

EXECUTIVE SUMMARY

The Rockland Disposal Site (RDS) was monitored by Science Applications International Corporation (SAIC) from 7 to 18 September 2000 aboard the M/V *Beavertail* and on 1 May 2001 aboard the F/V *Susan & Jessica* as part of the Disposal Area Monitoring System (DAMOS) Program. The field efforts consisted of the acquisition of bathymetric survey data, side-scan sonar data, Remote Ecological Monitoring of the Seafloor (REMOTS[®]) sediment-profile images, and underwater drop video footage. These field techniques were employed to establish new baseline bathymetry and imagery for the RDS, to assess the benthic recolonization status and overall benthic habitat quality of surface sediments within the RDS, and to evaluate the relationship between benthic substrate and lobster populations and better define short-term impacts and long term benefits to the fishery resulting from deposition of dredged sediments.

The RDS has been subjected to limited dredged material placement activity over the past decade, receiving a total reported barge volume of only 26,780 m³ of sediment since April 1989. Prior to the 2000 survey, the last monitoring survey at the RDS was conducted in June 1989. Depth difference results between the 2000 and 1989 bathymetric surveys indicate no major seafloor changes within the RDS. Because of the deep-water depths throughout and the limited amount of additional material placed at the RDS, no major differences were expected. The 2000 bathymetric survey will provide the updated RDS baseline bathymetry to which future monitoring surveys will be compared. The 2001 side-scan sonar survey will provide the updated RDS baseline acoustic imagery to which future monitoring surveys will be compared. These surveys completely and accurately covered the RDS and will provide sufficient detail to detect any significant seafloor changes resulting from subsequent placement activities.

The 2000 REMOTS[®] survey will provide the updated RDS REMOTS[®] baseline data to which future monitoring surveys will be compared. The limited recent placement activity over the RDS has enabled the seafloor to return to near ambient conditions, with overall benthic habitat quality generally equal to or better than the surrounding reference areas. Both the sediment-profile images and drop video data suggested that surface sediments comprised of dredged material within RDS have been colonized extensively by benthic organisms. Combinations of infaunal successional stages I, II and III were observed in the sediment-profile images, while the video showed evidence of extensive burrowing activity throughout the survey area attributed to shrimp and juvenile lobsters. It is hypothesized that the soft sediments both in and around the RDS provide suitable habitat for juvenile lobster and were supporting an active population at the time of the survey.