A MULTIBEAM SONAR SURVEY OF MIDSENECA LAKE: BATHYMETRY, BACKSCATTER, AND INVASIVE SPECIES

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• The survey region encompassed area of the FNC-3A Aug. 2005 experiment.
• Track-lines with 50 and 100 m spacing were run at an average speed of 8 knots.
• Resolution of approximately 3 m x 3 m was achieved.
• Underwater video and grab samples obtained during the survey.

• Approximate experiment timeline:
  – 12 hours required to mount, setup and test equipment
  – 20 hours for survey.
  – 4 hours for ROV operations.
  – 4 hours for cleanup.
Goal: collect bathymetry and scattering strength data to complement data collected as part of the 2005 FNC-3A experiment.
Equipment and Personnel

• Facilities:
  – NUWC Seneca Lake Sonar Test Facility (used workboat with generator)

• Equipment:
  – RESON 8101 240 kHz calibrated multibeam
  – RBR CTD data logger
  – Coda Octopus F180 Attitude and Positioning System

• Personnel:
  – Anthony P. Lyons
  – Thomas C. Weber
Mounting
Navigation
Data Acquisition
Tracklines
Bathymetry Results
Bathymetry Results
Scattering Strength Results
Scattering Strength Results
ROV Operations
ROV Video
Frame Grabs

~200 feet water depth

~130 feet water depth

~70 feet water depth
Grab Sampler
Grab Samples with Quagga(?) Mussel Shells
View of SMP from Anthony Road Vineyard