

*Updating ESI Maps for Long Island Sound
and the greater New York – New Jersey Region*

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*In cooperation with NOAA's Office of Response and
Restoration, Woolpert Inc., RPI, and other partners*



Why?

Update Environmental Sensitivity Index (ESI) Maps to reflect storm-induced changes, and add new information that would be useful when another disaster strikes. LIS region completed in 2009, NY-NJ in 2002.

Where?

ESI maps completed as regional projects, for Long Island Sound, NY-NJ region, other states from Maine to South Carolina

When?

Long Island Sound region (CT-NY) is underway (2014). Greater NY-NJ region 2014-2015.

Shoreline characterization:

- **Develop base shoreline (CUSP).**
- **Segment and classify shoreline based on ESI scheme.**
- **Delineate tidal flats and coastal wetlands.**
- **Deliver in GIS format with full metadata.**

Biology and Human Use:

- **Develop geodatabase with spatial distribution of fishes, invertebrates, birds, reptiles and amphibians, marine mammals, terrestrial mammals, biogenic habitats, socio-economic features.**
- **Deliver as geodatabase with full metadata.**

Possible Enhancements:

- **Storm surge inundation areas**
- **Tsunami inundation areas (for applicable regions)**
- **Evacuation routes**
- **Additional jurisdictional boundaries**
- **Beach sand nourishment areas**
- **Traditional and renewable energy development sites**
- **Scientific sample sites for repeated measures**
- **Benthic habitats, including biotic habitats**
- **Other human-use and socioeconomic features**
- **Fishery management zones**

ESI Database Elements:

Geographic Themes

ESI lines

ESI polygons

Human uses locations

Biological resources locations

Data Tables

Sources

Socio-economic

Species

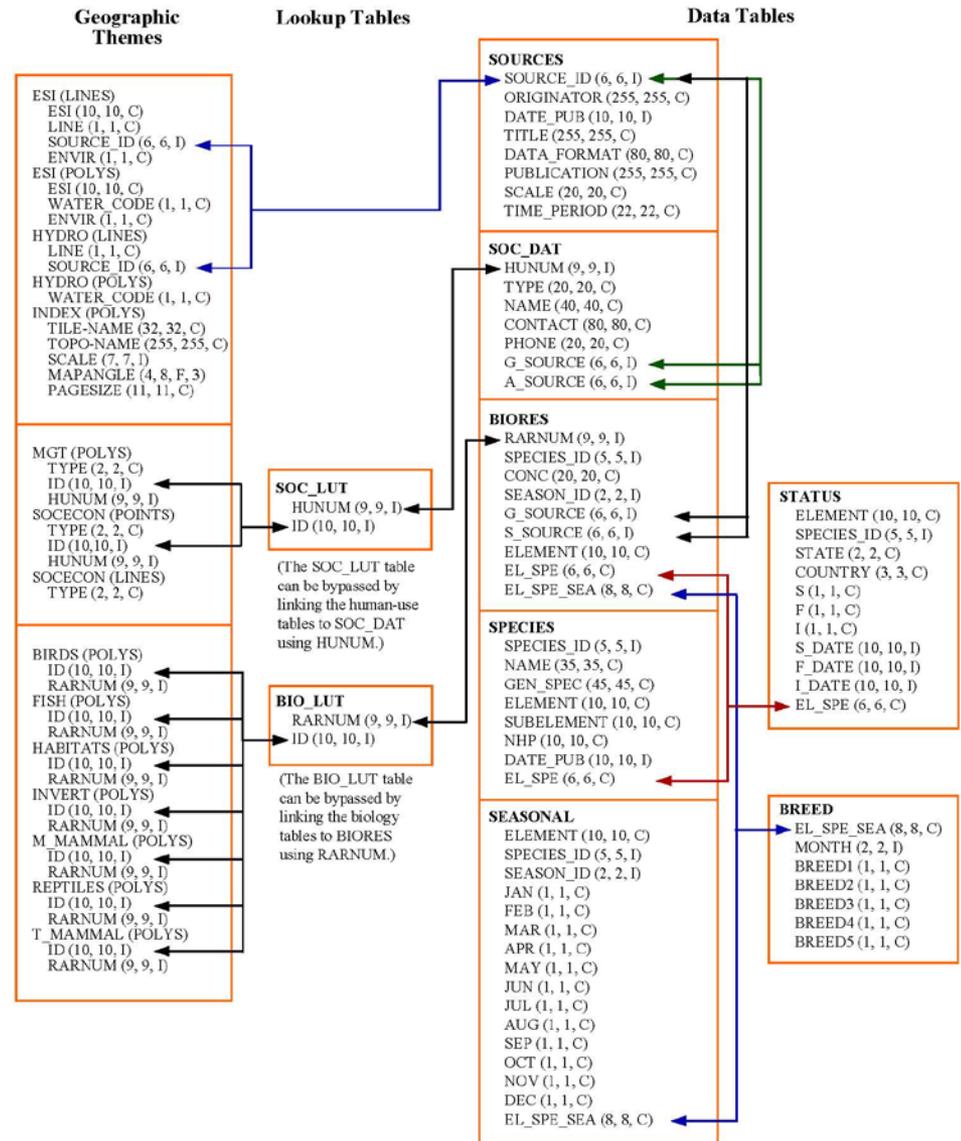
Seasonality

Breed (nesting, migrating, molting, etc.)

Endangered status

Index (Lookup) Tables

Long Island ESI
Entity Relationship Diagram for the Relational Data Tables
Relationships between spatial data layers and relational data tables



Building the ESI Database:

Custom Microsoft Access Advanced interface for data management

Links to geographic features (polygons, lines, points) in ArcGIS geodatabase

Bioresources

B00190 Blue-winged teal Anas discors BIRD waterfowl

NHP: G5 DATE PUB: 200412

OBJECTID (Feature #) 229

EL_SPE EL_SPE_SEA SEASON ID CONCENTRATION

74 B00190 B0019001 1 Unknown

EL_SPE_SEA JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC

B0019001			X	X	X	X	X	X	X	X		
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EL_SPE_SEA	MONTH	Nesting	Migrating	Molting	-	-
B0019001	3	N	Y	U	-	-
B0019001	4	N	N	U	-	-
B0019001	5	Y	N	U	-	-
B0019001	6	Y	N	U	-	-
B0019001	7	Y	N	U	-	-
B0019001	8	N	N	U	-	-
B0019001	9	N	N	U	-	-
B0019001	10	N	N	U	-	-

Add Blue-winged teal data to a new feature (polygon, line, or point):

Add Data for New Feature #

GEOGRAPHIC SOURCE: 10

Add New Geographic Source

SEASONAL SOURCE: 23

Add New Seasonal Source

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Remove this Data Source Combo

Notes

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Availability of ESI products:

Hardcopy map atlases

PDFs

Geodatabase for ArcGIS and shapefiles

ESI Map Viewer (MARPLOT) and web data viewer

Environmental Response and Mapping App (ERMA)

Discussion questions:

- **What enhancements would be most useful?**
- **In what situations are ESI maps most useful?**
- **What platform for delivery of map products would be most useful? (paper, PDF, tablet, etc.)**
- **Who can we contact to provide data and review draft products?**

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Thanks!

Céad Mile Fáilte

Mahalo Nui Loa

Tusen Takk