

**Science & Technical Advisory Committee**  
**TEAMS Online Meeting**  
**February 18, 2022 – Meeting Summary**



**In Attendance:**

**STAC Members:** Jim Ammerman, Cassie Bauer, Chris Conroy, Carmela Cuomo, Sylvain De Guise, Kristin DeRosia-Banick, Dianne Greenfield, Jim Hagy, David Lipsky, Darcy Lonsdale (New York Co-chair), Jim O'Donnell, Suzanne Paton, Brad Peterson, Julie Rose, Paul Stacey, Kelly Streich, Mark Tedesco, Maria Tzortziou, Jamie Vaudrey, Penny Vlahos (Connecticut Co-chair), Laura Wehrmann, Mike Whitney, Chester Zarnoch

**CAC Liaisons to STAC:** Mickey Weiss (Project Oceanology)

**Others:** Mary Arnold (NYSDEC), Nancy Balcom (CTSG), Zosia Baumann (U Conn), Holly Drinkuth (TNC/CAC), Syma Ebbin (CTSG), Richard Friesner (NEIWPC), Lillit Genovesi (NYSG), Michele Golden (NYSDEC), Elizabeth Hornstein (NYSG), Kristin Kraseski (NYSDEC/NEIWPC), Peter Linderoth (STS), Bill Lucey (STS), Jon Morrison (USGS), Esther Nelson (EPA), Victoria O'Neill (NYSDEC/NEIWPC), Jimena Beatriz Perez-Viscasillas (NYSG), Sara Powell (NYSG), Samarra Scantlebury (NYSDEC), Sarah Schaefer-Brown (NYSG), Nancy Seligson (CAC), Becky Shuford (NYSG), Lane Smith (NYSG), Cayla Sullivan (EPA), Nicole Tachiki (EPA), Alicia Tyson (CTSG)

**Introductions, Updates:** Penny Vlahos asked for nominations for the New York STAC Co-chair to her by April 1 as well as volunteers for a nominating committee, two from each state to her by next week. Jim Ammerman noted in response to a question that remote access would also be available for future in-person meetings.

**LISS FY 2022 Work Plan and Budget, Modeling Update:** Mark Tedesco, EPA LISS

Mark provided a quick a quick update on the FY2022 budget and process. The new 2022 Infrastructure Investment and Jobs Act (referred to as the Bipartisan Infrastructure Law or BIL) will provide \$106M for the LISS over five years. There a now several different pots of money with different requirements. The Long Island Sound Restoration and Stewardship Act (Clean Water Act 119) will provide \$21M in BIL funding and \$30.4M (possibly \$40M) in non-BIL funding for FY2022. The National Estuary Program (Clean Water Act 320) will provide \$1M in BIL funding and \$700,000 (possibly \$1.7M) in non-BIL funding for FY2022. EPA may be able to reduce or eliminate the matching fund requirements for the BIL funding, the details remain to be determined.

Now decisions about allocating the funds must be made. BIL priorities include a. water and wastewater infrastructure, b. climate change adaptation, and c. environmental justice. With recent increases in the research program, the futures fund, environmental justice, sustainable and resilient communities, and other obligations, the current LISS base budget is about \$28M. A series of additional proposals in line with existing priorities are currently being evaluated for funding, primarily from state and other federal agencies. We have reviewed remaining gaps and invited additional requests from the Federal Coordinating Group by March 4<sup>th</sup>. Implementation

Team meetings for detailed proposal discussions are scheduled for March 17<sup>th</sup> and 31<sup>st</sup>, and final decisions will be made at the April 21<sup>st</sup> Management Committee meeting.

In summary, the LISS must develop two separate work plans for the BIL and non-BIL funds and make sure the matching funds requirements are met. BIL funds are likely to require more frequent reporting. The program also needs to demonstrate rapid results by this fall, particularly with the BIL funds, and administer the FY2022 funds with its existing staff. All funds must be awarded by September of this year.

Mark also briefly reviewed the status of NYCDEP-HDR systemwide modeling effort which was presented the STAC a year ago and showed a figure of the model grid in use. He noted that thanks to the suggestions of the Model Evaluation Group (MEG), changes were made to planned model, and a ROMS-RCA model will be developed. The calibration/validation time periods for the model have also been modified to include periods both before and after nitrogen reductions. Changes have also been made in the deadlines for the modeler's reports to the MEG and the broader program.

**Discussion:**

--Paul Stacey asked if the MEG meetings could be opened to LIS partners and Mark replied that he could share reports and summaries from the meetings but wanted to preserve the MEG's confidential ability to directly interact with the modelers.

**LIS Research Conference Plans:** Syma Ebbin, Connecticut Sea Grant

The Research Conference has been moved to a new date and venue because of COVID, now it will be May 18<sup>th</sup> at Housatonic Community College in Bridgeport. This overlaps with the Joint Aquatic Sciences Meeting in Michigan and the virtual LIS Seaweed Bioextraction Symposium on May 18<sup>th</sup> and 19<sup>th</sup>. Syma detailed the registration fees and the registration deadline of May 6. She noted that there will be two keynote speakers, Monica Barra from the University of South Carolina focusing on Environmental Justice and Climate Change, and Chet Arnold, recently retired from UConn CLEAR discussing land use in the LIS watershed.

**Discussion:**

--Penny Vlahos asked if there was a remote option as well and Syma stated that the conference would be in person only, not hybrid. Syma said that there was a lot of interest in this meeting but asked everyone to further help get the word out.

--An additional question was asked about the hours for the meeting and Syma said it would be a full day with times geared to the ferry schedule.

--Paul Stacey asked if there was any contingency for the resurgence of COVID and Syma said that there were cancellation and postponement contingencies in the contract. She noted that she had had poor experiences with hybrid meetings. Holly Drinkuth suggested recording at least some of the talks and Penny Vlahos agreed that was a good idea.

--Michele Golden noted the overlap with the Seaweed Bioextraction Symposium on the 18<sup>th</sup> as well.

--Paul Stacey noted that online meetings had been a boon for him since he could see and hear better. He suggested recording the meeting if there was no hybrid access.

--Jim Hagy mentioned that he had learned how to pre-record his own talks and would like a meeting where pre-recorded talks would disappear after a certain period meaning he would not need permission from EPA to post them.

--Jim Ammerman mentioned that the upcoming Restore America's Estuaries meeting was requiring all speakers, in person or not, to pre-record their talks. Penny Vlahos said that this was becoming increasingly common, and she liked Jim Hagy's idea of a talk expiring.

--Jim O'Donnell said that he preferred in person meetings, but thought remote meetings were preferable because they had a much smaller carbon footprint.

--Sylvain De Guise asked Jim if he thought we should make the meeting remote for that reason but that it was getting late to do so. Sylvain said that hybrid access for such a meeting was very expensive. Jim replied that he withdrew his concern for this meeting since Bridgeport had public transportation access, but he thought that similar meetings should be mostly remote in the future.

#### **The 2022 LISS Research RFP:** Jim Ammerman, LISS/NEIWPC

Jim discussed the 2022 LISS Research RFP to be released in the next month or so by New York and Connecticut Sea Grant. The last RFP was released two years ago after much discussion at the last in person STAC meeting in March 2020. This year's will be similar but with some changes. He summarized the basic requirements as follows: 1. Is actionable research that informs managers, 2. Engages end users throughout the project, 3. Addresses the themes of the 2015 CCMP but is not limited to specific topic areas, and 4. Must specify how it addresses Ecosystem Targets, CCMP Strategies, Outcomes, Objectives, or Implementation Actions (which have been revised in the last year), and/or climate change resilience, long-term sustainability, or environmental justice. In addition: 5. A new 2022 Science Needs document will be posted shortly with fewer but higher priority listings than the previous 2020 document, though proposals are not limited to these listings, and 6. Proposed research must have explicit and testable hypotheses.

Jim summarized the likely details of the RFP: 1. \$5.5 M in total funding, 2. A maximum \$500 k per year for 2 years, 3. Proposals more than \$250 k per year must demonstrate interdisciplinary approaches with collaborative teams and have potentially high impact outputs, 4. There is a 50% match requirement (\$1 match for a \$2 grant), 5. Full proposals will require a data management plan, and 6. Fund proposals require an approved QAPP. The tentative calendar is to release the RFP in mid-March with pre-proposals due in early June. Principal investigators (PIs) will be notified in mid-August with full proposals due in mid-October. Final decisions will be announced at the end of the year and projects will start next spring. Jim then presented a graphic and a text description of the National Estuarine Research Reserve (NERR) Science Collaborative model with continuous interactions among sponsors, researchers, and users during a research project. While this RFP may not require an identical model, end users are likely to be an important part of the projects proposed for this RFP. He concluded by inviting questions and discussion.

#### **Discussion:**

--Jim Hagy noted that good hypothesis-driven research does not always have immediate end users and EPA ORD frequently asks for similar projects which leads to some rather fanciful connections at times. In addition, end users are not always lined up to use every creative research project upon completion. Jim Ammerman responded that the NERR Science Collaborative may be the extreme case but something approaching this needs to appear in proposals, with the exact wording left to the proposer. Jim Hagy responded that the idea was okay but that it was important to recognize that important research might require a few additional steps prior to management application.

--Mike Whitney said he liked the collaborative science model and he said even his past research projects had some extension effort through Sea Grant. He suggested that every research project include separate funds for outreach specialists to address stakeholders. Mike added that the approach presented seemed more like the Futures Fund with immediate application of the results, whereas the research program should be more cutting edge. He also mentioned that while the research program budget had increased, he wondered why it did not increase more based upon the overall budget increases. Mark Tedesco replied that the research funding had increased from \$1 M in the past to almost \$6 M this year and stated that he knew of no other EPA Geographic Program which invested so heavily in research. He stated that the ability to fund this research program was dependent on getting additional matching funds from other sources. Most of this match comes from the NY and CT state agencies, but as overall funding increases, this "overmatch" is getting harder to find. The research program required match at 50% of the Federal funds is still less than the overall required statutory match of 67% of the Federal funds but raising it to that level would cause problems for potential principal investigators. The Futures Fund, in contrast, has met the statutory match requirements in the past, though that may change this year. Jim Ammerman added that for several cycles in the past the funding was about \$1 M with no match and two years ago was \$3 M with a 50% match.

--Lane Smith suggested that researchers consider building on research that they have already done which requires only a few more steps to have management application; particularly with recently researched topics including carbon, respiration, and sediments.

--Dianne Greenfield asked about proposals of different sizes with the larger ones requiring interdisciplinary projects and a potential requirement for working in a reserve. Jim Ammerman replied that he expected a mix of different projects as occurred with the last RFP with a few large ones and more small ones. He said there was no requirement to work in a reserve, though CT was about to establish new National Estuarine Research Reserve which could be a research site. Sylvain De Guise added the CT Reserve is not yet established and that proposals are chosen based on merit, including peer and panel reviews. He noted that eight proposals were funded from the last RFP, including only one that was greater than \$250 k per year, and the 50% match requirement tends to limit the amount requested. Becky Shuford added that the language about the reserve came from the NERR Science Collaborative and has nothing to do with LIS.

--Nancy Seligson said that the CAC supported the connection of research to end users, particularly using research to help move and push forward to restore LIS. The CAC wants to make sure that research is being used to improve LIS and appreciates this thought process. Penny Vlahos commented that this was important and that for more esoteric projects there were other funding options. Sylvain De Guise added that the spectrum of potential proposals ranges from

including end users to vague statements that the research may be useful to management. This RFP is trying to move away from those vague statement towards a sweet spot closer to incorporating end users, though this may vary among proposals.

--Paul Stacey added that it may be premature to adopt the NERR Science Collaborative model, when he worked at the NERR in New Hampshire, it was a heavy lift to develop the collaborative approach. He suggested delaying such an effort to focus solely on applied rather than basic research but to keep moving in the direction of improving research connections to management.

--Jim O'Donnell said he was fine with applied research but said that it should be forward looking and have needed conversations to inform managers about new things that they may not know. Mark Tedesco added that the prior comments about "heavy lifts" and "needed conversations" were good reasons to move forward with this more collaborative research approach.

--Penny Vlahos asked Mark Tedesco to address the matching funds question for the research grants, particularly different matching funds options and how they could help the LISS. Mark said that was a discussion for the STAC, whether to raise the match requirement to 67% of the Federal funds, in which case he would not continue to bring up the matching funds issue. Jamie Vaudrey said that a 67% match requirement would limit the potential pool of researchers and would decrease their diversity when the LISS is trying to increase these. She said that the 50% match had already required research faculty like her to collaborate with tenure track faculty to meet the match requirements. Sylvain De Guise said that this was a good forum for discussion of this topic, since Sea Grant wants to set the right rules. The last RFP had a good diversity of proposals in different ranges, perhaps including some groups who came together because of the match requirements.

--Laura Wehrmann point that that younger faculty don't have the end user contacts of more senior faculty and have more trouble with the match requirements because their salaries are lower, she suggested that most of the funding seemed to go to more established researchers. Penny Vlahos responded that Laura made an important point and that joining the STAC and making contacts with others on or presenting to the STAC could be very helpful. Sylvain De Guise added that proposals are reviewed by peer reviewers and panelists from outside New York and Connecticut and are chosen based on rankings, not individuals. The pre-proposal review is more heavily weighted to LIS programmatic relevance and has some local representatives, but full proposal reviewers and panelists are all from outside the region. Syma Ebbin added that conflicts of interest between reviewers and principal investigators are carefully examined, and Sylvain added that all panelists and reviewers must sign conflict of interest forms. Suzanne Paton asked if reviewers had subject matter expertise, which Sylvain and Syma confirmed. Suzanne also said she had heard that many habitat scientists did not submit proposals because they thought most of the funding went to water quality proposals. Penny said that opening research topics to all parts of the CCMP means that the most convincing proposals on a variety of topics can be funded. Jim Ammerman added that a marsh habitat thin-layer placement proposal was funded in the last round and that only three-page pre-proposals were initially required so no one should hesitate to write one.

--Chester Zarnoch asked in the chat about double-blind reviewers. Syma replied that some Sea Grant programs have changed to that, and it may be considered in the future, but it does not allow for evaluation of the investigator's track record or budget. Jim O'Donnell asked if

demographic information was collected on PIs and Syma said no, Sylvain added that demographics were not considered in funding decisions, though research track record as indicated in the CV could help in determining whether proposed research projects would be successfully completed. Penny sympathized with the younger PIs who may believe most of the funding goes to more senior investigators and she suggested that they reach out to her or other senior faculty for mentoring or advice. The best way to be competitive is to be at the table when directions and needs are discussed, as is also happening here.

--Sylvain said that all the comments in the chat were in favor of not raising the match requirement beyond 50% but also said he would request additional input related to criteria for management impacts.

**Overview of the Draft LIS Marine Debris Action Plan:** Nancy Balcom, Connecticut Sea Grant  
Nancy said that Connecticut and New York Sea Grant got funding from both the NOAA Marine Debris Program (MDP) and National Sea Grant to develop a five-year action plan (2022-2027) for Long Island Sound and its watershed. They got guidance from both the Northeast and Mid-Atlantic regions which were developing their own plans. It is currently a draft plan but once approved by the NOAA MDP, will apply for five years. It envisions a LIS free from marine debris by reducing the impact of debris through improved understanding, taking preventative actions, and collaborating with partners.

Nancy said the planning process started in the summer of 2020, with a planning team working with the MDP. They followed with a survey and a workshop to develop goals in February of 2021. Three work groups (strategies, actions, and volunteer partners) worked through 2021 and released a draft plan in December. They are currently working on feedback and revisions, adding new partners and leads, and developing metrics for reporting progress.

The plan is structured by Goals, with Strategies under each Goal, and then a series of Actions. The Goals include the following. Goal 1. Understand, prevent, and mitigate impacts of single-use plastic and other water/land-based consumer debris. This goal has five strategies, each with multiple actions, several of which Nancy detailed. Each action would have a metric with the lead organization for that action responsible for report on the actions of all the partners. Goal 2. Understand, prevent, and mitigate impacts of abandoned and lost fishing/aquaculture gear. This goal also has five strategies, most with multiple actions. This is already an active area, particularly in New York with Cornell Cooperative Extension's Suffolk County Marine Program. Goal 3. Understand, prevent, and mitigate impacts of microplastics and microfibers. This goal has four strategies, all with multiple actions.

The planning team is looking for comments by the end of February with final team review by mid-March followed by a broader review. The plan should go to the NOAA MDP for final review and approval in April with final graphic design a posting in May. There will be at least annual reporting to the NOAA MDP as well as other interested parties and the ability to provide more detailed information than the simple marine debris ecosystem target in the LISS CCMP, which is pounds of debris removed per mile of shoreline surveyed. A mid-plan review will occur 2.5 years into the



plan including meetings the regional coordinators. Nancy also said the group considers the plan fluid, as it includes actions which do not have current leads or partners but hopefully will find willing groups in the future. She concluded by providing a link to the plan and noting that it is currently in flux with many comments.

**Discussion:**

--Dave Lipsky asked if there had been contact with the south shore of Long Island and New Jersey about marine debris that could reach LIS. Nancy said that they had worked with the NOAA mid-Atlantic coordinator and her replacement as well as several groups in the New York area, some of whom are involved with the mid-Atlantic plan.

--Carmela Cuomo asked if there was a New England plan as well and Nancy replied that there was a Gulf of Maine plan, and the Northeast coordinator has been involved in both that and the LIS plan. LIS sits between the two regions of the NOAA MDP and has coordinated with both, but the LIS plan is focused on LIS and its watershed.

--Suzanne Paton thanked Nancy and colleagues for their efforts and commented that Great Gull Island accumulates a lot of debris every winter, particularly relict gear, which is removed from bird nesting areas but just piled in the forts on the island. They applied for a grant to get a landing craft to come and remove the debris back to the mainland but are still considering how to best sort, recycle and pay for dispose of it. Nancy said she would put Suzanne in contact with the Cornell Marine Extension group and the analogous group in Connecticut that are dealing with the fishing gear issue.

--Paul Stacey complimented the efforts on the plan but noted it was an intractable problem. He said that the current marine debris ecosystem target of the pounds of debris collected off the beach was not very useful. He was glad to see that the plan went beyond that target and wondered if the LISS could develop new targets which could deal with emerging issues like microplastics and pursue fundamental research on prevention. Nancy responded that Robert Burg had also expressed concern about the current ecosystem target, but that target modifications were unlikely soon.

--Mickey Weiss said it was a great report and should be presented to the CAC at their March 10<sup>th</sup> meeting and Nancy replied that she would do so if invited.

--Jim Ammerman responded to Paul's earlier comment and said the marine debris ecosystem target was one of several that needed to be revised but would not be until the CCMP is revised. However, this plan would go way beyond the ecosystem target and may include some future activities of the LISS. Syma Ebbin added that the research priorities in this document could be used by PIs to argue for support from the LISS or other research programs even without the development of new ecosystem targets.

**Overview of the new CT National Estuarine Research Reserve:** Jamie Vaudrey, U Conn

Jamie started by thanking her co-lead, Kevin O'Brien of CT DEEP, and all the others involved in the process to create the new CT National Estuarine Research Reserve, hereafter referred to as the CT NERR or the reserve. She gave a brief overview of the reserve system, a network of 30 reserves totaling 1.3 M acres funded by NOAA plus a state match totaling about \$1 M per year in base funding. Additional funding sources include the NERR Science Collaborative referred to

earlier, as well as infrastructure and land acquisition funds. Unlike the LISS, the CT NERR will not run research competitions. The reserve includes the lower Connecticut and Thames Rivers, with land areas on two natural area preserves on the lower Connecticut and two state parks on the lower Thames. The headquarters will be at the U Conn Avery Point campus.

A research reserve is a protected coastal space for research, monitoring, education, training, and stewardship activities. Their multi-disciplinary staff conducts work that is locally relevant and nationally significant and targets national programs to address local priority coastal management issues. The State of Connecticut maintains regulatory control over all the land areas and all commercial and recreational activities will continue. In fact, the increased access and programs of the reserve should benefit the current activities. All reserves emphasize resilient estuaries and watershed where both human and natural communities thrive.

The reserve will immediately participate in some NOAA nationwide monitoring and education programs after consultation with partners in the LIS region who are already conducting related activities, in order to enhance but not duplicate these efforts. The NERR Science Collaborative is a competitive research grant program which is a great way to involve outside investigators in reserve activities and provide them with access to reserve research sites and staff. NOAA approved the reserve on January 14<sup>th</sup>, and there will be a small celebration in May and a larger open house once reserve staff are on board.

The reserve will start in July 2022 with a Reserve Manager, Fiscal Officer, Research Coordinator, and Education Coordinator, the required staff. The Coastal Training Program Coordinator and Stewardship Coordinator may be on board by the fall, with a Communications Specialist and research support staff by next year. A nascent Friends Group is already forming, these are very important to many reserves. Jamie described in detail the reserve's first year activities in research and monitoring, the coastal training program, and education and stewardship. Initial office space will be in the Lowell P. Weicker Building (formerly Marine Sciences) with a new building to be constructed in the future. Signage and pavilion space at the terrestrial properties will be increased in the short term. Jamie concluded with a list of the collaborative research opportunities and mentioned that there would also be opportunities to partner with the other reserve programs (stewardship, education, and coastal training). With her final slide she showed a detailed map of all the reserve areas and facilities.

**Discussion:**

--Nancy Seligson said that she was very excited about the reserve and said the coastal training program should include the Sustainable and Resilient Communities (SRC) work group and their outreach professionals. Nancy said she would provide a contact.

--Paul Stacey said that the plan turned out well, but had questions about the degree of visitor access, as the ratio of land to water area in the reserve was small. Jamie provided a detailed reply and said the large water area was a new reserve model. She noted that the eastern terrestrial areas were accessible state parks, but the western ones on the Connecticut River would benefit



from increased signage. The reserve wants to increase access while protecting the resource which will require additional consultation and discussion.

--Vicky O'Neill said that there was a lot of activity on Fishers Island related to eelgrass which would be a potentially good collaboration with the reserve and Jamie said that she was aware of their efforts.

--Alicia Tyson, the SRC outreach professional for eastern Connecticut, added that this was a great effort and a good way to expand their community network.

**LIS Pilot for NOAA Satellite Data Project:** Jim Ammerman, LISS/NEIWPC; and Nikki Tachiki, EPA Jim stated that NOAA is working with EPA headquarters (EPA HQ) on developing a national mapping app for daily satellite information on temperature, salinity, and chlorophyll from 100 US estuaries and EPA HQ wants LIS to be the pilot estuary. They want to know what we would want in the app and how we would use the data and referred to the Coral Reef Watch app as a potential model. We have already consulted with LIS remote sensing experts; EPA colleagues and others and any additional input should be sent to Jim and Nikki by February 24<sup>th</sup>.

--Dave Lipsky asked about the frequency of flyovers and resolution and Jim replied flyovers were frequent because of many new satellites and Coral Reef Watch is a model. The resolution depends on the satellite and Maria Tzortziou mentioned several different satellites with resolutions from 1 km down to 30 m. With the higher resolution sensors, you don't have daily images, perhaps only 3 or 4 per month.

--Paul Stacey said that he really liked the 30 m resolution and suggested a link to buoy data. Lane Smith further suggested a link to autonomous underwater vehicle (AUV) data if there is any in the Sound. Jim O'Donnell added that they have a model which takes NOAA satellite sea surface temperature (SST) data and buoy data to predict the spatial structure of water temperatures, which are more useful than SST. The predictions are consistent with CT DEEP monitoring data.

--Maria Tzortziou added that salinity information would probably not be available for LIS due to resolution issues and that NOAA standard chlorophyll algorithms typically were designed for open ocean environments and that algorithms optimized for LIS developed by several groups should be used instead.

--Zosia Baumann asked if the app would be useful for monitoring near-shore areas and Jim Ammerman said it would probably be a challenge but might be possible.

--Penny Vlahos reminded those who had were interested in joining the nominating committee for the New York co-chair or had nominations to provide should let her know.

--Jim Ammerman thanked all the speakers and attendees for interesting presentations and discussions, particularly on the RFP. Penny said that there will be numerous communications prior to the next meeting.