

# Eelgrass Protection, Mitigation and Restoration

Phil Colarusso

US EPA

March 30, 2009

# Eelgrass Legal Protection

- Special Aquatic Site under the Clean Water Act
  - No Significant Degradation
  - No Net Loss
- Water Quality needs to support eelgrass growth and survival

# Seagrass Restoration/Mitigation

- Seeding
- Transplanting of seedlings
- Transplanting of adult shoots

















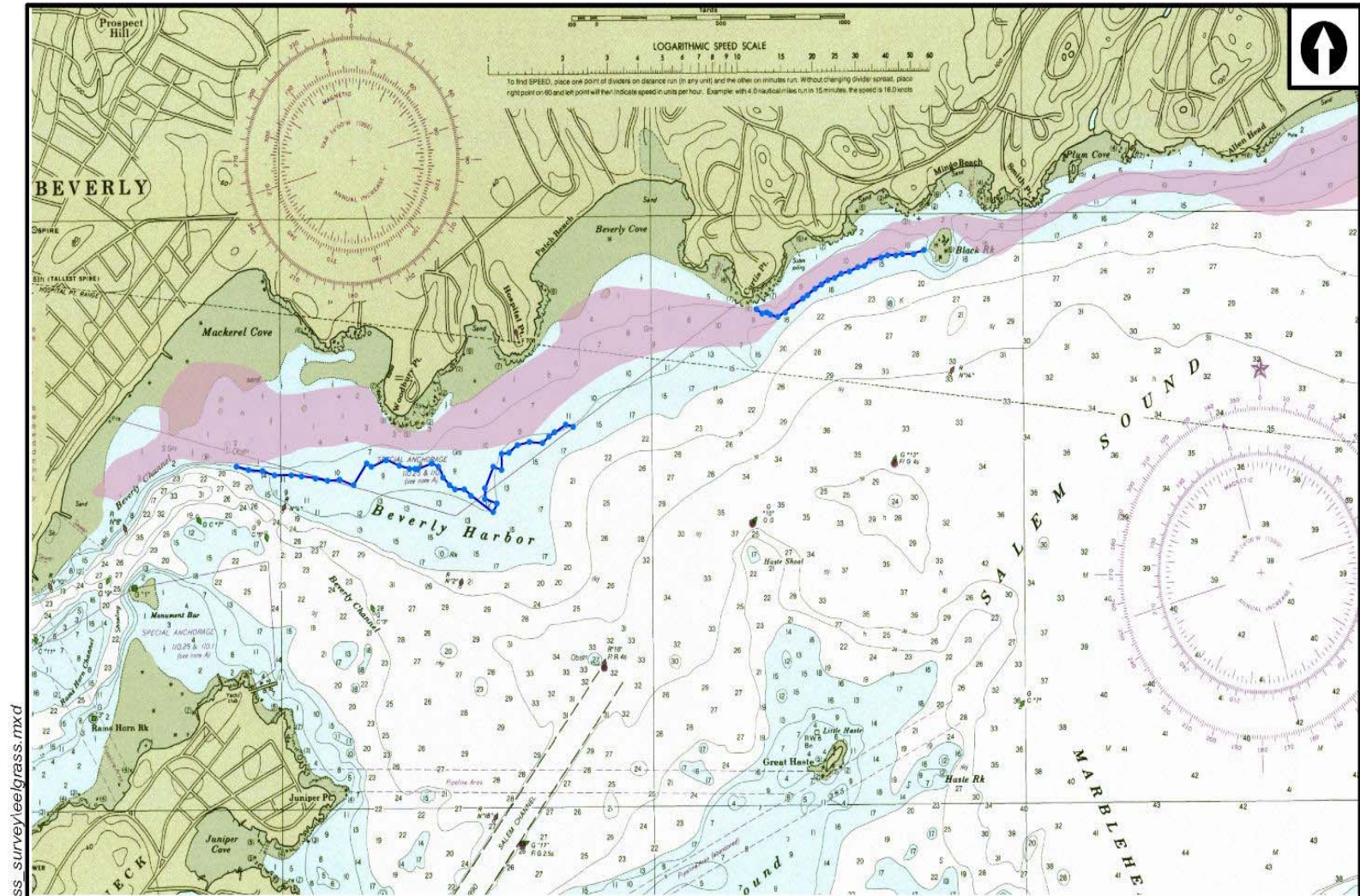


# Challenges to Restoration

- Labor intensive, expensive
- Many attempts, few documented success stories
- Proper site selection
- Bioturbation
- Limited post-transplant monitoring







C:\a-GIS\34648\_Everett Lateral\eelgrass\_survey\eelgrass.mxd

- DEP Eelgrass\* - July 1999 (MassGIS, EOEa Eelgrass Vector Datalayer)
- Eeelgrass Survey July 30-31, 2002 (Survey conducted by Normandeau Associates)

\* Note: DEP eelgrass beds were assessed by aerial photo interpretation using 1:20,000 scale stereo pairs. The photos were orthorectified to a 1 meter resolution and the eelgrass vector datalayers were digitized from these. The accuracy assessment of the digital data revealed that 85.4% of the beds had been correctly mapped.

Base map is National Oceanic and Atmospheric Administration (NOAA) chart; 1:10,000 scale Salem, Marblehead, and Beverly Harbors. Soundings in feet at mean low water.

<b>TRC</b>	Boott Mill's South Foot of John Street Lowell, MA 01852 978-970-5600
<b>HUBLINE PIPELINE PROJECT COMPARISON OF MASSGIS AND FIELD SURVEYED EELGRASS BOUNDARY</b>	
<b>FIGURE 4</b>	<b>PROJECT NO. 32022</b>