

Long Island Sound Study
Science and Technical Advisory Committee Meeting
Friday, February 16, 2007
UConn Stamford

Selection of NY Co-chair: Charles Yarish. Karen Chytalo announced that Larry Swanson (not in attendance) would like to continue as the NY Co-chair. Votes were submitted by attending Committee members. The final tally was 14 votes for Larry Swanson, 1 for Paul Stacey. Swanson will continue as NY Co-chair.

LISS Updates: Mark Tedesco

Budget: There is no update on the 2007 budget. The allocation for 2007 is still unknown, but may be funded at the 2006 level. No earmarks have been funded.

MC Meeting: Budget proposals were discussed. A request was made for funding of Research RFP and production of the LIS Synthesis project.

CAC Meeting 12/14/06: At this meeting, the committee heard an update on the Broadwater proposal and ongoing hearings. The committee will continue to follow the issue and as yet has no official statement on the issue.

Individuals from the CAC recently went to Washington to request funding for the LIS Restoration act. The change in Congress is an opportunity for more funding and better advocacy for LIS. A 2008 funding increase is possible. CAC will send letters to the LIS caucus to encourage funding be provided for LIS Restoration and Stewardship acts.

One goal is to get the governors of NY and CT together to talk about LIS.

CAC also wrote letters to LIS Caucus to address the issues of managing dredge material, and an update on the state of the Connecticut River. The CAC is planning to organize hearing for different regions. Charlie Yarish commented that the STAC Co-chairs could lend support to letter writing and hearings.

Dave Miller, Executive Director of Audubon New York, is leaving to join the State Dept. of Education as Deputy Commissioner of Innovation. As he has played an important role in advocating for LIS, there is a motion to acknowledge his leadership.

Sound Stewardship Summit: Mark Tedesco announced that the 17th Annual Sound Stewardship Summit will take place March 3, 2007 at the Planting Fields Arboretum in Oyster Bay, NY. All are encouraged to attend. Additionally, LISS is interested in forming a Stewardship Advisory committee.

Indicators Meeting: An individual was funded to interview members to get feedback on the effectiveness of indicator programs. An enhancement project will be starting soon. Karen Chytalo mentioned that legislators want to see that there is an interest in LIS. Charlie Yarish suggested something be written about LIS for high school newspapers,

and added that anyone interested in the science aspect of LISS is welcome to attend STAC meetings.

2007 LISS Research RFP: Corey Garza

Research topic areas that were funded in 2006 were

- 1) Benthic habitat mapping (habitat classification protocol, not LIS mapping protocol)
- 2) Multi-component analysis to limit the spread of invasives
- 3) Development of a LIS water quality analysis/index

All projects are currently underway after grants were established in September 2006. It was suggested that a benthic index could be developed along with the mapping project.

Corey Garza presented several ideas for new RFP projects:

- 1) Integrate landscape-scale processes, GIS and survey data to link benthic index with habitat
- 2) Look at scale dependency on LIS (e.g. Hypoxia)
- 3) Model testing—how well do models forecast?
- 4) Examine food webs—what are the effects of feedback loops, over-protection of predators, over-management of marine protected areas? This could be an elaboration of Roman Zajac's food web development.
- 5) Integrate policy with science. What is the effect of management on local economies? (Charlie Yarish noted that UConn-Stamford has created a Center for Environmental Sciences and Engineering, headed by Mike Willig, an expert on science and policy. Perhaps LISS could create a subgroup or committee to address this idea.)
- 6) Historical reconstruction of LIS—re-create food webs, establish baselines

It was agreed that pure research does not always point to what we need to do, so an integrated science and policy approach is a good idea; research should be problem solving. Ron Rozsa announced that CT legislature has proposed a bill to engage the Academy of Science and Engineering to say how climate change will affect CT. Modeling could show changes in hypoxic events and estimate the degree of sea level rise in LIS. Scientists should use models to show the public and legislators the effects of climate change.

Presentation: Development of an ANS Management Plan for LIS – Alexa Fournier, NY STAC Fellow

Alexa Fournier (Stony Brook Univ.) gave a presentation about her ongoing STAC project, the development of a bi-state aquatic nuisance species management plan for Long Island Sound. The plan is being drafted with Nancy Balcom (CT SeaGrant) and Kari Heinonen (UConn), and the final version will be submitted to the states and the LISS office by the fall of 2007.

LIS Synthesis Effort: Charlie Yarish

The Synthesis working group meeting will be held **May 14-16** at Danfords in Port Jefferson, NY. The format of the Synthesis will be a book (rather than a series of manuscripts) with 5 subject headings and the following lead authors:

- 1) Physical Forcing—Jim O'Donnell, Bob Wilson
- 2) Biochemistry and Fluxes—Carmela Cuomo
- 3) Pollutant Sources and Magnitudes and Trends—Johan Varekamp
- 4) Biological Conditions and Ecological Processes—Bob Whitlatch
- 5) Synthesis: Implications for Ecosystem-Based Management—Charlie Yarish, Larry Swanson, Corey Garza, Mark Tedesco

Mark Tedesco suggested that before the May meeting, the chapters should be broken down into sub-chapters so that authors will be more focused during the meeting. All subjects will include historical information and will address the possible effects of climate change to each subject area. There was a suggestion to add a chapter addressing what is known, what is not known, and what should be known about LIS from the stakeholders' point of view. Other suggestions were to consider fringes in a separate chapter, to review changes in land use, to set ecosystem goals, and to suggest management solutions for problems addressed by the Synthesis. Existing synthesis documents, management plans, and the Audubon series should be reviewed.

Presentation: Coastal Riparian Buffers – Chet Arnold

Chet Arnold gave a presentation about his work on several landscape projects related to riparian areas, watershed management, and NPS pollution. One project was the creation of land cover maps of Connecticut from 1985, 1990, 1995, and 2002, showing the relative change in development and absolute development over those years. These maps are available online at <http://clear.uconn.edu/clearims/landscape/viewer.htm>. Maps of regional impervious land coverage for areas surrounding LIS (both CT and NY) were also shown. Landsat images have been used to classify tidal wetlands with varying results; this method is okay for distinguishing high and low marshes in larger tracts of wetlands, but does not work well in small marshes, and is not detailed enough to track small changes. Another project discussed was the use of data fusion, a combination of LIDAR, spectral reflectance, and object-oriented classification data, to track invasive coastal plants, particularly *Phragmites*. After completing a coastal riparian buffer analysis for Connecticut, Arnold found that stream health is correlated with both impervious land cover and riparian buffer cover. In the future, collaboration with economists and social scientists could link the effects of development to local tax rates, urban sprawl, and other social issues.

June Agenda Items

RFP ideas and discussion.

Public Comments

Art, representing the Stakeholders of LIS, had many comments and concerns. The waters of western LIS are clear, yet still have periods of hypoxia—why? Why is clam production in Greenwich Cove high even though the area is polluted? Lobsters in LIS are healthy but scarce. Larvae are not being produced; due to the lack of plankton, the nursery is failing. Whelk fishing and collecting female horseshoe crabs for bait are both increasing and should be monitored. We need an analytical review of LIS over the past 20 years.