

# Climate Change and Sentinel Monitoring Workgroup Meeting Summary

February 21, 2023

Teams Meeting (Link in Meeting Invite)



## Attendees

Samarra Scantlebury (NYSDEC Co-Chair), Kathleen Knight (CT DEEP Co-Chair), James Ammerman (NEIWPC), Jordan Bishop (NEIWPC), Sarah Crosby (Maritime Aquarium), Gwen Gallagher (NY Sea Grant), Elizabeth Hornstein (NY Sea Grant), Gavin Jackson (CT DEEP), Jake Kritzer (NERACOOS), Esther Nelson (EPA), Katie O'Brien-Clayton (CT DEEP), Casey Personius (NYDEC), Matthew John Pruden (Cornell), Ron Rozsa (citizen, retired CT DEEP), Sarah Schaefer-Brown (NY Sea Grant), Evelyn Spencer (EPA), Cayla Sullivan (EPA), Jamie Vaudrey (UCONN), Penny Vlahos (UCONN), Harry Yamalis (CT DEEP)

## Introduction

Samarra Scantlebury called the meeting to order at approximately 10:00 AM. Samarra presented the workgroups charge per the CCMP and the FY tasks from the annual workplan that we would be addressing at today's meeting.

Samarra provided a synopsis of the [November 2022 Meeting](#): The Sea Grant Team provided a summary of their needs assessment and highlighted the environmental justice aspects of that needs assessment, and environmental justice breakout sessions were held. Any revisions to the summary should be emailed to [Kathleen.Knight@ct.gov](mailto:Kathleen.Knight@ct.gov).

Samarra introduced the web revisions to the team's [workgroup page](#) as well as the [research page](#). Samarra noted that as we proceed to go through the web page additional edits will be made and that there is an internal LISS effort to make the workgroup pages have consistency this effort will be reflected in coming months as well. Ron shared a previous webpage that was built to support the CCSM efforts and the associated subpages for the research listed there.

## SHARP Collaboration Debrief

Kate Knight debriefed the group regarding the January special meeting, the Saltmarsh Habitat Research Program ([SHARP Collaborative](#)). The intent of the special meeting was to provide the CCSM, Habitat Restoration and Stewardship, Indicators Review Team and our other external partners with an overview of the SHARP program and:

- Establish a shared understanding of the existing and intended continuance of data available through SHARP
- Establish a shared understanding of data gaps.
- Identify climate change monitoring collaboration opportunities.

This is intended to feed the CCSM's development of the updated 5-yr strategy and explore potential parameters, existing tested standard operating procedures and locations to inform the development of the LISS CCSM sentinel monitoring network (in conjunction with the other information explored in this year's meetings series).

Take-aways:

- Opportunities with tested and regionally consistent SOPs
- Both vegetation and bird surveys are at over 44 locations (170 transects) across CT, & several across LI.
- Demographic data is more limited to south shore of LI, [and fewer locations in CT] but partnerships are being established to explore N shore with restoration sites specifically.
- To ensure continuance of the data collection additional partnerships are needed.
- Ron noted he has provided a proposal for a conceptual model.

### **Introducing Equitable Discussion Methods**

Kate Knight introduced new rules for workgroup discussions and Q&A. The ground rules are to facilitate more equitable discussion and provide tools for building non-topical conversation in the more appropriate forums.

These new ground rules include:

- Raise Hand to Speak. Provides a fairness to que and eliminates talking over each other.
- Provided the limited time with guests we request keeping verbal discussion to agenda topics.
  - Ex: "I am responding to..."
- Parking-lot. A way to express non-topical conversation into future forums.
  - If your comment doesn't pertain to this meeting add it to the chat
  - The co-chairs will document and make sure that also gets to "take-space" at the appropriate time
- Two-minute time limit for questions and comments
- 30 second and 15 second warning
- Muted afterwards
- Pre-Delegated/Volunteer Conversation Leader for the member updates (to be called member updates and reflection) to allow equitable sharing of space at end of the meeting and to help set the tone with a variety of experiences/expertise and approaches. This is also an appropriate place to share non-topical content.

### **Sea Level Rise Affecting Marshes Model- Connecticut**

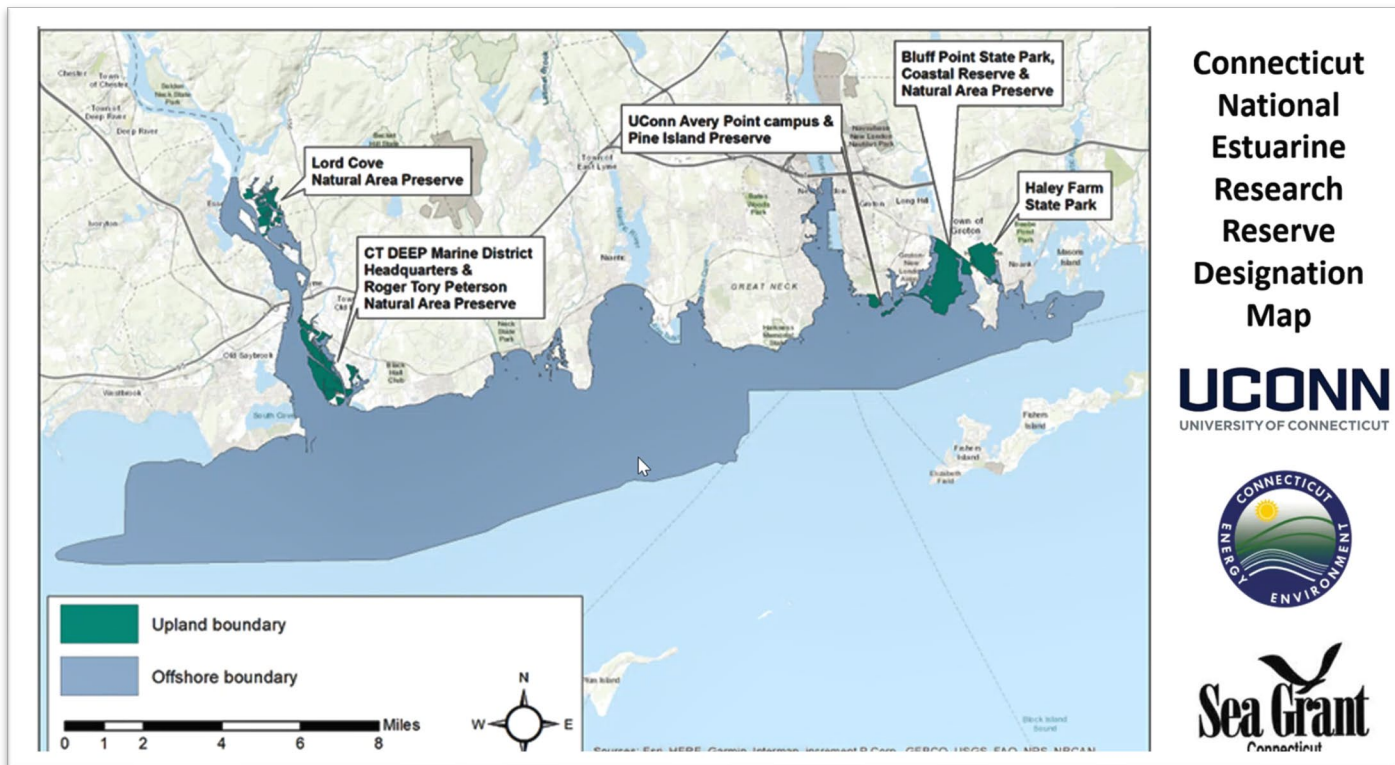
Presentation had to be rescheduled due to statewide outage.

### **National Estuary Research Reserve**

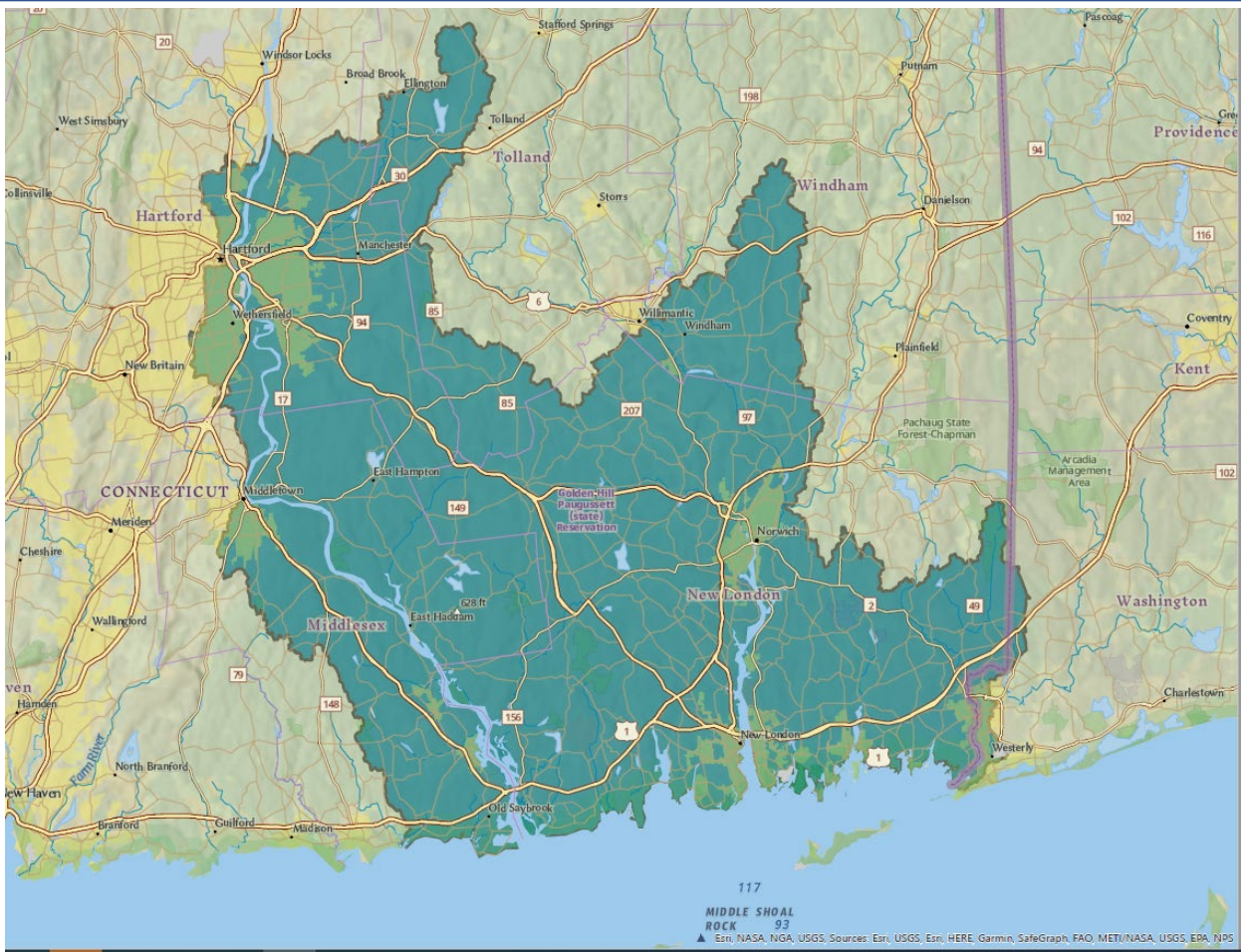
Dr Jamie Vaudrey presented the overview and direction of the Connecticut NERR site. Summary of the presentation includes:

- Connecticut is the 30<sup>th</sup> reserve to join the system
- What is a research reserve:
  - Provides protected coastal areas for research, monitoring, education and stewardship
  - NOAA provides funding to provide base staffing for education, establishing partnerships, and research support
  - As long as one of these four pillars are objective the reserve can help: Research & Monitoring, Stewardship, Monitoring and Training
  - Each Pillar has a designated staff Jamie is the Research Coordinator, Larrisa Graham is Education Coordinator, Katie Lund is the Coastal Training Program Coordinator and Jason Krumholz is the Stewardship Coordinator & program director George McManus and Financial Officer Sam Stadnick
  - Program is in progress of hiring Monitoring Technician and hiring new [Reserve Manager](#), three summer assistants and hope funds will allow for communication specialist and volunteer liaison.
- NERR has a standard set of programs required. The funding is limited to these programs and the base staff:
  - System-Wide Monitoring Program
  - Sentinel Site Application Module 1 &2
  - Coastal Training Program
  - K-12 Estuarine Education Program ; Teachers on the Estuary
  - [Margaret A Davidson Fellowship](#)
    - Margaret A Davidson is also notable influence and a [youtube](#) video was shared.
  - National Estuarine Research Reserve Science Collaborative.
- The boundaries considered several elements (image below).

- Some of the buffer zones indicate areas that are dredges, locations of offshore cable connections, military restriction areas, commercial traffic (dredged areas), mooring areas. Any where that has potential for manipulation of natural environment does is the buffer zone.
- Any research partners can work in boundary (but not required to work only in the boundary). Buffer informs partners about potential interferences/modifications to the environment
- Area to the West is notable because it is an important sediment zone coming from CT river. A lot of important sediment transformations noted.
- Some of best eel grass beds are around Ram Island, therefore it was extended to include these beds.
- Targeted watershed boundary also includes 40% of Connecticut's EJ areas. Serving these communities is running theme through management and planning. (See graphic below)
- Program Vision: A resilient, healthy Long Island Sound Estuary and watershed where human and natural communities thrive.
- Program Mission: To collaboratively integrate science with conservation, learning, recreation, and economic viability, using ecologically diverse sites in Southeastern CT.
- Anticipate that there will be center at UCONN Avery Point Campus dedicated to NERR program, pavilions available to center education and research collaboratives, and adding signage to create awareness and opportunities like the citizen science program [chronolog](#).
- In next month or so there will be series of committees/workgroup to provide input on monitoring program and priorities.
- Graduate students interested in working with the NERR have two options
  - Margaret A Davidson Application- Start date for this application is fall 2024 (funding is for 2yrs) and includes participation for national program. Not just UCONN NOAA provides review and acceptance.
  - Locally then you should contact person you are interested in working with if you have interest in a particular pillar reach out to that contact. (Above)



Connecticut NERR Designation Map (above) and CT NERR Targeted Watershed (below)



### **USGS Clearing House and Mapper Update**

When USGS proposed this project the CCSM was at a crossroads decision do we update and revamp our own meta data-database or find opportunities to collaborate and leverage other efforts. This was one of those efforts we identified to be ideal collaboration.

Cayla Sullivan provided an update to the USGS project funded under FY22.

The goal of this project is to provide a meta data base, supported by a mapper for visualization and interactive function.

Cayla noted the data categories to be included, stakeholders included in this effort and the intended attributes of the portal summarized in image below.

**Stakeholders**

Data generators	Data users
<ul style="list-style-type: none"> <li>• Federal partners</li> <li>• State and local agencies</li> <li>• Interstate organizations</li> <li>• Tribal Nations</li> <li>• Municipal environmental and health departments</li> <li>• Academic institutions</li> <li>• Community organizations</li> </ul>	<ul style="list-style-type: none"> <li>• Researchers</li> <li>• Decision-Makers</li> <li>• Public</li> </ul>

**Data Categories**

Monitoring locations (point)	Spatial data (polygon)	Modeled area (polygon)
<ul style="list-style-type: none"> <li>• Water quality               <ul style="list-style-type: none"> <li>• Continuous monitoring</li> <li>• Discrete sampling</li> </ul> </li> <li>• Physical               <ul style="list-style-type: none"> <li>• Continuous monitoring (Stream and Tide gages)</li> <li>• Miscellaneous and event gaging</li> </ul> </li> <li>• Sediment               <ul style="list-style-type: none"> <li>• Cores and sediment surveys</li> <li>• Chemistry and characterization</li> </ul> </li> <li>• Biological/Ecological               <ul style="list-style-type: none"> <li>• Survey sites</li> <li>• Sampling type</li> </ul> </li> <li>• Meteorological               <ul style="list-style-type: none"> <li>• Weather stations</li> <li>• Deposition station</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Land use/land cover</li> <li>• Topography/bathymetry</li> <li>• Waterbed delineations (HUC12)</li> <li>• Ecological assessment areas</li> <li>• Shellfish areas</li> <li>• Aerial vegetation surveys</li> <li>• Restoration/green infrastructure areas</li> <li>• Stormwater/wastewater conveyances</li> <li>• Aquifer maps</li> <li>• Superfund/Brownfield locations</li> <li>• Parks/wildlife areas</li> <li>• Waterway classification</li> </ul>	<ul style="list-style-type: none"> <li>• Water-quality               <ul style="list-style-type: none"> <li>• Contaminant transport</li> <li>• Total Maximum Daily Load modeling</li> </ul> </li> <li>• Physical               <ul style="list-style-type: none"> <li>• Inundation</li> <li>• Sediment-transport</li> </ul> </li> <li>• Geographical               <ul style="list-style-type: none"> <li>• Land-use change</li> <li>• Habitat change</li> </ul> </li> </ul>

**Mapper and portal attributes**

Mapper	Portal
<ul style="list-style-type: none"> <li>• Program and spatiotemporal information               <ul style="list-style-type: none"> <li>• Research Organization</li> <li>• Location</li> <li>• Duration</li> </ul> </li> <li>• Data Category               <ul style="list-style-type: none"> <li>• Constituents monitored</li> <li>• Methods</li> <li>• Study/monitoring purpose</li> </ul> </li> <li>• Data availability               <ul style="list-style-type: none"> <li>• Public availability</li> <li>• Data links</li> <li>• Contact information</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Functions               <ul style="list-style-type: none"> <li>• Filter metadata by multiple criteria</li> <li>• Export in several formats</li> <li>• Multiple database queries</li> <li>• Construct URL to query the Water-Quality Portal based on selected attributes</li> </ul> </li> <li>• Quality assurance               <ul style="list-style-type: none"> <li>• Verified metadata</li> <li>• Data identified as associated with standard operating procedures or Quality Assurance Project Plan</li> </ul> </li> </ul>

Currently the USGS has reached out to stakeholder to fill out a form so that a preliminary gather of data sources can be compiled, it is USGS's intention to reach out to PIs and continue to build out the meta and location data specifically to facilitate the build of the clearing house.

CCSM to share the form for this preliminary data collection.

**Adjourned at 11:21 AM**