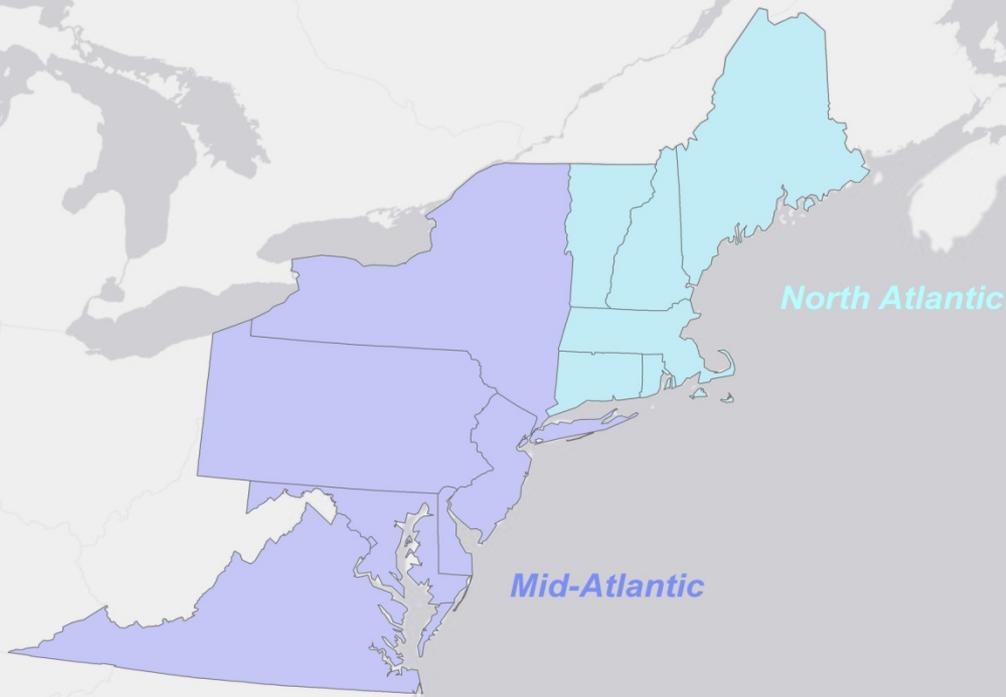


Regional Experiences and Lessons Learned in Artificial Reef Application



North Atlantic and Mid-Atlantic Regions

Mark Rousseau

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ASMFC Artificial Reef Committee*

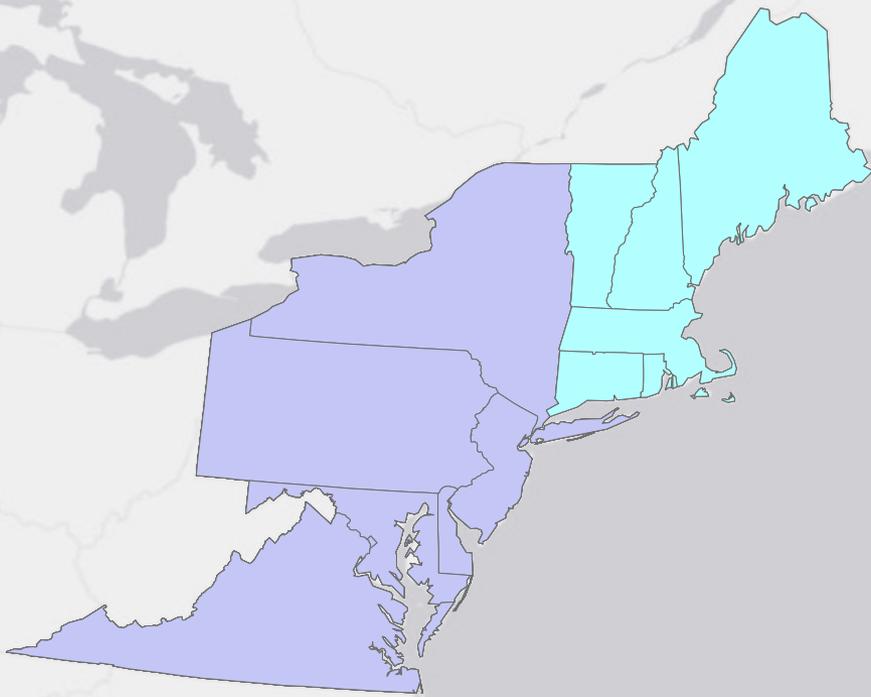


Outline

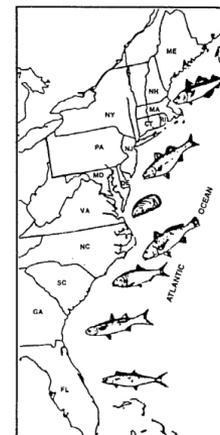
- Overview of the regional AR experience
- Examples of fishery management / enhancement applications
- Address 2 key questions:
 - » Biggest challenges and lessons learned
 - » Program needs moving forward
- Summary

Overview

AR experience in your region



Special Report No. 14
of the
ATLANTIC STATES MARINE
FISHERIES COMMISSION



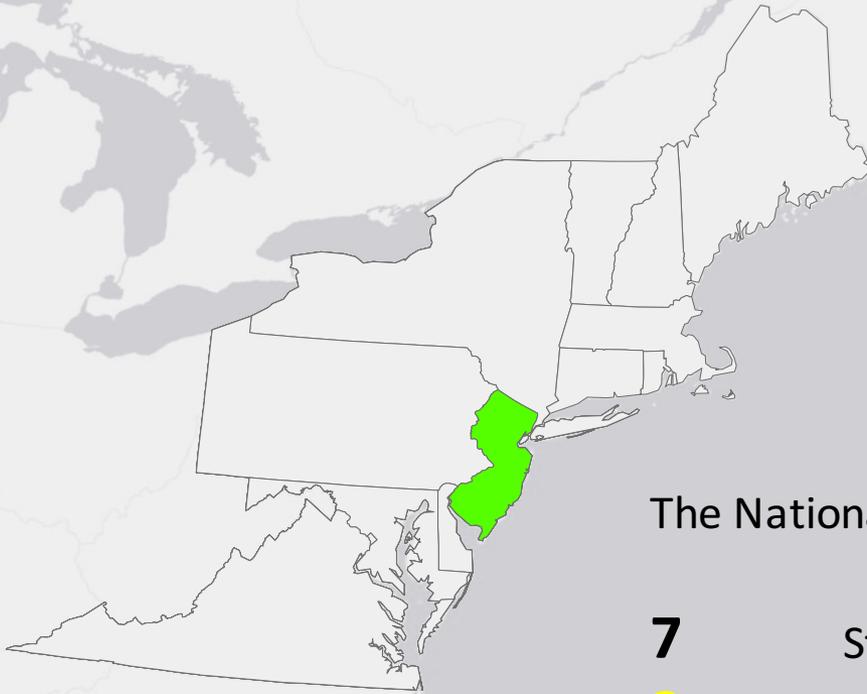
A PROFILE
OF
ATLANTIC ARTIFICIAL
REEF DEVELOPMENT

AUGUST 1988

[A Profile of Atlantic Artificial Reefs, Special Report No 14. 1988. Atlantic States Marine Fisheries Commission.
http://www.asmfc.org/uploads/file/sr14ProfileofAtlArtificialReefDevelopmentAug88.pdf](http://www.asmfc.org/uploads/file/sr14ProfileofAtlArtificialReefDevelopmentAug88.pdf)

Overview

State Artificial Reef Plans - 1988



The National Artificial Reef Plan was released in 1985.

7

States with no Plan or Program

2

States with reef plans under development

1

State with an Artificial Reef Plan



No State Reef Plan or Program



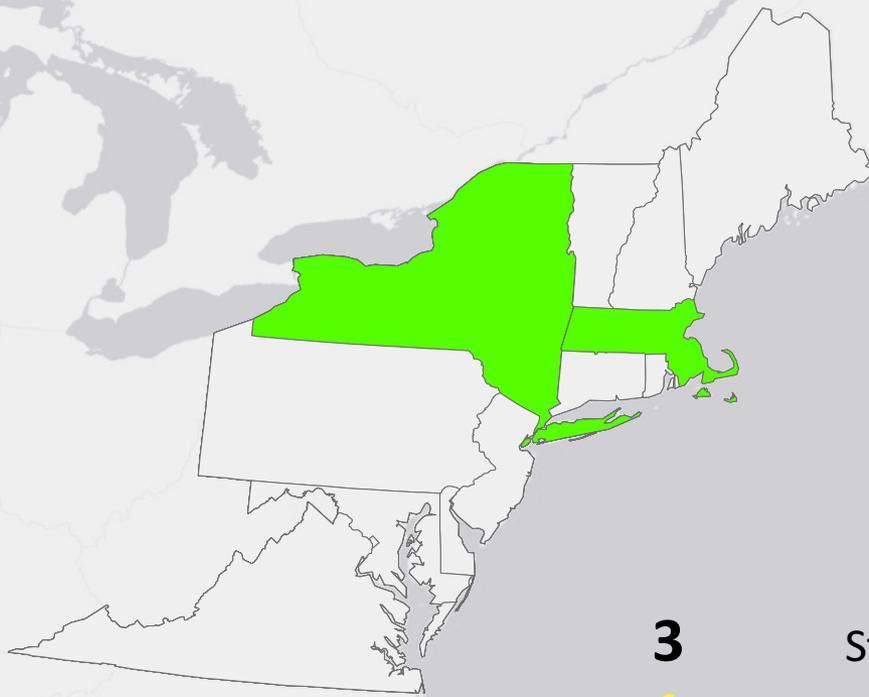
Plan / Program Under Development



State Reef Plan / Program

Overview

State Artificial Reef Plans - 2016



3

States with no Plan or Program

1

States with reef plans under development

6

State with an Artificial Reef Plan



No State Reef Plan or Program



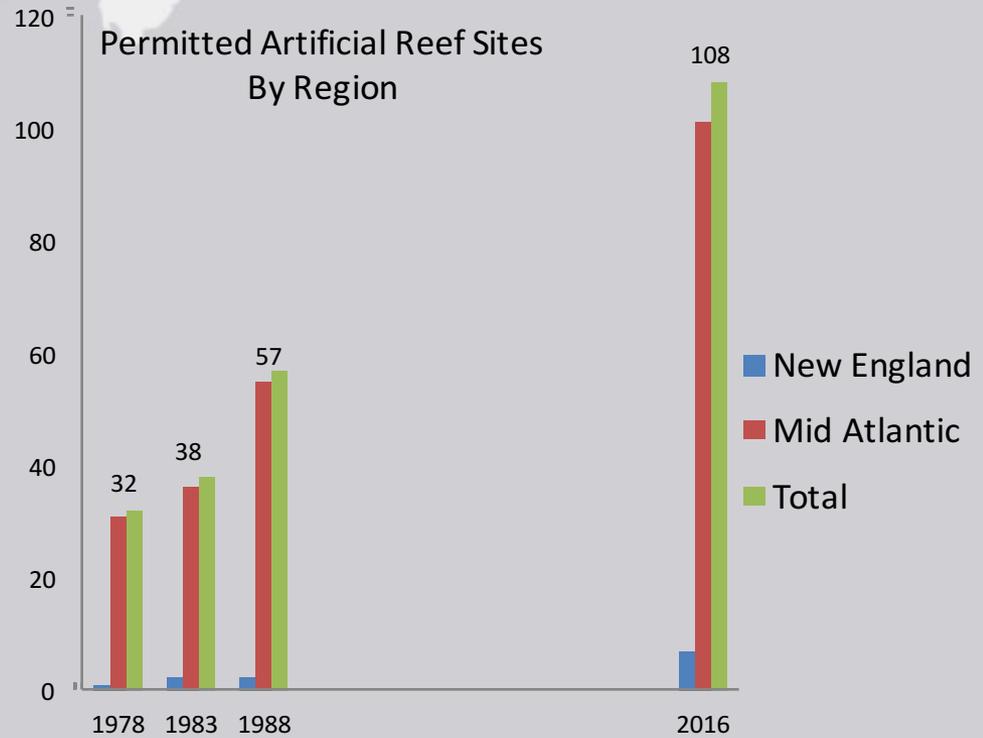
Plan / Program Under Development



State Reef Plan / Program

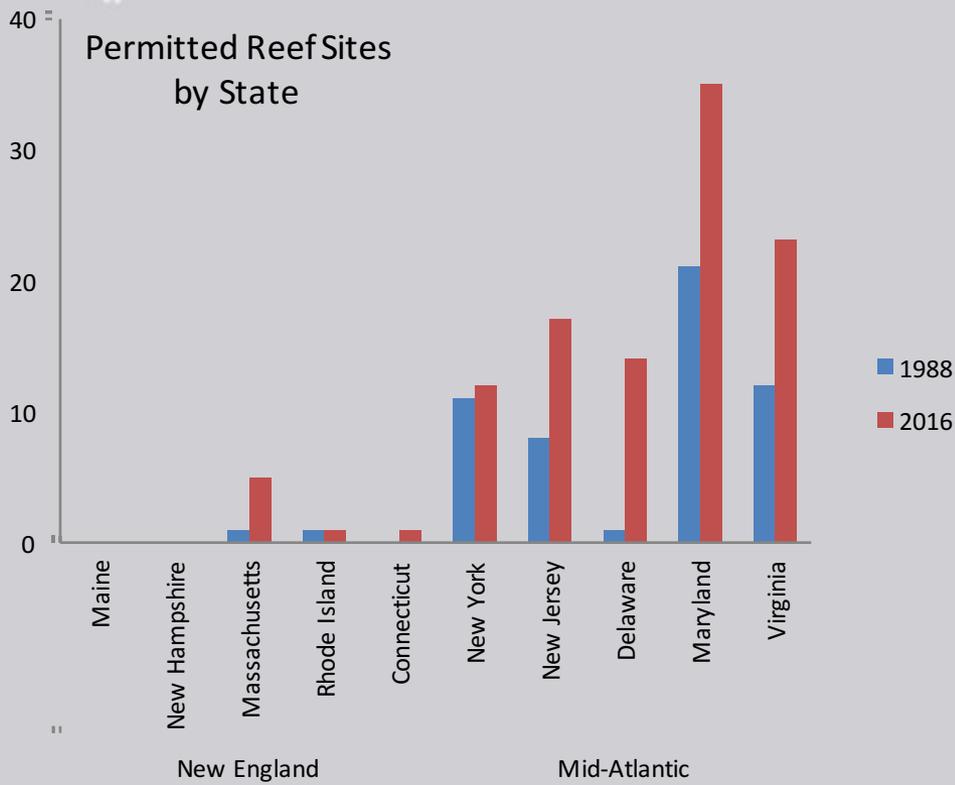
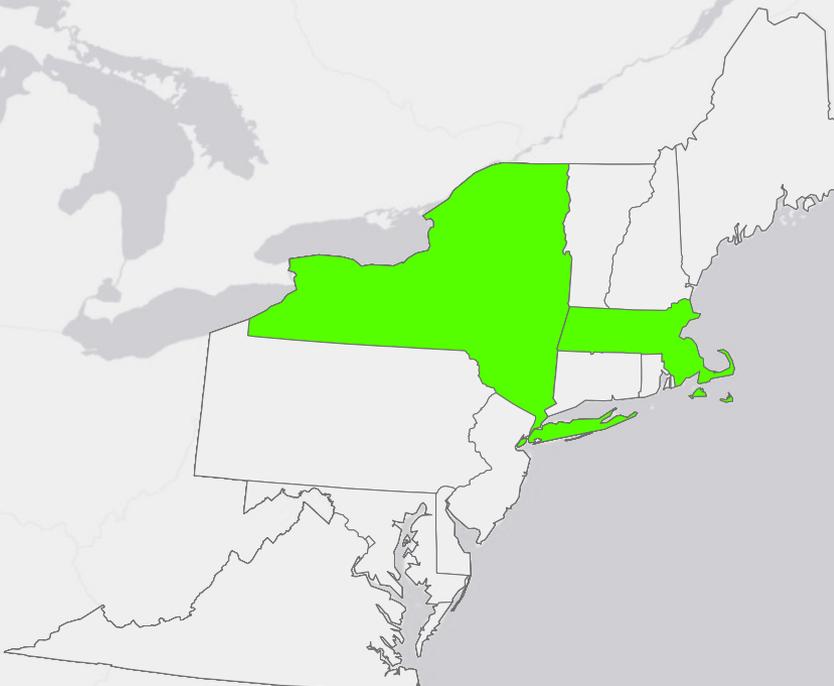
Overview

Permitted Reef Sites



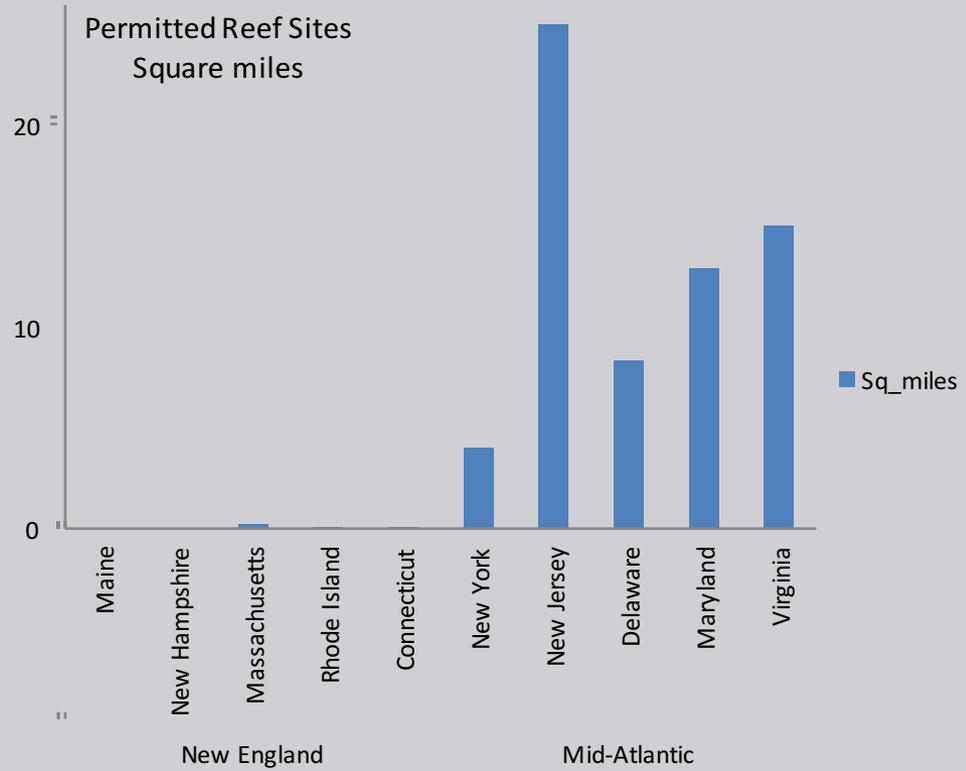
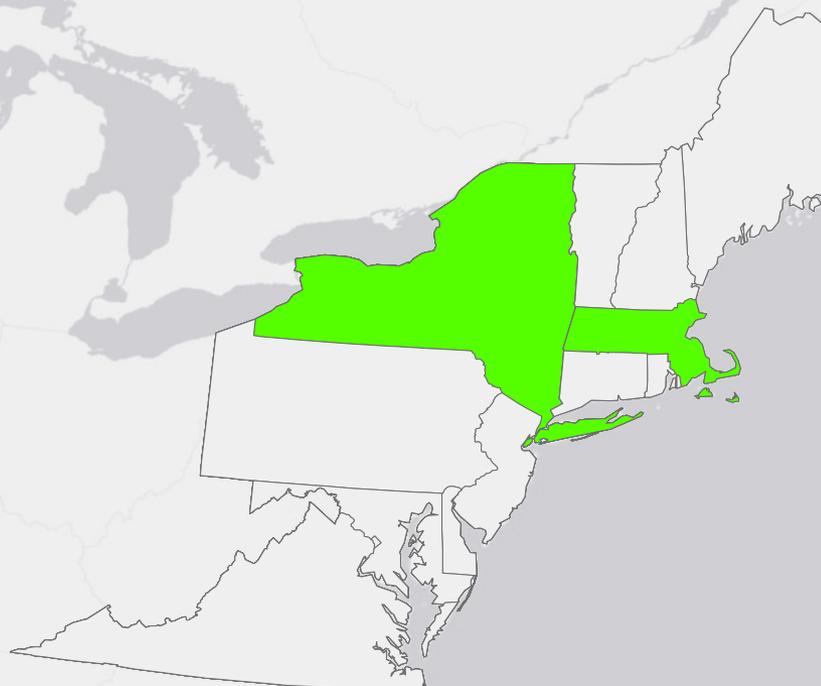
Overview

Permitted Reef Sites



Overview

Permitted Reef Sites



Overview

Uses

- Primarily recreational fishing
- Some diving
- Some commercial fishing
- Seasonality component to northern reef sites
- Growing interest in utilizing reefs for shoreline protection / living shorelines
- Mitigation

Management / Enhancement Applications

- Shellfish restoration / enhancement (MD, RI)
- Commercial fishing restrictions (VA, MA, NJ, DE)
- Gear restrictions (VA, MA, NJ, DE)
- SMZ's (DE, NY)
- Mitigation (MA)
- Research (RI, MD)

Biggest challenges

(not including funding)

- Monitoring (VA, NY, MA, RI, MD)
- Living shorelines – where do artificial reefs fit in? (DE, NJ, MA)
- Lack of staff / resources (NJ, MD, RI)
- Regulatory issues (RI, VA, NY)
- Ocean Planning / User group conflicts
- Public outreach

Lessons Learned

- Limited resources is the norm
- Materials – the ocean dumping stigma
- Matching funds
- Regional communication / collaboration
- GIS
- Permits – cumbersome process (MD, MA)
- Collaboration - DelJerseyLand Reef (DE, NJ, MD)
- Communication and Transparency are essential (MD)
- Recreational license fees and reefs (MA, DE)

Needs moving forward

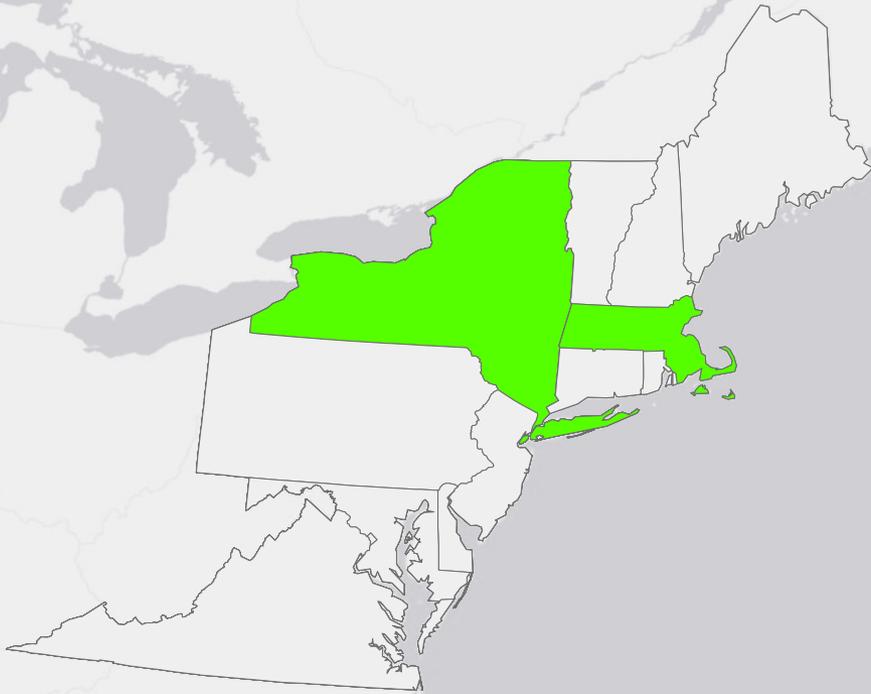
(in addition to funding)

- Staffing / Resources / Equipment / Infrastructure
- Monitoring
- Hybrid reefs and “living shorelines” – where do they fit into existing reef programs?
- More public outreach / improved communication (MD, VA, RI)
- More exposure to funds (VA, MA)
- More transparency (MD)
- Focused research
 - attraction vs. production – demersal fishes (NJ)
 - juvenile fish assessments (RI)
- Role of license revenue in artificial reef programs (DE, MA)

Regional Summary

- 6 of 10 states with formal reef program or plan (All Mid-Atlantic states have plans)
- Regional reef program growth has been slow, but steady, averaging about 2 new sites permitted per year
- New sites are in both nearshore and offshore (>3nm) areas
- Many states maintain open permits to allow for future deployments
- Artificial reefs are utilized by a multiple user groups
- In general, artificial reefs increase in numbers and area as you progress southward along the eastern seaboard
- Permitted reefs utilize a broad array of material types
- Donated and secondary use materials continue to be the primary structure sources for reefs
- All states use reefs in some capacity for fishery management / enhancement
- Collaboration and communication, staff / resources, and monitoring were identified as the biggest challenges among reef programs
- Trying to figure out the utility of recreational saltwater license revenue to artificial reef programs

Thank You



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North Atlantic

Maine – no formal program

New Hampshire – no formal program

Massachusetts – 5 reefs. 0 in federal waters. <150 acres (<0.25sq miles)

Rhode Island – no formal program

Connecticut – no formal program – Stratford reef

Mid Atlantic

New York – 11 permitted sites

New Jersey – 17 sites. 25 sq miles of seafloor

Delaware – 14 permitted reef sites. 5 in federal waters

Maryland – 10 (11) permitted ocean sites. 24 permitted bay sites

Virginia – 23 artificial reef sites (18 inshore, 5 offshore)

Region	State	CoastMiles	inshore1988	inshore2016	offshore 1988	offshore2016	1988	2016	Program	Reef Plan 1988	Reef Plan2016	Sq_miles	acres
	Maine	3478	0	0	0	0	0	0	0N	N	N	0	0
	New Hampshire	131	0	0	0	0	0	0	0N	N	N	0	0
	Massachusetts	1519	1	5	0	0	1	5Y	N	N	Y	0.24	150
	Rhode Island	384	1	0	0	0	1	1Y	N	D	D	0.1	0
New England	Connecticut	618	0	1	0	0	0	1N	N	N	Y	0.1	0
	New York	2625	8	9	3	3	11	12Y	N	N	Y	4	2539
	New Jersey	1792	1	1	7	16	8	17Y	Y	Y	Y	25	16000
	Delaware	381	1	9	0	5	1	14Y	N	N	Y	8.35	5344
	Maryland	3190	19	24	2	11	21	35Y	D	D	Y	12.9	8244.1
Mid-Atlantic	Virginia	3315	6	18	6	6	12	23Y	D	D	Y	15	9600
NA Totals		6130	2	6	0	0	2	7	0	0	01	0.44	150
MA Totals		11303	35	61	18	41	53	101	0	0	16	65.25	41727.1
Totals		17433	37	67	18	41	55	108	0	0	17	65.69	41877.1