



SAN MATEO
RESOURCE
CONSERVATION
DISTRICT

PPH Water Quality Assistance Update

Noah Katz
Water Quality Program Manager
&
Nicole Schmidt
Water Quality Program Coordinator

Overview

- TMDL Deliverables
- Rainwater Capture Project
- Blue Weeks Signage
- Coastside Pet Waste Program
- Drainage Map
- First Flush Results



Resource Conservation District



Water



Climate



Wildlife



Agriculture



Fire and Forest Health



Stormwater and Sanitary Sewer System Inspections and Mapping

- TMDL Implementation Actions:
 1. “Inspect sewer and stormwater laterals and all other components connecting facilities at Pilar Point Harbor to the sanitary sewer system”
 2. “Evaluate effectiveness and proper performance of sewage collection systems (sewage dump stations, sewage pumpout stations, sewer lines, etc.) for the harbor marine and harbor amenities”
- Re-inspect stormwater lines with #4 rating
 - DI1 → DI2: drains to Inner Harbor Outfall
 - DI3 → Outfall (First Flush Site)
 - CB3B → CB31
 - SAB → Unknown

Work planned for this summer

- Cost estimate: \$10,400
- Work to be completed over 2 nights to minimize disruption



South Stormwater Lines

Stormwater Capture

- DWR Grant submitted
- Water resources project
- Co-benefits:
 - Water quality
 - Water security
 - Beautification/greening
- Lot Area = ~435,000 sq ft
- Average capture potential = ~5-million gallons*
- Usage offset potential = 86%

*for 2018-2020 period. **Relative to 4/19-3/20 usage)





WQ Signage: The problem

- Not always engaging
- Doesn't allow celebration of good news
- Permanent signage of risk contamination doesn't reflect most recent data





WQ Signage: The solution

- Reflects most recent data
- Tells people when its safe
- Allows for celebration



WATER QUALITY FLAG WARNING SYSTEM



POTENTIAL HEALTH HAZARD



The bacteria levels at this beach are tested weekly. The following flags indicate current levels of bacteria & associated health risk:



Black Flag: Beach is Closed

Swimming, wading, and contact with water and sand is not advised due to excessive bacteria.



Yellow Flag: Use Caution

Increased health risk for water contact. Bacteria levels are above the State Health Standards limit.



Blue Flag: Low Risk

Low health risk for water contact. Bacteria levels are within State Health Standards limit.

For more information and weekly test results visit www.sanmateorcd.org/WQ



WATER QUALITY FLAG WARNING SYSTEM



POTENTIAL HEALTH HAZARD



The bacteria levels at this beach are tested weekly. The following flags indicate current levels of bacteria & associated health risk:



Black Flag: Beach is Closed

Swimming, wading, and contact with water and sand is not advised due to excessive bacteria.



Yellow Flag: Use Caution

Increased health risk for water contact. Bacteria levels are above the State Health Standards limit.



Blue Flag: Low Risk

Low health risk for water contact. Bacteria levels are within State Health Standards limit.



For more information and weekly test results visit www.sanmateorcd.org/WQ



SAN MATEO
RESOURCE
CONSERVATION
DISTRICT

Pillar Point Harbor Beach Water Quality Status



Red Light: Beach is Closed. Swimming, wading, contact with water and sand not advised. There is a Water Quality Hazard

Yellow Light: There is an increased health risk for swimming and wading. Bacteria results do NOT meet State Health Standards.

Green Light: The most recent weekly water quality testing indicates Low health risk for water contact. Bacteria results are within State Health Limits.

Be advised, there is always some risk with beach water contact. Beach water contact may cause illness. Do not swallow water. Shower and towel dry after water contact. Water quality conditions can change at any time.

Tenaa un cuenta...

Current Site Conditions* (September 13, 2021; data available on September 15)

Sample Date	PPH 8 (Mavericks?)			PPH 7			PPH 5		
	Total coliform	E. coli	Entero	Total coliform	E. coli	Entero	Total coliform	E. coli	Entero
9/7/2021	20	<10	<10	160	10	<10	95	<10	10
8/30/2021	<10	<10	<10	10	10	<10	2723	10	10
8/23/2021	189	75	20	62	<10	<10	253	10	30
8/16/2021	20	20	<10	871	20	<10	884	63	20
8/9/2021	52	<10	10	41	10	10	<10	<10	31
30-Day Geometric Mean	44.53	38.73	14.14	81.26	11.89	10.00	490.44	18.47	17.94

Sample Date	PPH 9		
	Total coliform	E. coli	Entero
9/7/2021	235	10	<10
8/30/2021	805	10	41
8/23/2021	213	41	161
8/16/2021	10	<10	<10
8/9/2021	41	10	10
30-Day Geometric Mean	110.84	14.23	40.41

WQO	Single-Sample	Geomean (of at least 5 weekly samples (collected within a 30 day period))
Total Coliform	10,000	1,000
E. coli	400	200
Enterococcus	104	35


Figure 1. WQOs from <https://www.smchealth.org/beaches>






Coastside Pet Waste Outreach Program

- Literature Review and Adaptive Management
- Public Pet Waste Management Stakeholder Group
- Volunteer Pick-Up Events
- Table Local Events
- Print Materials
- Website
- Social Media

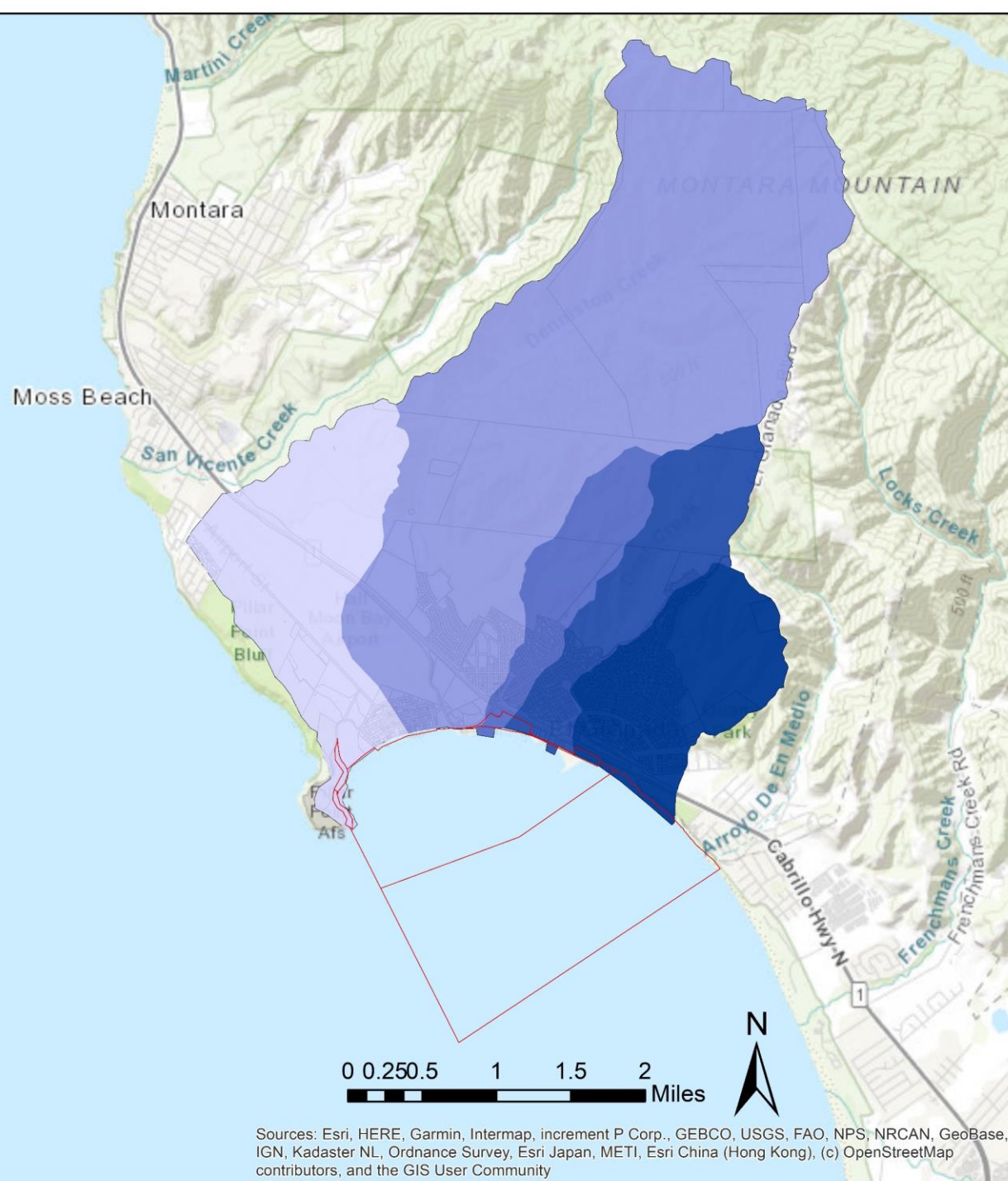
Pillar Point Harbor Sub Watersheds

 PPH Property
<all other values>

WATERSHED

-  PILAR POINT MARSH
-  DENNISTON CREEK
-  MONTECITO AVE DRAINAGE
-  EL GRANADA CREEK
-  SANTA MARIA AVE DRAINAGE

 Parcels



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



SAN MATEO
RESOURCE
CONSERVATION
DISTRICT

First Flush 2021 Water Quality Results

Nicole Schmidt
Water Quality Program Coordinator

COMMUNITY BASED



CITIZEN SCIENCE



VOLUNTEER EVENT





Sewer Authority Mid-Coastside
SAM



**Surfrider
Foundation®**



**PARTNERS &
SPONSORS**



What do
we test
for?



Pollutant	Potential Sources	Effects
Fecal Indicator Bacteria (<i>E. coli</i> , <i>Enterococcus</i>)	Feces of warm blooded animals (humans, dogs, horses, wildlife etc.)	Indicator for pathogens that harm human health
Nutrients (nitrates and orthophosphates)	Fertilizer, pesticides, detergent	Ecosystem and recreation impacts
Metals (copper, zinc, lead)	Gutters, roofs, brake pads, industrial waste, paint, fire	Human health impacts, reduced reproduction of marine mammals
Total suspended solids	Construction, erosion, agricultural runoff, fires	Impacts water column and is an indicator of presence of other contaminants in the water
Physical measurements (electric conductivity, temperature, observations)	Rain influences, minerals, salts	Conductivity tells us if we captured the rain, high temperatures has ecological impacts, observations give context to data

San Pedro Creek Mouth

Montara Creek

San Vicente Creek

Inner Harbor Parking
West Point Ave
Vassar Ave
El Granada Ditch

Frenchmen's Creek
Pilarcitos Creek

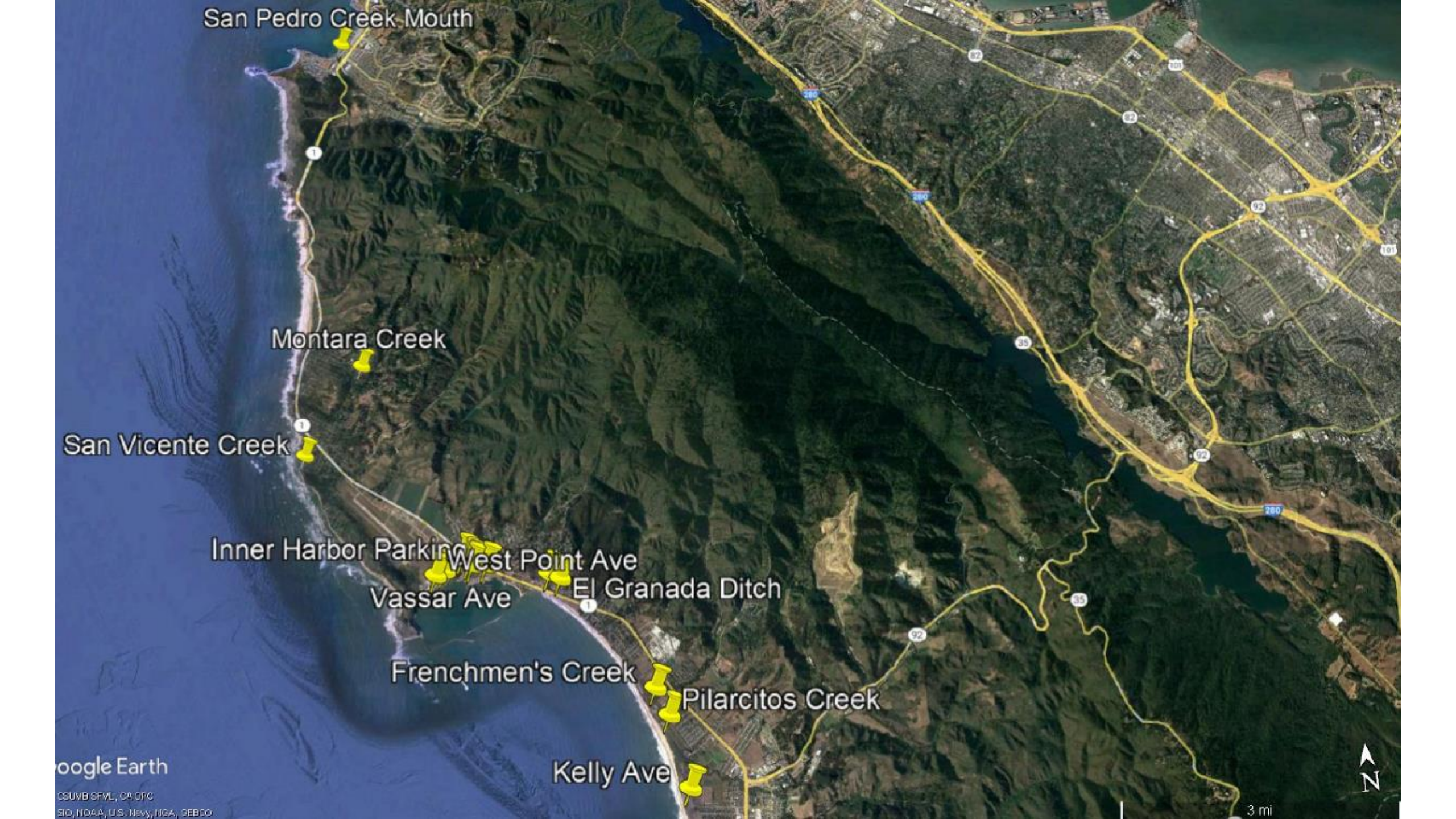
Kelly Ave

Google Earth

CSUMB SFML, CA OFC
BIO, NOAA, U.S. Navy, NGA, GEBCO



3 mi





Denniston Creek Outfall

Capistrano Rd

Inner Harbor Parking

St. Augustine Creek

Vassar Ave

West Point Ave

Key Findings

Above recommended amounts:

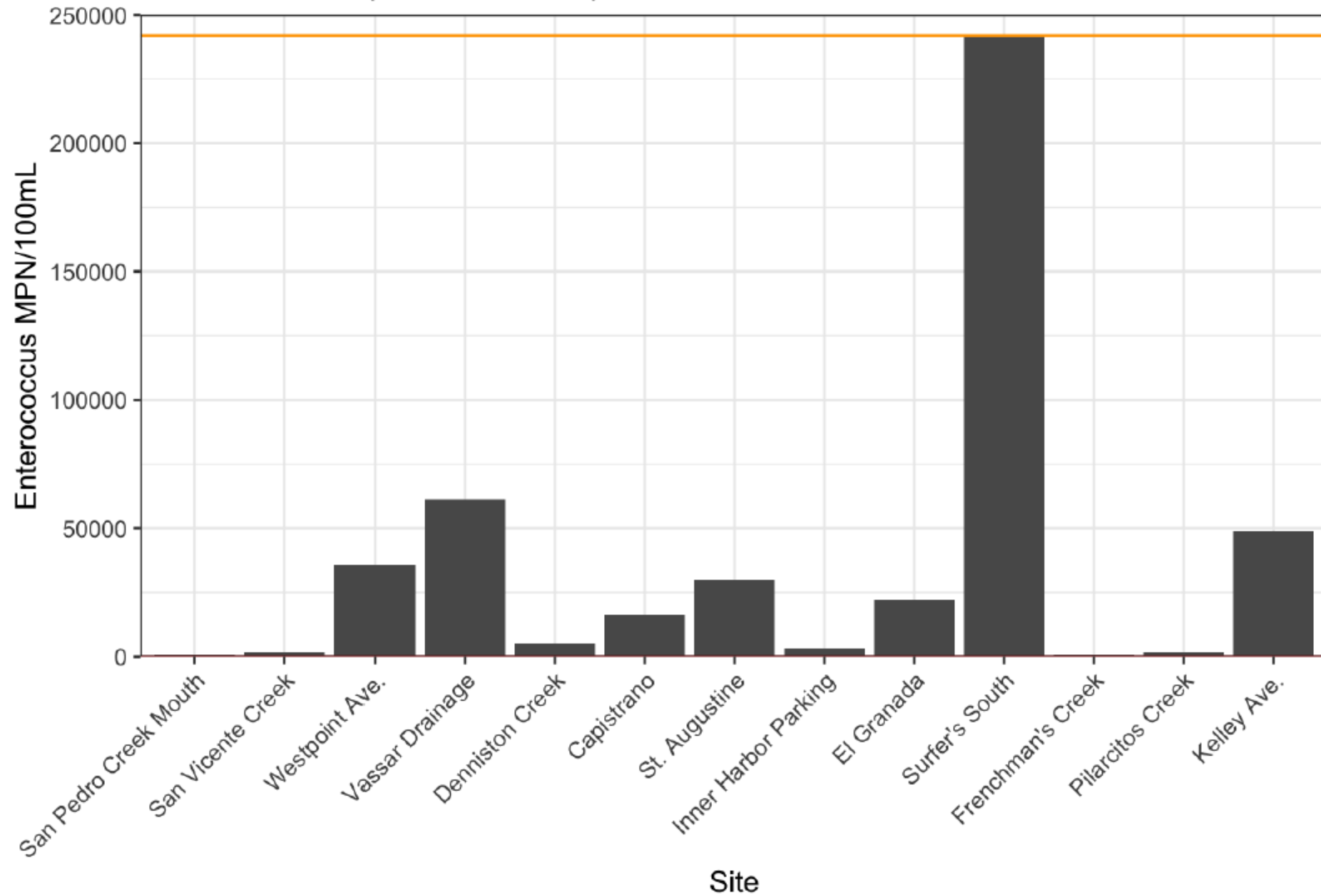
- *Enterococcus* (6/6 sites)
- *E. coli* (6/6 sites)
- Orthophosphates (5/6 sites)
- Copper (2/6 sites)

No concerns observed:

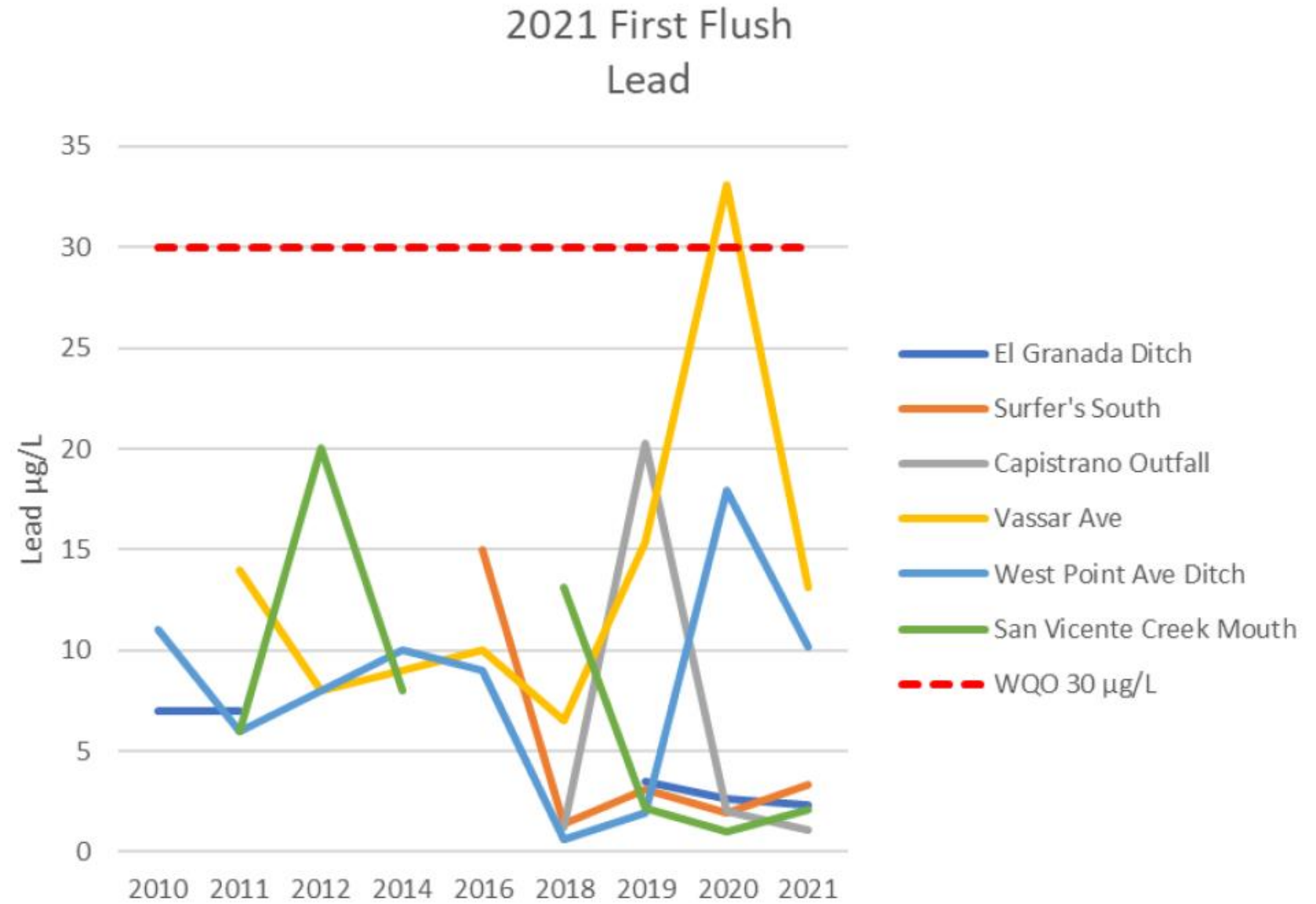
- Nitrate
- Lead
- Zinc
- Total suspended solids



Enterococcus (1:100 Dilution)



Vassar Drainage





www.sanmateoRCD.org

www.facebook.com/sanmateoRCD

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

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

noah@sanmateoRCD.org

nicole@sanmateoRCD.org

Thank you!