

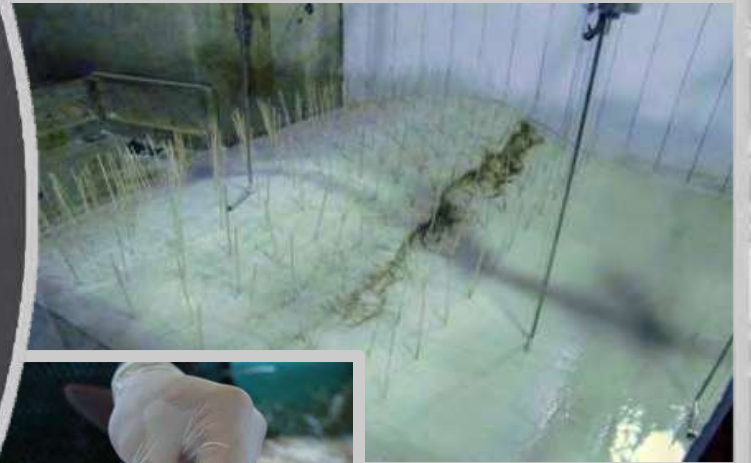


U.S. ARMY

Promoting SAV Habitat Sustainability through Innovative Dredging and Placement Practices

Emily Russ and Safra Altman
USACE ERDC EL
CERF 2021

Emily.R.Russ@usace.army.mil



US Army Corps
of Engineers®



Submerged Aquatic Vegetation (SAV) vs. Dredging

- **SAV provide critical ecosystem services**
- **Threatened by multiple stressors including dredging impacts**
 - **Physical removal**
 - **Burial**
 - **Elevated Turbidity**
- **Resource agencies focus on these short-term impacts to SAV**



<https://www.nwp.usace.army.mil/Estuary/Structure/Submerged/>



<https://www.saw.usace.army.mil/Missions/Navigation/Dredging/District-Plant-Dredging/Merritt/>

Can Dredging Help SAV?

- **Projected loss of SAV habitats due to Sea Level Rise and coastal squeeze**
- **Can beneficial use of dredged sediment help increase SAV coverage?**
 - **Anecdotal evidence of SAV expansion over longer time periods following dredging**

Case Studies: Short- vs. Long-term impacts

- **Historical Examples – poorly (if at all) documented**
 - **Working with USACE Districts to obtain data**
- **Field-based efforts to track pre-, during, and post-restoration effects on SAV**

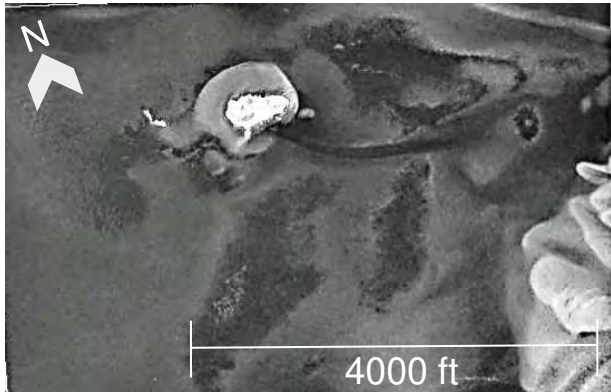
Barnegat Bay, NJ – Oyster Creek Channel

- **Oyster Creek Channel – Dredged ~2 years between 1981-2017**
- **Material placed at 2 open-water disposal areas that became islands**
 - **26A (East) – inactive since 2008, now a Heron Rookery**
 - **26B (West)**



Barneгат Bay, NJ – 26B SAV

March 1995



Last placement: 1991
Next placement: 1996

May 2008



Last placement: 2004
Next placement: 2009

September 2013



Last placement: 2010
Next placement: 2015

October 2017

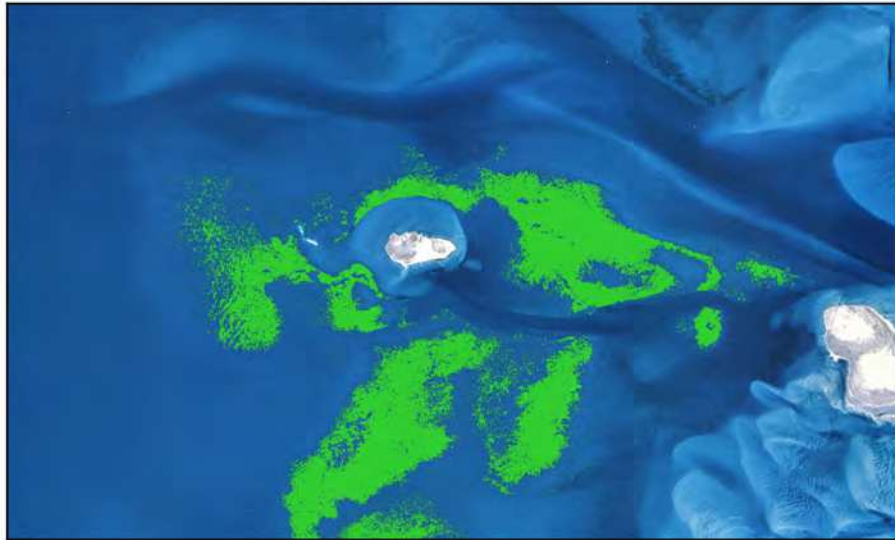


Last placement: 2017*

Imagery from GoogleEarth

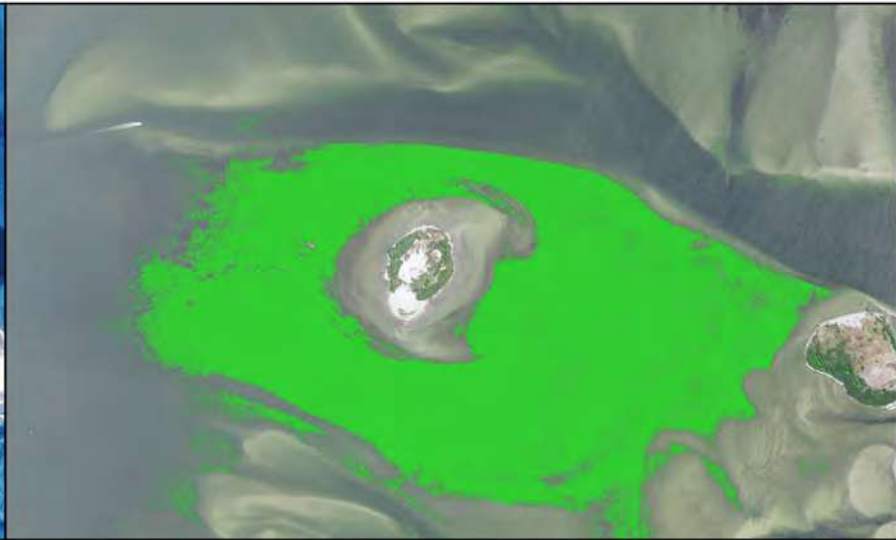
Barnegat Bay, NJ – 26B SAV

NAIP Imagery: 1995



SAV area: 0.59 km²

NAIP Imagery: 2015



SAV area: 1.57 km²