

**DRAFT Minutes of the Regular Meeting of the Board of Directors  
Thursday, November 16, 2023**

**4:00 – 6:00 pm**

**Location: 80 Stone Pine Road, Suite 100, Half Moon Bay, CA 94019 and via Zoom  
at: Zoom Link:**

Directors: Barbara Kossy, Adrienne Etherton, Michelle Weil

Associate Directors: John Wader, John Keener

RCD staff: Lau Hodes, Cesar Aguilar, Joe Issel, David Cowman, Noah Katz, Amy Kaeser, Christina Kelleher, Timothy Federal, Eddie Sanchez

NRCS staff: Jim Howard

**1. Call to Order**

Kossy called the meeting at 4:01 p.m.

**2. Approval of Agenda**

- Etherton noted the hyperlink for item 5.2, October 25, 2023 Half Moon Bay Review, "Resource Conservation District recounts 15 years of work", did not work and asked it to be reposted at the December board meeting.
- **ACTION:** Etherton moved to approve the agenda, as amended, Wiel seconded. Motion passed unanimously.

**3. Introductions of Guests and Staff**

- All in attendance introduced themselves.
- Hodges introduced Aguilar, the RCD's new Administrative Assistant. Aguilar said he was excited for the opportunity.

**4. Public Comment**

There was no public comment.

**5. Consent Agenda**

**ACTION:** Etherton moved to approve the consent agenda as amended (less item 5.2), Weil seconded. Motion passed unanimously.

**6. Regular Agenda**

**6.1. Water Quality Program Update by Noah Katz, Water Quality Program Manager (presentation attached)**

- Discussion included monitoring soil for glyphosate; whether lead was a more concerning contaminant than fecal indicator bacteria; hypotheses regarding the source(s) of lead how to determine the source animals of fecal indicator bacteria; that if all the dogs were removed from San Mateo County it wouldn't fix the bacterial problem; and general appreciation for the program and praise for how it protects Coastside streams.

## **6.2 Board will consider adoption of Fiscal Year '24 First Quarter Financial Statements.**

- Hodges offered to work with Ryan Charland, the RCD's accountant, to better account for what had previously operating support for the RCD from San Mateo County but had become more of a fee for service contract.
- Discussion included the ratio of accounts receivable (\$8.6M) to accounts payable (\$2.7M) and the purchase of a truck.

## **6.3 Executive Director's Report (presented in Nelson's absence by Joe Issel with support from Amy Kaeser and Adria Arko)**

- Rural road repair projects in the Gazos Watershed and on Old Haul Road were completed.
- RCD helped County Parks with a stream crossing.
- A dam was removed on Mindego Creek.
- A project was completed restoring fish habitat in Pescadero County Creek Park.
- The RCD partnered with John Muir Laws to host a nature journaling event on December 9th.
- Our goal for donors next year is 200,000 dollars. The annual appeal went out last week and so far over \$6K has been donated.

## **6.4 USDA NRCS (Natural Resources Conservation Service) report**

- The federal government narrowly avoided a shut down but managed to stay open.
- Inflation Reduction Act funds are coming in full throttle. California expected a 50% increase of what we are accustomed to. The inflation reduction act is up to \$67M. Howard added that we will not be getting as much financial assistance from our other programs.
- Katz finished the Nation Water Quality Initiative assessment and is looking to get funding, via the Farm Bill, for implementation.

- Kossy asked if the Farm Bill was being held up due to Congress. Howard explained he was still operating off an extension of the 2018 Farm Bill.
- Howard is looking forward to the California Association of RCDs' annual conference.

### **6.5 Board will consider designation of a delegate of the California Association RCDs 2023 Conference and Meeting**

**ACTION:** Etherton nominated Steve Stielstra with Weil as backup, Kossy seconded. Motion passed unanimously.

### **6.6 Directors' connection and directors' reports**

- Kossy volunteered to lead the Directors' connection at the December meeting.
- Kossy attended a MidCoast Community Council Meeting regarding alternatives to pesticides in San Mateo County Parks. She noted the public had requested more transparency and she wondered how the RCD might be able to help. She had sent out annual appeals and encouraged other directors to do the same.
- Weil had nothing to report.
- Etherton reported that the Dark Sky Ordinance is on the agenda for the City of Brisbane's council meeting. She is happy the federal government stayed open as she is headed on a road trip of nation parks with her family soon. Nelson had reached out to her for help throwing a fundraiser at Miramar Farms.
- Wade expressed appreciation for how helpful Kellyx Nelson, Executive Director, and Sara Polgar, Conservation Program Specialist, have been at the Mushroom Farm.

## **7. Adjourn Meeting**

Kossy adjourned the meeting at 5:31 p.m.



# WATER QUALITY PROGRAM

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November 2023



SAN MATEO  
RESOURCE  
CONSERVATION  
DISTRICT





# Outline

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- What's an RCD
- SMRCD's Water Quality Program
- First Flush
- Coastside Water Quality Issues
- Partnership Opportunities
- Choose your own adventure (if time)





# RCD Water Quality Program

- **Understand** – Water quality studies and pollution source identification
- **Reduce** – Reducing and eliminating pollution sources
- **Engage** – Outreach and community science



# Where We've Sampled

- Capistrano Outfall
- Daffodil Creek
- Deer Creek
- Denniston Creek
- El Granada Ditch
- Frenchman's Creek
- Kanoff Creek
- Kelly Ave
- Martini Creek
- Montara Creek
- Pilarcitos Creek
- Pillar Point Harbor stormwater system
- San Pedro Creek and tributaries
- San Vicente Creek
- Seventh Street
- St. Augustine
- Sunshine (Dean) Creek
- Surfer's South
- Vallemar
- Vassar Ave
- Weinke Way
- West Point Ave Ditch
- And more





# What we talk about when we talk about water quality

Pollutant	Potential Sources	Effects/Risk categories
Fecal Indicator Bacteria (FIB) (E. coli, Enterococcus)	Feces of warm-blooded animals (humans, dogs, horses, wildlife, etc.)	Human health risk
Nutrients (nitrates and orthophosphates)	Fertilizers, pesticides, detergents, failing septic	Human and Ecological
Metals (copper, lead, zinc)	Gutters/roofs, brake pads, tires, industrial waste, paint, fires	Human and Ecological
Total Suspended Solids	Construction, erosion, agricultural runoff, fires	Ecological
Pyrethroid pesticides	Ag ops and home gardens	Human and Ecological (thought to be low for both)



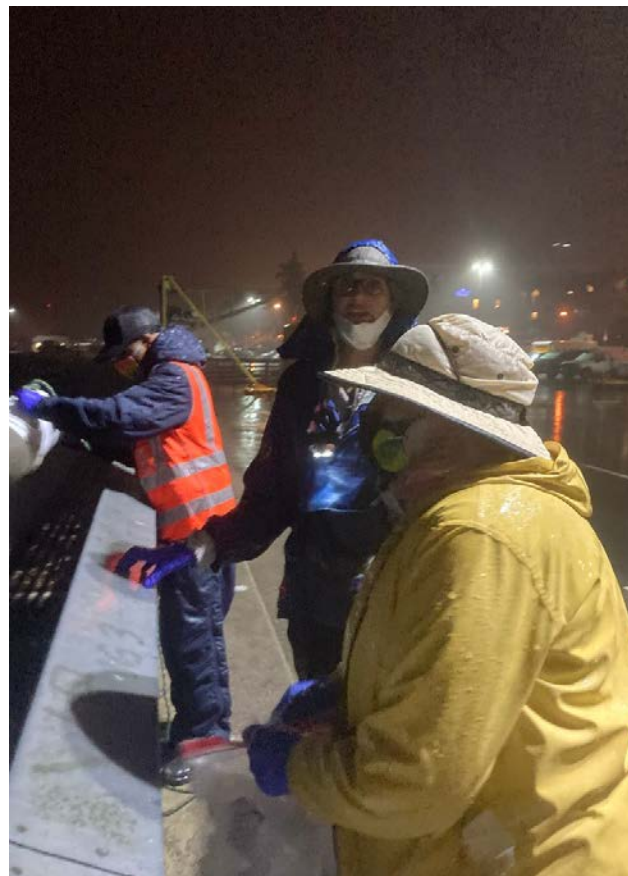
# What's in a Watershed?







# FIRST FLUSH



COMMUNITY SCIENCE



VOLUNTEER EVENT



# First Flush 2022 Results Summary

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San Vicente Creek within recommended ranges for *E. coli* for 2 years in a row!

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Zinc, Lead, and TSS within recommended ranges at all sites

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Orthophosphate: 8 of 13 sites outside of recommended ranges

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Nitrate: 2 of 13 sites outside of recommended ranges

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Samples analyzed for 12 Pyrethroid pesticides; only one found at one site

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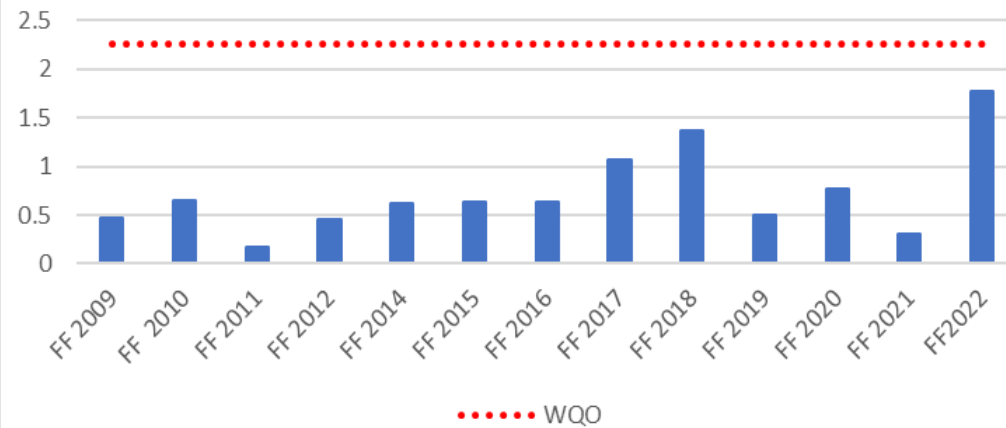


2022 Full Results Presentation SAM Board Meeting May 22<sup>nd</sup>

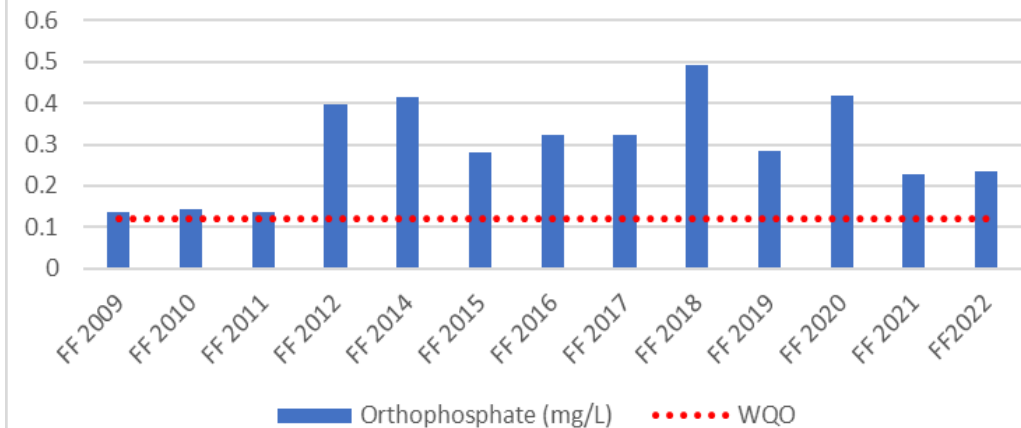
2023 Training presentation August 23rd @ 6pm. Email [firstflush@sanmateoRCD.org](mailto:firstflush@sanmateoRCD.org) to register

# Nutrients by Location

Average Nitrate  
San Mateo County First Flush  
2009-2022



Average Orthophosphate  
San Mateo County First Flush  
2009-2022

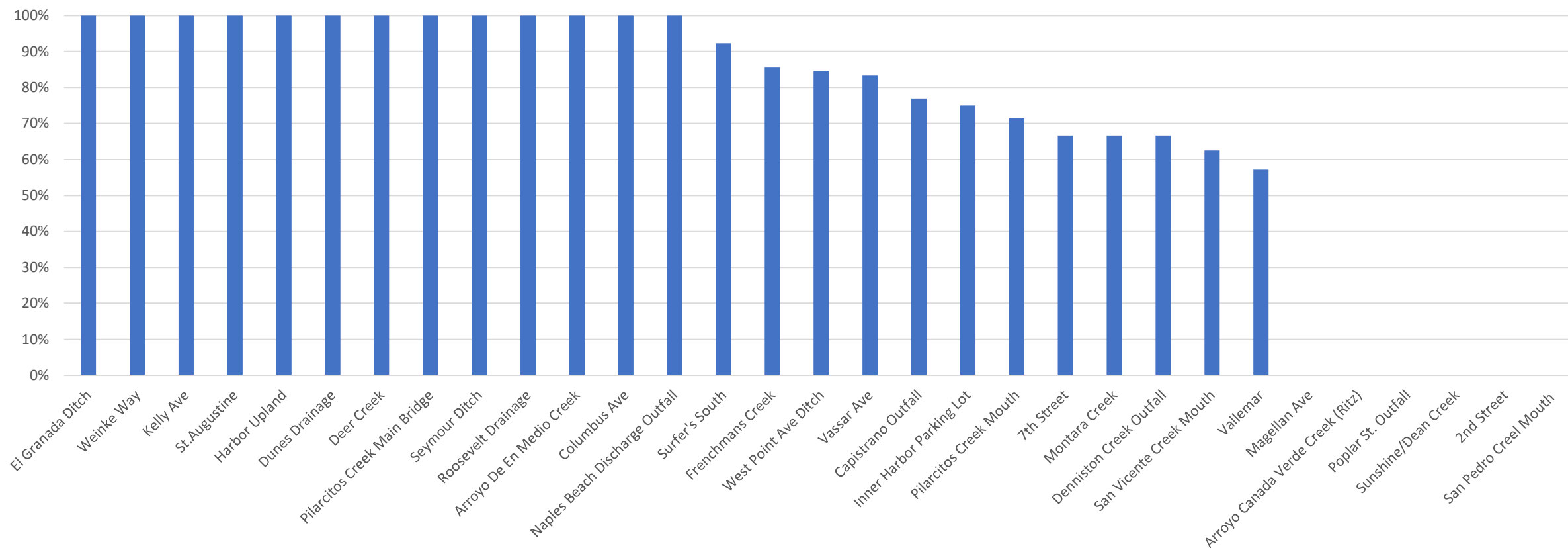






# Orthophosphate Exceedance Rates

## First Flush 2009-2022



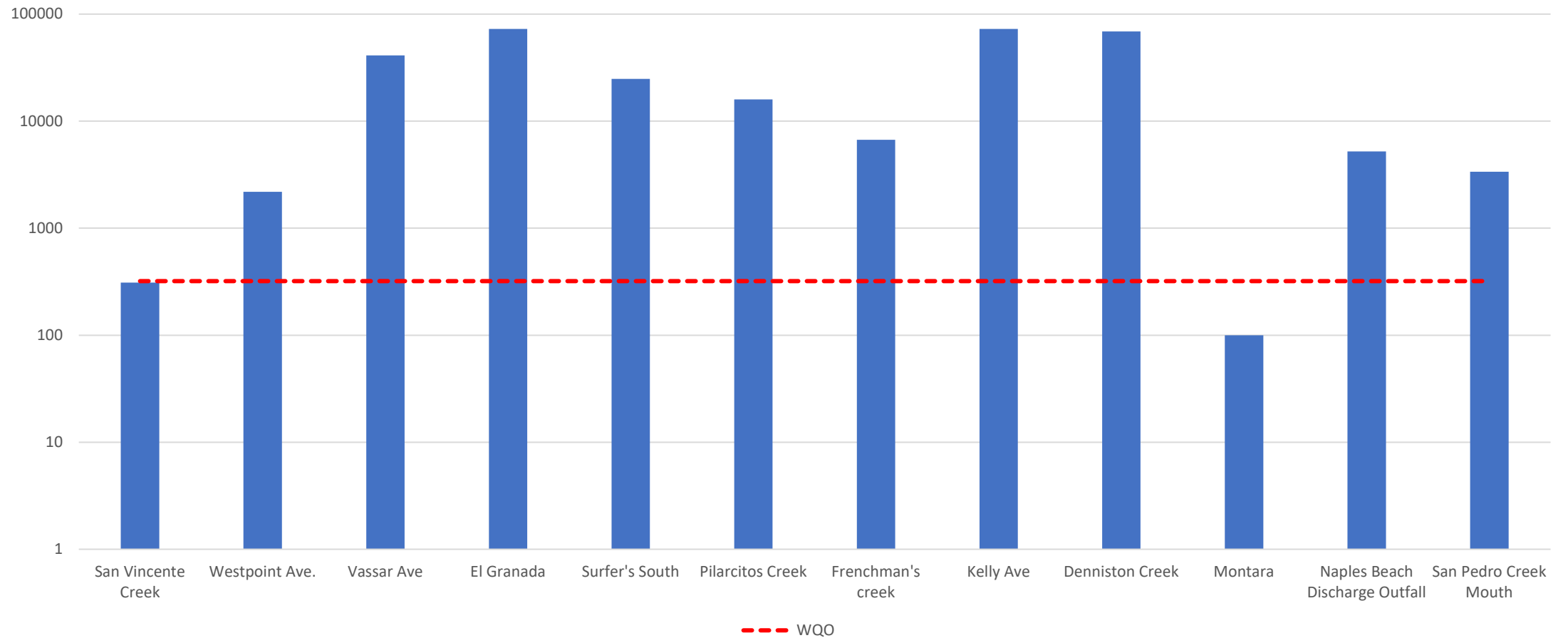


# Heavy Metals

- First Flush samples analyzed for copper, lead, & zinc
- High levels rarely found



# 2022 *E. coli* bar chart 1:100 dilution





# Coastside Bacteria Impaired Watersheds



**Pacifica State Beach  
and San Pedro Creek  
TMDL**

**San Vicente  
Creek WQIP**

**Pillar Point Harbor  
and Venice Beach  
TMDL**



0 1.25 2.5 5 Miles

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community



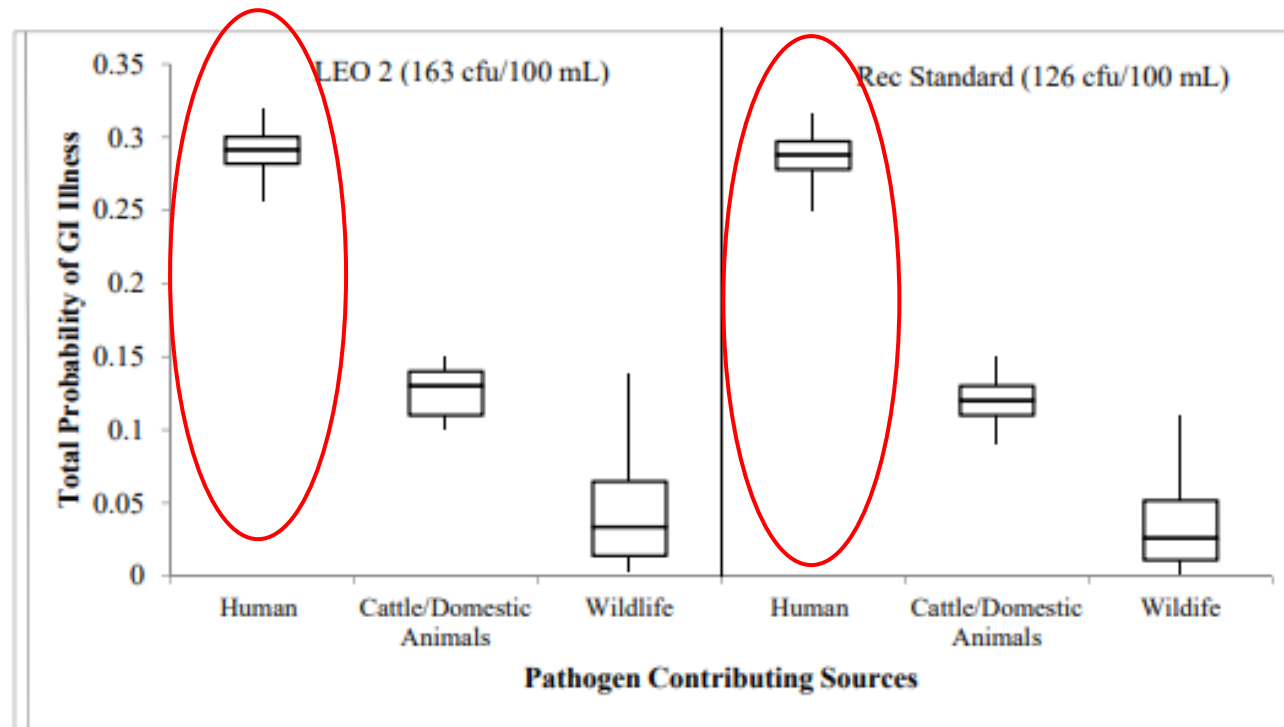


# Fecal Indicator Bacteria

- Chronic bacteria problem in many watersheds
- Implications for public health, public relations, community cohesion
- Regional Water Quality Control Board action plans
- Heal the Bay "Beach Bummers"
- HUMAN HEALTH RISK. BUT RISK AND FIB CONC. IS NOT 1:1

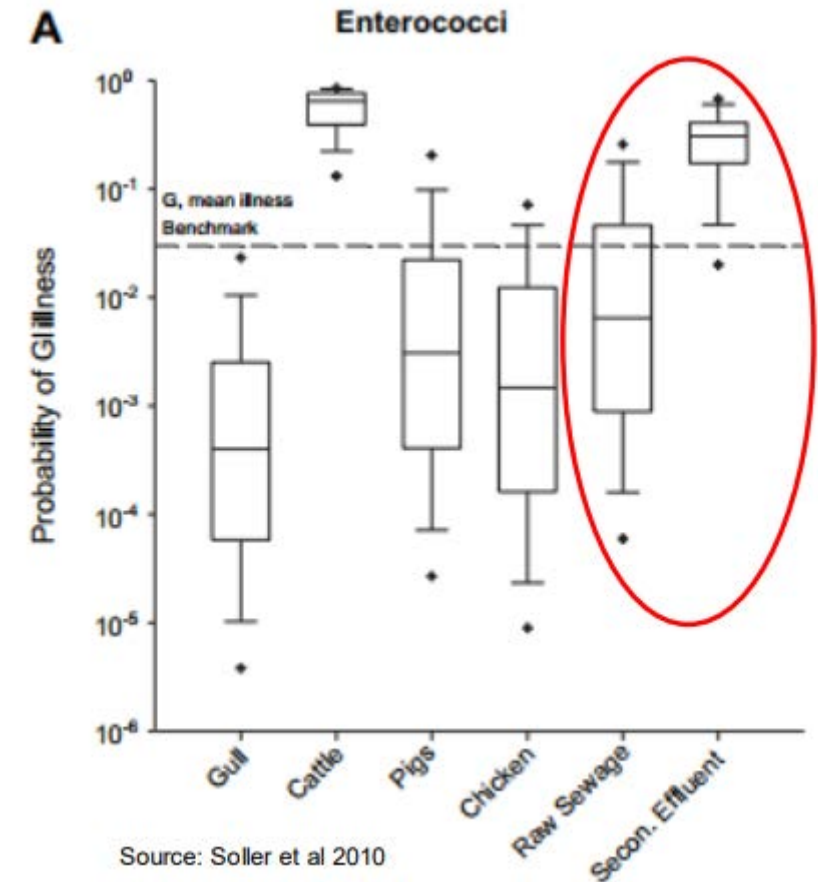


# FIB concentrations and Risk are not 1:1



Source: Gitter et al, 2020

“human health risk... is predominantly driven by the most infectious source instead of by the largest contributing source to a waterbody. The proportion of a single-source contributing to the overall fecal indicator concentration is not an indicator of the overall human health risk, therefore, determining which source represents the most dominant human health risk can assist in targeting management efforts” (Gitter et al., 2020)



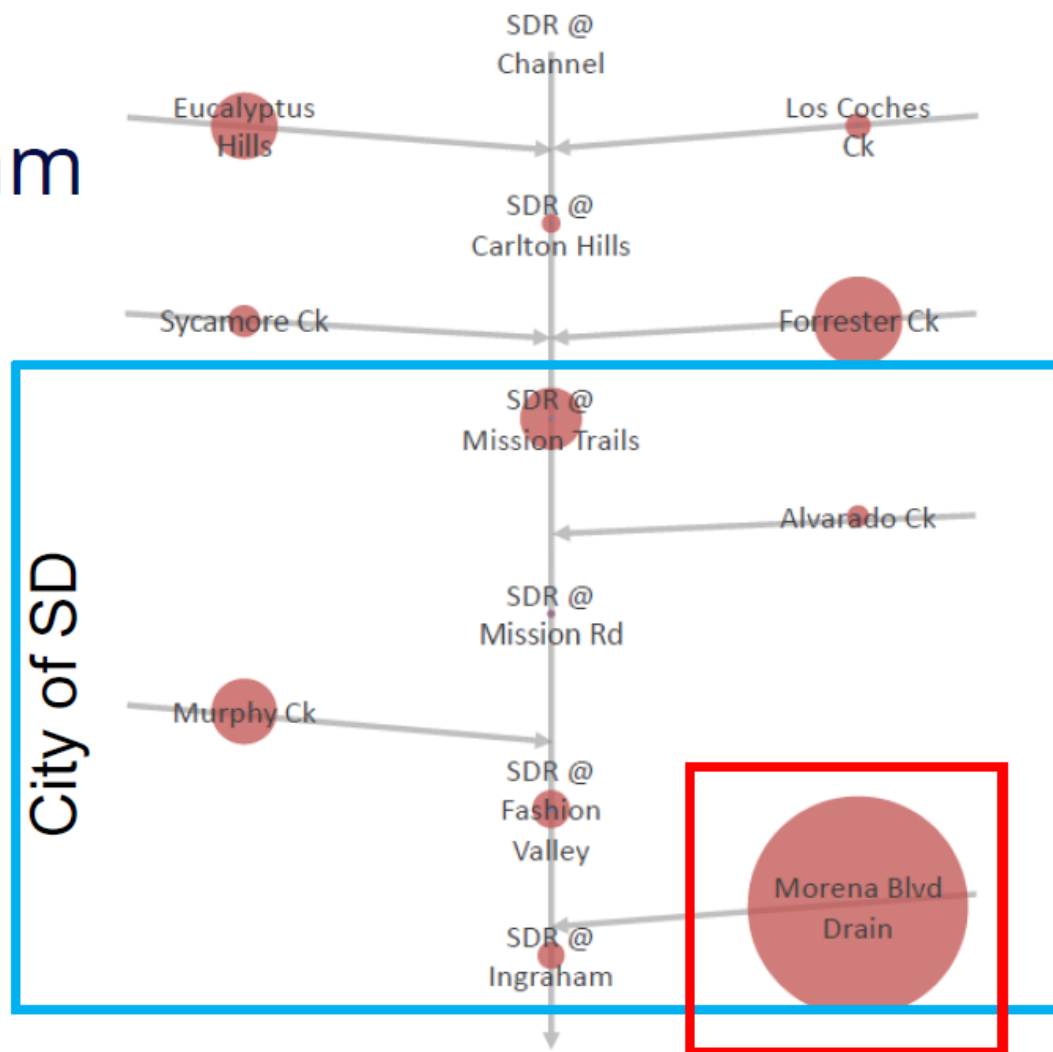
Source: Soller et al 2010



# City of SD's Science-based Approach

## San Diego River Upstream Source Tracking Study

Concentrations of  
HF183 during 2016  
storm event



Driver for  
adaptive  
management



# Adaptive Management Approach to Human Source Control



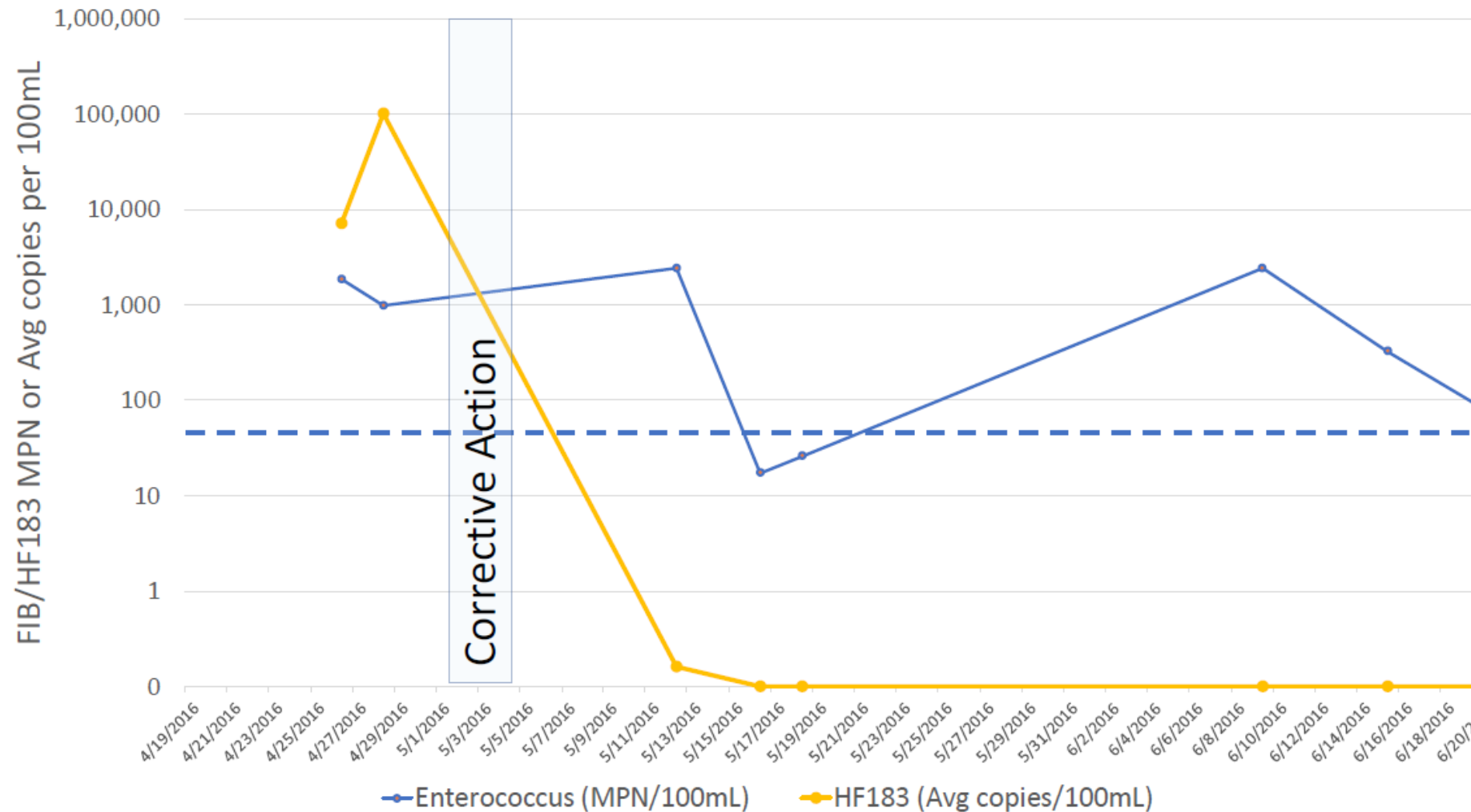
- Tiger Team established in response to SHS data
- Rapid response to findings of elevated HF183
- Combined traditional tools + new tools (HF183) + intra and interdepartmental collaboration



# Adaptive Management Approach to Human Source Control



HF183 fully abated,  
**FIB persists above action level**



# Efforts to reduce FIB

## Dry Weather Flows:

- Low Flow Diversions (to sanitary sewer)
- Low Flow Treatment (e.g., UV)
- Human waste control strategy (e.g., Santa Monica Bay Beaches)

Sometimes but its complicated

## Wet weather flows:

- Green infrastructure

Don't know yet

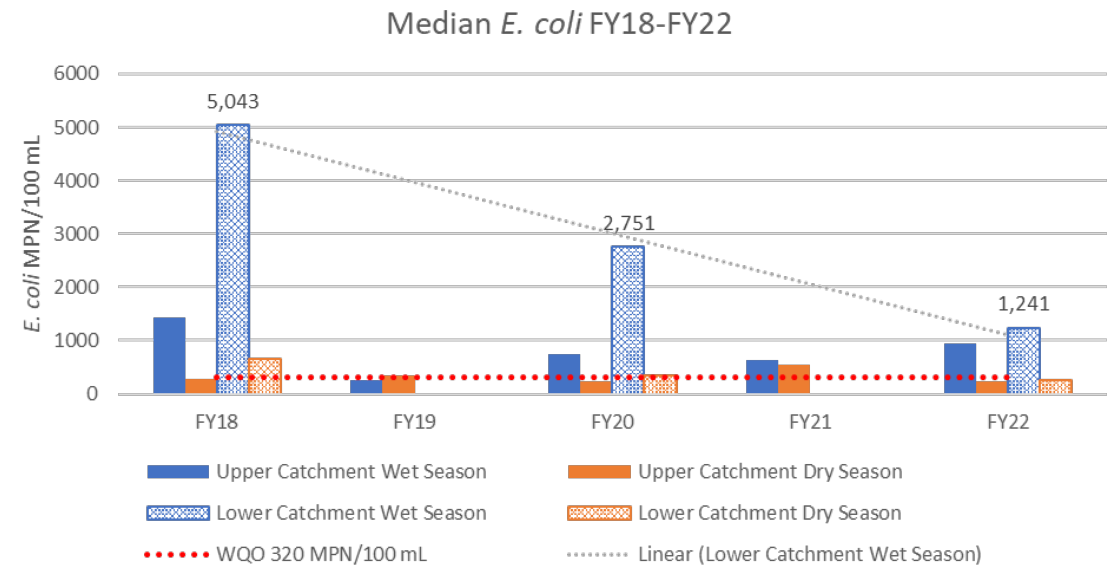
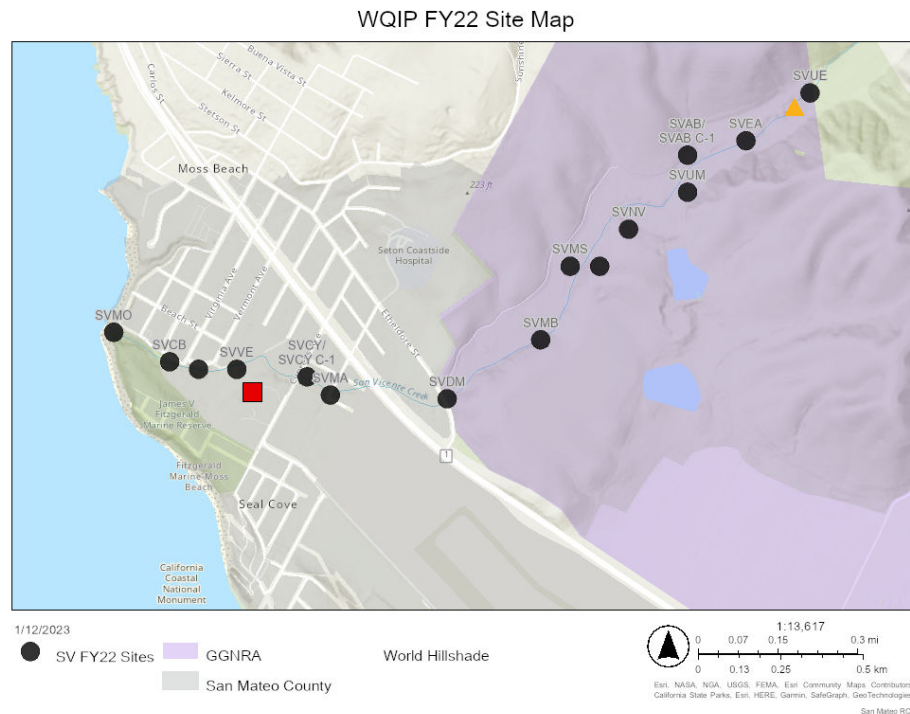
# But what's working?

# So, what should we do about FIB?

- Monitoring: augment FIB sampling with human MST (HF183)
- Determine Safe swimming distances at beaches
- Better signage
- Preventative care through outreach and education
- Implementation: prioritize dry season flows (complex due to culverted creeks and groundwater inflow)
- RCD will continue providing technical assistance to land managers
- Upland sources?
- Wet season sources?

# Where are we seeing improvements?

- San Vicente Creek in SMC
  - 50% decrease in median wet season e.coli concentrations year on year since 2018
  - First Flush results met action levels last two years in a row (after being the #1 beach bumper in the State)
  - Dry season improvements in other urban areas though not necessarily seeing WQOs met







## Opportunities for partnership

- Pet waste outreach and cleanup community group
- Safe swimming distance/plume studies at creek mouth beaches (salinity and FIB)
- Dry season flow mapping for FIB control
- Orthophosphate monitoring
- Adding FOG management to Ocean Friendly Restaurants
- Neighborhood cleanups (Ocean Friendly Neighborhoods?)



# Choose your own adventure!

- Pillar Point Harbor?
- San Vicente Creek?
- San Pedro Creek and Pacifica State Beach?







**[www.sanmateoRCD.org](http://www.sanmateoRCD.org)**

**[www.facebook.com/sanmateoRCD](https://www.facebook.com/sanmateoRCD)**

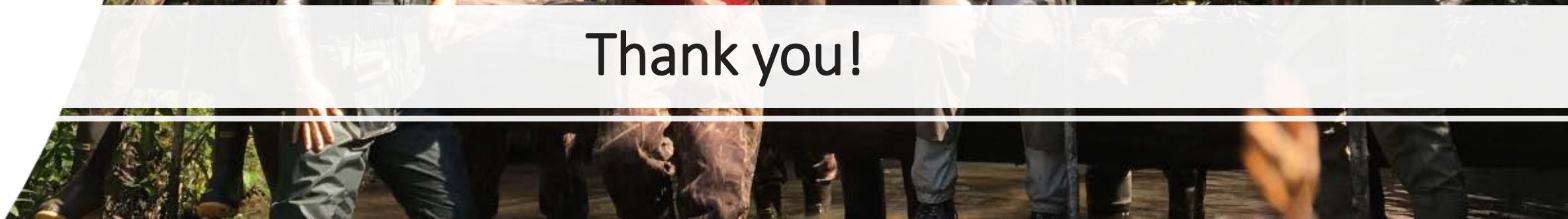
**YouTube: [sanmateoRCD](https://www.youtube.com/sanmateoRCD)**

**[instagram.com/sanmateoRCD](https://www.instagram.com/sanmateoRCD)**

**[noah@sanmateoRCD.org](mailto:noah@sanmateoRCD.org)**



**Thank you!**

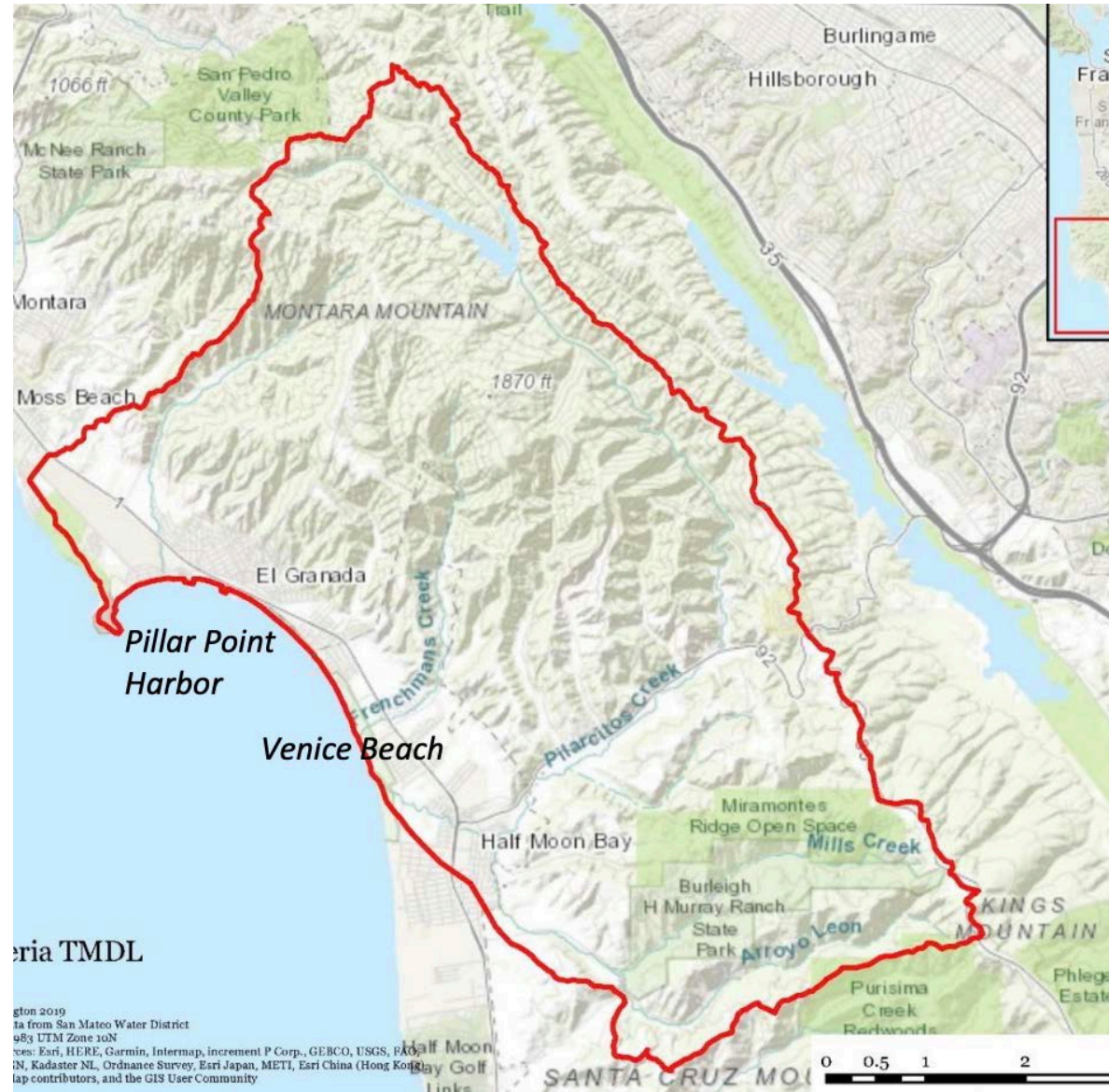




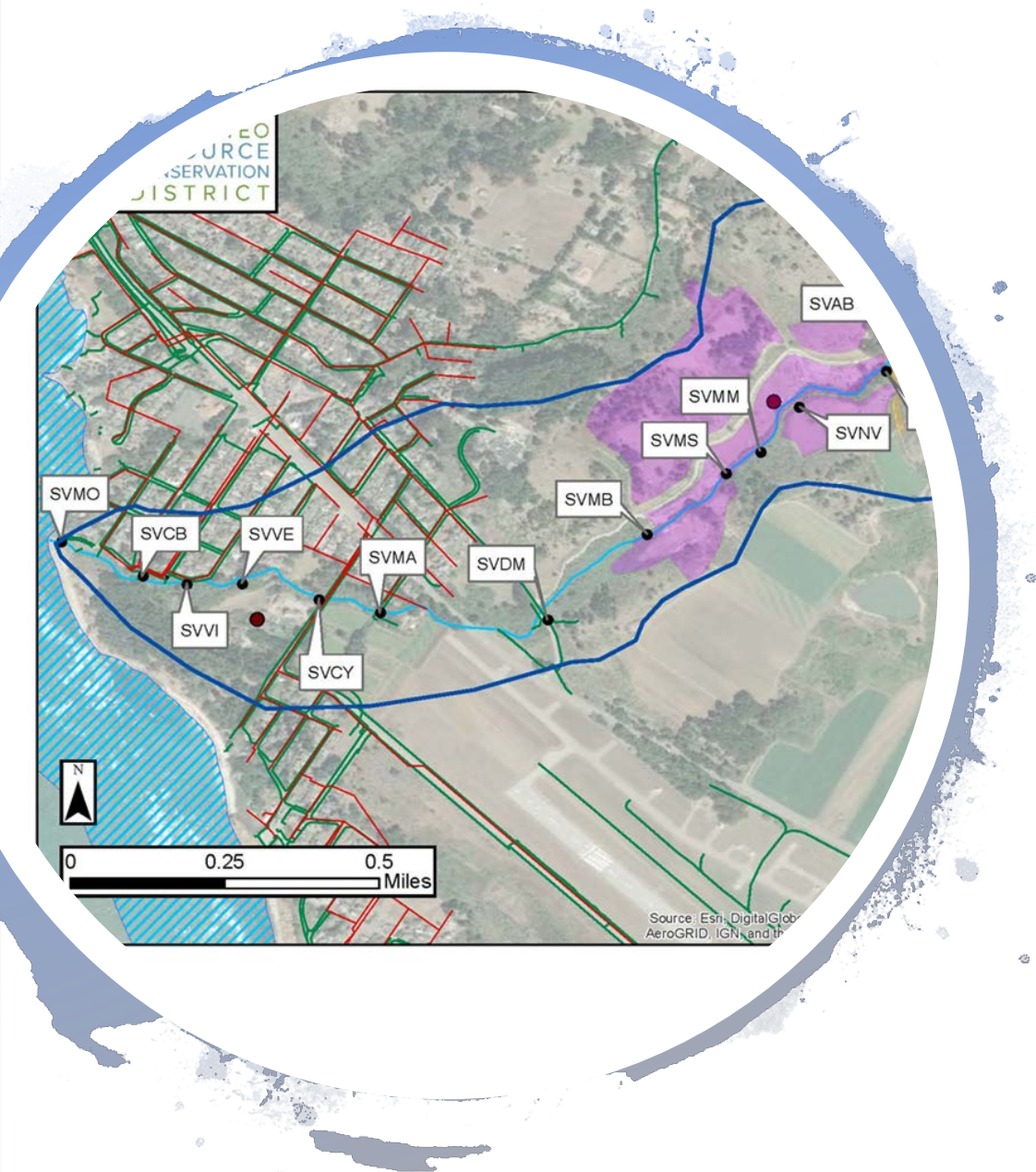
# PPH and Venice Beach TMDL

RCD PPH Investigations:

- Circulation study
- Monitoring upper watersheds, stormwater network, beach discharges
- CCTV inspections (storm and sewer)
- Live aboard boat dye testing
- Tenant row dye testing







# San Vicente Creek



Horses (wet season)



Humans  
(intermittent wet  
and dry season)



Deer/Cow  
(intermittent dry  
season)



Dogs (wet and dry  
season)



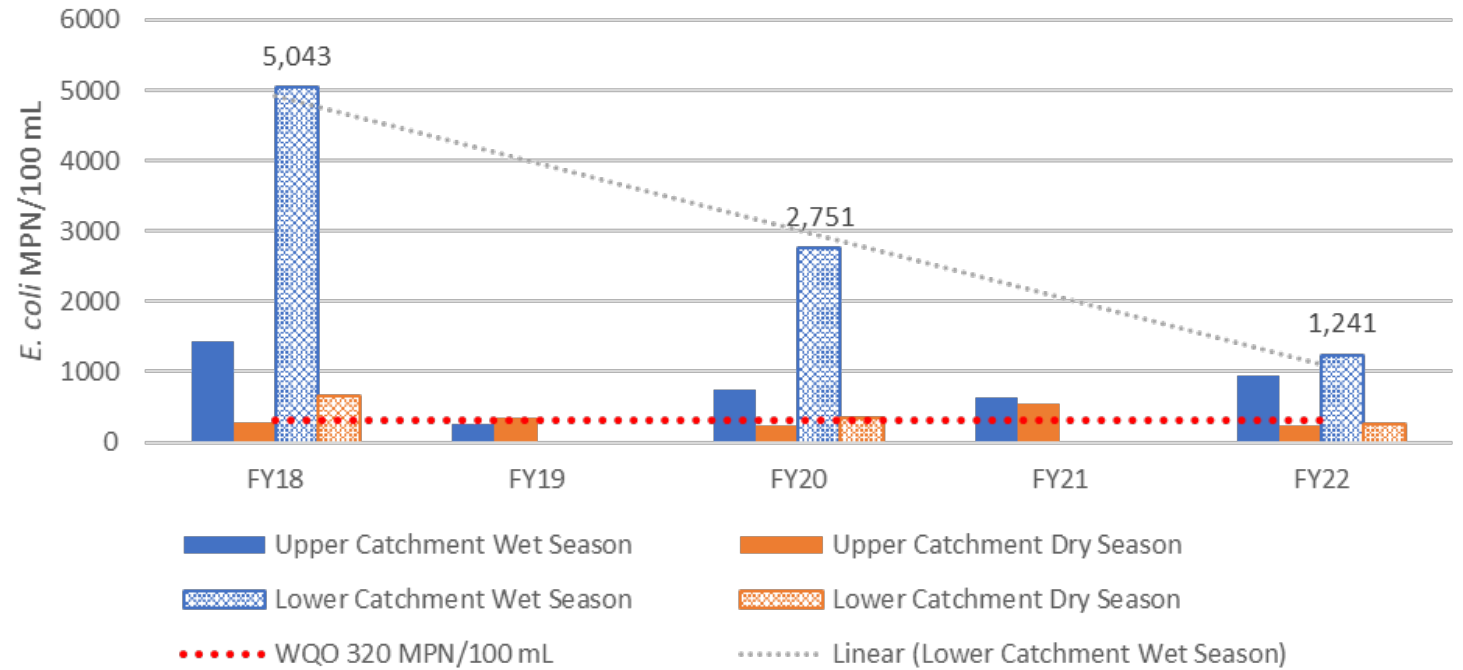
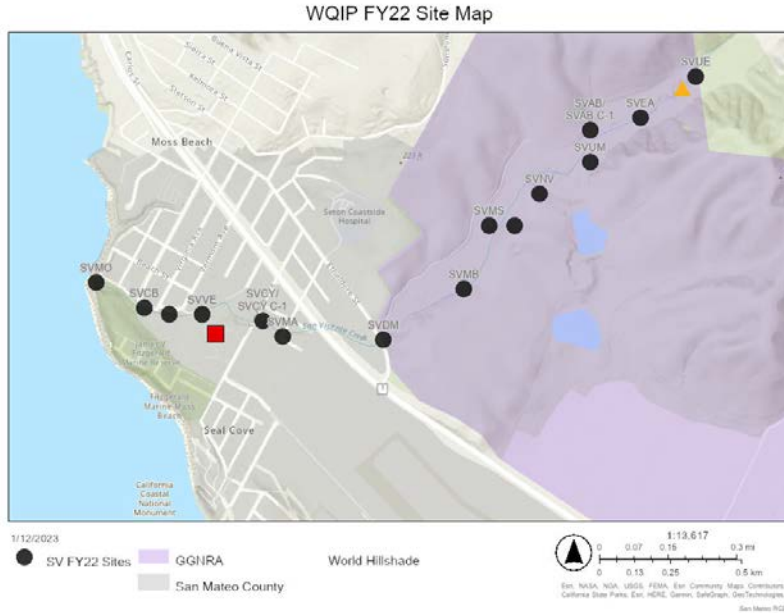
Wildlife (wet and dry  
season upper)

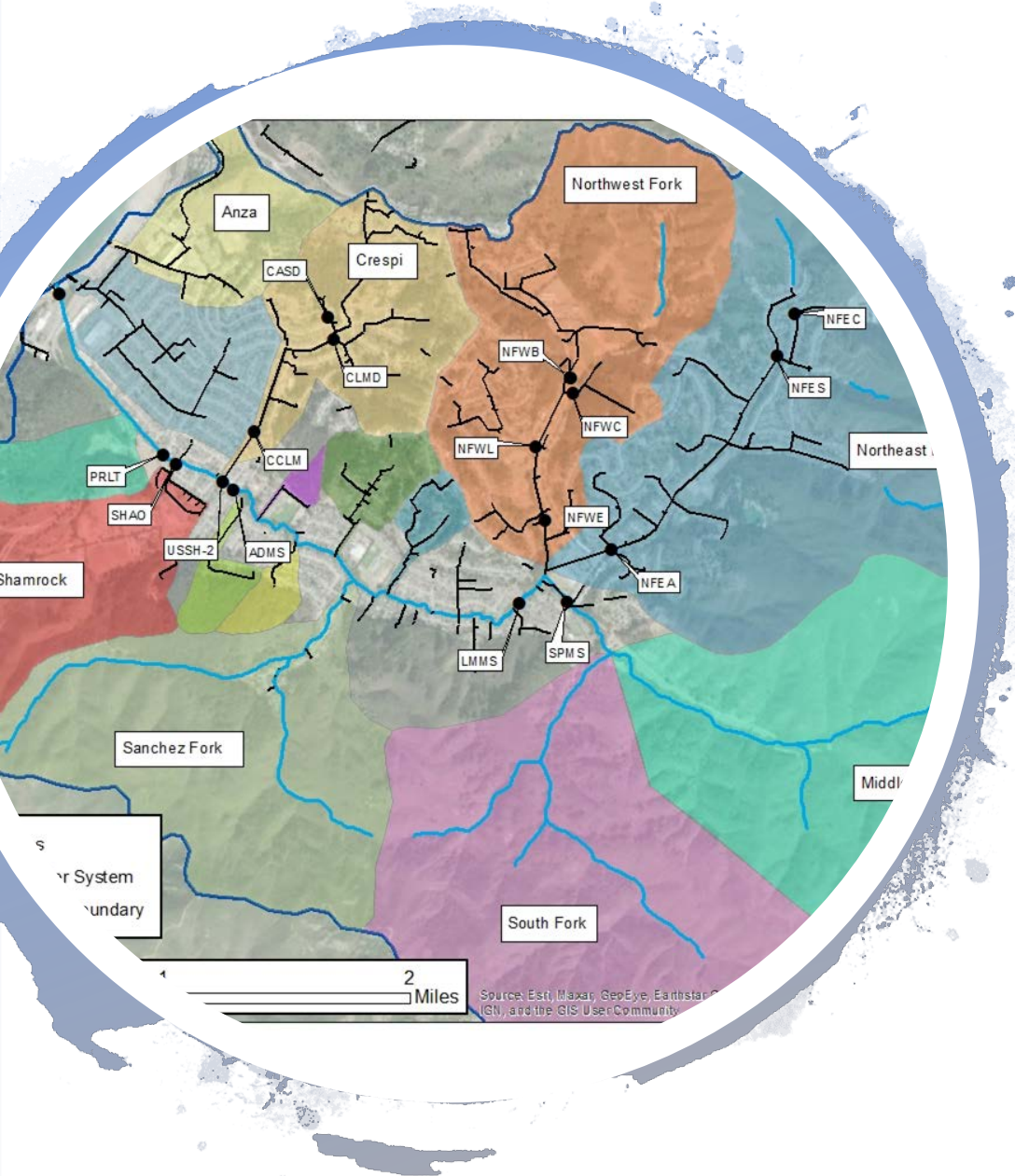


Secondary sources

# San Vicente Creek WQIP

Median *E. coli* FY18-FY22





# San Pedro Creek



Horses (Wet and Dry season multiple sub-catchments)



Humans (Wet and Dry season multiple sub-catchments)



Dogs (Wet and Dry season multiple sub-catchments)



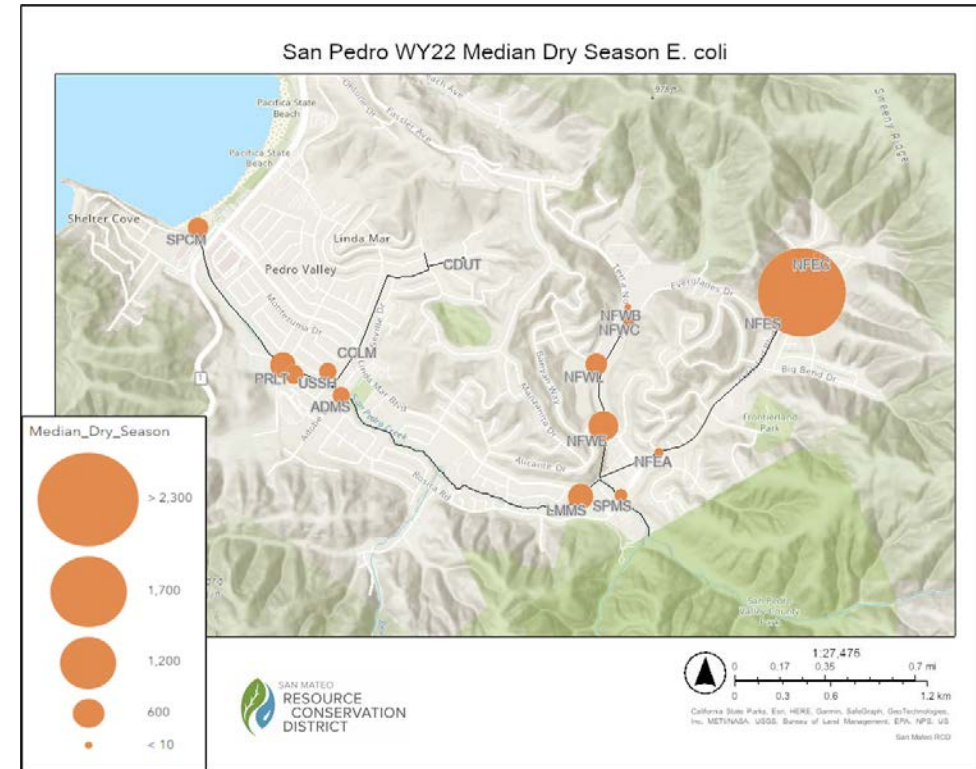
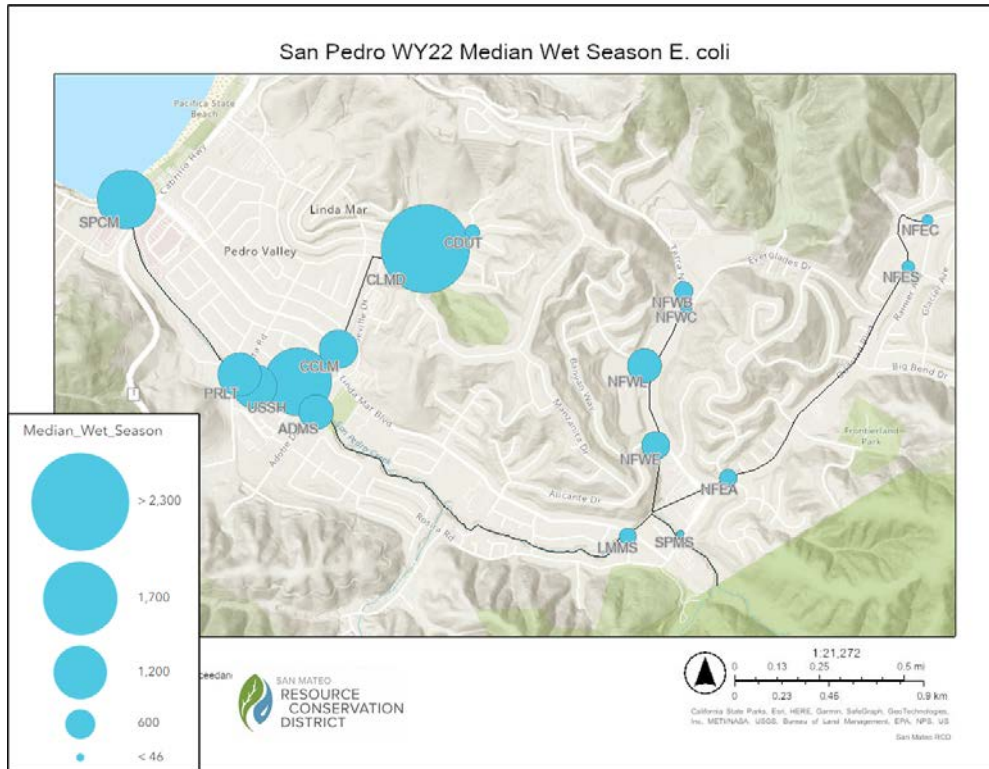
Wildlife (inferred from species not tested – present wet and dry seasons in all sub-catchments)



Secondary sources



# San Pedro Creek Median E. coli Maps





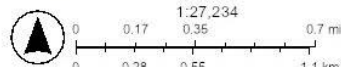


# San Pedro Creek: Dog MST

San Pedro WY17-22 Dry Season Dog MST Detection Map



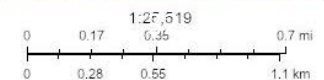
3/7/2023



San Pedro WY17-22 Wet Season Dog MST Detection Map

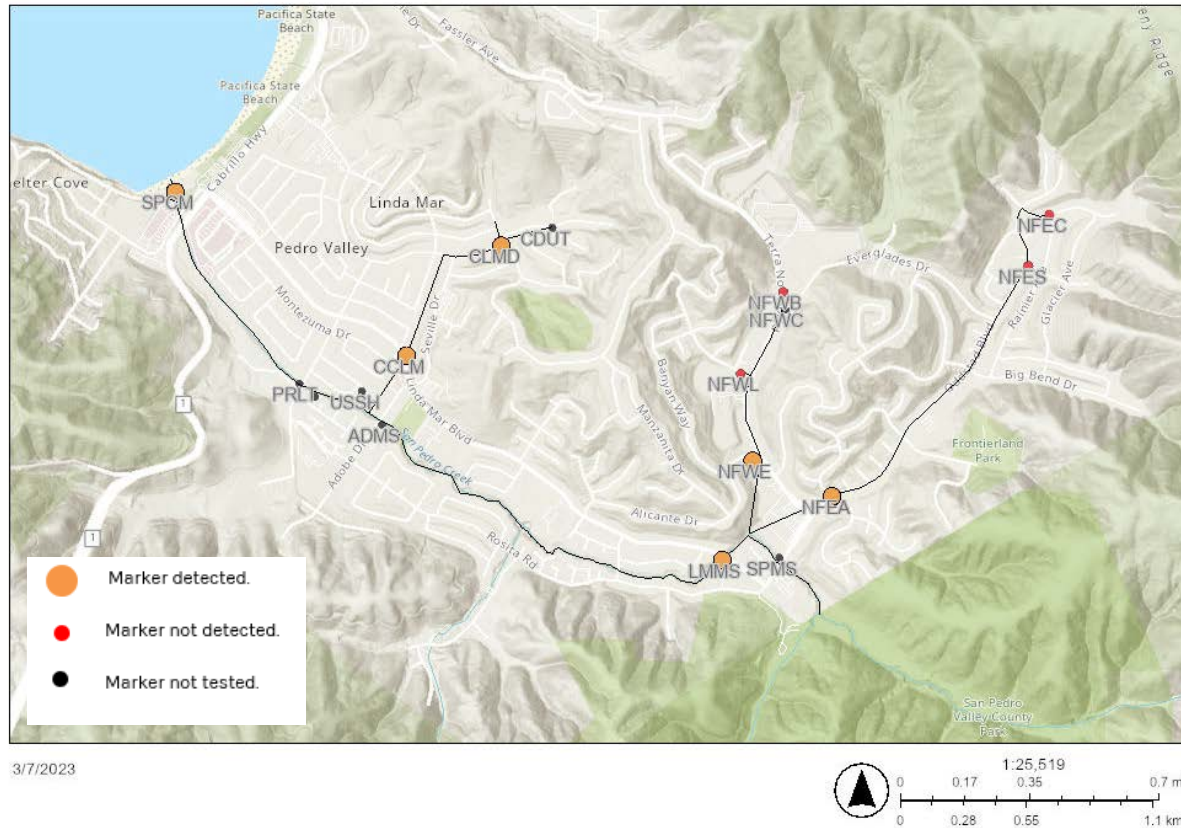


3/7/2023



# San Pedro Creek: Human MST

San Pedro WY17-22 Dry Season Human MST Detection Map



San Pedro WY17-22 Wet Season Human MST Detection Map







## PPH: Some Key Findings

1. Not chronic sources
  - Boats in the inner harbor
  - The outer harbor
  - Dogs on beaches
  - Birds
2. No missed connections identified in stormwater system or sewer system
3. One segment of stormwater line where groundwater inflow is likely (repairing this soon)
4. Should focus on dry season flows from Capistrano
5. Dry season flows from St. Aug and Denniston may be more difficult to address

# FIB summary

- San Vicente Creek significant decrease in median concentrations!
- For urbanized catchments, dry season flows should be targeted first
- Don't yet know if GI will work for wet season
- Need MST to allocate resources to best reduce sources of bacteria
- FIB concentrations and Risk are not 1:1. Should prioritize human MST (HF183). Important to remember that removing human sources may not reduce FIB concentrations.

The goal with FIB is to reduce risk to human health