Sinepuxent Bay: A Case Study

Location of Sinepuxent Bay

Pilot Study Site
Sinepuxent Bay, MD

Normalization of Data

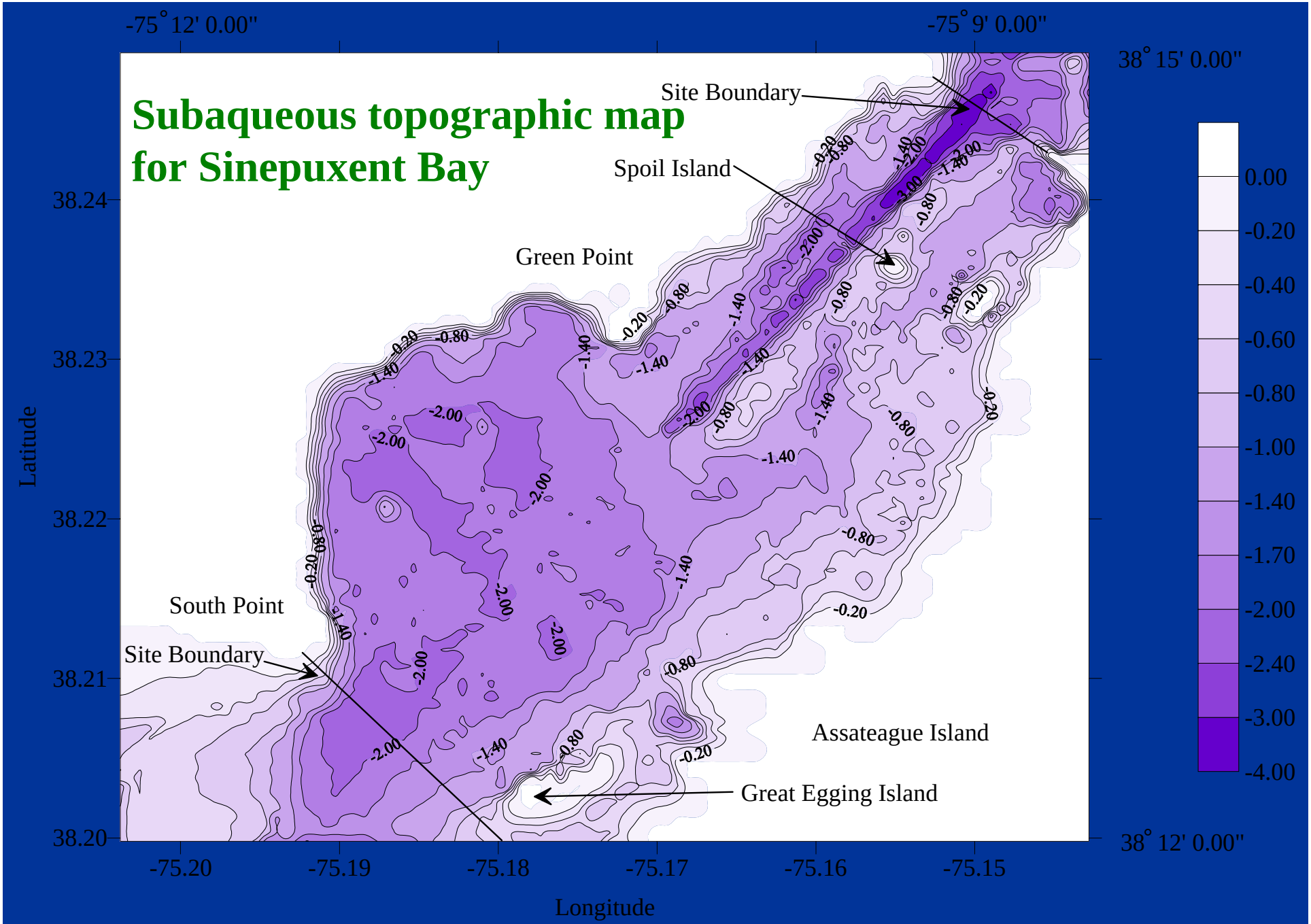
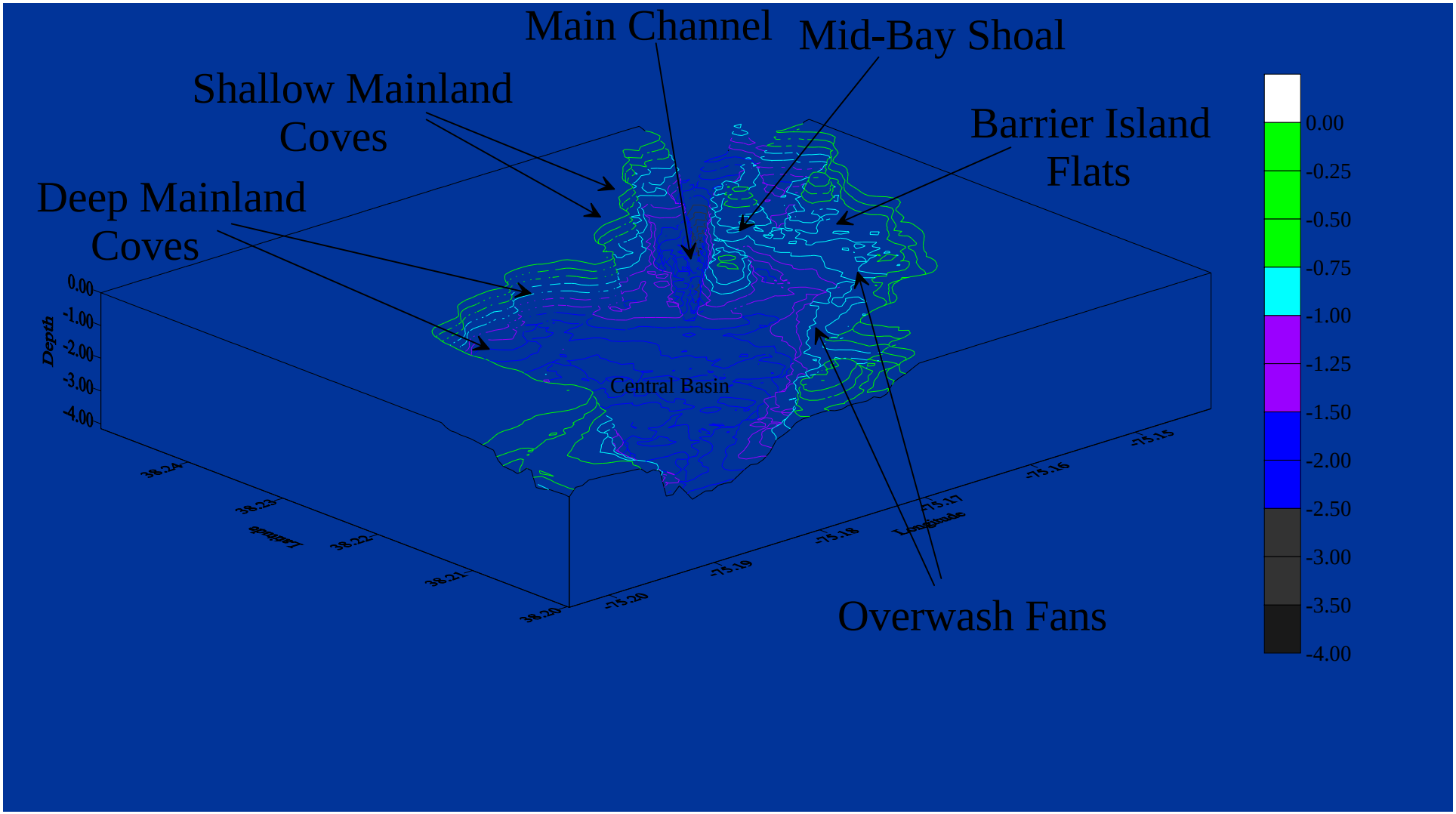
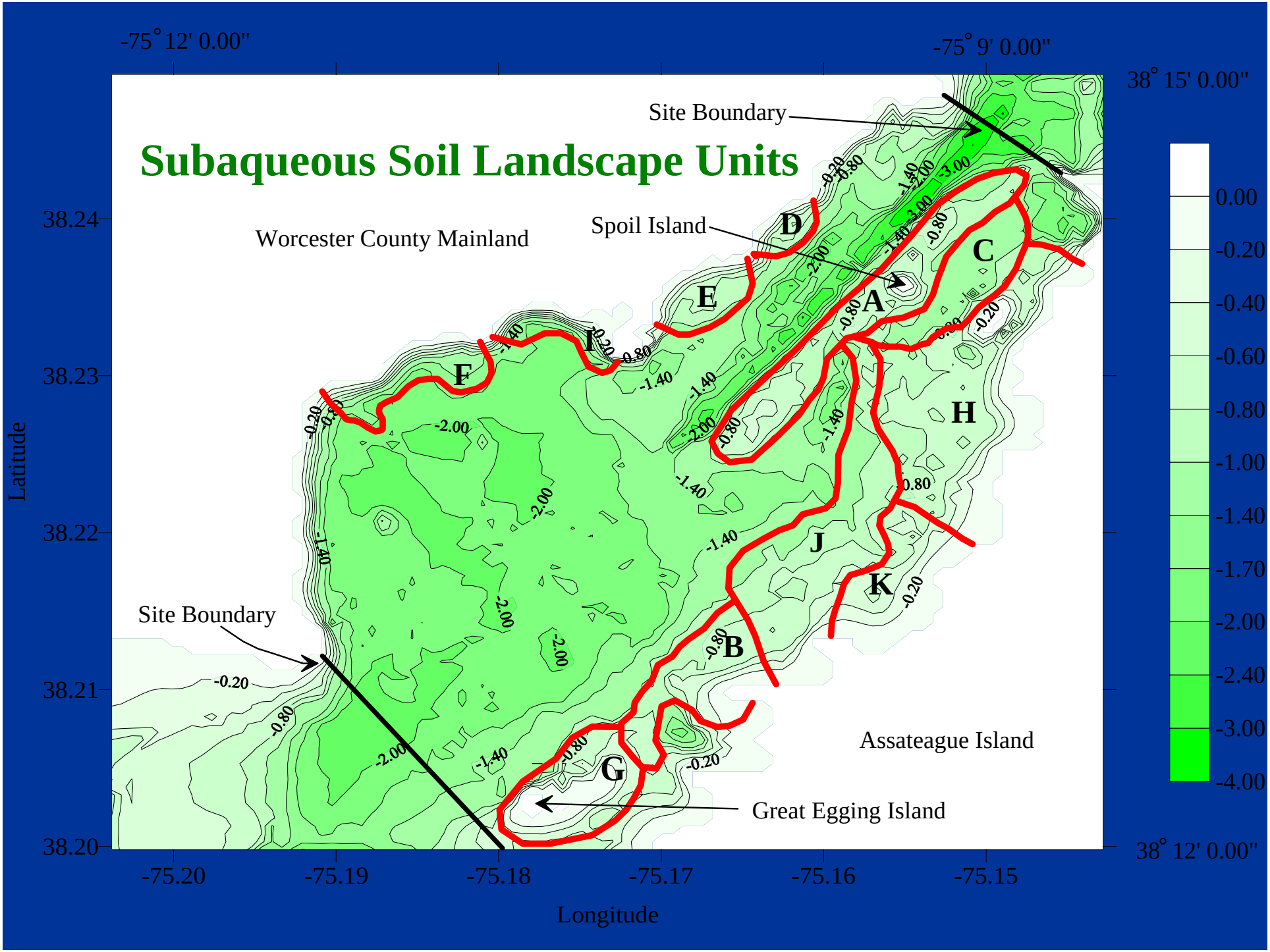


Figure 3-3. Bathymetric map of Sinepuxent Bay (depth in meters below MSL)

Pilot Study Area
Sinepuxent Bay, MD

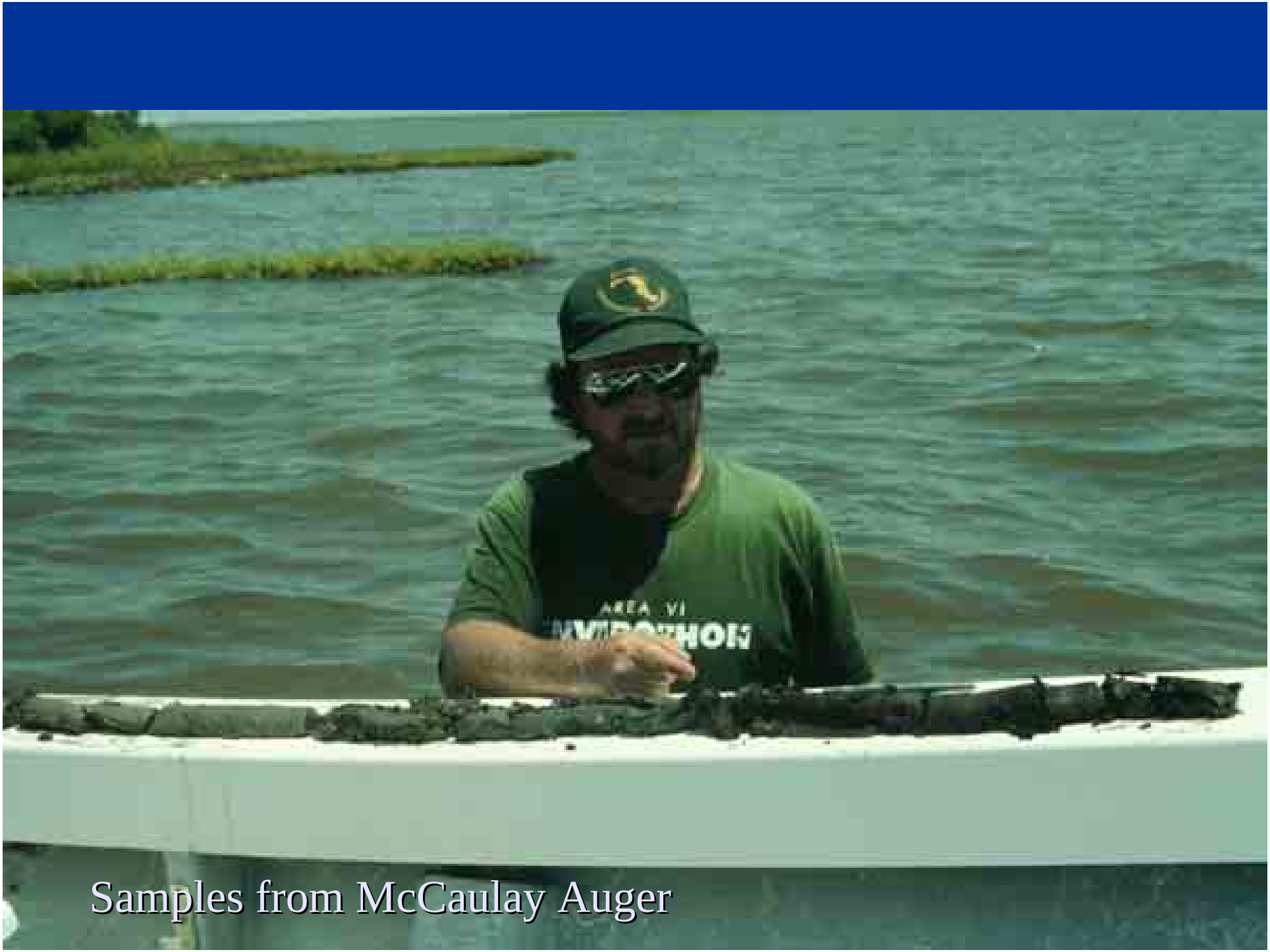



Subaqueous Soil Landscape Units
-75° 12' 0.00"
-75° 9' 0.00"
38° 15' 0.00"
38° 12' 0.00"
Site Boundary
Spoil Island
Worcester County Mainland
Site Boundary
Assateague Island
Great Egging Island
A
B
C
D
E
F
G
H
I
J
K
38.24
38.23
38.22
38.21
38.20
Latitude
-75.20
-75.19
-75.18
-75.17
-75.16
-75.15
Longitude
0.00
-0.20
-0.40
-0.60
-0.80
-1.00
-1.40
-1.70
-2.00
-2.40
-3.00
-4.00

Field Observation & Sampling
Bucket Auger


Samples from Bucket Auger

Field Observation & Sampling
McCaulay Sampler



Samples from McCaulay Auger

Vibracoring

coarse-loamy, Sulfic Fluvaquent

Horizon	Depth (cm)	Description
Ag	0-6	Grayish brown (2.5Y 5/2) fine sand; single grain; loose; few fine and very fine roots; loose; abrupt boundary
Cg1	6-21	Dark gray (5Y 4/1) fine sand; 3% shell fragments; single grain; loose; clear boundary
Cg2	21-56	Dark greenish gray (5GY 3/1) fine sand; 5% shell fragments; single grain; loose; abrupt boundary
2Agb	56-106	Dark gray (5Y 4/1) sandy loam; massive; 4% (10YR 3/3) root fragments; friable; n-value 0.8; clear boundary
3Cg3	106-170	Dark greenish gray (5GY 3/1) fine sand; single grain; loose

Tizzard Series

Soil Series Established in the Sinepuxent Bay Pilot Project

Series Name	Classification
Fenwick	Typic Psammaquents
Newport	Typic Psammaquents
Sinepuxent	co-lo Typic Sulfaquents
South Point	fi-si Typic Sulfaquents
Tizzard	co-lo Sulfic Fluvaquents
Demas	Typic Psammaquents

Soil Map of Pilot Project Area Sinepuxent Bay, MD

Work on Interpretations

SAV

Eelgrass (*Zostra marina*)

Widgeongrass (*Ruppia maritima*)

Experimental SAV Restocking Effort
Indian River Bay, Delaware

Published Papers

- Demas, G. P., M. C. Rabenhorst, and J. C. Stevenson. 1996. Subaqueous Soils: A pedological approach to the study of shallow water habitats. Estuaries 19: 229-237.
- Demas, G. P., and M. C. Rabenhorst. 1998. Subaqueous soils: a resource inventory protocol. Proceedings of the 16th World Congress on Soil Science, Montpellier, France. August 20-26,1998. Sym #17, on CD.
- Demas, G. P., and M. C. Rabenhorst. 1999. Subaqueous soils: Pedogenesis in a submersed environment. Soil Sci. Soc. Am J. 63: 1250-1257.
- Demas, G. P., and M. C. Rabenhorst. 2001. Factors of Subaqueous Soil Formation: a System of Quantitative Pedology for Submersed Environments. Geoderma 102:189-204.