

## EXECUTIVE SUMMARY

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Sediment-profile and plan view photographs were collected at the Massachusetts Bay Disposal Site (MBDS) for three separate objectives. The first objective was to assess the recolonization status of the recently disposed dredged material. The remaining two objectives were in response to results from the MBDS baseline survey of 1993. The second objective was to determine the areal limits of historical dredged material using acoustical data from the 1993 survey as a reference. The final objective was to investigate the successional status and general benthic conditions at the area around historical Station 12-3 that has shown evidence of historical contamination.

Results from sampling at the active disposal buoy indicated that the disposal of dredged material at MBDS is not impeding benthic recolonization. The results were compared with reference area data and showed that the area near the disposal buoy contained a relatively advanced benthic community, despite the recent disposal of sediments.

The areal extent of both recent and historical dredged material that had been defined using acoustical data in the 1993 baseline survey was confirmed with the photographic data. Both the acoustic and the photographic data, however, were not apt to detect highly reworked dredged material around the flanks of the current and historical dredged material deposits at MBDS.

Although sediments at the 12-3 Grid did show signs of organic eutrophication (reduced sediments with high sediment oxygen demand and locally thin apparent redox potential discontinuity intervals), most of the stations still contained a highly developed Stage III community. While any chemical contaminants that may be present are not apparently toxic to the local benthic assemblage, the potential for bioaccumulation in their tissues still persists. Because Station 12-3 represents a small area (less than 400 m in diameter) there is little risk of significant transfer of contaminants to benthic predators. Station 12-3 may provide a field test bed for evaluation of the sensitivity of REMOTS® technology in assessing the impact of sublethal contaminant levels on the benthic community.