Shoreline Characterization and Change Analyses

Boston Harbor Region
Regional Coastal Erosion Commission Workshop
Boston - May 22, 2014

**SHORELINE CHARACTERIZATION**

**Description**
Coastal sediments, habitats, developed lands, and hardened coastal structures (collectively referred to as “features”) were identified at the immediate, exposed shoreline for coastal Massachusetts. Protected habitats and setbacks were generally excluded. Classes were identified for every ~50 meters of assessed shoreline and summarized by percentage of total assessed shoreline for each community.

**Methods**
A transect approach was used to identify classes along the shoreline. This approach allowed us to examine features along any given transect. For segments of shoreline it was possible to examine more information at a finer scale than was otherwise possible. Classes were aggregated into 11 bins to make analysis and reporting more meaningful. Data were further processed to generate more than 50 classes from multiple source datasets identified in this process. Classes were aggregated into bins to make analysis and reporting more meaningful. Data were further processed to generate classes’ summaries, as shown in the community bar charts below. Values above are comprised of forest and brush/wooded/developed land cover classes only.

**Shoreline Change**

Short-term erosion and accretion trends (1970-2009) per community in the Boston Harbor region. This plot denotes dominant direction, not magnitude, of shoreline movement based on the number of shoreline change transects in each town.

Long-term erosion and accretion trends (1944-2009) per community in the Boston Harbor region. This plot denotes dominant direction, not magnitude, of shoreline movement based on the number of shoreline change transects in each town.

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**Legend**
- Assessed Shoreline (MHHW)
- Coastal Structures