COLLABORATIVE SCIENCE FOR ESTUARIES

WEBINAR SERIES

Julie Gonzalez
University of California, Davis

Chris Peter
Great Bay NERR

Kelly Darnell
Gulf Coast Research Laboratory & University of Southern Mississippi

Caitlin Young
NOAA RESTORE Science Program | Moderator

Doug George
NOAA Office for Coastal Management | Moderator

Collaborative Science Conversations

Career Pathways to Collaborative Science Success

National Estuarine Research Reserve System
Science Collaborative

RESTORE SCIENCE PROGRAM

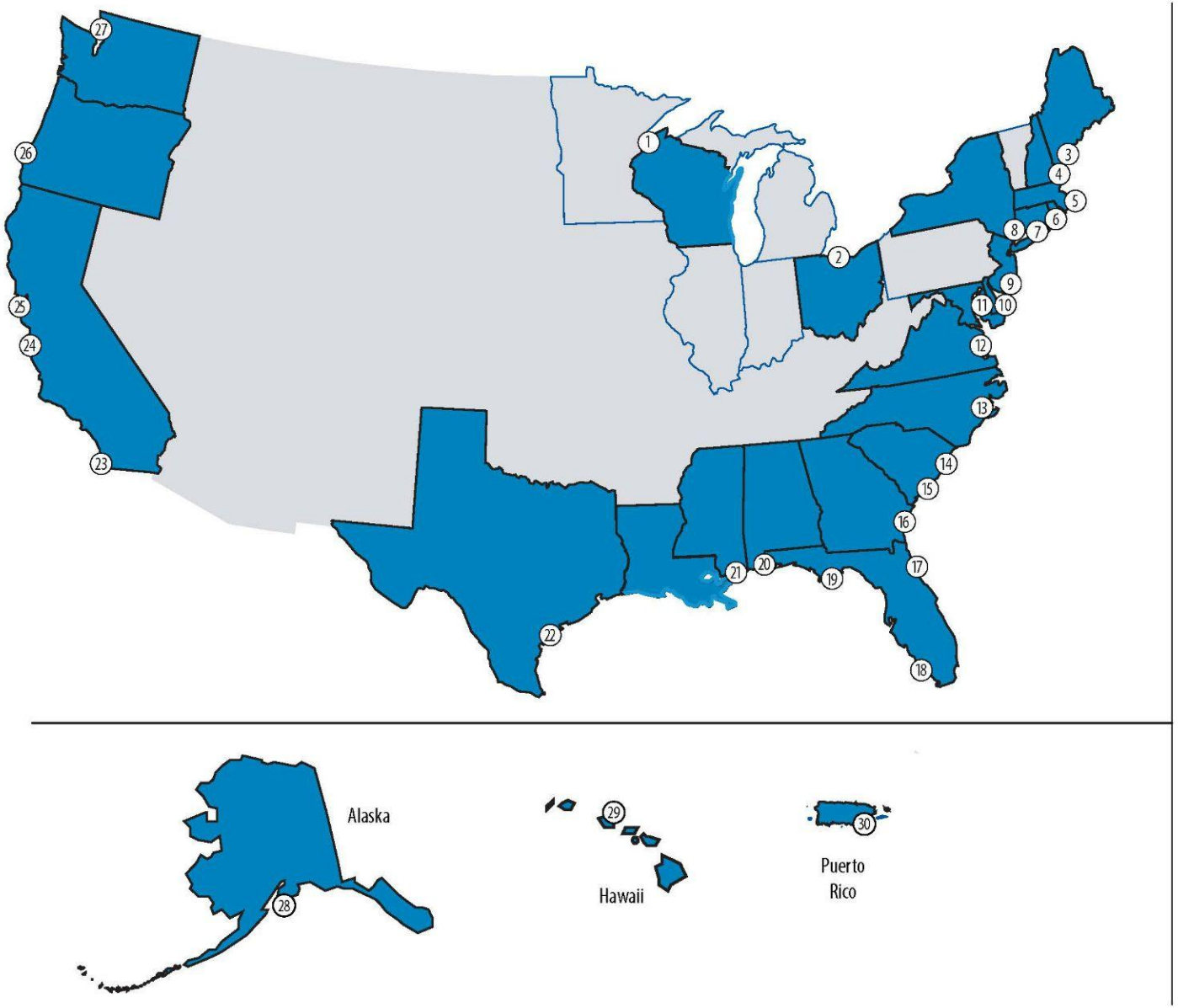
Date: Thursday, June 22, 2023
Time: 3:00-4:00 PM ET

NATIONAL ESTUARINE RESEARCH RESERVES

The National Estuarine Research Reserve System (NERRS)

- NOAA Program
- Place-based collaboration with a local partner, e.g.:
  - State Agency
  - University
  - Nonprofit
- Reserve programs:
  - Stewardship
  - Research and scientific monitoring
  - Training
  - Education

The NERRS Science Collaborative supports science for estuarine and coastal decision-makers.



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

Questions

Use the **Q&A** feature to ask the speakers questions about the presentation. Q&A visible to organizers only.

Need help?

Use the **Q&A** feature to contact organizers.

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Wrapping Up

- Webinar recording will be made available in the next few days.
- Please take the exit survey to help us develop future webinars!

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Q&A

Q: Dr. Darnell mentioned taking a course through NOAA to be trained in this area. Can you speak more about this course?

- **A**: Kelly: It was the NOAA Facilitations Basics course, and I took it virtual because it was during the time where everybody was staying home. The course covered how to be a facilitator for a meeting, but also how to lead a meeting, the prep required before a meeting to make it go as smooth as possible, and post-meeting, engaging with participants. The course was extremely valuable and it was offered through Caitlin's program, which was fantastic, and I have since seen it offered in many different avenues. I am always a big proponent of training and I think that one was certainly a good use of my time.
- Chris: Ironically, I have a tough time with being engaged through collaborative training virtually, but in-person, the osmosis of working with people on projects that have been doing collaborative science for so long has been a huge learning experience for me. A quick shameless plug for the Science Collaborative, if you are on a collaborative science project it comes with a collaborative network of events where you can learn about how other people approach collaborative issues and what they love about it and what some tools and tips are.
- Julie: Another plug for the Davidson Fellowship, you get access to tons and tons of really awesome trainings through NOAA. They are so well-thought out and so effective despite being mostly virtual. They are very interactive, super fun and you learn a lot. One in particular we had for the Davidson Fellowship, there was a collaborative science training that took place over the course of two weeks and that was super beneficial learning all the theories and learning about the whole world of literature devoted to collaborative science. I took a couple of other trainings during my time as a Davidson fellow that were very helpful, including the Facilitations Basics course that Kelly was talking about.

Q: Do you have examples of collaborating with storytellers and artists to help share your research with communities and non scientists? Do you have ideas on how artists and storytellers can collaborate with scientists?

- **A:** Chris: There are a couple of simple ways I have seen this happen. The best figure I have ever seen in a peer-reviewed journal article was an artist's drawing representing different species compositions and quantities in different habitats like oyster reefs, oyster farms, seagrass beds, and mudflats. That figure and so many other scientific figures drawn by artists have spoken volumes to me and I will never forget them. Another way I have seen this happen is with logos. Some projects have logos to help brand and recognize those projects immediately, and in one project I've been involved in an artist drew a seagrass bed as our logo.
- Kelly: Here at Gulf Coast Research Laboratory's Marine Education Center, we have a piece of art from a local artist on display that is made up of trash left from our beaches. To me this is so poignant, and using that to reach the public and really illustrate that what we're doing and what we're leaving behind on our beaches accumulates to be a lot. This is a very visual, pretty reminder of the impact that we have, and this is definitely an area where I see great opportunity.
- Julie: I think that storytelling and art have a huge place in collaborative science. One example from my experience is in the project up in Oregon we developed a brochure meant for local community members, and the NERRS Science Collaborative team's designers helped us do this. It was very visual, there were diagrams and lots of pictures, and we took the information that we gained from focus groups about what people really care about estuaries and tried to make visual connections showing how what scientists actually measure when they measure the progress of restoration projects is actually directly related to what people said they cared about in focus groups. Visual diagrams and those kinds of depictions are really important for getting points across to groups that may be less technical.
- Chris: One thing Kelly mentioned reminds me of the Mission-Aransas NERR in Texas that used old plastic dolls that washed up on the shore there, and used those to raise money and awareness about marine debris.

Q&A

Q: As I've advanced in my career, it's become clear to me that if I want to do the research, academia is the best place. How did you navigate any potential mismatch between traditional tenure metrics (papers, etc) and doing Co-P science (e.g. long time to conceive project, different value systems, etc)

- A: Kelly: I've approached that as an open communication with department chairs, saying "I find value in this and these are all the reasons. This is the grant funding that is coming in, and the number of papers that result from this will be the same but they may be delayed because of the time". I have found that approaching this respectfully but also with numbers that can be used for evaluation has been very helpful. At least at my University, the leadership has been very receptive to that.
- Chris: I try to strike a balance, I was in academia and now I'm in the NOAA umbrella within the NERRS system, and I have shifted a lot of my time from literature review and churning out papers to organizing symposiums and work groups. Now I am feeling like I have over-shifted a little bit and want to shift back to the middle by dedicating some time to maybe once a week reading papers, and maybe this can be done collaboratively by doing a journal club with some of your colleagues, or setting time aside for writing. I have struggled to write manuscripts in the last couple of years, not because I don't have the content, but just because of the time that it takes. Time is such a precious resource and trying to find a balance between traditional tenure metrics and Co-P science is the best thing you can do.

Q: Can you provide some examples of types of deliverables that are useful for community stakeholders, or categories of deliverables? It seems like the community doesn't need or want the data we produce.

- **A:** In the Guide to Collaborative Science, there are a few resources you can refer to which address this common challenge of creating deliverables that are useful for community stakeholders. In the guide section "Identify the Products That Will Meet a Need", we provide a detailed overview on developing information, products, and tools that intended users will find relevant and usable. Within the first tip in this section, "Consider a range of potential products", you will find a dropdown list with examples of past usable products designed for a range of users, including community stakeholders.