Introduction

Tidal wetlands serve as an excellent habitat indicator, especially for the wetland-rich Delaware Estuary. They exist at the land-sea interface and are our first line of defense against sea level rise and storm surge. Coastal marshes help sustain fisheries and shellfisheries, provide breeding and foraging habitat for diverse fish and wildlife, and succor sites in food chains and food webs. They are also an underappreciated ecosystem service such as helping sustain good water quality, sequestering carbon, and buffering other habitats (Fig. 1).

In the last five years, the Partnership for the Delaware Estuary has been leading a multidisciplinary effort to assess the current extent and health of our vast tracts of coastal wetlands (see other presentations on the Mid-Atlantic Coastal Wetland Assessments). Information from that effort and other wetland assessments is not yet available for use in the 2011 Technical Report for the Estuary and Basin (TRB), and so we will need to rely on a patchwork of acreage datasets that is incomplete and somewhat incompatible in time and space. This poster describes our approach and current progress in assessing tidal wetland status and trends in the Delaware Estuary. Final results will be reported as a core indicator in the Inheritable Habitats section of the TRB.

Why Tidal Wetlands?

Tidal wetlands are arguably the Delaware Estuary’s most important and characteristic habitat. There are two main types throughout this system. First, there is a coastal marsh that fringes Delaware Bay and the lower estuary region (Fig. 2).

Second, the system has the largest freshwater tidal prism in the world, and the extended salinity gradient leads to a rich diversity of marsh types. Some are flooded regularly by tides and others are irregularly flooded on spring tides during storms. The most extensive types are marshes dominated by perennial vascular plants. The different marsh communities are mainly delineated by the salinity gradient.

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References
