Eelgrass and Bay Scallop Restoration in Virginia’s Seaside Bays
Eelgrass and Bay Scallop Restoration

- VA was major producer of bay scallops 1920-1932
- Led nation in 1930 with 1.8M lbs ~91M scallops
- Scallop production and eelgrass abundance decline 1930-31
- 1933 Hurricane – no eelgrass habitat, no bay scallops
• Seaside Partnership formed in 2001 to reverse loss of oyster reef and eelgrass habitat lost in previous century
• Joined VIMS’ efforts to restore eelgrass after nearly 70 years absence
• First funded by VA CZM Program then significantly supported by NOAA
Shoot collection by volunteers
Reproductive shoots held in mesh laundry bags prior to transfer to holding tanks.

Photo by P. Kingsley-Smith

Mechanical Seagrass Harvester
Seagrass facility, Oyster VA

Photo by P. Kingsley-Smith
6,195 acres Present (2015)
525 acres Seeded (2016)
6,195 ACRES
Largest Seagrass Restoration in the World!
Bay Scallop Restoration Initiated 2009

• NOAA ARRA Grant to investigate methods
• VIMS established first VA broodstock with scallops collected from NC
• Scallops introduced to system annually through:
  ➢ Larval dispersal
  ➢ Free planting
  ➢ Caged deployment
VIMS ESL Hatchery
Algae culture
Broodstock conditioning
Spawning
Larval feeding 0-9 days
Private Hatcheries utilized as well
Larval Dispersal
Larval Setting Tanks

VIMS, Cherrystone Aquafarms, and TNC all experimenting with more efficient setting techniques
Annual Scallop Survey

2015 and 2016 Assessment Info
3 locations
4 segments/location
20/40 sites/segment
50 m² of seagrass checked
16,000 m² of bottom

(4 acres searched for scallops by hand)
Cobb Bay: 779.4 acres, 107 scallops found/4000 m² = 84,376 scallops = 0.027/m²
South Bay: 1354.2 acres, 151 scallops found/8,000 m² = 103,444 scallops = 0.019/m²
South Bay South: 603.0 acres, 88 scallops found/4,000 m² = 53,688 scallops = 0.022/m²

Florida Gulf Coast (FL FWCC)
0 – 0.01 /m² = Collapsed
0.01 – 0.1/m² = Vulnerable
0.1 – 1/m² = Stable
>1/m² = sustainable
Future Possibilities?