



Snapshot Day 2017

May 6, 2017



You are here!



Lisa Emanuelson
Volunteer Monitoring Coordinator
California Marine Sanctuary Foundation





Our National Marine Sanctuaries



Olympic Coast

Cordell Bank
Gulf of the Farallones
Monterey Bay
Channel Islands

Thunder Bay

Stellwagen Bank

Monitor

Gray's Reef

Flower Garden Banks

Florida Keys

Papahānaumokuākea
(Northwestern Hawaiian Islands)

Hawaiian Islands Humpback Whale

Fagatele Bay

American Samoa

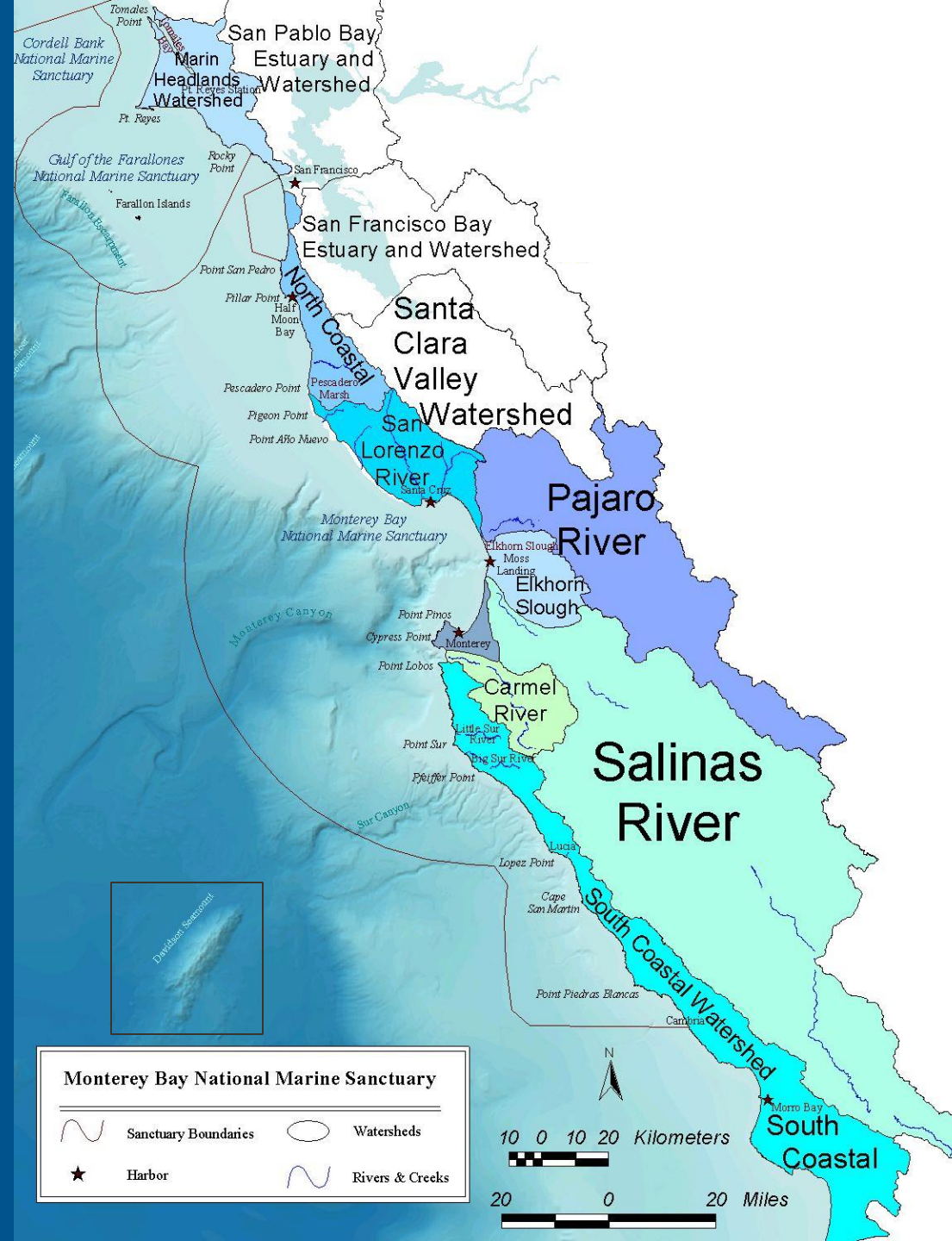
Map Source: NASA

● National Marine Sanctuary

★ Marine National Monument

Monterey Bay National Marine Sanctuary

- 4,601 sq. nautical miles
- 350 miles of coast
- multiple habitats
- largest under water canyon on the west coast
- deepest point 12,713 ft.
- 345 spp. of fish
- 94 spp. of sea birds
- 33 spp. of marine mammals
- 7000 sq. mile watershed



Snapshot Day

Since 2000

What is the quality of water flowing into Monterey Bay National Marine Sanctuary?

Develop a long term data set of quality monitoring results to enable resource managers to make good decisions to protect the environment

Inspire stewardship

Snapshot Day

Partnerships are key!

Coastal Watershed Council



San Mateo County RCD



Sewer Authority Mid-Coast



EPA County of Santa Cruz

MRSWMP



City of Watsonville



City of Salinas

City of Santa Cruz

City of Scotts Valley

San Luis Obispo County Health Lab

San Mateo County Health Department



Morro Bay NEP Watsonville Wetlands Watch

Snapshot Day

2017 Stats

146 sites

179 volunteers

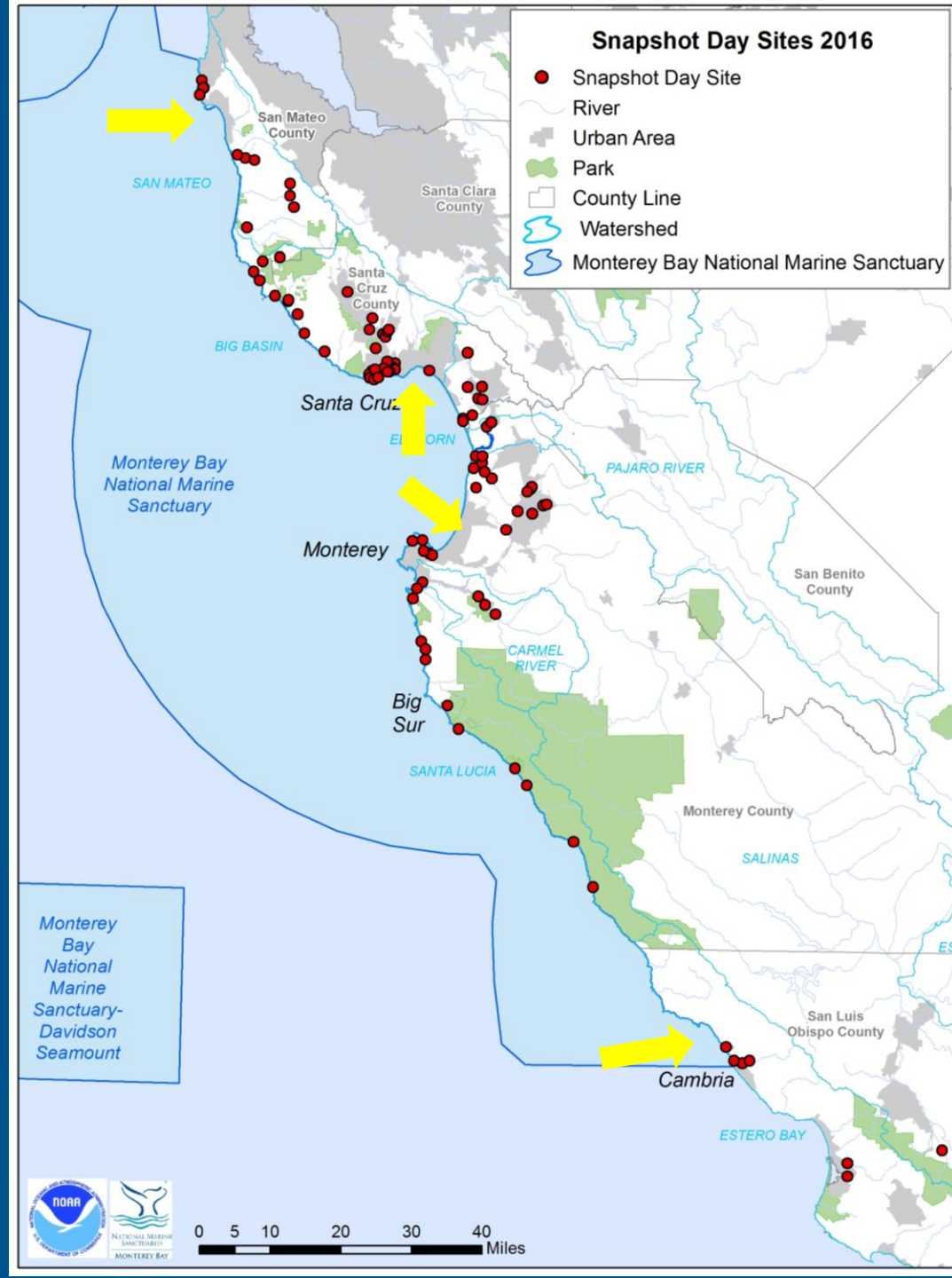
4 Hubs

Half Moon Bay

Santa Cruz

Monterey

San Simeon



Snapshot Day

Parameters

- Dissolved oxygen
- pH
- Water & air temperature
- Conductivity
- Turbidity/transparency

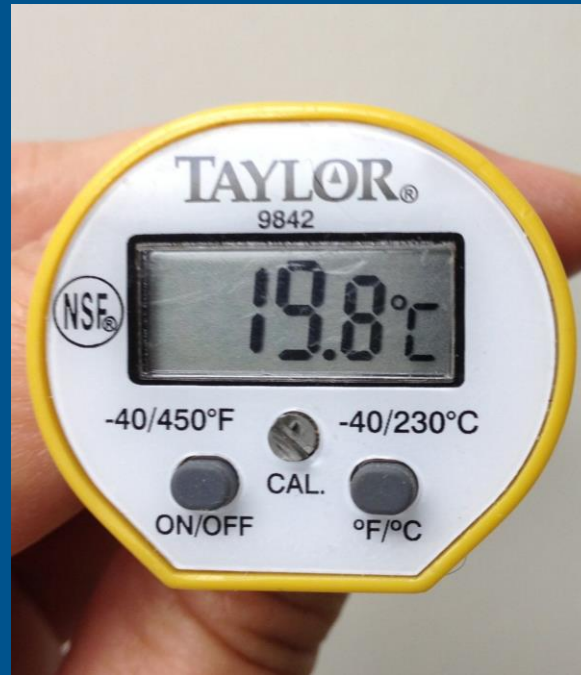
- Nitrate as N
- Orthophosphate as P
- *E. coli* and total coliform



Snapshot Day

Lessons learned....

“If you can't explain it to a six year old, you don't understand it yourself.” –Albert Einstein



Monterey Bay National Marine Sanctuary Snapshot Day Field Data Sheet

Please Use one sheet for each Station. Use back for comments.

GPS Coordinates:

DOC ID# : _____

Datum: _____

W: _____

N: _____

GPS ID: _____

Hydrologic Unit ID: 309

Site ID: 309-SALIN-31

Waterbody: _____

Waterbody Type: _____

Date: May 6, 2017

Watershed: _____

Watershed Group Name: _____

Site map is attached to this data sheet, please update if necessary.

Flow discharge (circle one):
Stagnant (NOT Flowing)- do not sample!
Moderate (< 5 gal/sec) Trickle (< 1 quart/sec)
High (> 5 gal/sec)

Weather Conditions (circle):
Has it rained within the last 24 hours? N

<u>no clouds</u> partly cloudy heavy clouds overcast	<u>none</u> foggy misty rain	<u>none</u> breezy windy <u>blustery</u>
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Volunteer Monitors

TEAM LEADER (list full name & phone #):
Lisa Emanuelson Phone: () - - -
Craig Noke Phone: () - - -
Dave Parara Phone: () - - -

4) _____ 5) _____

(list additional names on back)

Time of Field Measurements: 10:45 am

INSTRUMENT ID	PARAMETER	RESULT	Replicate	UNITS (circle appropriate unit)	Other Info
<u>TT-3NET-42</u>	Air Temperature	<u>18</u>	<u>18.2</u>	F <input checked="" type="radio"/> C	Water Clarity (circle one): clear <input type="radio"/> <u>cloudy murky (water itself, not scum)</u>
<u>TT-3NET-42</u>	H2O Temperature	<u>14.5</u>	<u>14.0</u>	F <input type="radio"/> C <input checked="" type="radio"/>	
<u>PHST-3NET-51</u>	pH	<u>7.25</u>	<u>7.25</u>	pH units	Sampling device used? <input checked="" type="radio"/> Y <input type="radio"/> N If so, what kind? <input checked="" type="radio"/> Bucket <input type="radio"/> Kemmerer bottle other: _____
<u>DOC-3NET-2</u>	Dissolved Oxygen	<u>9</u>	<u>9.0</u>	mg/l (ppm)	
<u>EC-3NET-5</u>	Conductivity	<u>650</u>	<u>640</u>	<input checked="" type="radio"/> μ S <input type="radio"/> mS	other: _____
<u>TRT-3NET-3</u>	Transparency	<u>54.2</u>	<u>54.5</u>	cm	
_____	_____	_____	_____	UNIT _____	
_____	_____	_____	_____	UNIT _____	
_____	_____	_____	_____	UNIT _____	other: _____
_____	_____	_____	_____	UNIT _____	other: _____

Notes and Observations :
(include any equipment comments/problems or observations such as water color, trash composition, etc.)

Fish or Wildlife Observed:
(describe number seen, length of fish, and behavior)

Sample Collection:

Site ID:	Time Collected:	Collected by:	Type:	Container type :
<u>309-SALIN-31</u>	<u>10:35 am</u>	<u>Dave Parara</u>	<u>Bacteria</u>	100 ml with WHITE plastic lid-STERILE
<u>309-SALIN-31</u>	<u>10:35 am</u>	<u>Dave Parara</u>	<u>Nutrient</u>	100 ml with WHITE plastic lid-NON STERILE
_____	_____	_____	_____	_____

Sample Custody:

Relinquished By: _____ Received By: _____

Date /Time: _____ Date /Time: _____

This event sponsored by the Monterey Bay National Marine Sanctuary
In collaboration with the MBS Citizen Watershed Monitoring Network and the Coastal Watershed Council

Do not jeopardize your personal safety to complete this datasheet. Lisa's Cell (831) 521-9512

Snapshot Day

Lessons learned....

Recruit from local colleges...



and provide food!

Snapshot Day

Lessons learned....
Get reliable help

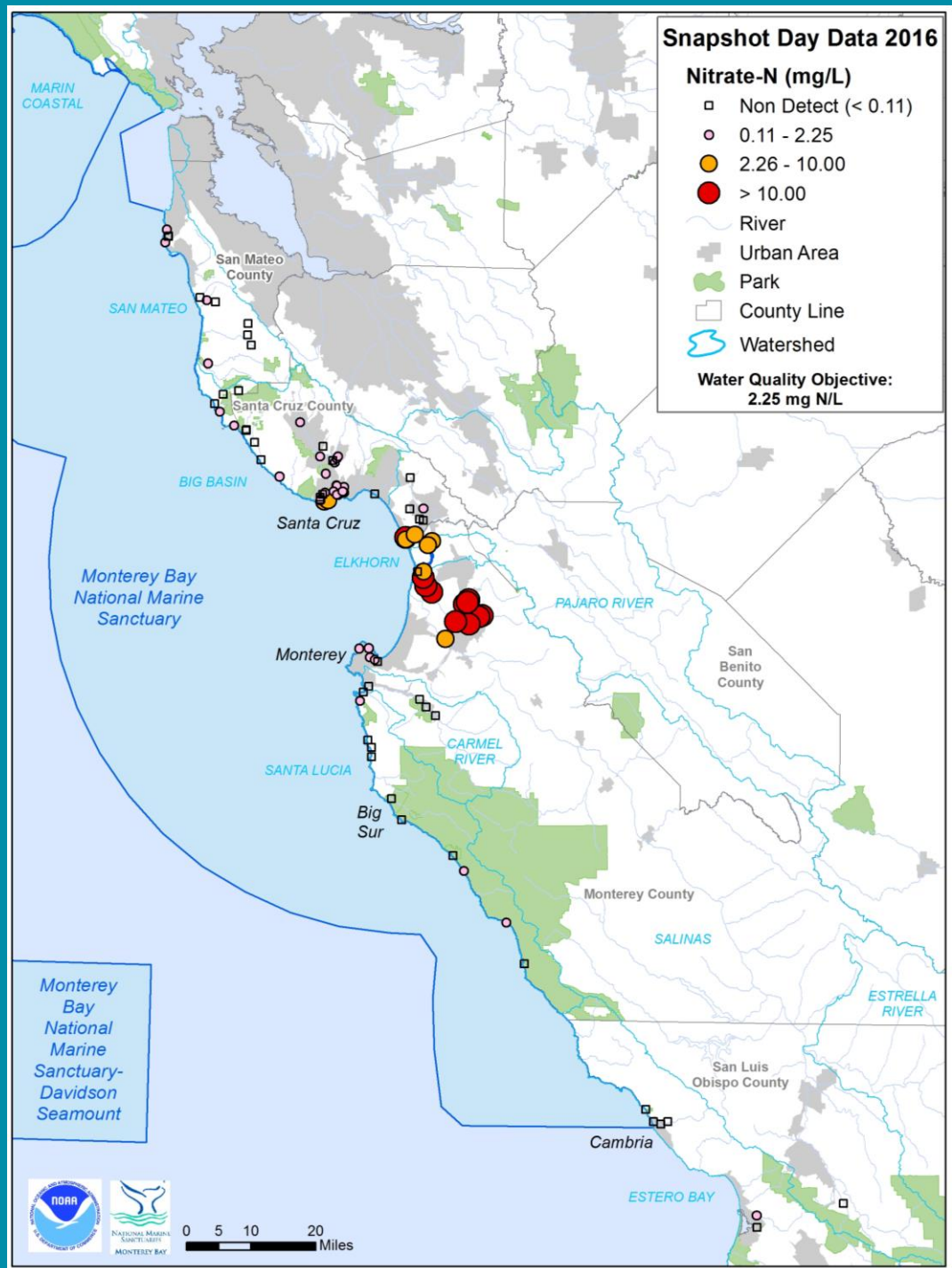


Snapshot Day

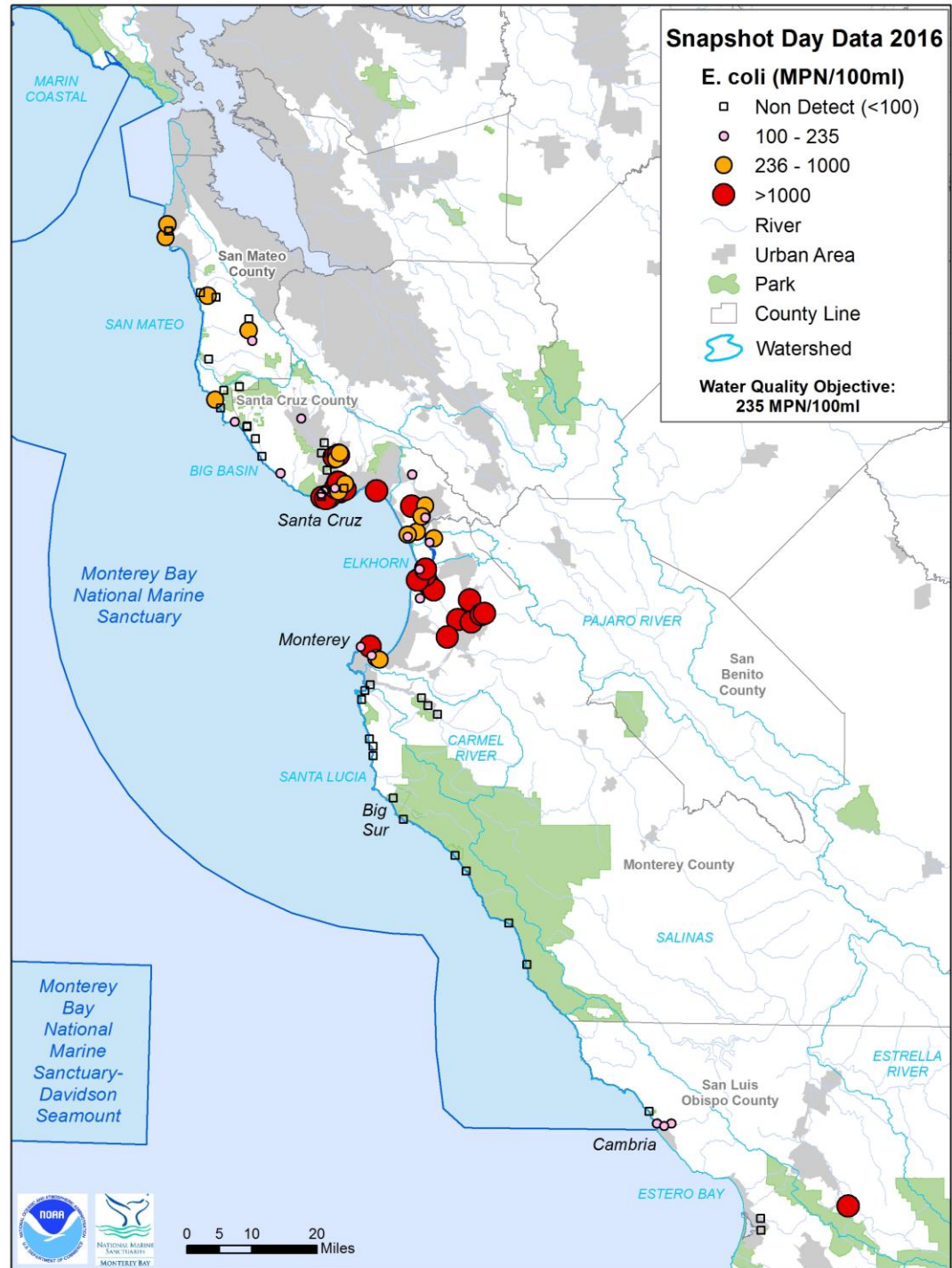
Photo Contest!
Best technique
Funniest
Team shot



Snapshot Day



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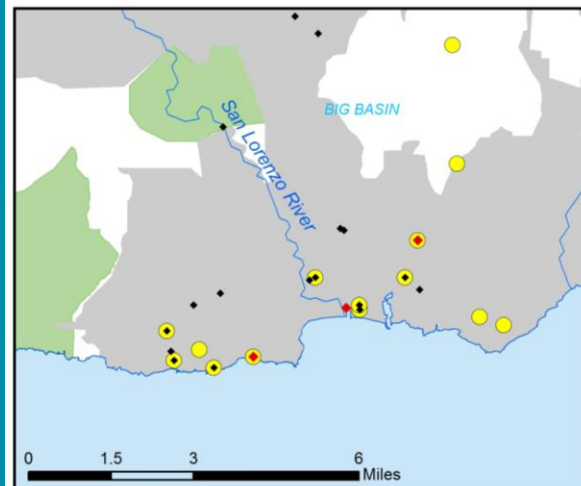
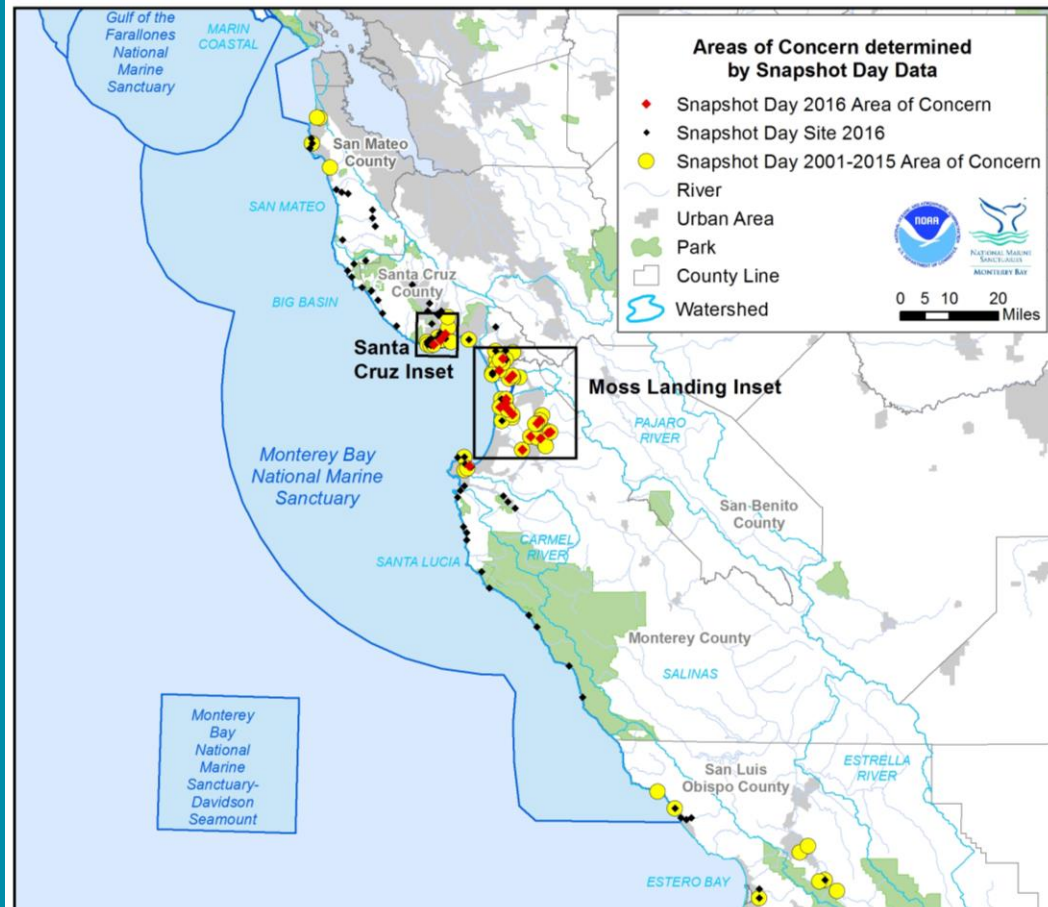


Snapshot Day

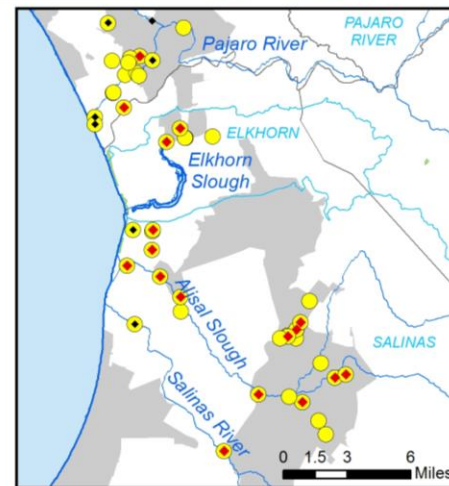
Areas of Concern 2016

21 sites

14 water bodies



Santa Cruz Inset



Moss Landing Inset

Snapshot Day

14 Year Report 2000-2013

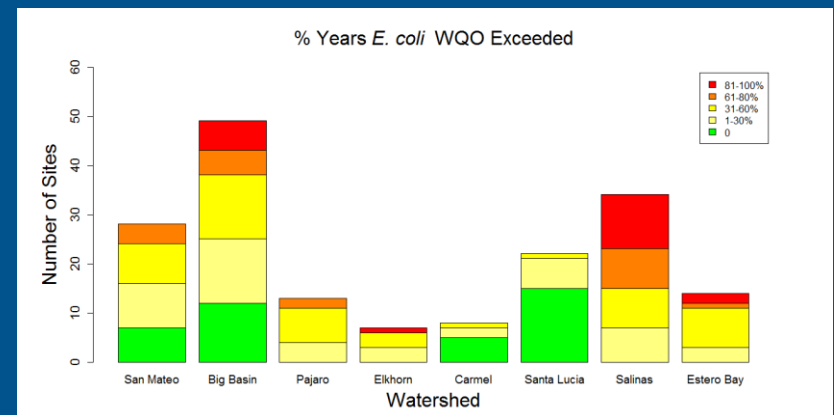
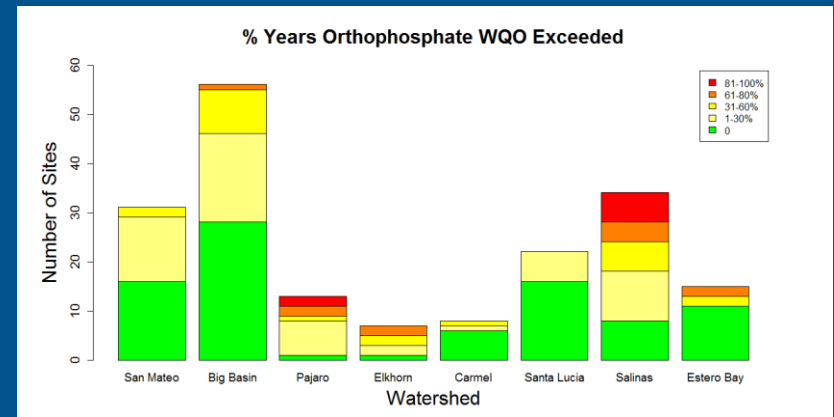
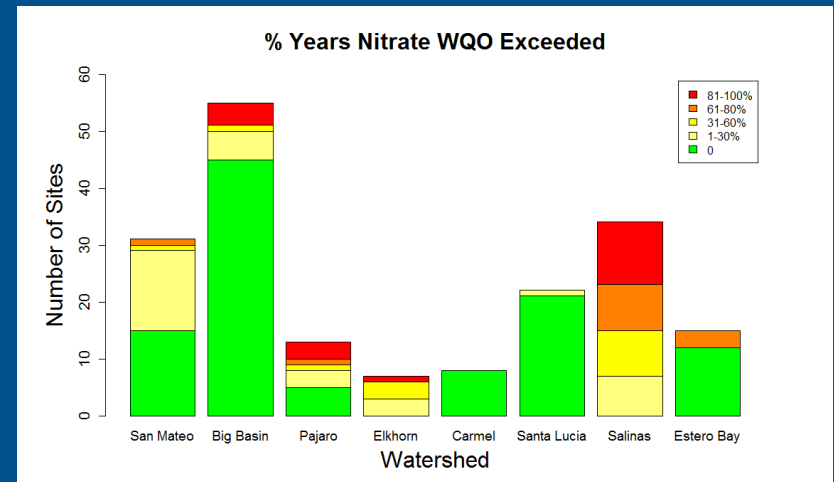
2494 volunteers

243 sites total

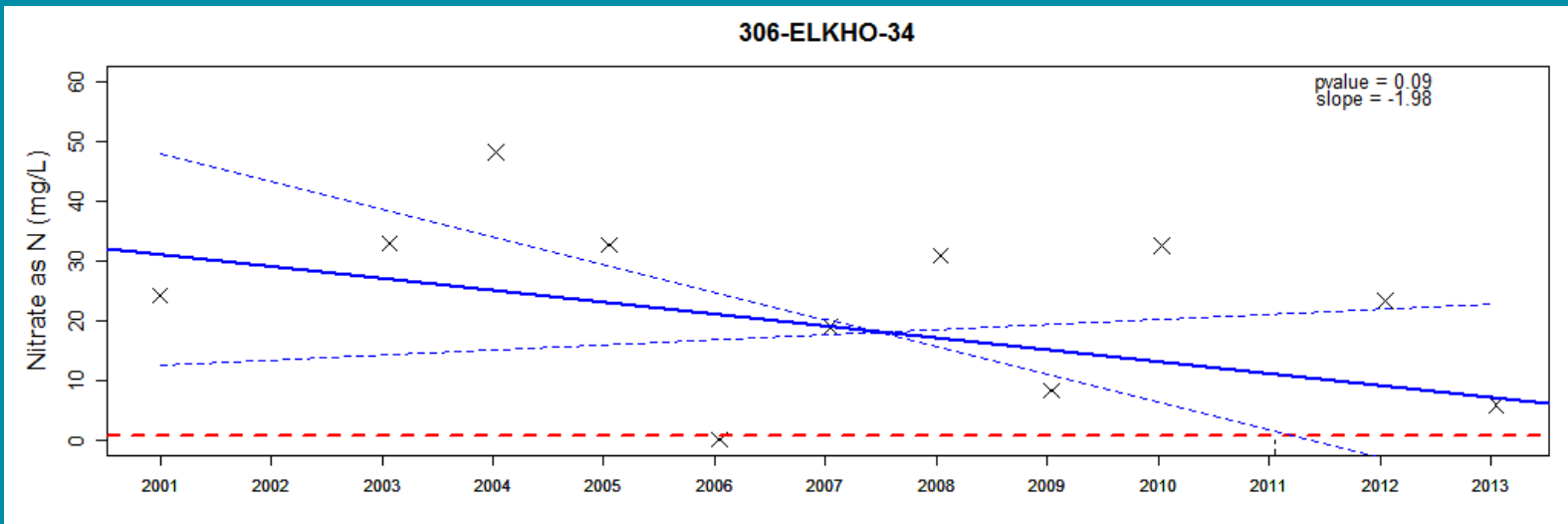
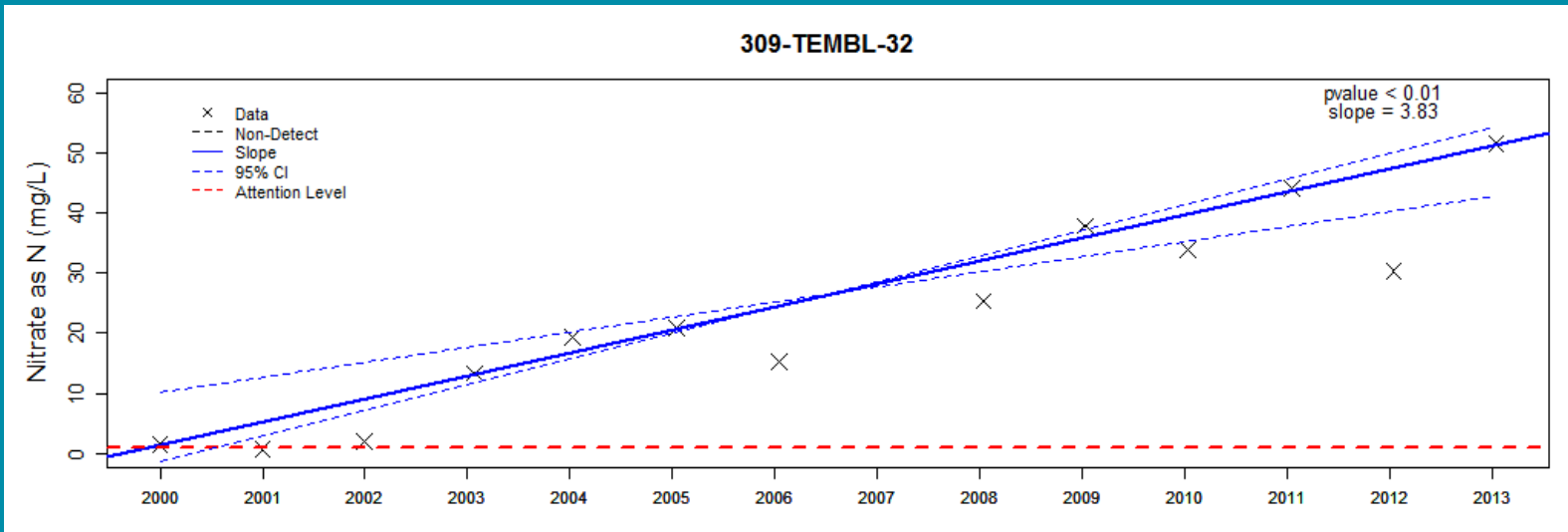
186 > 5 years

9 major HUs
+Estrella

Exceedances
Trends



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