Bathymetric Data Collection
Bathymetric Data

- What is bathymetric data?
- Why is this important?
- How can this be obtained?
What is Bathymetry?

- A representation of the 3-D nature of the subaqueous land surface
- A contour map
- A DEM
Why is Bathymetry Important?
Terrestrial Block Diagram Showing Soil-Landscape Relations
Within the soil-landscape unit, the five soil forming factors interact in a distinctive manner. As a result, all areas of the same soil-landscape unit develop the same kind of soil.

Once the relationship among soils and landscape units have been determined for an area, the soil type can be inferred by identifying the soil-landscape unit.

From Hudson 1992 (SSSAJ 56:836-841)
Three-dimensional View of Sinepuxent Bay, MD
How can this be obtained?

- NOAA
- Other agencies
- Self generated
For Small Areas

- Rod and level
  - Bradley and Stolt modification
- GPR (on frozen water bodies)
For Larger Areas

- Need more sophisticated means for data collection
Data Collection
High Quality Bathymetry
Digital Output

Plgr-GPS
X, Y

Fathometer
Z

X, Y, Z stored with unique date-time stamp
Figure 3-2. Location map of bathymetric runs in Sinepuxent Bay (depth in meters below MSL). Distance between successive readings was approximately 10 m.
Collection of bathymetric data without having real-time plot on a map or photo
Indian River Bay, Delaware
Bathymetric Runs, Fall 2000

[Map with waypoints and coordinates]

- Sept13-00.shp
- May25-99-2SP.shp
- June07-99SP.shp
- June08-99SP.shp
- June14-99SP.shp
- July01-99SP.shp
- Jul26-99SP.shp
- July30-99SP.shp
- Aug12-99SP.shp
- July13-00-1SP.shp
- July13-00-2SP.shp
- July14-00-1SP.shp
- July14-00-2SP.shp
- July14-00-3SP.shp

[Compass rose]
Data collected on different days
Normalization of Data
Rehoboth Bay Bathymetry (draft)
Sinepuxent Bay, MD

Assateague Island
National Seashore
Subaqueous topographic map for Sinepuxent Bay

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

- Lidar
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