

Pillar Point Harbor Water Quality Report

San Mateo County Harbor District Board of
Commissioners Meeting

June 21st 2017



About the RCD

- Formed in 1939 in partnership w/ USDA
- Non-regulatory



Water



Climate



Wildlife



Agriculture

The Problem

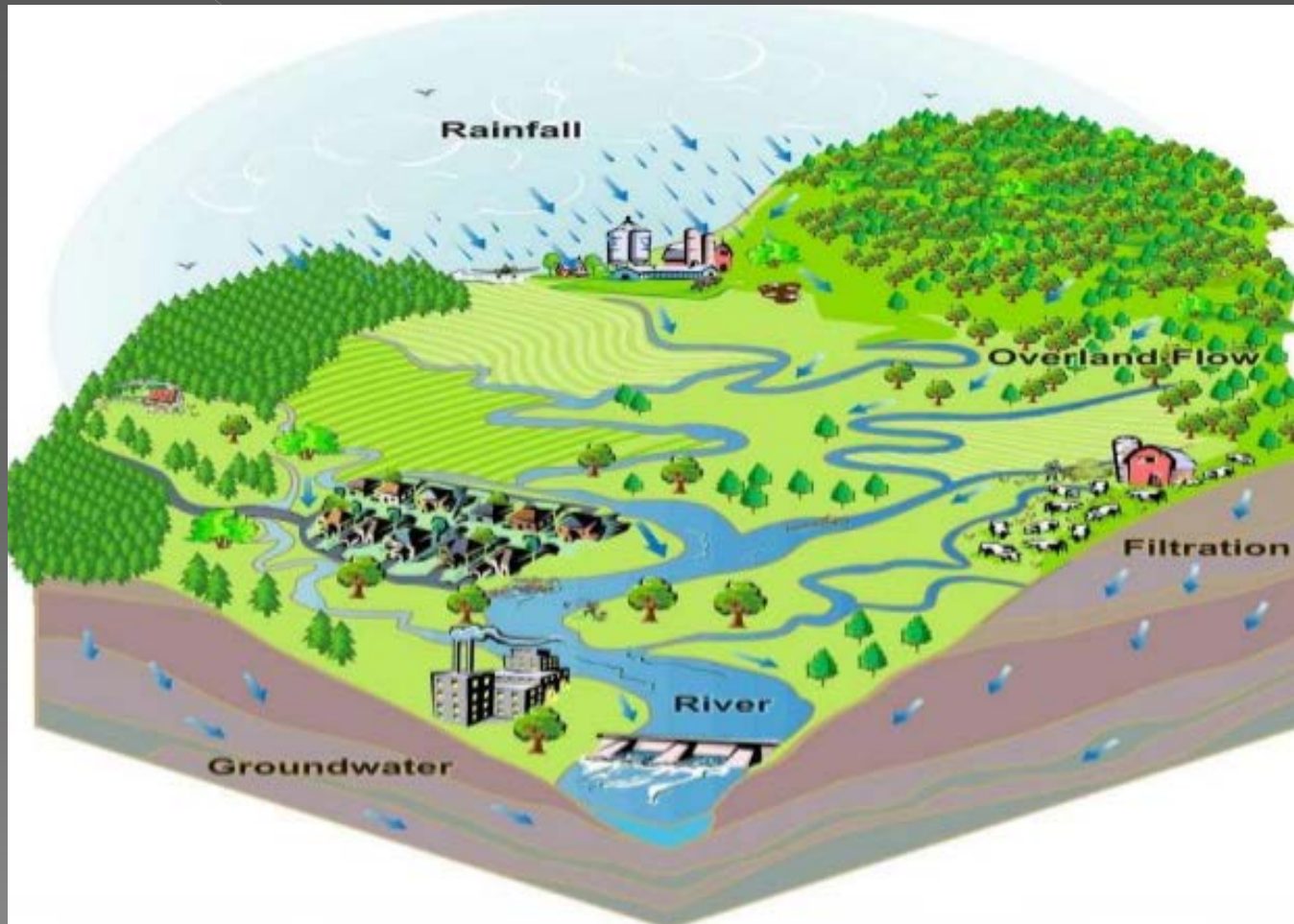
- Bacteria pollution since late 1980s



- 303 (d) list since 2002 and TMDL regulations in 2019

*The health of our waters is the principal
measure of how we live on the land*

~Luna Leopold



Who is responsible?

Everyone!



RCD/HD Partnership

- 2014: Completed harbor study
- 2013-2015: Monitored various pollutants
- 2016-current: Investigating sources of bacteria at Capistrano Beach



Capistrano Beach Investigation

- ◉ Bacteria monitoring harbor, outfalls, upstream
- ◉ Field recon - dry weather flows, observations
- ◉ Stormwater & sewer infrastructure info & maps
- ◉ Historic & current data integration
 - ◉ GCSD, SAM, County
 - ◉ New analysis of harbor study

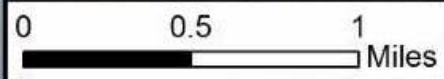
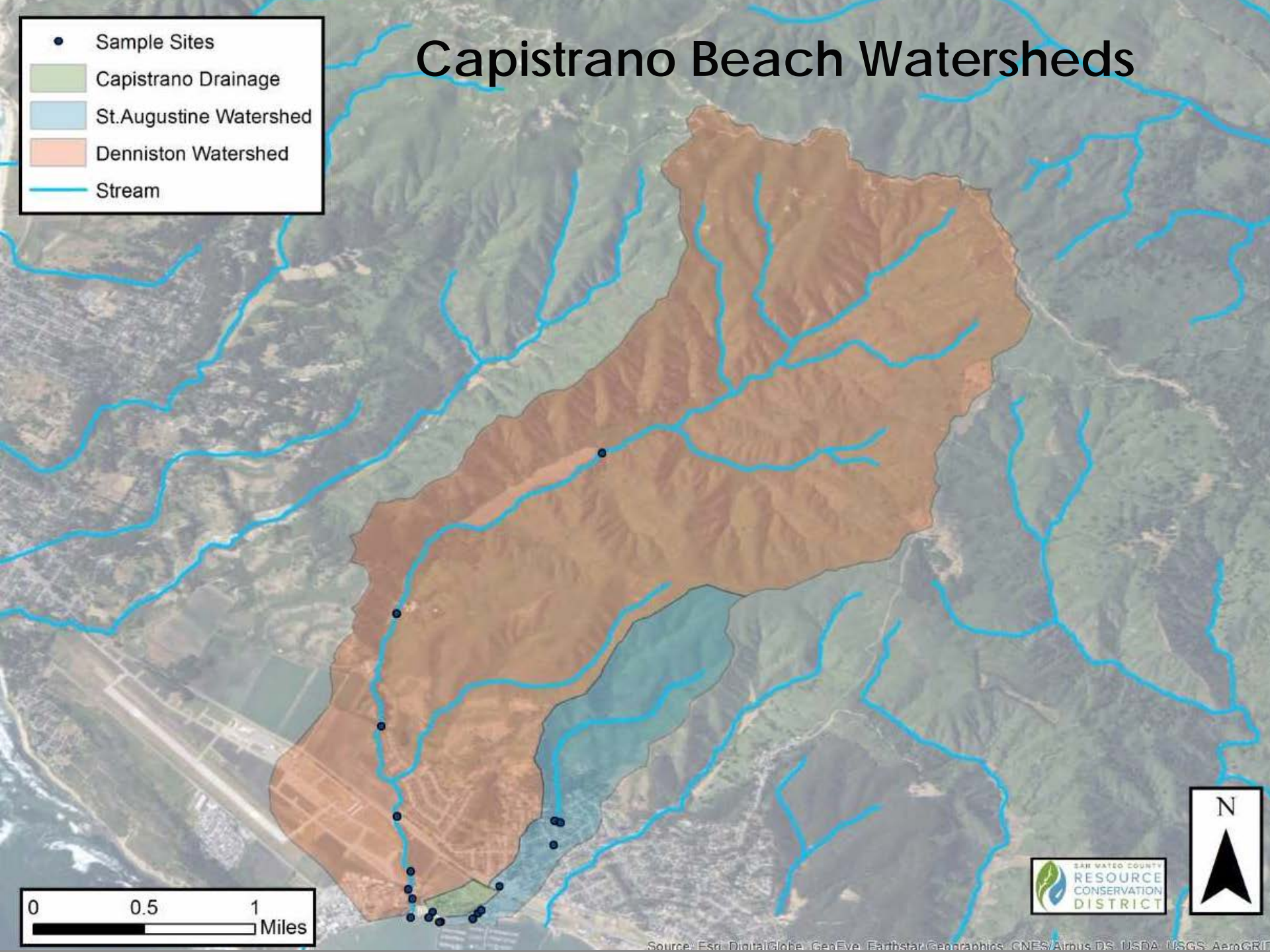


It's Complicated

- ◉ Water flows across property boundaries
- ◉ Rural vs urban
- ◉ Freshwater vs salt water
- ◉ Bacterial pollution & Microbial Source Tracking
 - › Evolving technologies
 - › Environmental and human effects (temp, chlorine..)
 - › Life-cycle and transport (sediment, creek, pipes)

Capistrano Beach Watersheds

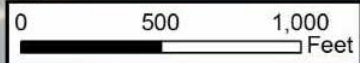
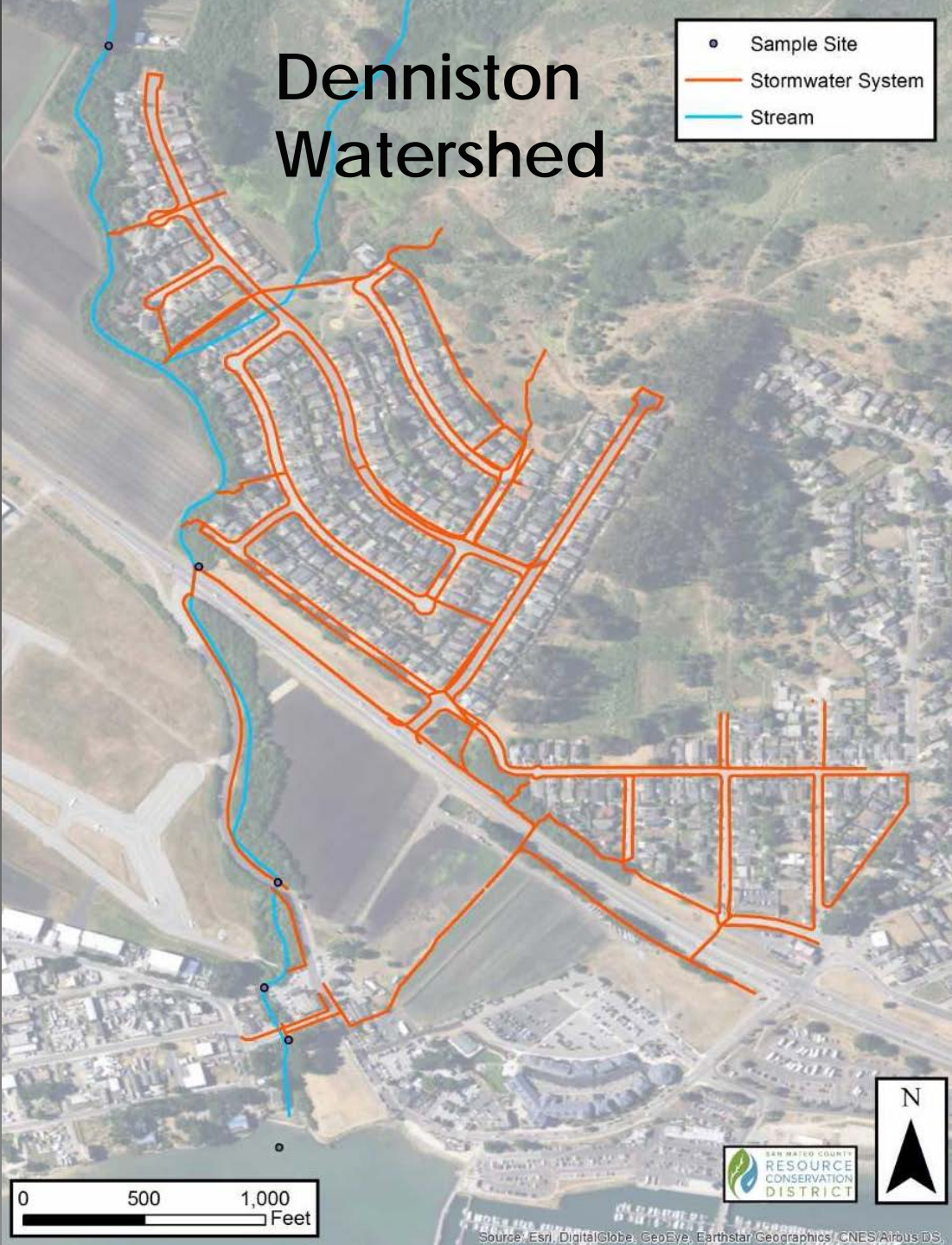
- Sample Sites
- Capistrano Drainage
- St. Augustine Watershed
- Denniston Watershed
- Stream



San Mateo County
RESOURCE
CONSERVATION
DISTRICT

Denniston Watershed

- Sample Site
- Stormwater System
- Stream



Source: Esri, DigitalGlobe, GeoEye, Earthstar/Geographics, CNES/Airbus DS,

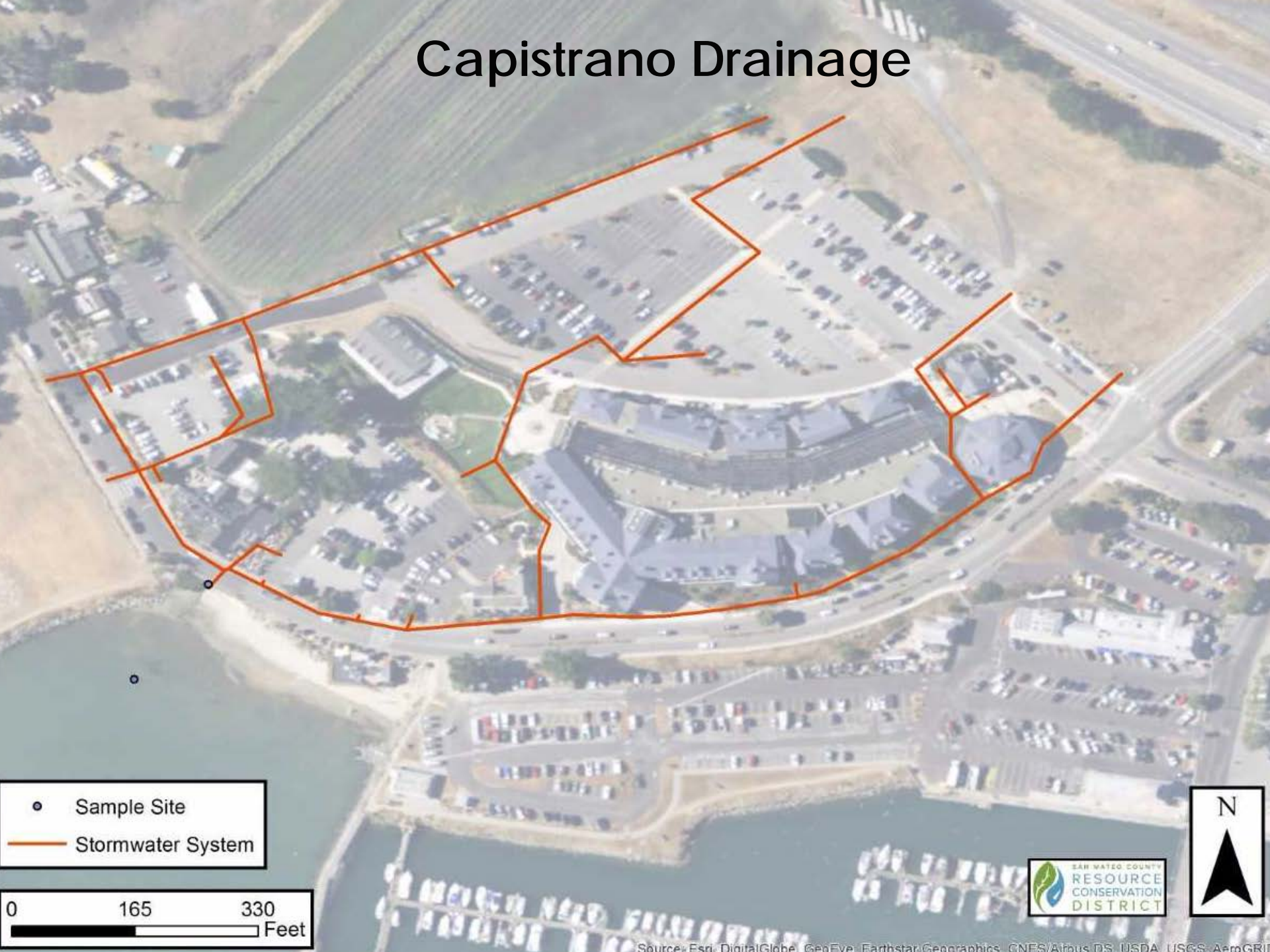
Denniston Outfall



Denniston Watershed



Capistrano Drainage



- Sample Site
- Stormwater System



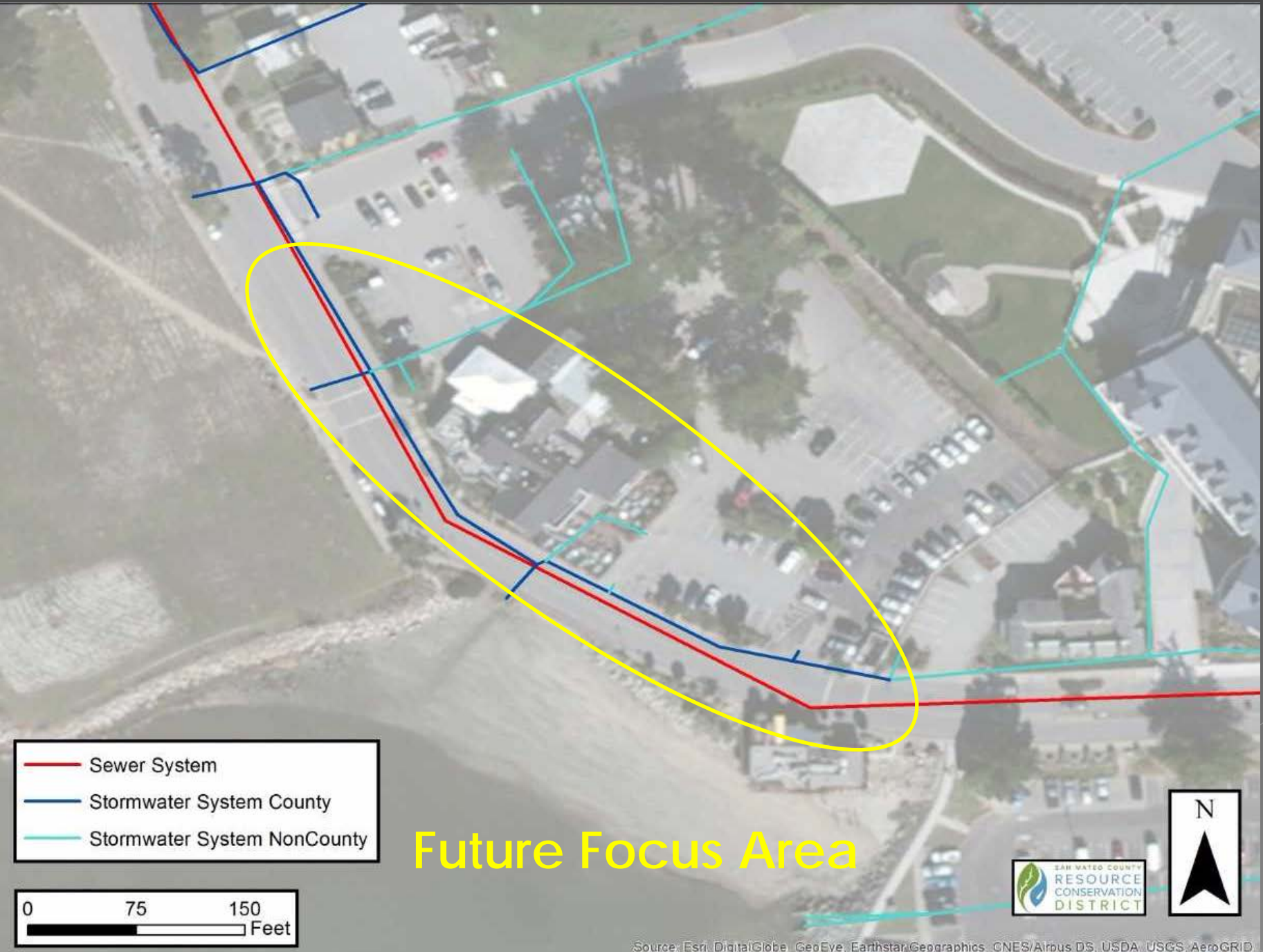
Capistrano Outfall



Capistrano Drainage

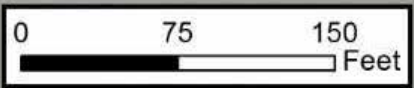
- ◉ Dry season water in County stormwater system
- ◉ Unknown and dirty pipes in system- some flow
- ◉ Past MST data analysis: human and dog detected





- Sewer System
- Stormwater System County
- Stormwater System NonCounty

Future Focus Area



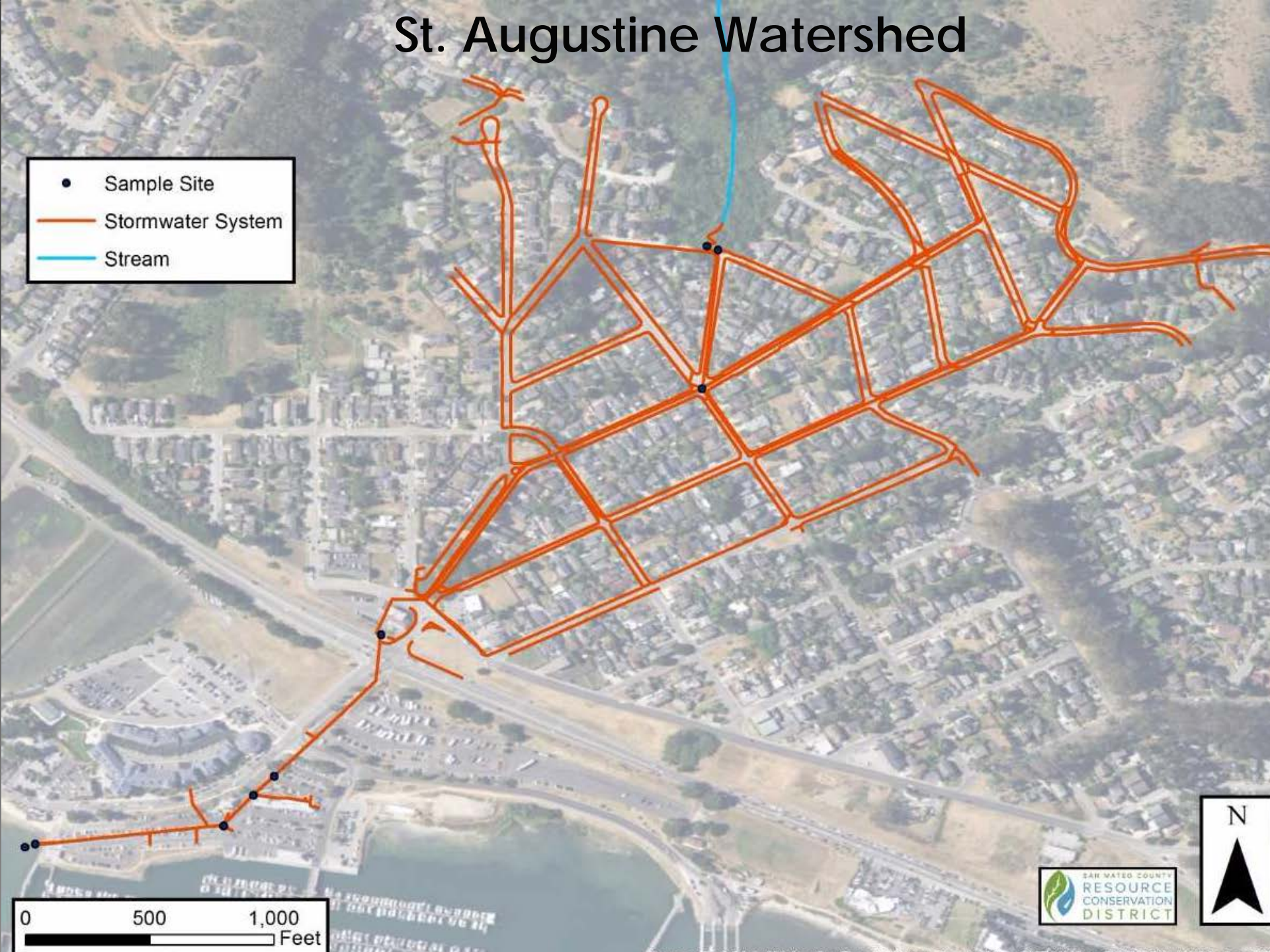
Historic Infrastructure





St. Augustine Watershed

- Sample Site
- Stormwater System
- Stream



St. Augustine Outfall



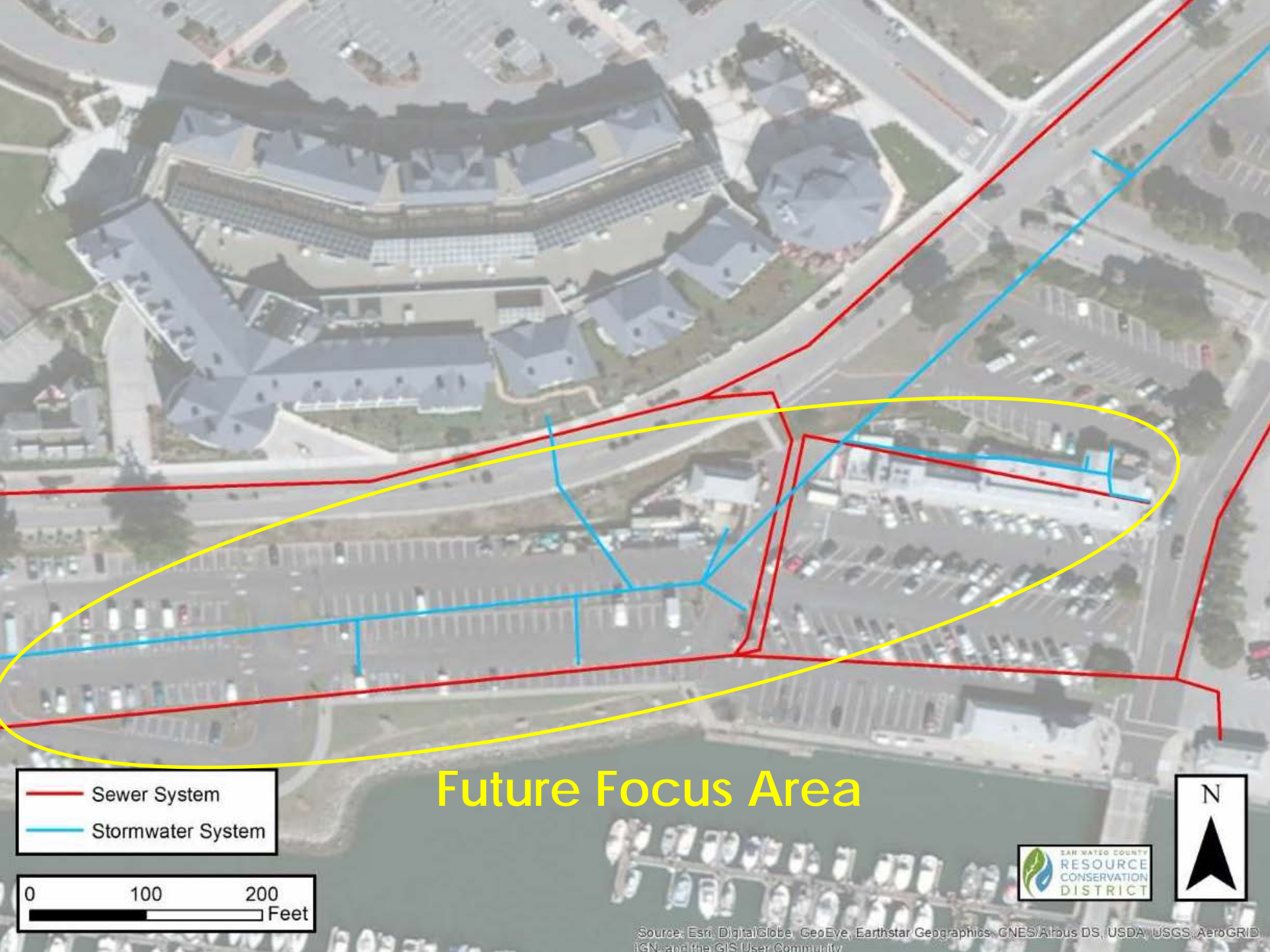
St. Augustine Watershed

- Higher bacteria downstream in lower Harbor District parking lot
 - › Unknown HD pipes w/ low flow
- Upstream sites high bacteria during rain – raccoons, dogs on trails, residences
- Past MST data analysis: human & dog detected



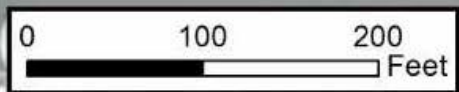
Thank you Harbor District Staff!





- Sewer System
- Stormwater System

Future Focus Area

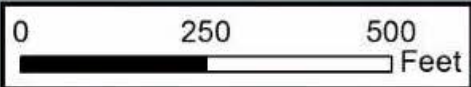


Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Recommendations	Partners and Leverage
Inspect stormwater & sewer lines in priority areas then repair if needed	HD, RCD, County, GSD
Dye test connections & drains if needed (ex: wash areas, toilets, sinks)	HD, RCD, GSD Business/property owners
Clean stormwater system on Capistrano Rd (not just catch basins & outfall)	County
Education, outreach, assistance to businesses & residences (watersheds, pet waste, best practices etc)	NRCS, SAM, County, HD, RCD
Water quality sample collection as needed and data integration	Surfrider (Yacht Club Fundraiser), HD, RCD
Microbial Source Tracking	C/CAG (Water Pollution Prevention Program), HD, RCD
Develop remediation measures and best management practices	NRCS, C/CAG, HD, RCD

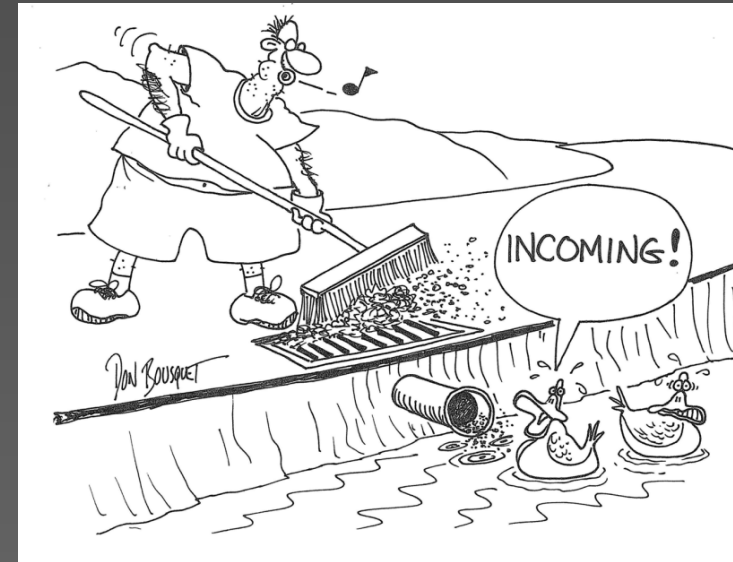
Inspection Recommendations

- Sewer System
- Stormwater System



But Keep in Mind

- We are focusing on the most **persistent** bacteria sources that have the **most impact**
- There may still be bacteria in the harbor
 - Inputs from a complex and dynamic watershed (wildlife, periodic dumping, pets, etc.)
 - Harbor dynamics (circulation, tides, sediment, biofilms, legacy bacteria, etc.)



Thank you!

Questions?



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