

SITE SELECTION FOR SUBTIDAL AQUACULTURE DEVELOPMENT AREAS: A COMPREHENSIVE HABITAT MAPPING APPROACH

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Background

- Stakeholders express support for Provincetown/Truro community subtidal Aquaculture Development Area (ADA)
- Outreach conducted among current and prospective growers, town Shellfish Committees – lots of support!
- Proposal submitted to Northeast Sustainable Agriculture Research and Education (SARE) Sustainable Community Grant Program to provide technical support to towns



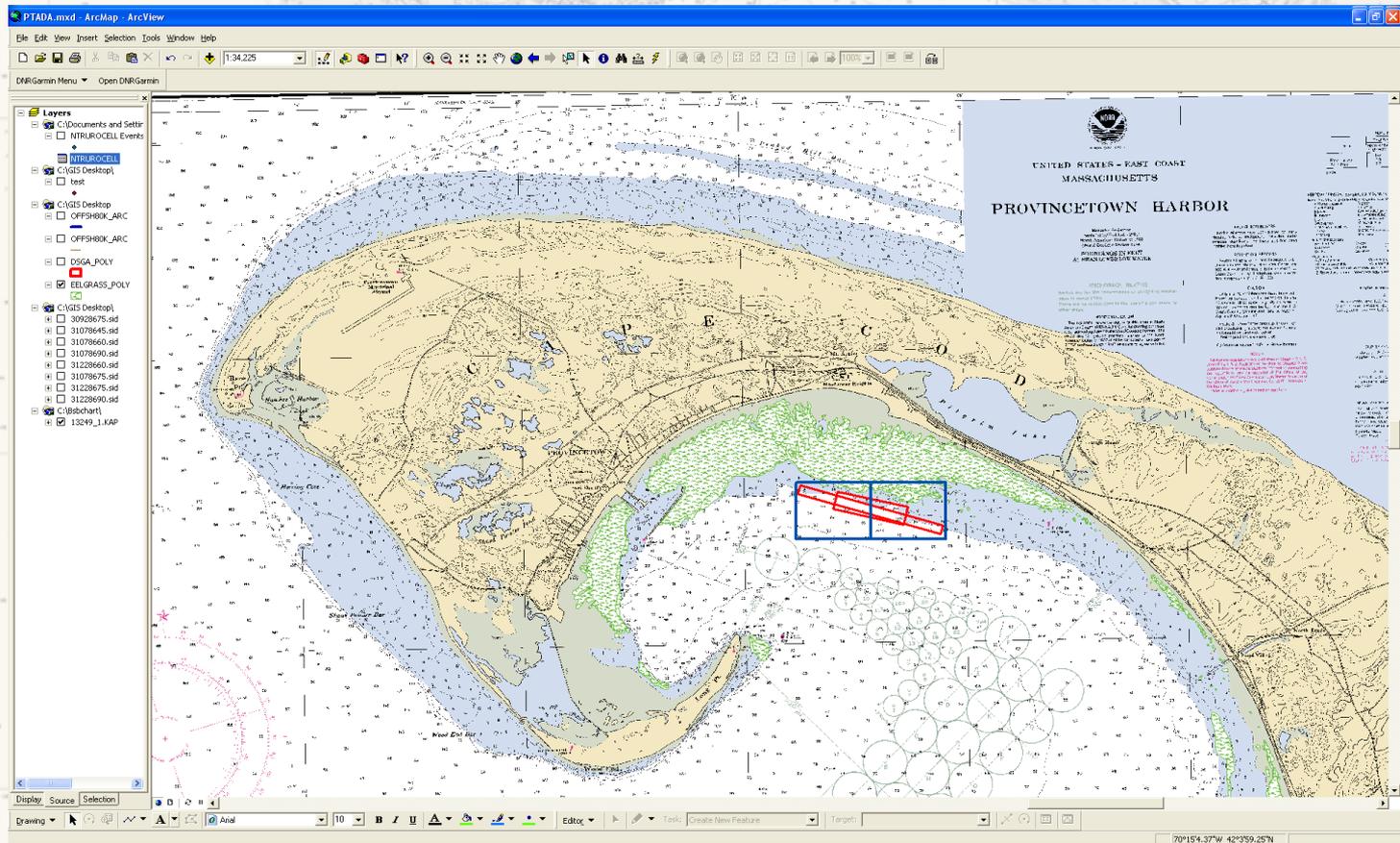
Project Grants for ♦ Farmers ♦ Researchers ♦ Educators



Supporting Sustainable Agriculture

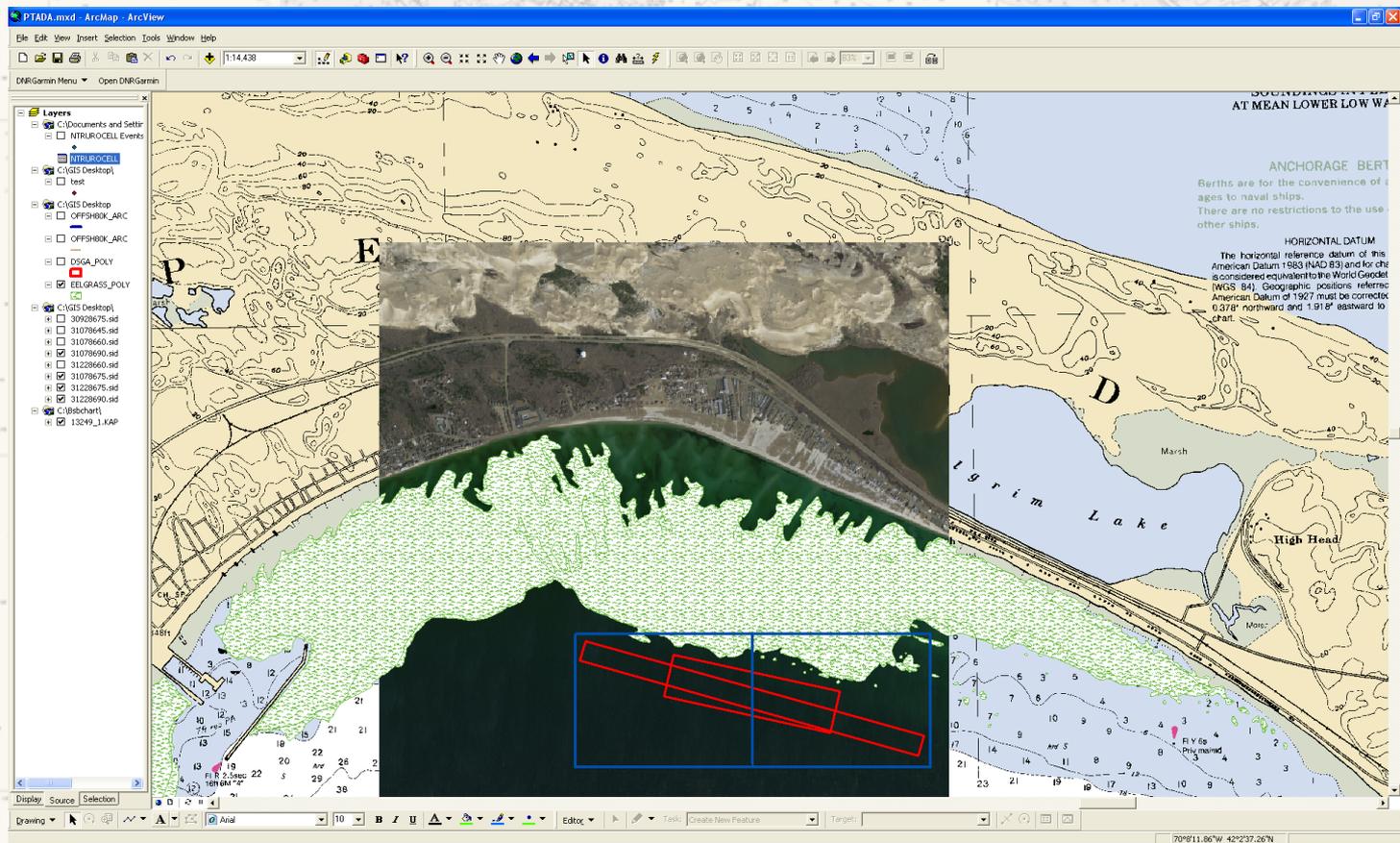
Mapping Approach

- Geographic Information System (GIS) – based approach to preliminary mapping:

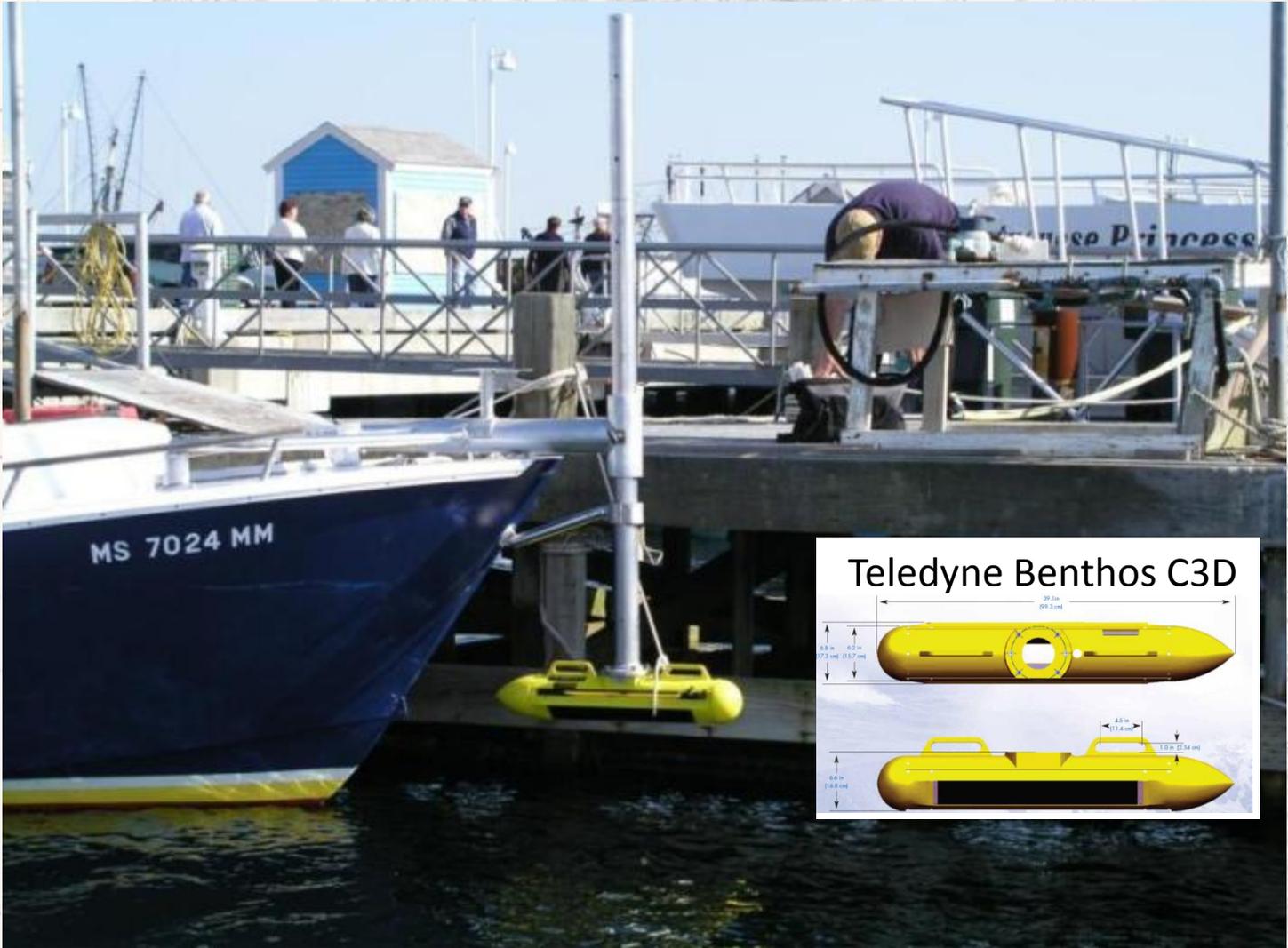


Mapping Approach

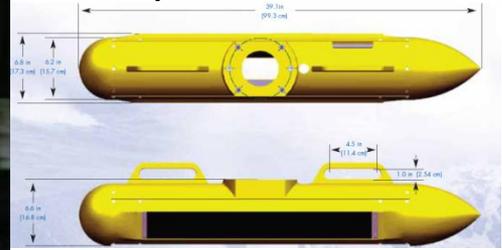
- Geographic Information System (GIS) – based approach to preliminary mapping:



Mapping Approach

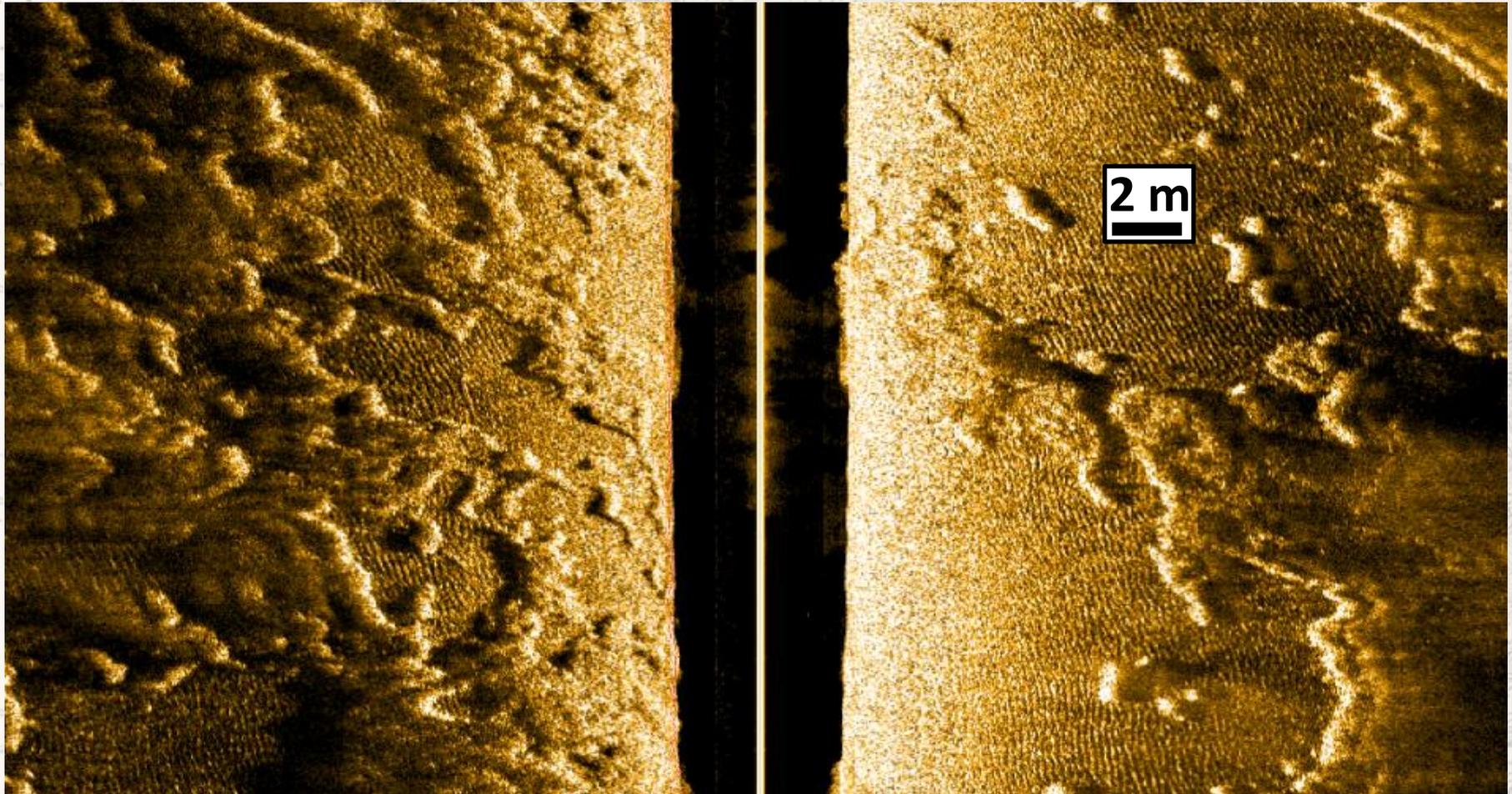


Teledyne Benthos C3D



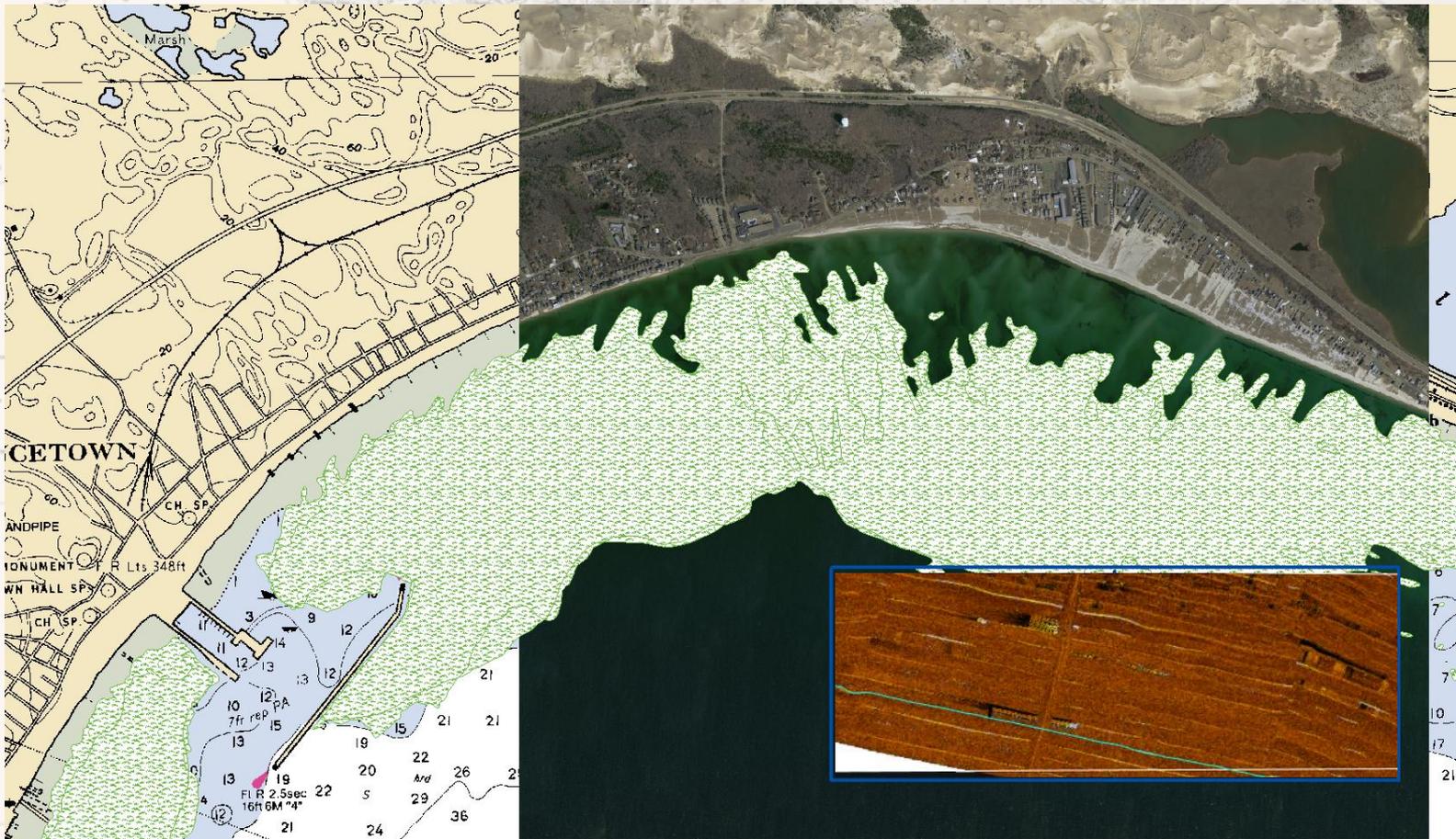
Mapping Approach

- Habitat characteristic identification: eelgrass, sand waves



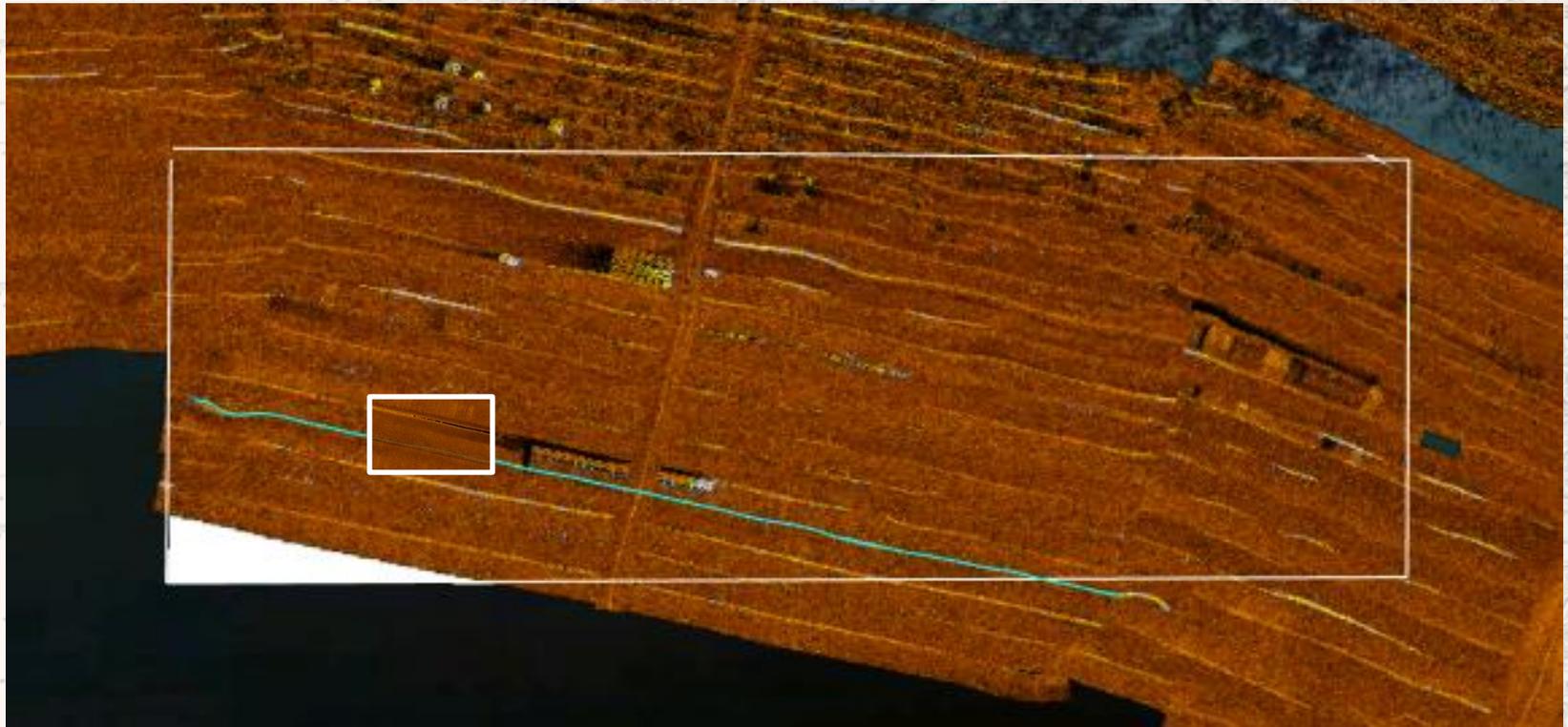
Mapping Approach

- Data processing ongoing – preliminary results



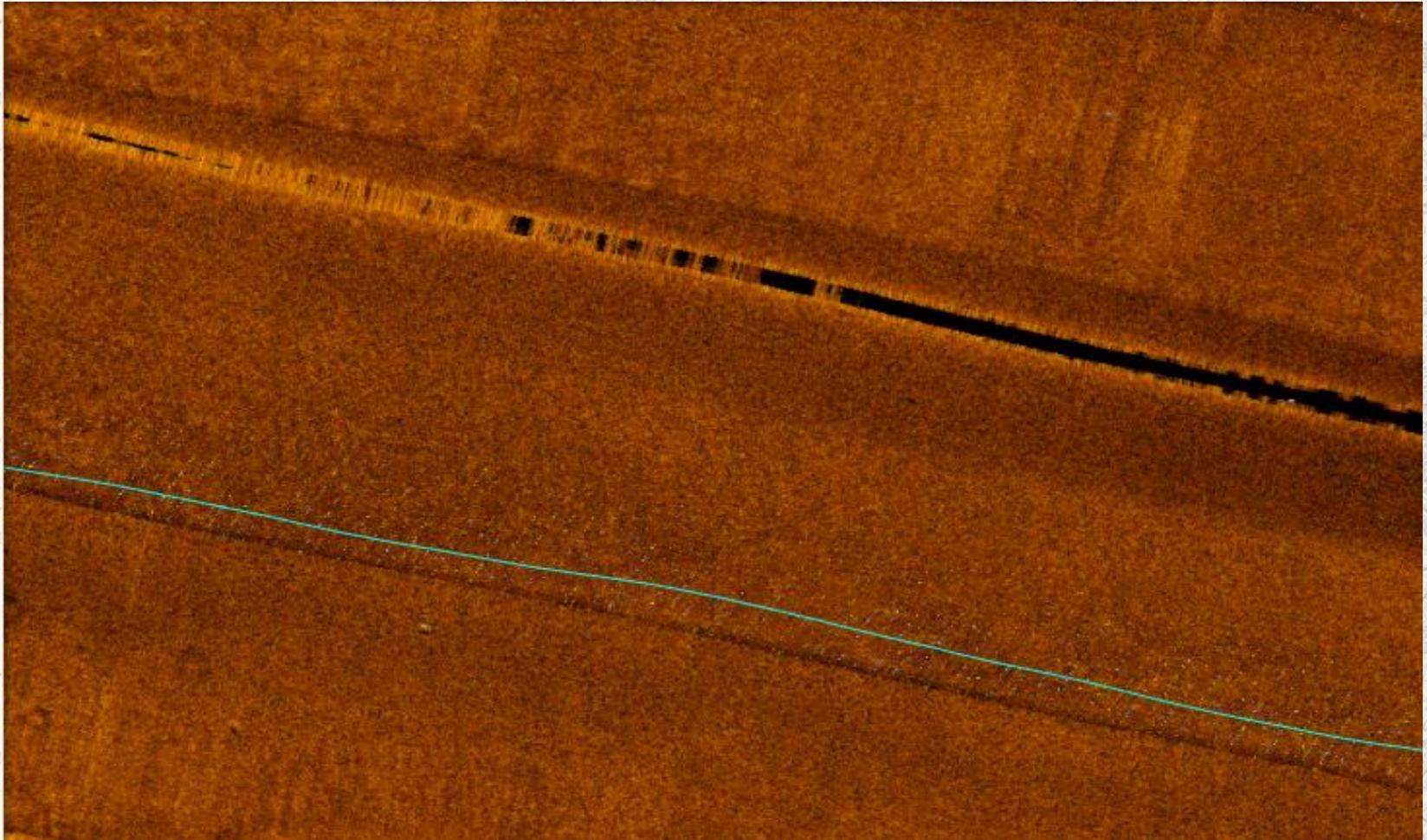
Mapping Approach

- Preliminary data adequate for general characterization



Mapping Approach

- Preliminary data adequate for general characterization



Mapping Approach

- 1.5 days of dive surveys completed (25 stations)

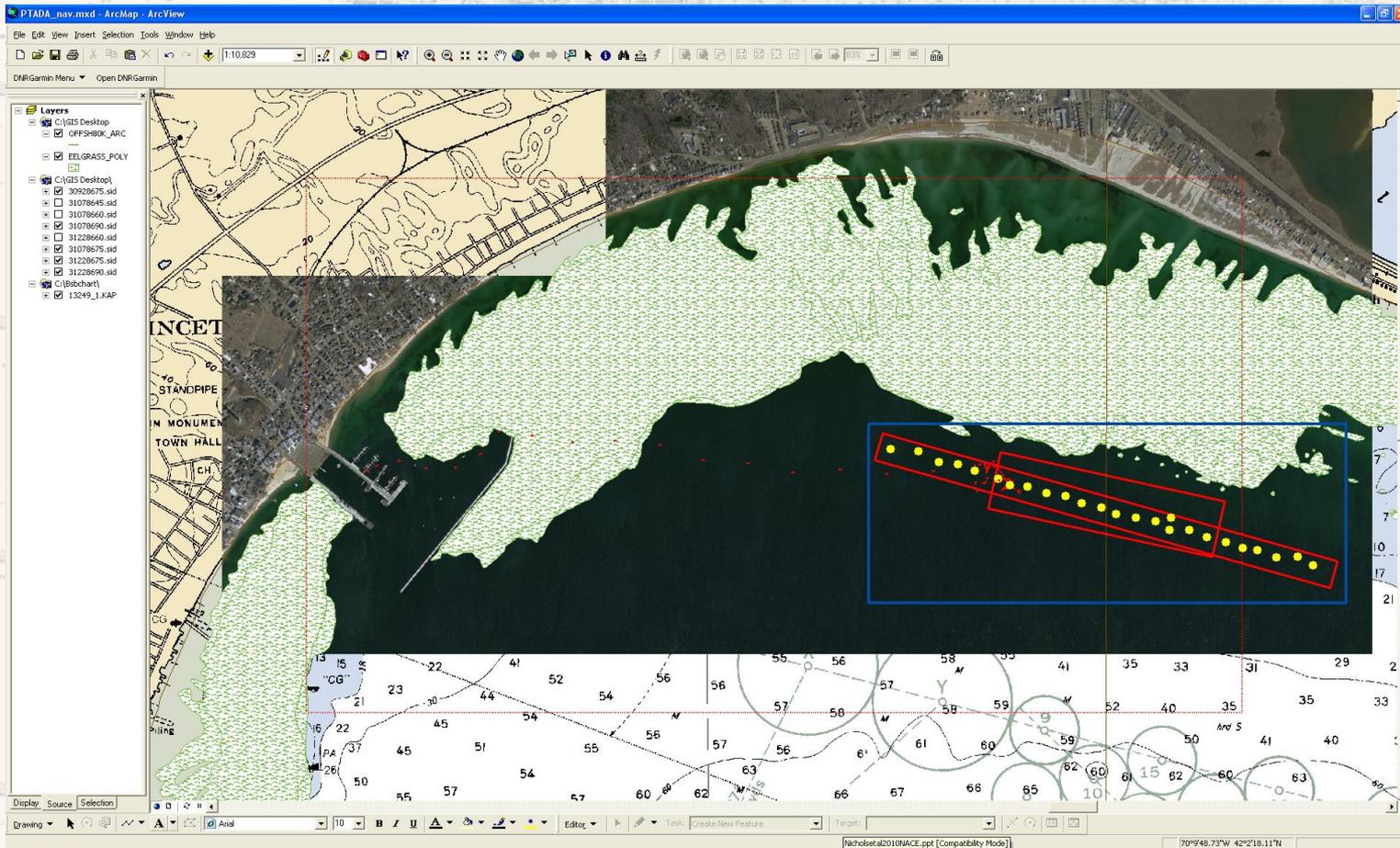


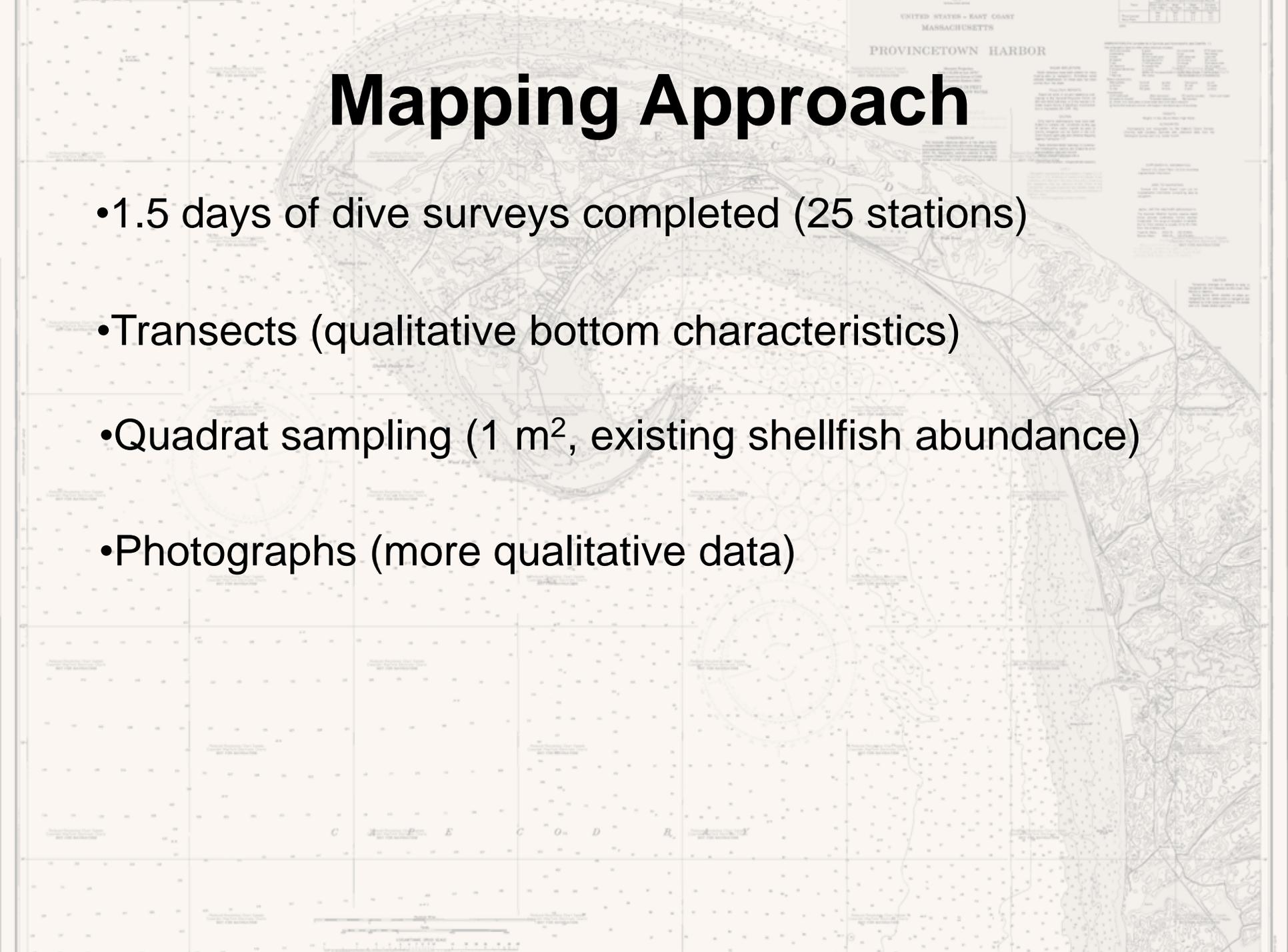
F/V Chase (Seafood Divers, Inc.)



Mapping Approach

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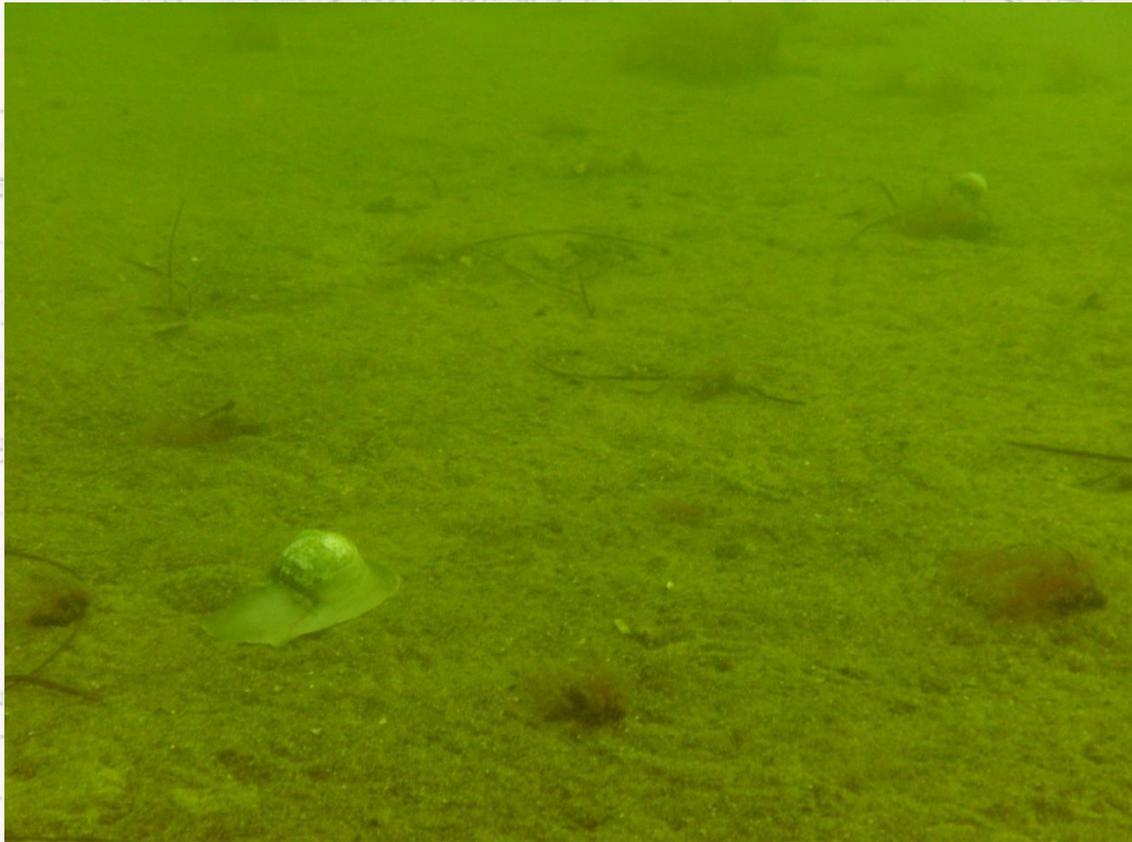


Mapping Approach

- 1.5 days of dive surveys completed (25 stations)
- Transects (qualitative bottom characteristics)
- Quadrat sampling (1 m², existing shellfish abundance)
- Photographs (more qualitative data)

Mapping Approach

- Transects and photographs support sonar data



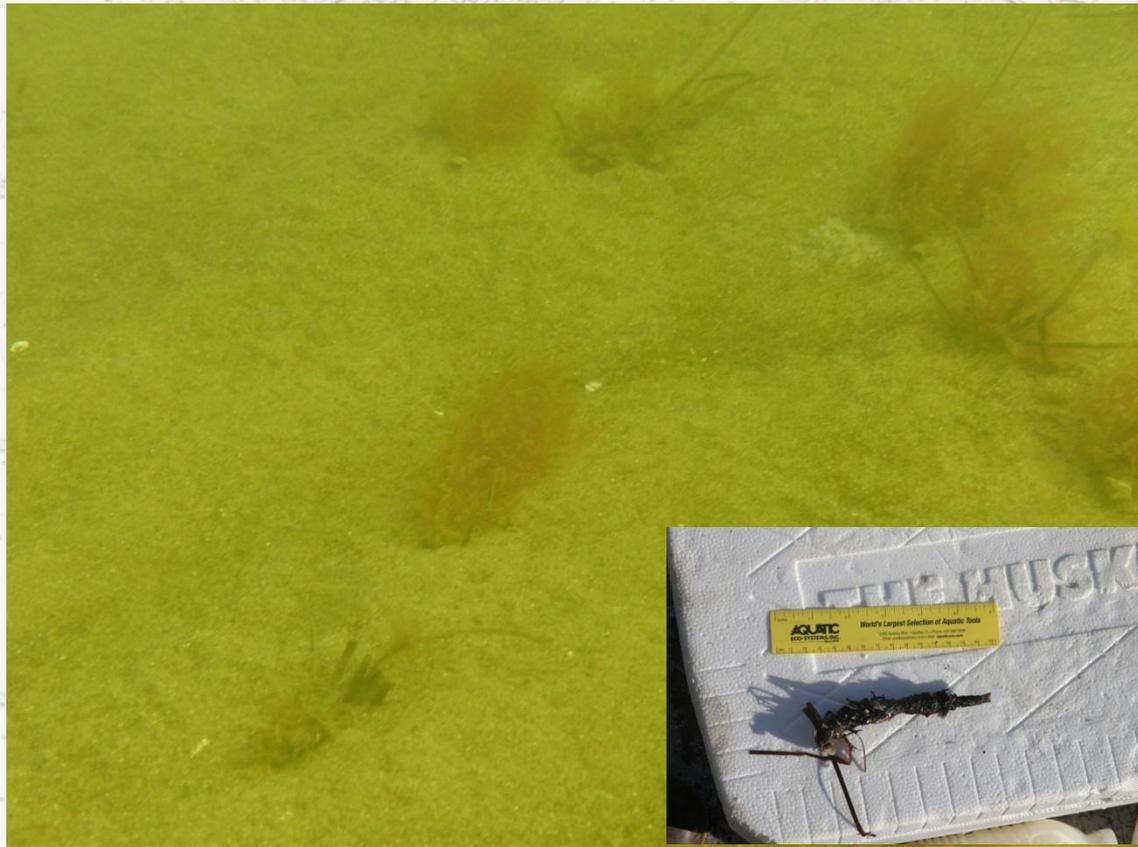
Mapping Approach

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Mapping Approach

- Transects and photographs support sonar data



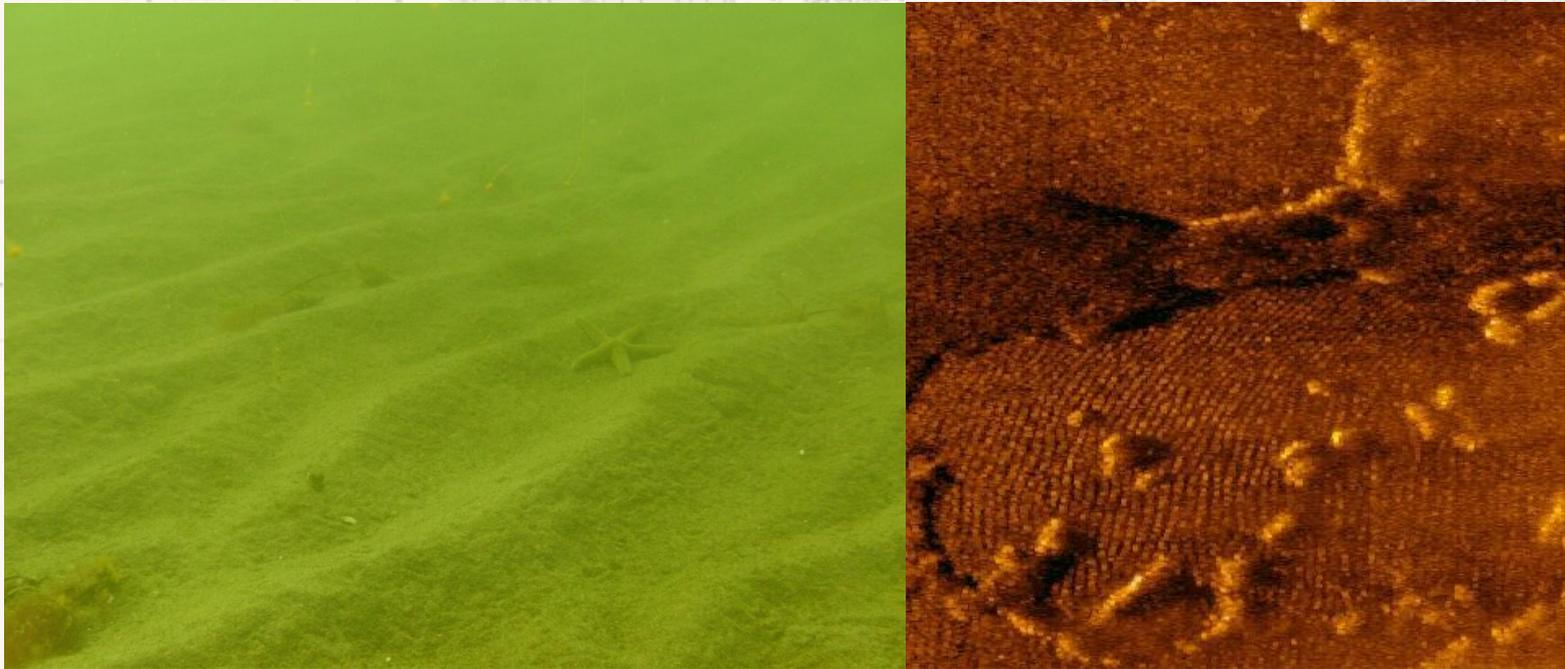
Mapping Approach

- Transects and photographs support sonar data
- Existing shellfish abundance at all stations < 1 org./m²



Next Steps

- Full integration of geo-referenced sonar data
- Look for fine-scale (ephemeral) features



Next Steps

- Place findings in the context of shellfish biology, aquaculture practices, and management



Redraw boundaries, conduct more surveys
(if needed)

Next Steps

- Maps to town committees and then selectmen – if towns choose to move forward, continue technical support through regulatory and state/federal permitting processes
- Follow up: outreach and extension



Thank You!

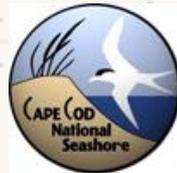
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