

## **Sedimentology and Structure of Storm Overwash Lobes Deposited by Hurricane Sandy Near Tiana Beach, New York**

Bennington, J Bret<sup>1</sup>, E. Christa Farmer<sup>1</sup>, Emily Dorward<sup>1</sup>, Steven Leone<sup>1</sup>, Ashley Persaud<sup>1</sup>, and Brian Zilli<sup>2</sup>

<sup>1</sup>Department of Geology, Environment, and Sustainability, Hofstra University and

<sup>2</sup>Macarthur High School, Levittown, NY

The storm surge from Hurricane Sandy deposited a number of large lobes of overwash sand in the marshes and bays of southern Long Island. Several prominent overwash lobes are located west of Shinnecock Inlet in the vicinity of Tiana Beach, near Quoque, New York. In January of 2013 we collected five sediment cores from two overwash lobes in this area to study the sedimentology and structure of hurricane overwash deposits. The motivation for this study is to be able to more confidently recognize past overwash deposits in sediment cores collected along the margin of Long Island's southern bays as part of an ongoing study to develop a record of prehistoric hurricane activity on Long Island. Ongoing analysis of these cores is revealing that overwash sands vary in their sedimentological characteristics depending on their location relative to the margin of the lobe and stratigraphic position within the lobe deposits. Lobe sediments deposited subaerially directly on the marsh surface are relatively homogeneous while subaqueous sands deposited directly into the bay show heavy mineral laminations due to settling and or reworking during lobe deposition. Lobe deposits analyzed to date are relatively fine-grained and lacking in pebble-sized material and we have noted a tendency for sediments to coarsen upward from the base to the top of the lobe.