CENAP eCOASTAL GIS: A Status Report

A Step Towards eGIS Implementation

US Army Corps of Engineers
Philadelphia District

Outline

- Goals
- Technical Developments
- District Support
- Summary Thoughts

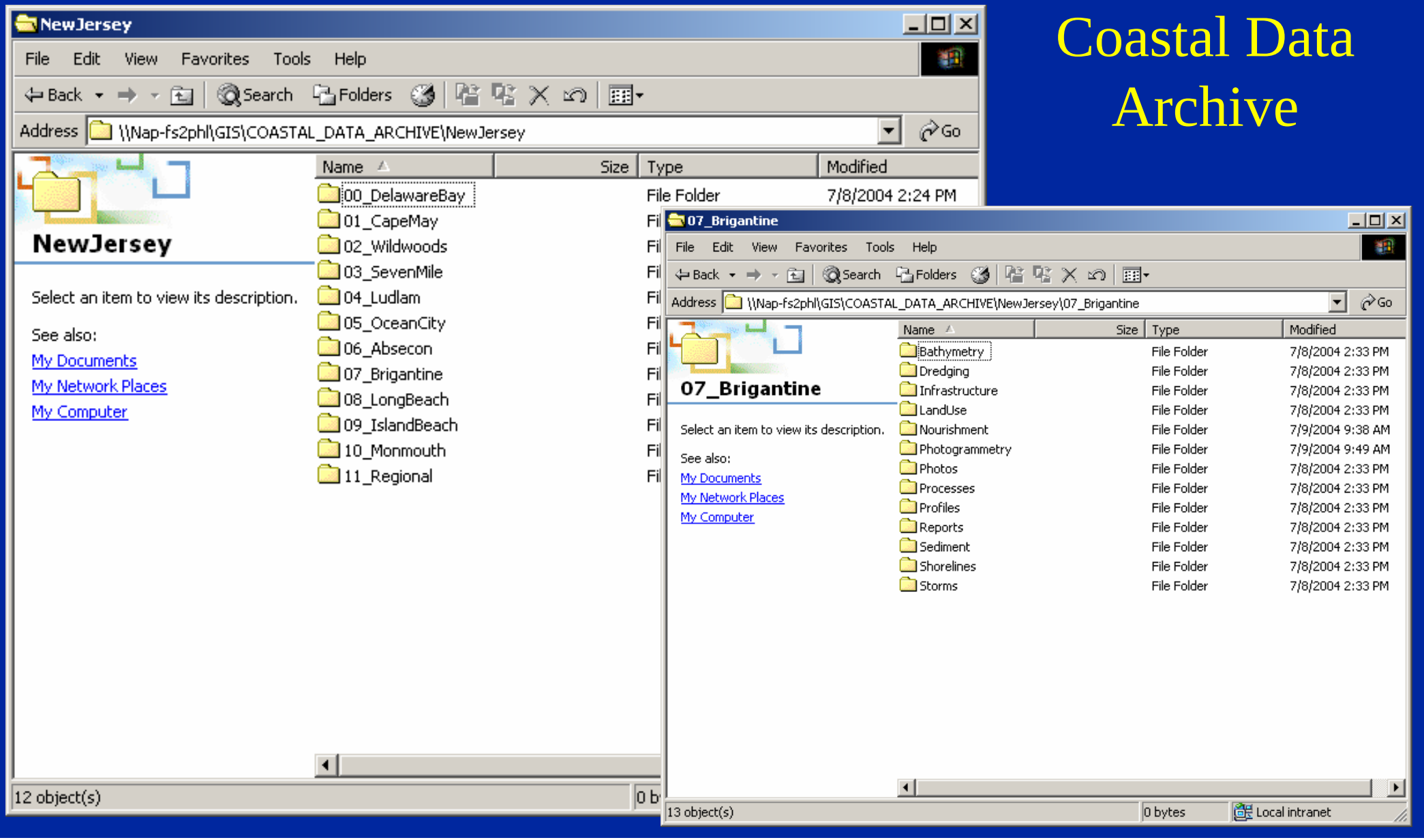
US Army Corps of Engineers
Philadelphia District

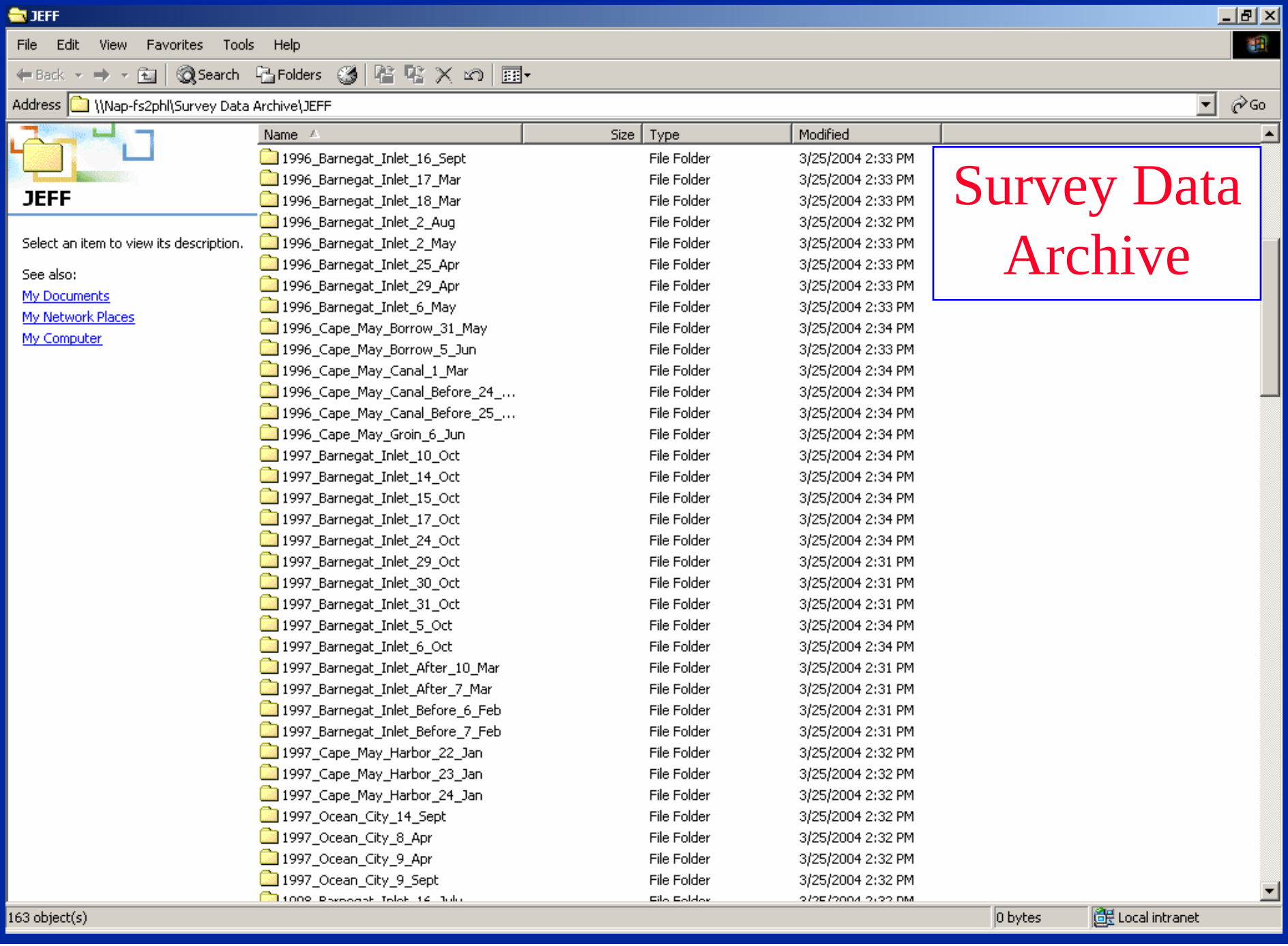
CENAP's eCoastal GIS Goals

- Develop a coastal data archive for district-wide coastal data
- Develop NAP eCoastal GIS
- Implement USACE eGIS
- Collaborate with NAD functional elements

Technical Developments

Coastal Data Archive




JEFF
File Edit View Favorites Tools Help
Back Search Folders
Address \\Nap-fs2phl\Survey Data Archive\JEFF
Go
JEFF
Select an item to view its description.
See also:
My Documents
My Network Places
My Computer
Name Size Type Modified
1996_Barnegat_Inlet_16_Sept File Folder 3/25/2004 2:33 PM
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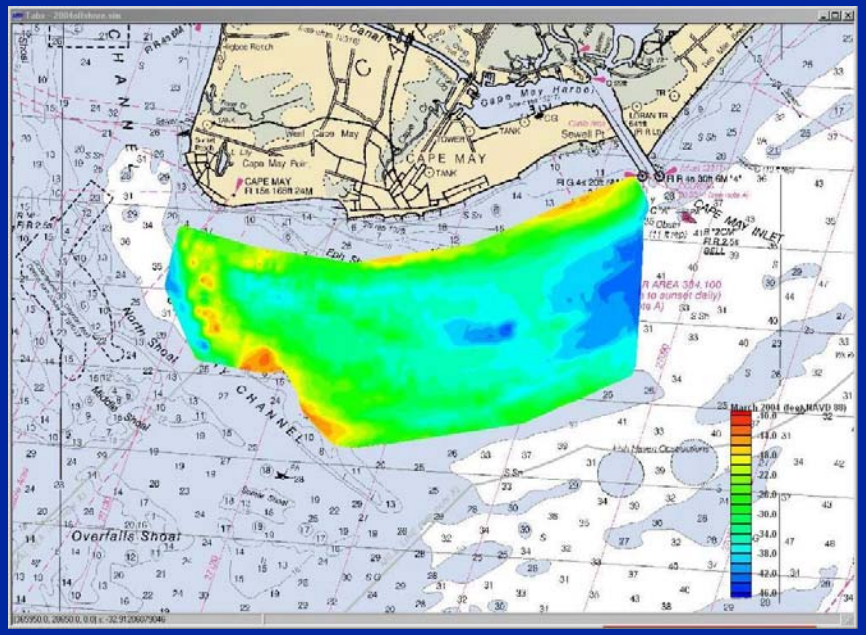
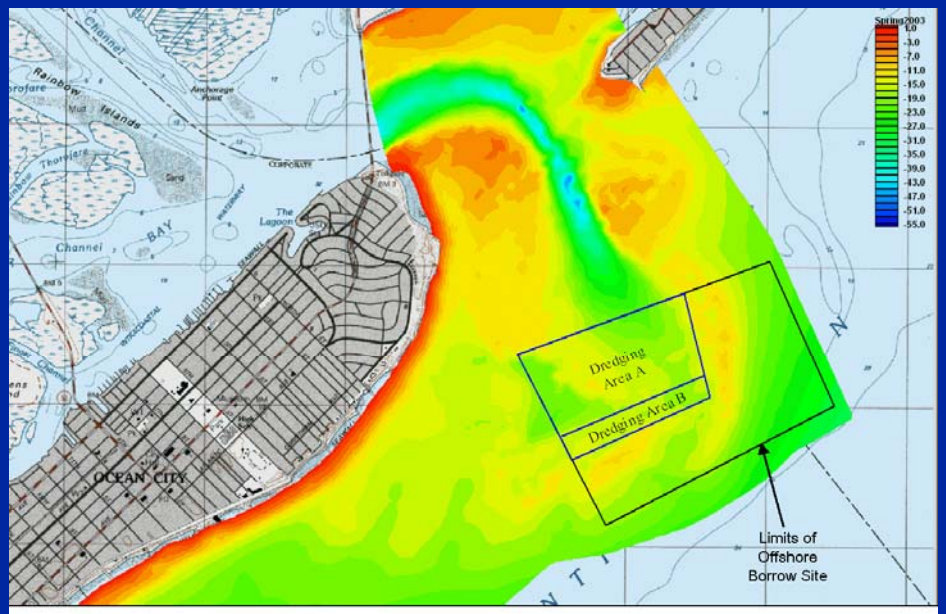
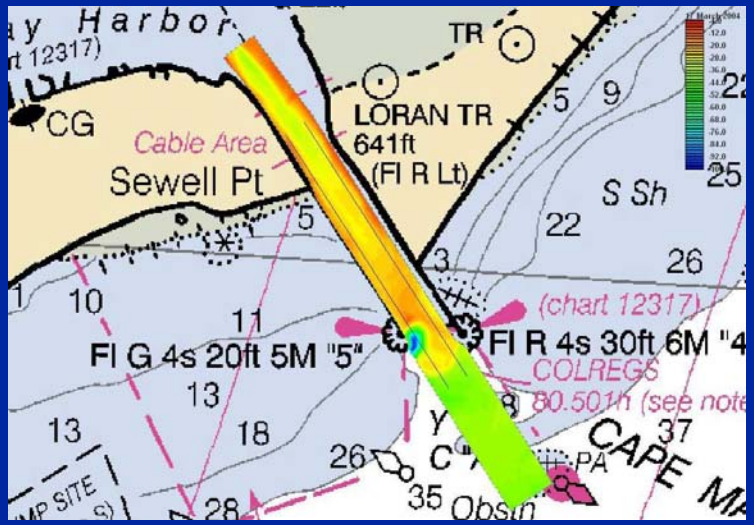
Survey Data Archive
163 object(s)
0 bytes
Local intranet

Field Data Collection

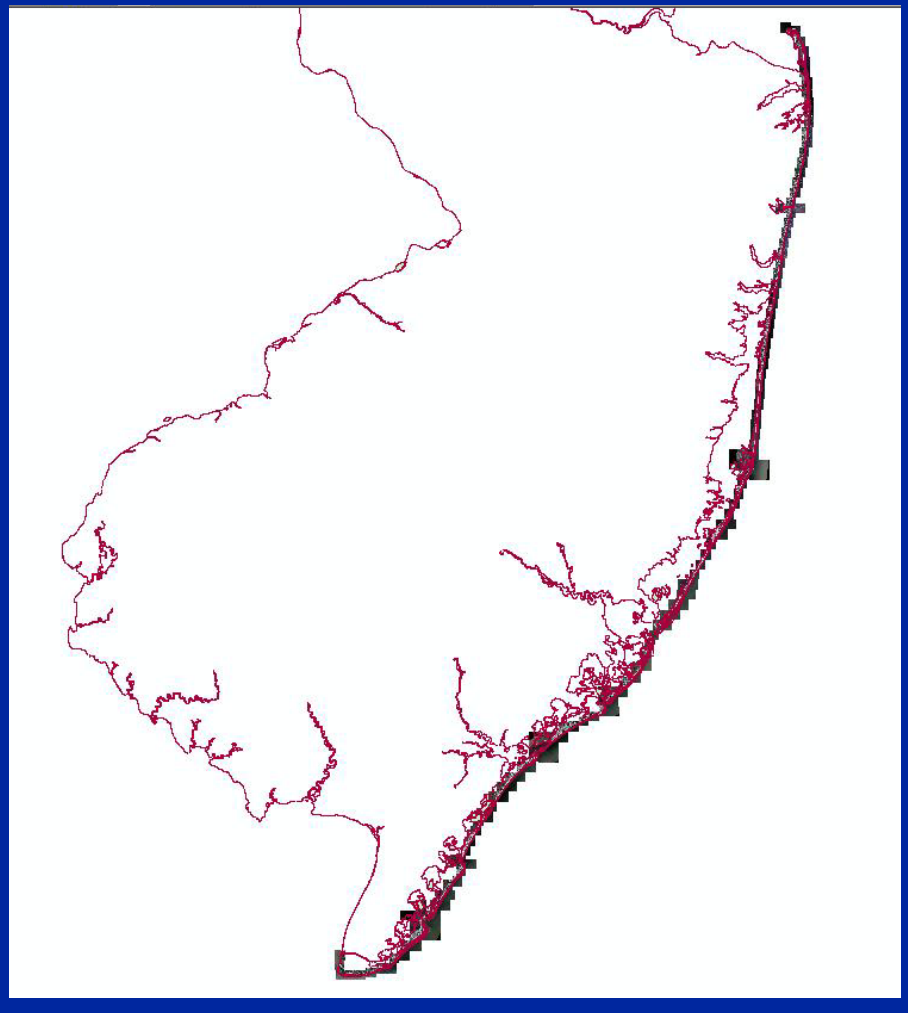




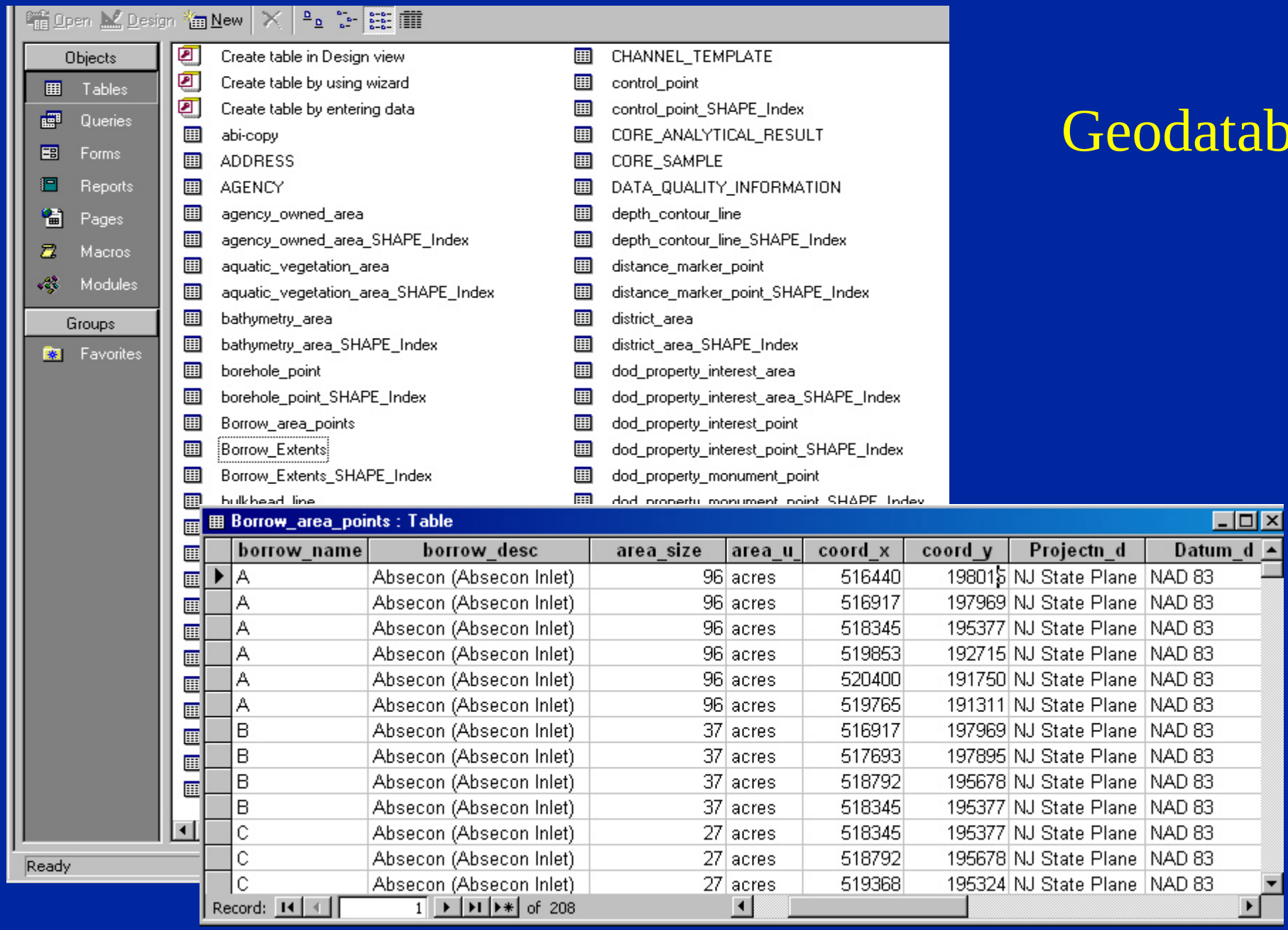
Great Egg Harbor Inlet
Spring 2003



Digital Aerial Orthophotography Base Map/ Historical Shorelines



Geodatabase



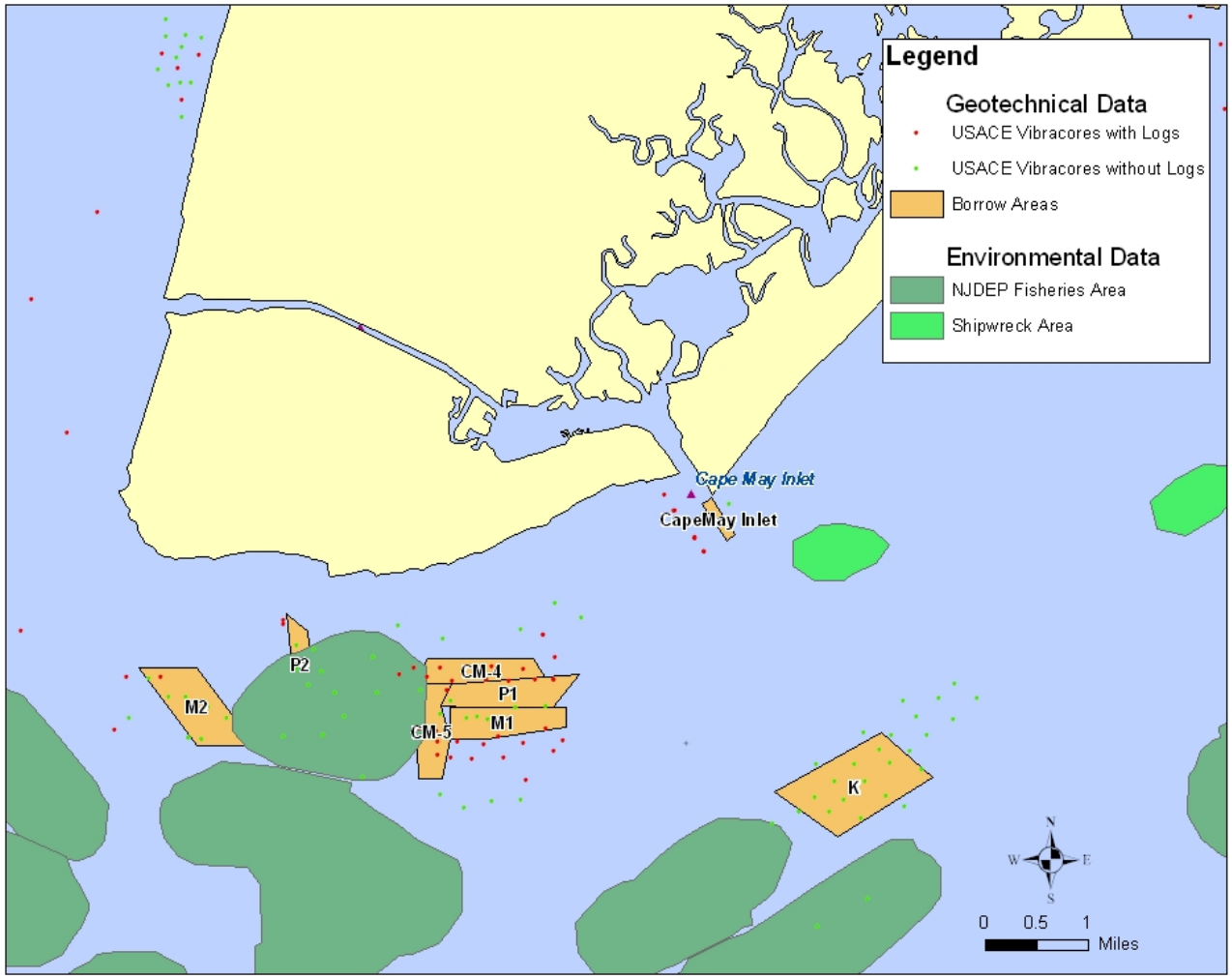
Borrow_area_points : Table

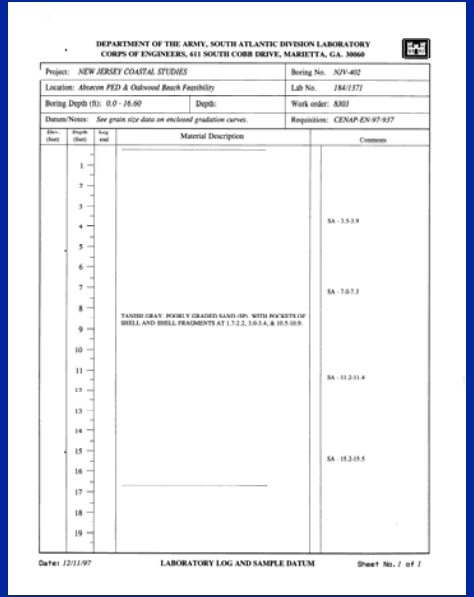
borrow_name	borrow_desc	area_size	area_u	coord_x	coord_y	Projectn_d	Datum_d
A	Absecon (Absecon Inlet)	96	acres	516440	198015	NJ State Plane	NAD 83
A	Absecon (Absecon Inlet)	96	acres	516917	197969	NJ State Plane	NAD 83
A	Absecon (Absecon Inlet)	96	acres	518345	195377	NJ State Plane	NAD 83
A	Absecon (Absecon Inlet)	96	acres	519853	192715	NJ State Plane	NAD 83
A	Absecon (Absecon Inlet)	96	acres	520400	191750	NJ State Plane	NAD 83
A	Absecon (Absecon Inlet)	96	acres	519765	191311	NJ State Plane	NAD 83
B	Absecon (Absecon Inlet)	37	acres	516917	197969	NJ State Plane	NAD 83
B	Absecon (Absecon Inlet)	37	acres	517693	197895	NJ State Plane	NAD 83
B	Absecon (Absecon Inlet)	37	acres	518792	195678	NJ State Plane	NAD 83
B	Absecon (Absecon Inlet)	37	acres	518345	195377	NJ State Plane	NAD 83
C	Absecon (Absecon Inlet)	27	acres	518345	195377	NJ State Plane	NAD 83
C	Absecon (Absecon Inlet)	27	acres	518792	195678	NJ State Plane	NAD 83
C	Absecon (Absecon Inlet)	27	acres	519368	195324	NJ State Plane	NAD 83

Record: 1 of 208

Borrow Area Inventory

Fishery habitat, Shipwreck, and Geotechnical data





DEPARTMENT OF THE ARMY, SOUTH ATLANTIC DIVISION LABORATORY
CORPS OF ENGINEERS, 611 SOUTH COBB DRIVE, MARIETTA, GA. 30060

Project: NEW JERSEY COASTAL STUDIES	Boring No. NJV-402
Location: Absecon PED & Oakwood Beach Feasibility	Lab No. 184/1371
Boring Depth (ft): 0.0 - 16.60 Depth:	Work order: 8303
Datum/Notes: See grain size data on enclosed gradation curves.	Requisition: CENAP-EN-97-937

Elev. (feet) | Depth (feet) | Log end | Material Description | Comments

TANISH GRAY POORLY GRADED SAND (SP) WITH POCKETS OF SHELL AND SHELL FRAGMENTS AT 1.7-2.2, 3.0-3.4, & 10.5-10.9

SA - 3.5-3.9

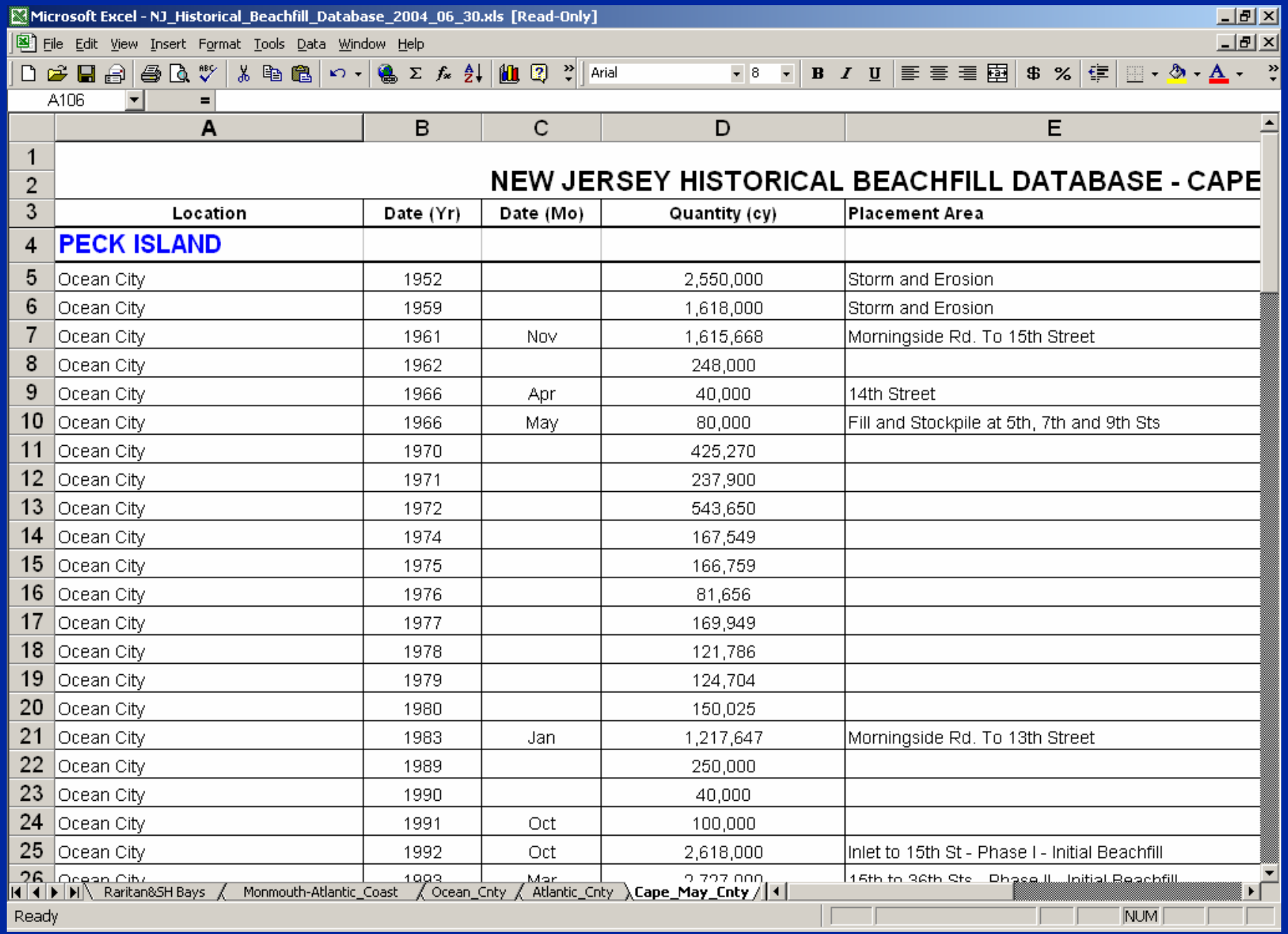
SA - 7.0-7.3

SA - 11.2-11.4

SA - 15.2-15.5

Date: 12/11/97 LABORATORY LOG AND SAMPLE DATUM Sheet No. 1 of 1

Historical Beachfill Database


Microsoft Excel - NJ_Historical_Beachfill_Database_2004_06_30.xls [Read-Only]

File Edit View Insert Format Tools Data Window Help

A106

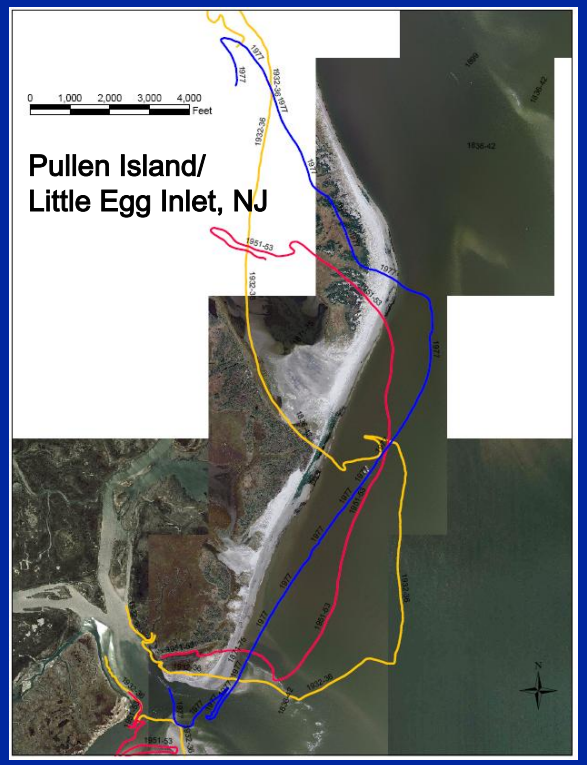
NEW JERSEY HISTORICAL BEACHFILL DATABASE - CAPE

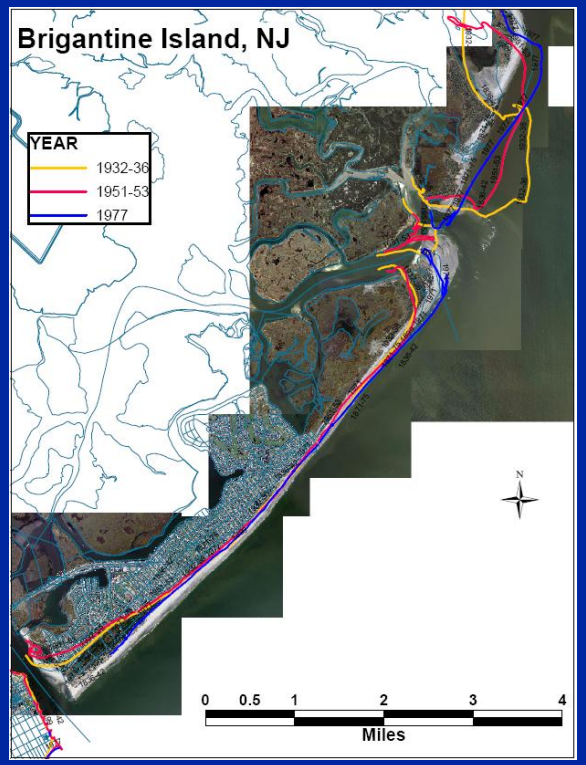
Location	Date (Yr)	Date (Mo)	Quantity (cy)	Placement Area
PECK ISLAND				
Ocean City	1952		2,550,000	Storm and Erosion
Ocean City	1959		1,618,000	Storm and Erosion
Ocean City	1961	Nov	1,615,668	Morningside Rd. To 15th Street
Ocean City	1962		248,000	
Ocean City	1966	Apr	40,000	14th Street
Ocean City	1966	May	80,000	Fill and Stockpile at 5th, 7th and 9th Sts
Ocean City	1970		425,270	
Ocean City	1971		237,900	
Ocean City	1972		543,650	
Ocean City	1974		167,549	
Ocean City	1975		166,759	
Ocean City	1976		81,656	
Ocean City	1977		169,949	
Ocean City	1978		121,786	
Ocean City	1979		124,704	
Ocean City	1980		150,025	
Ocean City	1983	Jan	1,217,647	Morningside Rd. To 13th Street
Ocean City	1989		250,000	
Ocean City	1990		40,000	
Ocean City	1991	Oct	100,000	
Ocean City	1992	Oct	2,618,000	Inlet to 15th St - Phase I - Initial Beachfill
Ocean City	1993	Mar	2,727,000	15th to 36th Sts - Phase II - Initial Beachfill

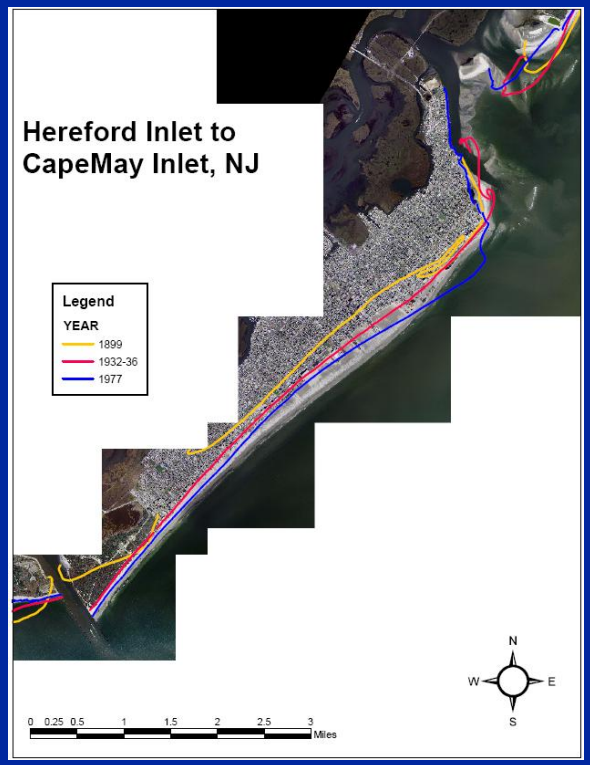
Raritan&SH Bays | Monmouth-Atlantic_Coast | Ocean_Cnty | Atlantic_Cnty | Cape_May_Cnty

Ready NUM

Distribution of GIS Capabilities to the District User







Outreach/Collaboration

- NAN/NAP
- Mobile District to develop eCOASTAL GIS
- NJ Geographic Information Network membership
- External agency sharing of data NJDEP, MMS, NJ and DE Geological Survey

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Continued Development
eCoastal GIS

- Coastal Data Archive
- Regional Sediment Budget
- Create integrated decision support tools
- Continued field data collection program
- Review Mobile District's 8-step eCOASTAL plan

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District Interest in eCOASTAL GIS

- Building relationships among different district functional elements
  - Collaboration with NAN
- eCoastal GIS Developments
  - Borrow Area GeoDatabase
  - Coastal Data Archive
  - Steps towards regional sediment budget
- The benefit of the CDA to individual projects
  - Storing district data in a central location
  - Effective Storage of Borrow Area data
    - Cape May, NJ
- Regional Sediment Management

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Summary Thoughts

- Progress in the development of eCOASTAL GIS
- Interested in further collaboration with others
- Garnered District support
- Recommendations on PMP Development
  - Identify NAD RSM GIS PDT
  - Use available templates and expertise
  - Need to identify individual District specific role
  - Provide detailed guidance, and task/action items
  - Identify NAD support so we can plan

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General Temple's Message

- Develop eGIS for watershed management purposes
- Develop recommendations for RSM group to become a USACE Community of Practice
- Implement the NAD eCOASTAL GIS
- Set the stage for the PDT to implement and cost out NAD eCOASTAL
  - Determine a rough NAD eCOASTAL plan
  - PDT develop and plan Scope, Schedule and Budget

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Lessons Learned

- Innovative ways to fund regional work being done by the Districts is needed to overcome the limitations of project-specific funding

  With only project-specific funding available, no funding is available for areas where there are no Corps' projects. Project specific tasks have taken precedent over regional tasks.

- Funding for IT infrastructure improvements

  Ultimately, terabytes of data will be collected and archived on networked storage devices. Purchasing the required IT hardware and software for the eGIS is very expensive.

- Until recently, collection of coastal survey data was not standardized

  Develop a common standard within and across different Districts for coastal data that is to be archived in the eGIS. Historical data lacks metadata and is in various projections, datums, and formats. Will be time-consuming to incorporate into eGIS.

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Lessons Learned Continued

- Work from the present to the past

  More recently collected datasets will take less time to incorporate into an eGIS than historical datasets which can be hard to find and have many unknowns about them. NAP has historical datasets that must be incorporated into an eGIS because of the lack of data collected recently due to funding constraints.

- Datasets needed may lie elsewhere

  Help to form partnerships with other Federal, State, & Academia stakeholders to leverage data that the Corps' needs that has been collected by other organizations.

- Need to work closely with IMO

  Planning, Engineering, & Operations personnel that will be involved in the creation and management of an eGIS need to work with IMO to overcome restrictions that have been implemented by the Corps due to security concerns.