Climate Change and Sentinel Monitoring Workgroup Meeting Summary
September 11 2024, 10-12PM
Teams Meeting (Link in Meeting Invite)

Attendees

Samarra Scantlebury, NYSDEC (Co-Chair), Kathleen Knight, CTDEEP (Co-Chair), James Ammerman (NEIWPCC), Juliana Barrett (CT Seagrant), Sarah Crosby (Norwalk Maritime Aquarium), Sarah Schaefer-Brown (NY Seagrant), Sarah Schechter(CT Seagrant), Melissa DeFrancesco, Gregory P. Dietl(Cornell), Alex Dumont (NEIWPCC), Melissa Duvall (EPA), Richard Friesner(NEIWPCC), Elizabeth Hornstein (CT Seagrant) Madeline Kollegger (UCONN), Jiayu Liu (NYCDEP), Jackie Motyka (NERACOOS), James O'Donnell (UCONN), Matthew Pruden (Cornell), Ron Rozsa (retired DEEP), Paul Stacey (Footprints In The Water), Maria Tzortziou (CCNY-CUNY), Penny Vlahos (UCONN)

Introduction

Samarra Scantlebury called the meeting to order at approximately 10:00 AM. Samarra provided an overview of the Climate Change and Sentinel Monitoring Work Group's (CCSM) purpose and, the agenda and goals for the meeting.

Samarra shared a brief recap of the last meeting, which was focused on climate related impacts for shellfish.

Workgroup Review of the Draft Comprehensive Conservation Management Plan (CCMP)

Kate introduced the draft CCMP Objectives and the actions associated with each. The purpose of today's review was to evaluate the objectives and actions relative to climate impacts to assess if:

1. Climate change will inhibit our ability to progress to these objectives
2. Evaluate if there are gaps in the actions relative to climate impacts.

The uses of these were noted as three potential avenues, short term workplan objectives, revisions or enhanced focus in the revised sentinel monitoring strategy or recommended edits to the CCMP draft. This discussion resulted in three overarching comments and detailed review of potential impacts and gaps to the objectives in the revised CCMP.

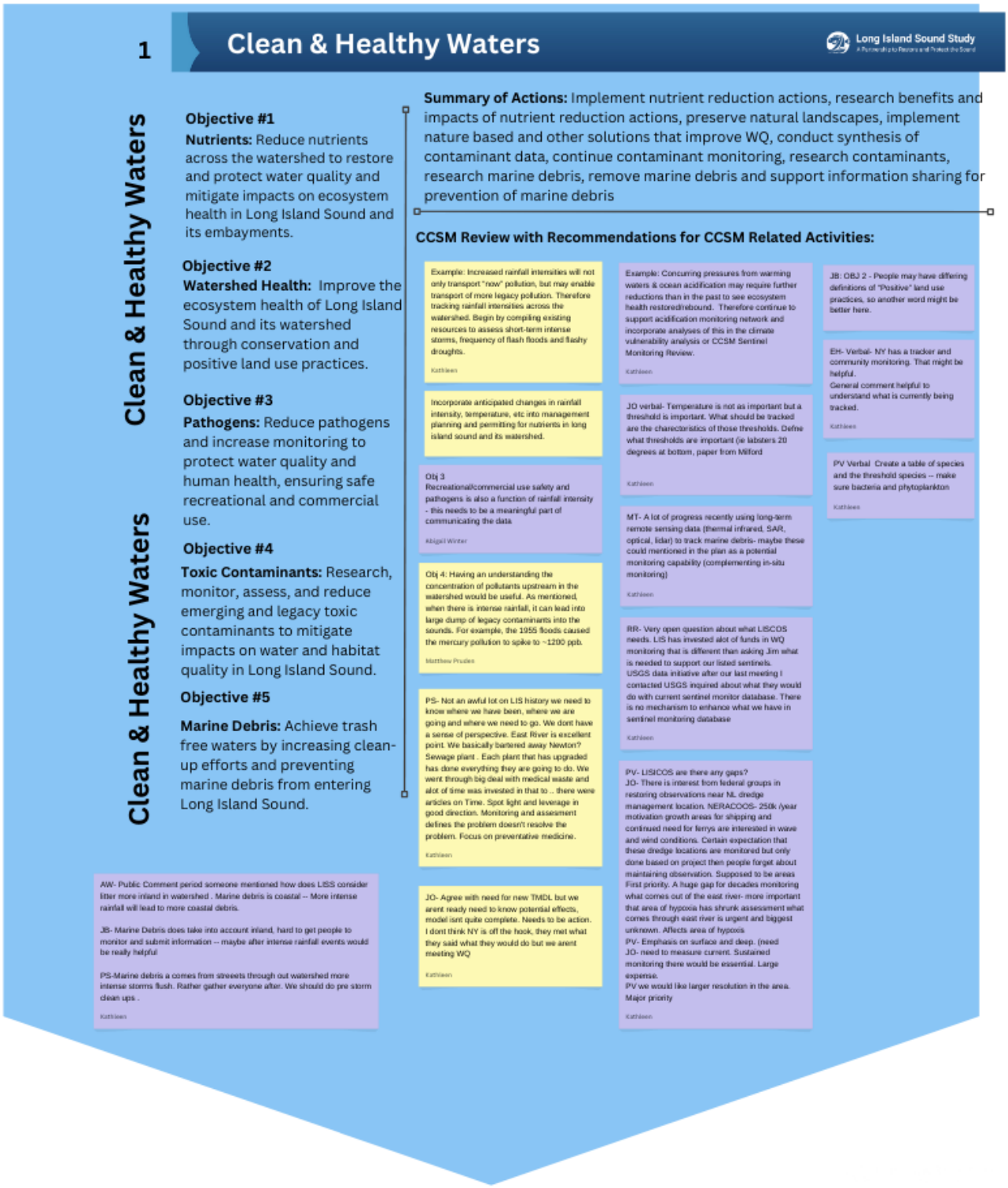
Overarching comments:

1. Penny Vlahos suggested the team consolidate this feedback into a letter to the management committee, much like the CAC and STAC does. Co-chairs indicated if team agreed this could be done. There was agreement noted and no disagreement to that approach. Co-Chairs then committed to sharing a draft letter to be sent to the management committee.

2. Paul Stacey also noted that climate should be reviewed as whole system and not as an isolated parameter and that it is important to tell the story of where it has been as well. General agreement with this statement and others noted that there are varied climate impacts that will impact things like predation rates by introducing new species or changing reproductive timing etc.

3. The recommendation was made to update the programs Climate Risk Assessment and to do so in parallel with updating the Climate Change and Sentinel Monitoring strategy, to align the risk with risk monitoring. The group noted the original Climate Risk Assessment was a review of a 2015 report that was done as on a regional scale and since the development of this we have alot more data to make local risk evaluations to better aide decision making in the program. Jim O'Donnell noted that for things like temperature thresholds are much more important, for example for lobster it wouldn't matter if it is 18 or 19 but if it were 20 then they could not survive, so tracking the known thresholds and how many times we see that value in a given year might be more important.

Detailed discussion:
The team utilized three methods of collecting feedback the teams chat, verbal and participation on a team white board. All of those thoughts and ideas where consolidated into the graphics below and archived in this live link.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Clean & Healthy Waters
Long Island Sound Study
Clean & Healthy Waters
Clean & Healthy Waters
Objective #1
Nutrients: Reduce nutrients across the watershed to restore and protect water quality and mitigate impacts on ecosystem health in Long Island Sound and its embayments.
Objective #2
Watershed Health: Improve the ecosystem health of Long Island Sound and its watershed through conservation and positive land use practices.
Objective #3
Pathogens: Reduce pathogens and increase monitoring to protect water quality and human health, ensuring safe recreational and commercial use.
Objective #4
Toxic Contaminants: Research, monitor, assess, and reduce emerging and legacy toxic contaminants to mitigate impacts on water and habitat quality in Long Island Sound.
Objective #5
Marine Debris: Achieve trash free waters by increasing clean-up efforts and preventing marine debris from entering Long Island Sound.
Summary of Actions: Implement nutrient reduction actions, research benefits and impacts of nutrient reduction actions, preserve natural landscapes, implement nature based and other solutions that improve WQ, conduct synthesis of contaminant data, continue contaminant monitoring, research contaminants, research marine debris, remove marine debris and support information sharing for prevention of marine debris
CCSM Review with Recommendations for CCSM Related Activities:
Example: Increased rainfall intensities will not only transport "new" pollution, but may enable transport of more legacy pollution. Therefore tracking rainfall internatbes across the watershed. Begin by compiling existing resources to assess short-term intense storms, frequency of flash floods and flashy droughts.
Kathleen
Example: Concurring pressures from warming waters & ocean acidification may require further reductions than in the past to see ecosystem health restored/rebound. Therefore continue to support acidification monitoring network and incorporate analyses of this in the climate vulnerability analysis or CCSM Sentinel Monitoring Review.
Kathleen
JB: OBJ 2 - People may have differing definitions of "Positive" land use practices, so another word might be better here.
Incorporate anticipated changes in rainfall intensity, temperature, etc into management planning and permitting for nutrients in long island sound and its watershed.
JO verbal- Temperature is not as important but a threshold is important. What should be tracked are the charecteristics of those thresholds. Define what thresholds are important (ie labsters 20 degrees at bottom, paper from Milford
Kathleen
EH- Verbal- NY has a tracker and community monitoring. That might be helpful.
General comment helpful to understand what is currently being tracked.
Kathleen
Obj 3
Recreational/commercial use safety and pathogens is also a function of rainfall intensity - this needs to be a meaningful part of communicating the data
Abigail Winter
MT- A lot of progress recently using long-term remote sensing data (thermal infrared, SAR, optical, lidar) to track marine debris- maybe these could mentioned in the plan as a potential monitoring capability (complementing in-situ monitoring)
Kathleen
PV Verbal Create a table of species and the threshold species -- make sure bacteria and phytoplankton
Kathleen
Obj 4: Having an understanding the concentration of pollutants upstream in the watershed would be useful. As mentioned, when there is intense rainfall, it can lead into large dump of legacy contaminants into the sounds. For example, the 1955 floods caused the mercury pollution to spike to ~1200 ppb.
Matthew Pruden
RR- Very open question about what LISCOS needs. LIS has invested alot of funds in WQ monitoring that is different than asking Jim what is needed to support our listed sentinels.
USGS data initiative after our last meeting I contacted USGS inquired about what they would do with current sentinel monitor database. There is no mechanism to enhance what we have in sentinel monitoring database
Kathleen
PS- Not an awful lot on LIS history we need to know where we have been, where we are going and where we need to go. We dont have a sense of perspective. East River is excellent point. We basically bartered away Newton? Sewage plant . Each plant that has upgraded has done everything they are going to do. We went through big deal with medical waste and alot of time was invested in that to .. there were articles on Time. Spot light and leverage in good direction. Monitoring and assesment defines the problem doesn't resolve the problem. Focus on preventative medicine.
Kathleen
PV- LISICOS are there any gaps?
JO- There is interest from federal groups in restoring observations near NL dredge management location. NERACOOS- 250k /year motivation growth areas for shipping and continued need for ferrys are interested in wave and wind conditions. Certain expectation that these dredge locations are monitored but only done based on project then people forget about maintaining observation. Supposed to be areas
First priority. A huge gap for decades monitoring what comes out of the east river- more important that area of hypoxia has shrunk assessment what comes through east river is urgent and biggest unknown. Affects area of hypoxia
PV- Emphasis on surface and deep. (need
JO- need to measure current. Sustained monitoring there would be essential. Large expense.
PV we would like larger resolution in the area. Major priority
Kathleen
AW- Public Comment period someone mentioned how does LISS consider litter more inland in watershed . Marine debris is coastal -- More intense rainfall will lead to more coastal debris.
JB- Marine Debris does take into account inland, hard to get people to monitor and submit information -- maybe after intense rainfall events would be really helpful
PS-Marine debris a comes from streeets through out watershed more intense storms flush. Rather gather everyone after. We should do pre storm clean ups .
Kathleen
JO- Agree with need for new TMDL but we arent ready need to know potential effects, model isnt quite complete. Needs to be action. I dont think NY is off the hook, they met what they said what they would do but we arent meeting WQ
Kathleen

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Thriving Habitats and Abundant Wildlife

Long Island Sound Study
A Partnership to Restore and Protect the Sound

Thriving Habitats & Abundant Wildlife

Objective #1
Protect and enhance the extent, health, and wildlife benefits of coastal habitats through restorative measures to combat deterioration and loss.

Objective #2
Protect and enhance the health of offshore habitats and their associated species.

Objective #3
Increase connectivity of coastal habitat to enhance biodiversity and support migratory pathways.

Objective #4
Conserve open space through land acquisition while maintaining and enhancing the total area of protected land.

Summary of Actions: Restore coastal habitat, promote living shorelines, Use tools and site verification to target restoration and protection, research and monitor tidal wetlands and eel grass, remove stream barrier, promote collaborations to streamline permitting for restoration, promote marine spatial planning, support seafloor habitat mapping, promote stewardship and restoration of off-shore habitats, protect high priority habitat from development, increase equitable access and stewardship

CCSM Review with Recommendations for CCSM Related Activities:

JO- Two reports SLR and Physical Assement. The later is being expanded to include wind as well, though capacity of existing models is not high. We expect this will be out by the end of the year. We didnt do anything about water temperature- this was last done in 2010 worthwhile considering analog of what we are doing for atmo over CT for LIS conditions again. There is pending paper with temperature in LIS and fish ecology. We have completed QA/QC for ship survey data of salinity /temp and DO in LIS.. working on QA/QC for bouy data for last 20 yrs. Bouy data is more difficult is more difficult to sustain using ship surveys to make sure buoy data in

Kathleen

Obj 1 - need to recognize the role of SLR on coastal habitat loss when tracking extent

Abigail Winter

Obj 1. Coastal forests are a priority LIS Habitat and have been recognized in early version of the SM plan. This habitat is degrading due to invasvie species (some of which may be climate related) and resilience issues. Monitroing and managmeent of coastal forests should be a priority.
J. Barrett

(1) Marsh monitoring network to support Obj #1 through a climate lens. (2) I'd like to see greater effort toward monitoring and understanding changing benthic foundation species offshore (sponge communities, shellfish, etc.) as I don't see that coming up as often in our collective discussions. (Sarah Crosby)

JM- Does telemetry fit into these to track migoratory species. National Biodiversity plan just came out and this might be good piece to tie this in.

Kathleen

LIDAR Tidal Wetland should be reviewed and assessed for potential change.

Team saw examples in May expect new data for team to reviewed next week. Vegetation mapping is last. Expect we will have contour mapping. But might be separate initiative.

Not sure there is an opportunity for our team to review before final

Kathleen

MT- Other studies fusion of SAR data (Sentinel 1 C-Band SAR) with optical imagery (Landsat) this could be added as well. Wetland Marshes further reaching than just LIS but inclusive of LIS.
Wetland tidal inundation, wetland classification, vegetation phenology

3

Sustainable and Resilient Communities

Long Island Sound Study
A Partnership to Restore and Protect the Sound

Sustainable and Resilient Communities

Objective #1

Grow the number of municipal, nonprofit, and community leaders receiving training and support to increase capacity for adaptation to environmental challenges.

Objective #2

Increase the number of municipalities that identify key resilience priorities through local and/or regional community-driven planning processes.

Objective #3

Implement initiatives to improve community resilience to flooding and other environmental challenges.

Summary of Actions: Develop, Deliver and facilitate trainings and tools, support or incentivize local climate plans, coordinate across muni boundaries to promote collective resilience priorities, increase engagement in resiliency planning and decision making, increase community capacity, support development and adoption of local regulations/ordinances to address flooding or other climate impacts, implement nature based solutions to mitigate flooding or other climate impacts, implement priority infrastructure projects to increase community sustainability/resiliency

CCSM Review with Recommendations for CCSM Related Activities:

JB- If a new Vulnerability Assesment is conducted that information may be really important to get to the communities. This could be common theme . Agree with making the update of the V A and the SMS in parallel and one in the same

Kathleen

For community planning is there a way that LISS can encourage planning processes that review existing conservation and development plans after extreme weather events?
-Richard

PS- CT is so locked into local plans and conservation even something as simple as protecting stream buffers isnt simple. We can do alot of good information but we had a policy meeting that had no policy discussed. Tough problem, smart ordinances would have helped flooding we saw in SW CT. Social ecological interface is critical

Kathleen

EH- Do have action to support ordinances /codes. We are hosting training land use traingin with Pace university.

Vulnerability Assesment have to be thoughtful of how to make this more useful and like the idea to link this sentinel monitoring strategy. NY state is working on climate adaptation plan for state. Give more thought on what would be worthwhile.

Kathleen

JB- The VA was done in 2016 and it was very broad it wasnt just LIS and the 2019 report was the assesment of the assesment. CT and NY gave alot of input and critism that too broad.

Kathleen

Crosby: FYI that the marsh monitoring network is seeking to engage at the municipal level to provide baseline data/identify priorities.

PS- Tough challenge, co-author for original CT Climate change action, and DO TMDL locked us into barriers to further commitments. We have use our policy committee to better effect. Proactive prevention we are not getting there.

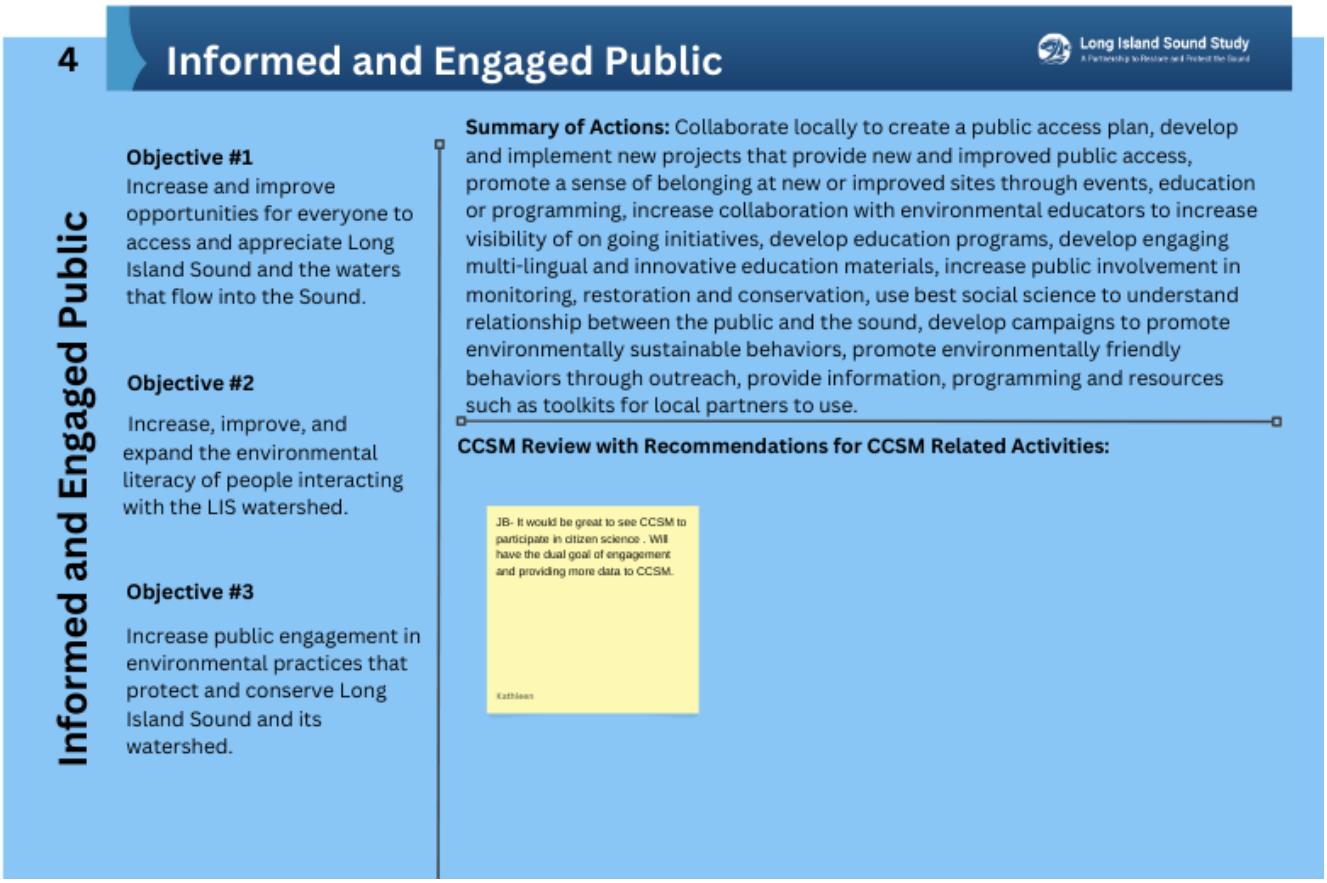
Kathleen

RF- Communication is really important.

Kathleen

AD- Communities revising plans following a disaster there is a critical point a community might react based on fear or informative. What role does LISS are we those who people go to after a disaster... thinking of NYC about a plan re giant retaining wall that kind of reactive planning can be counter productive to what we are trying to achieve

Kathleen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Informed and Engaged Public
Long Island Sound Study
Informed and Engaged Public
Objective #1
Increase and improve opportunities for everyone to access and appreciate Long Island Sound and the waters that flow into the Sound.
Objective #2
Increase, improve, and expand the environmental literacy of people interacting with the LIS watershed.
Objective #3
Increase public engagement in environmental practices that protect and conserve Long Island Sound and its watershed.
Summary of Actions: Collaborate locally to create a public access plan, develop and implement new projects that provide new and improved public access, promote a sense of belonging at new or improved sites through events, education or programming, increase collaboration with environmental educators to increase visibility of on going initiatives, develop education programs, develop engaging multi-lingual and innovative education materials, increase public involvement in monitoring, restoration and conservation, use best social science to understand relationship between the public and the sound, develop campaigns to promote environmentally sustainable behaviors, promote environmentally friendly behaviors through outreach, provide information, programming and resources such as toolkits for local partners to use.
CCSM Review with Recommendations for CCSM Related Activities:
JB- It would be great to see CCSM to participate in citizen science . Will have the dual goal of engagement and providing more data to CCSM.
Kathleen