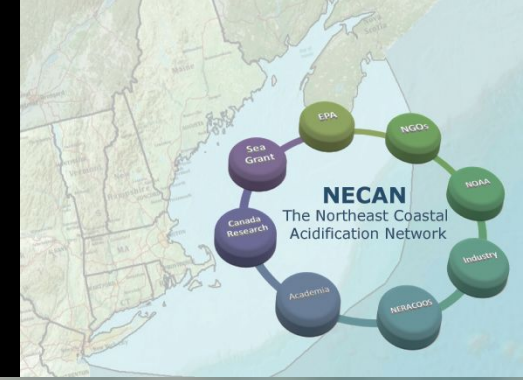
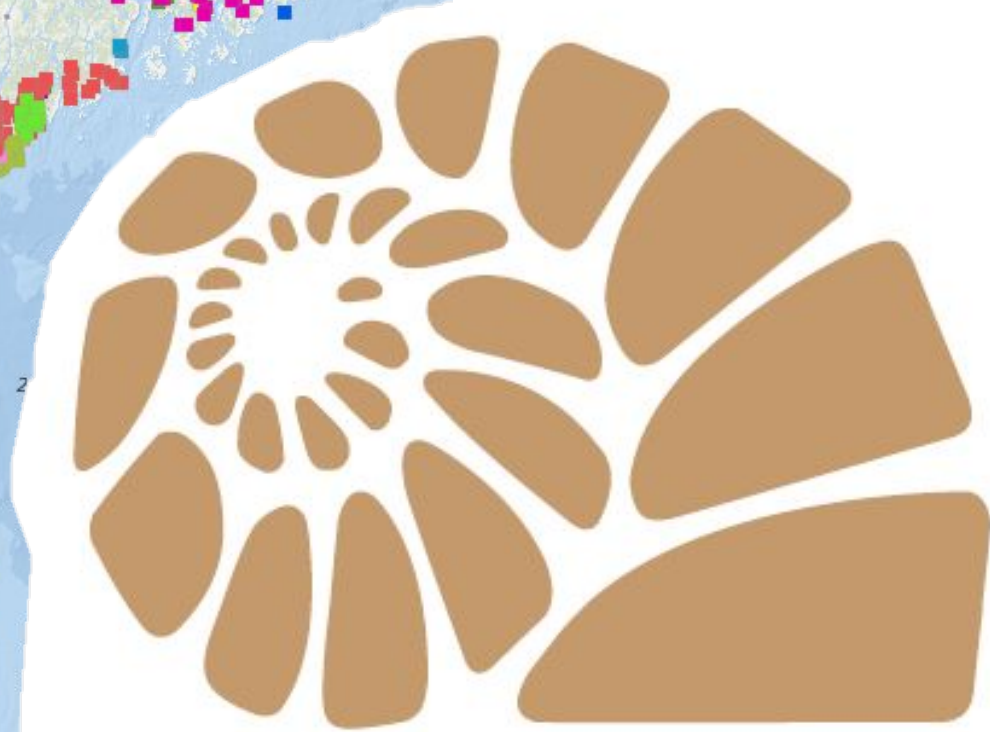
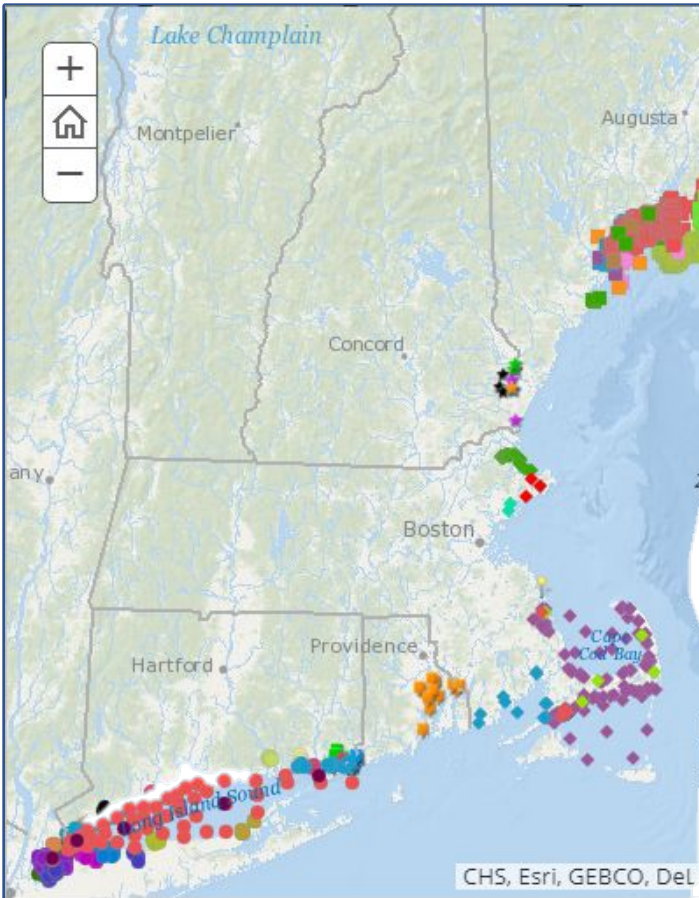


ESTABLISHING WATER MONITORING NETWORKS

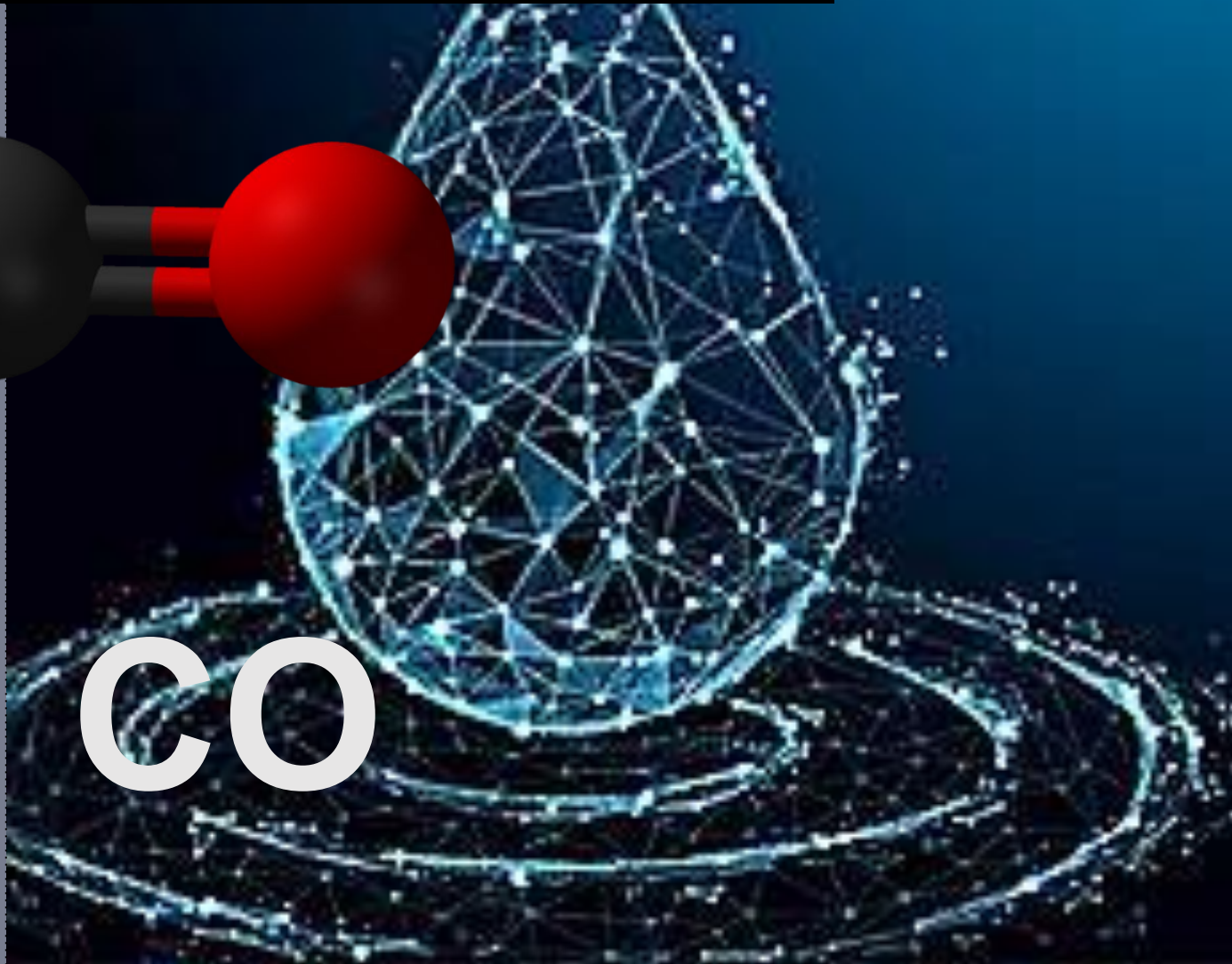
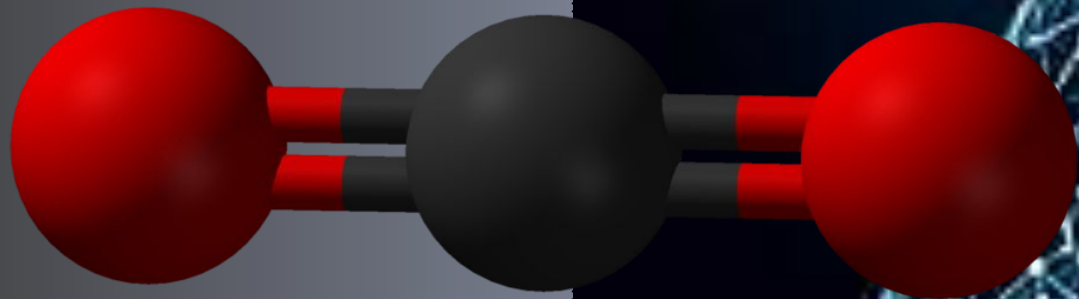


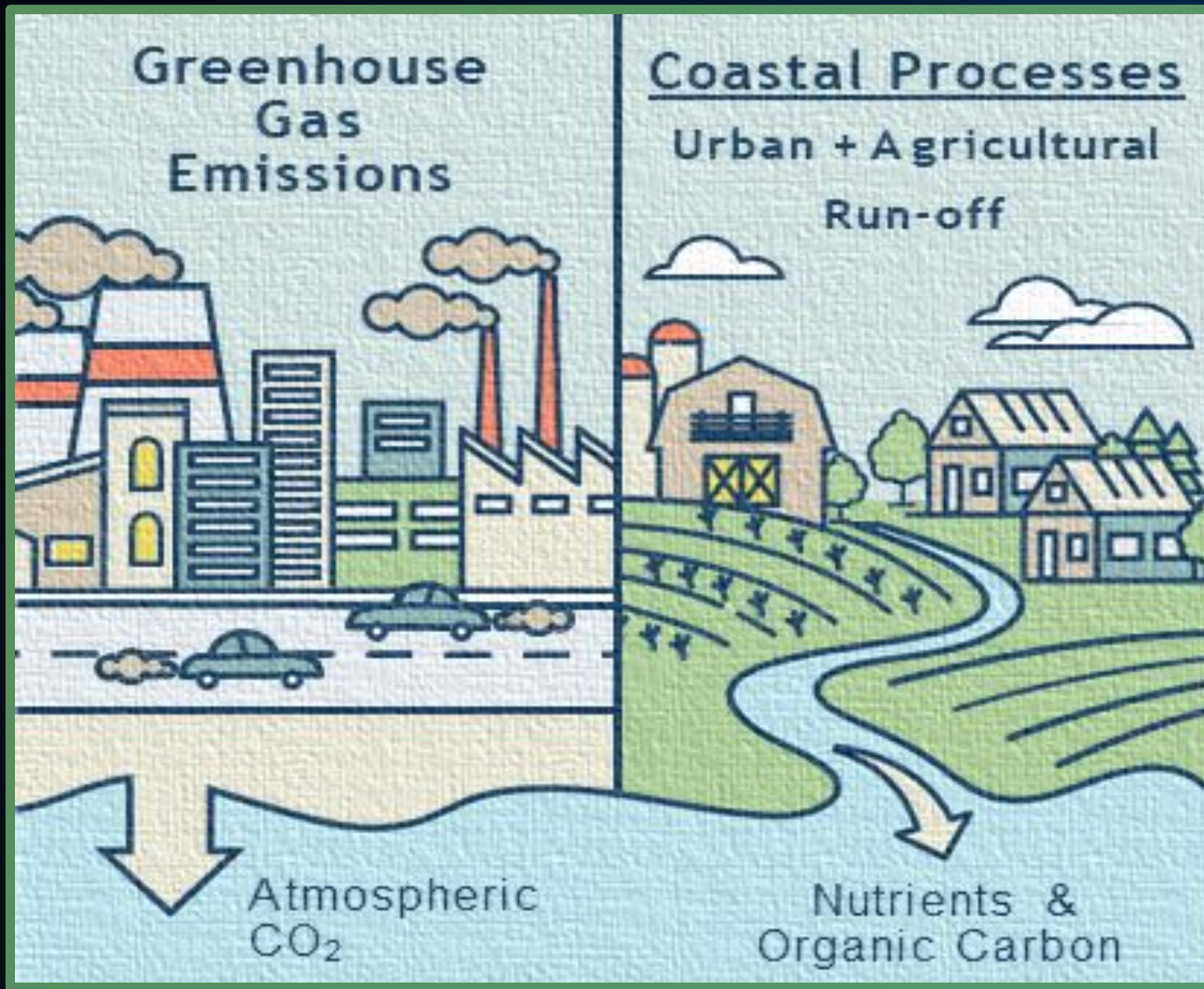
Coastal Acidification



SHELL DAY
AUGUST 22
2019

COASTAL ACIDIFICATION





GLOBAL
+
LOCAL

Community Science and Research Organizations

CT

- Harbor Watch
- Clean Up Sound and Harbors
- Save the Sound
- Coalition to Save Hempstead Harbor
- Save the Bay- Westerly
- Dominion Energy
- Shellfish Commission Members
- Norm Bloom & Son Oysters
- Fisher's Island Oyster Farm
- CT Shellfish Industry
- The Nature Conservancy
- Kelp Hatcheries
- Project WET Water Education for Teachers
- Roger Williams University
- Monitoring Partnerships
- Roger Williams University
- East Coast Shellfish Growers Association
- URI Watershed Watch Program
- URI Monitoring Partnerships
- Brown U. Monitoring Partnerships


MA

- Mystic River Watershed Association
- Charles River Watershed Association
- Neponset River Watershed Association
- North and South Rivers Watershed Association
- Buzzards Bay Coalition
- Upper North Shore Region of MassBays
- Nashua River Watershed Association
- Ipswich River Watershed Association
- Blackstone River Watershed Association
- Salem Sound Coastwatch
- Massachusetts Rivers Alliance
- Cohasset Center for Student Coastal Research
- Center for Coastal Studies- Provincetown
- National Park Service- Cape Cod
- The Massachusetts Shellfish Officers Association (MSOA)
- Mass. Aquaculture Association / Island Creek
- Aquaculture Research Corporation
- Falmouth Water Stewards
- Town of Mashpee

ME

- Maine Coast Observers Alliance
- MCOA
- Georges River Tidewater Association
- Damariscotta River Association
- Sheepscot Valley Conservation Association
- Medomak Valley Land Trust
- Kennebec Estuary Land Trust
- Boothbay Region Land Trust
- Rockport Conservation Commission
- Friends of Casco Bay
- Mook Sea Farm
- Bowdoin College Partnerships
- Hancock County Soil and Water Conservation District
- Schoodic Institute
- Mount Desert Biological Laboratory
- Island Heritage Trust
- Friends of Pleasant Hill

For Local Monitoring



“Guidelines for Measuring Sea Water pH and associated Carbonate Chemistry in Coastal Environments of the Eastern United States”

– Grear and Pimenta

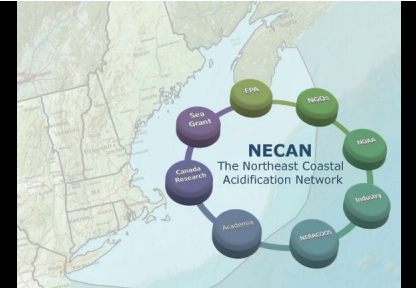
A Strategy for Ocean and Coastal Acidification (OCA) Education and Citizen Science Monitoring in the Northeast

– Beth Turner

Workshops



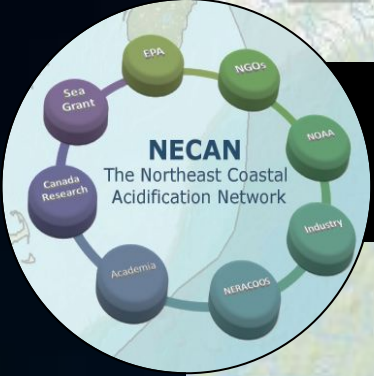
NECAN.ORG



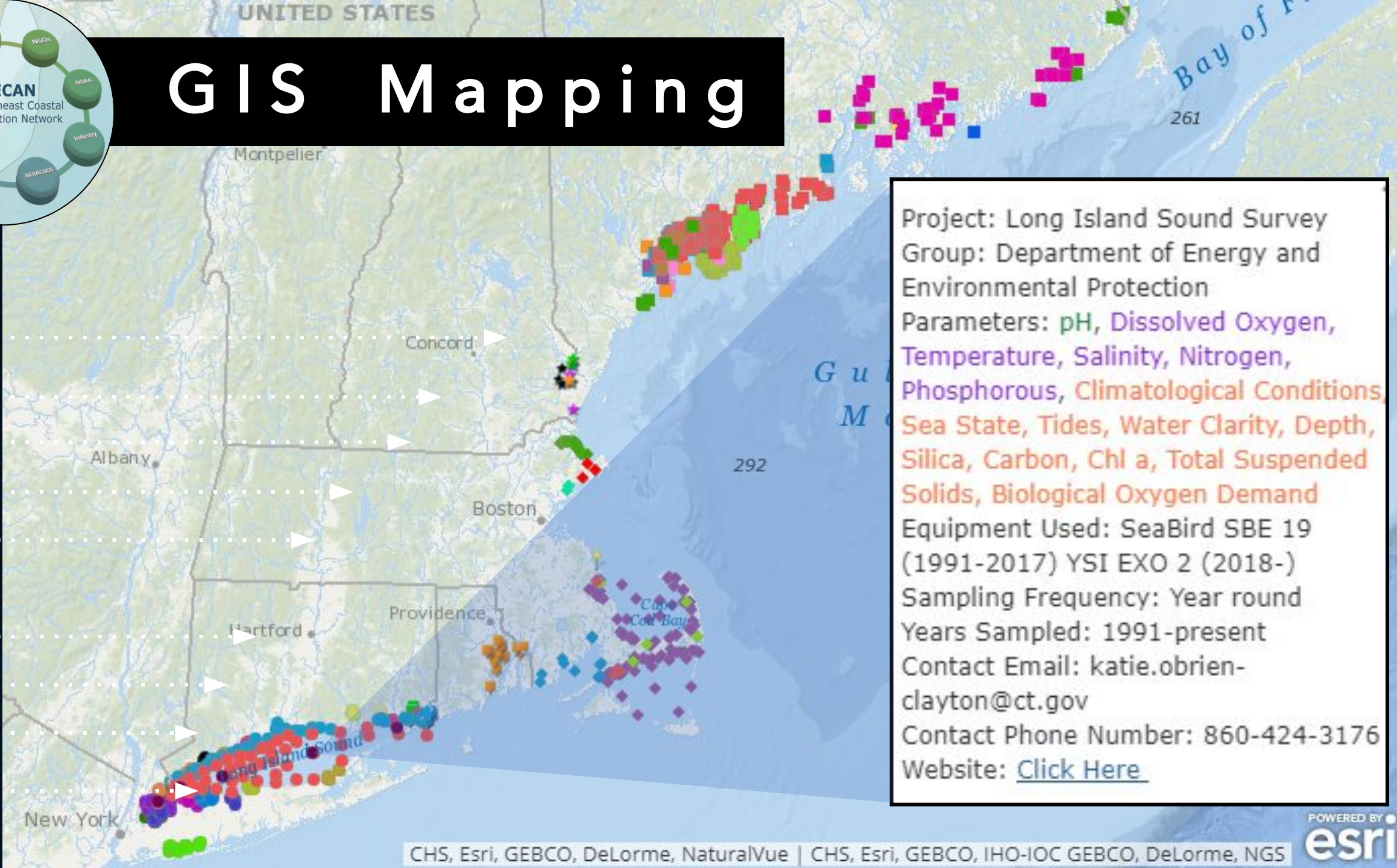
EPA Guidelines Document

2 Recorded Training Webinars

OCA Educational Resources



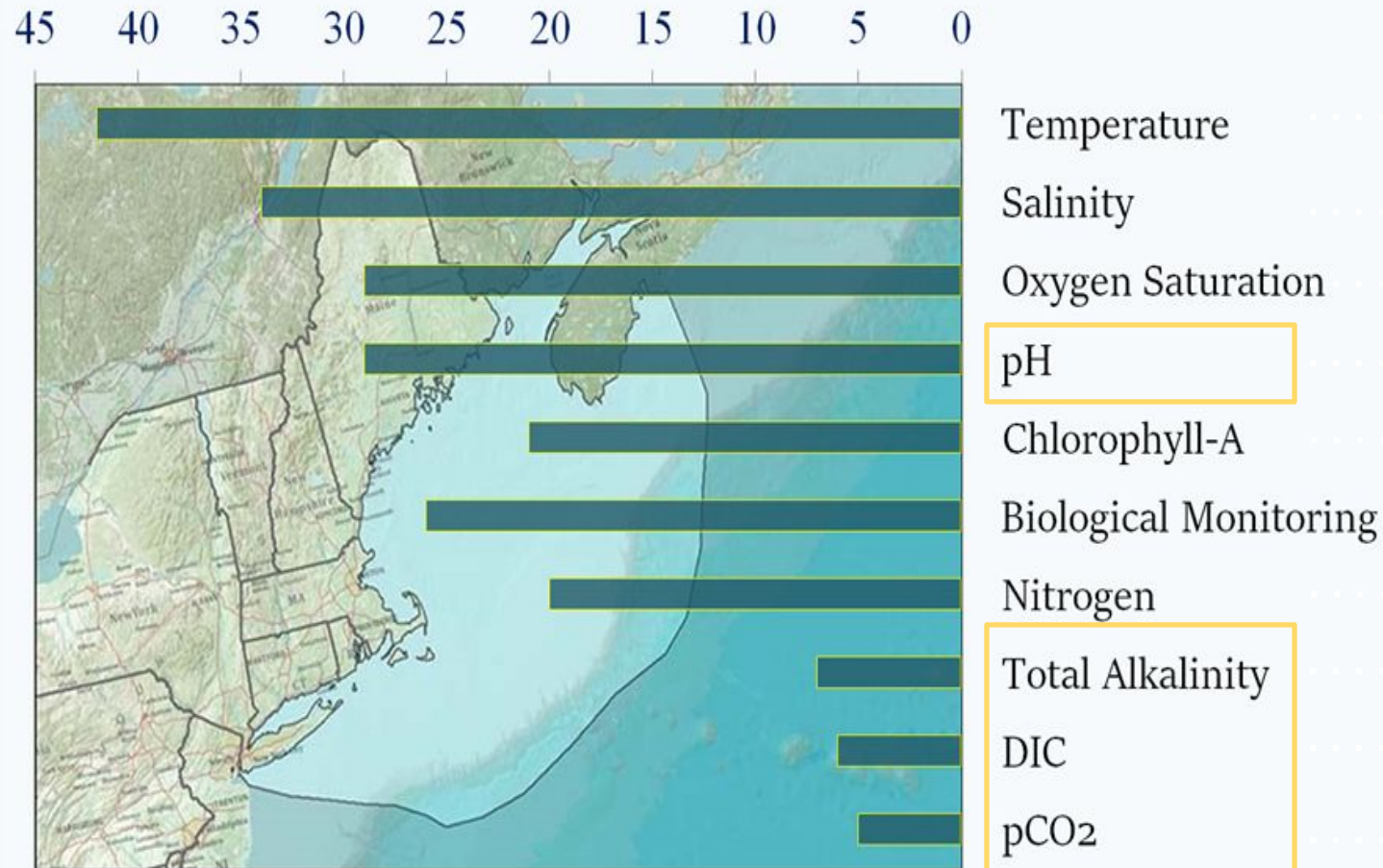
GIS Mapping



Project: Long Island Sound Survey
 Group: Department of Energy and Environmental Protection
 Parameters: pH, Dissolved Oxygen, Temperature, Salinity, Nitrogen, Phosphorous, Climatological Conditions, Sea State, Tides, Water Clarity, Depth, Silica, Carbon, Chl a, Total Suspended Solids, Biological Oxygen Demand
 Equipment Used: SeaBird SBE 19 (1991-2017) YSI EXO 2 (2018-)
 Sampling Frequency: Year round
 Years Sampled: 1991-present
 Contact Email: katie.obrien-clayton@ct.gov
 Contact Phone Number: 860-424-3176
 Website: [Click Here](#)

Individual Community Science Groups

Organizations measuring each parameter





Coordinating



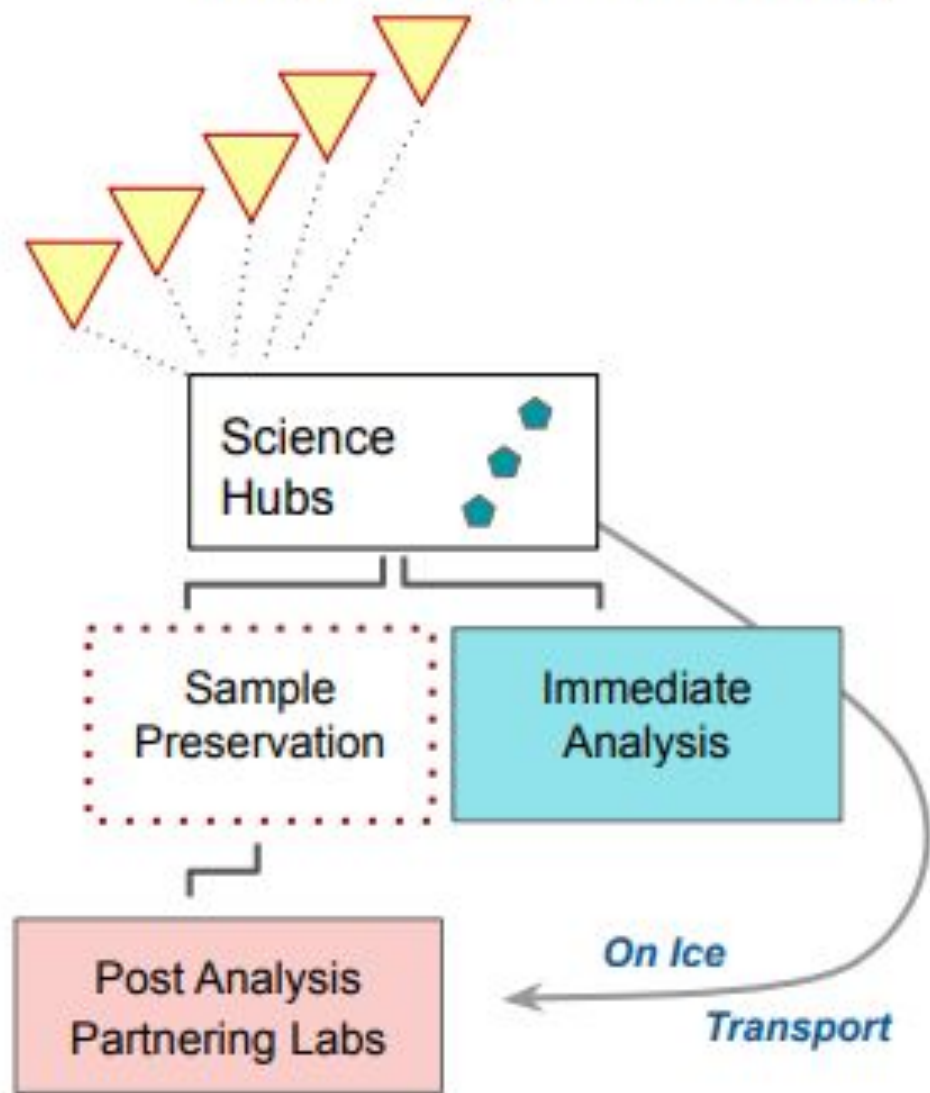
Water Monitoring
Groups



Laboratories to Measure
Total Alkalinity



Proposed Sequence for Shell Day:



- **Join discussion webinars** for the project and methodology
- **TA sampling kits** arrive free of charge to monitoring organizations (TA sample bottles, data labels, waterproof bag for on-ice transport)
- Monitoring groups select sampling sites with science advisors
- Sampling regimes focus on greatest "*salinity gradient*"; i.e. maximums of **low and high tide**
- You'll need your own thermometers, salinity meters, a cooler and ice
- Educational materials for coastal acidification will be provided for you to share with volunteers

- **Aug 22, Collect samples at low, mid and high tide** for each site. Bottle samples kept on Ice. While you do this, other groups from Long Island Sound to Downeast Maine will also be sampling for TA, Salinity and Temperature
- **Aug 23, Transport or ship samples to Science Hubs at partnering laboratories**
- **Join Science Advisors** and other Shell Day participants to continue conversation about coastal acidification and to operate on-site TA measurement
- **Data synthesis** led by NECAN research partners and participating organizations
- **Results** formulated into usable figures/products
- **Webinars** to discuss and share result in Fall, 2019

OVERVIEW



Many *routine* water measurements are integral to understanding local acidification conditions

There are resources to help water monitoring programs further investigate coastal acidification

Join Shell Day on August 22!

NECAN.ORG/shellday

Special Thanks to our Partners

