

Eelgrass Restoration in Narragansett Bay, RI

SAVE THE BAY®

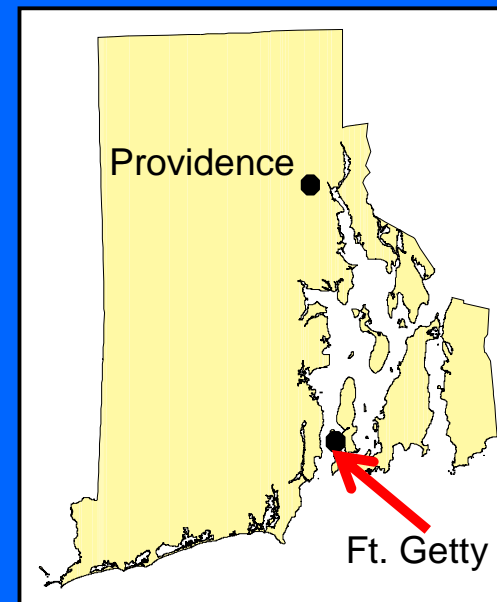
NARRAGANSETT BAY

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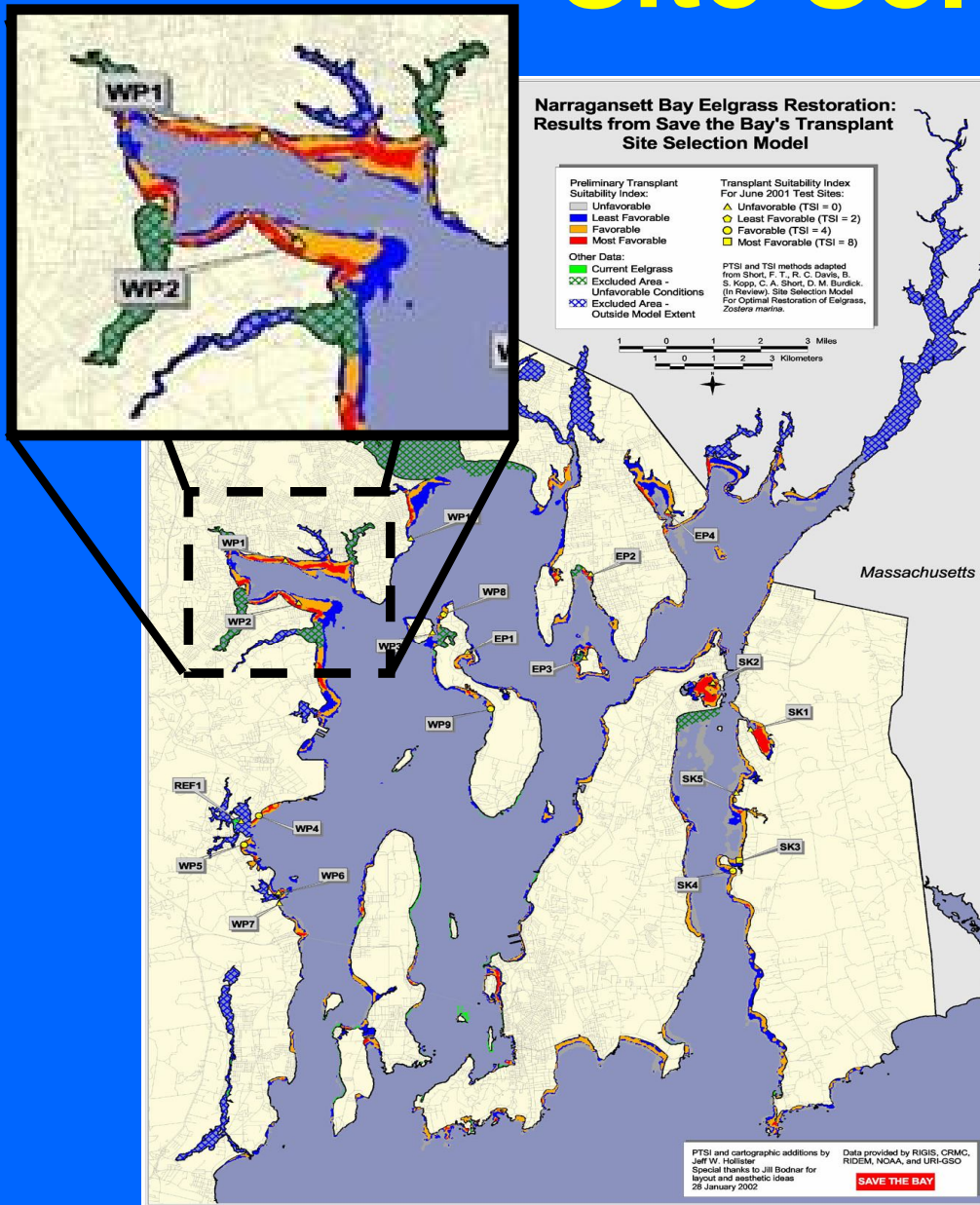


Background

- § Save The Bay began bay-wide eelgrass restoration in 2001
- § The first large-scale transplant was conducted in 2002 with 22,000 shoots
- § Save The Bay planted approximately 110,000 shoots a year
- § Techniques and use of volunteers have changed over the years to increase transplant survival and efficiency



Site Selection



§ Transplant Site Selection Model adopted from Short et al. 2002

§ Model includes depth, light, temp, historic distribution

§ Test-transplant follows site selection

§ Successful test transplants (greater than 50% survival) are then scaled up

Harvest Methods

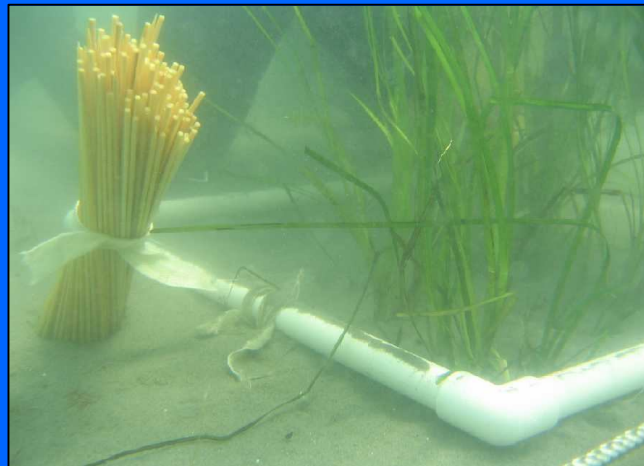
- Divers use trowels to remove eelgrass from sediment
- Kayakers transport catch-bags to shore
- Volunteers count and bundle eelgrass



Hand Planting



- Adapted from Horizontal Rhizome Method (Davis and Short, 1997)
- Method has been used since 2003
- Hand transplanting using soaked bamboo skewers as bio-staples
- 50 shoots planted within 0.25 m² quadrat

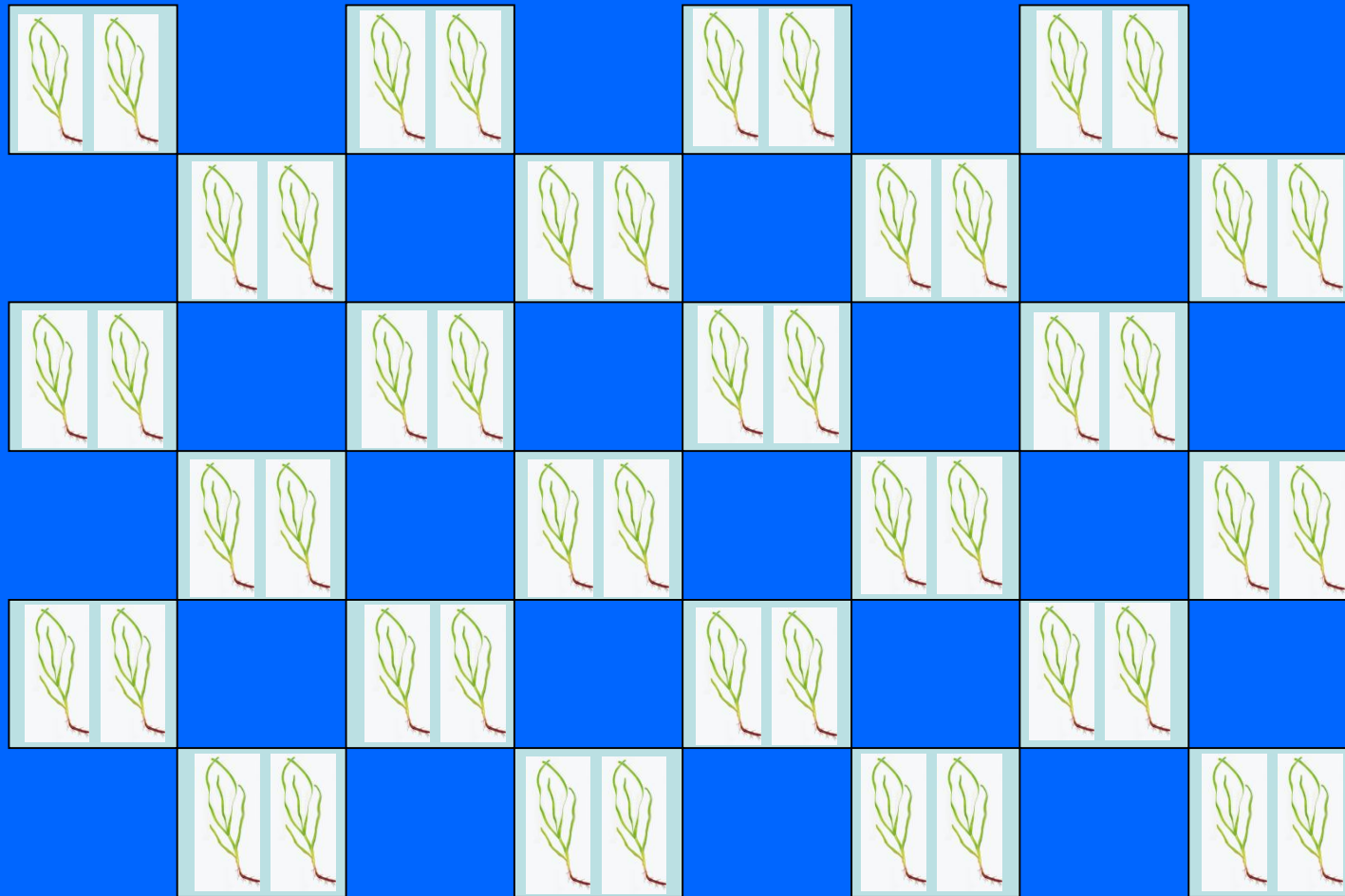


Checkerboard Pattern

Buoy

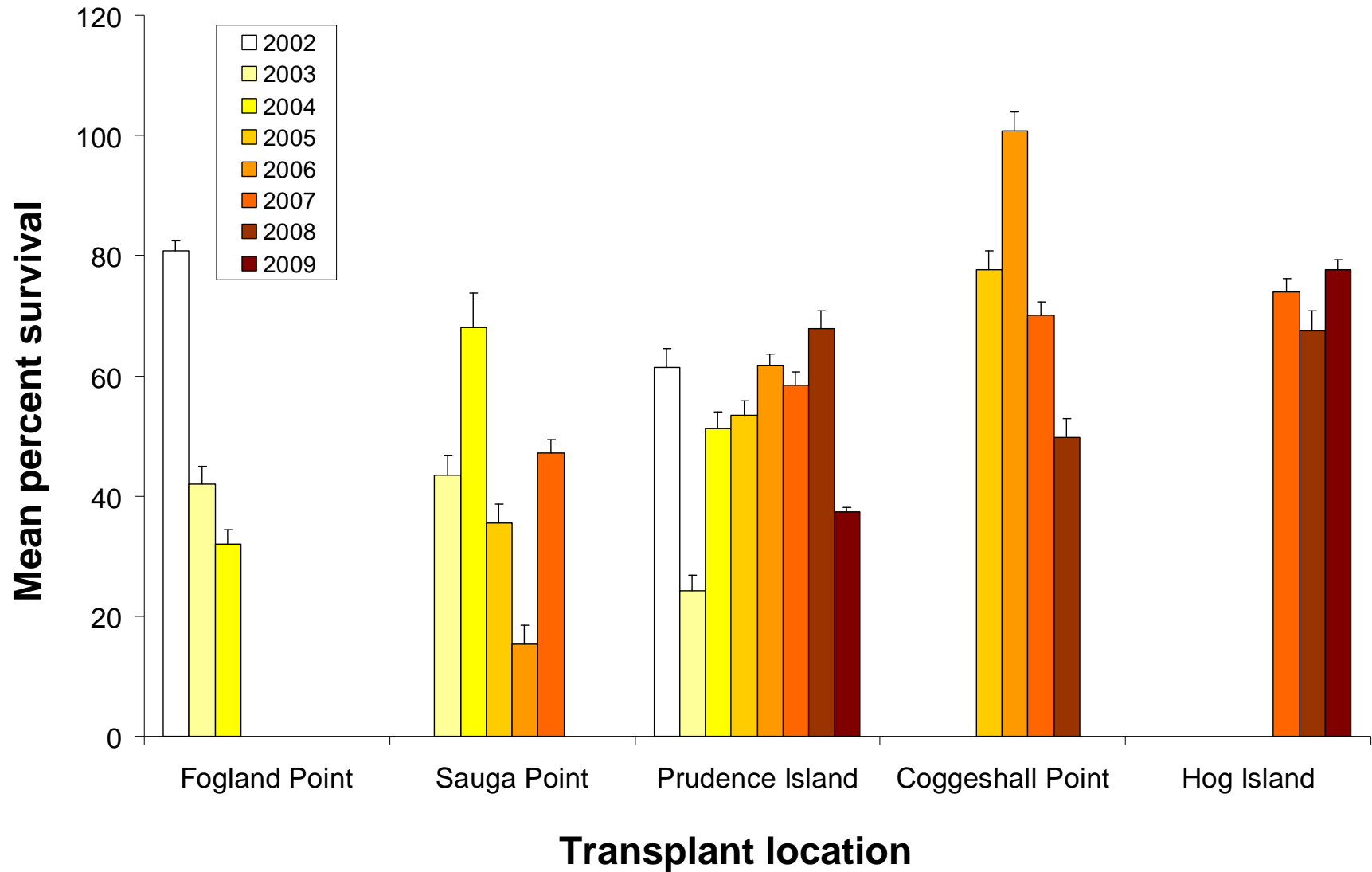


4 meters



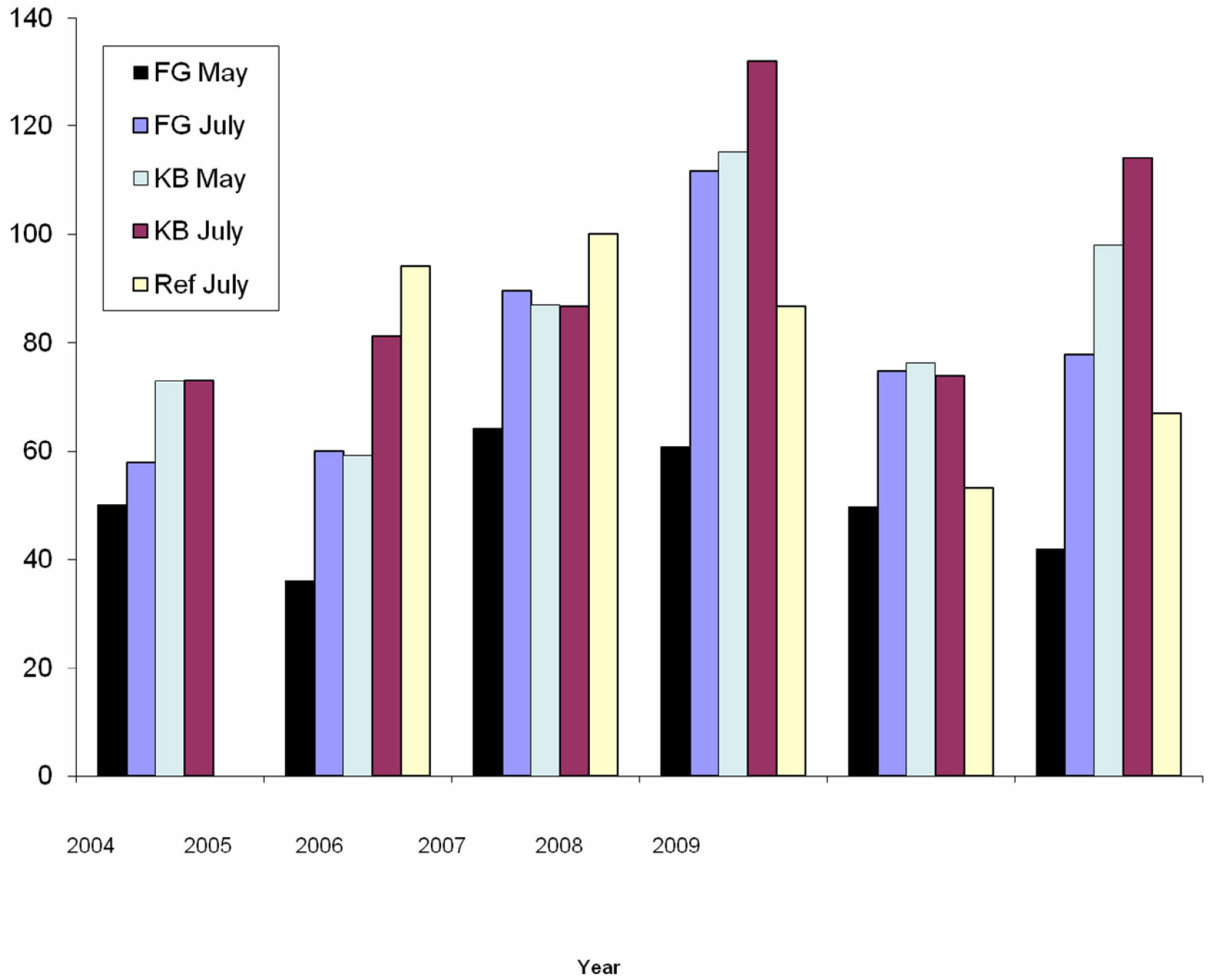
3 meters

- § 24 Quadrats spaced Corner to Corner
- § 1,200 shoot per checkerboard plot

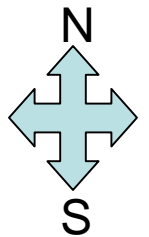


- § High variability in shoot survival between growing seasons in the Bay
- § Shoot survival varies between transplant sites
- § Success of a site cannot be determined over one growing season

Shoot Density (shoots per 0.25 m²)



Prudence Island Transplants 2002-2009





SAV Mapping 2006



- Mapped eelgrass in Narragansett Bay and Block Island
- 10 years since previous effort
- Identified 466 total acres of eelgrass
- Funded by the Estuarine Reserves Division of NOAA, RI CRMC, NRCS, the NOAA Community-Based Restoration Program Partnership with Restore America's Estuaries, and the Town of New Shoreham
- Efforts underway to secure funding for another mapping effort in 2011, with goal to collect data every 5 yrs

Future of Eelgrass

- Continue test transplants to monitor changes in water quality and identify new sites for transplanting
- Conduct advocacy to reduce nitrogen loading to the Bay from point and non-point sources

Questions?

