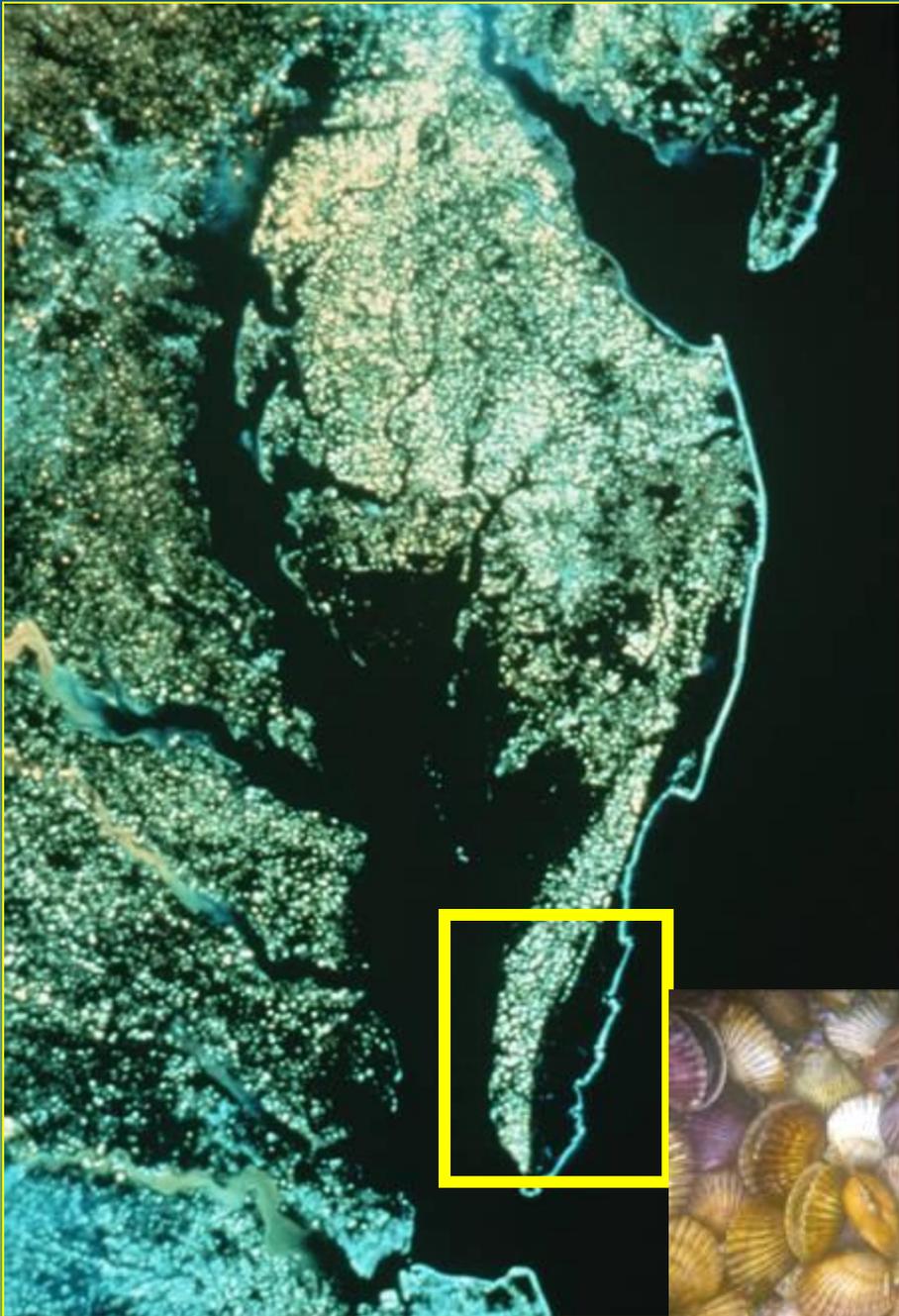
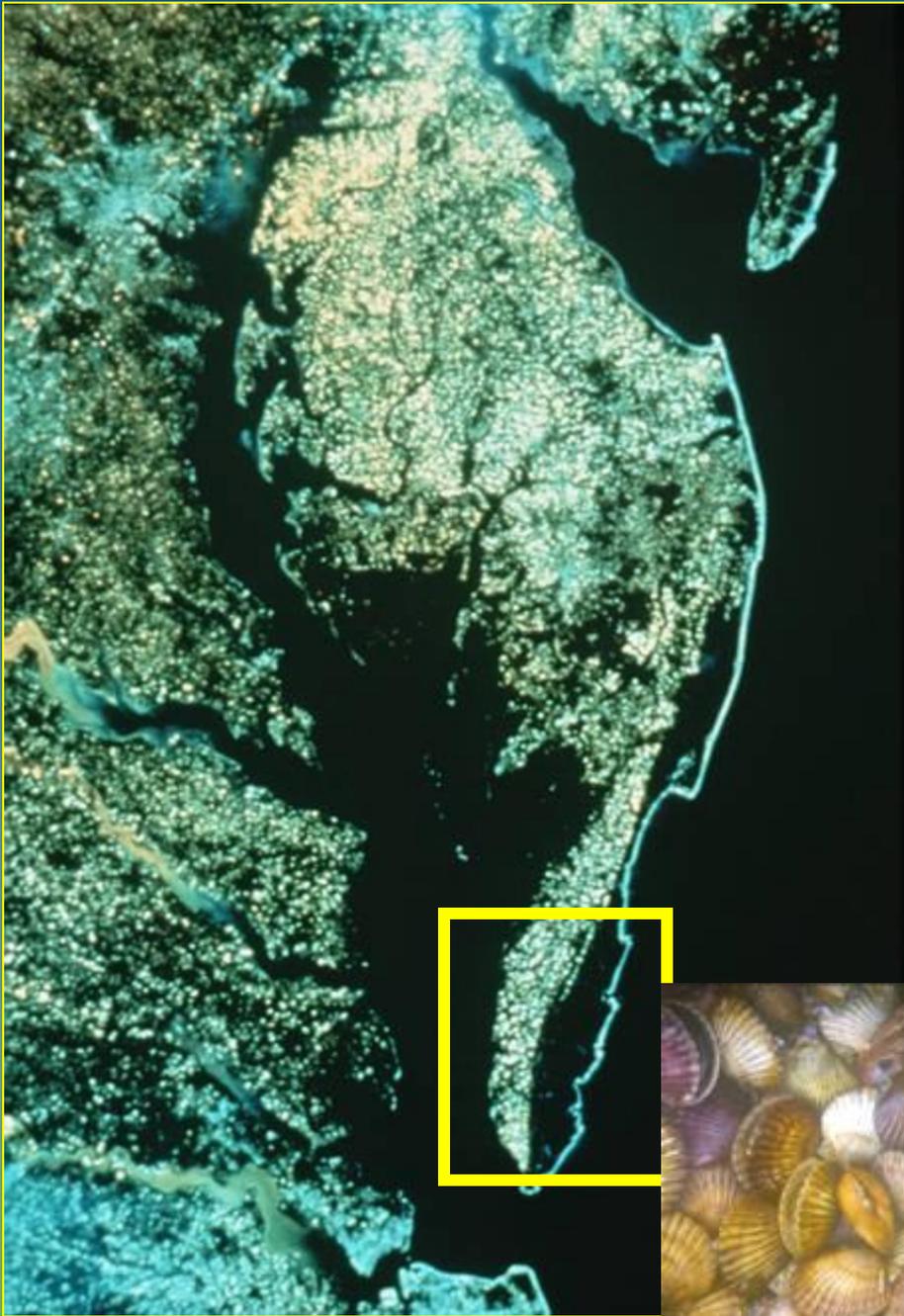


Eelgrass and Bay Scallop Restoration on the Seaside of Virginia's Eastern Shore

Bob Orth

Virginia Institute of Marine Science
College of William and Mary





GOAL

Re-establishment of eelgrass to the Virginia's coastal lagoons and the ecosystem services this community provided, esp. the bay scallop!



The Genesis of this Project

PRE-1930'S



Eelgrass Widely Distributed in Chesapeake Bay and Coastal Bays – Bay Scallops Abundant

Major Changes in 1930s:
Pandemic Disease

Coup de Grace – 1993 Hurricane

Eelgrass Distribution in Chesapeake Bay & Coastal Bays

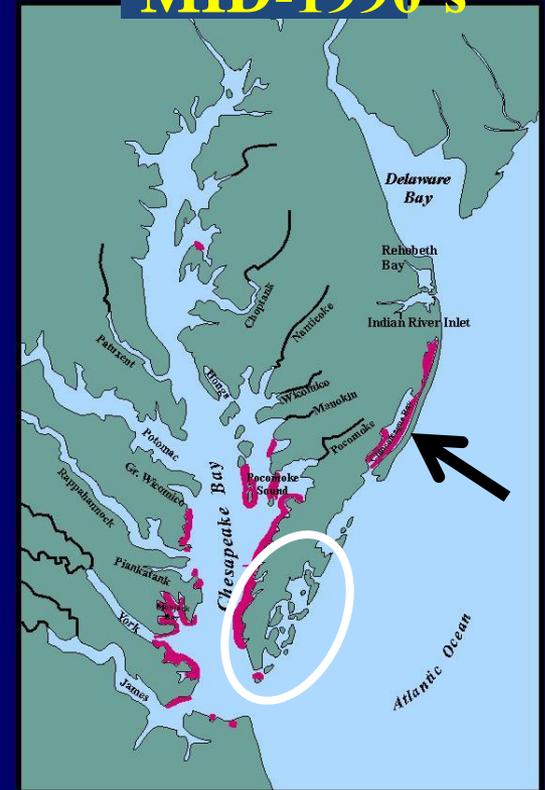
PRE-1930'S



1960'S



MID-1990'S



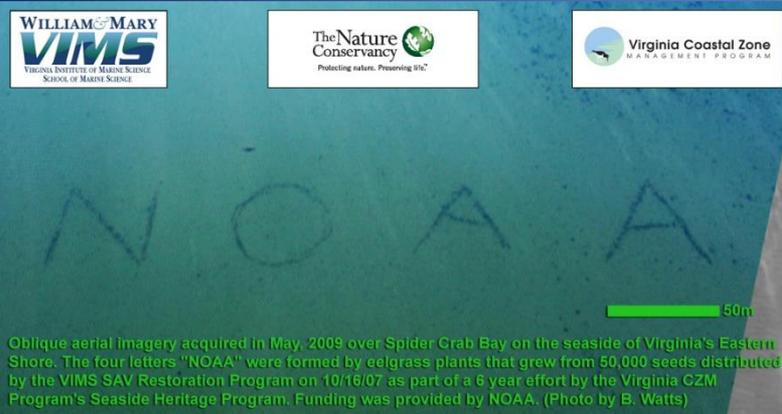
Bay Scallop Harvest Accomac and Northampton Counties

| Year | Harvest (lbs) | Dollars | Today's \$\$ |
|------------------|------------------|---------|-----------------|
| 1925 | 360,732 | 74,272 | 902,405 |
| 1929 | 1,145,598 | 207,883 | 2,554,882 |
| 1930 | 1,824,948 | 147,564 | 1,773,719 |
| 1931 | 1,226,478 | 78,990 | 1,031,609 |
| 1932 | 658,584 | 80,090 | 1,153,296 |
| 1933- present | 0 | 0 | 0 |

Seed Based Eelgrass Restoration Effort

Machine and Volunteers Collecting Eelgrass Seeds





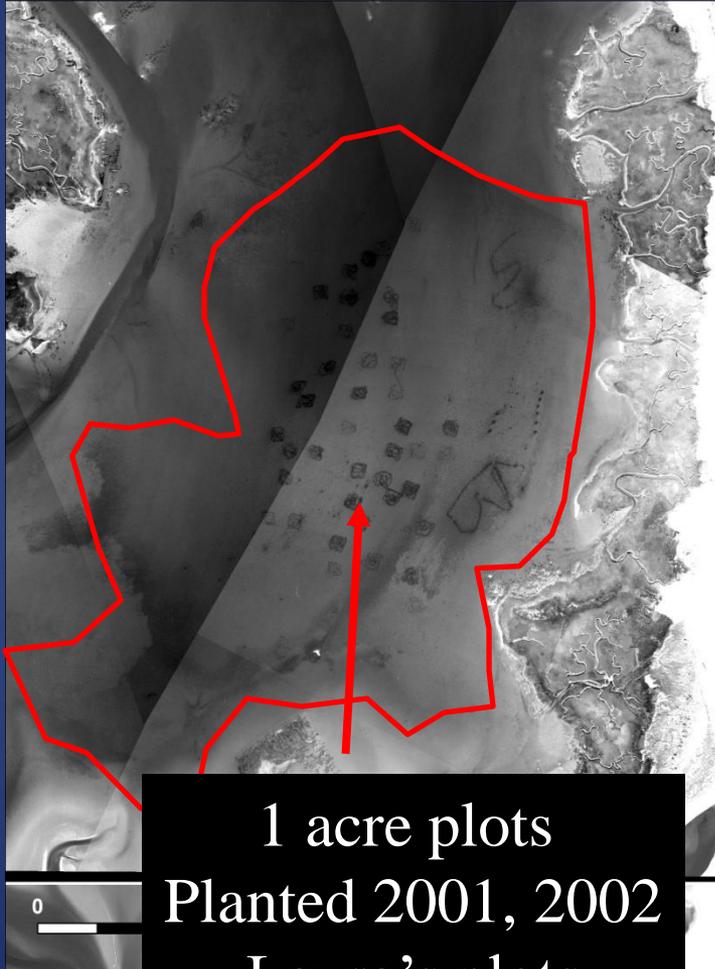
Seeds broadcast, settle rapidly, and become incorporated quickly into the sediment, not far from where the seed settles.

South Bay eelgrass changes from 2004 to 2010

(inside red polygon) (aerial photographs from 12,000 ft)

2004

2010



1 acre plots
Planted 2001, 2002
Laura's plots



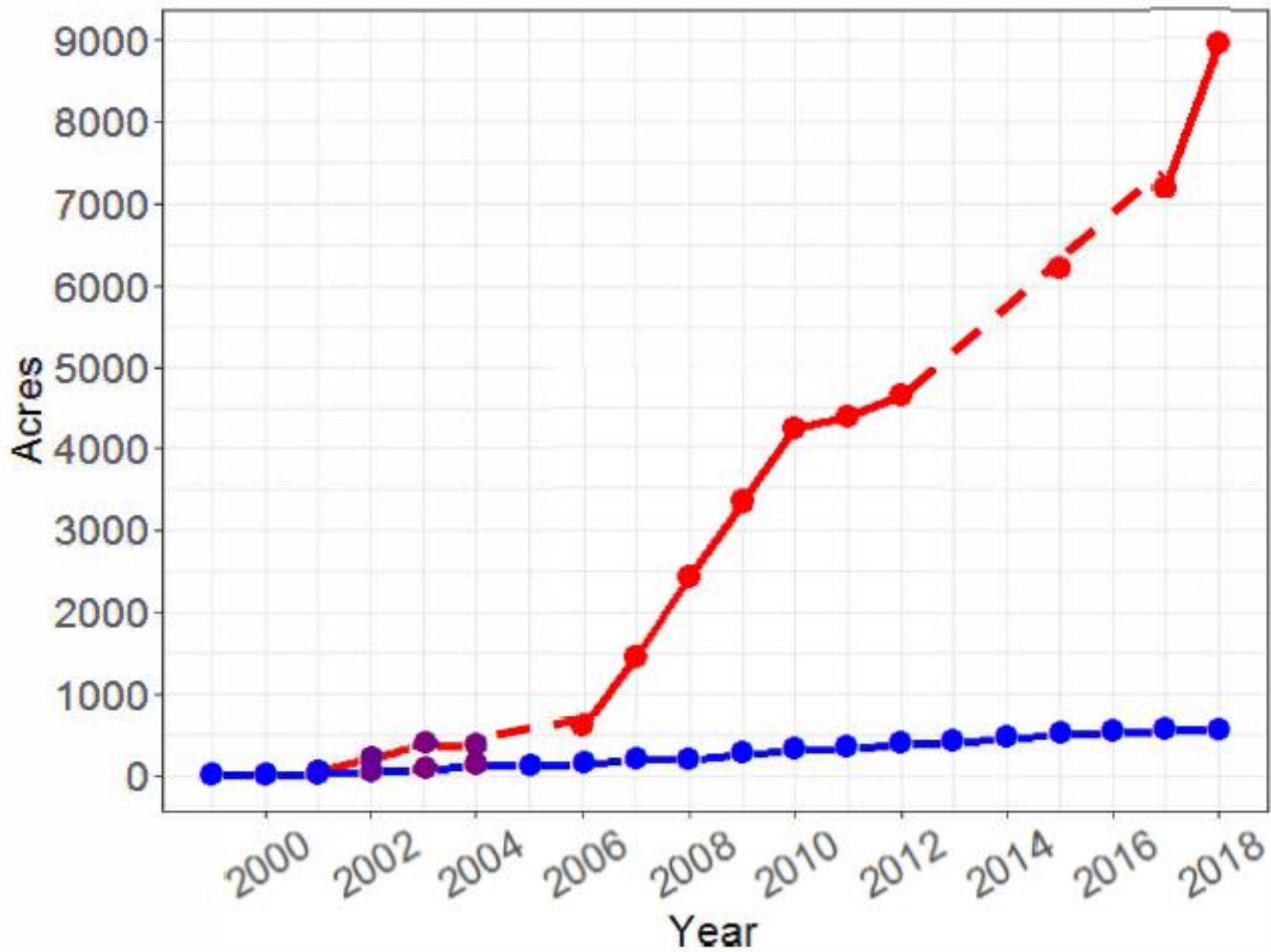
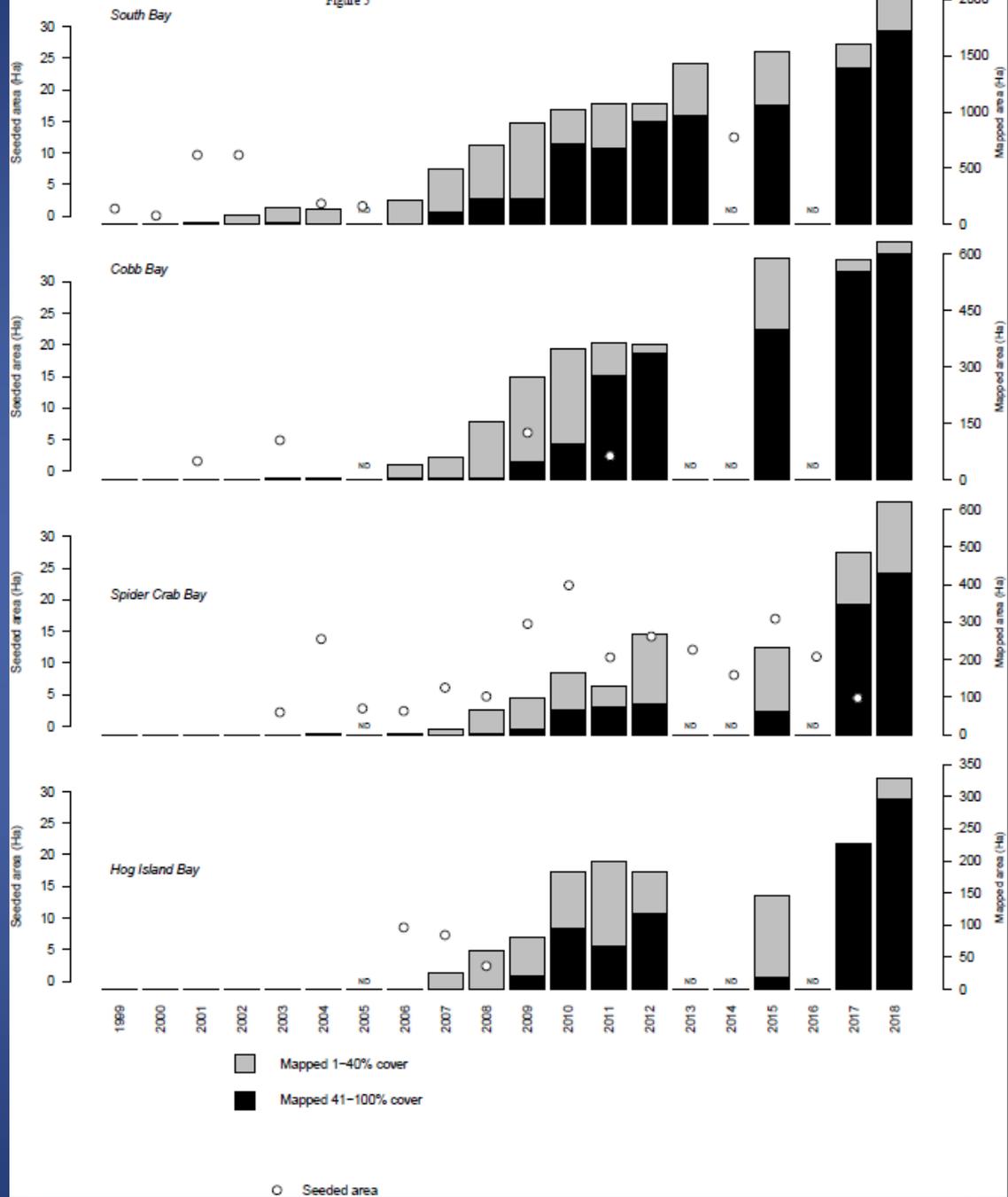
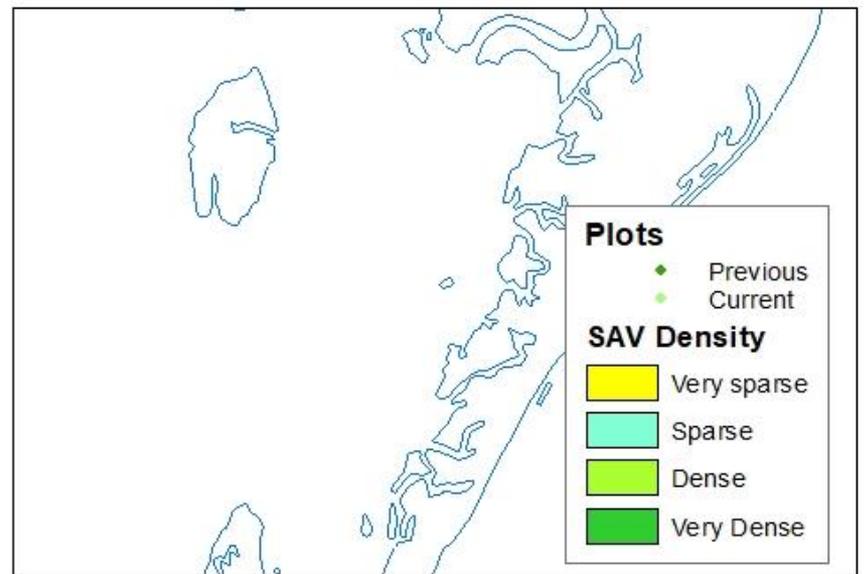
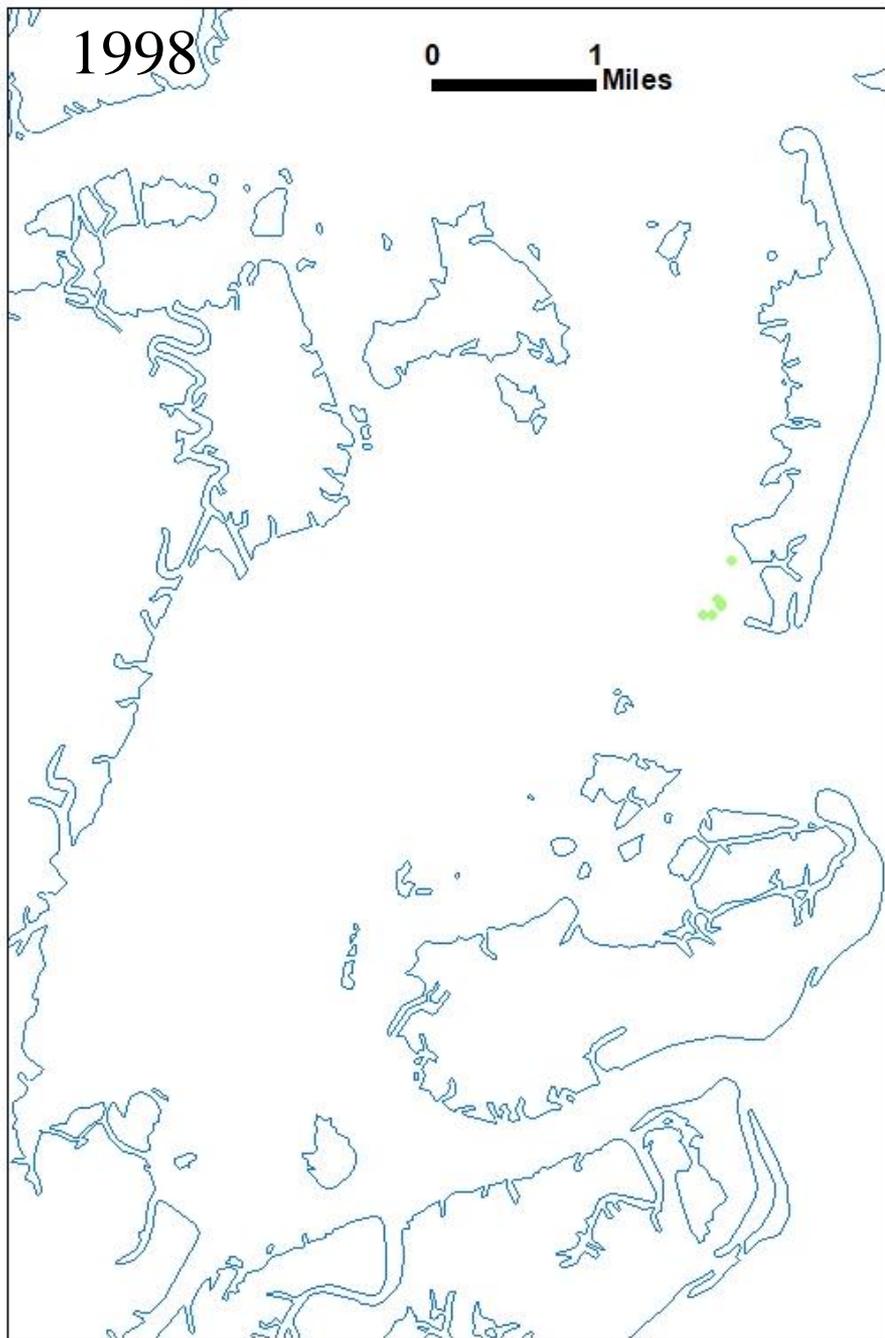
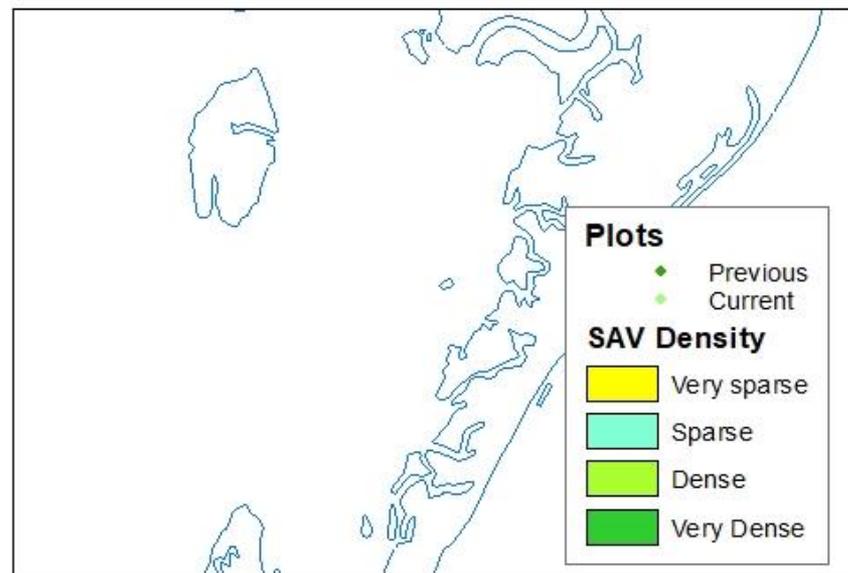
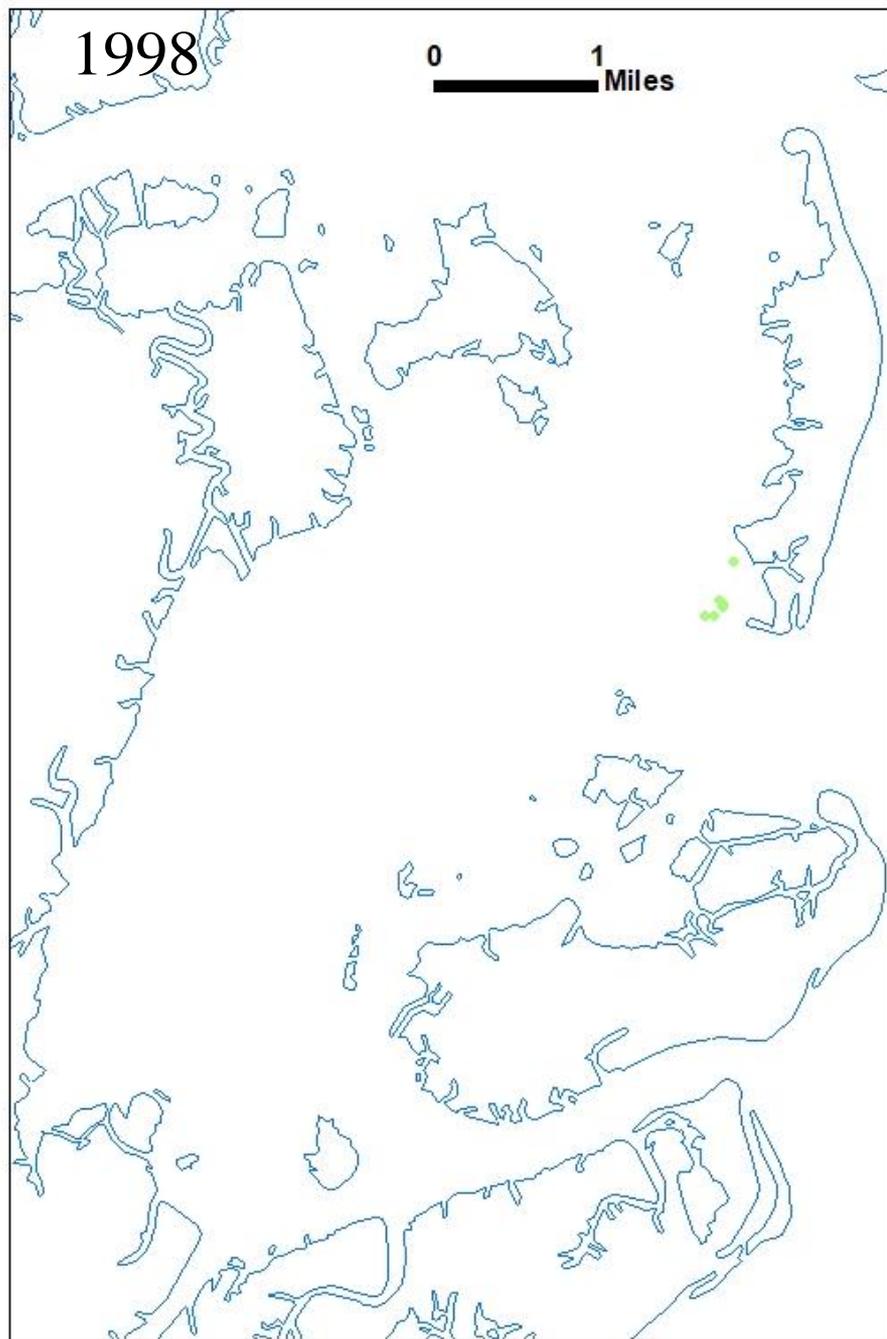
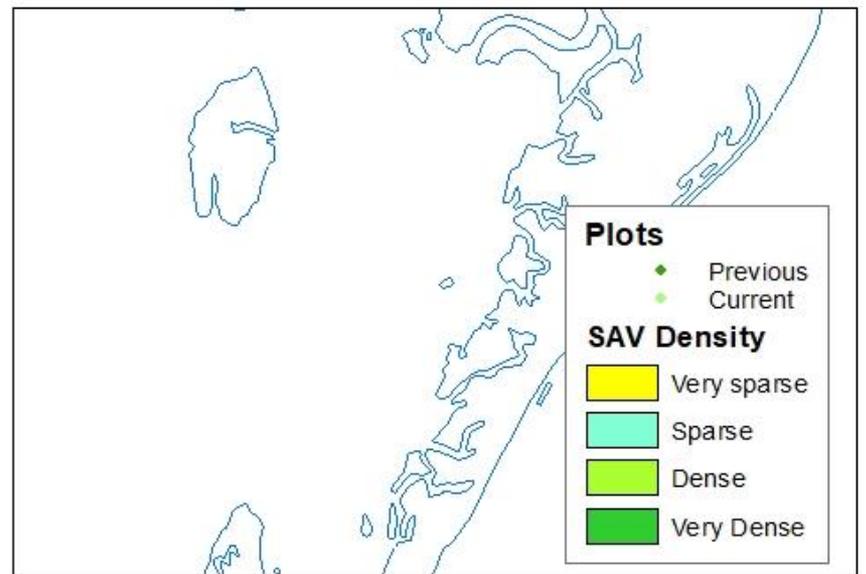
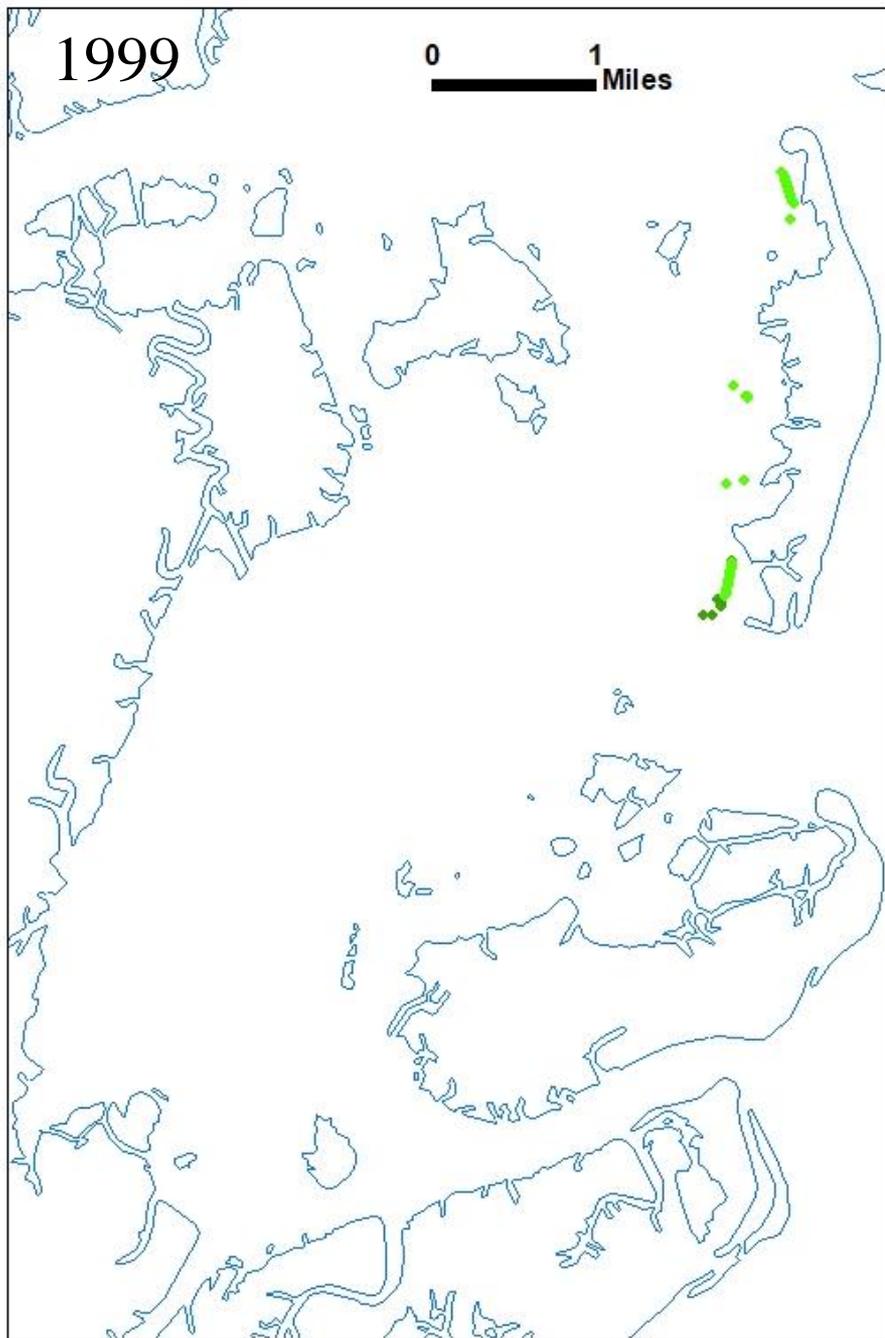


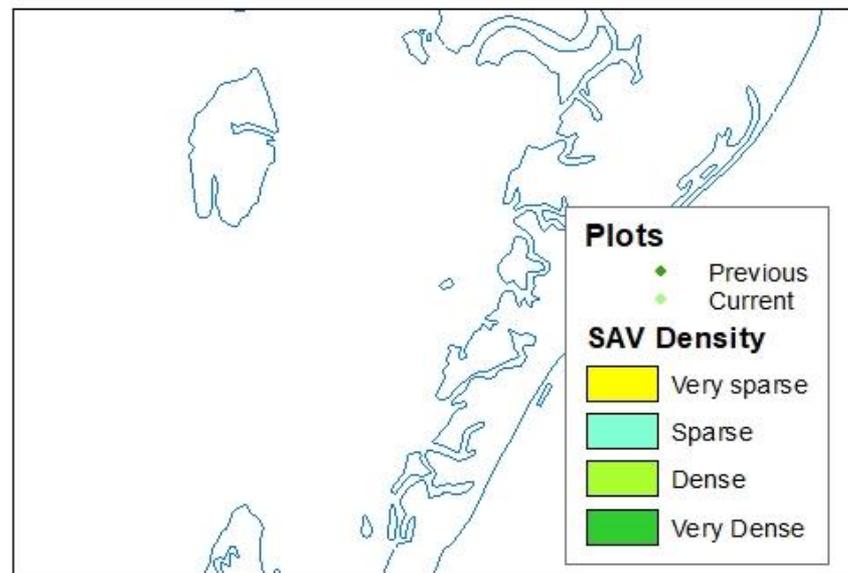
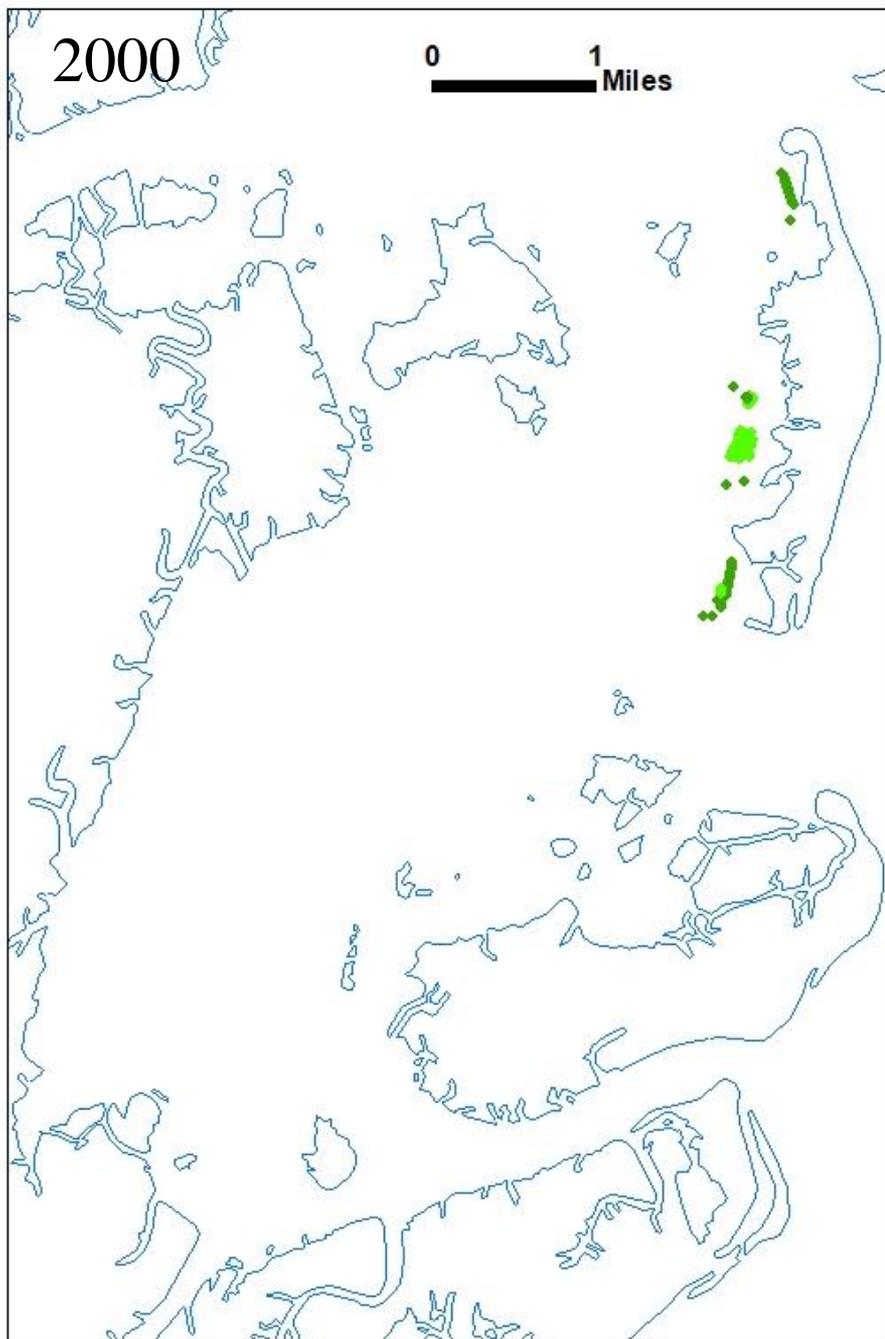
Figure 5

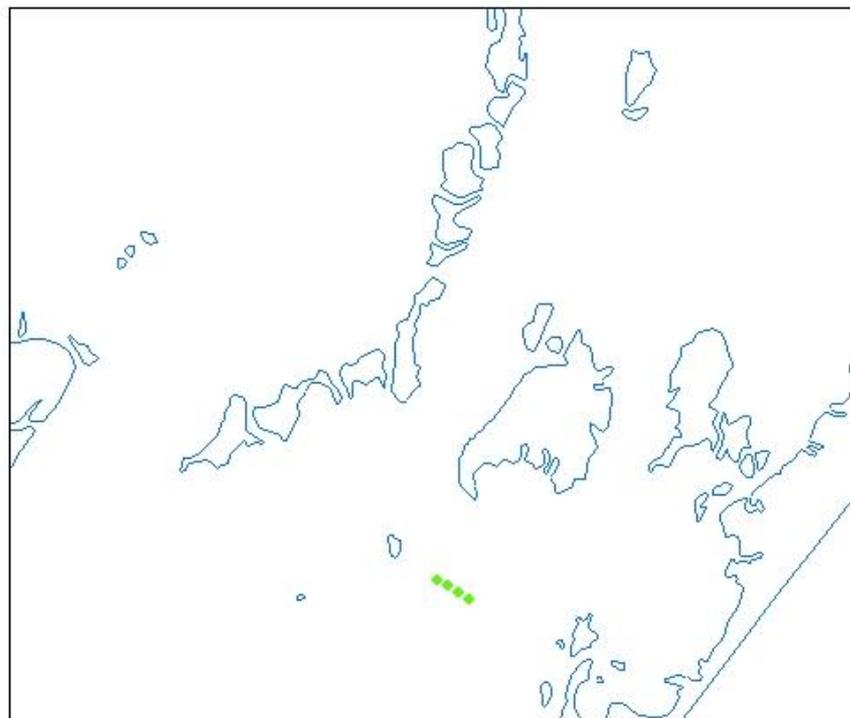
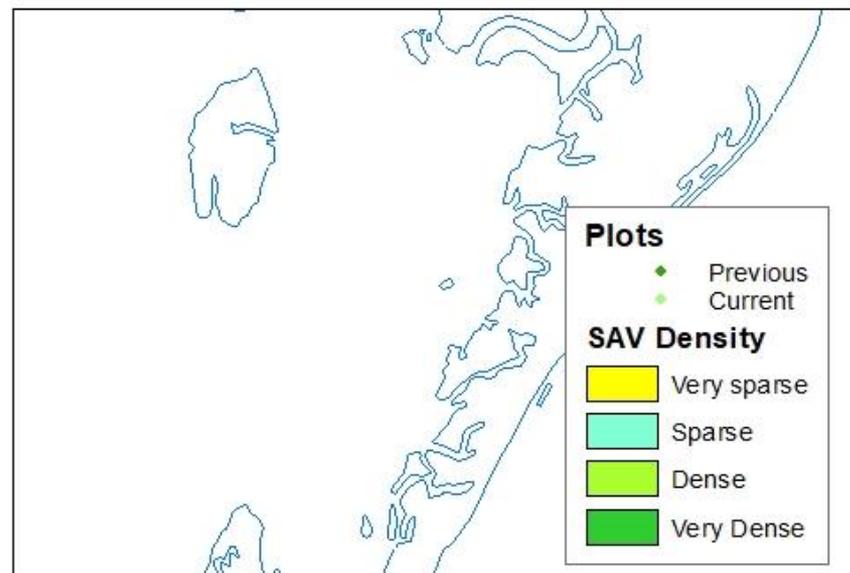
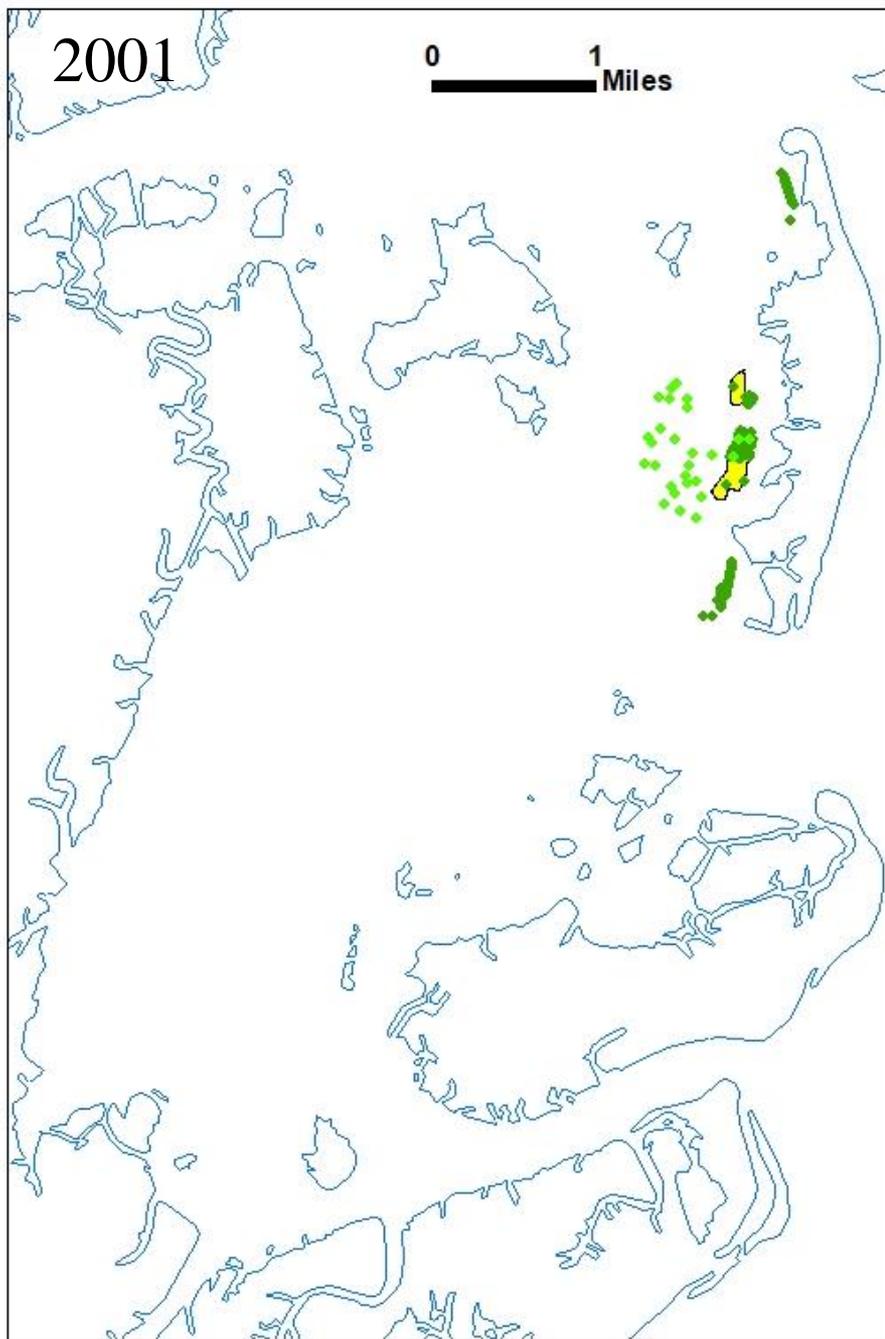


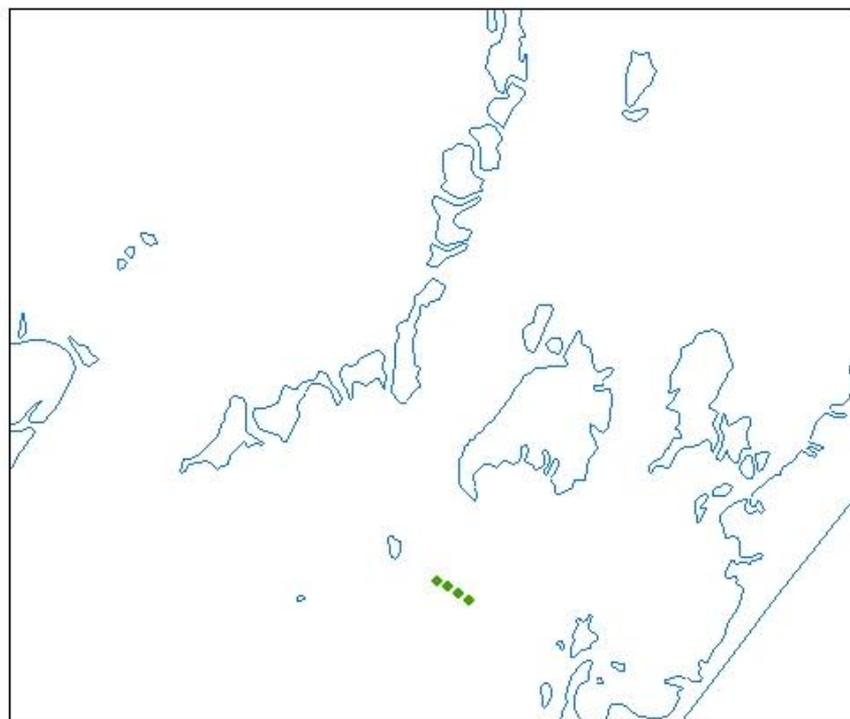
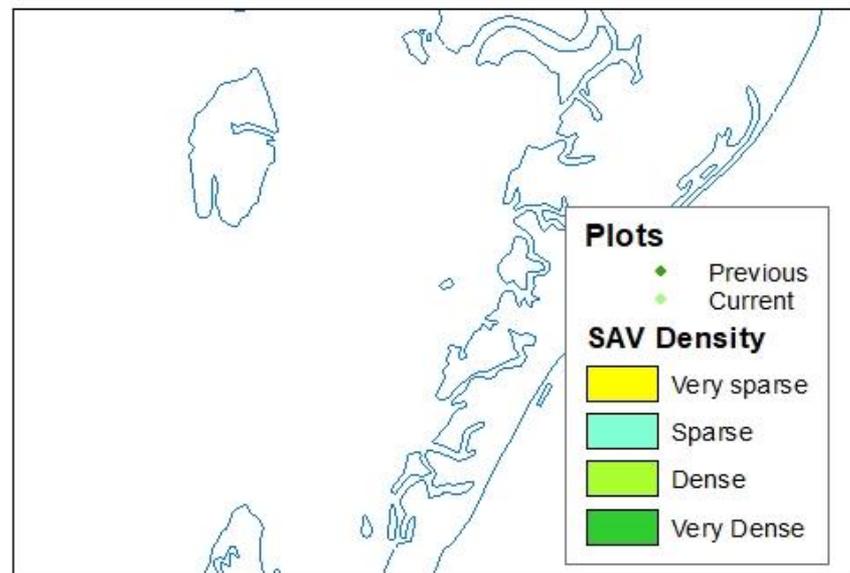
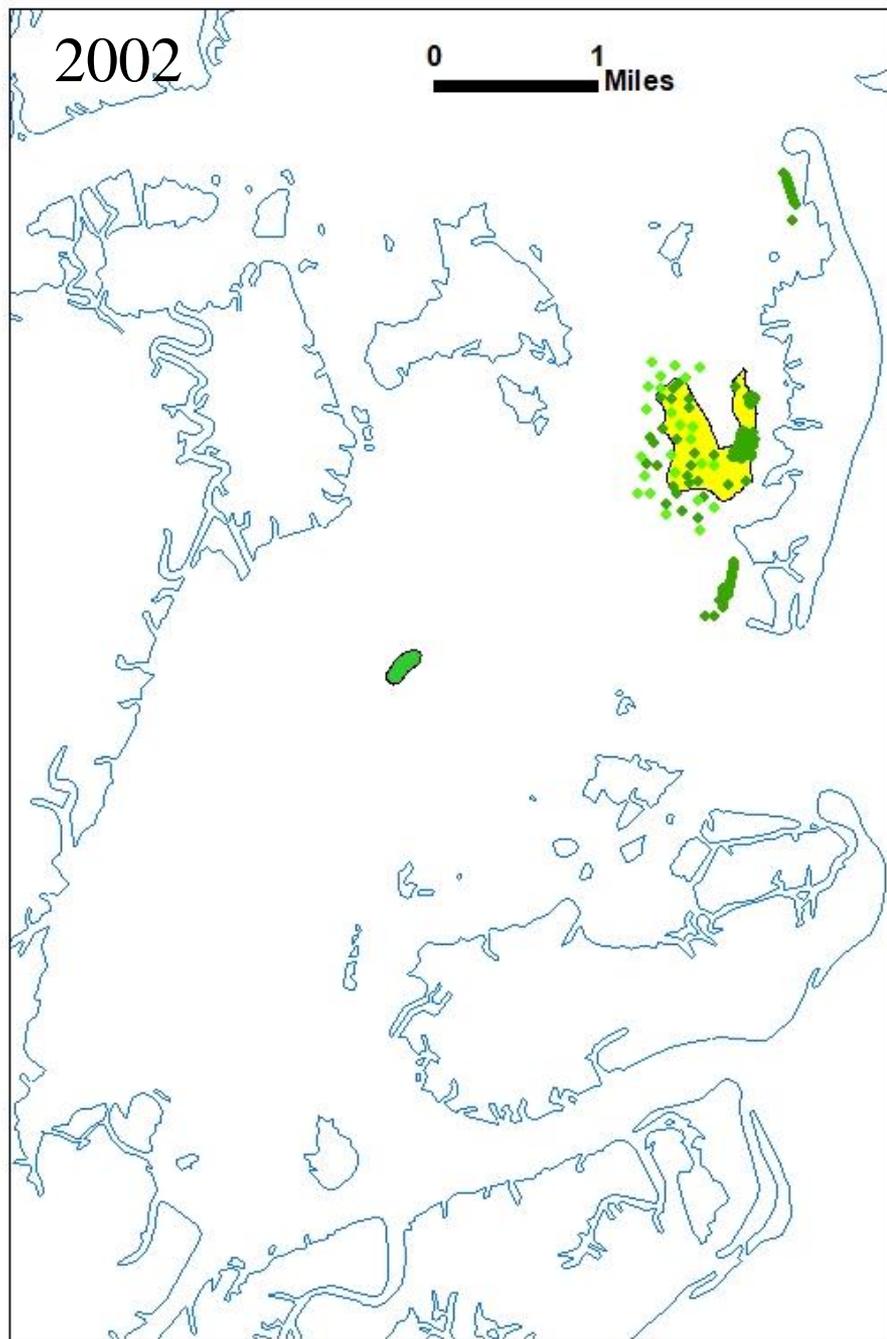


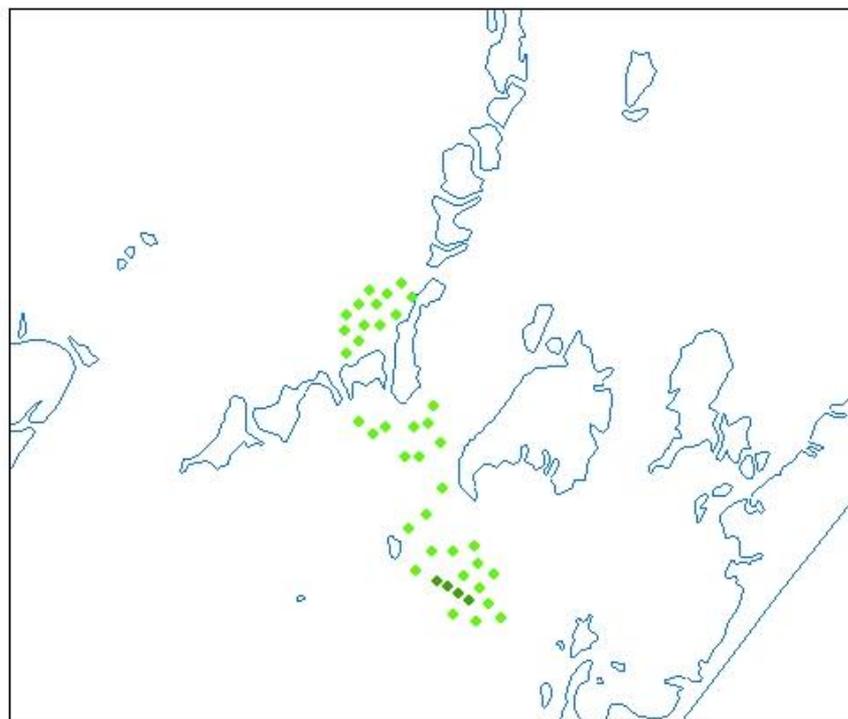
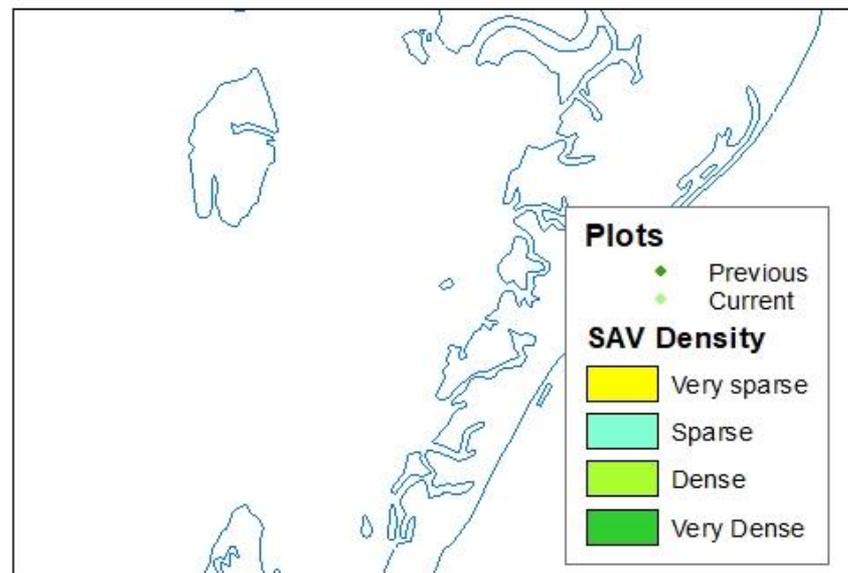
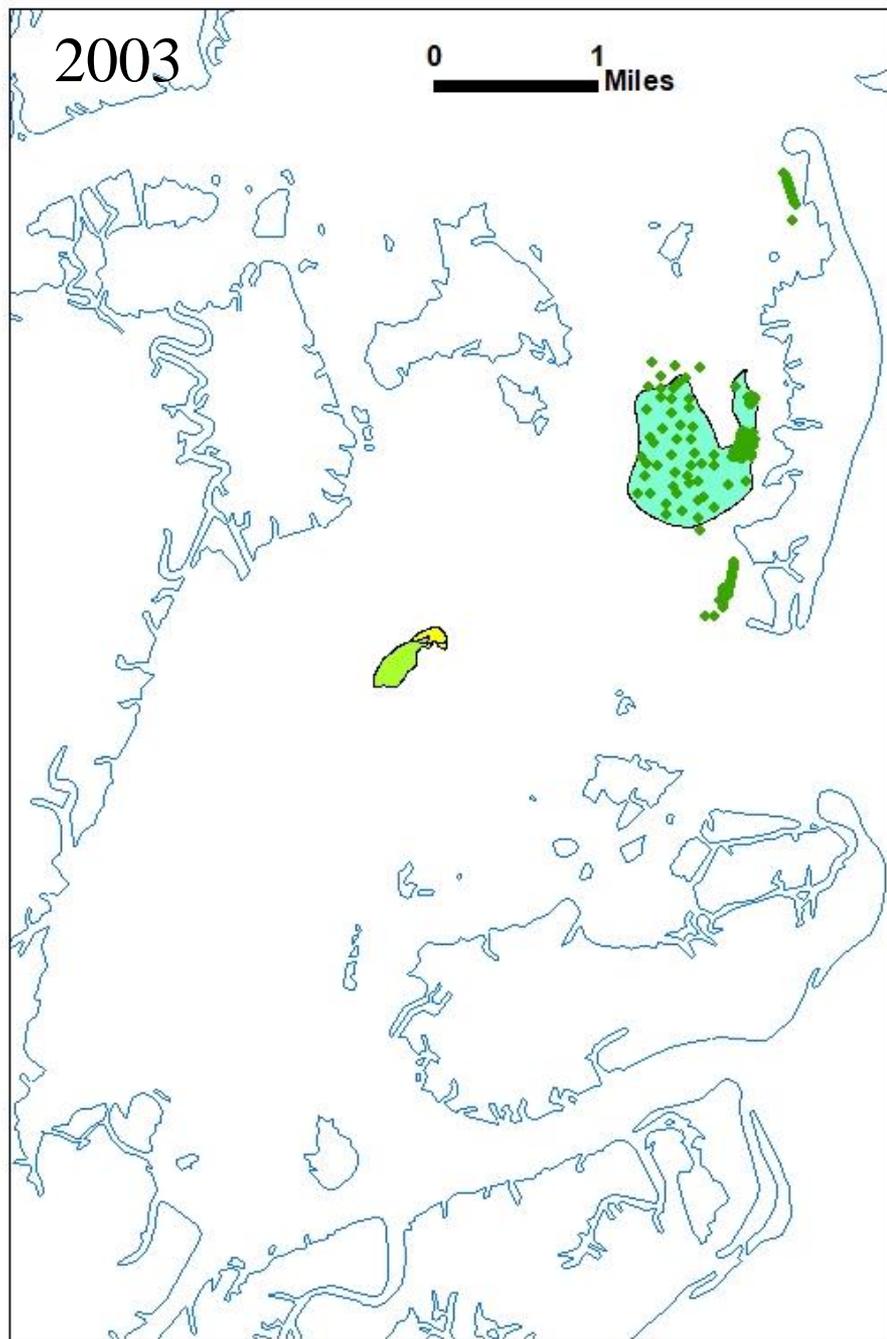


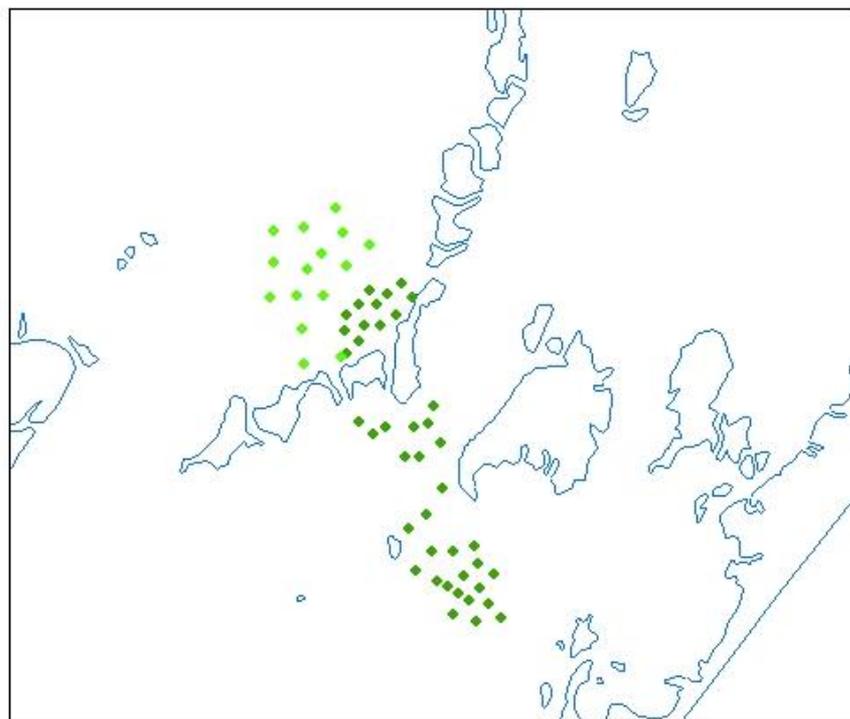
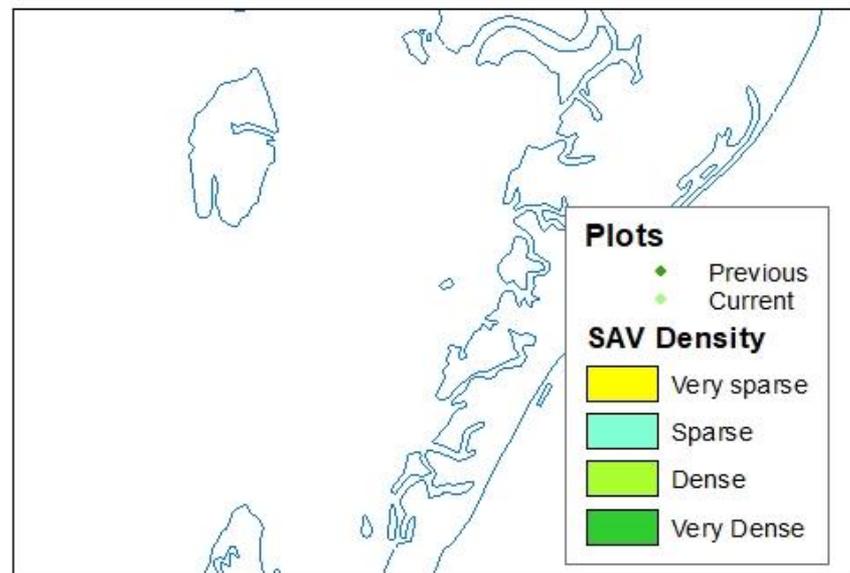
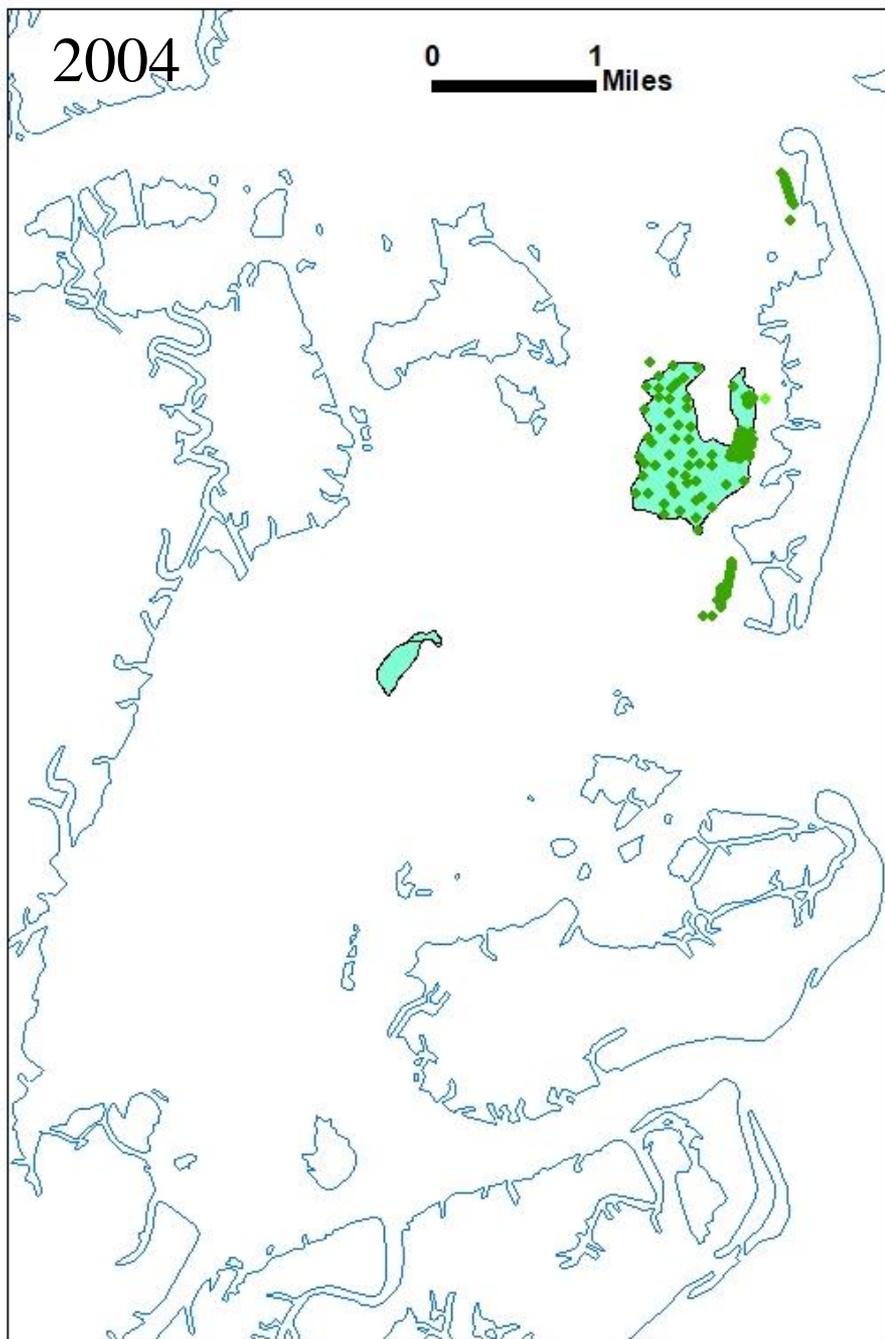


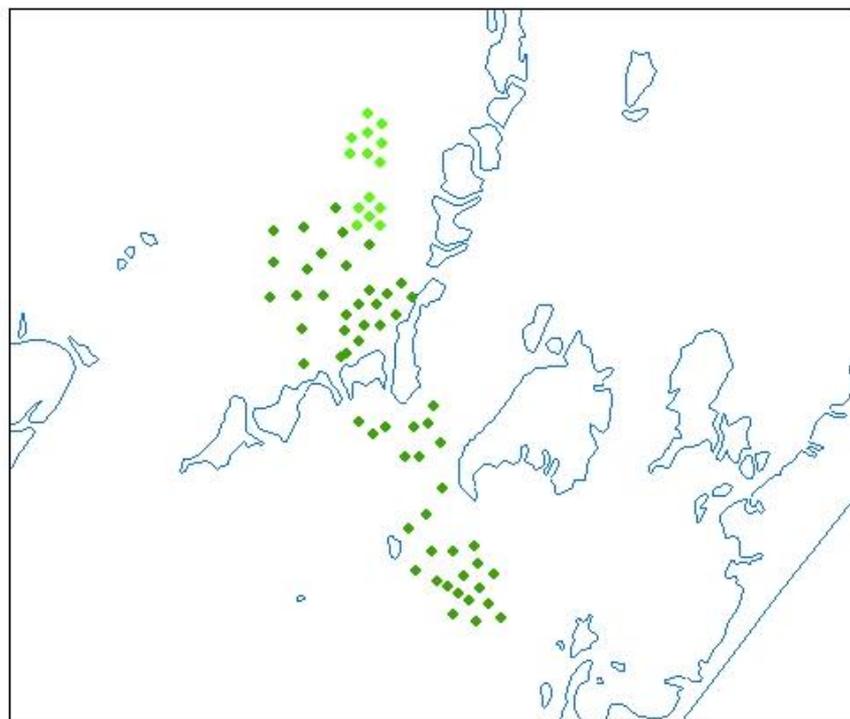
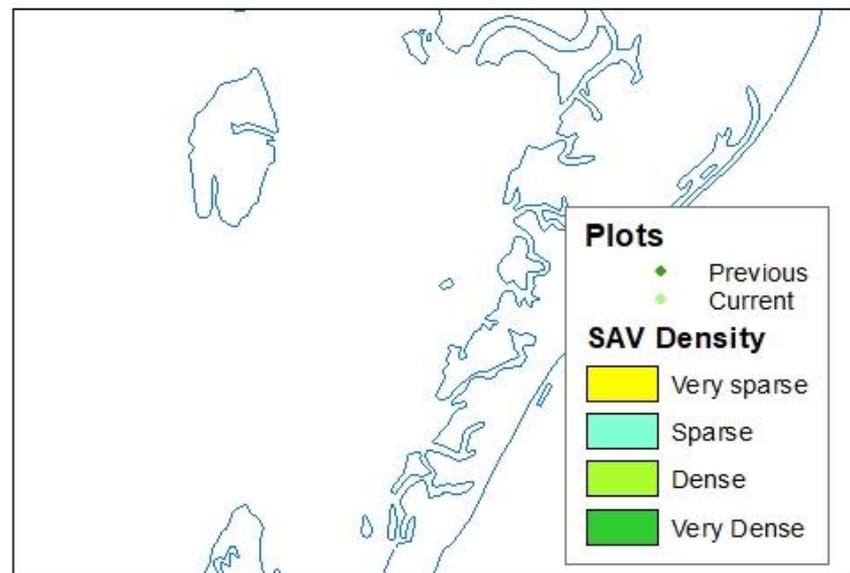
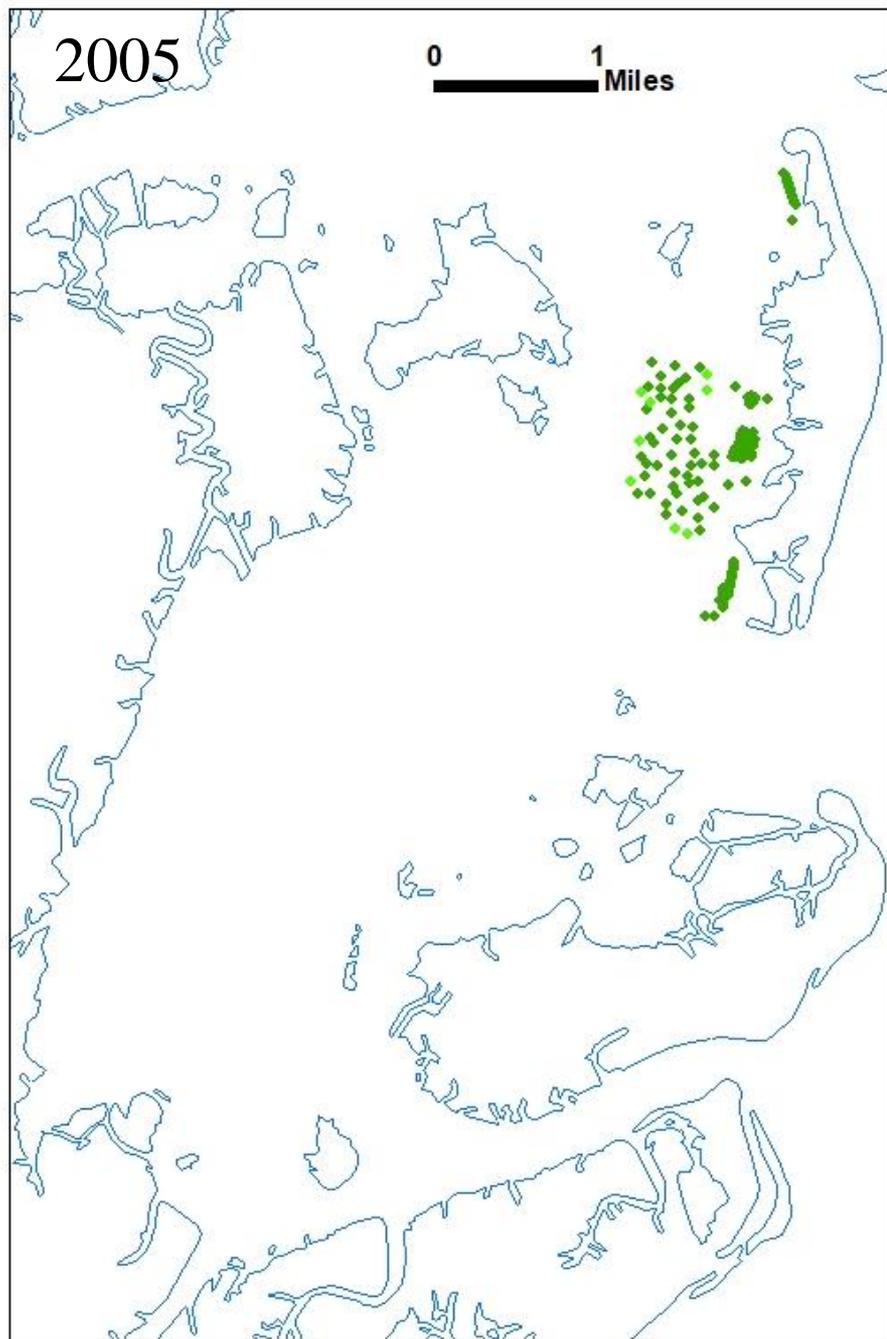


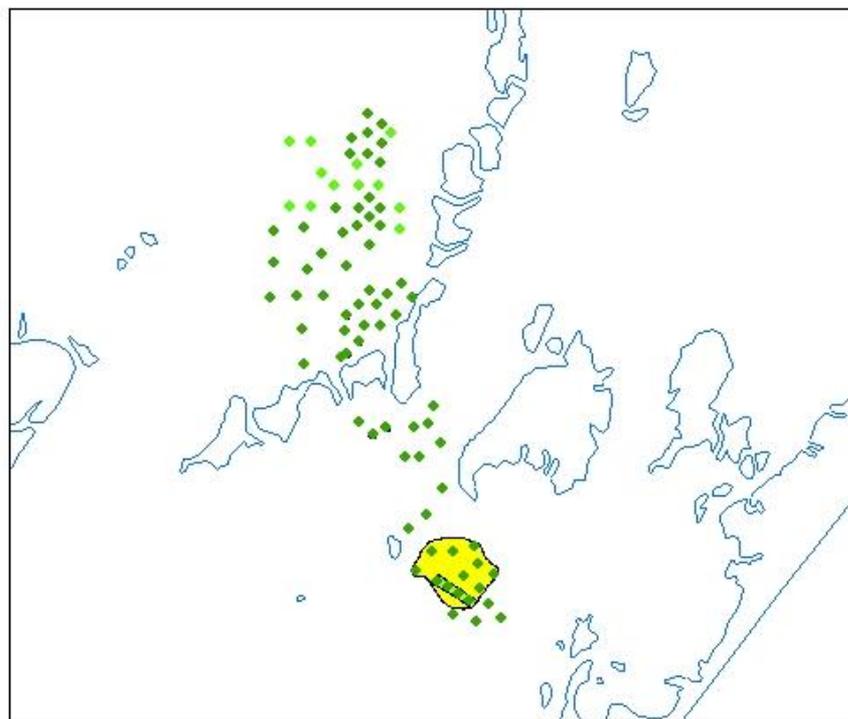
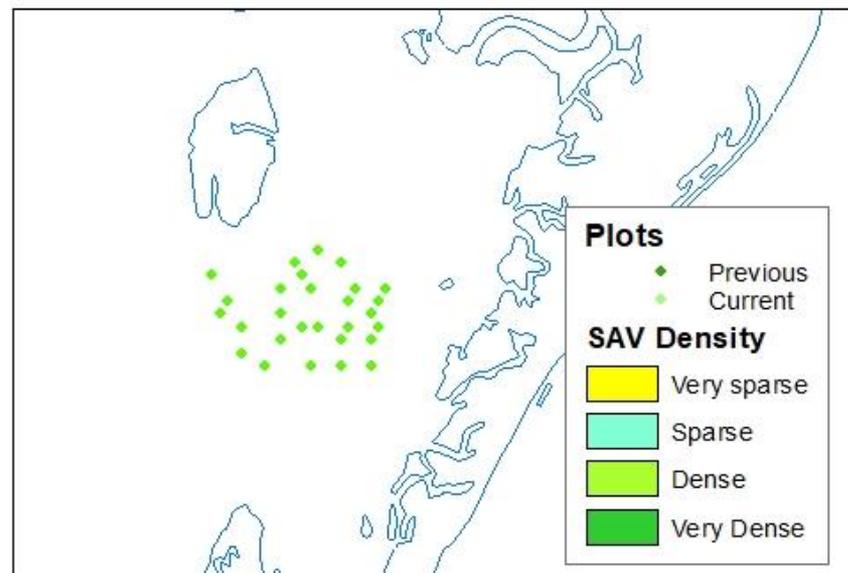
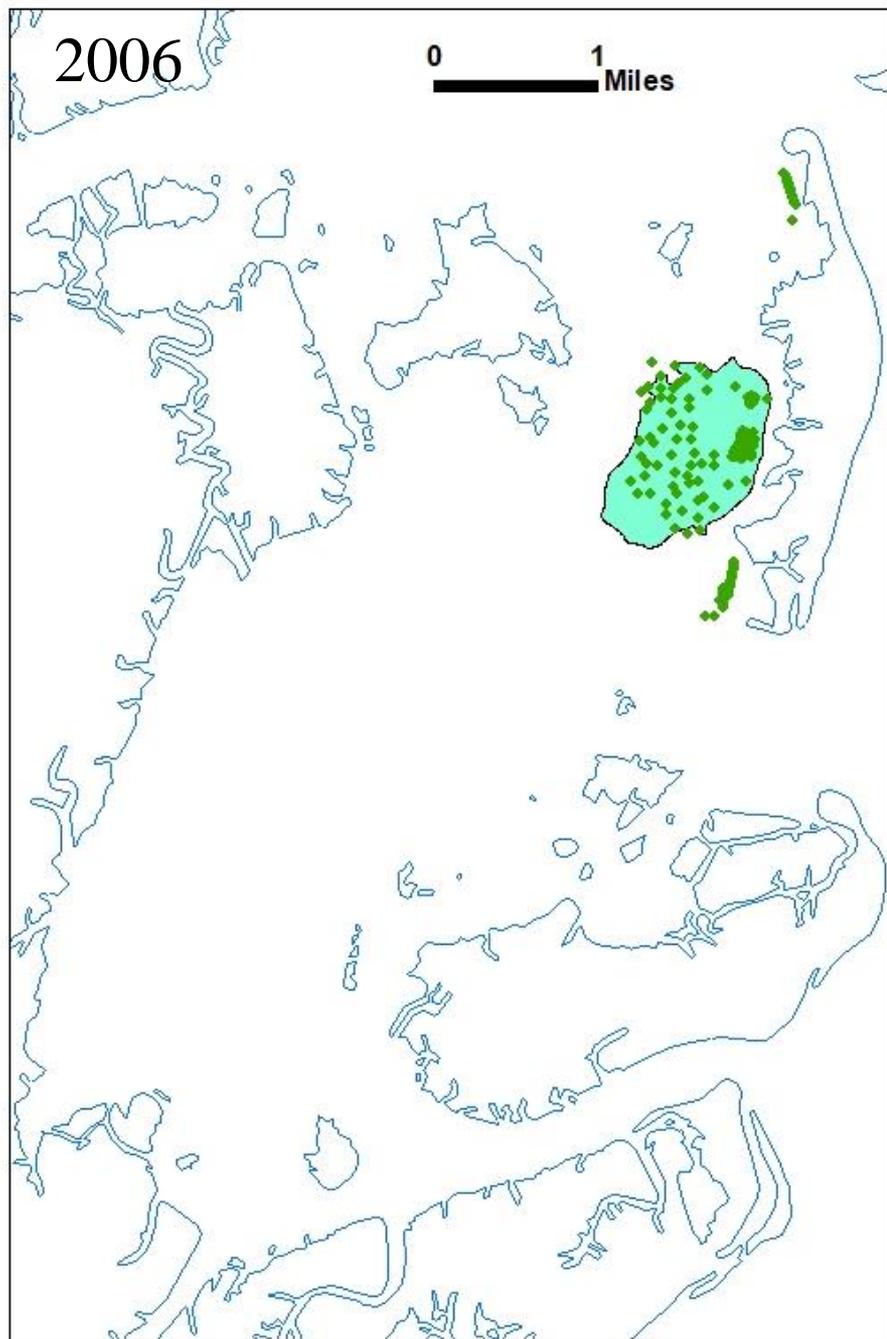


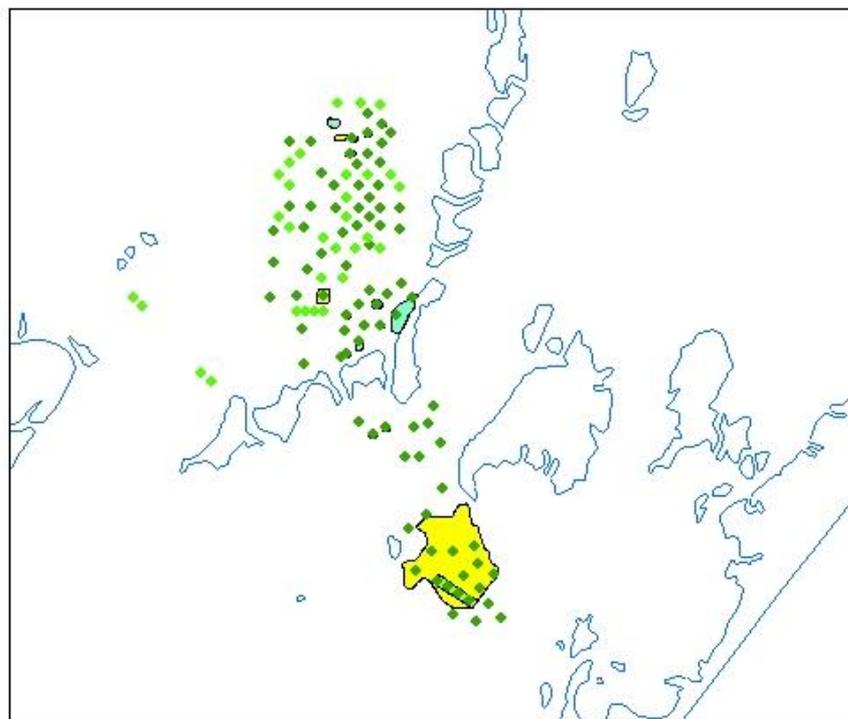
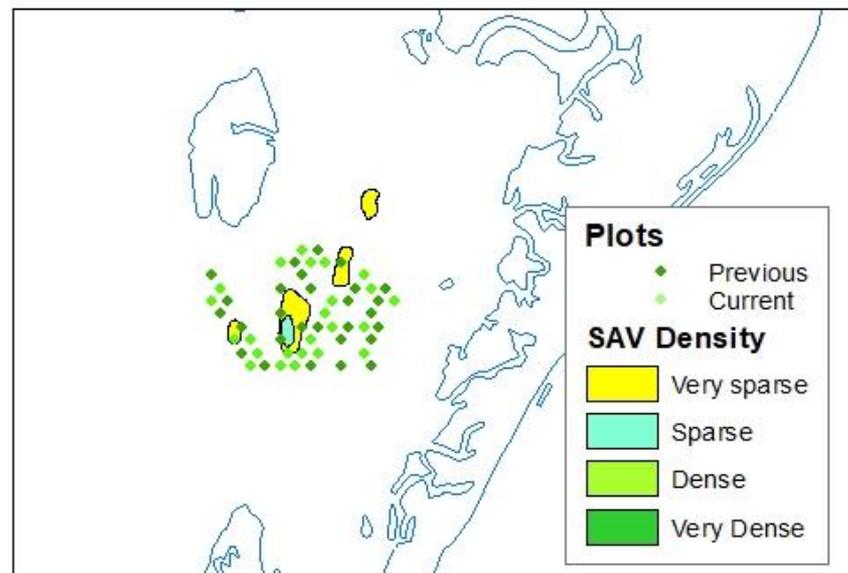
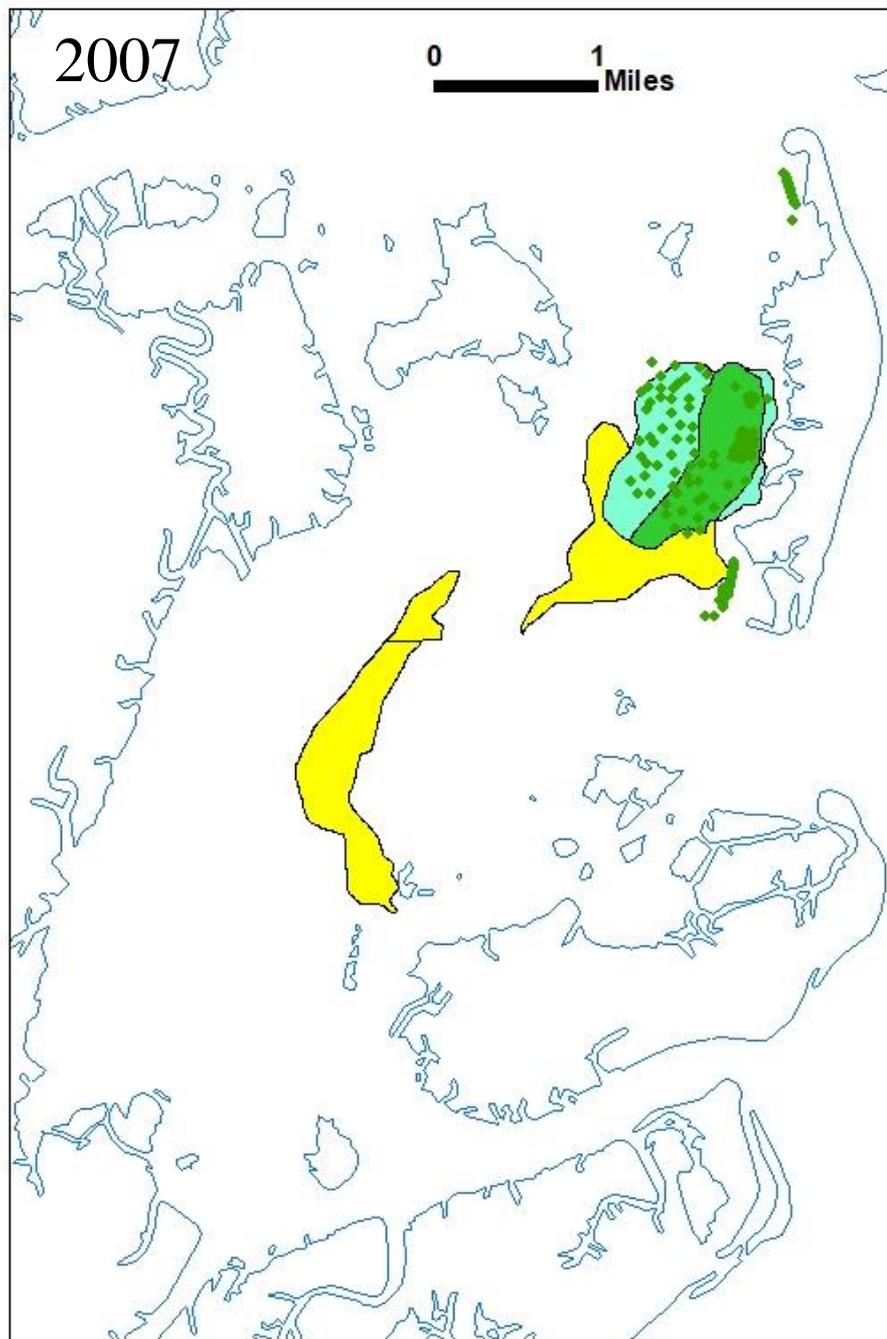






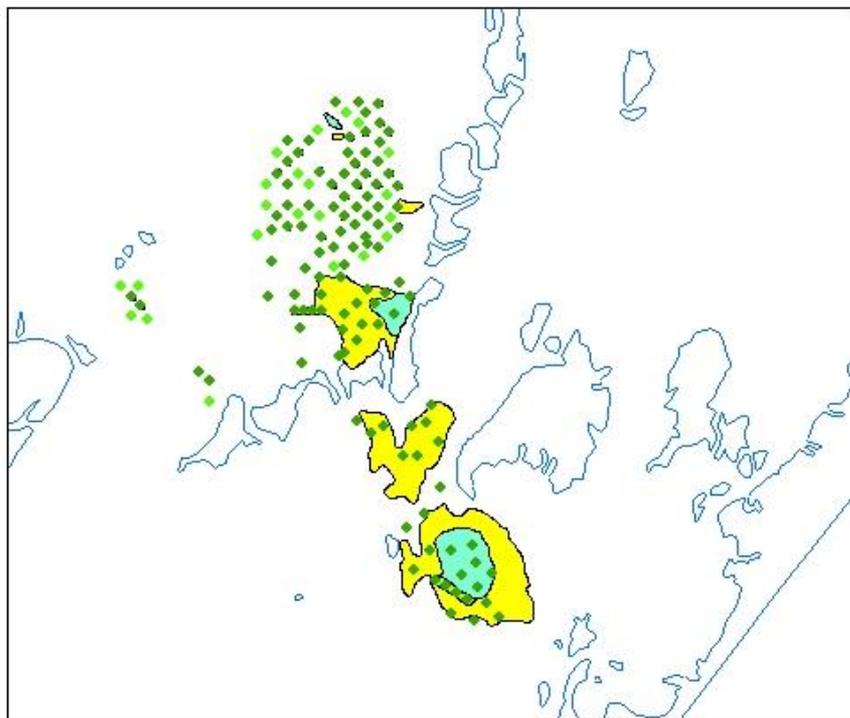
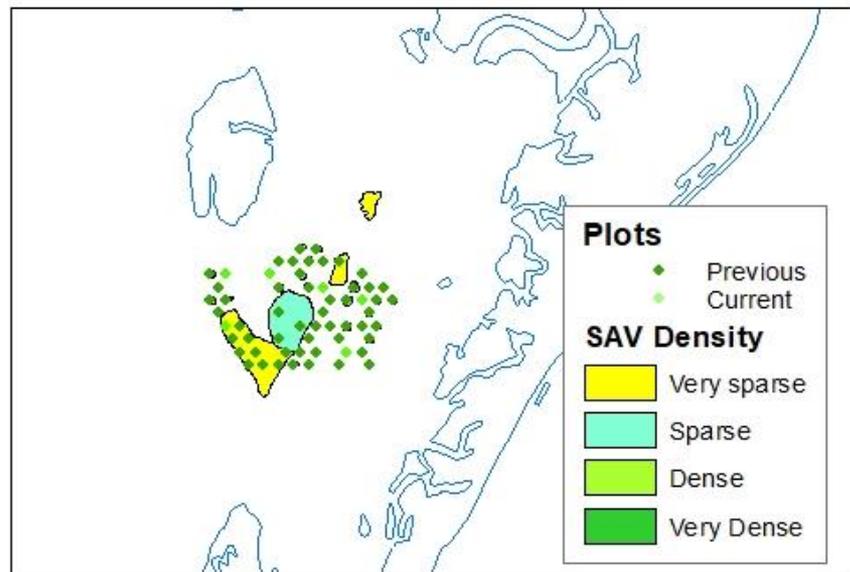
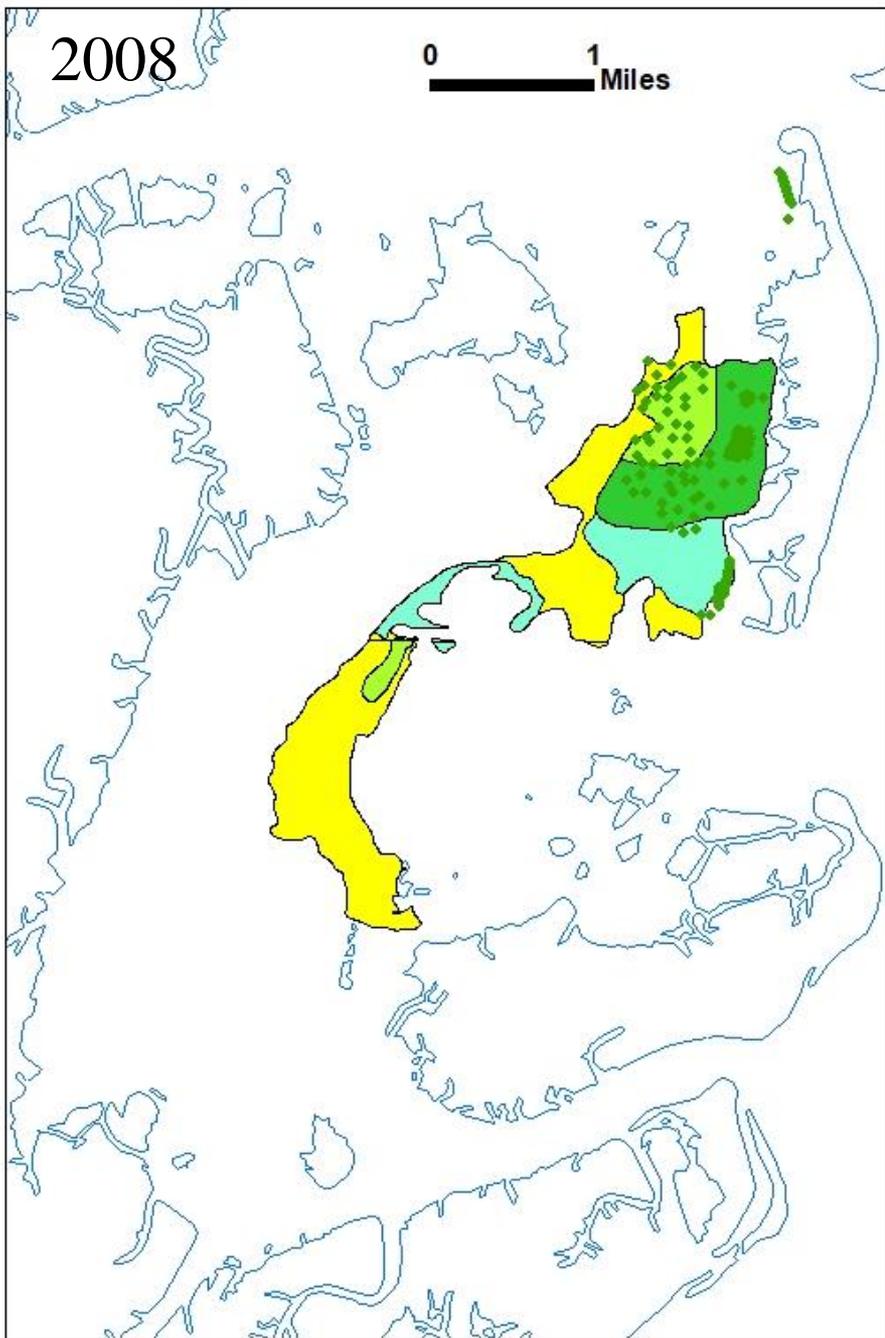






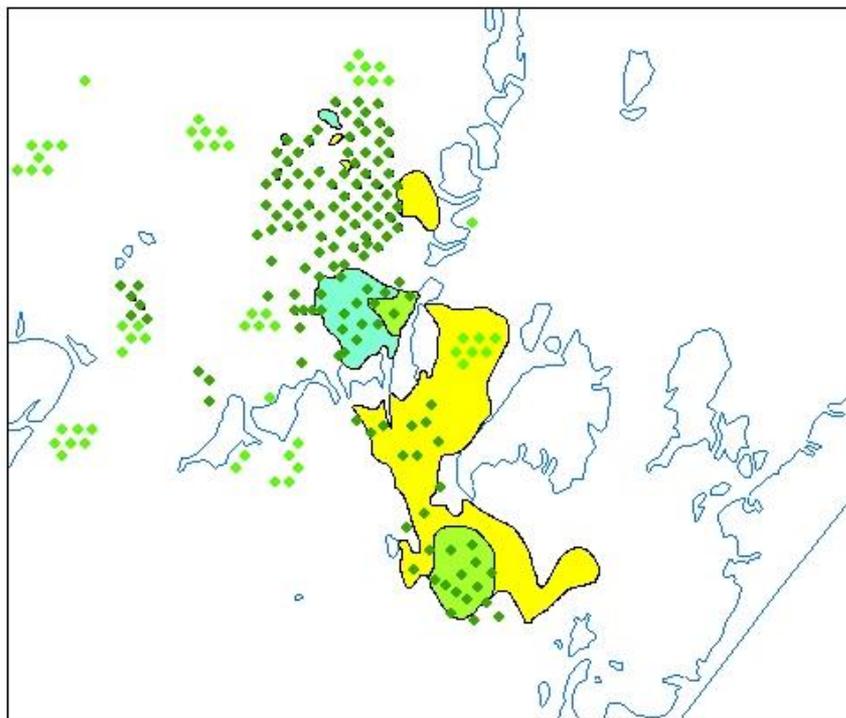
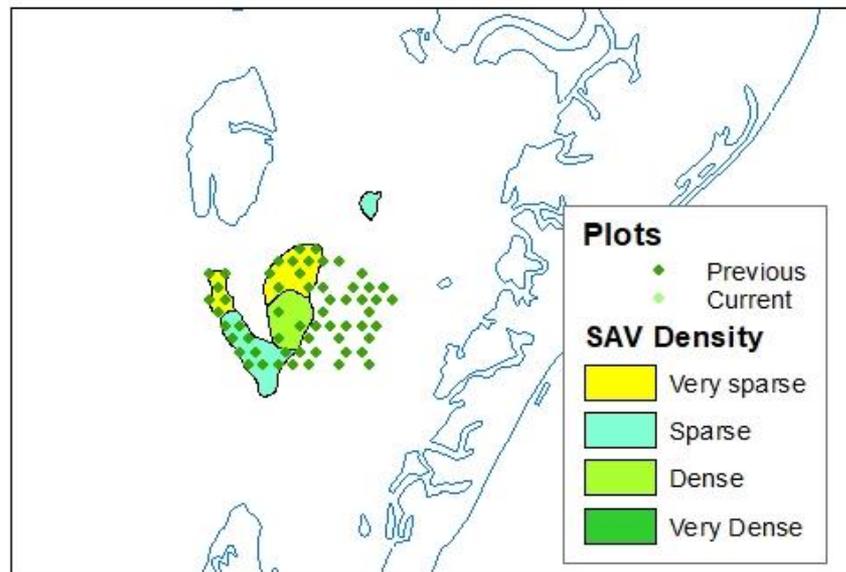
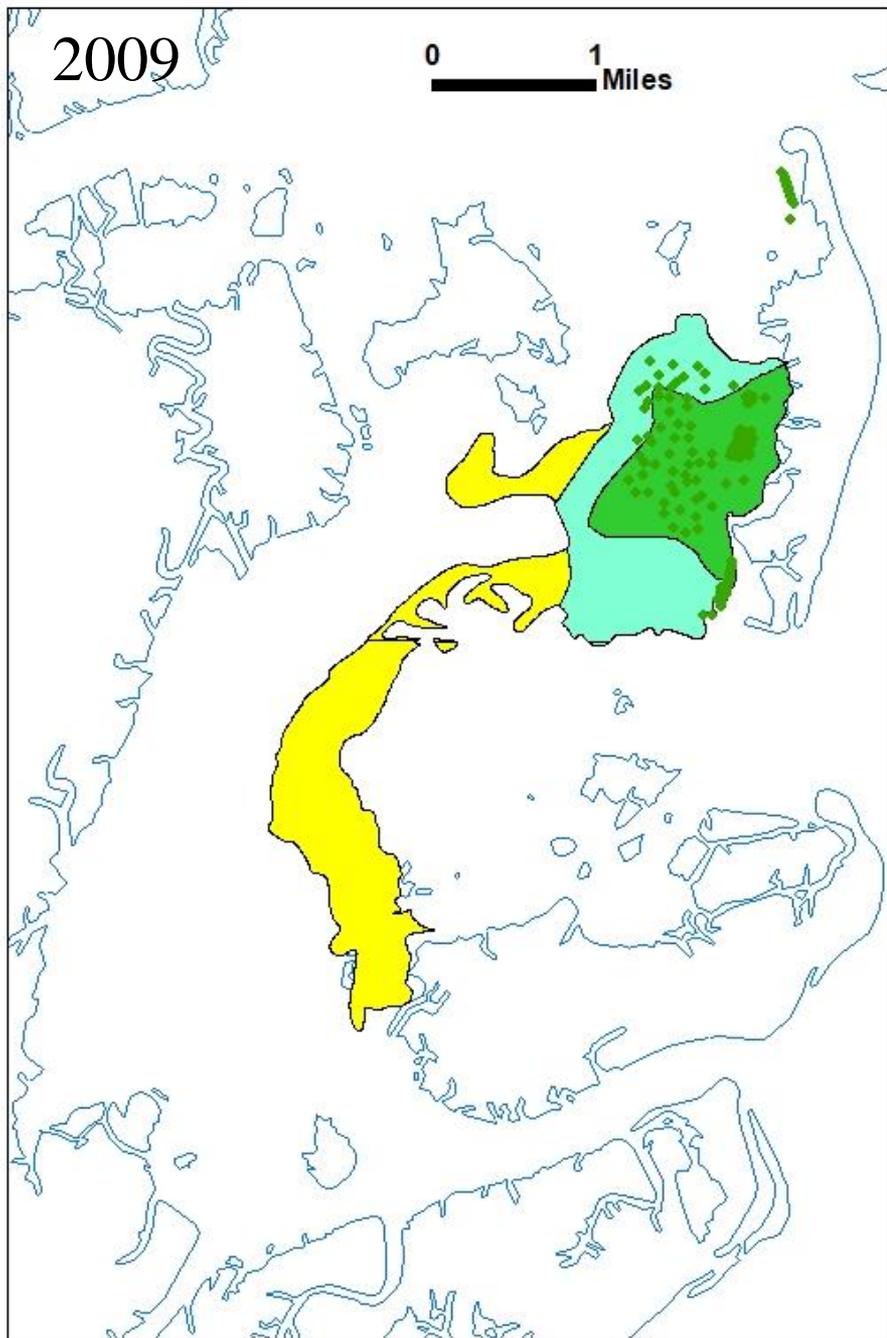
2008

0 1 Miles



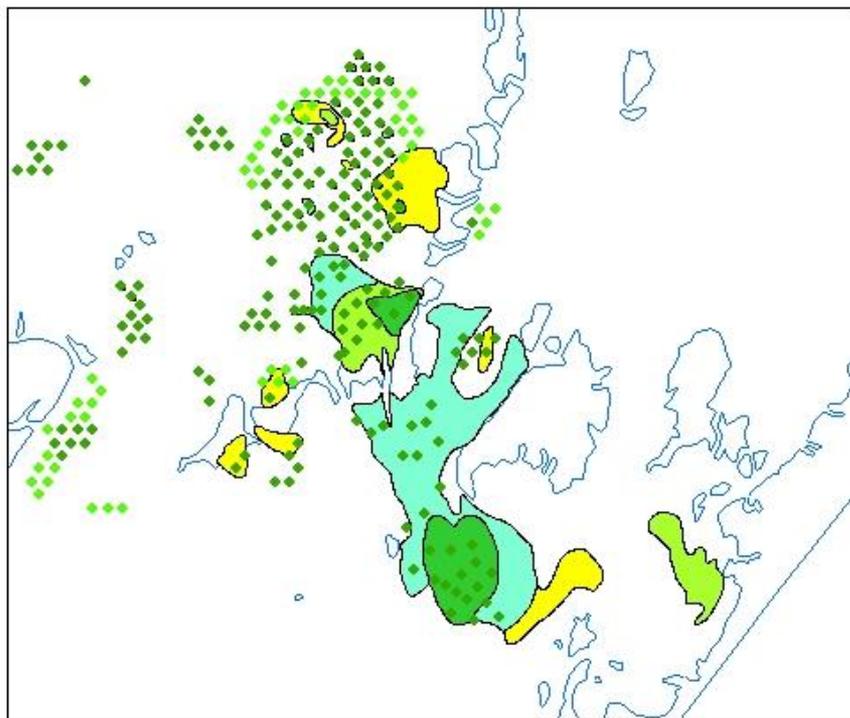
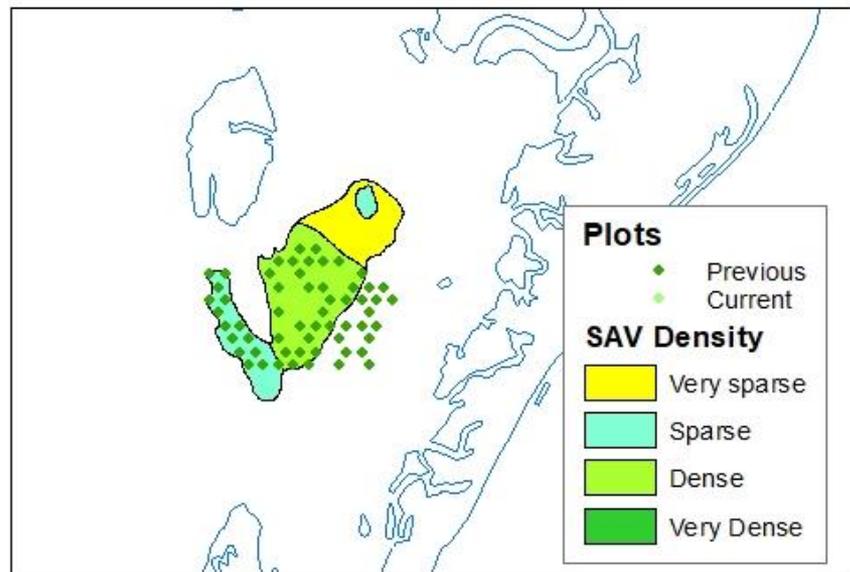
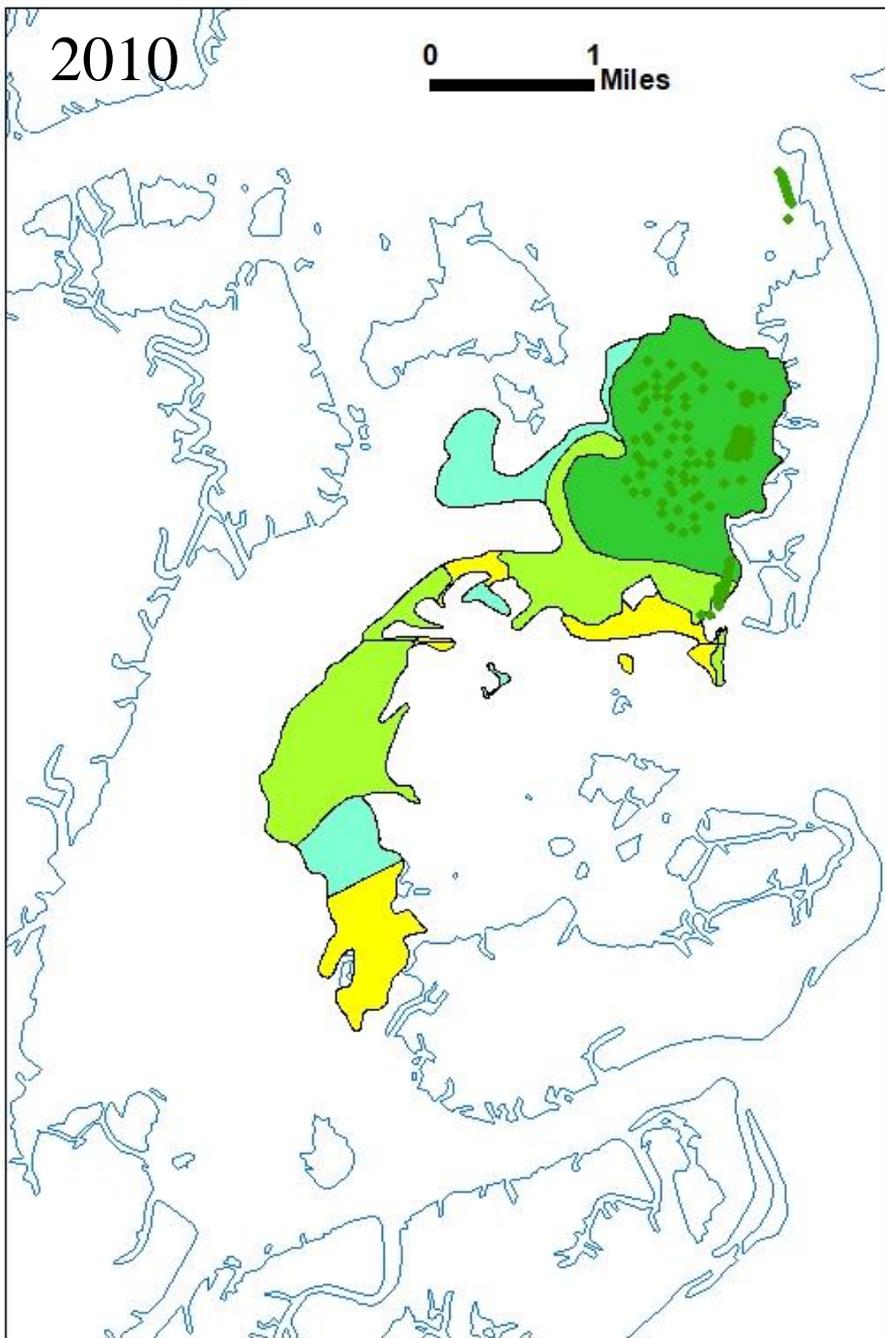
2009

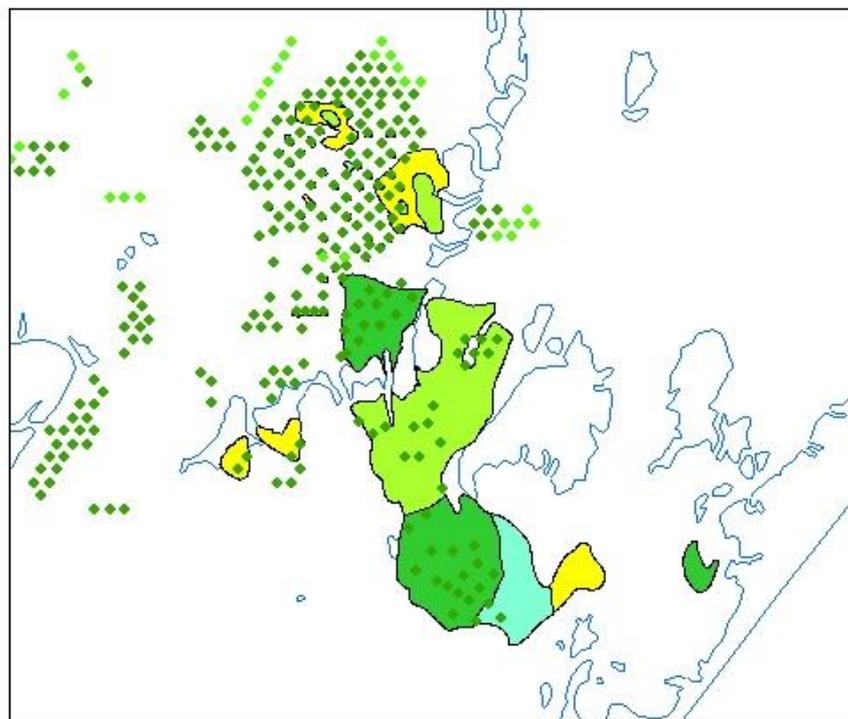
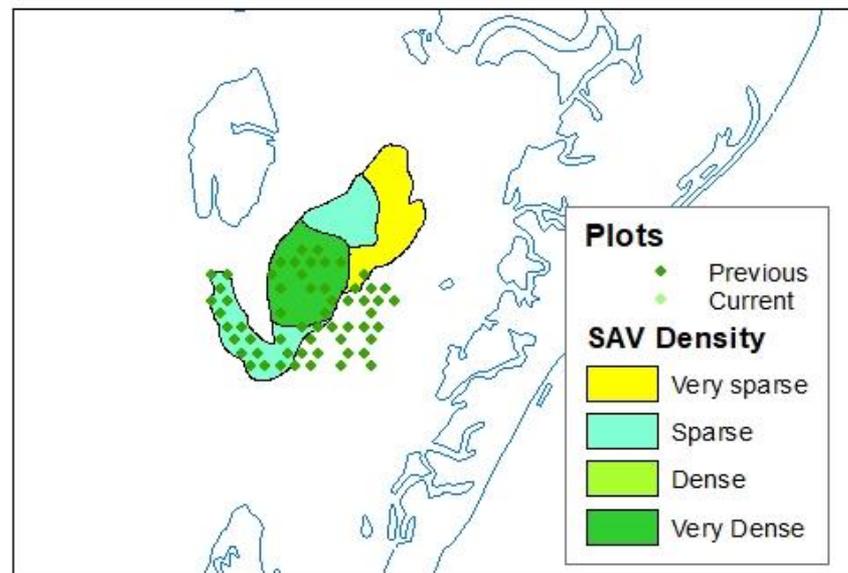
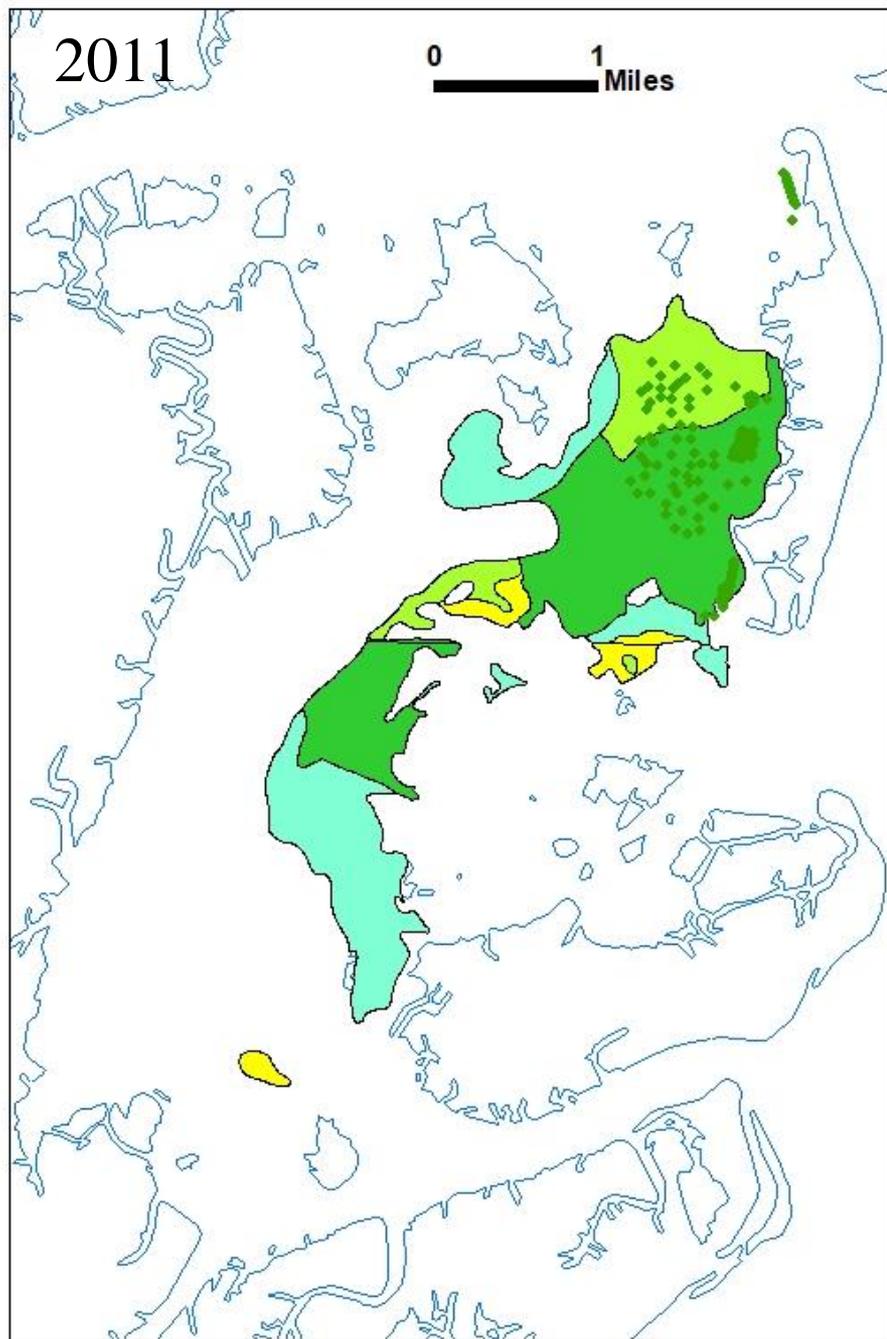
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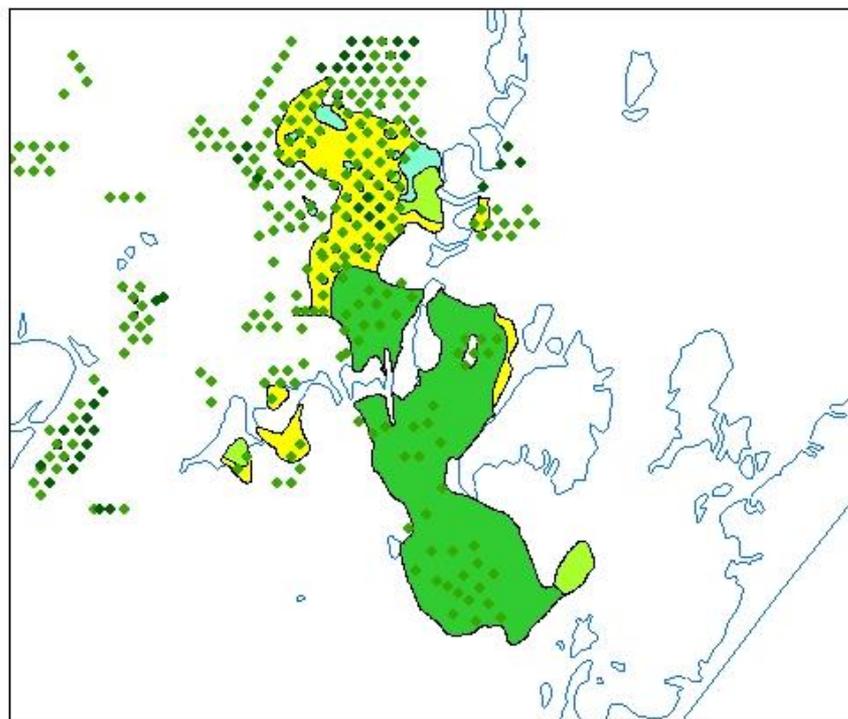
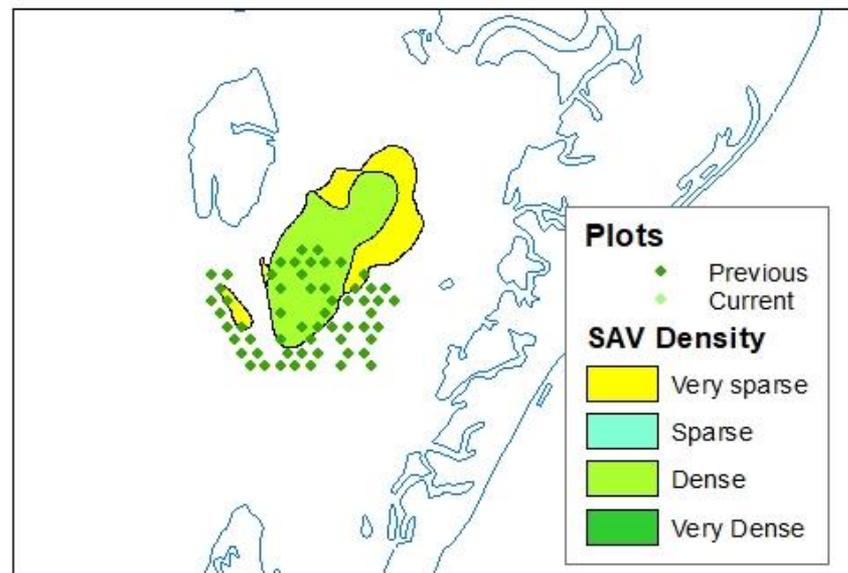
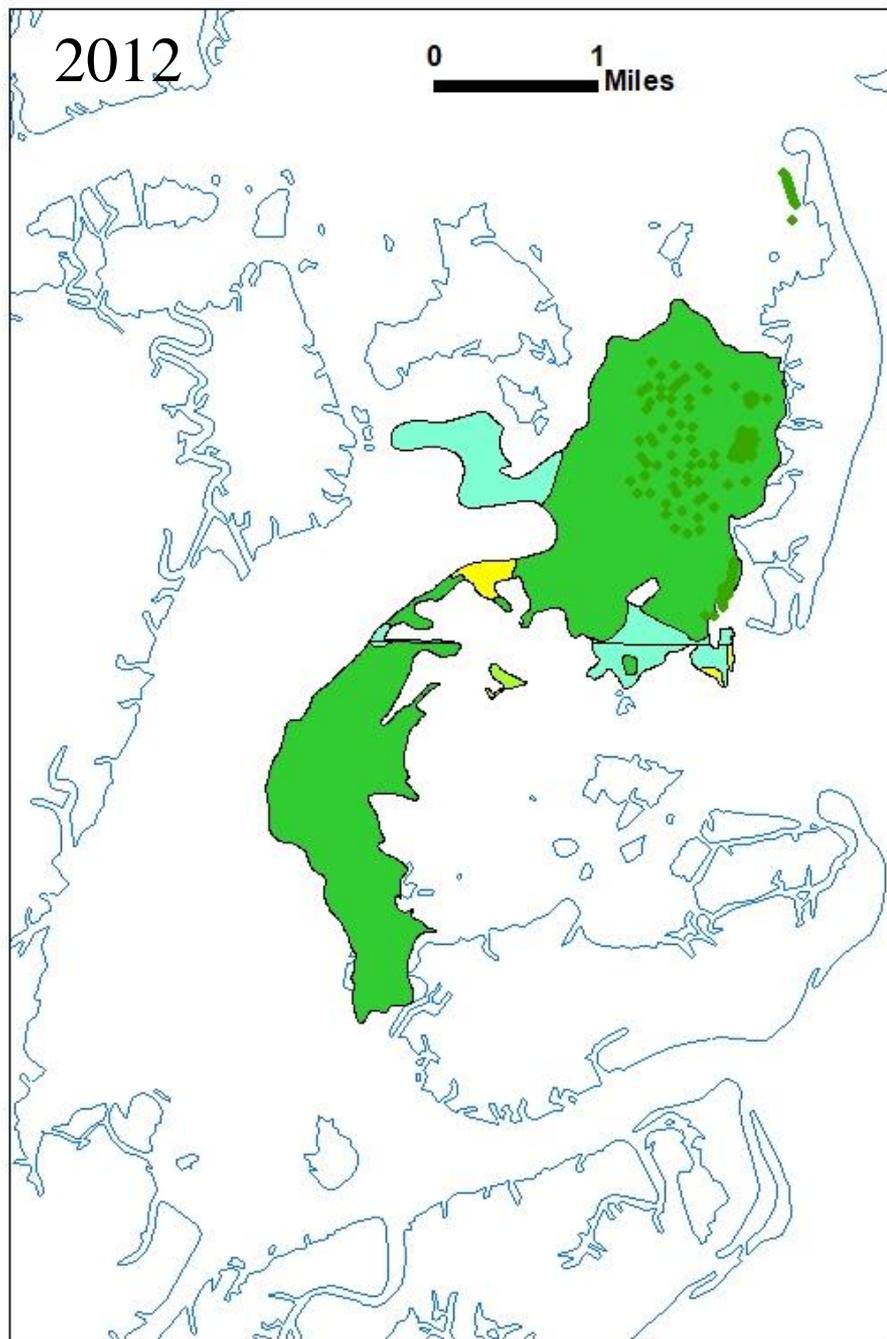


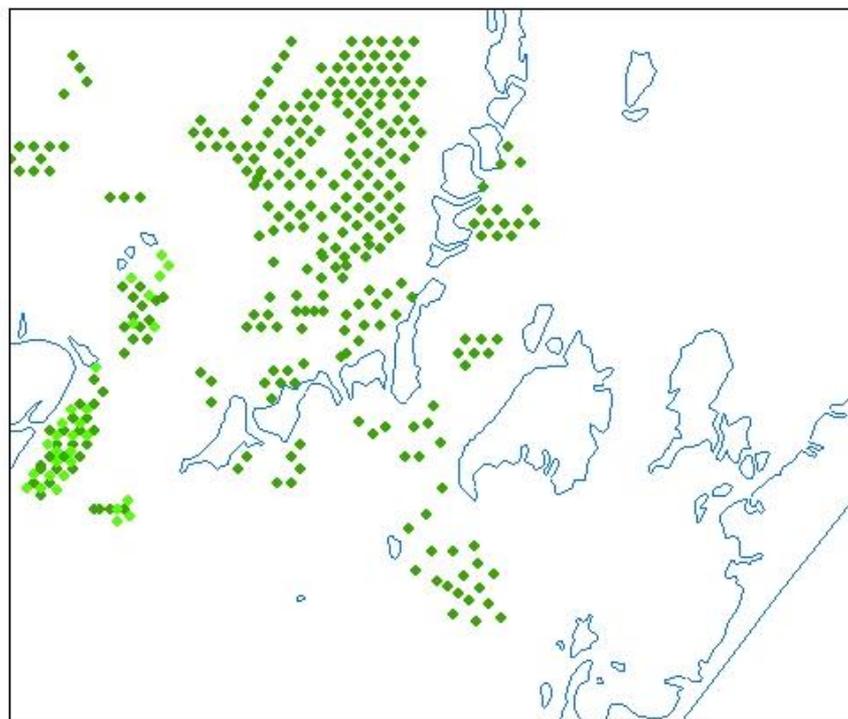
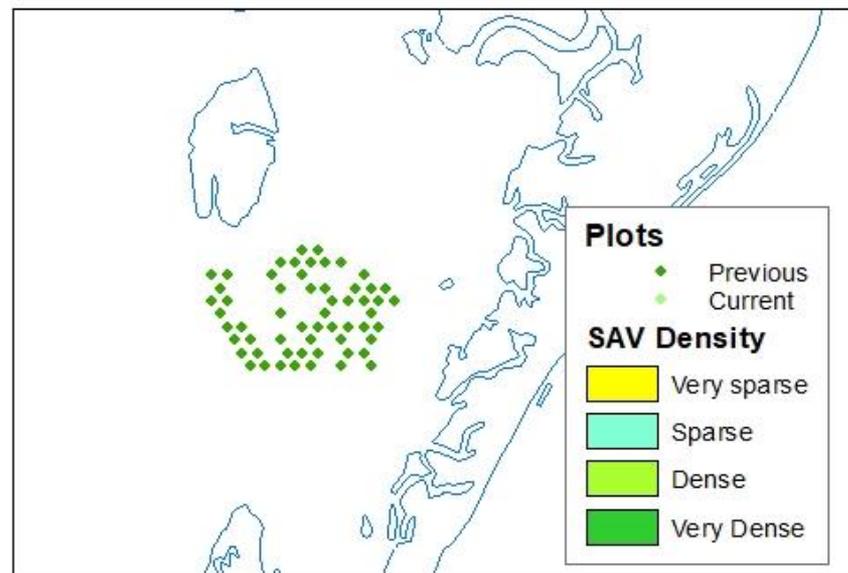
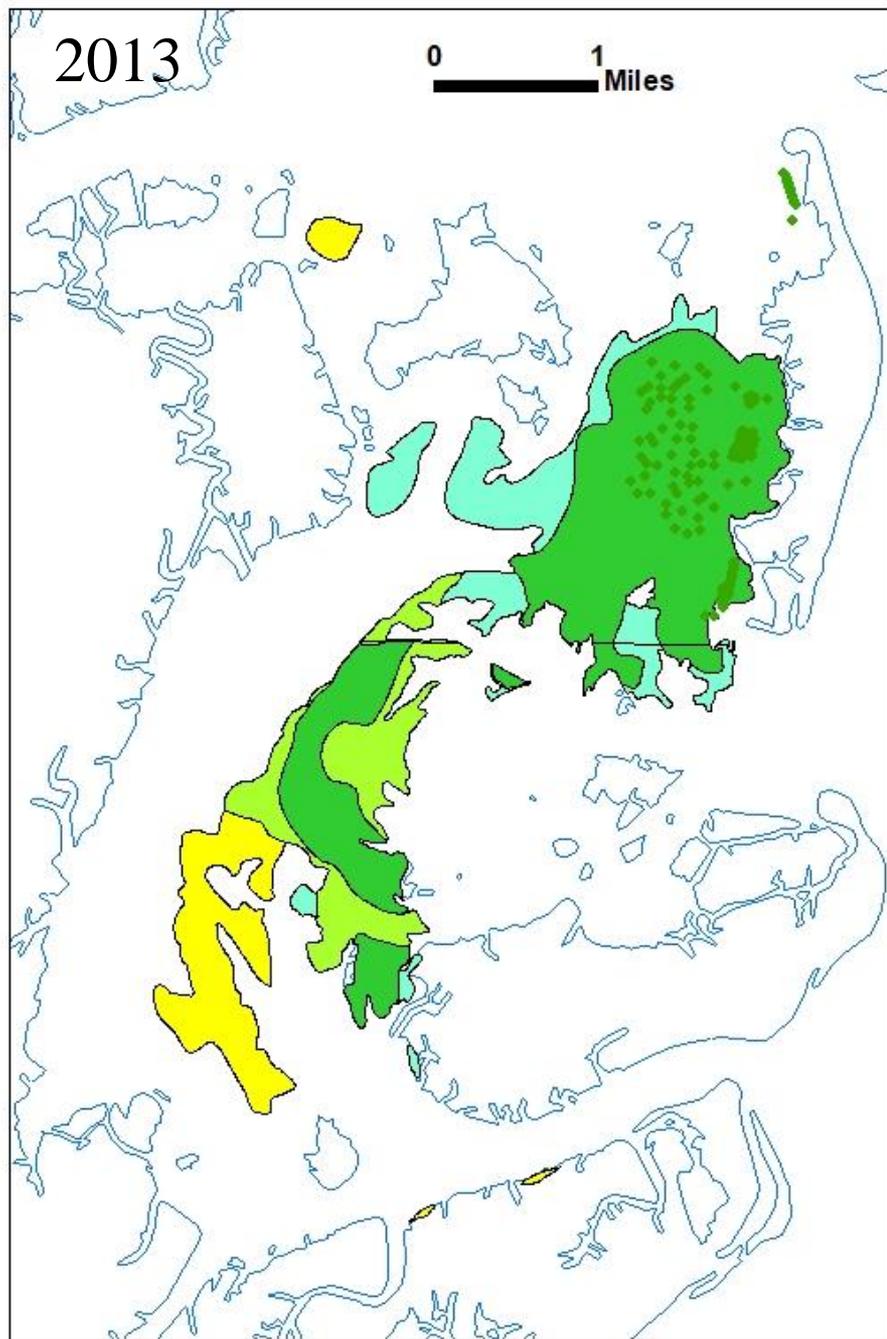
2010

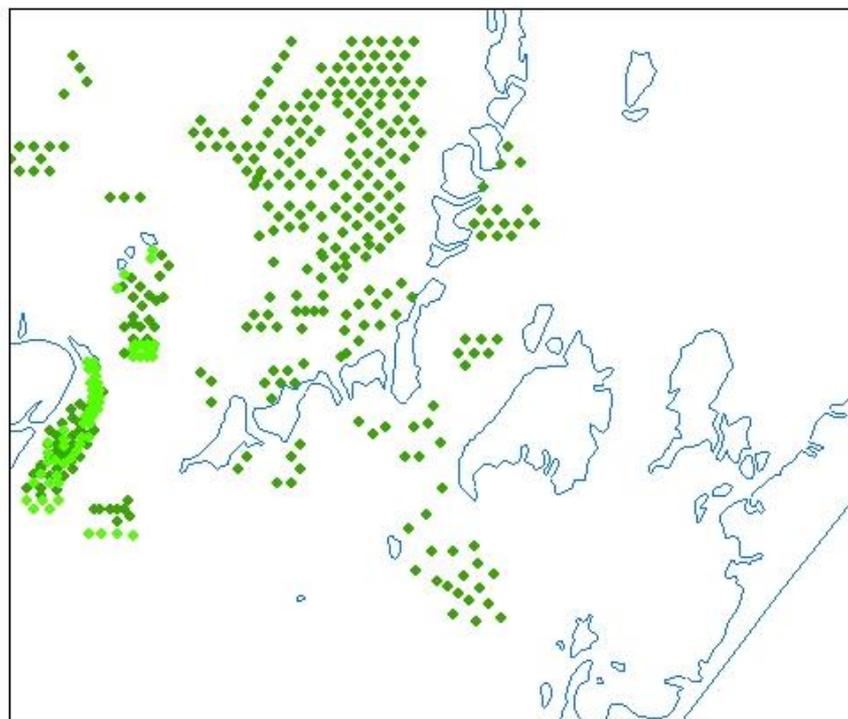
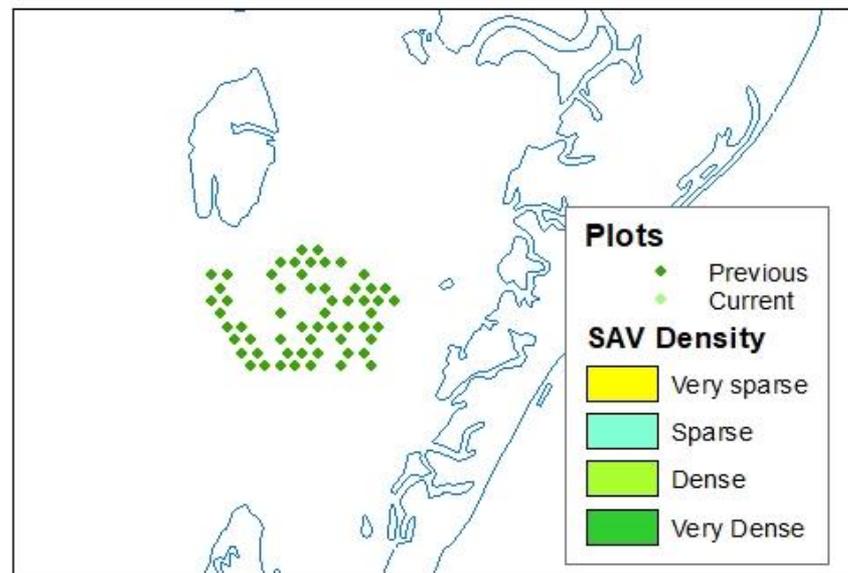
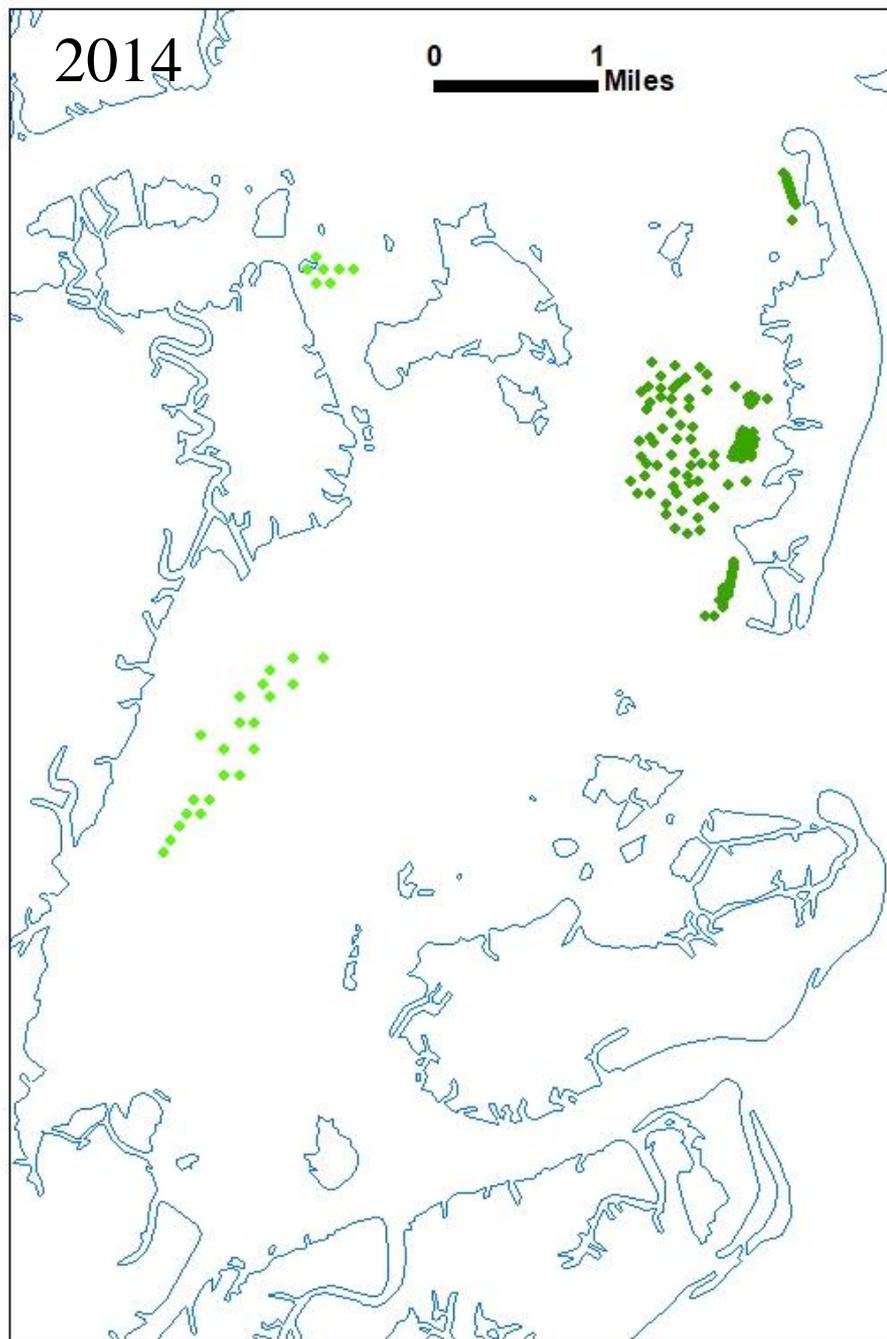
0 1 Miles

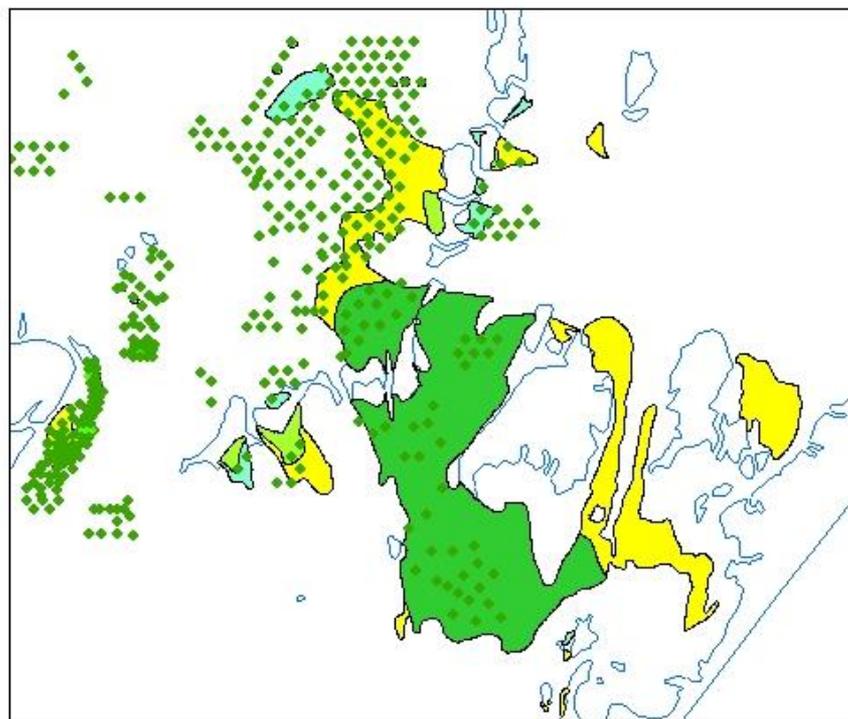
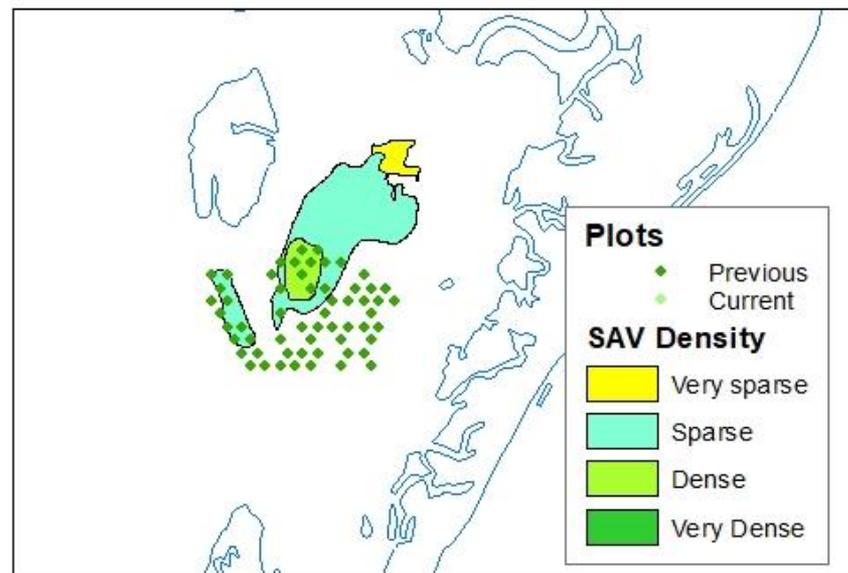
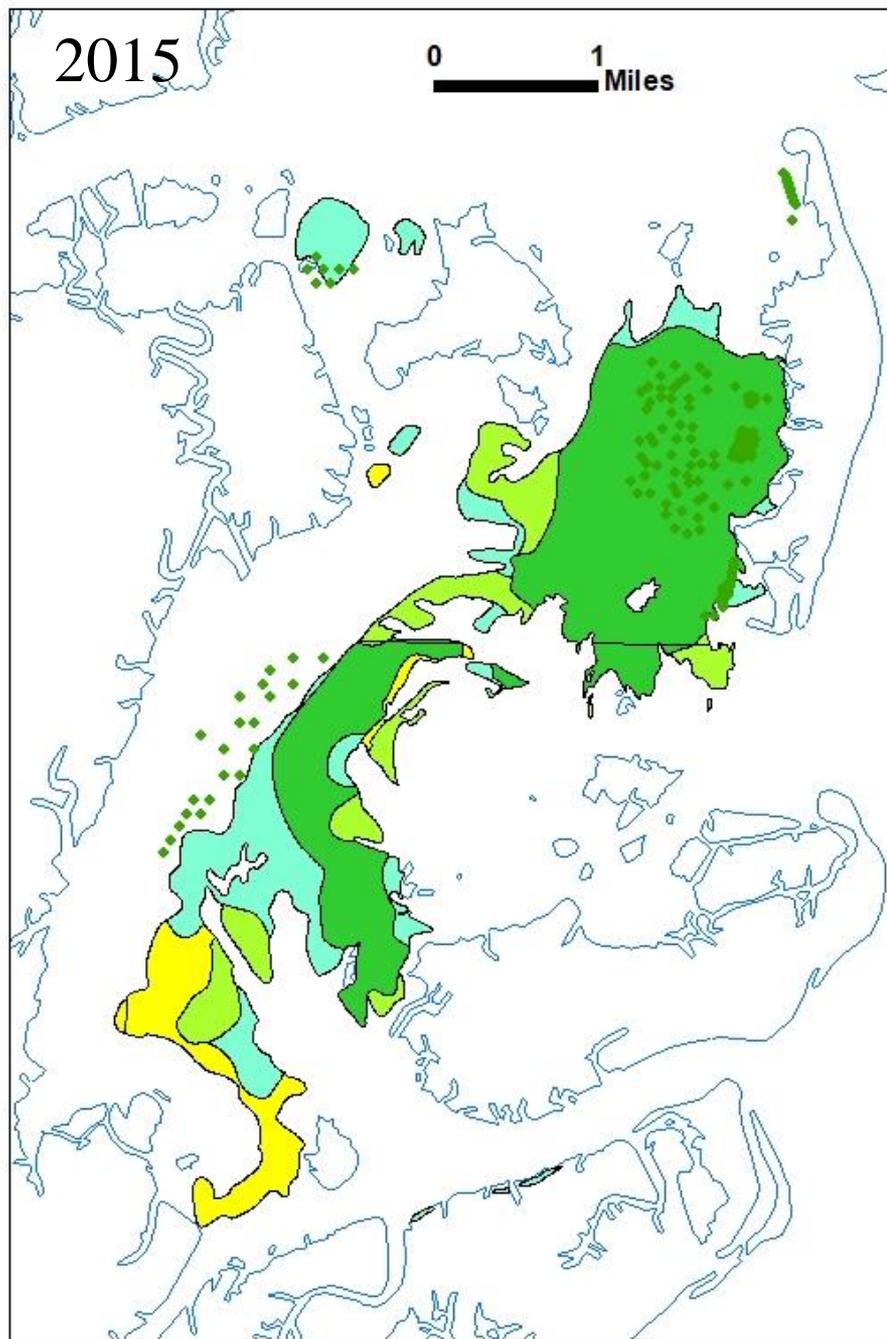


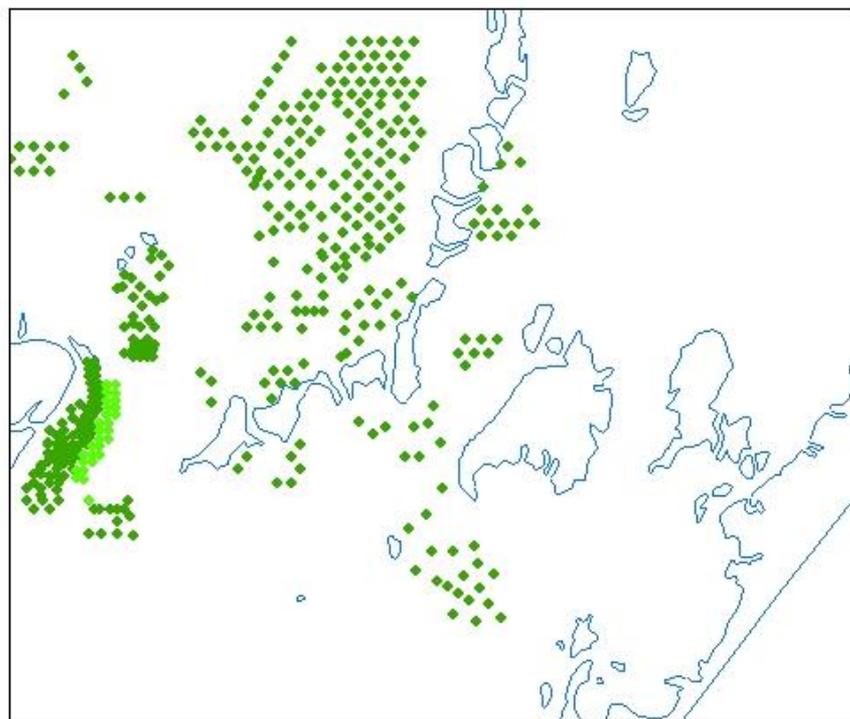
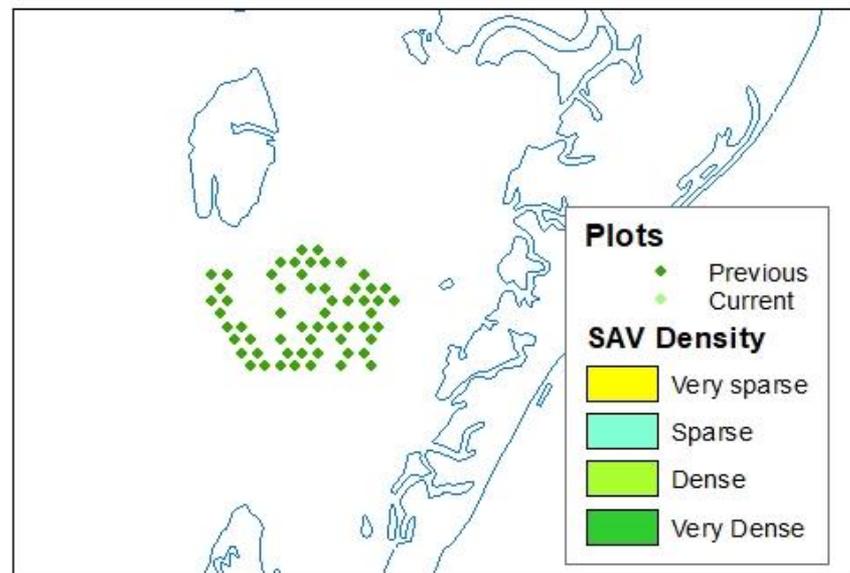
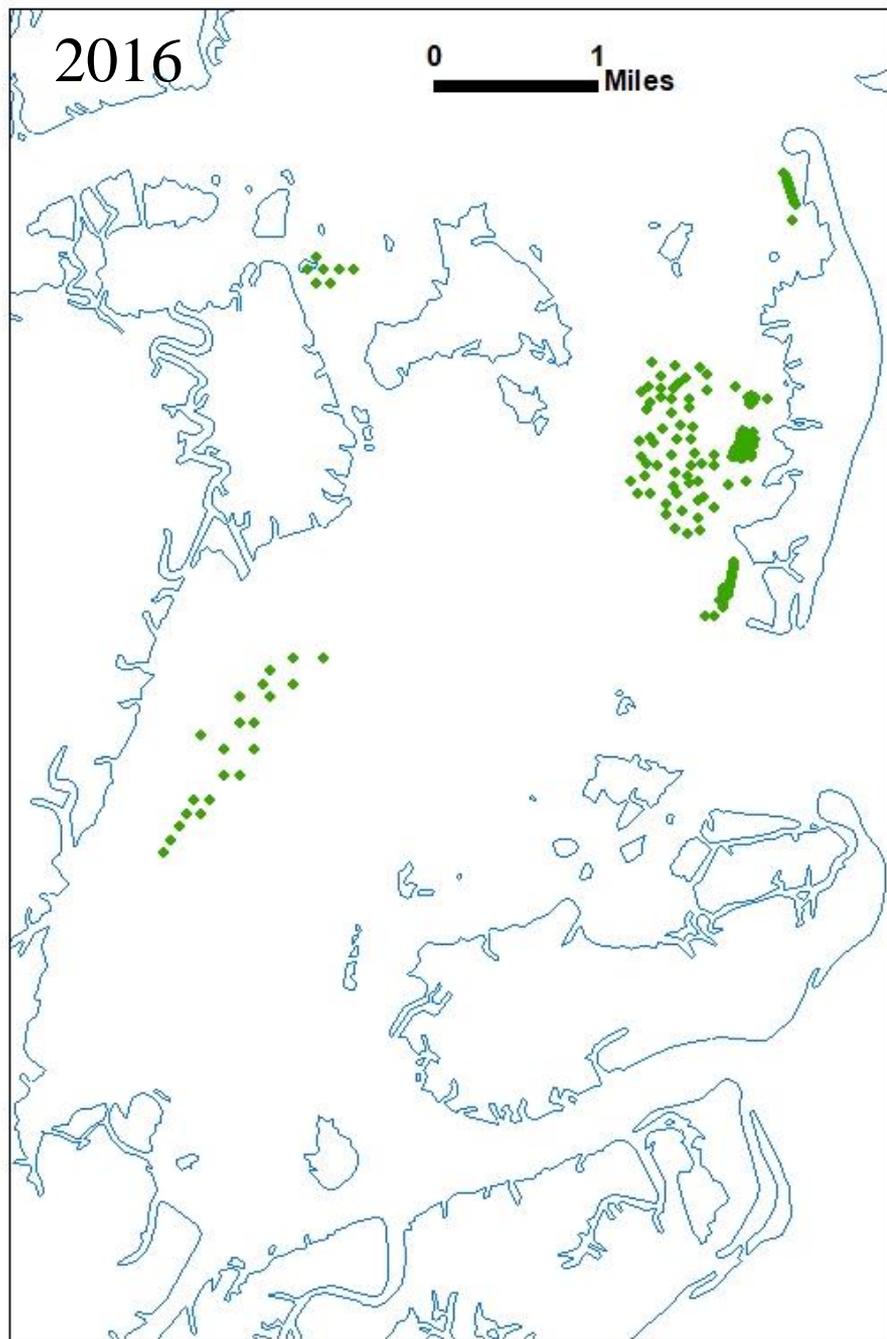


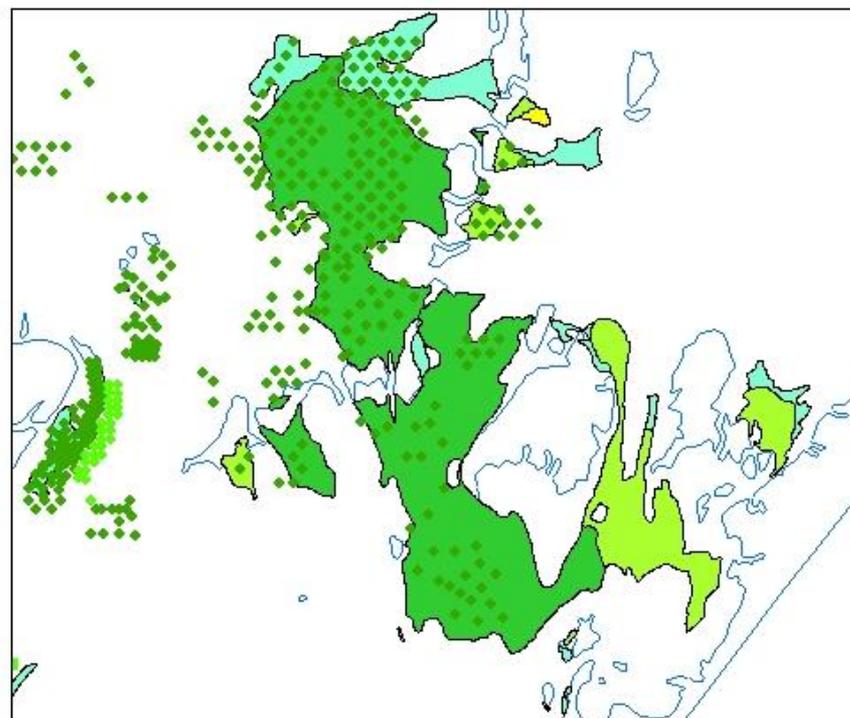
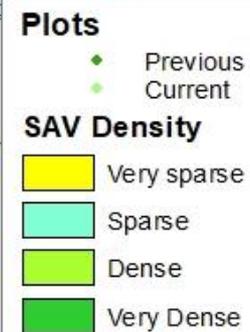
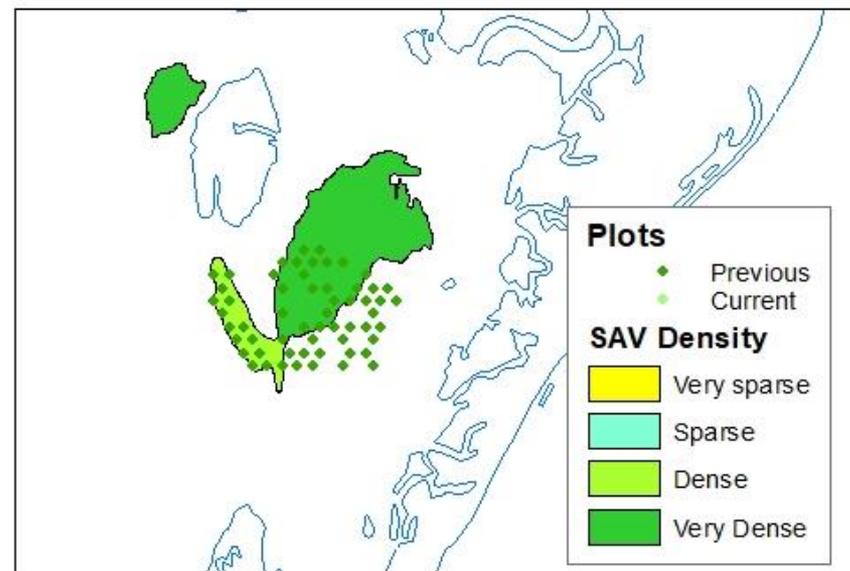
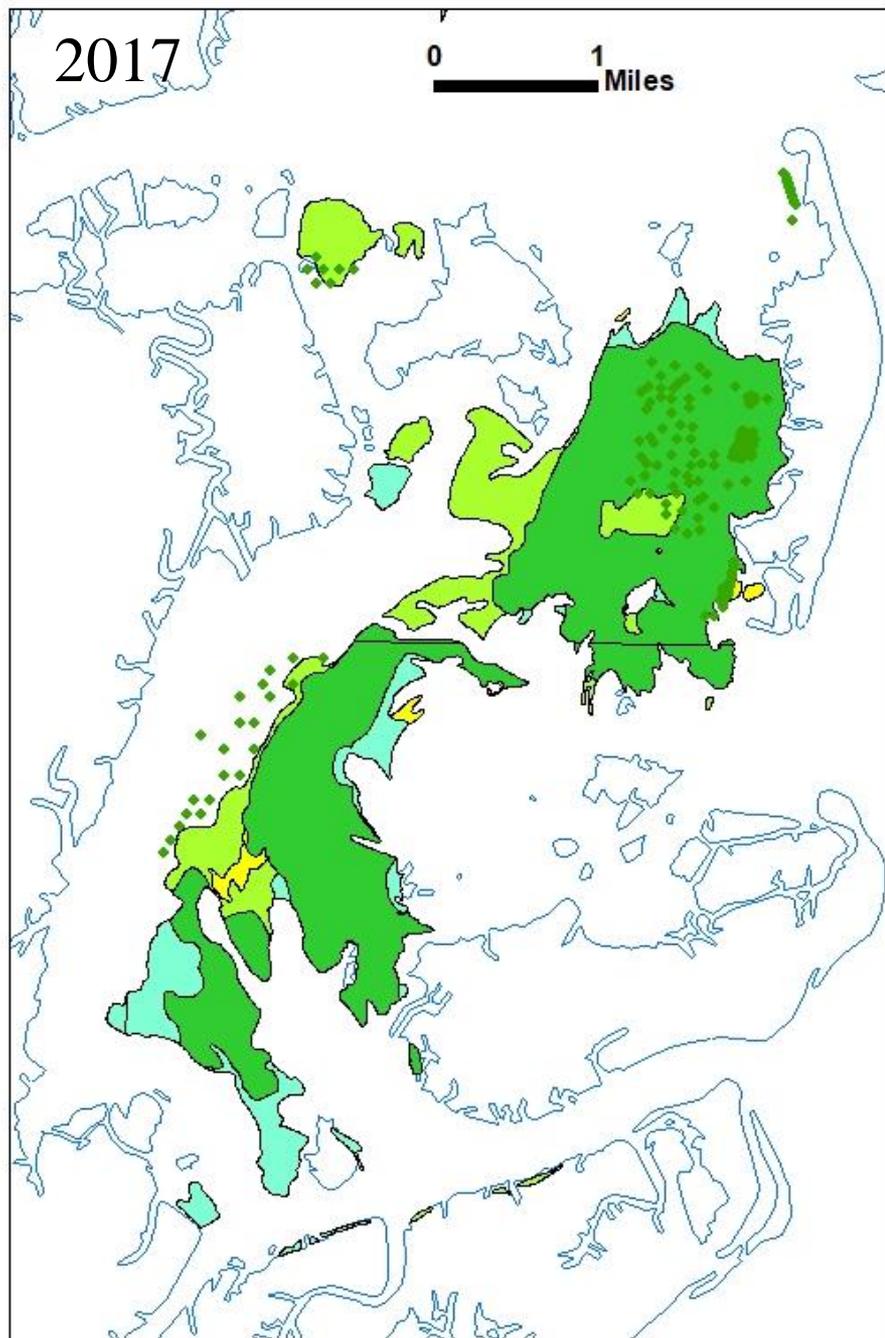


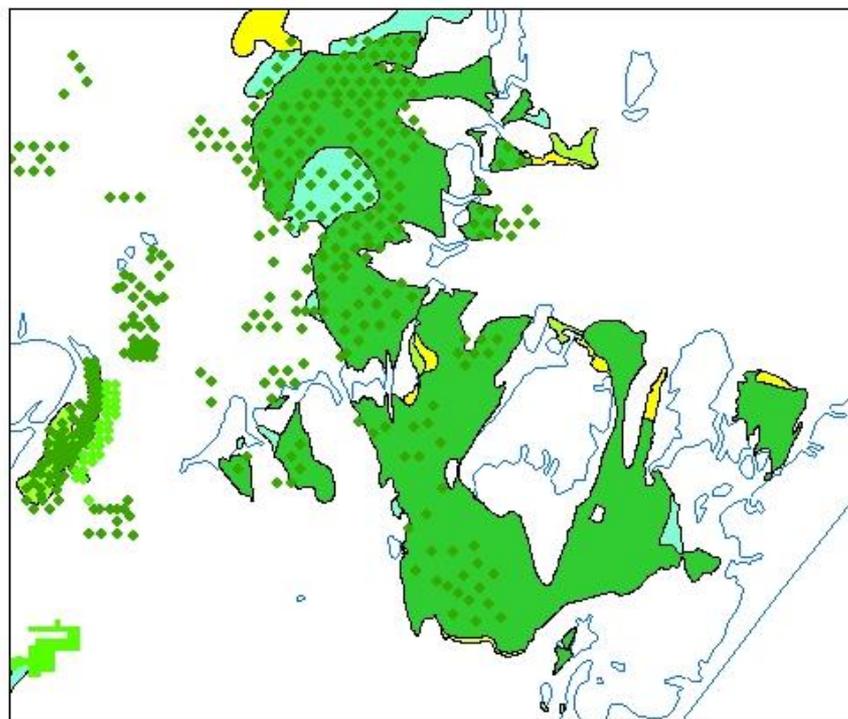
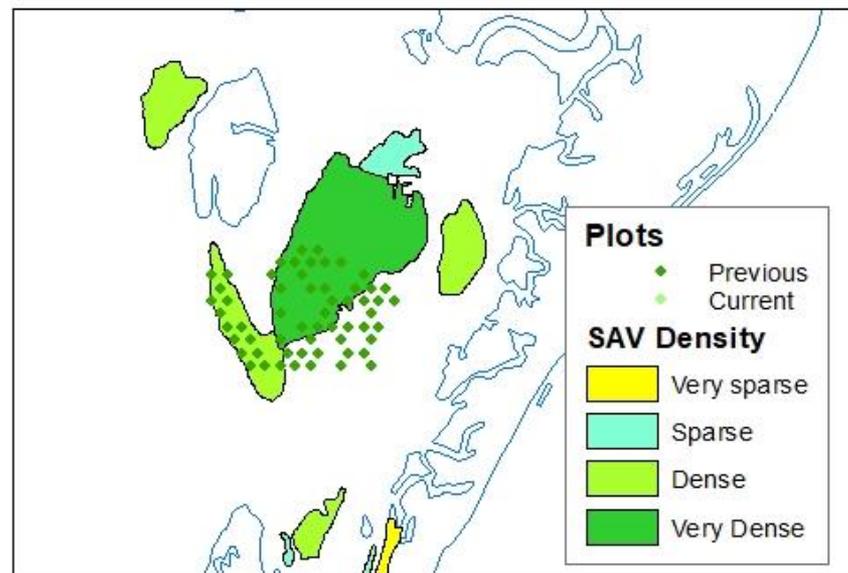
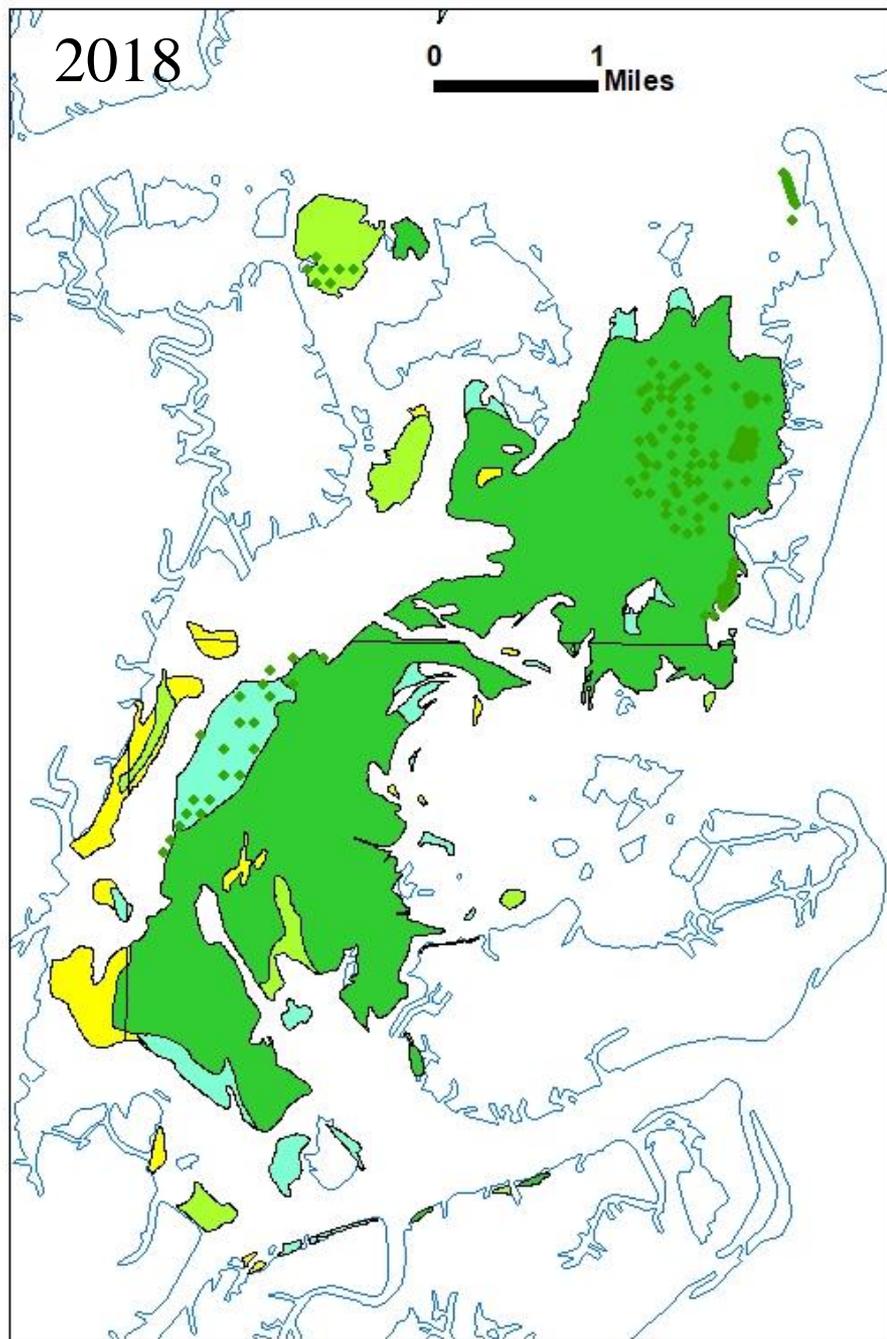


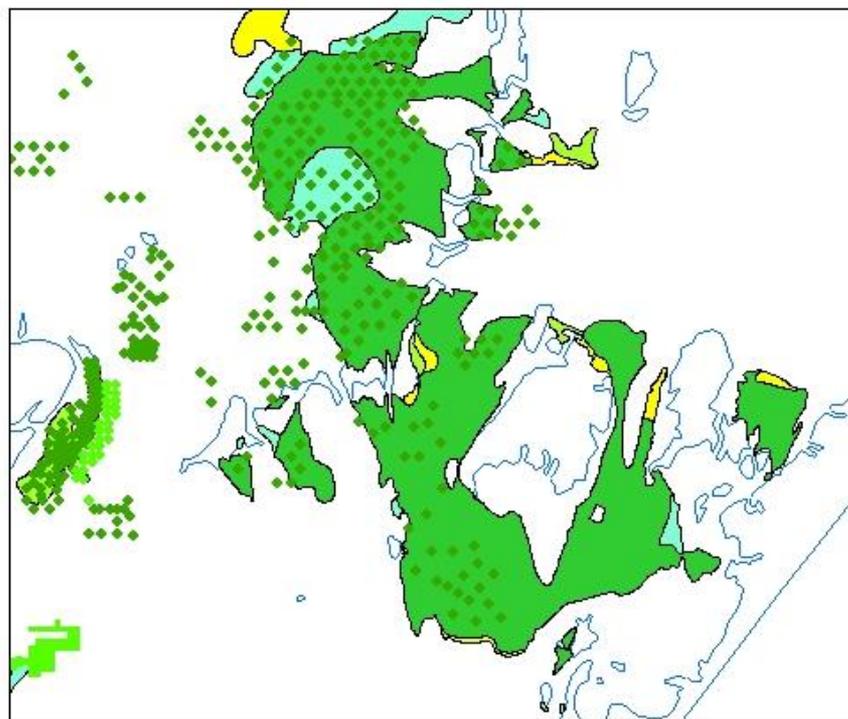
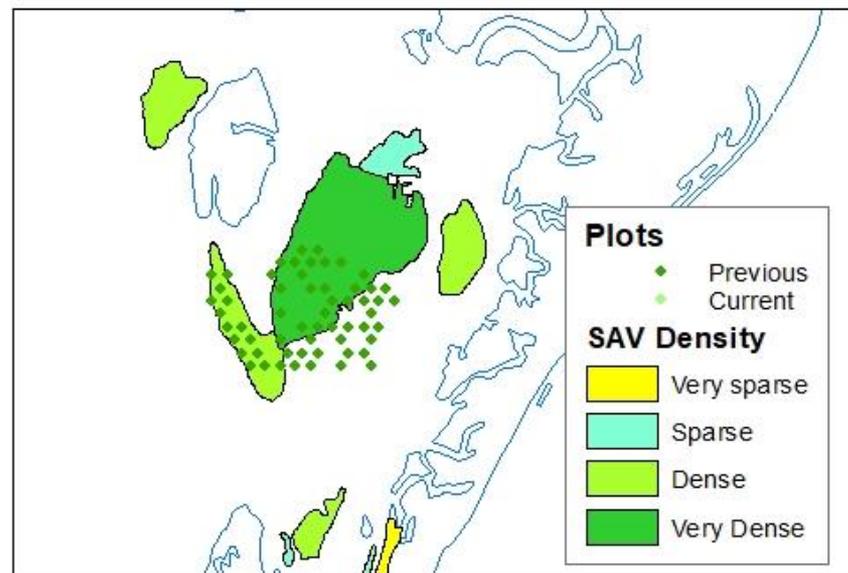
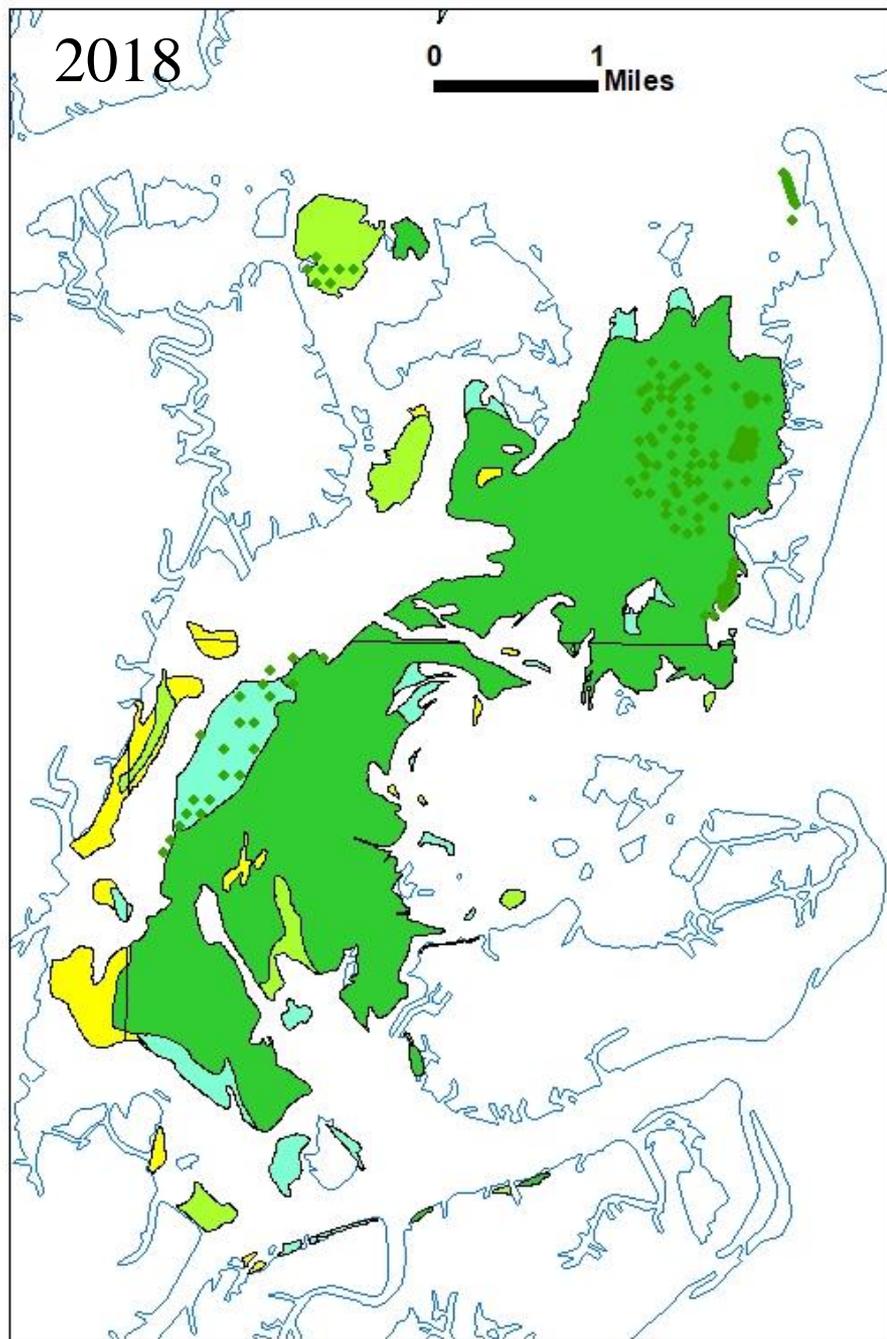


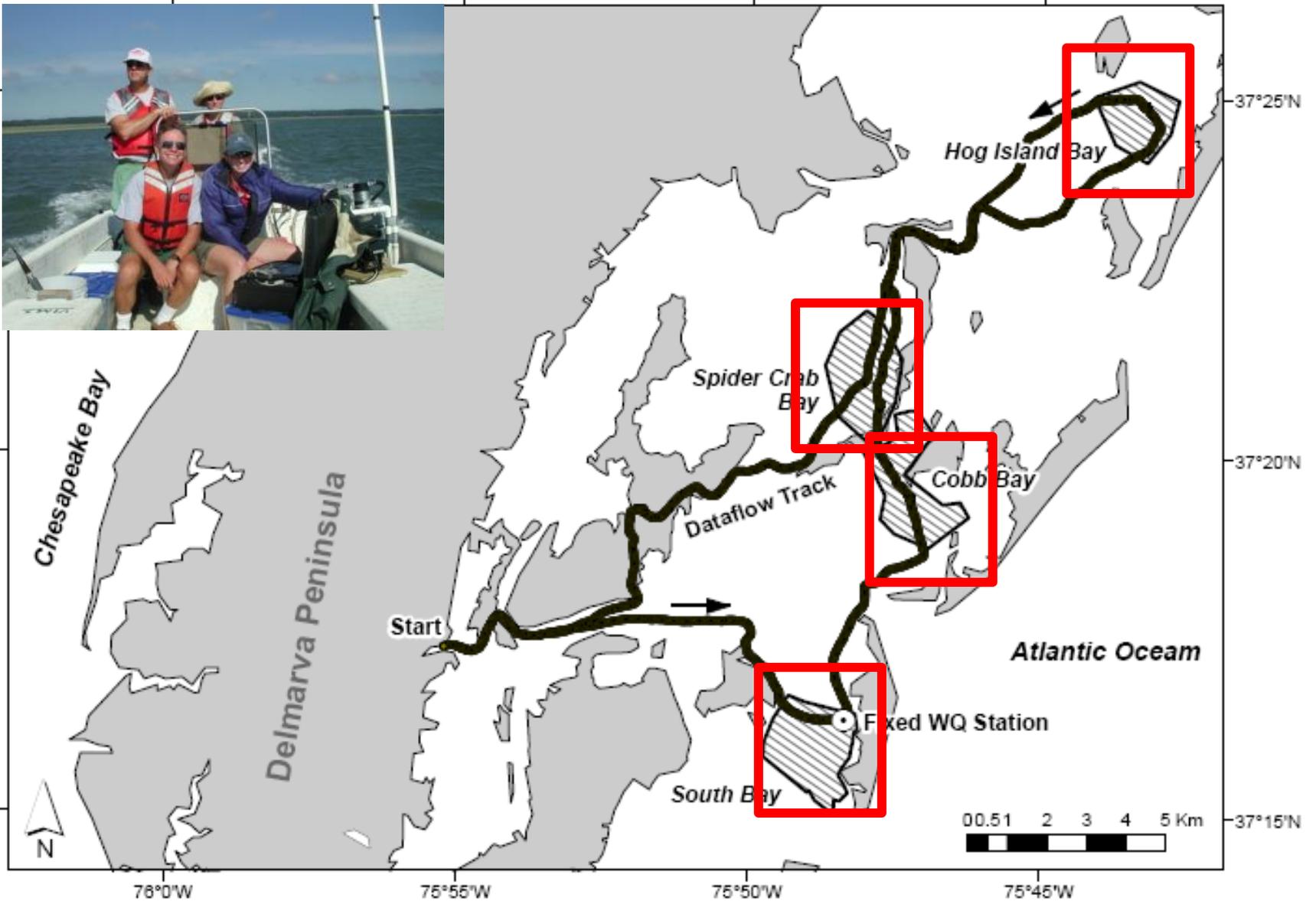




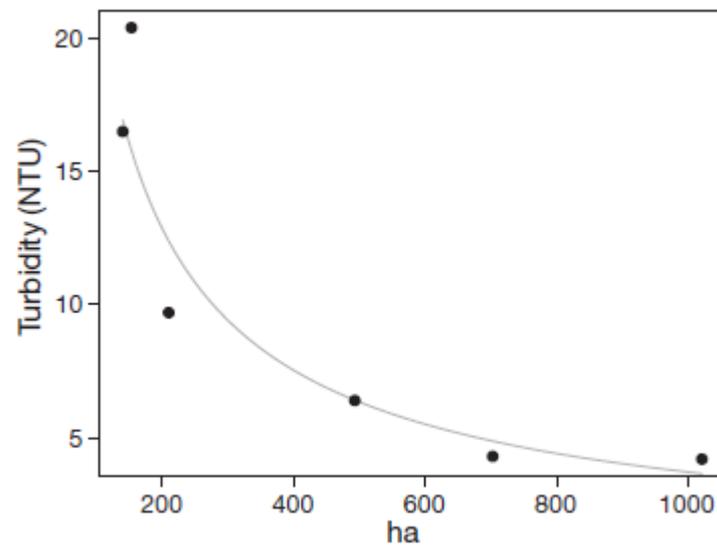
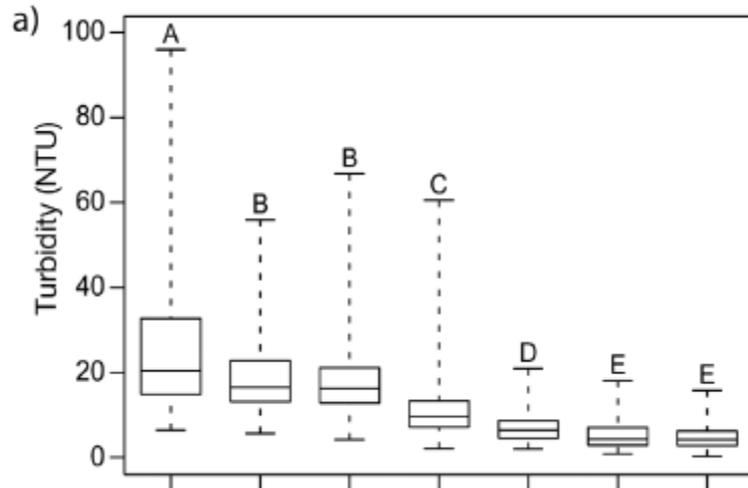








South Bay Turbidity Trends



<http://www.ysieconet.com/public/WebUI/Default.aspx?hidCustomerID=154>



Bay Scallops

Bay Scallop Restoration Initiated 2009



2015-8 Assessment Info

3 locations

4 segments/location

20/40 sites/segment

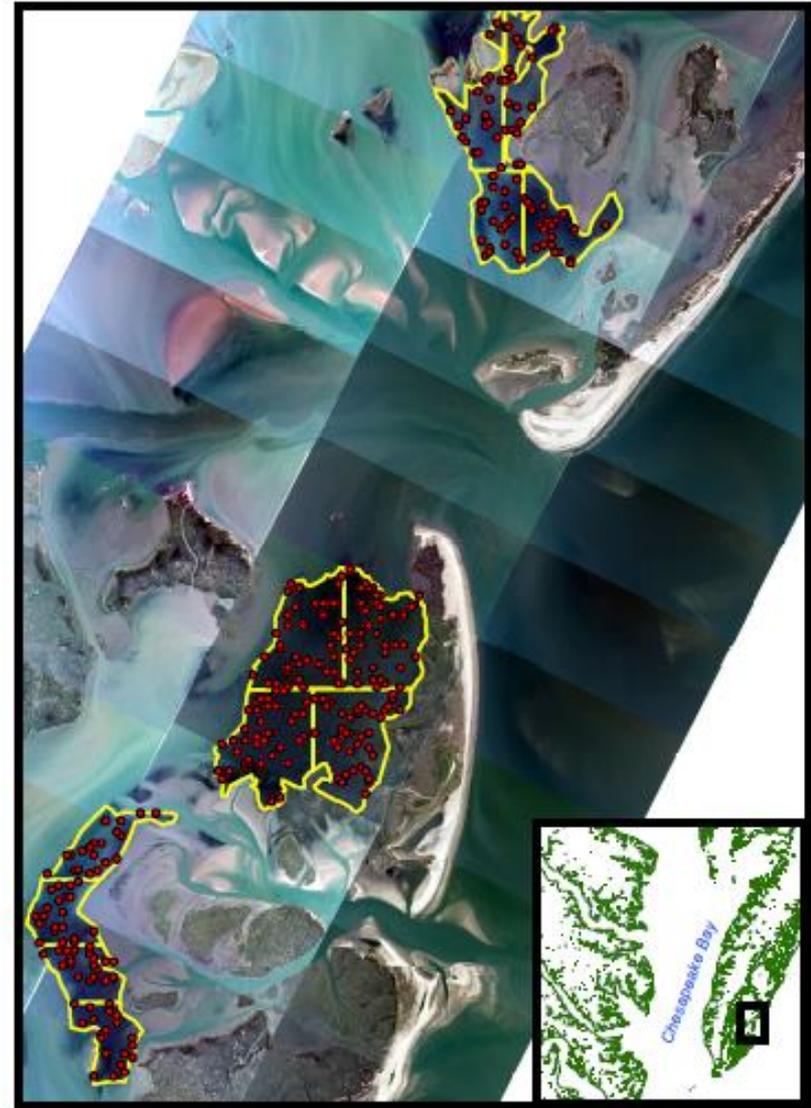
50 m² of seagrass checked

16,000 m² of bottom

(4 acres searched for scallops by hand)



Bay Scallop Sampling in Virginia's Coastal Bays

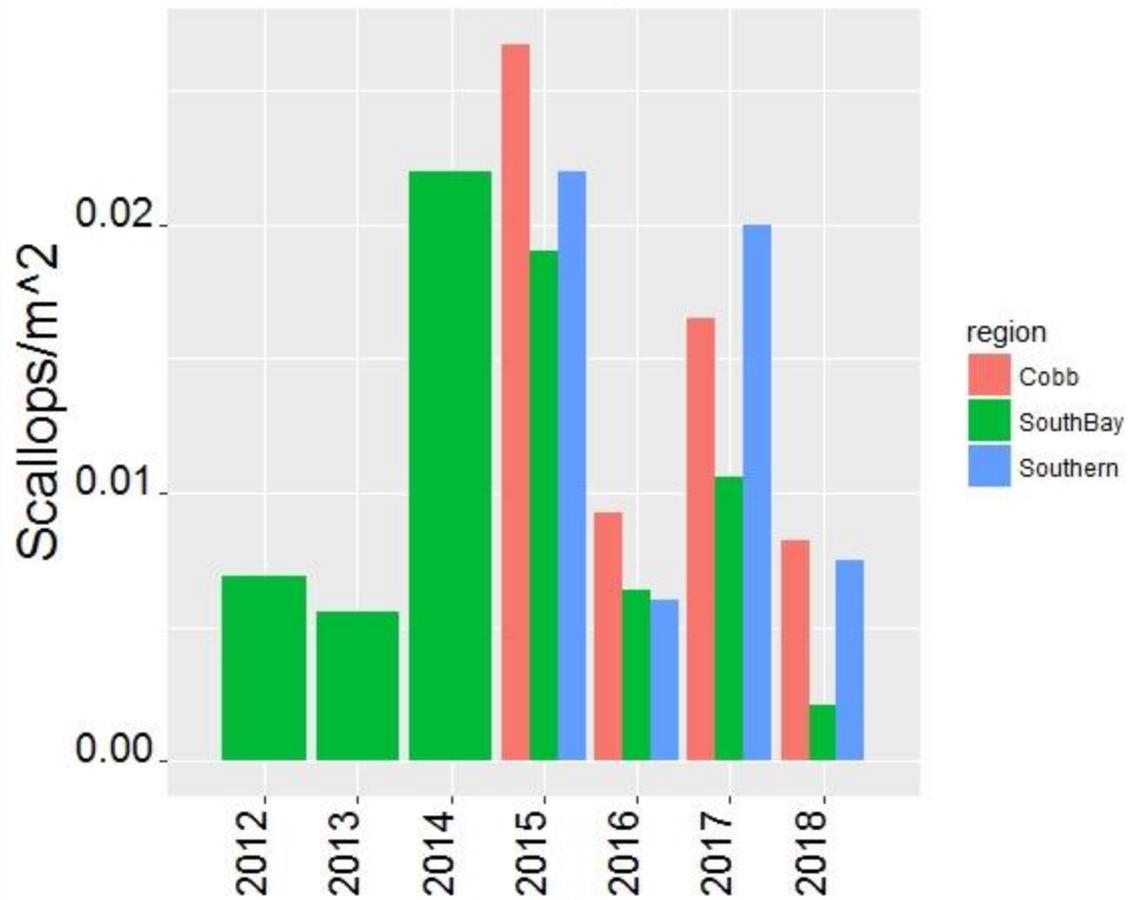


0 0.75 1.5 3 4.5 6 Kilometers





Estimated Scallop Abundance



Other Benefits

- Brant
- Fish
- Blue Carbon

THE FUTURE



THE FUTURE

yummie



Thank You!

Questions?

