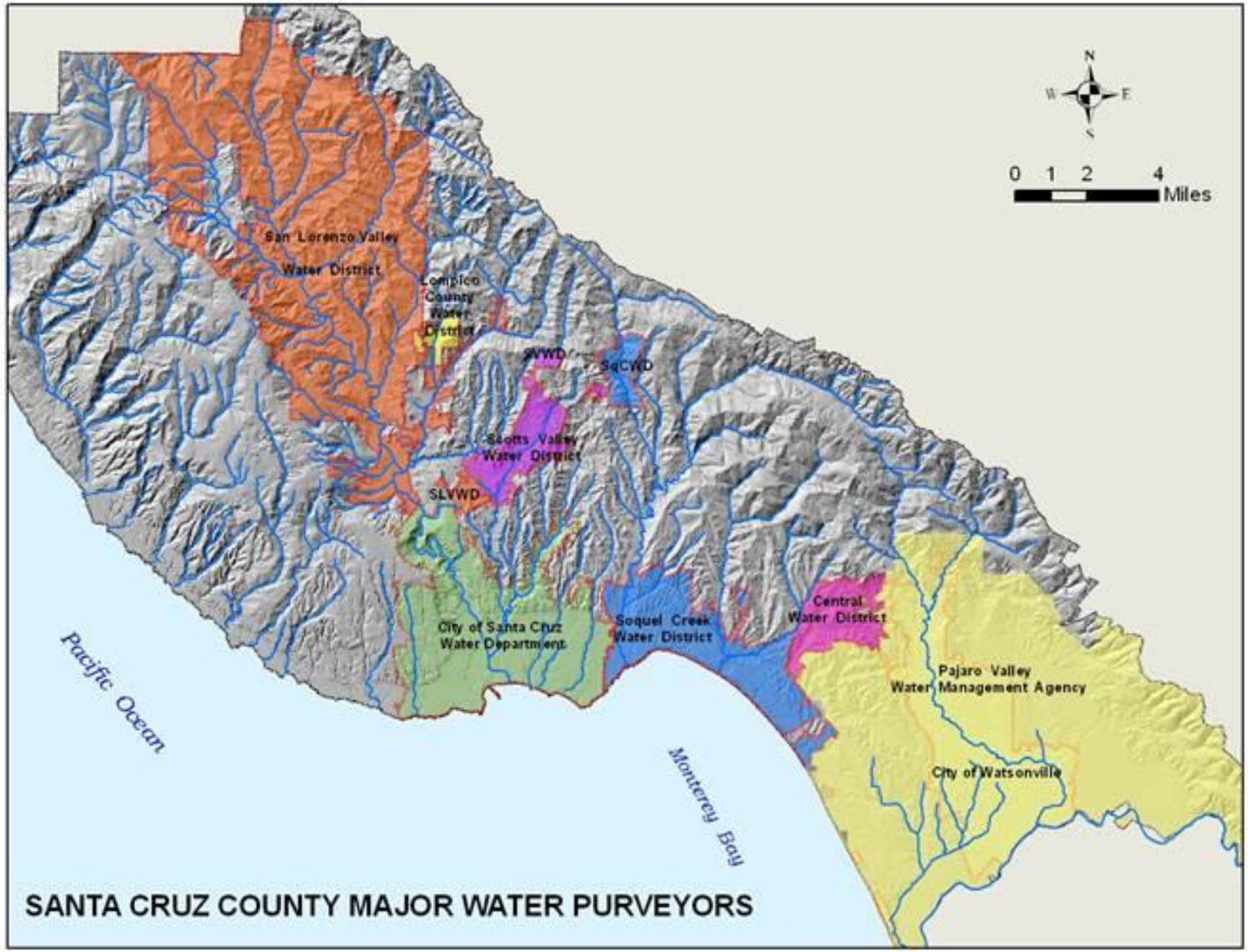
Failing OWTS



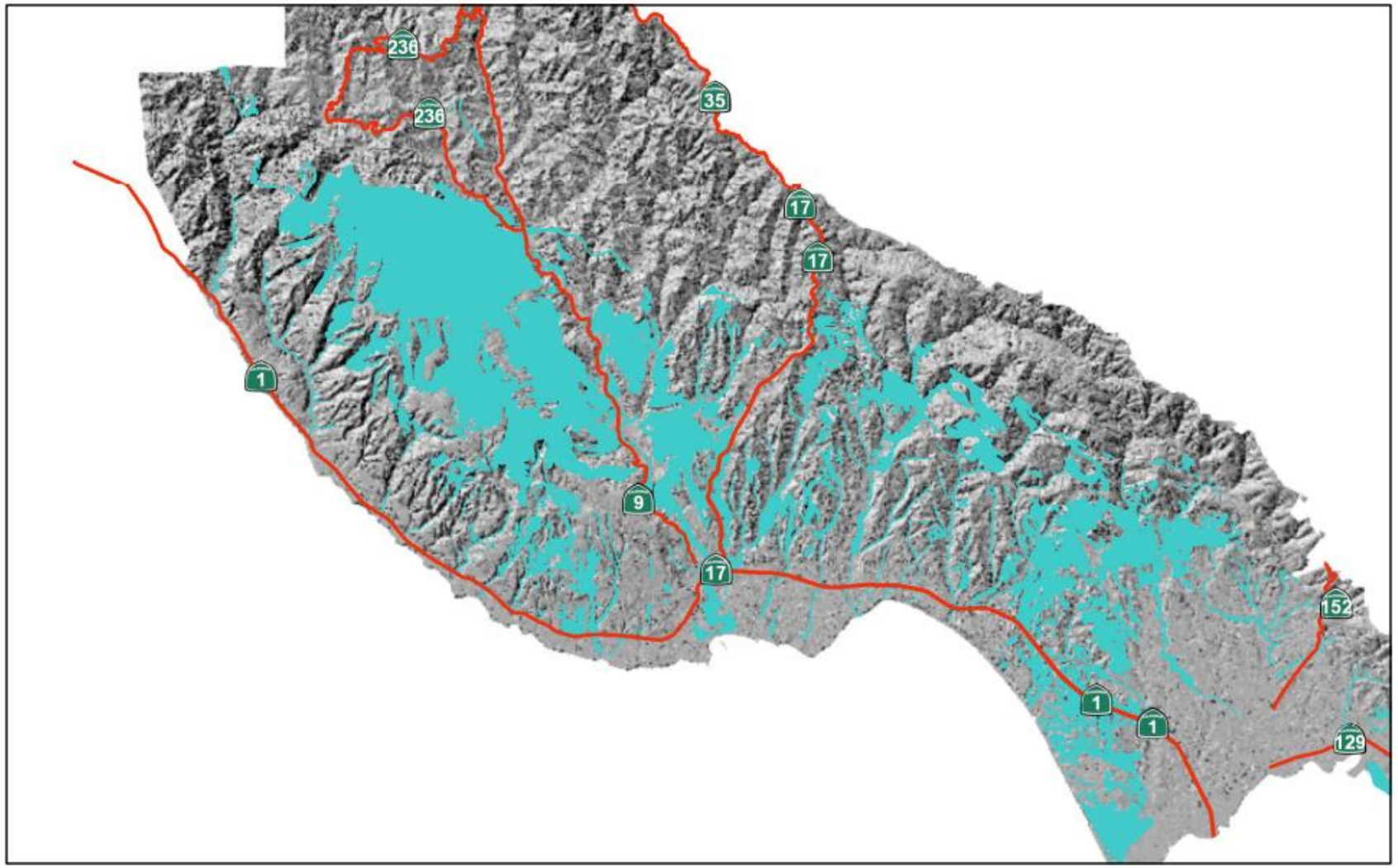


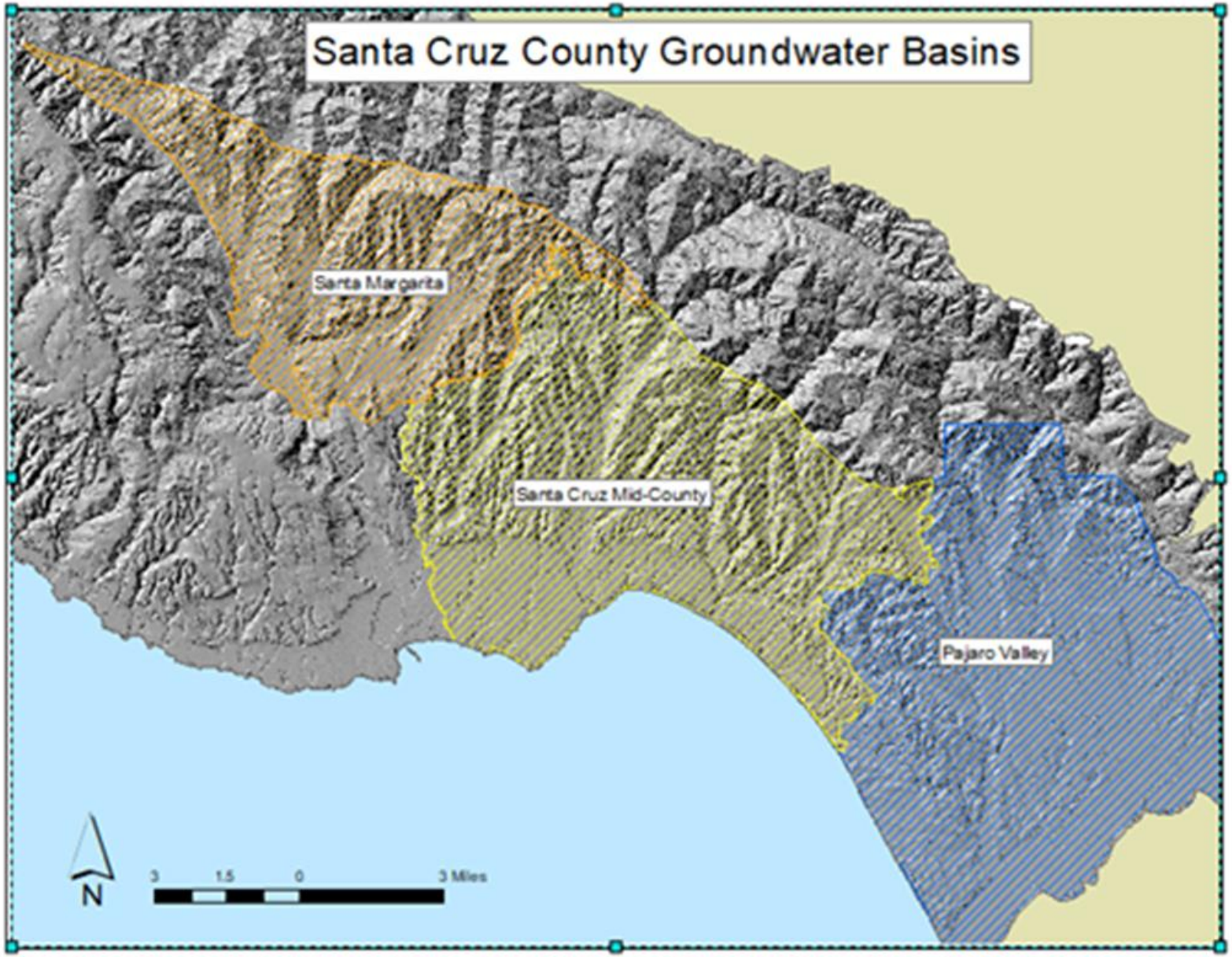
Percentage of OWTS Observed Failures in San Lorenzo Watershed




N
W
E
S
0 1 2 4
Miles
San Lorenzo Valley
Water District
Lompico
County
Water
District
SVWD
SqCWD
Scotts Valley
Water District
SLVWD
City of Santa Cruz
Water Department
Soquel Creek
Water District
Central
Water District
Pajaro Valley
Water Management Agency
City of Watsonville
Pacific Ocean
Monterey Bay
SANTA CRUZ COUNTY MAJOR WATER PURVEYORS

Primary Groundwater Recharge Areas in Santa Cruz County

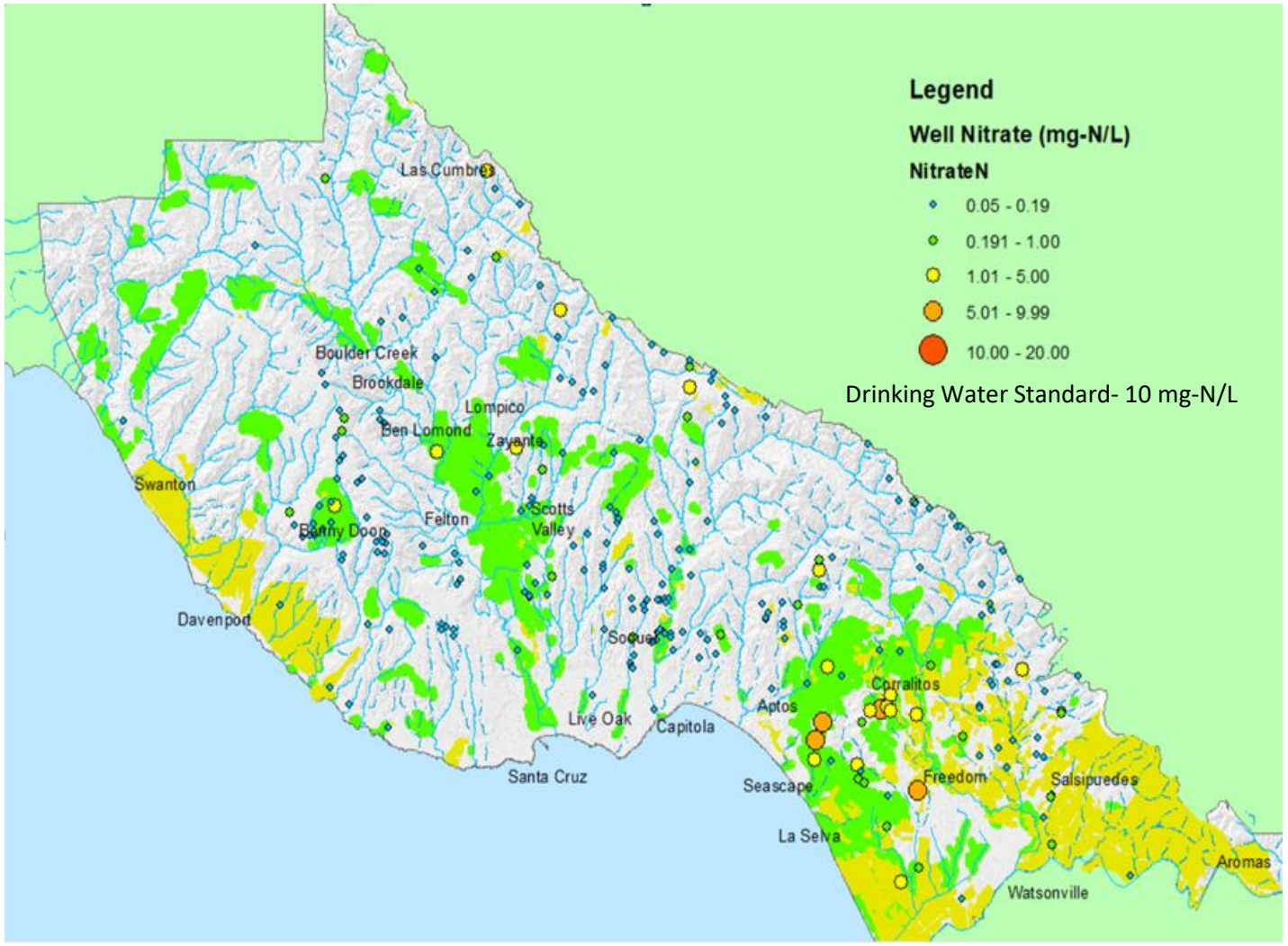



Santa Cruz County Groundwater Basins
Santa Margarita
Santa Cruz Mid-County
Pajaro Valley
N
3
1.5
0
3 Miles

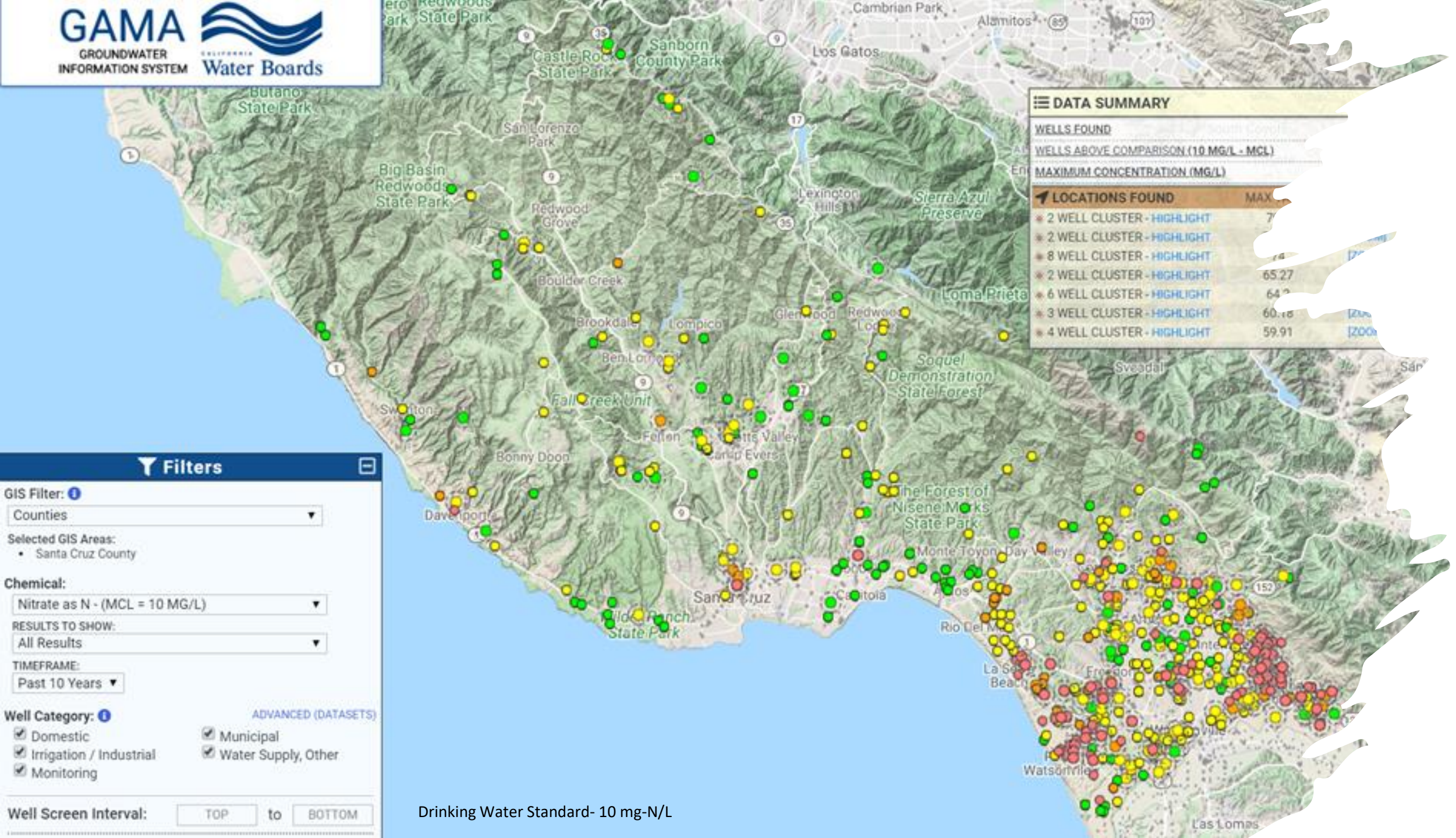
Nitrate and Salt Concerns from OWTS

- The Pajaro Basin- Salt and Nutrient Management Plan in 2016
  - OWTS a small contributor (4%)
  - Fertilizer
  - Salt from inland sources and coastal seawater intrusion
- Santa Margarita Basin contributes baseflow to the San Lorenzo River, which is designated as impaired due to elevate nitrate concentrations
  - Also localized nitrate in municipal wells in Quail Hollow, not above drinking water standards
- Mid-County Basin has had localized impact- a municipal water well was taken out of surface

Nitrate Measured in New Wells, 2010-2019

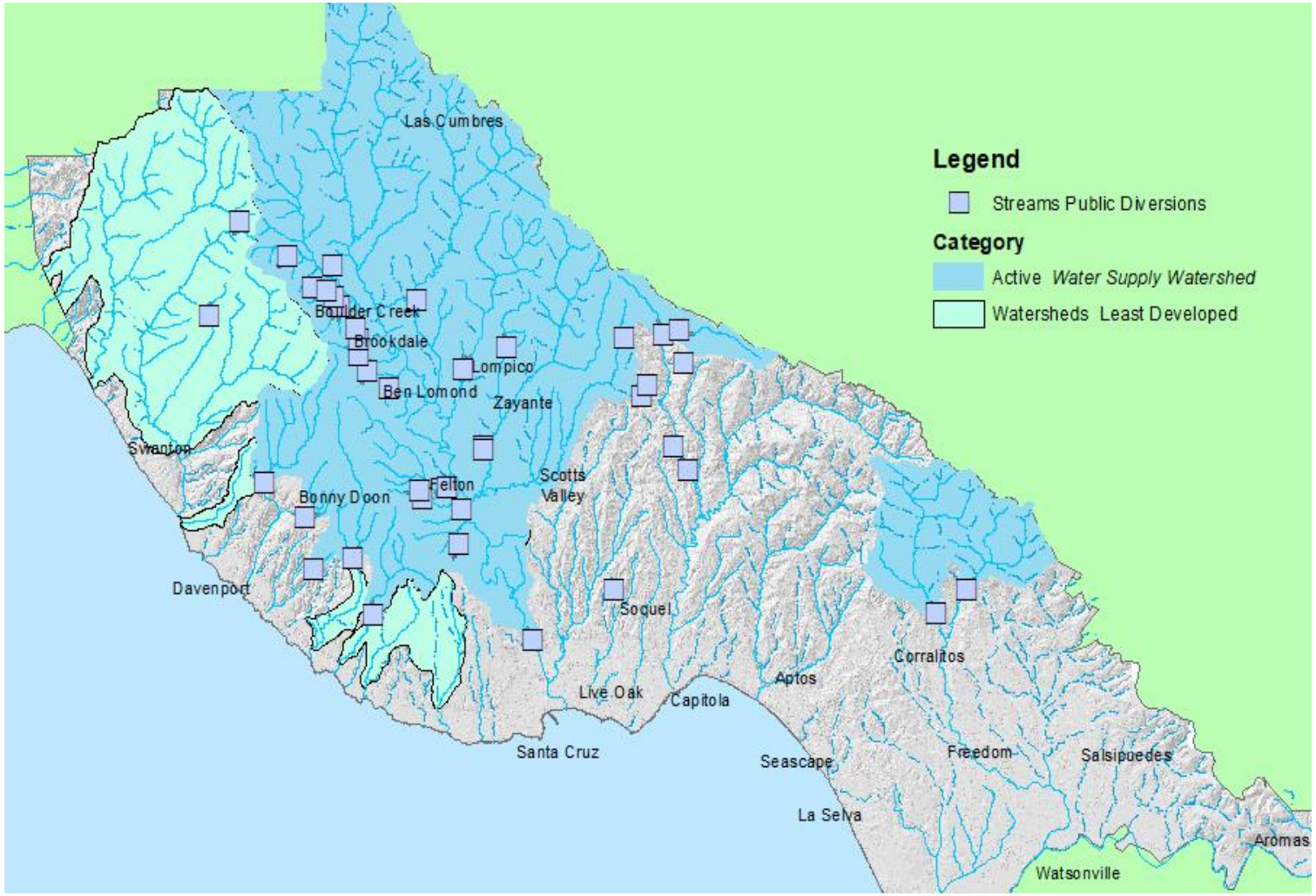


Agricultural and turf parcels shown in yellow, highly permeable soils in green



Drinking Water Standard- 10 mg-N/L

Protected Watershed Designations in Santa Cruz County General Plan



Summary of Impaired Waterbodies and Pollutant Sources Within Santa Cruz County

Sources, in order of importance, with 1 the most important, when determined. ND= Not Determined										
Water Body	Constituent	MS4, Urban lands	Sewers and Laterals	Home-less	Pets	Live-stock	Onsite Systems	Agricul. Manure Fertilizer	Landfill runoff	Extent of Impairment
Aptos/Valencia Creek	Pathogens	1	3	ND	2	4	ND	ND	ND	Aptos downstream of Valencia Cr, Valencia Cr. downstream of Cox Rd and Valencia Rd, Trout Gulch
Corralitos Cr	Pathogens	1	6	2	3	4	5	ND	ND	Downstream of Browns Valley Rd and Salsipudes Cr.
Pajaro River	Fecal Coliform	1	3	ND		2	ND	ND	ND	Pajaro River
Pajaro River	Sediment	Yes						ND	ND	Pajaro River and Corralitos Cr.
Pajaro River	Nitrate/ Nutrients	2	3			3		1	ND	Various streams in Pajaro Watershed
Pinto Lake	Phosphorus/ Cyanotoxins	2				4	2	1	ND	Pinto Lake Watershed
San Lorenzo Estuary	Pathogens	2	1	4	3	6	5	ND	ND	
San Lorenzo, Lompico	Pathogens	2	3	5	4	6	1	ND	ND	
Branciforte	Pathogens	1	3	4	2	6	5	ND	ND	
Carbonera, Camp Evers	Pathogens	1	6	3	2	5	4	ND	ND	
San Lorenzo Watershed	Nitrate	4	2			3	1	ND	ND	
San Lorenzo Watershed	Sediment	Yes						ND	ND	
Soquel Creek and Lagoon	Pathogens	1	2	4	3	3	ND	ND	ND	Soquel Creek downstream of Porter St. and Noble Gulch
Watsonville Sloughs	Pathogens	Yes	Yes			Yes		Yes	Yes	Watsonville, Harkins, Hanson, Gallighan, Struve

OWTS significant source of impairment

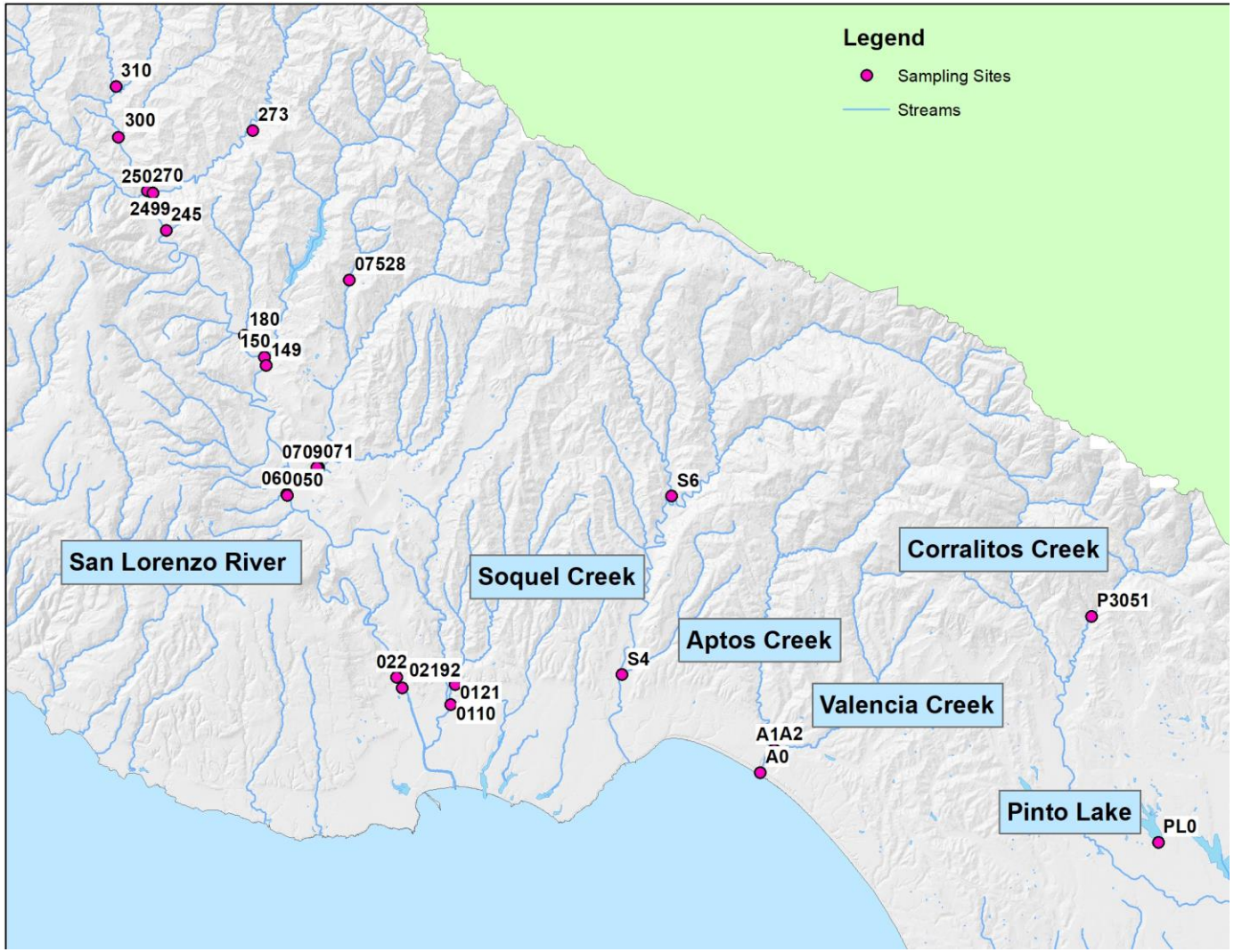
San Lorenzo River and all tributaries for pathogens and nitrate

- Tributaries include the San Lorenzo River Estuary (also known as San Lorenzo River Lagoon) Camp Evers Creek, Carbonera Creek, Branciforte, Shingle Mill and Lompico Creeks

- Salsipuedes Creek and Corralitos Creek downstream of Brown's Valley Road: fecal coliform

- Pinto Lake: phosphorus contributing to cyanobacteria blooms

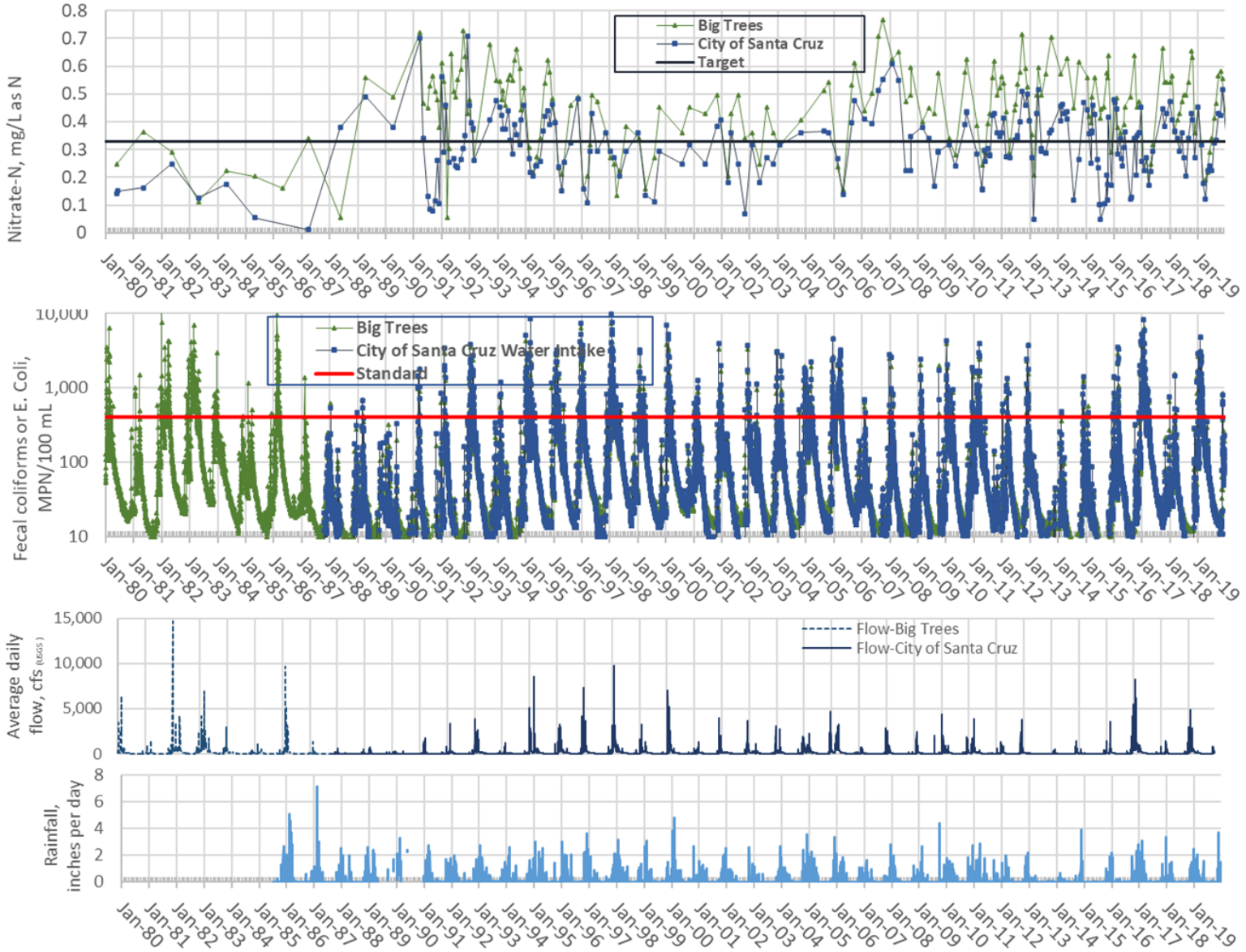
Selected Stream Water Quality Sampling Locations



Summary of Nitrate and Fecal Indicator Data for Selected Santa Cruz County Waterbodies

Locations: Aptos, Soquel and Watsonville sites	Years of E.coli Record	Geomean E.coli	Years of NO3N Record	Average NO3N Concentration (mg-N/L)
APTOS CREEK @ MOUTH (A0)	30	925	8	0.17
APTOS CREEK @ VALENCIA CREEK (A2)	26	131	8	0.03
VALENCIA CREEK @ APTOS CREEK (A1)	22	834	10	0.64
SOQUEL CREEK @ BATES CREEK (S4)	15	161	12	0.04
WEST BRANCH SOQUEL C @ SAN JOSE-OLIVE SPRINGS (S6)	23	138	11	0.07
PINTO LAKE @ BOAT RENTAL	29	59	3	0.21

Nitrate, bacteria, flow, and rain in the lower San Lorenzo River watershed 1980-2019.



Monitoring data provided by the City of Santa Cruz Water Department, flow data from USGS, and rainfall data from CIMIS. Horizontal lines represent target levels per TMDLs.

LAMP is a Balance:

State OWTS Policy and Regional Water Board Policies
Protection of public health and water quality
Conditions in Santa Cruz County

- 27,700 existing OWTS (Onsite Wastewater Treatment Systems: aka: septic systems)
  - Including over 700 enhanced treatment systems
  - Limited new OWTS: 20/year
  - Upgrades: 40/year
  - Repairs: 220/year
- Many constraints:
  - High winter groundwater
  - Streams and drainageways
  - Steep slopes unstable areas
  - Sandy soils or clay soils
  - Small lots and old development

LAMP Contents

- Existing Conditions and Water Quality Data,
- Requirements for New and Replacement OWTS
- Operation of Existing OWTS
- Water Quality Monitoring and Assessment Program,
- Program Management
- Appendix
  - Appendix A: Proposed revisions to County Code Chapter 7.38, Sewage Disposal
  - Appendix B: County Code Chapter 7.42, Septic Tank Pumping
  - Appendix C: Summary of Key Elements, Tables
  - Appendix D: Enhanced Treatment Systems
  - Appendix E: Septic Tanks, Distribution Boxes and Chamber Guidelines,
  - Appendix F: Site Evaluation and testing procedures
  - Appendix G: State OWTS Policy

LAMP has different provisions for different types of systems:

- New Development
- Upgrades: bedroom additions and ADUs (Accessary Dwelling Units)
- Repairs of old or failing systems

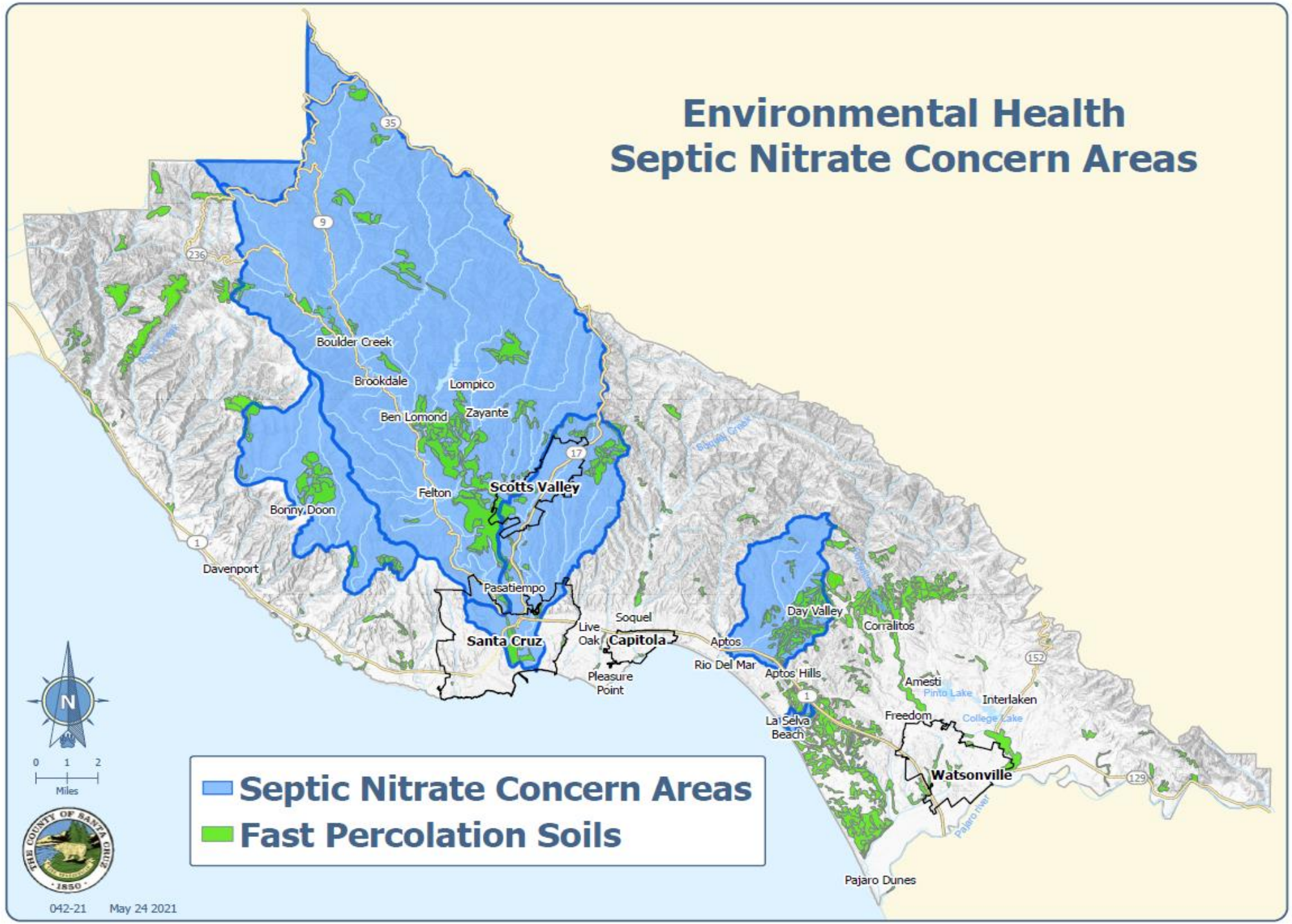
Use of:

- Conventional systems
- Enhanced Treatment Systems
- Low-Flow Systems
- Interim Non-conforming systems

Primary Changes from 2016 Standards:

(Estimated number of affected parcels in parentheses)

- Groundwater separation for replacement OWTS increases from 1-3 ft to 5-8 ft, depending on soil percolation (1500-3000 parcels)
- Repairs and upgrades in sandy soils in nitrate concern areas require enhanced treatment (1500-2000 parcels)
- Seepage pits require enhanced treatment (1000-2000 parcels)
- Replacement on slopes over 30% requires geologic review
- Repairs must have soil evaluation and be designed by qualified professionals (not contractors)
- System evaluations are required at time of property transfer
- Use of enhanced treatment may increase from 16% to 30-40% of permits
- Enhanced treatment can be used for newly created parcels


Environmental Health
Septic Nitrate Concern Areas
Boulder Creek
Brookdale
Lompico
Ben Lomond
Zayante
Felton
Scotts Valley
Bonny Doon
Davenport
Pasatiempo
Santa Cruz
Live Oak
Soquel
Capitola
Pleasure Point
Aptos
Rio Del Mar
Day Valley
Corralitos
Aptos Hills
Amesti
Pinto Lake
Interlaken
College Lake
Freedom
La Selva Beach
Watsonville
Pajaro River
Pajaro Dunes
N
0 1 2
Miles
Septic Nitrate Concern Areas
Fast Percolation Soils
042-21 May 24 2021

Options for Systems that Cannot Meet Standards

- New Parcels and New Development:
  - Enhanced Treatment for reduced groundwater separation and/or dispersal area
- Upgrades for Bedroom Additions, ADUs and Major Remodels (>500 sf)
  - Enhanced Treatment for reduced groundwater separation, stream setback and/or dispersal area
  - Slopes 30-50% with Geologic Report
  - Reduced setback to drainageway of 25-50 ft
  - Use of seepage pits with enhanced treatment
- Repairs of Old or Failing Systems: Same as Upgrades plus:
  - Reduced groundwater separation of 5 ft for medium percolation soils
  - Reduced setback to streams of 50-100 ft
  - Deeper Dispersal up to 10 square feet per linear foot
  - Low-Flow System, with reduced dispersal area
  - Interim Nonconforming System, with deferral of enhanced treatment

Review Process and Response to Comments

- Last Draft released November 2020.
- Comments were received from approximately 20 individuals
- Changes have been made in response to comments:
  - Nitrogen Reduction in sandy soils only required in Nitrate Concern Areas
  - 5 foot separation to groundwater is allowed for repairs in medium percolation soils
  - Requirements for groundwater and soil application rate are clarified
  - Requirements for operation of enhanced systems are more specific
  - ADU’s can use their own system, rather than a shared system

Anticipated Schedule

Public Comments Due	July 11, 2021
Santa Cruz County Board of Supervisors Meeting	August 24, 2021
RWQCB Staff Report Due	August 24, 2021
RWQCB Board Meeting • LAMP Takes Effect Upon Adoption	October 14 and 15, 2021
Environmental Review of Ordinance	Late 2021?
Planning Commission- Ordinance	2022
Board of Supervisor- Ordinance	2022
Coastal Commission- Ordinance	2022

How to Participate

- If you have a question:
  - For those participating via the Teams app, let the moderator know by selecting the Hands Raised button. (Select the Hands Raised Button to lower your hand.)
  - For those participating by phone, push *5 to raise your hand. (*5 also lowers your hand.)
- When you are called on to ask your question:
  - For those participating via the Teams app, unmute yourself by selecting the microphone by deselecting the microphone and speak. Mute yourself by selecting the microphone after you ask your question
  - For those participating by phone, push *6 to unmute and speak. Push *6 to mute after you ask your question.

Questions and Comments

- Questions
  - Send email to EnvironmentalHealth@SantaCruzCounty.us, subject line: LAMP questions
  - Call 831-454-2022
- Written Comments on LAMP- due July 11
  - Send email to EnvironmentalHealth@SantaCruzCounty.us with subject line: LAMP comments
  - Send via US Mail to Environmental Health, 701 Ocean Street, Room 312, Santa Cruz, CA 95060, Attention: LAMP coordinator
  - Send email to RB3-WDR@waterboards.ca.gov
- More Information: Search for SCCEH LAMP