

# PUBLIC HEARING – DRAFT REVISED FIVE-YEAR MANAGEMENT PLAN FOR SF BAY NERR (2017-2022)



December 18, 2017

# WELCOME!

## NERR Staff

Michael Vasey, PhD, Director

Matt Ferner, PhD, Research Director

Sarah Ferner, Education Coordinator

Aimee Good, Wetland Science and Coastal Training Coordinator

Anna Deck, Research Technician (Monitoring)

Stuart Siegel, PhD, Coastal Resilience Specialist

Christine Metzger, Administrative Coordinator

Jenna Judge, PhD, Sentinel Site Cooperative



## Estuary and Ocean Science Center

### Roberg Tiburon Campus

Karina Nielsen, PhD, Director

Staff, Faculty, Research Scientists, and Graduate Students

## California State Parks and Recreation

Vince Anibale, District Superintendent

Staff

## Solano Land Trust

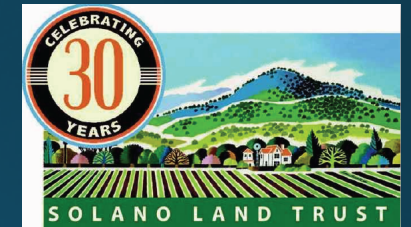
Nicole Byrd Braddock, Executive Director

Staff

## College of Science & Engineering

### San Francisco State University

Carmen Domingo, PhD, Dean



## Friends of China Camp

Martin Lowenstein, Executive Director

Ed Lai, Board Representative

## Bay Conservation and Development Commission

Steve Goldbeck

Deputy Director

## Office for Coastal Management

### National Oceanic & Atmospheric Administration

Bree Turner and Rebecca Smyth

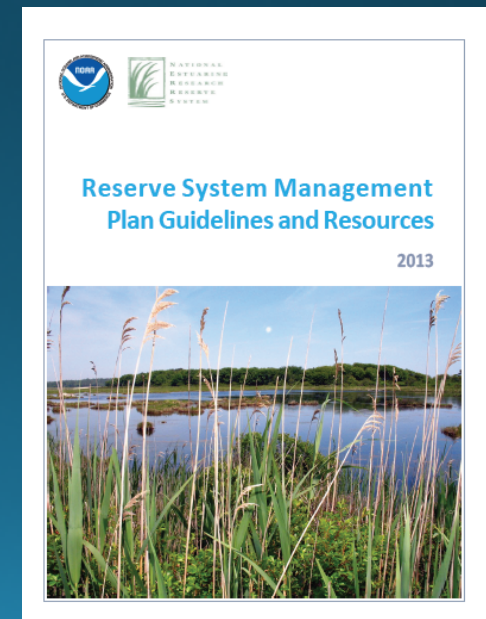
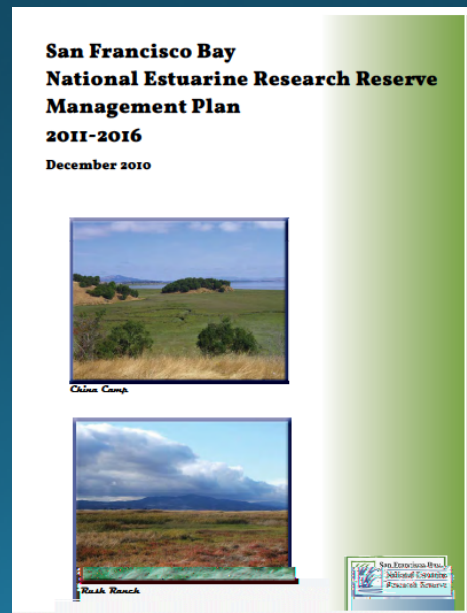
# OUTLINE OF “BRIEFING”

- Provide quick introduction to the goal of the evening
- What is the San Francisco Bay “National Estuarine Research Reserve”
- Why do we need a Revised Management Plan?
- How to submit comments
- Questions and Answers

# GOAL OF THE EVENING

- Elicit informed comments from the public on the Draft SF Bay NERR Revised Management Plan (2017 – 2022) over the next 30 days so that final revisions can be integrated into the draft.
- The SF Bay NERR was designated in November 2003 – this is the third Management Plan in its history.
- Management Plans are required for all NERRs to qualify for funding opportunities and stay in compliance with federal regulations.

Video record this session so that we can post it on our website and it will be available for reference during the public comment period (and perhaps beyond)



# WHAT IS THE 'SAN FRANCISCO BAY NATIONAL ESTUARINE RESEARCH RESERVE'?

To briefly answer this question, I will decompose the term 'NERR' into its four component elements, beginning with the last word first, emphasizing the SF Bay dimension to each, as follows:

1. Reserve
2. Research
3. Estuarine
4. National



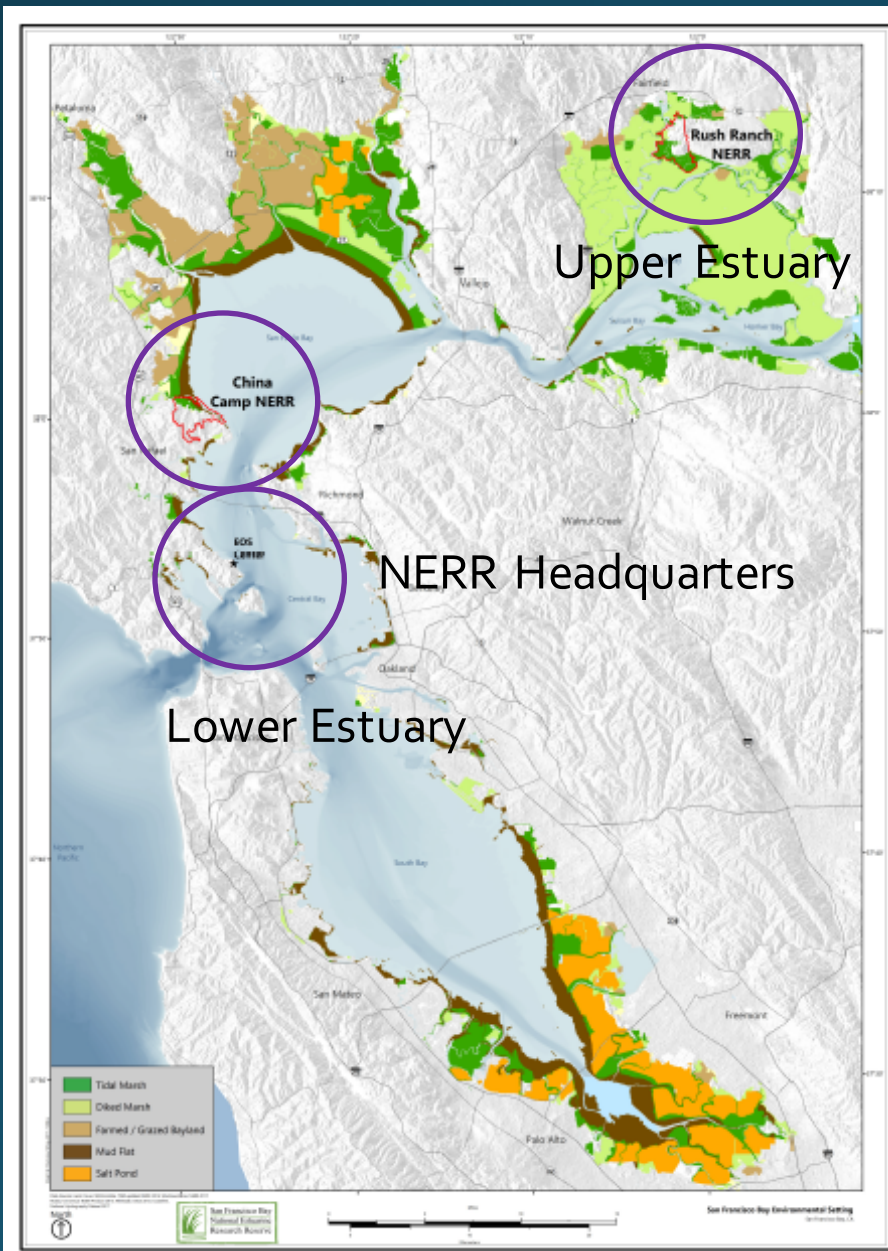
Education Coordinator Sarah Ferner provides insight on Olympia Oyster ecology to a Discovery Day audience based on data collected at China Camp State Park

# RESERVE

All Reserves are **place-based** settings where research, long-term monitoring, education, and stewardship take place and, based on insights derived from these places, trainings and engagement with the broader community are disseminated.



# RESERVE



Estuary and Ocean Science Center  
Romberg Tiburon Campus  
San Francisco State University

The SF Bay NERR is a *program* that supports our land managing and institutional partners. The NERR does not own or directly manage these places; rather, staff provides support and guidance to these partners.

# RESEARCH

Reserve places attract many different researchers and excellent science is practiced at Reserve sites, however, Reserve staff primarily **facilitate research and assist land managers in permitting research**. Hence, research is more of a collaborative process than the focus of Reserve staff.



USGS eddy covariance flux tower measures methane emissions at Rush Ranch



USGS & NERR collaborate on ecological effects of SLR at Rush Ranch

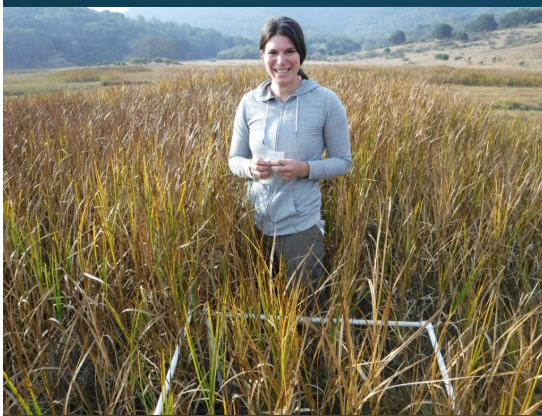


RTC grad student and NERR research potential Spartina introduction at Sears Point



# RESEARCH

The major focus of Reserve staff is participating in **long-term monitoring** - particularly water quality monitoring - as part of the national NERRS system, **education** – particularly “teaching” teachers how to integrate NERR data into inquiry-based learning, providing **science-based training** for the broader community, and assisting partners with **stewardship**.



Anna Deck doing veg monitoring at China Camp



Matt Ferner at China Camp water quality monitoring station



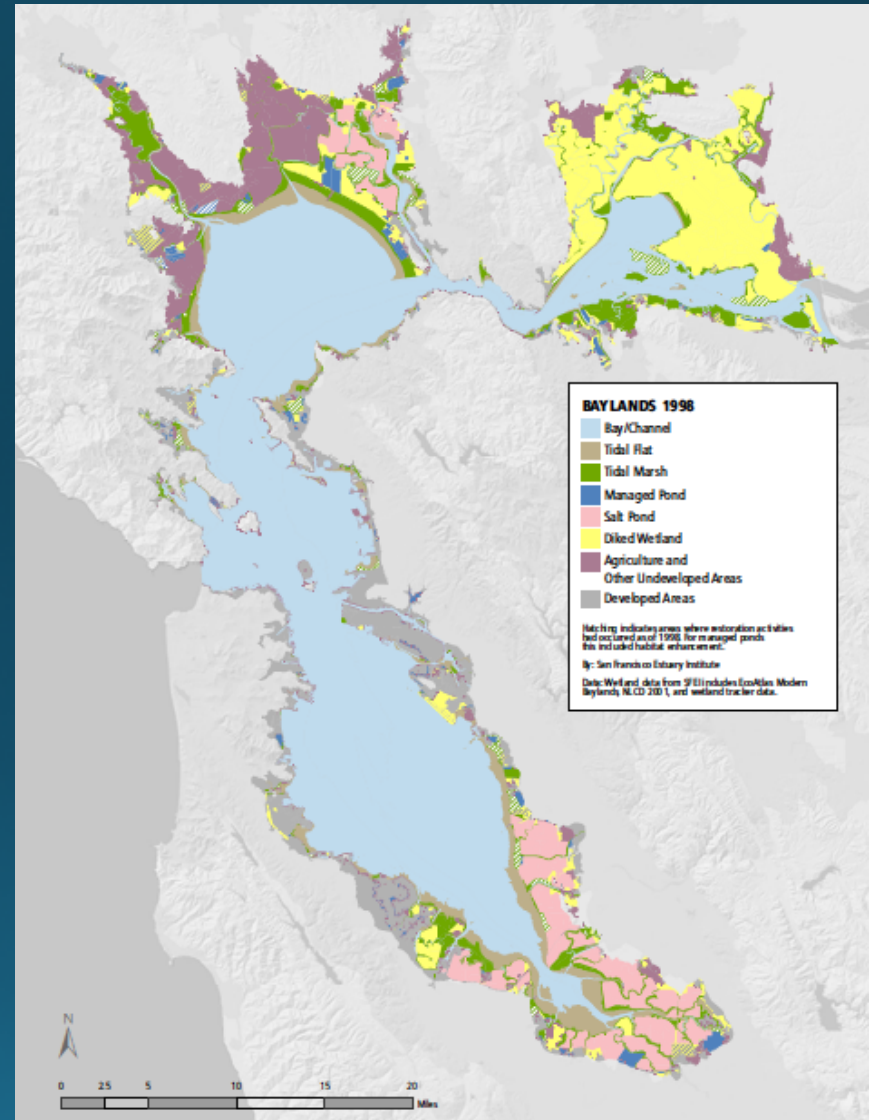
Admirer of China Camp interpretive sign designed by Sarah Ferner



NERR tech using RTK GPS at Rush Ranch

# ESTUARINE

Estuaries are **coastal embayments** where **freshwater flows** (e.g., rivers) meet the sea (mostly **tidally-influenced oceans**). They are ecologically rich and yet disproportionately impacted by human commerce and settlement. The San Francisco Estuary is the largest and most complex estuary in western North America. Also arguably the **most impacted**.



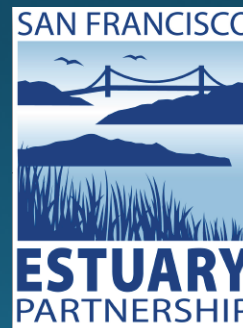
Out of ~ 190,000 acres of tidal wetlands, only ~40,000 acres (21%) were intact by 1998. About 30,000 now being restored, goal is to ~ double.

# ESTUARINE

Tidal wetlands provide key ecological services to human communities: e.g., habitat for special status species, sediment sinks that help prevent filling of channels, detoxifying contaminants, and buffering shorelines. The SF Bay NERR was founded on the idea that **science-based learning about intact tidal wetlands will contribute to the restoration and resilience of these ecosystems.**



Stuart Siegel (left) at an NGS workshop focused on marsh response to sea-level rise



# NATIONAL



The NERRS program was authorized by the CZMA of 1972. There are now 29 designated Reserves in the system. Reserves are funded by NOAA through yearly congressional appropriations and annual grants to state partners.

# NATIONAL

The NERRS program links federal, state and local partners with NOAA resources such as National Geodetic Survey (NGS). Program specialists provide guidance and support for Reserves through the Office for Coastal Management (OCM). Five-year management plans and formal evaluations are requirements of the NERRS Program.



Site visit with NERR staff and SLT staff Near Rush Ranch. Michael Migliori from OCM (former liaison) is at far right.



Phillipe Hensel PhD of NGS conducts a training focused on Sentinel Site technology at Rush Ranch.

# WHY DO WE NEED A REVISED MANAGEMENT PLAN?

- Important requirement of the NERRS program and funding options contingent on plan
- Healthy opportunity to pull staff together and bring Reserve activities up-to-date
- Provides framework to track progress of Reserve in biennial Progress Reports – leads to Reserve evaluation metrics at roughly five-year intervals

# HOW TO SUBMIT COMMENTS

- If you have questions, please address these by email to:  
[mvasey@sfsu.edu](mailto:mvasey@sfsu.edu), cc:  
[christinemetzger@sfsu.edu](mailto:christinemetzger@sfsu.edu)
- Comments should be submitted by email to:  
[christinemetzger@sfsu.edu](mailto:christinemetzger@sfsu.edu) by  
January 18, 2018
- Access Draft Revised Management Plan and Video Record of this proceeding (when available) at:  
<http://www.sfbaynerr.org/>

# QUESTIONS?

Sarah Ferner (Education Coordinator) will facilitate

Aimee Good (Wetland Science and Coastal Training Program Coordinator) will capture questions on flip chart

Christine Metzger (Administrative Coordinator) will take notes