EXECUTIVE SUMMARY

A monitoring survey was conducted in June 2004 at the Cornfield Shoals Disposal Site (CSDS) as part of the Disposal Area Monitoring System (DAMOS). CSDS is located in eastern Long Island Sound. The site has received dredged material since 1961 and is characterized as a dispersive disposal site. A series of surveys were conducted at CSDS in 1991, 1992, and 1994 because of concerns that dispersed material could be transported to shellfish beds to the north of the site. These surveys documented the dispersive nature of the site, but revealed that sediment transport from the site was oriented in an east-west direction aligned with the predominant tidal currents.

The June 2004 field effort consisted of a bathymetric survey designed to document any significant accumulation of dredged material around the center of the disposal site since the previous set of investigations in the early 1990s. More than 300,000 m^3 of dredged material had been disposed at CSDS since the studies performed in 1992 and 1994, with all of the disposal directed to the center of the site. The 2004 bathymetric survey was performed over a 1.96 km^2 area at the center of CSDS.

The results of the June 2004 bathymetric survey found no distinct disposal mounds at CSDS. A comparison of the 2004 and 1992 bathymetry data indicated that limited accretion (less than one meter in thickness) was present to the west of the disposal target and limited erosion was noted to the east. At a depositional disposal site, 335,000 m^3 of disposal would be expected to form a mound approximately 2 m in height and 300 to 400 m in diameter. The lack of a distinct mound at CSDS and limited areas of apparent accretion and erosion were consistent with sediment transport patterns observed in earlier surveys, further documenting the dispersive nature of this site and east-west transport orientation.