

PROPOSED PROJECT:
NAVESINK/SHREWSBURY RIVER DREDGING PROJECT
PHASE 1: PLANNING AND COORDINATION



Submitted to:
New Jersey Department of Transportation, *I BOAT NJ Program*
1035 Parkway Avenue, PO Box 600
Trenton, NJ 08625-0600



Submitted by:



Engineers • Planners • Scientists • Surveyors

1. Introduction

The Navesink and Shrewsbury Rivers (“the Rivers”) are coastal lagoons bordering several Monmouth County communities and Sandy Hook Bay. These invaluable waterways provide a myriad of ecological, recreational and commercial benefits to these communities, including: (1) a seaward route to one of the State’s finest recreational fishing grounds (Sandy Hook) and popular cruise destinations (NY-NJ Harbor and Hudson River); (2) an aquatic habitat, nursery and commercial shellfishery, including the State’s primary soft clam fishery; and (3) an important marketing area for the State’s boating industry. Unfortunately, the Rivers are subject to shoaling and siltation, and require periodic maintenance dredging to ensure safe navigation for the boating public. The Rivers’ navigation channels are primarily federally owned, with secondary channels reaching into shallow tidal waters of neighboring municipalities. These federal (primary) channels are periodically maintained (last dredged in the mid-1980’s). However, many of the secondary channels also need to be dredged to maintain seaward access for many boaters, and to maintain tidal exchange with the River’s upper reaches.

In order to remedy the River’s current shoaling problems, the U.S. Army Corps of Engineers has begun surveying the main channels in preparation of an anticipated federal maintenance dredging project to be funded in FY 2007. This development provides a unique opportunity for local communities to develop a holistic (rather than piecemeal) plan to conduct maintenance dredging in other reaches of the Rivers. To this end, municipalities bordering the two Rivers have established a Two Rivers Dredging Group, with representatives preparing to work cooperatively to ensure that secondary channels are dredged, along with the federal channels, in an efficient manner. Several of these representatives were involved with the previous, successful dredging project.

In addition to the secondary channels, several municipalities have canal and/or creek communities within their borders that will also require dredging, likely at the expense of individual homeowners. The Two Rivers Dredging Group has met several times and has determined that funding from I-BOAT NJ would be needed to develop a comprehensive management plan for sediment testing, removal and disposal of dredged materials from the secondary channels and local waterways. Accordingly, this proposal seeks funds to develop such a preliminary (phase 1) plan.

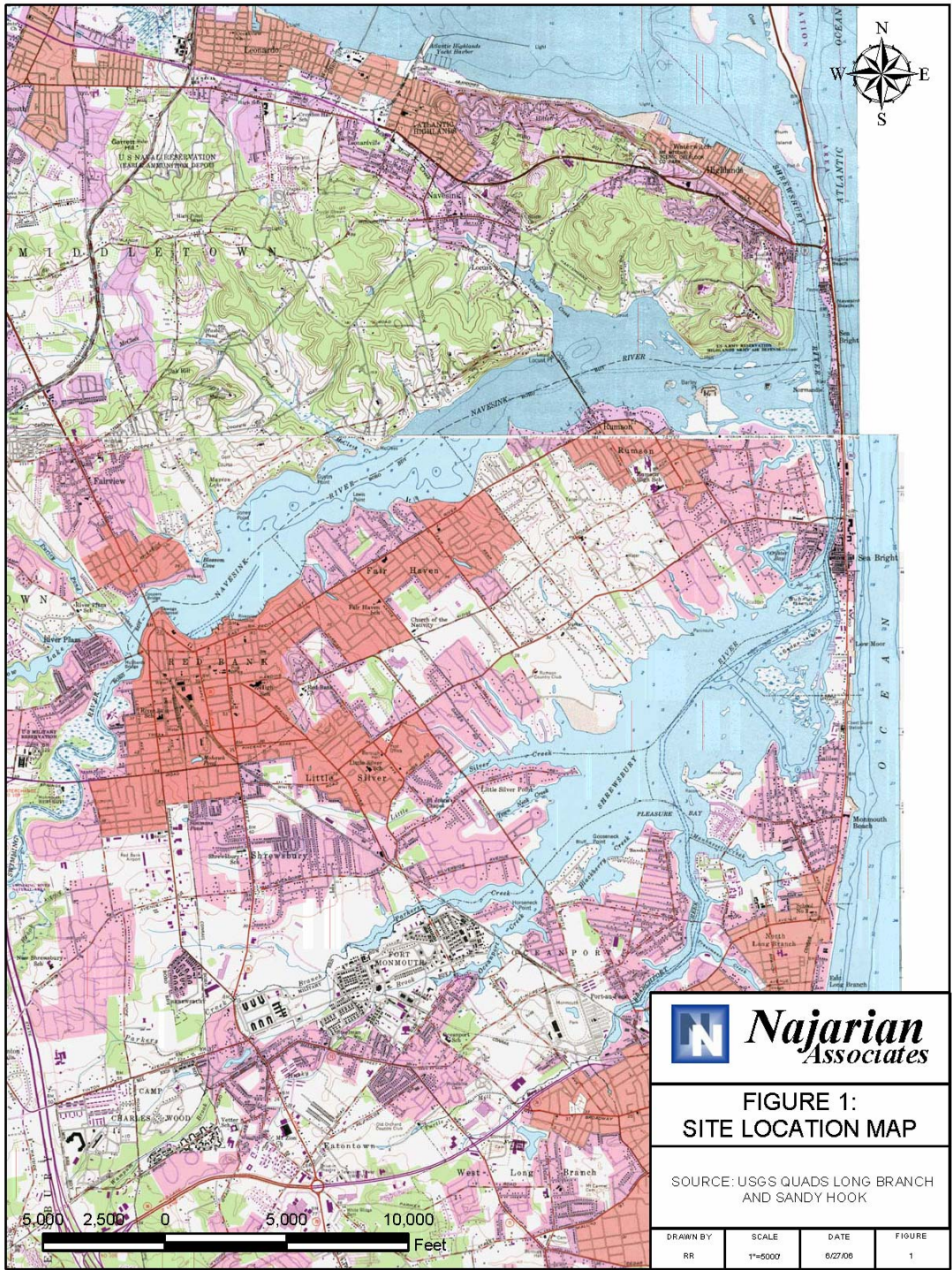


Figure 1: Site Location Map (U.S.G.S. Quandrangle Maps)

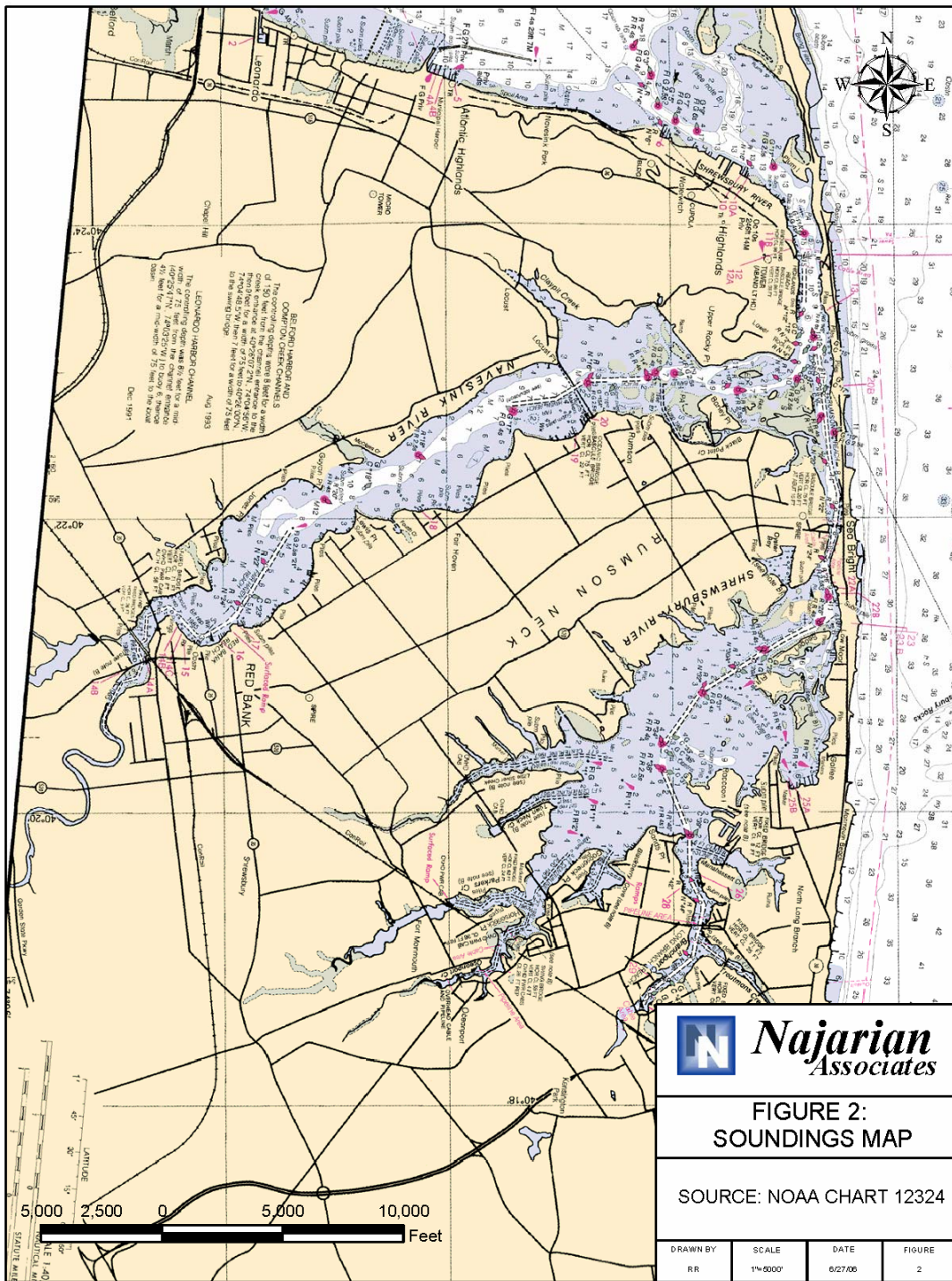


Figure 2: Portion of NOAA Navigation Chart 12327

2. Proposal Description and Objectives

To plan and coordinate multiple maintenance dredging projects – and obtain environmental permits necessary to conduct such projects – managers must collect, retrieve, compile and synthesize a considerable amount of existing and new information. For example, one must gather information to: (1) characterize the extent of shoaling in the Rivers' secondary channels; and (2) determine a minimum dredging depth that will support navigational uses without adversely impacting the River's ecology. Where available, some of this information may be gleaned from recent sounding maps and related analyses; otherwise, new hydrographic surveys must be conducted. In any case, one must estimate the volume of material to be dredged, and an operational plan must be developed to dredge and dispose of this material in an environmentally sound manner. Such activities require careful consideration of the Rivers natural resources (e.g., water quality, shellfish habitats, finfish spawning grounds, etc.), jurisdictional zones (e.g., tidelands lease/license areas), sediment testing data, previous and existing dredging permits (for maintenance dredging), and candidate disposal sites. Such spatial and tabular information should be retrieved, compiled and supplemented in a common platform, so that planners may readily access the information, identify data deficiencies and, ultimately, develop a regional dredging strategy.

Thus, the first goal of the proposed project will be to characterize the extent of the Rivers' shoaling and dredging problems for all 9 Navesink/Shrewsbury River Communities. To this end, we will first retrieve and compile available information to support dredging projects in the Rivers (including detailed sounding maps, riparian lease/license area delineations, sediment testing data, disposal area plans, aerial photographs, quadrangle maps, shellfish maps, etc.). Next, we will collect new sounding data to quantify the extent of shoaling. Also, we will create a web-based Geographic Information System (GIS) database that will allow managers to rapidly retrieve and assess such information for a particular reach, and identify critical data gaps. Based on the sounding data, we will obtain preliminary estimates of the quantity of material to be dredged from shoal areas in the River's secondary channels, and design a coordinated monitoring program to collect additional data, as needed.

The second major goal of the project will be to identify suitable dredge-material disposal sites; and develop dredging timetables for the successful coordination and completion of the dredging project, in cooperation with the U.S. Army Corps of Engineers. While this is often the most challenging aspect of any dredging plan, the project team previously has been successful working with the government agencies and other stakeholders to locate such sites in the Rivers. The benefits of this project to the general boating public will be substantial, and will meet the required objectives of the I-BOAT NJ program and the Maritime Industry Fund.

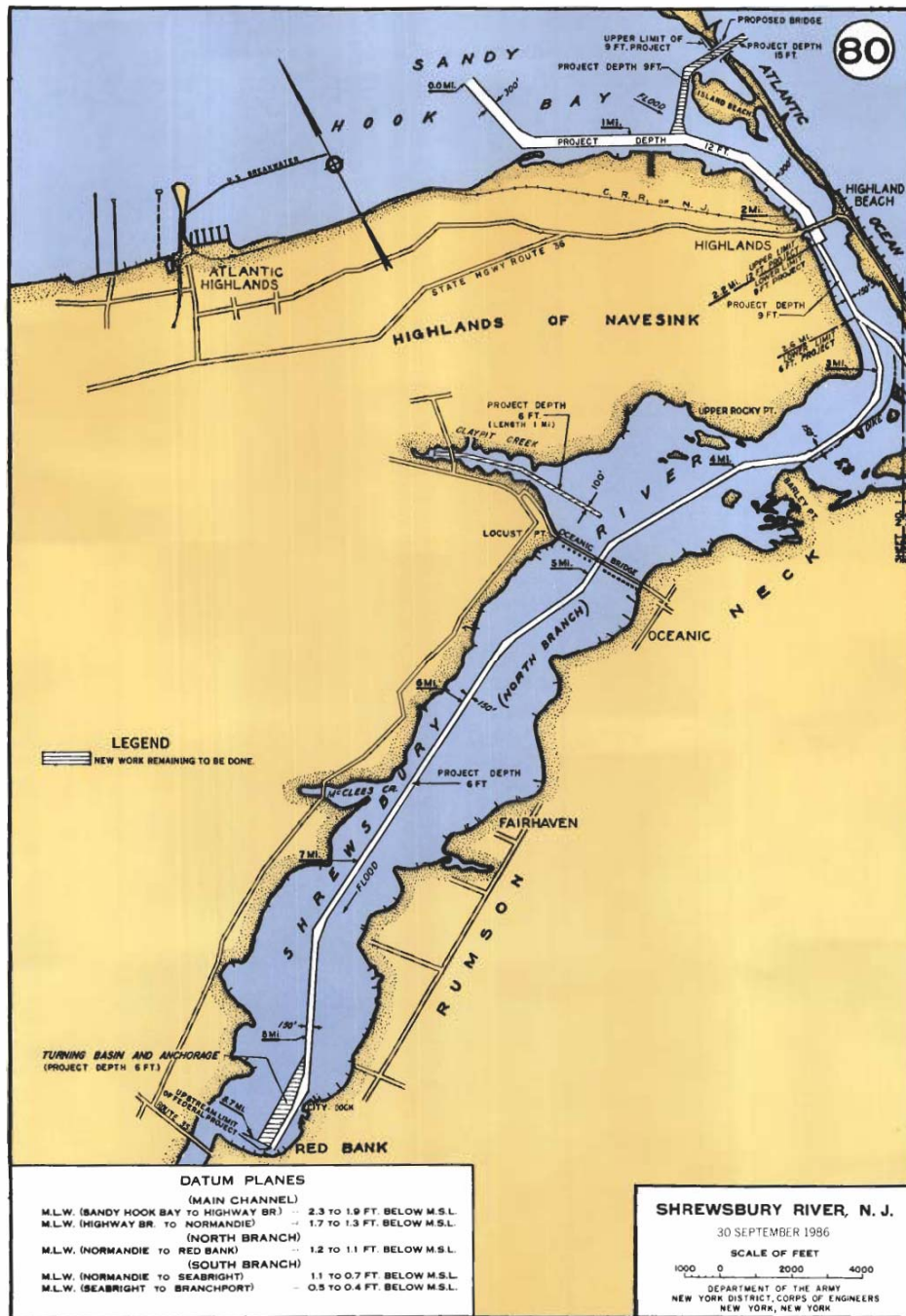
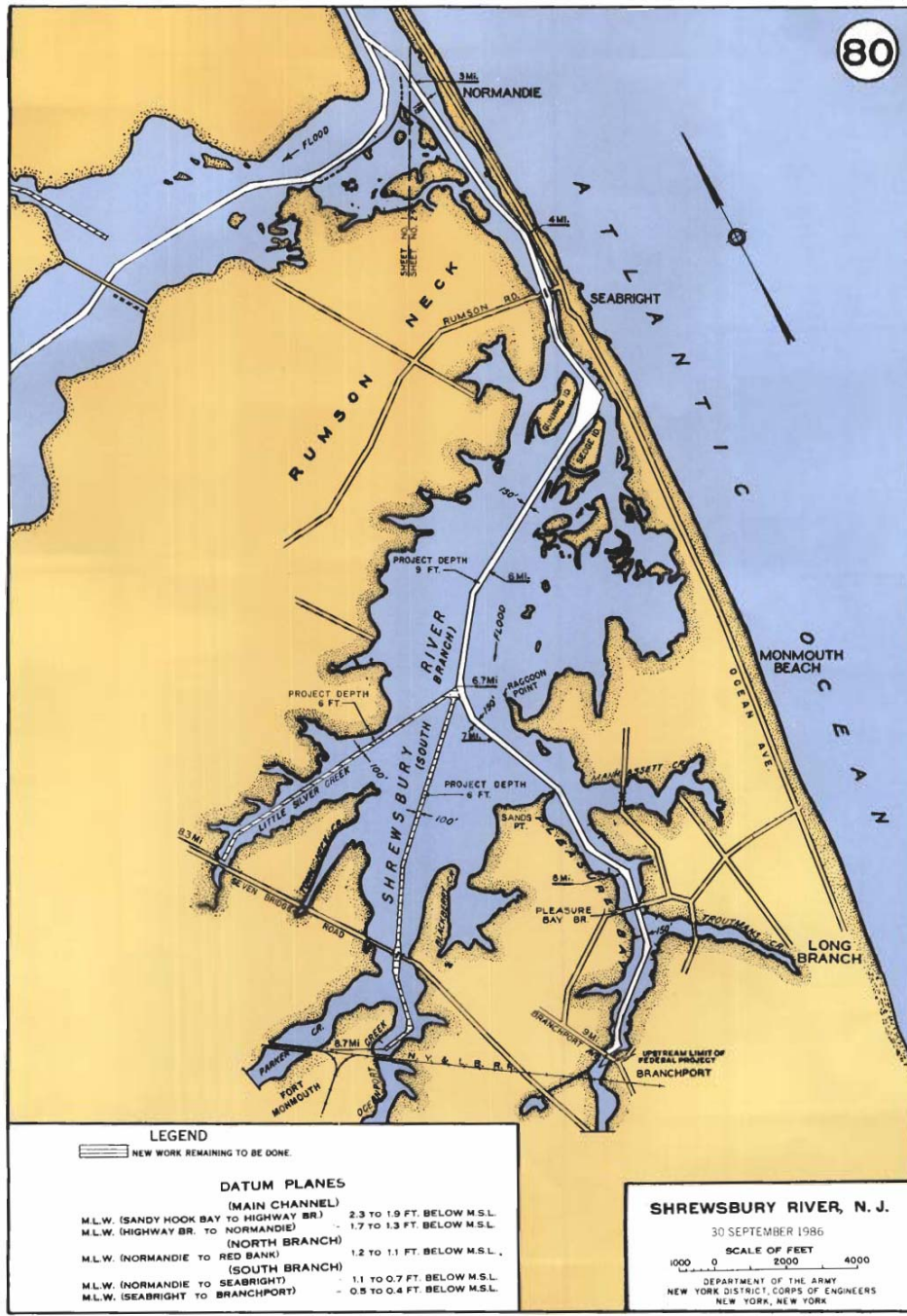


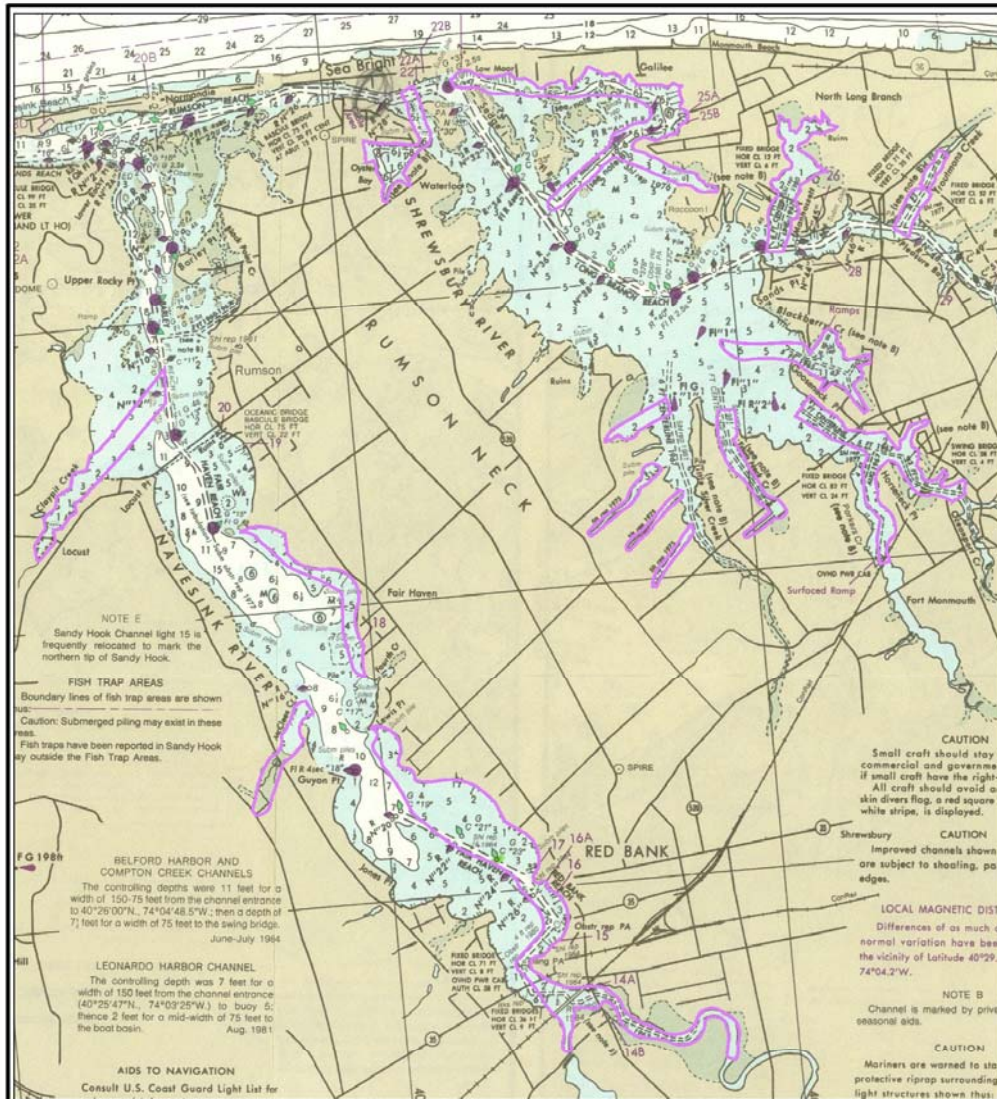
Figure 3: Primary Navigation Channels in Navesink River



4: Primary Navigation Channels in Shrewsbury River

Figure

Y:\PROPOSAL\06\06-048\NAUTICAL.dwg 7/24/2006 2:14:19 PM EDT



<p>LEGEND:</p> <p>SOURCE: NAUTICAL CHART 12324, INTRACOASTAL WATERWAY, SANDY HOOK TO LITTLE EGG HARBOR, NEW JERSEY</p>	<p style="text-align: center;">NAUTICAL MAP</p> <p style="text-align: center;">SECONDARY CHANNELS FOR PROPOSED SOUNDING</p> <div style="text-align: center;"> <p style="font-size: small;">Engineers • Planners • Scientists • Surveyors One Industrial Way West, Eatontown, New Jersey 07724</p> </div> <table border="1" style="width: 100%; border-collapse: collapse; font-size: x-small;"> <tr> <td>DRAWN BY</td> <td>SCALE</td> <td>DATE</td> <td>DWG. NO.</td> <td>FIGURE</td> </tr> <tr> <td>CMJ</td> <td>NTS</td> <td>7/21/06</td> <td>P06048</td> <td>5</td> </tr> </table>	DRAWN BY	SCALE	DATE	DWG. NO.	FIGURE	CMJ	NTS	7/21/06	P06048	5
DRAWN BY	SCALE	DATE	DWG. NO.	FIGURE							
CMJ	NTS	7/21/06	P06048	5							

Figure 5: Secondary Channel Areas Proposed for New Soundings