

INTENSIVE LONG-TERM MONITORING IN TIDAL WETLANDS OF DELAWARE AND BARNEGAT BAYS

THE ACADEMY
OF NATURAL SCIENCES
of DREXEL UNIVERSITY

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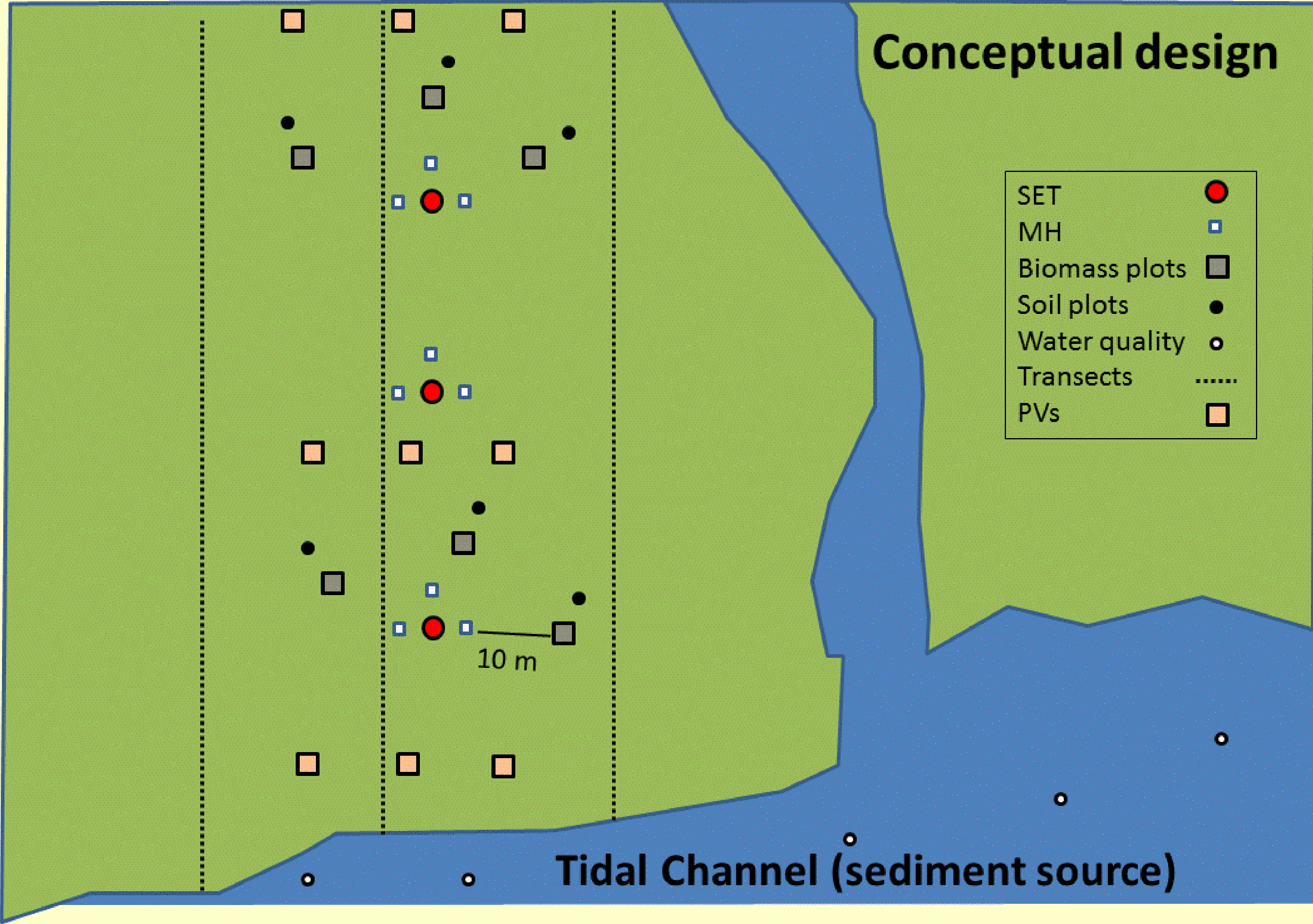
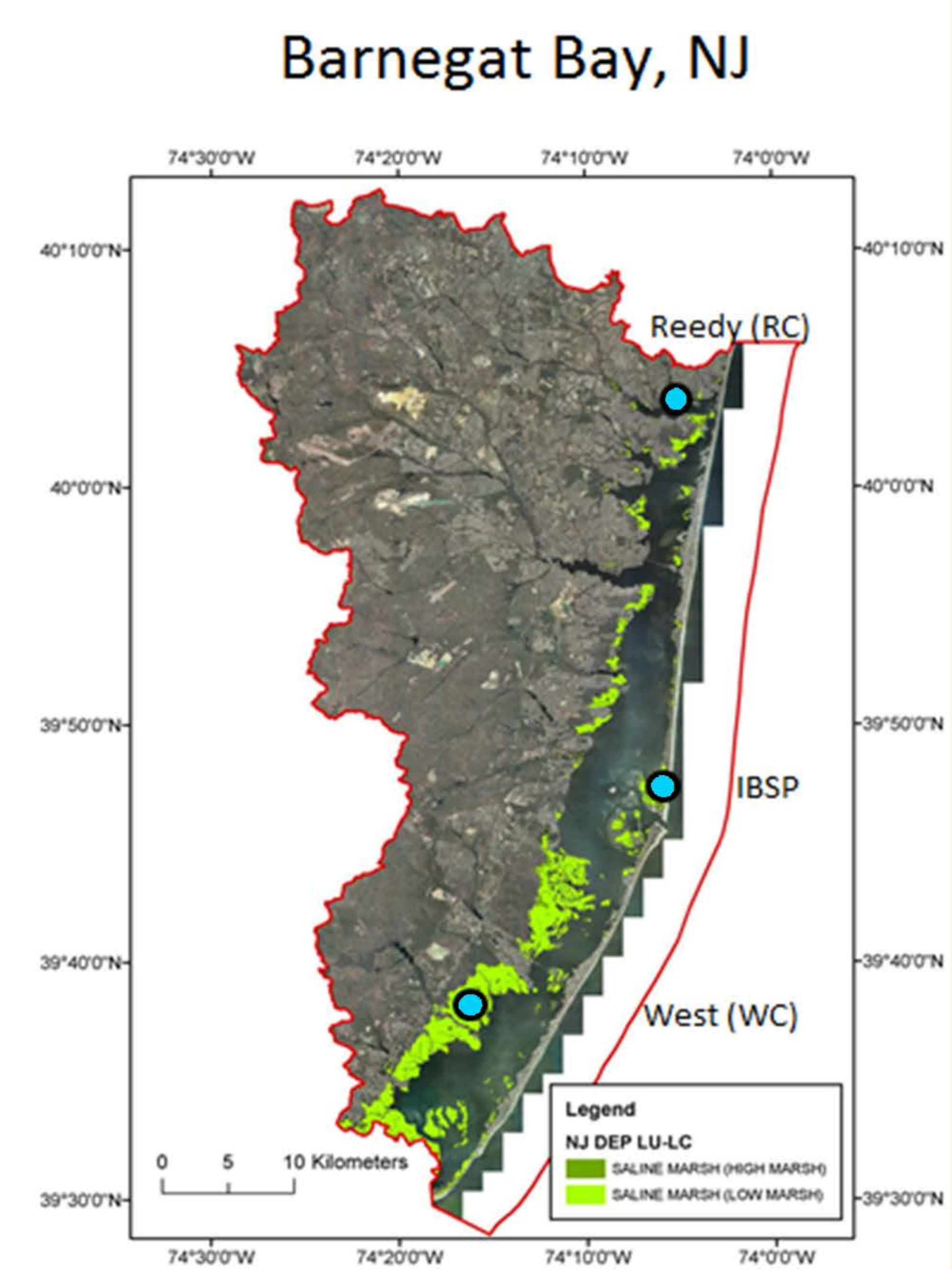
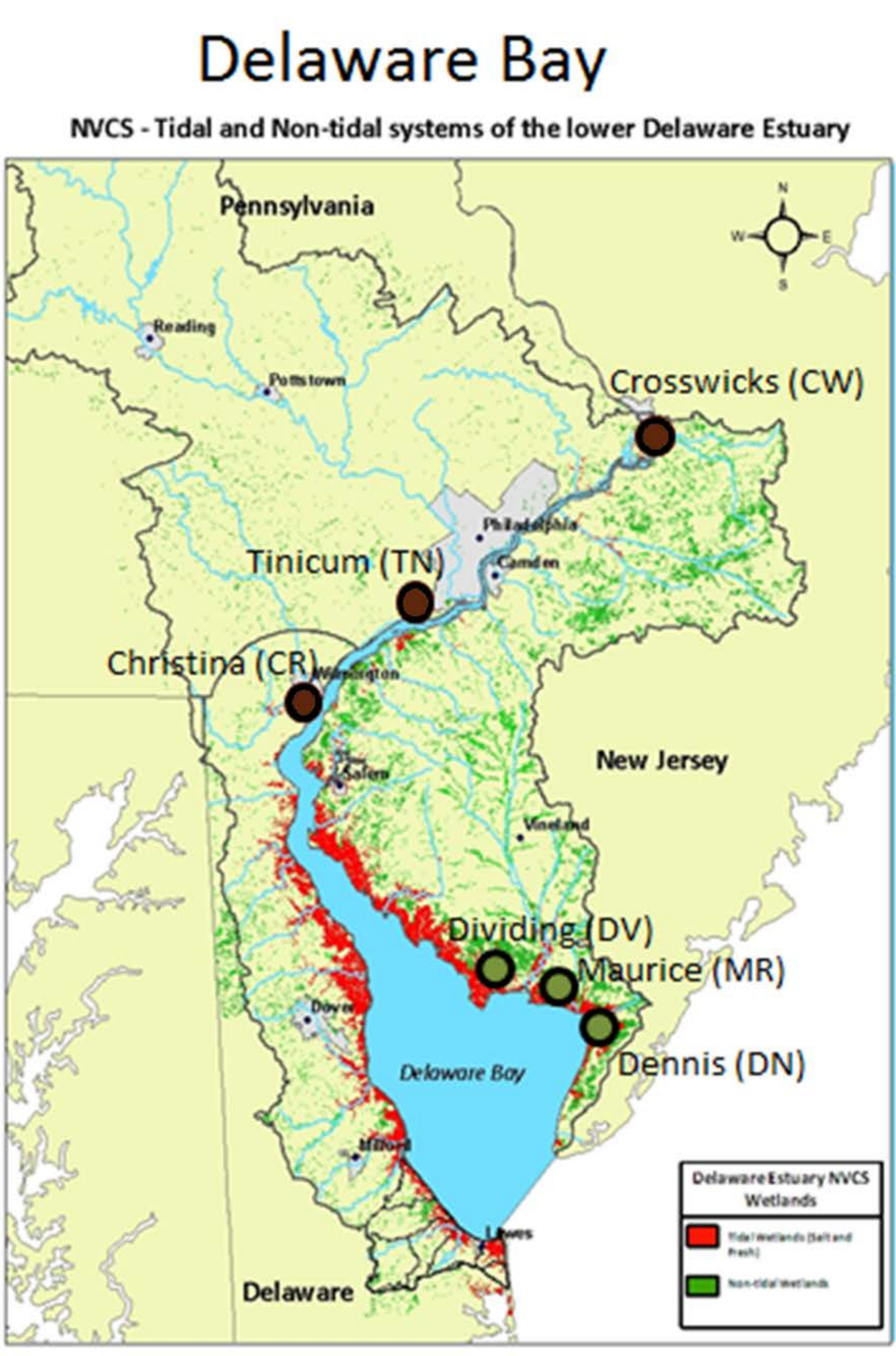
A network of coastal wetland stations has been established in the Mid-Atlantic region for long-term monitoring. Sites occur along gradients from tidal freshwater to saline and in diverse geomorphic settings, from estuarine fringe to barrier island marshes. The purpose was to establish a baseline understanding of spatial and temporal variation of wetland structure and function using a multi-parameter, integrated approach. Measurements include marsh elevation and vegetation surveys, plant biomass, elevation change and surface accretion rates, water quality, and soil quality. This approach will allow us to evaluate the trajectory and sustainability of these wetland systems under changing conditions of climate, relative sea level, and nutrient and sediment loads. These data are beginning to provide insights on physical, chemical, and biological components that can affect wetland survival. There is potential for utilizing wetland sites within this network as reference sites for comparison with restoration projects.

SURFACE ACCRETION

ELEVATION CHANGE



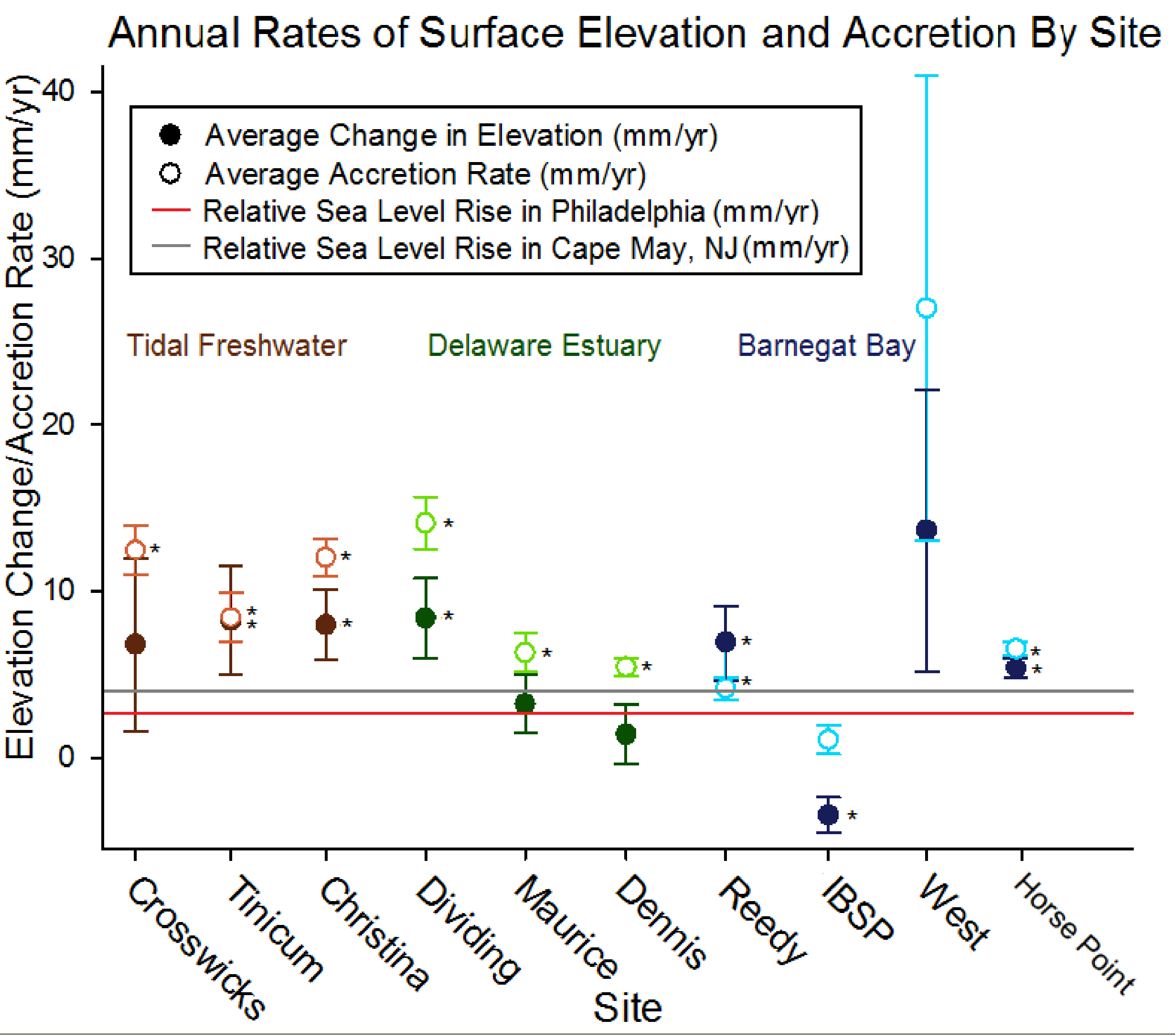
VEGETATION SURVEYS



PLANT BIOMASS



WATER AND SOIL CHEMISTRY



Symbols with an (*) have a significant rate of elevation change or accretion. Rates of accretion and elevation change are averaged over a few years. Rates of Sea Level Rise are averaged over ~100 years (NOAA).

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