

NOAA IDIQ Regional Services Contract Task 09–07 Long Island Sound Tidal Current Measurement Project

Project Characteristics:

- *Tidal Current Survey at 38 Stations*
- *Deployment Planning and Execution*
- *Bottom Mounted and Taut-Line Moorings*
- *300, 600, 1200 kHz Acoustic Doppler Current Profiler (ADCP) and Various Acoustic Releases*

The objective of this project was to collect current measurements at 38 tidal current stations to update NOAA's Tidal Current Prediction Tables in Long Island Sound. The stations included prior and newly established sites that have been identified as important for the nation's commercial and recreational transportation systems. The project's study area reached from Throgs Neck, NY in the west, to The Race, located at the eastern entrance of Long Island Sound. The work was completed under a NOAA IDIQ Regional Services Contract (Task 09–07).

WHG led four cruises using the R/V *Connecticut* to install and recover the government-supplied equipment used for the project between April and September 2010. An acoustic Doppler current profiler (ADCP) was deployed at its predetermined station for a period of at least 35 days. The two stations located at the east and west boundaries of the Sound were deployed for the entire 3-month program to serve as long-term data verification stations. Due to the large number of stations (38) that required measurement, and a limited amount of NOAA furnished equipment, Woods Hole Group segmented the program into three deployments (Eastern, Central, and Western) within which the equipment was rotated.



Bottom-mounted current meters were housed in trawl-resistant bottom mounts (TRBM) with Benthos 875 pop-up recovery buoys and Benthos UAT-376 underwater relocation transponders. The subsurface taut-line moorings were deployed with upward looking ADCPs in an Open Seas Inc. SUBS buoy, with tandem ORE CART releases, and an ARGOS relocation beacon.

WHG achieved 100% data collection for the project, which was completed safely and on schedule.