

COLLABORATIVE SCIENCE FOR ESTUARIES

WEBINAR SERIES



Kaitlyn Dietz

*Guana Tolomato Matanzas
NERR*



Aimee Good

San Francisco Bay NERR



Doug George

*NOAA Office for Coastal
Management*

Fostering Partnerships, the Foundation of Collaborative Science



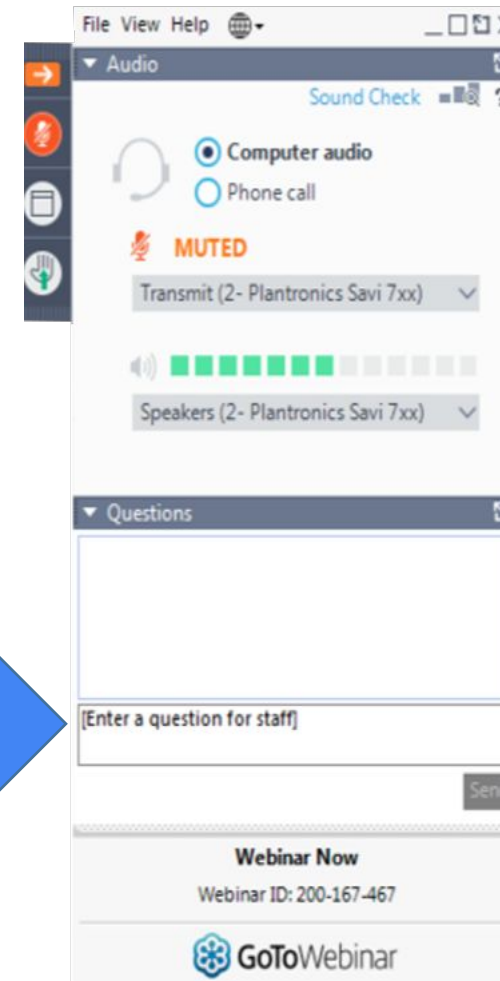
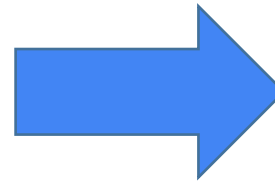
National Estuarine
Research Reserve System
Science Collaborative

Date: Thursday, February 3, 2022

Time: 3:00-4:00 PM ET

Have a question?

Use the “Questions” function to pose questions throughout the webinar.

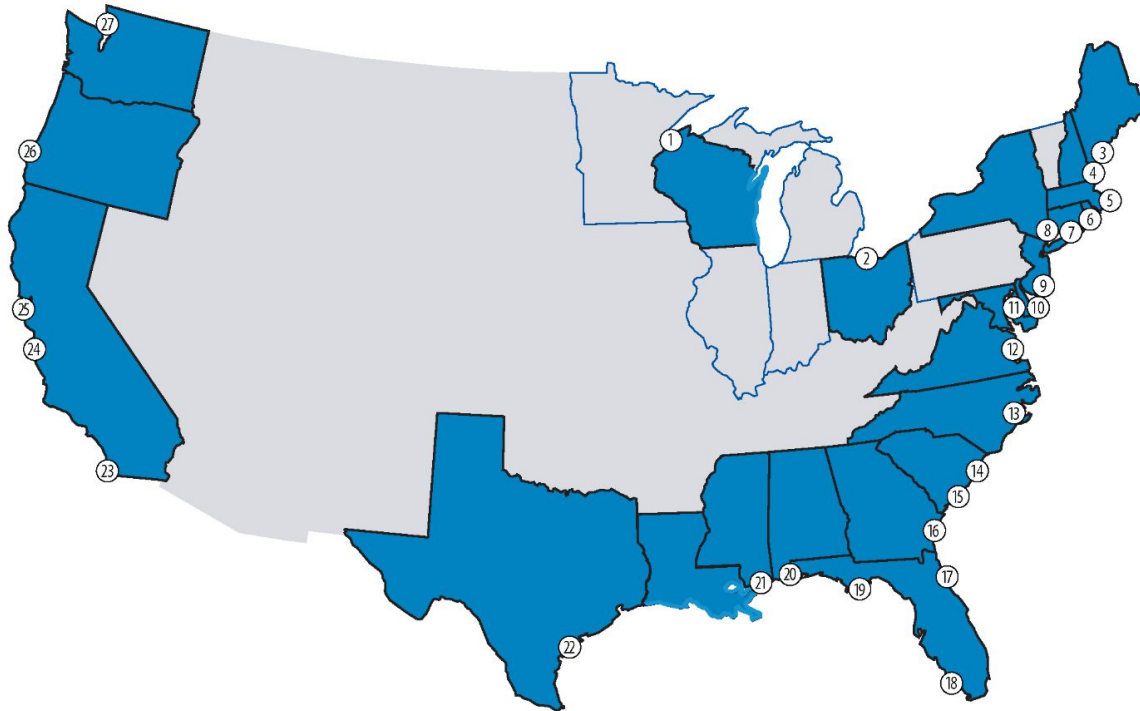


**National Estuarine
Research Reserve System
Science Collaborative**

National Estuarine Research Reserve System



NATIONAL ESTUARINE RESEARCH RESERVES



Great Lakes

1. Lake Superior, Wisconsin
2. Old Woman Creek, Ohio

Northeast

3. Wells, Maine
4. Great Bay, New Hampshire
5. Waquoit Bay, Massachusetts
6. Narragansett Bay, Rhode Island
7. Connecticut

Mid-Atlantic

8. Hudson River, New York
9. Jacques Cousteau, New Jersey
10. Delaware
11. Chesapeake Bay, Maryland
12. Chesapeake Bay, Virginia

Southeast

13. North Carolina
14. North Inlet-Winyah Bay, South Carolina
15. ACE Basin, South Carolina
16. Sapelo Island, Georgia
17. Guana Tolomato Matanzas, Florida

Gulf of Mexico

18. Rookery Bay, Florida
19. Apalachicola, Florida
20. Weeks Bay, Alabama
21. Grand Bay, Mississippi
22. Mission-Aransas, Texas

West

23. Tijuana River, California
24. Elkhorn Slough, California
25. San Francisco Bay, California
26. South Slough, Oregon
27. Padilla Bay, Washington
28. Kachemak Bay, Alaska

Pacific

29. He'eia, Hawai'i

Caribbean

30. Jobos Bay, Puerto Rico

PROPOSED

Bay of Green Bay, Wisconsin
Louisiana





Fostering Partnerships: The Foundation of Collaborative Science

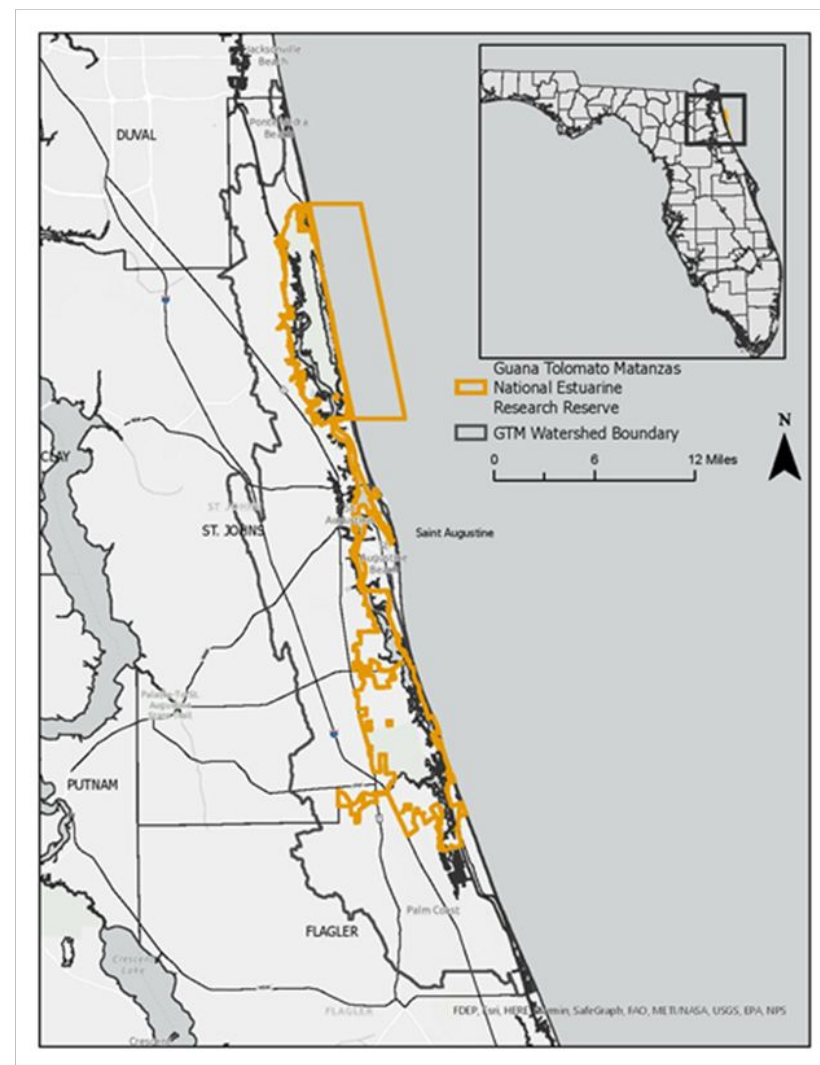
**Kaitlyn Dietz, Collaboration Coordinator
Guana Tolomato Matanzas National Estuarine Research Reserve
904-823-4500, Kaitlyn.Dietz@FloridaDEP.gov**





GTM Research Reserve

- Designated in 1999
- Network of public lands
- Approximately 76,000 acres
 - 40 miles of coastal lands
 - Variety of species
 - 61 archaeological sites





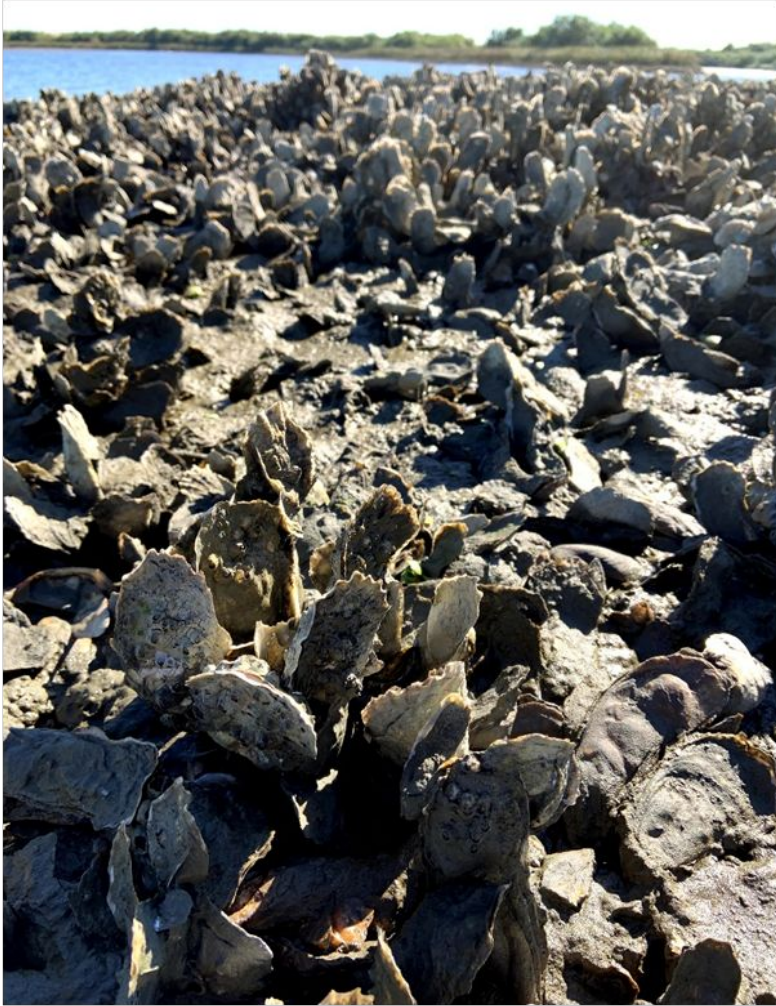
Mission

To achieve the conservation of natural biodiversity and cultural resources by using the results of research and monitoring to guide science-based stewardship and education strategies.





Understanding Oysters



Photos by Nikki Dix, GTM Research Reserve





Understanding Oysters



Photos by GTM Research Reserve





Estuarine Research Consortium



Photo by GTM Research Reserve





“Shuck and Tell”



Photo by Kaitlyn Dietz, GTM Research Reserve





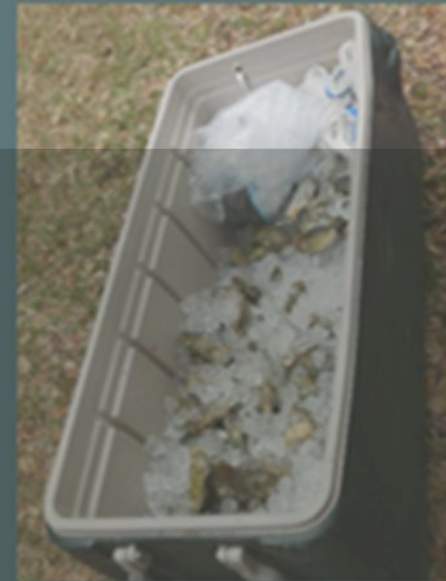
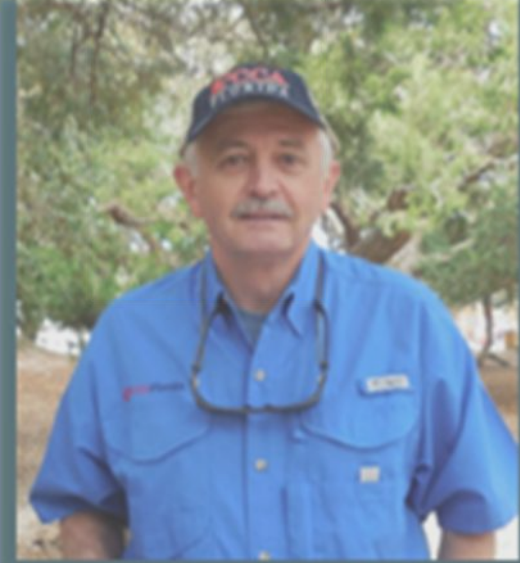
Oyster and Water Quality Task Force



Photo by GTM Research Reserve

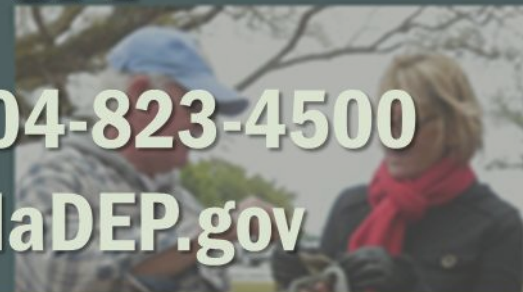
- Florida Department of Environmental Protection (FDEP)
- Florida Department of Agriculture and Consumer Services (FDACS)
- Florida Fish and Wildlife Conservation Commission (FWC)
- St. Johns River Water Management District (SJRWMD)
- St. Johns County
- Flagler County
- City of St. Augustine
- City of Palm Coast
- Matanzas Riverkeeper
- UF/IFAS Extension and Sea Grant
- University of Florida
- University of North Florida
- Flagler College
- Northeastern University
- Oregon State University
- Local homeowners, shellfish harvesters, and private citizens.





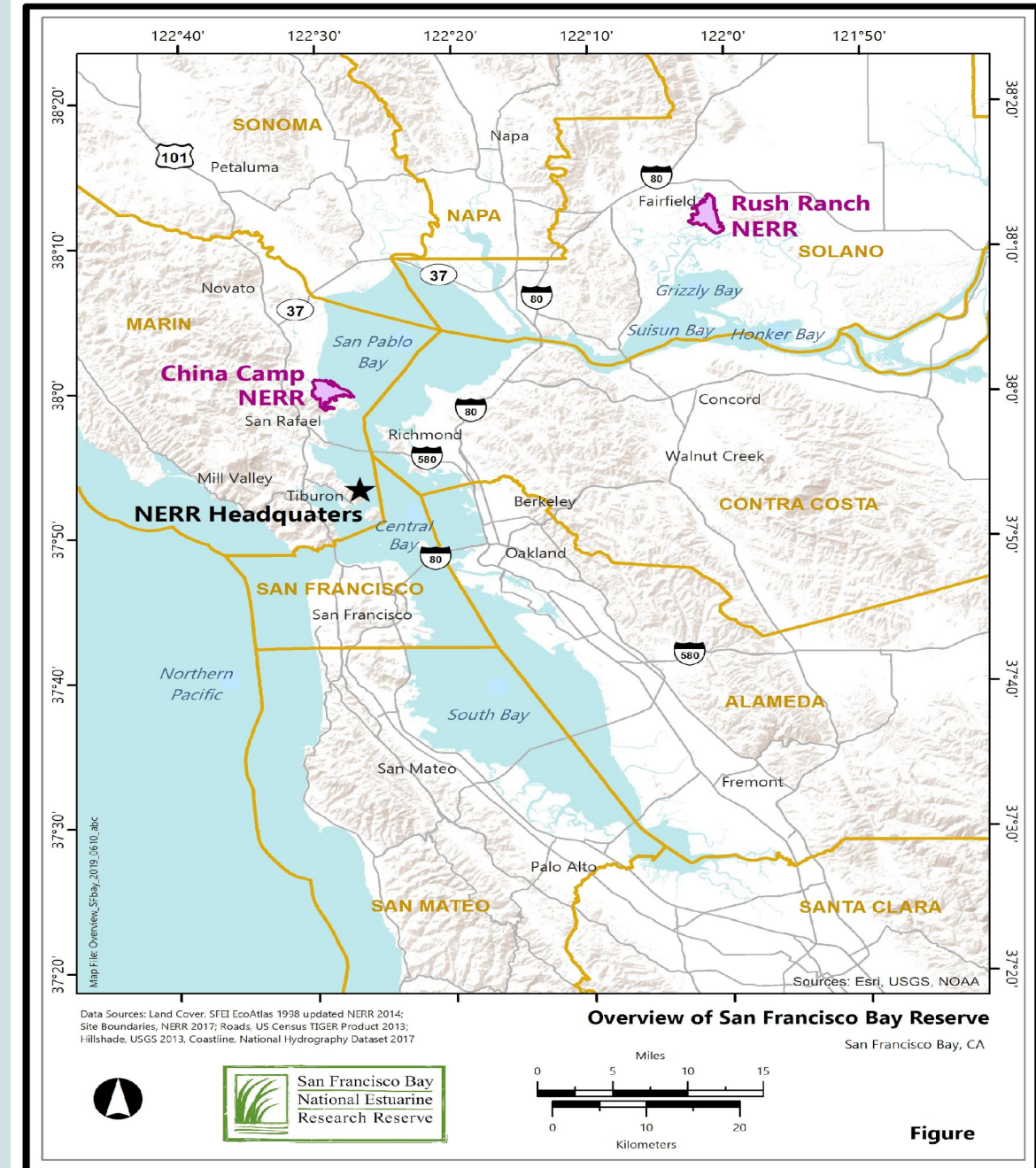
Thank you!

Contact Kaitlyn Dietz at 904-823-4500
or Kaitlyn.Dietz@FloridaDEP.gov





SF Bay NERR encompasses over 3,700 acres of tidal marshes and undeveloped uplands that serve as research sites, outdoor classrooms, and recreation destinations. We have two distinct sites; China Camp in San Pablo Bay and Rush Ranch in Suisun. Our home base is at the Estuary & Ocean Science Center, SF State's Lab on the bay in Tiburon.



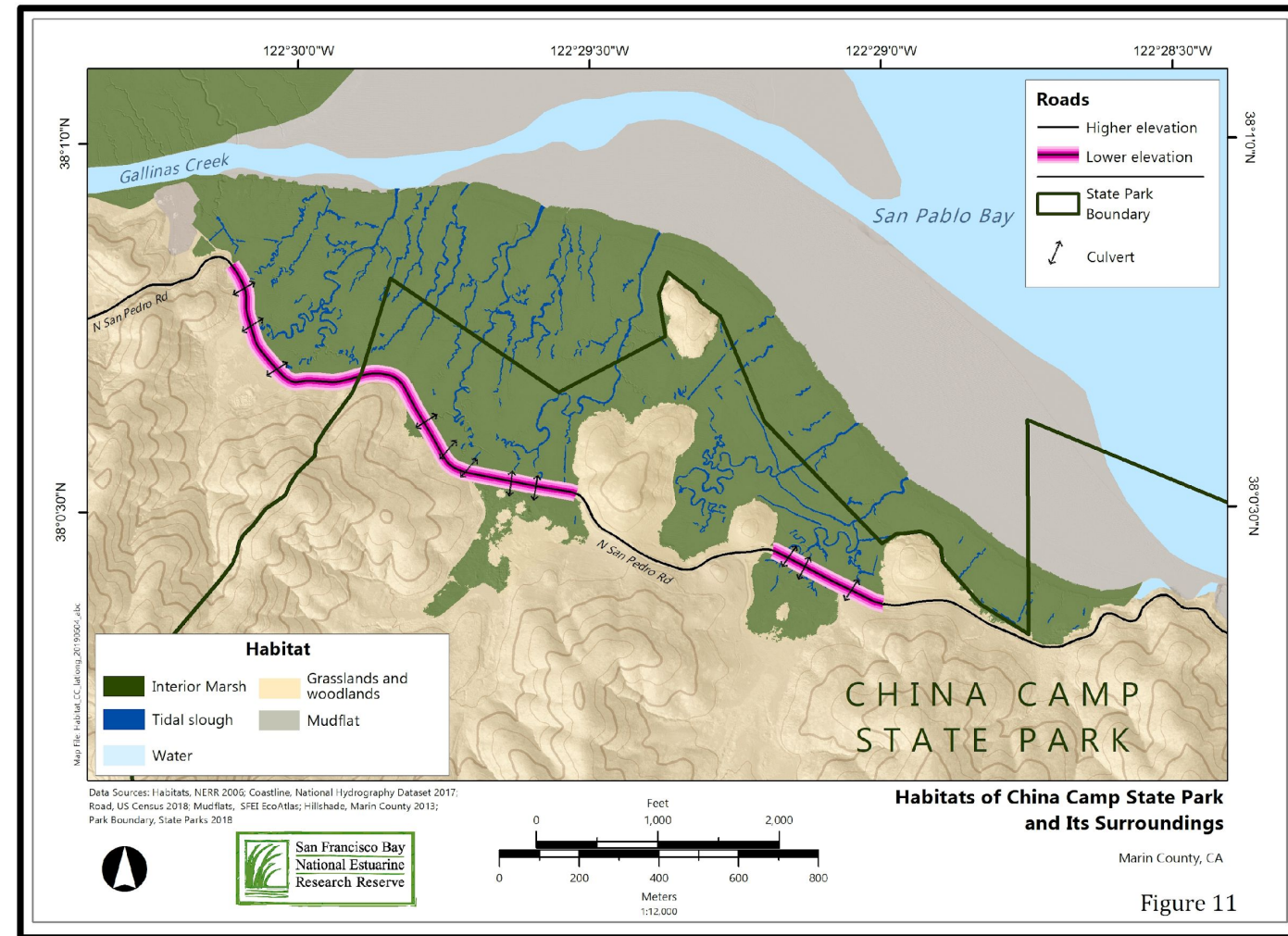


A ROAD RUNS THROUGH IT

Collaboration, coordination and lots of conversations



LINKING SAN FRANCISCO BAY NERR SCIENCE TO STAKEHOLDER-DRIVEN CLIMATE ADAPTATION IN THE GALLINAS CREEK WATERSHED, SAN PABLO BAY, CA



The China Camp Road “Community of Interests (partial)

SF Bay NERR
Reserve

Responsible Parties

State Parks
Land Owner

County DPW
Road Maintenance

**Friends of
China Camp**
Park Operator

PSPRC, SVNA
Road Access

**MCBC, Bay Trail,
Water Trail**
Recreation

GCWC, WAM
Watershed

PBCS, USGS, SFEI
Research

StB, MAS, MCL
Advocacy

LGVSD
Wastewater Supplier

County, City
Public Safety, Elected Officials



SFBJV, SFEF
Regional Conservation

MMWD
Water Delivery

**BCDC*, RWQCB,
USACE, EPA**
Regulators
**Reserve Partner*

**USFWS, NMFS,
CDFW, SLC, SHPO**
Resource Trustees

**SCC, SFBRA, WCB,
CDFW, DWR, etc.**
Funding

Peacock Gap
Recycled Water User



WHO LOVES
CHINA
CAMP?

Project Approach

Develop China Camp State Park Road Adaptation Options

Collaboration Meeting #1: Setting, Start into Goals, Feasibility

- Initial settings understanding
- Initiate developing goals, objectives, feasibility considerations

Nov 2018

Collaboration Meeting #2: Goals, Options Brainstorming

- Adopt Goals, Objectives, feasibility considerations
- Brainstorm Adaptation Options

Feb 2019

Data: Compile and synthesize existing data

Settings: Issues, Opportunities, Constraints

New Data: Inland marsh water levels and nesting bird surveys

Generate Evaluation Table: Visual matrix of how well alternatives achieve goals and meet feasibility criteria, used as a screening tool for selecting alternatives

Collaboration Meeting #3: Recommend Alternatives

- Review Comparative Evaluation
- Make recommendations on which alternatives to carry forward
- Gather input to prepare strategy for moving forward

Jun 2019

Output 1: Adaptation Options to Carry Forward

Issue framing, goals, feasibility criteria, options descriptions, comparative evaluation, selected alternatives to carry forward.

Aug 2019

Output 2: Strategy for Moving Forward to Adaptation

Process roadmap of activities needed, lead and participating entities, funding needs and opportunities, schedule.

Aug 2019

Bringing Together End Users and Stakeholders to Identify and Evaluate Sea Level Rise Adaptation Options to Solve Road Flooding in China Camp State Park

KEY: ➡ Data Flow

➡ Collaborative process flow

Stakeholder Meeting

Information Input

Project Output



Congressman Jared Huffman, Interim NERR
Manager Stuart Siegel, Former Manager
Michael Vasey





INTEGRATING CULTURAL AND NATURAL RESOURCES INTO
COMMUNITY-BASED SEA LEVEL RISE ADAPTATION PLANNING FOR
THE CHINA CAMP SHORELINE ROAD



Research Question 1: What Are the Hydrologic and Geomorphic Processes Driving SLR Vulnerability of Natural and Cultural Resources Impacted by the China Camp Road, and How Can They Be Addressed?

- Install surface and groundwater wells, collect sediment cores within interior marshes
- Monitor surface water-groundwater interactions
- Map interior marsh topography
- Compile weather station data
- Measure intermittent streamflow
- Measure water levels at culverts
- Assess sediment transport if have large storm(s)
- Conduct 2011 vs. 2018 terrain change analysis of lower watershed stream channels
- Model inundation regimes

Research Question 2: What Are the Climate Change Vulnerabilities of Cultural Resources and How Can They Be Addressed?

Expand prior tribal engagement

Focused Cultural Resources Surveys

Cultural Resources
Vulnerability Assessment

End User and Stakeholder Collaboration

Community (many entities)

Tribe

Landowners

Regulatory and Resource Agencies

Key Outcome:
Decision Making Support for
Selecting Adaptation Project and
Advancing to Construction

Key Output:
Vulnerability Assessments and
Adaptation Strategies for Least
Harmful Road Modification Project

Legend:

Community engagement

Tribal engagement

Research activities

Responsible entities

Outputs and Outcomes

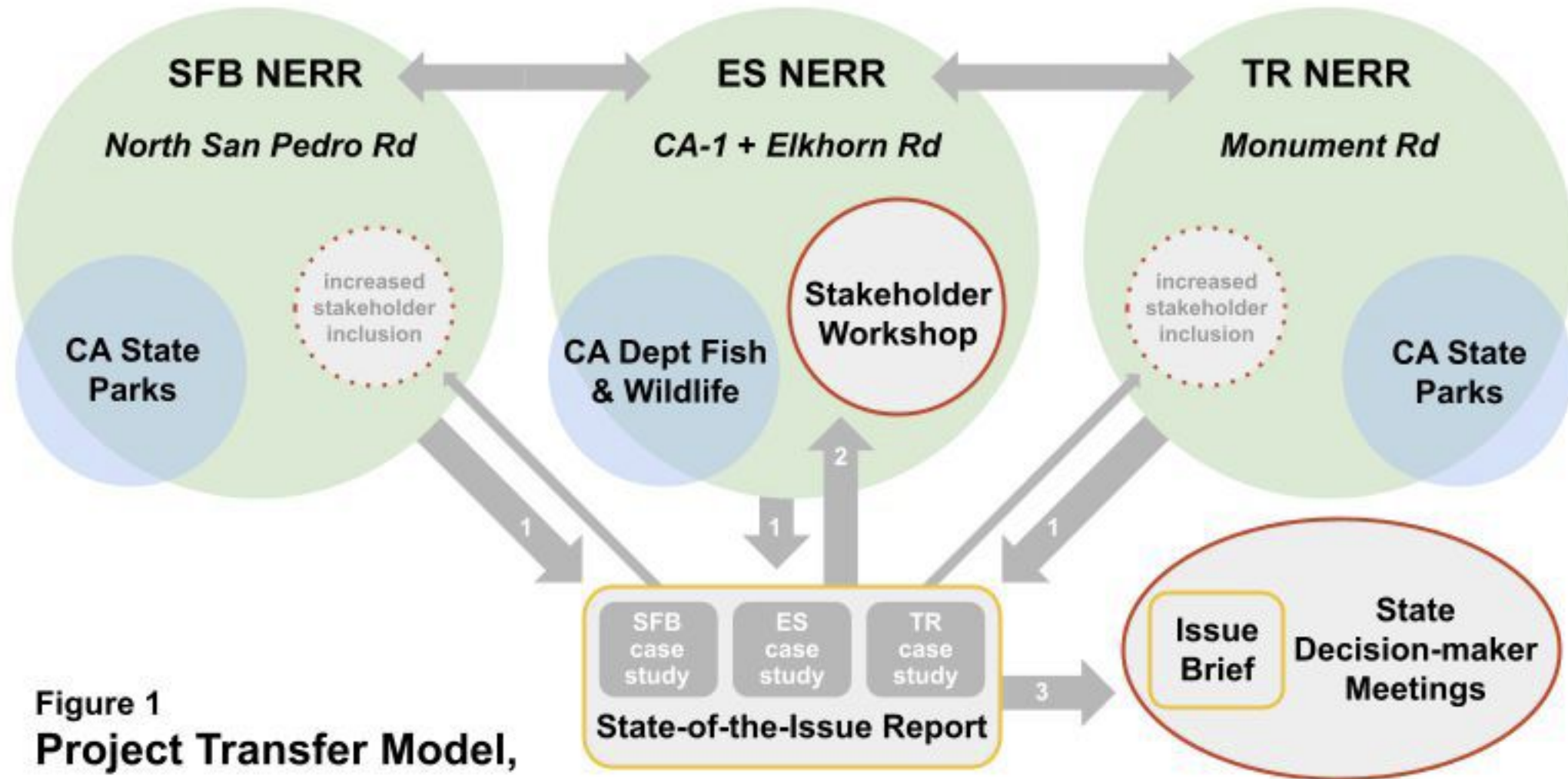
Research Approach



RESILIENT ROADS AND RESERVES

2021 NSC TRANSFER GRANT

RESILIENT ROADS AND RESERVES – 2021 NSC TRANSFER GRANT



showing various knowledge transfer processes among Reserves (pale green), and highlighting Reserve state-partner end-user agencies (blue), stakeholder and decision-maker engagement processes (dark red borders), written outputs (orange borders), and project emphases during the three project phases (white numbers).



San Francisco Bay
National Estuarine
Research Reserve



SF STATE

ESTUARY & OCEAN
SCIENCE CENTER

AT THE ROMBERG TIBURON CAMPUS

THANK YOU

CONTACT:

Aimee Good

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sfbaynerr.org



Q&A

**Looking back at the overall effort:
What difference has the work made in
what you are seeing in the reserve and
the issues that matter to your reserve?**

**How do you know an idea is worth
pursuing through partnerships and
collaboration, versus going it alone?
And how do you think our more virtual
world has impacted your thinking?**

Moderator



Doug George

NOAA Office for Coastal
Management



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Q&A

Have a question?
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Moderator

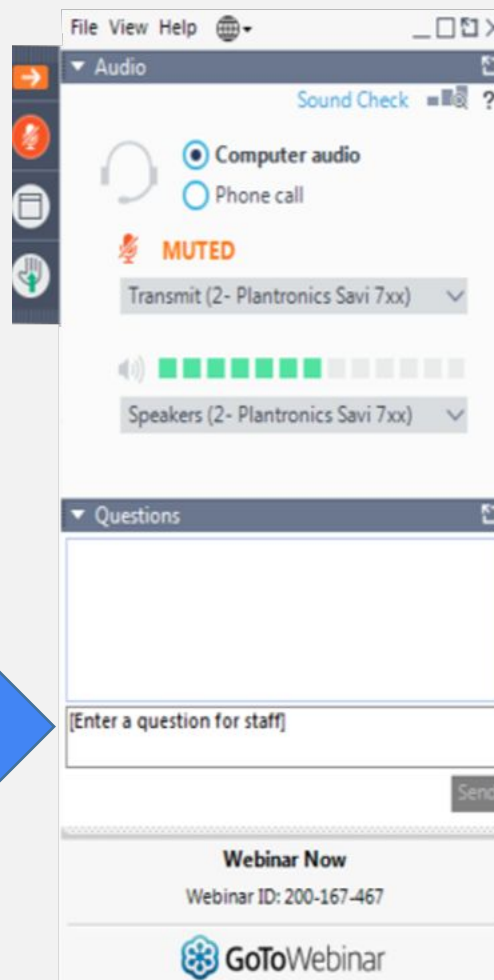
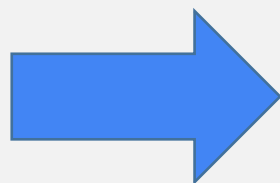


Doug George

NOAA Office for Coastal
Management



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Kaitlyn Dietz

Guana Tolomato
Matanzas NERR



Aimee Good

San Francisco Bay
NERR

Wrapping Up

- Webinar recording will be made available in the next few days.
- Looking ahead:
 - Next webinar: 3 pm ET, Wednesday, March 30, 2022



**National Estuarine
Research Reserve System
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Q&A

Q: Looking back at the overall effort: What difference has the work made in what you are seeing in the reserve and the issues that matter to your reserve?

- **Aimee:** The capacity building project laid a foundation establishing SF Bay NERR as a neutral partner that could convene all the stakeholders with ownership and regulatory responsibilities for the area. Establishing these relationships and maintaining transparency has been a crucial element when it comes to identifying shared goals and developing collaborative research projects that address needs in the area.
- **Kaitlyn:** Totally agree with Aimee; establishing these relationships and being able to have open and respectful conversations builds the shared comfort level needed to investigate and address issues.

Q: How do you know an idea is worth pursuing through partnerships and collaboration, versus going it alone? And how do you think our more virtual world has impacted your thinking?

- **Aimee:** All of our work is collaborative by design, and we have a pretty small staff at the actual NERR - a lot of our success depends on building strong partnerships with people who care about the issues in the region. So since some of us are so spread out, we're pretty accustomed to doing more a lot of work virtually. Though it's definitely true that video call fatigue is a real thing, and after a certain point you have to get creative and do other things besides staring at a screen.
- **Kaitlyn:** Since we're both part of the Coastal Training Program, I think it's always part of our process to look for opportunities to collaborate with partners because these coastal and estuarine issues requires including a lot of diverse perspectives. While we usually prefer to have people gather at sites and experience that in-person, we've been able to get creative and partner with people across the country using some of these virtual techniques as well.

Q: Aimee - can you share more about how you will engage Tribes to collect their input?

- **A:** It's kind of hard to define their role, because they don't really like the bins that we tend to put things in. From a grant perspective, they are officially project partners. But they're also more, above and beyond that. We work closely with people who work directly with the local Tribes, and with a consultant who is a Tribal liaison, and with an anthropologist who has a very close relationship with the local Tribes. So far, we haven't had direct interaction, but they're very excited about this work and they're glad that we brought them in early in the beginning phases of the work. In this phase, where we're compensating them, we have Tribal monitors anytime we're doing any fieldwork or exploration of any type. So we're building the relationship slowly, and right now it's through the experts that have the existing relationships with them.

Q: How were capacity building funds used?

- **Kaitlyn:** Funding was used for the Estuary Foundation to hire a staff person to pull together northeast Florida's management plans and do an in-depth analysis of issues, challenges, and recommendations. A portion was also devoted to meeting facilitation. There's always a need for planning around meeting facilitation, whether that's food, or a comfortable space to meet, or someone to mediate, there are always some things to consider.
- **Aimee:** Pretty similar - a little bit of staff work to do engagement, outreach, and build the stakeholder list. Then the actual symposium, food, transportation, handouts, poster boards, etc.



**National Estuarine
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Comments

- *Learned importance of collaborative conservation and how it relates to the actual field work to protect and preserve ES.*
- *These kinds of complex NERRS projects are where the system makes a difference in local issues. The funding from the science collaborative allows these lessons to be shared*
- *Excellent examples of engaging with partners to advance NERR efforts in CA and FL.*
- *The webinar highlighted the need to define the NERR needs in our Collaborative Science proposal, as well as the needs of the stakeholder community.*



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