

# Why a National Estuarine Research Reserve for Connecticut?

*CT Department of Energy & Environmental Protection  
Office of Long Island Sound Programs,  
NOAA Office for Coastal Management,  
CT Sea Grant, &  
University of Connecticut Marine Sciences Program*

April 12, 2016

Dr. Jim Edson & Dr. Sylvain De Guise

University of Connecticut



# UConn Avery Point



Dive Program



Rankin Lab



ROV



RV Weicker



RV CT



# Basic Estuarine Research



Tobias & Edson

Carbon Budgets in Marshes



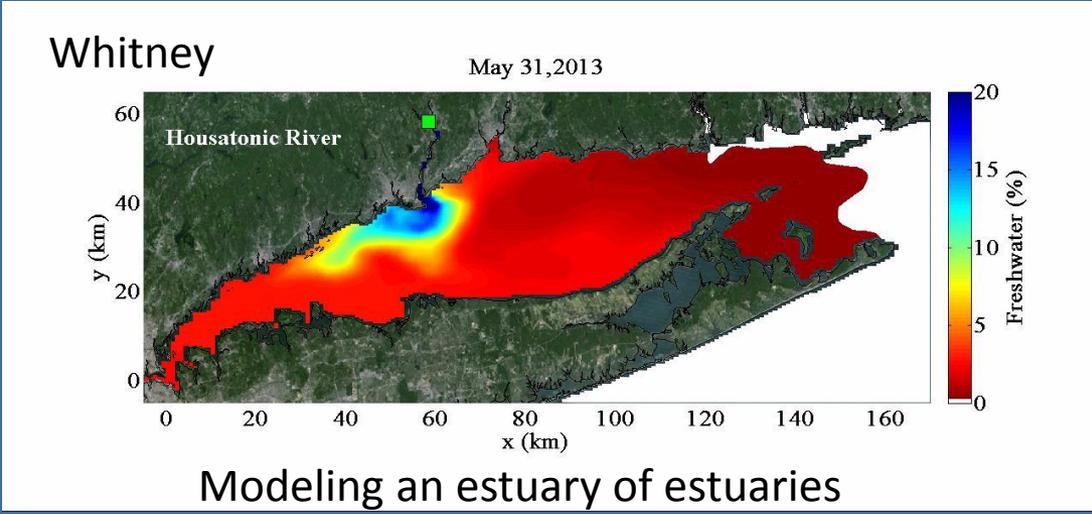
Elphick

Ecology and conservation of birds in tidal marshes



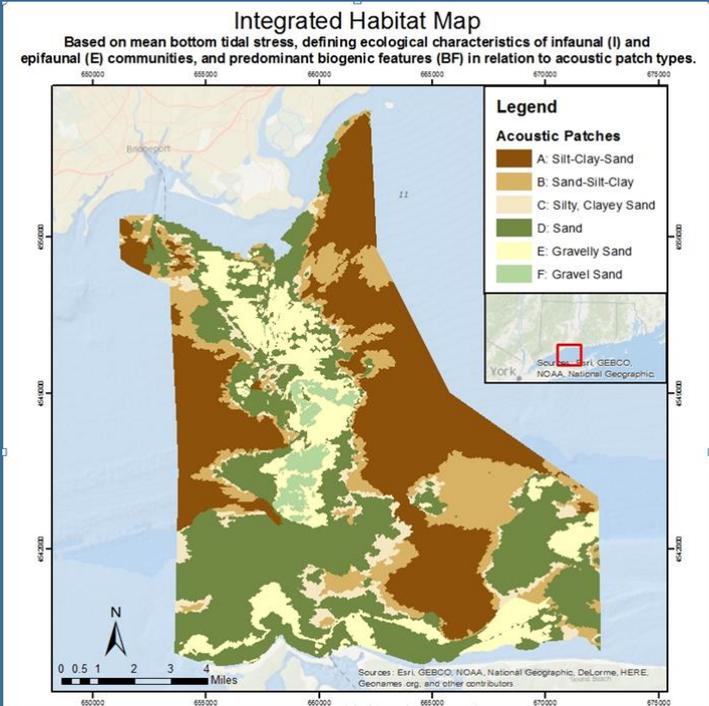
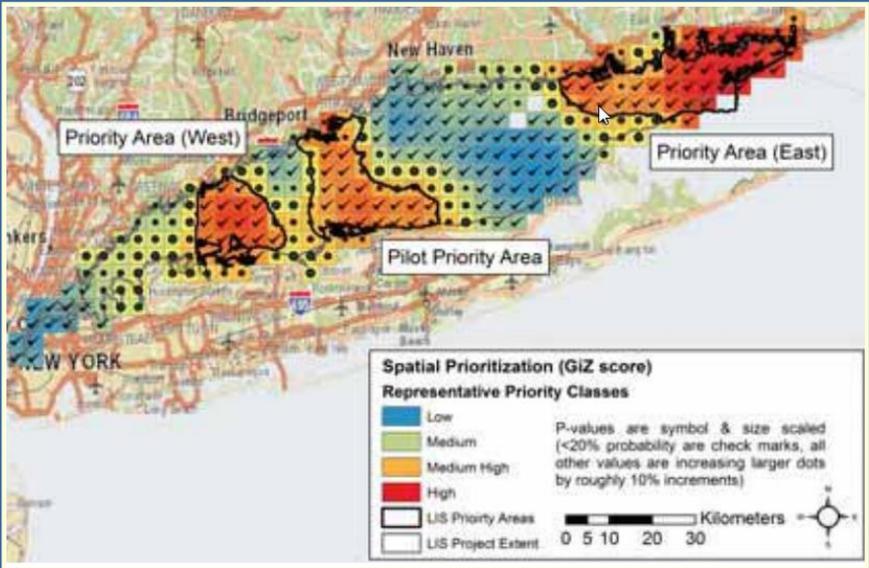
Vaudrey

Assessing embayment water quality

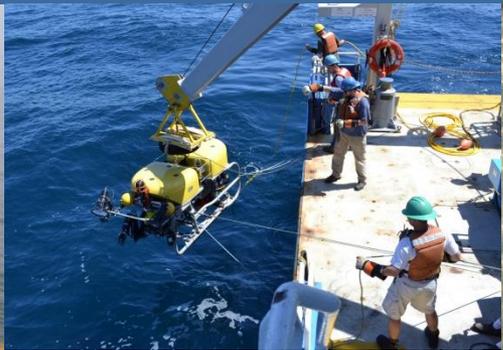


Modeling an estuary of estuaries

# Applied Estuarine Research: LIS mapping



Identified priority areas for habitat mapping  
 Federal, state and academic partnerships  
 Developing data products to aid resource management



# Applied Estuarine Research: CIRCA



Connecticut Institute  
for Resilience and  
Climate Adaptation



**SEA LEVEL RISE**



**CRITICAL INFRASTRUCTURE**



**INLAND FLOODING**



**POLICY & PLANNING**



# Education – K through Gray



Touch, Taste & Smell of Science

- **Hands-on** K-12, Undergraduate and Graduate Education
- Teacher Professional Development
- Public outreach
- Citizen Science



Louis Stokes Alliance for Minority Participation



**Coastal Perspectives Lecture Series**  
**University of Connecticut, Avery Point Campus**  
**Spring of 2024**

Please join us for a series of invited 30-minute presentations for the 3rd annual Coastal Perspectives Lecture Series. The intention is to provide students the most current information and the greatest insight on the latest in the field. This lecture series attempts to span the breadth of human interactions with coastal waters (including content from the natural and social sciences).

February 8 - **Michelle Adler, Ph.D.**, Visiting Research Fellow, Naval Research School of Leadership  
 "Race to the Bottom: The Forgotten Quest to Conquer and Colonize the Seabed, 1946-1970"

February 22 - **Gregory Skelton, Ph.D.**, Senior Marine Fisheries Biologist, in his prime time  
 "Living Deep(er) into the World of the Great White Shark"

March 8 - **Christina Miller, Ph.D.**, Assistant Professor of Ocean Studies in Storrs, Ct  
 "Strategies for a Resilient and Vibrant Newport Harbor"

March 22 - **Patrick Conroy, Director of Bird Conservation for Connecticut, CT Audubon Society**  
 "The Burdened Alliance for Coastal Wetlands: Partnering to conserve threatened coastal birds in Connecticut"

April 5 - **Wen-Ling, Ph.D.**, Assoc. Prof. of History and Social Sciences, The Bureau-Oceanography  
 "8 Billion Years' Plenty: Fossils and Catastrophes Headwaters After the Coal War"

April 18 - **James Prosser, artist, writer, and naturalist**  
 "Hunting and Chasing Water: An Artist's Perspective"

*Presented by the UConn Avery Point Campus*

Lectures will be held in the Avery Point Pavilion, 3800 Development Road, Ocean Point from 8:00am to 10:00am and are subject to weather conditions. Free and all of partial admission, an event though the student center get your flight of fishes.

This series is sponsored by Ocean State Park, the Connecticut Sea Grant College Program, the UConn Department of Marine Sciences, and the UConn Marine Studies Program.

For more information, contact your advisor or go to <http://www.seagrant.uconn.edu>



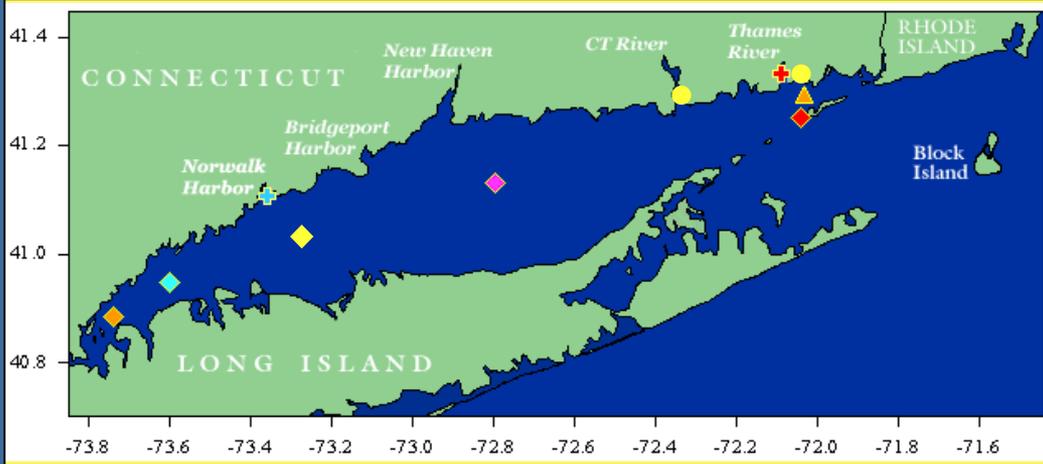
Citizen Science & MARN 4001



# Monitoring: LISICOS (w/ NDBC & NERACOOS)

## Long Island Sound Integrated Coastal Observing System

Wind Speed:	13.2 knots
Wind Gust:	17.7 knots
Wind Direction:	218 degT
Air Temperature:	45.0 degF
Dew Point:	36.1 degF
Air Pressure:	30.12 inches Hg
Humidity:	71%
Significant Wave Ht:	1.8 feet
Maximum Wave Ht:	3.2 feet
Significant Wave Period:	2.7 secs
Average Wave Period:	2.6 secs
Wave Direction:	258.6 degT
Wave Spread:	41.1 deg
Surface Water Temperature:	43.0 degF
Surface Salinity:	27.2
Surface DO Concentration:	0.6 mg/L
Surface DO Saturation:	100.5 %
Chlorophyll Concentration:	10.4 RFU

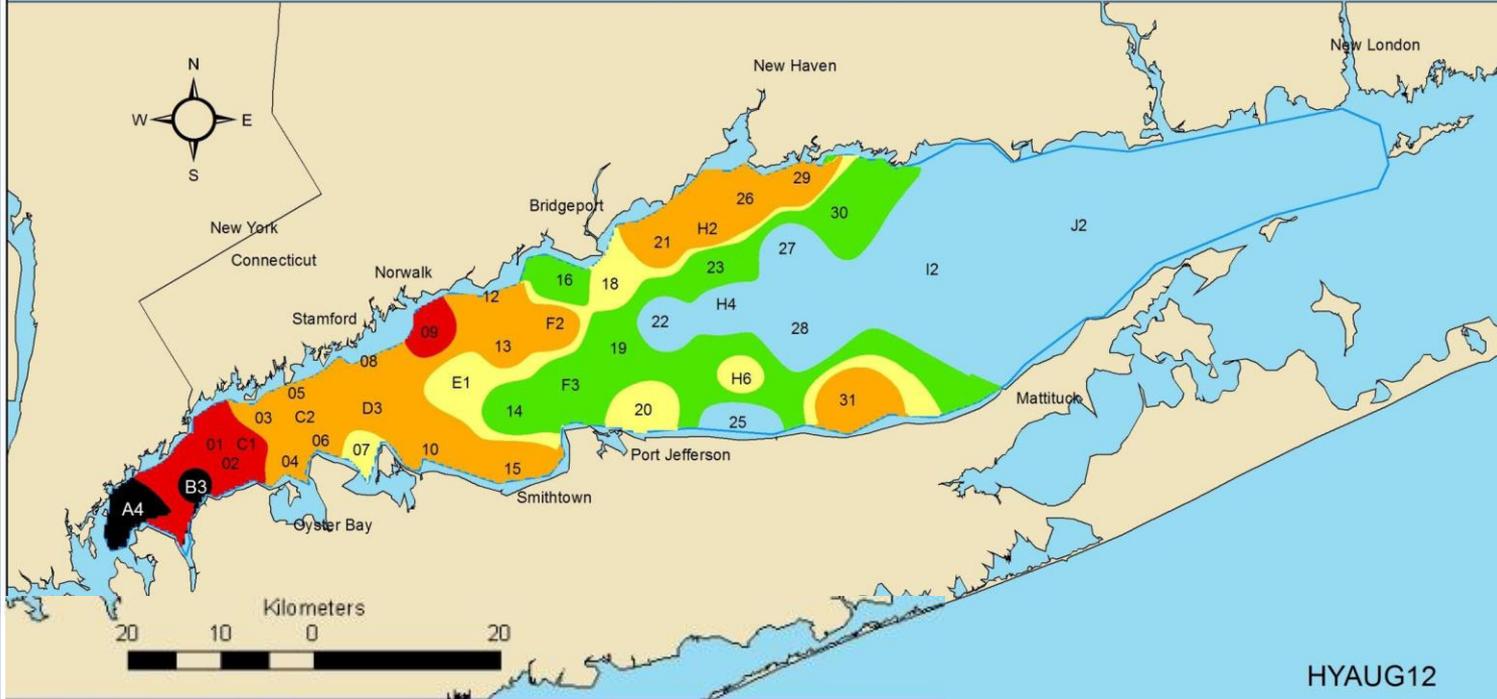


Coastal Laboratory for Atmospheric and Marine Sciences (CLAMS)

# Monitoring: LISS Water Quality Monitoring



Dissolved Oxygen in Long Island Sound Bottom Waters  
August 14 - 16, 2012



HYAUG12

Dissolved Oxygen	Severity of impact
0.0 - 0.99	Severe
1.0 - 1.99	Moderately severe
2.0 - 2.99	Moderate
3.0 - 3.49	Marginal
3.5 - 4.79	Interim management goal
4.8+	Excellent - Supportive of marine life



# Monitoring: LISS Water Quality Monitoring



## Dissolved Oxygen in Long Island Sound Bottom Waters 17-19 August 2015



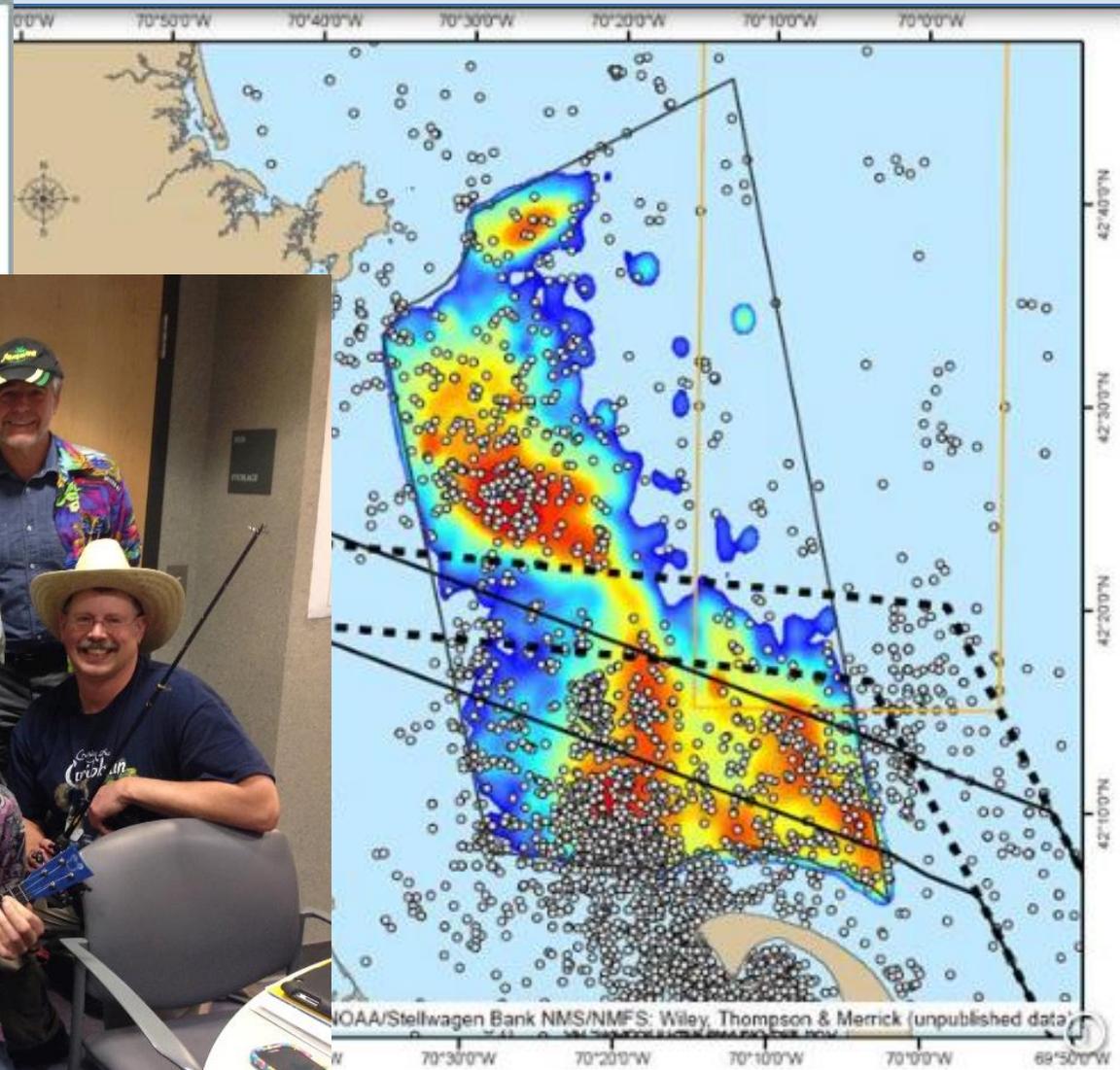
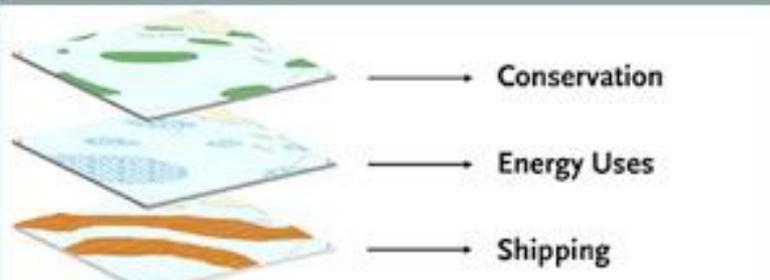
HYAUG15

Dissolved Oxygen	Severity of impact
0.0 - 0.99	Severe
1.0 - 1.99	Moderately severe
2.0 - 2.99	Moderate
3.0 - 3.49	Marginal
3.5 - 4.79	Interim management goal
4.8+	Excellent - Supportive of marine life

# Monitoring: LIS Sentinel Monitoring for Climate Change



# Training: Coastal and Marine Spatial Planning



# Training: Climate Adaptation Academy

The Climate Adaptation Academy provides information on current adaptation research, policy and practice, and serves to promote an exchange of information between municipal officials, researchers, and other professionals.

[Read more >>](#)



**Stewardship** – Enables wise management decisions based on sound science that engages citizens to understand and support the entire process



**Substitute House Bill No. 6839**

**Public Act No. 15-66**

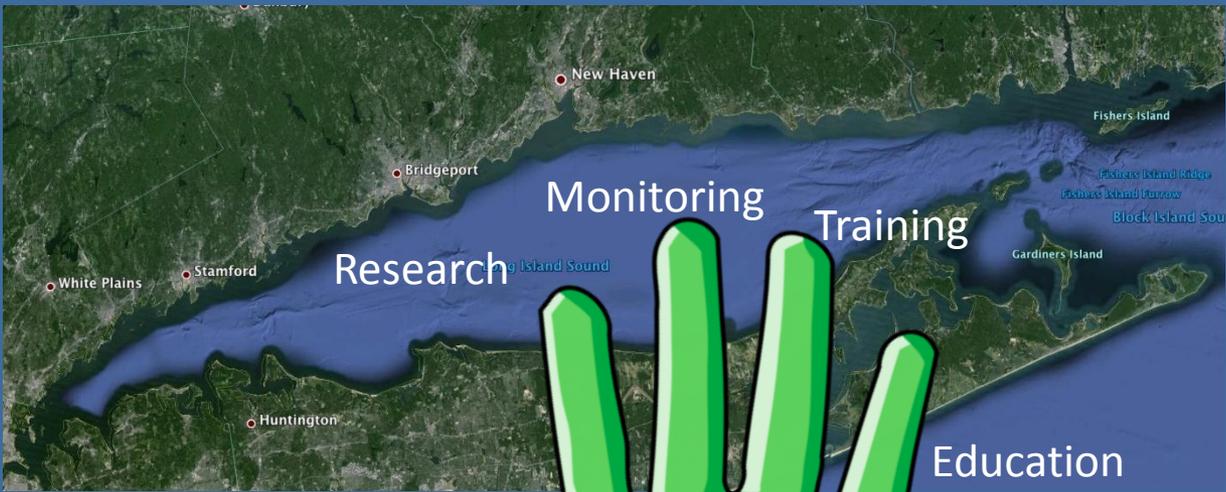
**AN ACT CONCERNING A LONG ISLAND SOUND BLUE PLAN AND RESOURCE AND USE INVENTORY.**



Long Island Sound Comprehensive Conservation and Management Plan 2015  
Returning the Urban Sea to Abundance



# NERR – A Great Fit for Connecticut



Stewardship



A place-based opportunity to continue, enhance, coordinate and display ongoing hands on activities

