

U.S. FISH AND WILDLIFE SERVICE FUNDING FOR ACFHP PROJECTS

2010-2018

and

2019 Proposed Projects

ON-THE-GROUND PROJECTS

- From 2010 to 2018 – U.S. Fish and Wildlife Service funded 20 on-the-ground projects
- \$672,234 awarded to partners
- Leveraged \$11,948,033 matching funds and in-kind services
- Funding supported
 - 9 fish passage projects
 - 11 coastal habitat restoration projects
 - 3 marsh/mangrove restoration projects
 - 3 submerged aquatic vegetation (SAV) projects
 - 4 oyster reef restoration projects
 - 1 sturgeon spawning habitat restoration

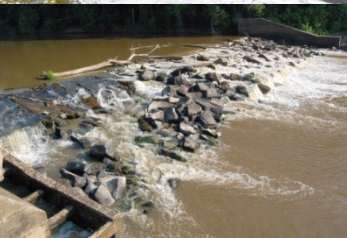
ACFHP OPERATIONS

- From 2014 -2018 - U.S. Fish and Wildlife Service provided funding for ACFHP Operations
- \$251,125 awarded to ASMFC
 - 2018 - \$66,125 (will be \$75,849)
 - 2017 - \$75,000
 - 2016 - \$50,000
 - 2015 - \$30,000
 - 2014 - \$30,000
- Multi State Grant Funding (AFWA) and Wallop-Breaux funding make up the rest of the operation budget

*Note: Wallop-Breaux funding is Sport Fish Restoration Funding, managed by the U.S. Fish and Wildlife Service



ON-THE-GROUND PROJECTS



RANKED LIST FOR FY18 FUNDING

TOTAL ACFHP ALLOCATION - \$214,585

COORDINATION - \$75,000 (NO INDIRECT)
PROJECTS - \$139,000 (15% INDIRECT)

TITLE	PROPOSED
ACFHP Operations FY18	\$75,000
Columbia Dam Removal	\$50,000
Oyster Reef Restoration in Back sound Rachel Carson Reserve, Beaufort, NC	\$49,833
Seagrass Conservation Moorings, Coecles Harbor, Shelter Island, NY	\$32,001
Dam Removal on Childs River, Falmouth, MA	\$49,450
Restoration of Submerged Aquatic Vegetation in Freshwater and Meso- haline Region of the Chesapeake Bay MD	\$16,020
Total	\$272,304
Remaining	

Total requested:
\$75,000 for ACFHP Ops
\$197,304 for projects

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TITLE	PROPOSED	To Project	NOTES
ACFHP Operations FY18	\$75,000	\$66,125	
Columbia Dam Removal	\$50,000	\$50,000	
Oyster Reef Restoration in Back Sound Rachel Carson Reserve, Beaufort, NC	\$49,833	\$49,833	
Seagrass Conservation Moorings, Coecles Harbor, Shelter Island, NY	\$32,001	\$17,965	NOAA \$14,035
Dam Removal on Childs River, Falmouth, MA	\$49,450		
Restoration of Submerged Aquatic Vegetation in Freshwater and Meso- haline Region of the Chesapeake Bay MD	\$16,020		
Total	\$272,304	\$183,923	

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Dam Removal on Childs River, Falmouth, MA	\$49,450		request removed
Restoration of Submerged Aquatic Vegetation in Freshwater and Meso-haline Region of the Chesapeake Bay MD	\$16,020	9,725	funding refused
Total	\$272,304	\$183,923	
Remainder			

RANKED LIST FOR FY18 FUNDING

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COORDINATION - \$75,000 (NO INDIRECT)

PROJECTS - \$139,000 (15% INDIRECT)

TITLE	PROPOSED	To Project	Total w/15% indirect
ACFHP Operations FY18	\$75,000	\$66,125	\$66,125
Columbia Dam Removal	\$50,000	\$50,000	\$57,257
Oyster Reef Restoration in Back sound Rachel Carson Reserve, Beaufort, NC	\$49,833	\$49,833	\$58,627
Seagrass Conservation Moorings, Coecles Harbor, Shelter Island, NY	\$32,001	\$17,965	\$21,135
Dam Removal on Childs River, Falmouth, MA	\$49,450	--	--
Restoration of Submerged Aquatic Vegetation in Freshwater and Meso-haline Region of the Chesapeake Bay MD	\$16,020	\$9,725	\$11,441
Total	\$272,304	\$183,923	\$203,144
Remaining			\$11,441

RANKED LIST FOR FY18 FUNDING

TOTAL ACFHP ALLOCATION - \$214,585

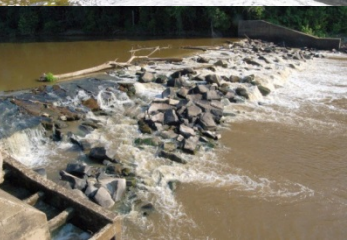
COORDINATION - \$75,000 (NO INDIRECT)

PROJECTS - \$139,000 (15% INDIRECT)

TITLE	PROPOSED	To Project	Total w/15% Indirect
ACFHP Operations FY18	\$75,000	\$75,849	\$75,999
Columbia Dam Removal	\$50,000	\$50,000	\$58,824
Oyster Reef Restoration in Back sound Rachel Carson Reserve, Beaufort, NC	\$49,833	\$49,833	\$58,627
Seagrass Conservation Moorings, Coecles Harbor, Shelter Island, NY	\$32,001	\$17,965	\$21,135
Dam Removal on Childs River, Falmouth, MA	\$49,450	--	--
Restoration of Submerged Aquatic Vegetation in Freshwater and Meso-haline Region of the Chesapeake Bay MD	\$16,020	\$9725	\$11441
Total	\$272,304	\$193,647	\$214,585
Remaining			



ON-THE-GROUND PROJECTS



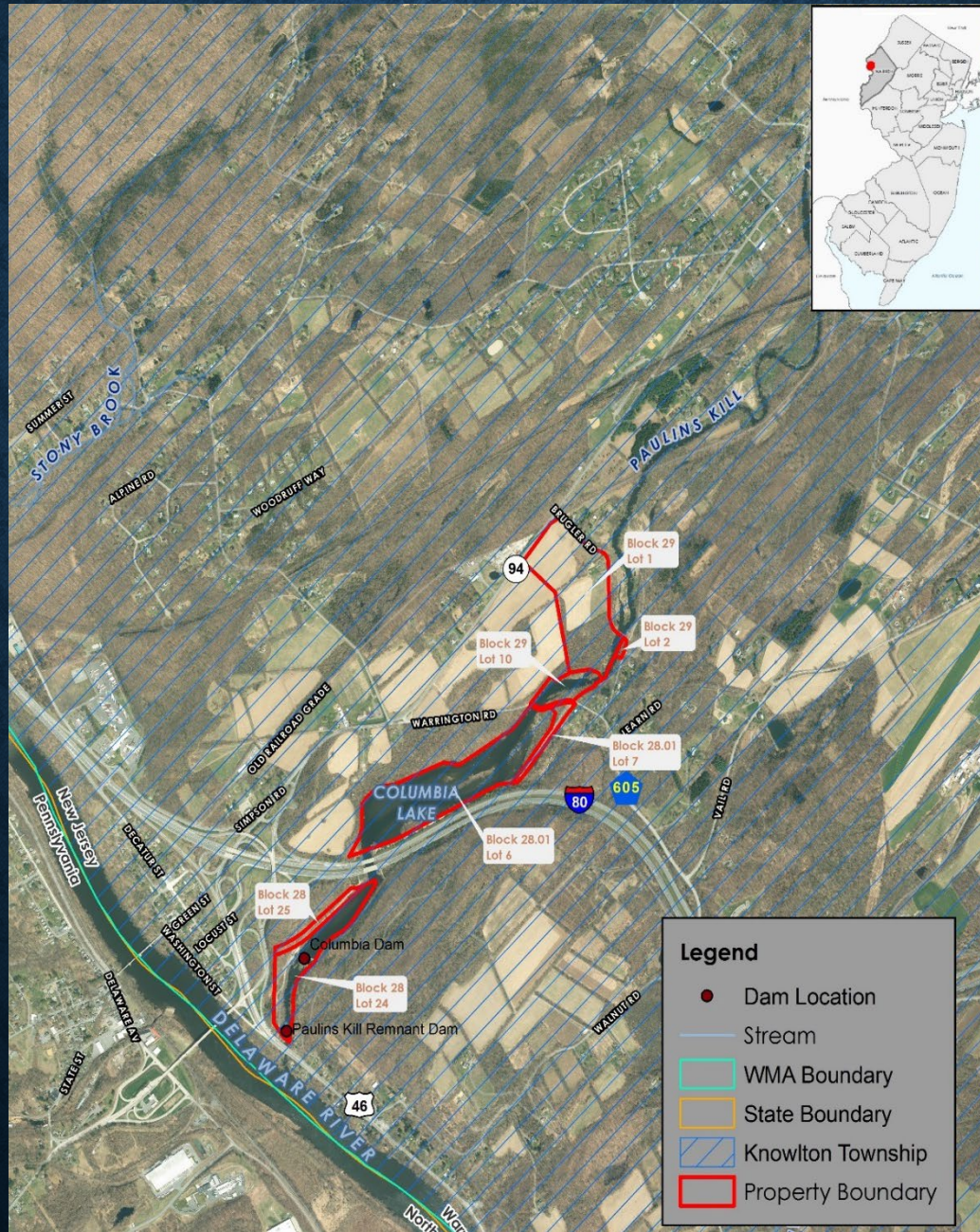
COLUMBIA DAM REMOVAL, KNOWLTON TOWNSHIP, NJ

FY18 - \$50,000 Total - \$7,193,000

- Remove dam to open 20 river miles
- First obstruction to passage off the Delaware River in the Paulins Kill
- Instream restoration and weirs to protect upstream infrastructure
- Timeline: Removal began August, 2018



COLUMBIA DAM REMOVAL



COLUMBIA DAM REMOVAL



COLUMBIA DAM REMOVAL



OYSTER REEF RESTORATION IN BACK SOUND, RACHEL CARSON RESERVE, NC

FY18 - \$49,833 Total - \$123,010

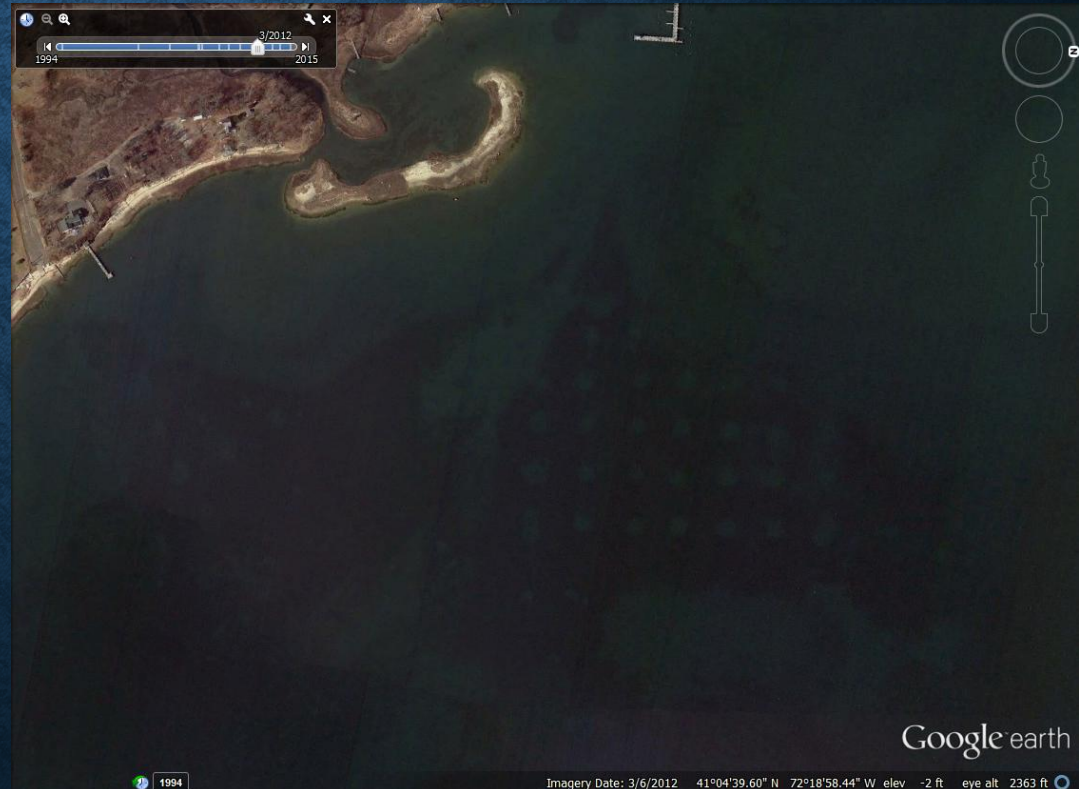
- Restore 0.11 acres of oyster reefs along eroding salt marsh
- Protects an additional 3+ acres of saltmarsh
- Timeframe: 7/18



SEAGRASS CONSERVATION MOORINGS, COECLES HARBOR, NY

FY18 - \$17,965 Total - \$138,188

- Replace 6 traditional moorings with conservation moorings to protect seagrass in harbor
- Good visibility to inspire others to use conservation moorings
- Timeframe: 2019?





FY17 On-The-Ground Fish Habitat Projects



**Sheepscot River
Barrier Removal**

**Oyster Reef and
Estuarine
Shoreline
Restoration**

SHEEPSCOT RIVER BARRIER REMOVAL, ME

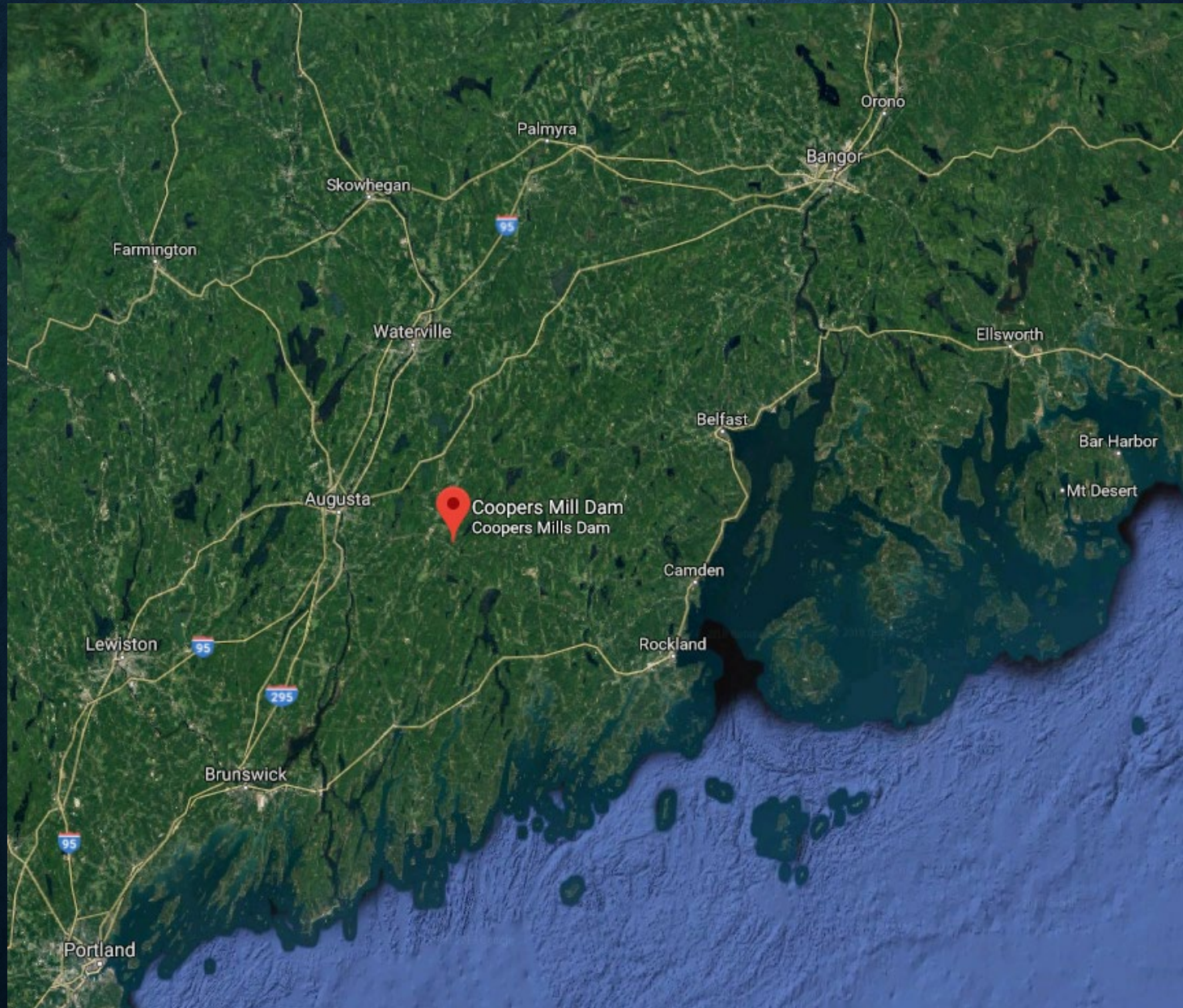
Coopers Mill FY17 - \$15,000 Total - \$930,600

Head Tide FY17 - \$35,000 Total - \$446,000



- Coopers Mill Dam Removal and Head Tide Partial Removal
- Opens 71 miles for Atlantic salmon and other species
- Southernmost Atlantic salmon river designated as Critical Habitat
- Timeframe: Coopers Mill completed summer/fall of 2018. Head Tide will occur in 2019.

COOPERS MILL DAM



COOPERS MILL DAM REMOVAL



COOPERS MILL DAM REMOVAL



COOPERS MILL DAM REMOVAL



COOPERS MILL DAM REMOVAL



BOGUE SOUND, OYSTER REEF AND ESTUARINE SHORELINE RESTORATION

FY18 - \$38,110 Total - \$77,236

- Recycled oyster shells placed along 300 ft. of shoreline to promote saltmarsh
- Nursery habitat for black sea bass, red drum
- Feeding ground for summer flounder
- Timeframe: summer 2018



Conservation moorings: field observations

Tay Evans

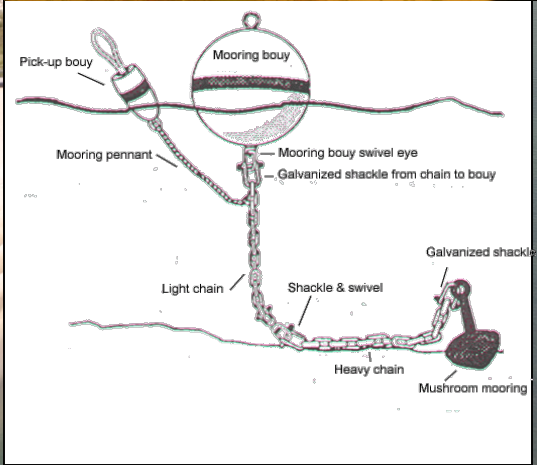
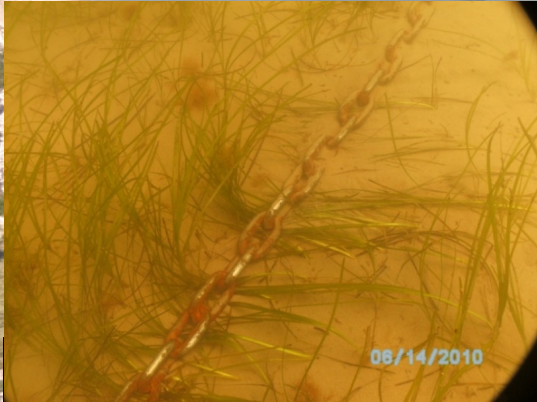
Massachusetts Division of Marine Fisheries



Atlantic Coastal Fish Habitat Partnership

Working together to conserve coastal, estuarine-dependent, and diadromous fish habitat







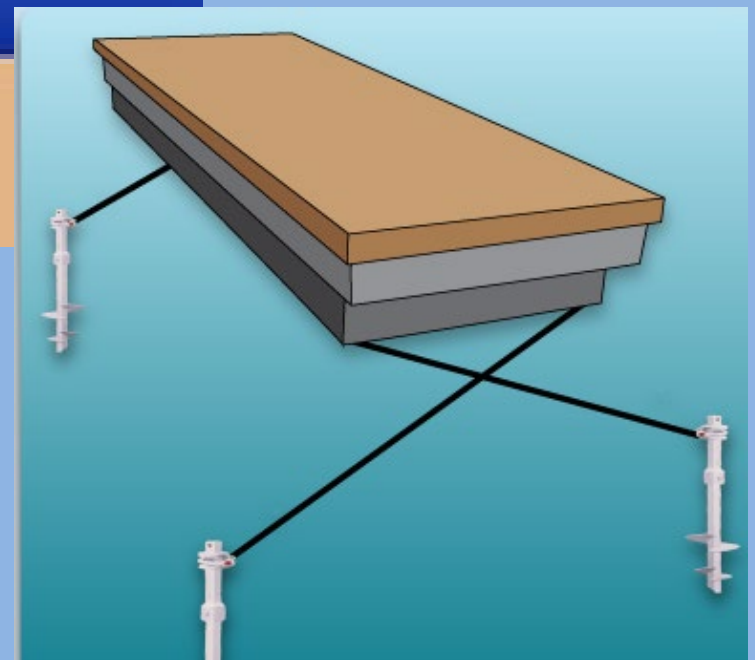
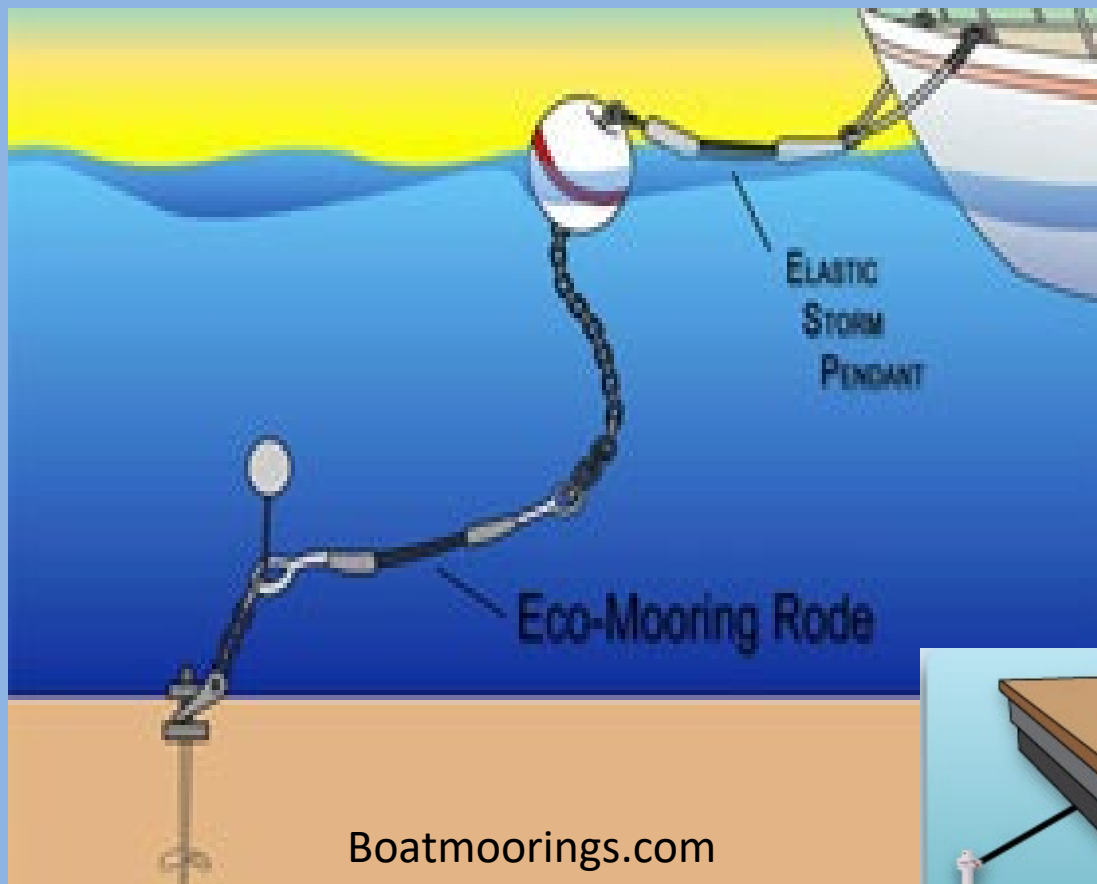
Prop scars



#116



Keel or Prop
Scar





Hazelett Mooring
and Spar
Buoy



Seaflex
Mooring



Eco-mooring



Stormsoft





Hazelett, Manchester

07/19/2011



Stormsoft Pennant, Manchester



Eco-mooring, Manchester



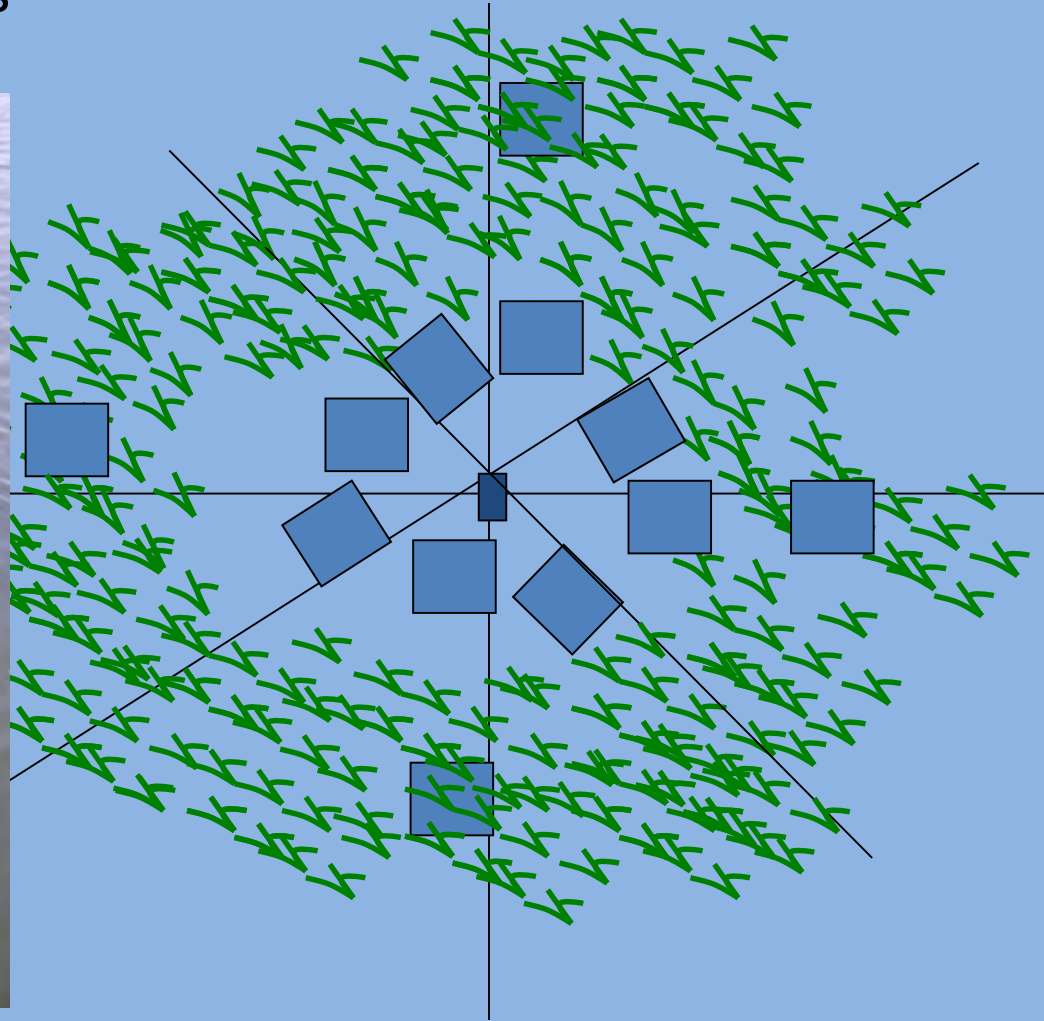
DMF Mooring Projects

- **CHPP** 2009 NMFS, EPA, DMF Vineyard haven demonstration project.
- **NOAA** Habitat Restoration MassBays and TNC – Manchester & Ptown 2010 -2012
- **ACFHPP** West Falmouth 2013-2014. 8 conservation moorings
- **Massport** mitigation project 2014 through 2019 in Falmouth, Wareham, Manchester, Boston, Gloucester. Total 275 moorings installed.
6-8 moorings monitored per harbor.

MONITORING GOALS

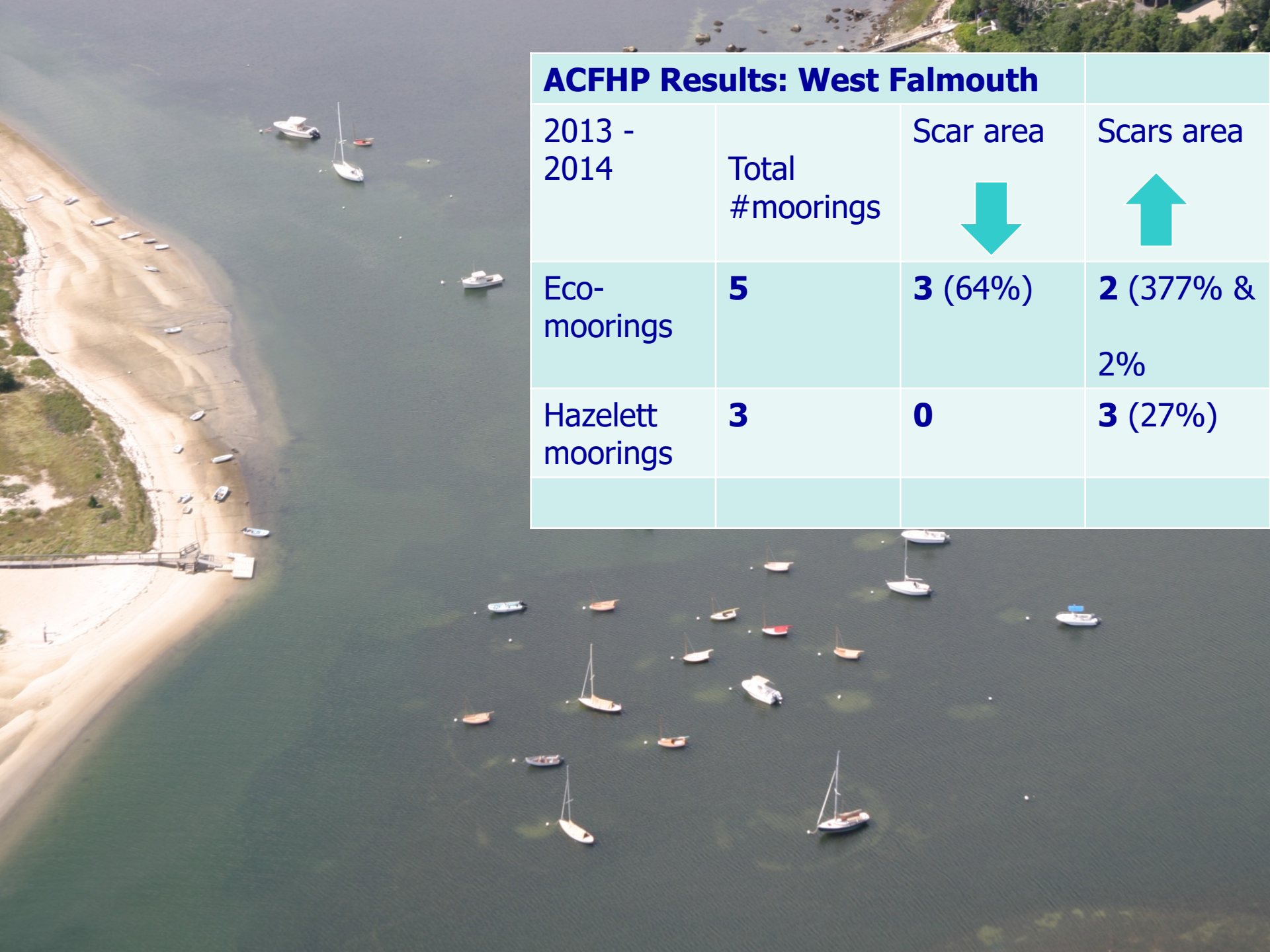
- Demonstrate the use of conservation moorings to boat owners, harbormasters and marina operators in Massachusetts
- Assess the effectiveness of conservation moorings
- Assess the effectiveness of conservation moorings at allowing eelgrass to grow back into the scar – used as restoration.
- Monitor and report on moorings as mitigation
- Make appropriate policy recommendations

- Measure scar area, shoot density & percent cover, evidence of seeding, mooring observations





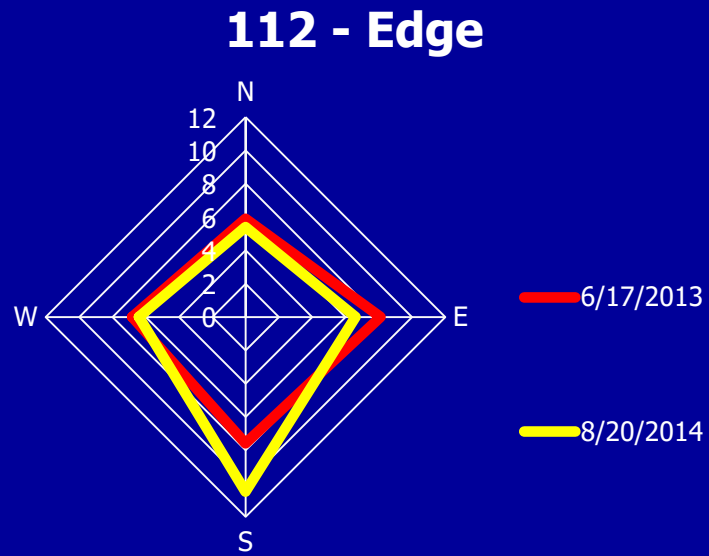




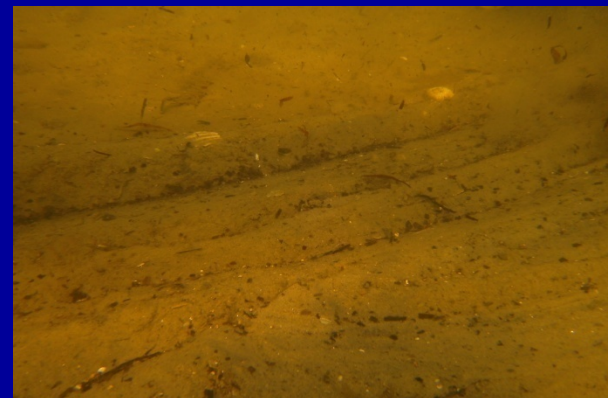
ACFHP Results: West Falmouth

2013 - 2014	Total #moorings	Scar area ↓	Scars area ↑
Eco-moorings	5	3 (64%)	2 (377% & 2%)
Hazelett moorings	3	0	3 (27%)

Hazelett Mooring installed in May 2013, 35 foot sailboat, 7-13 ft depth

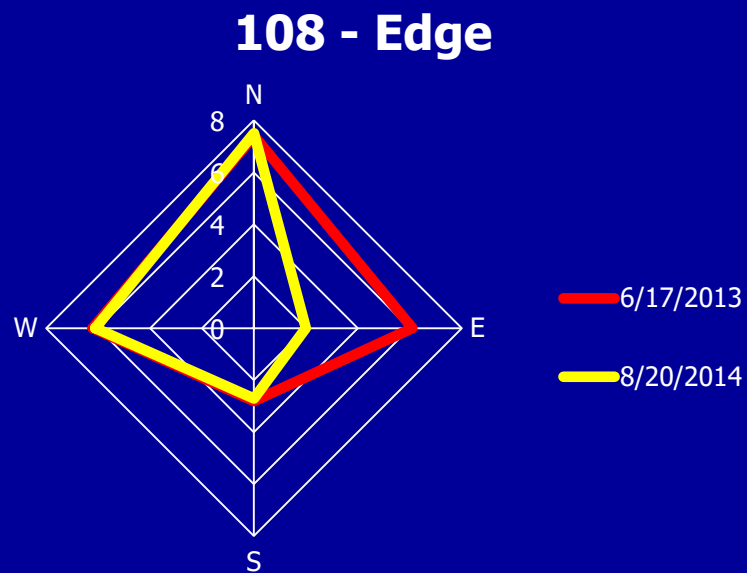


April
2014

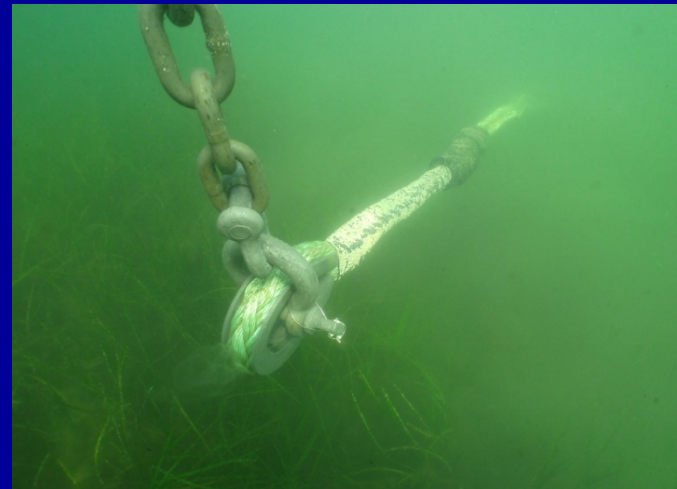


Scar increased by 2.5%

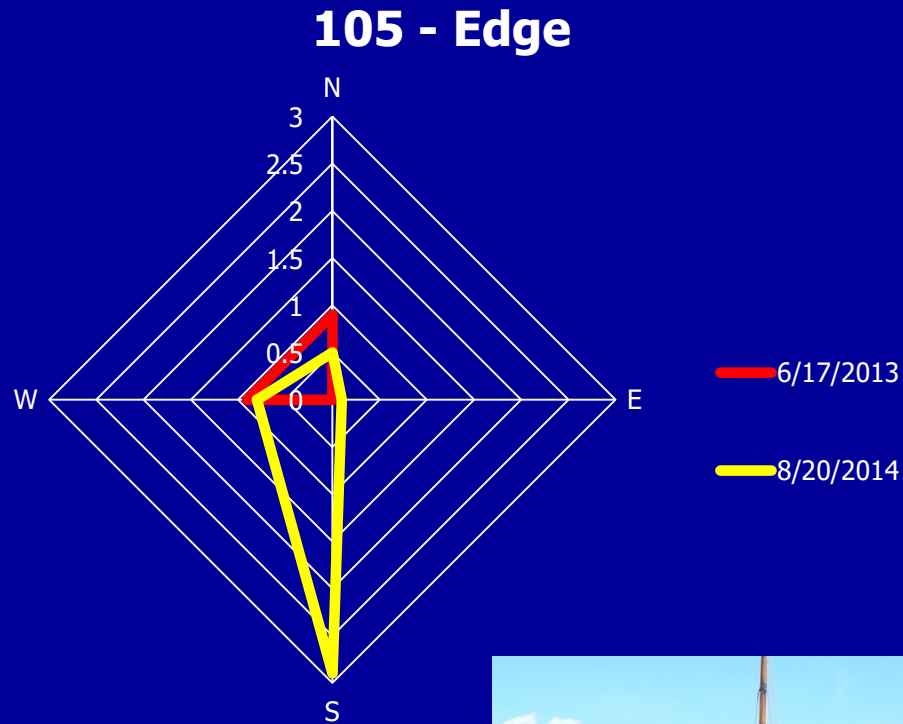
Eco-mooring installed in 2013, 35 ft sailboat in 7-13 ft depth



34% decrease in scar
area



Eco-Mooring installed in May 2013, 13 ft sailboat and 3-9 ft water



Scar area
increased by
377%

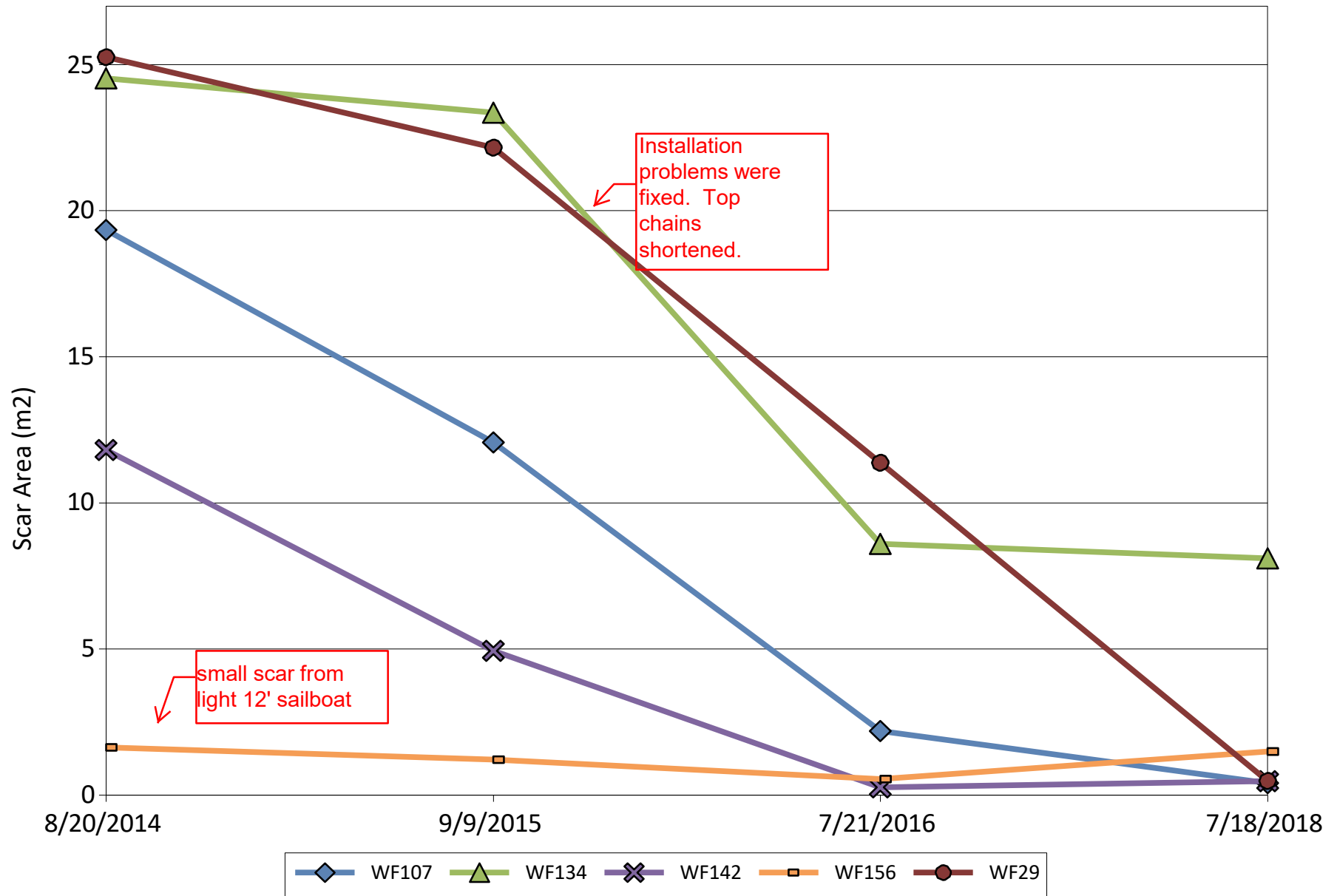


May
2013 –
one
month
post
install



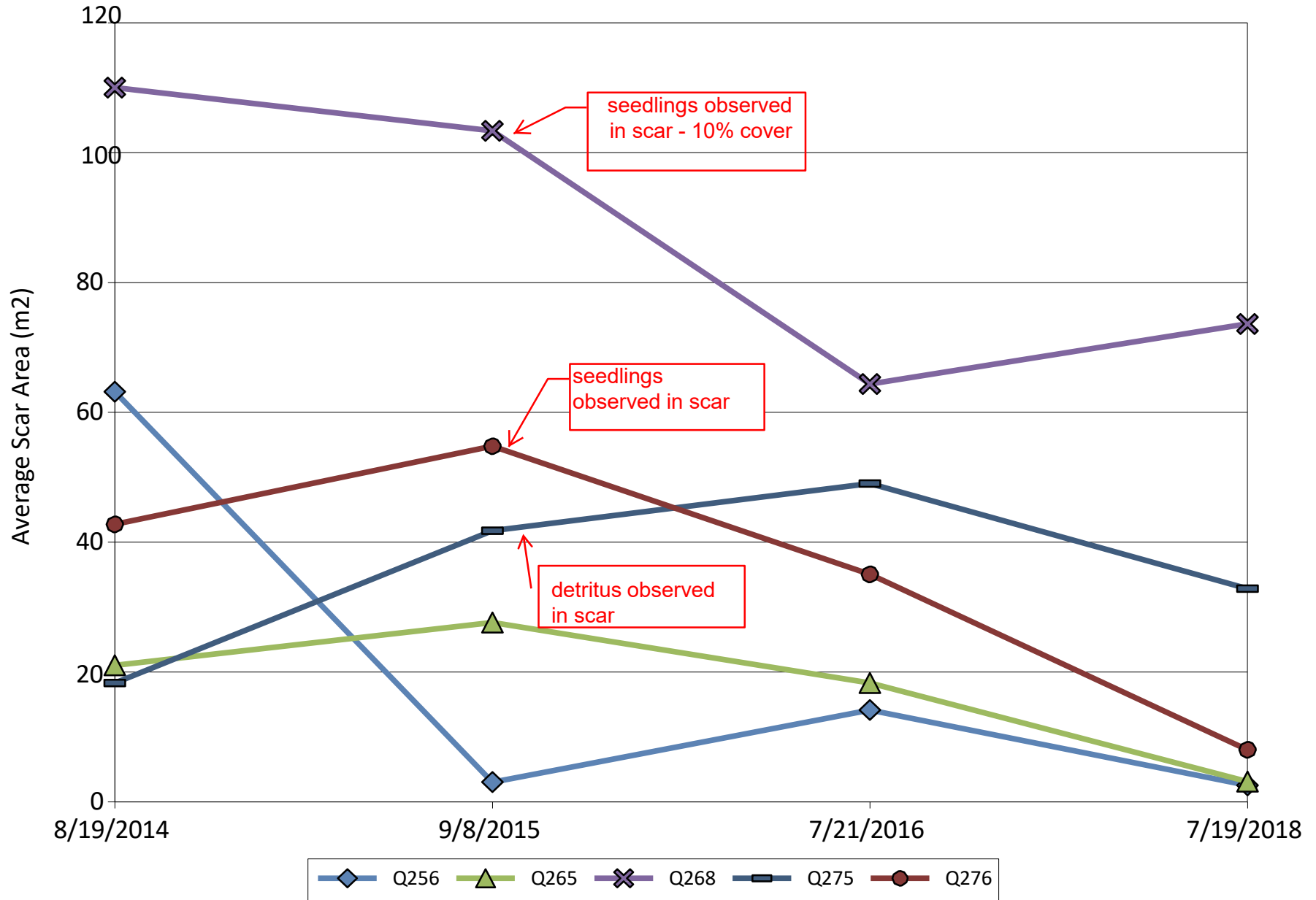
April
2014

West Falmouth



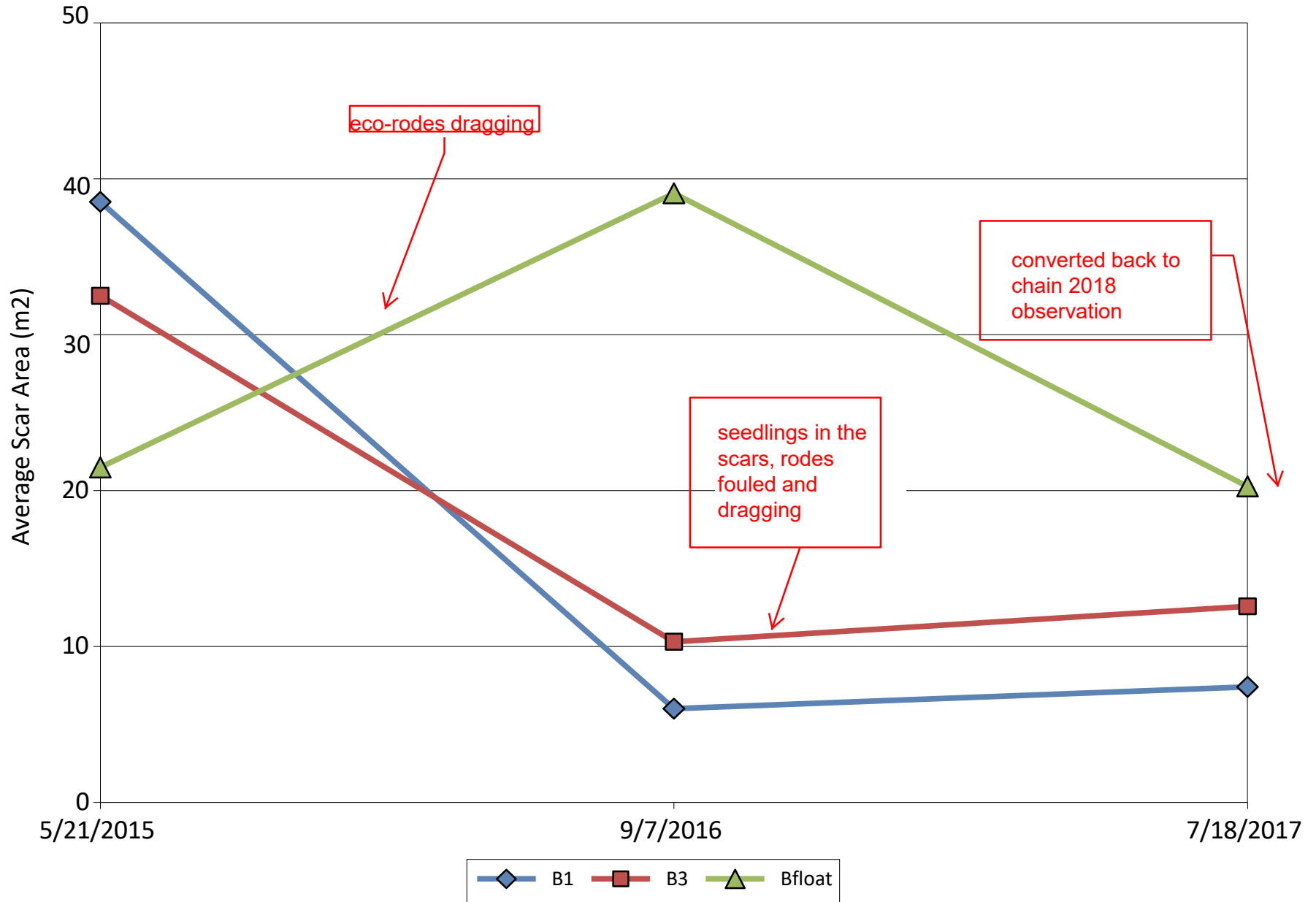


Quissett

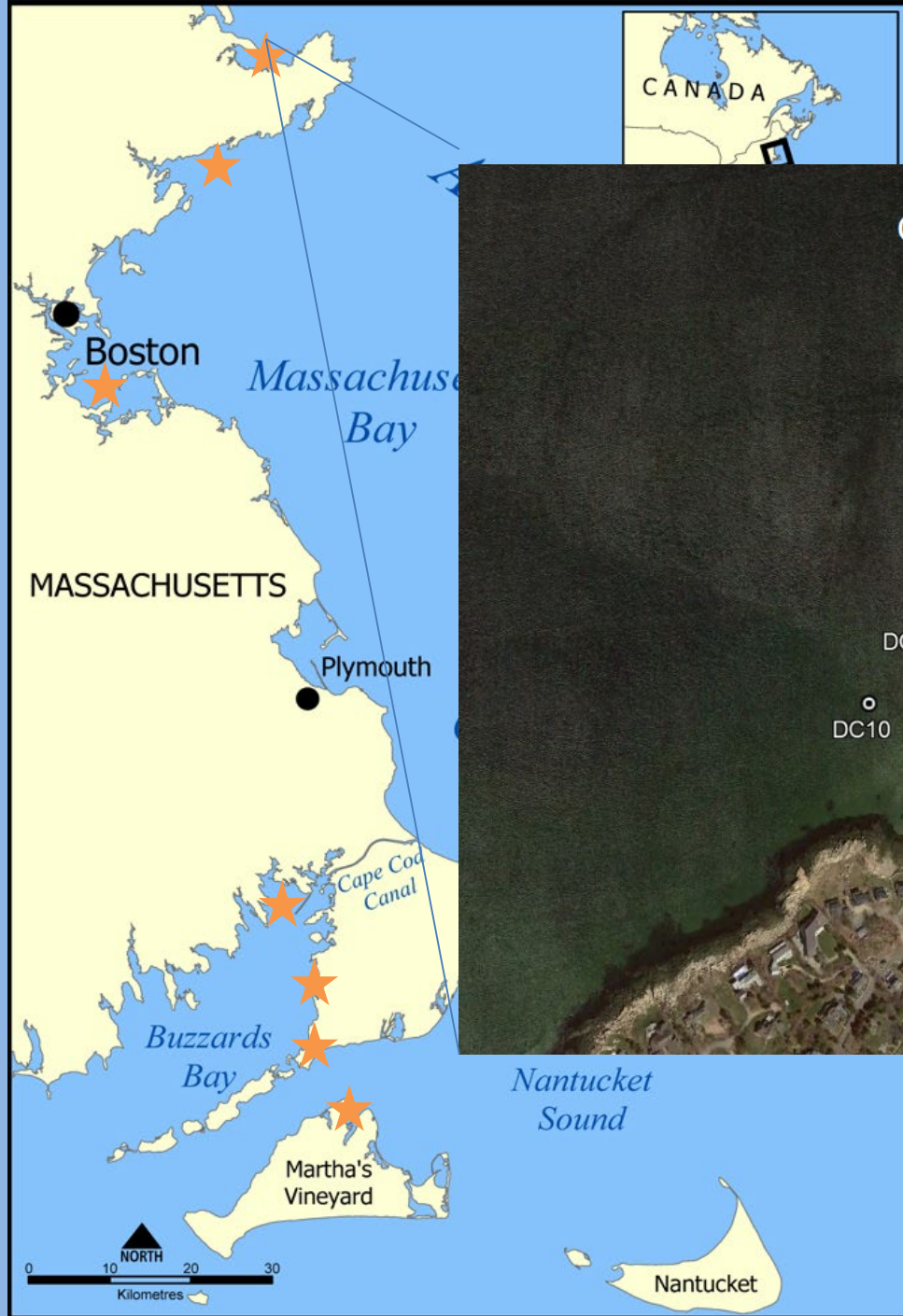




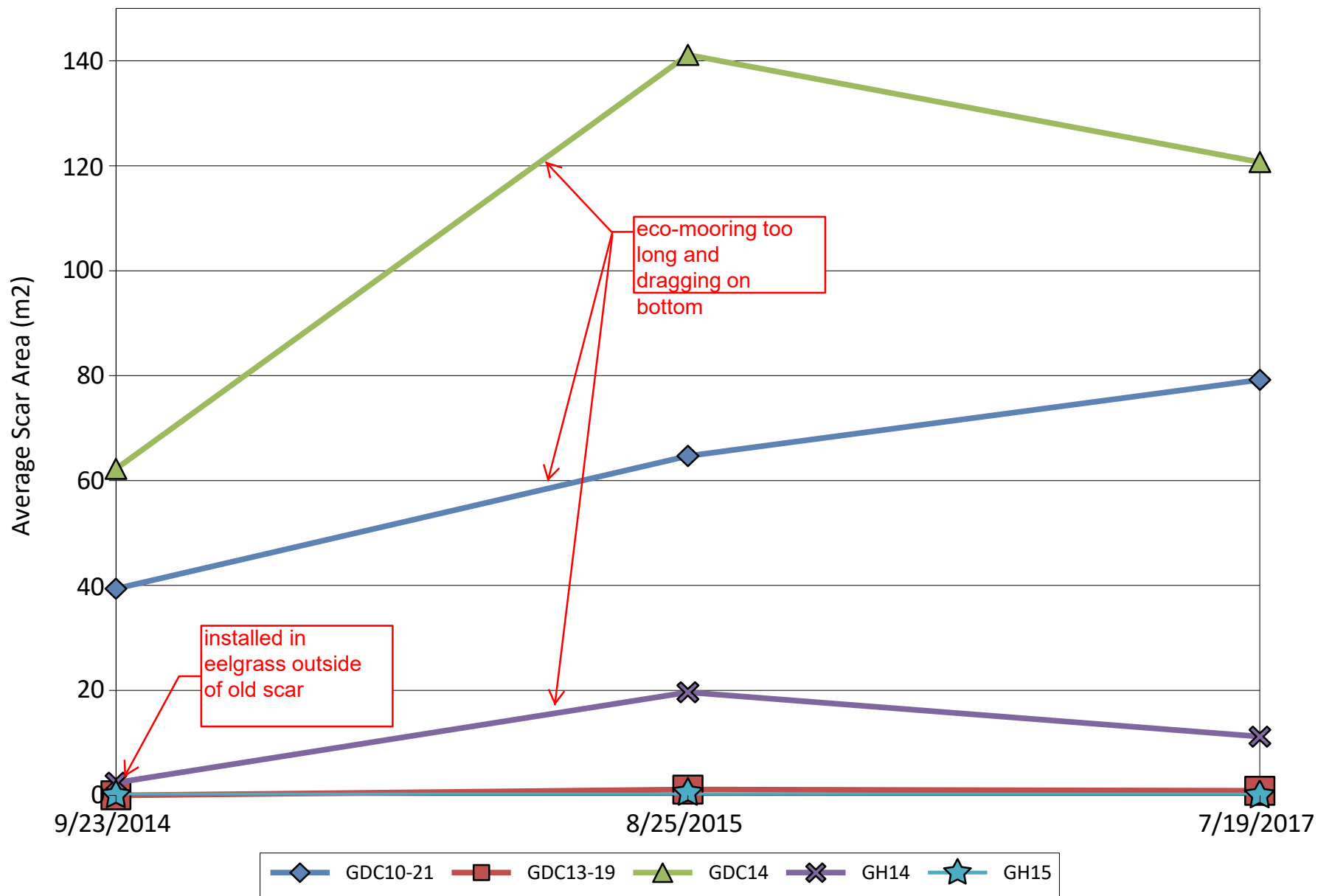
Boston - Long Island

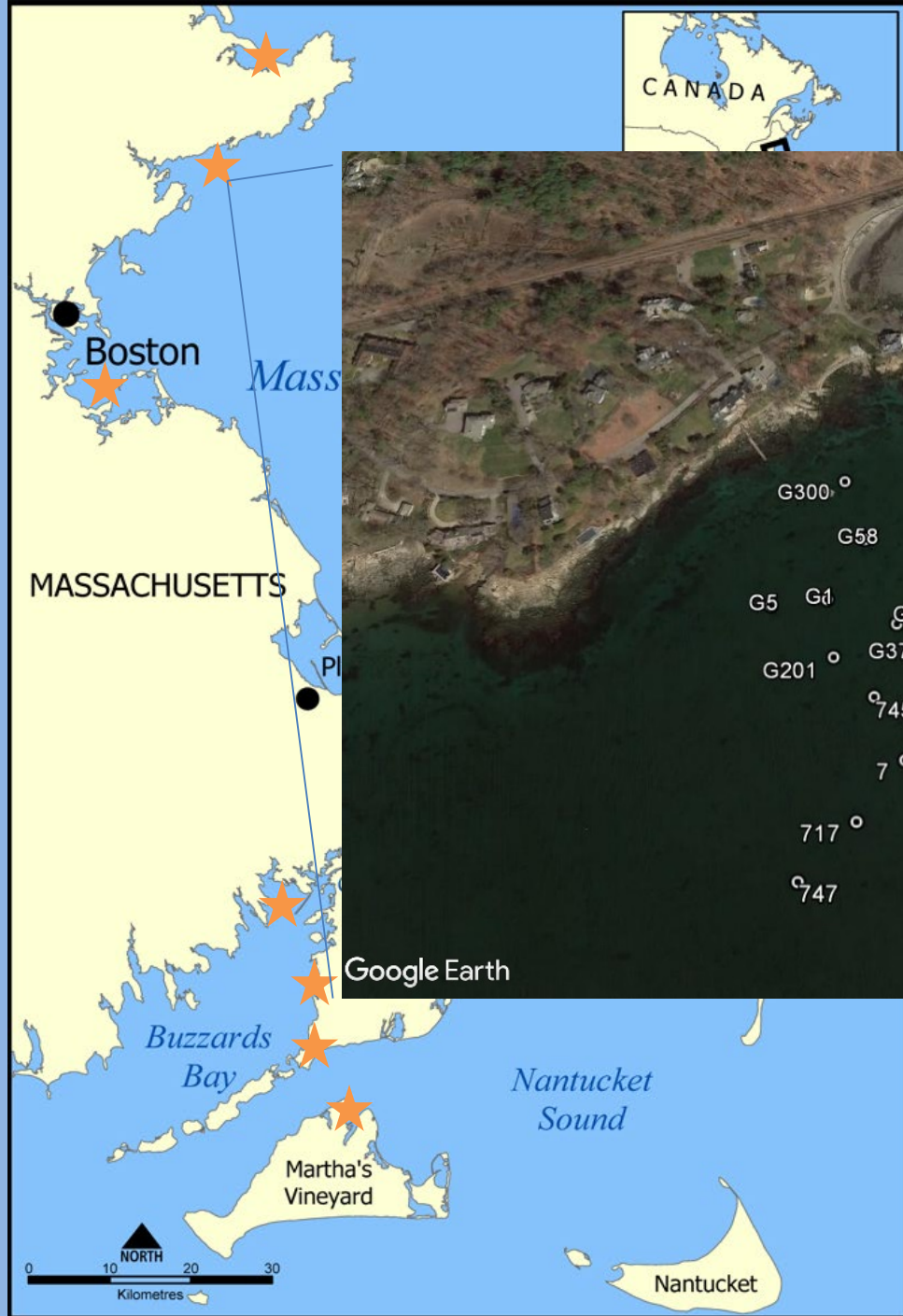




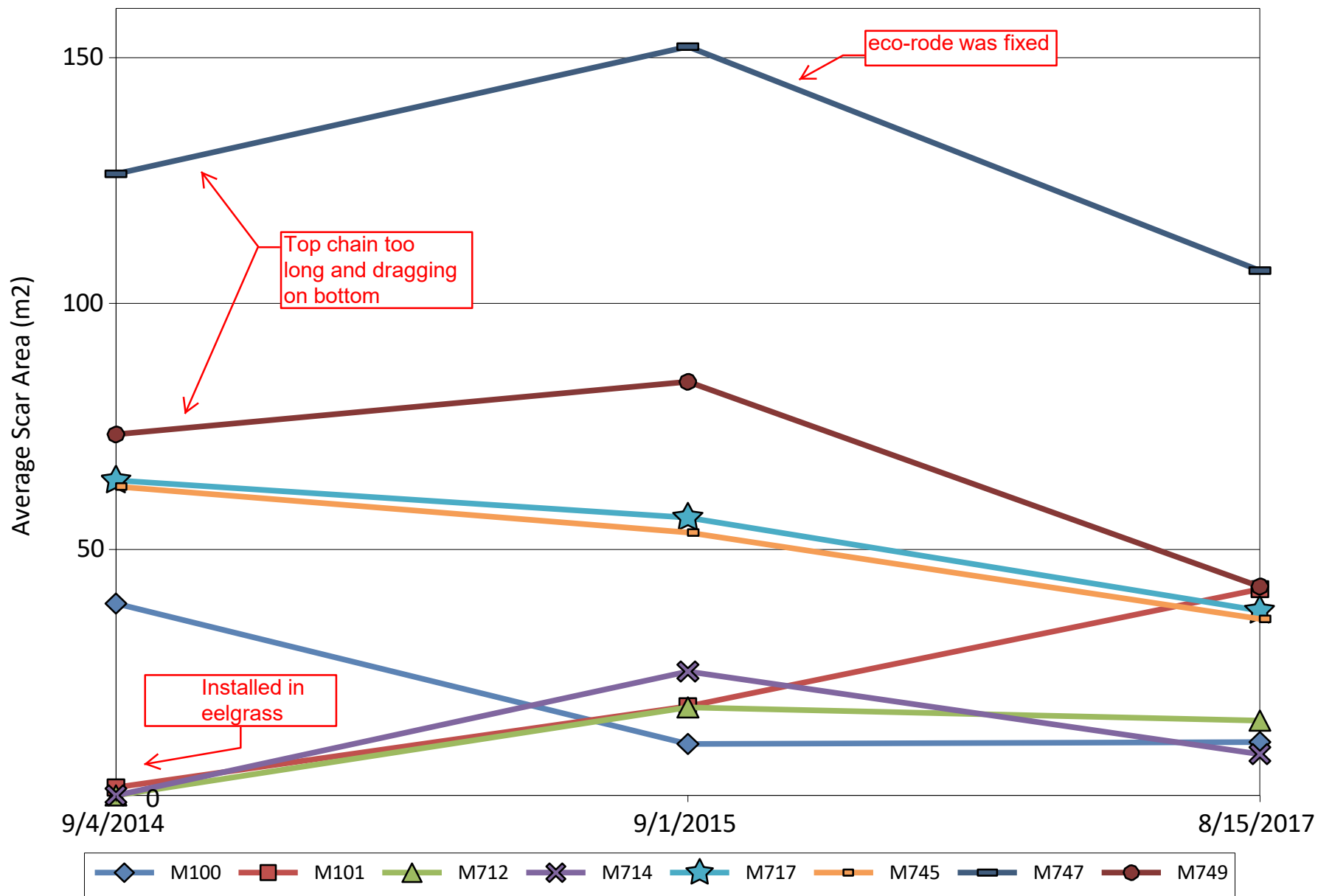


Gloucester - Davis Cove & Hodgkins Cove





Manchester By-the-Sea



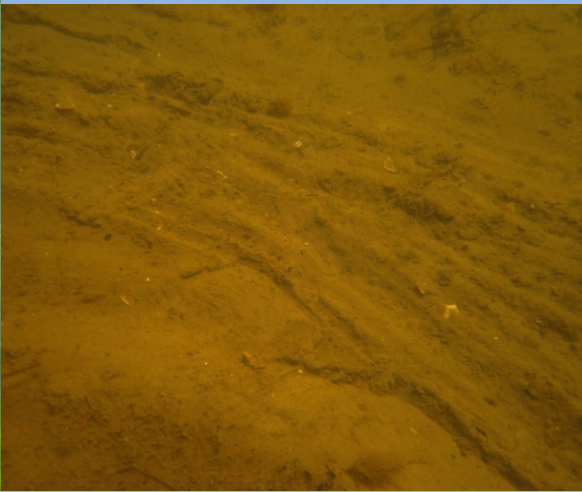




Fouling



Dragging – not floating



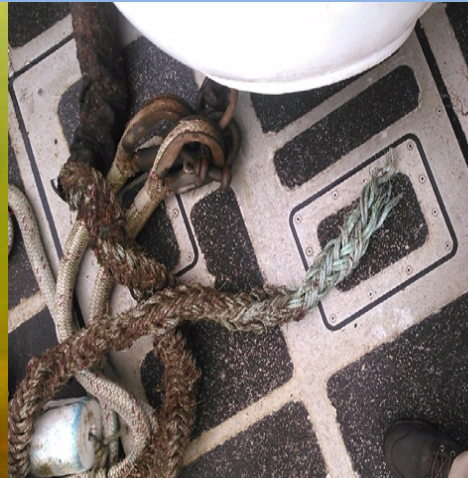
Too long



Overwintering



breaking



detritus



Conclusions

- West Falmouth

WF	2013	2016-18
Mean scar area (m2) 8 moorings	66	16
Total scar area 8 moorings	533	128

- Manchester

Manchester	2010	2017
Mean scar area (m2) 8 moorings	40.9	37.9
Total scar area 8 moorings	327	303

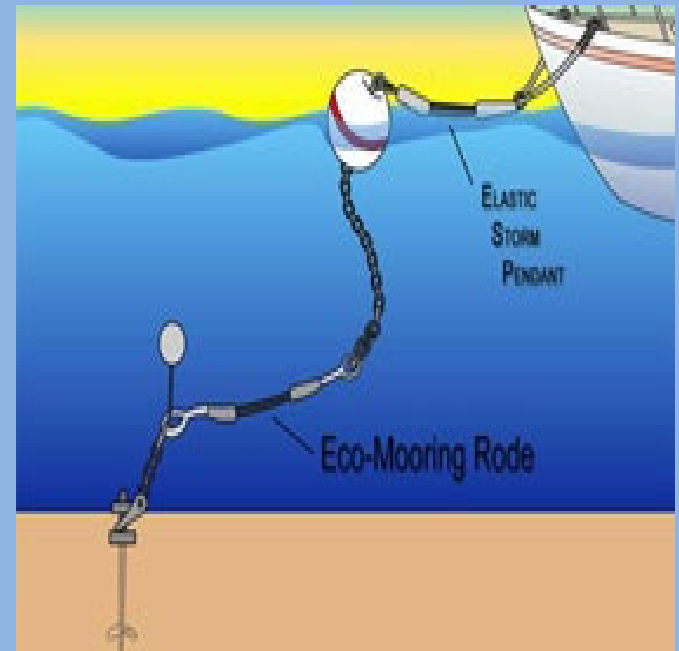
Conclusions

- Increased awareness and education of boat owners and harbormasters.
- CMs have worked to minimize impacts to eelgrass when designed and maintained correctly.
- Design and Installation problems still need improvement.

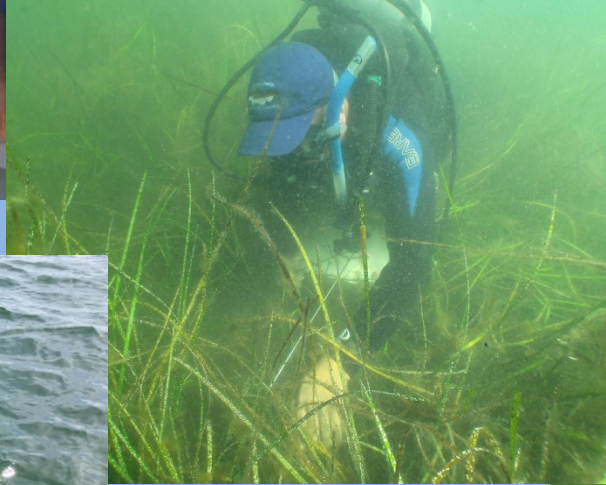


Recommendations

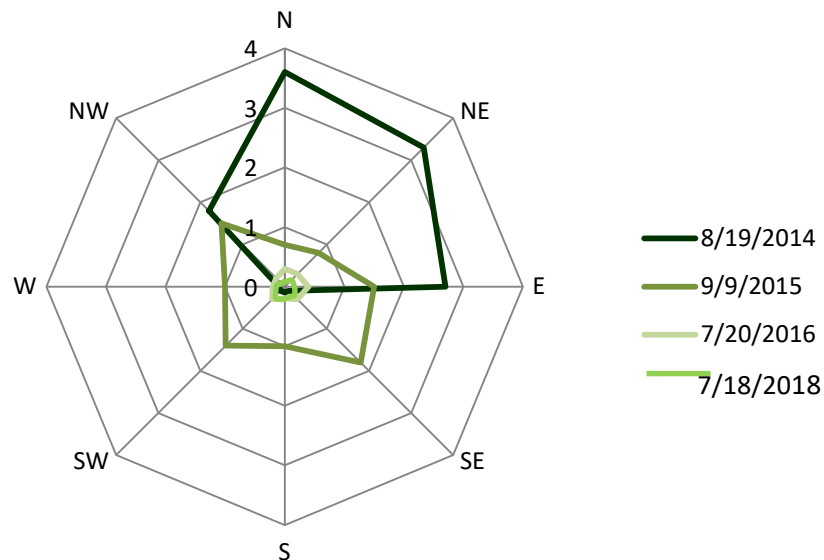
- Size for depth, tidal range and boat use
- Maintenance 2x per season, ensure they are floating
- Winter storage on land
- Some sites benefit more than others from conservation moorings
- We do not recommend using conservation moorings for mitigation of eelgrass impacts



Thanks!



WF 142



2014 – Patchy scar edge

2015 – some shoots in the original scar, but fouled and dragging rode. Need shorter top chain/rode

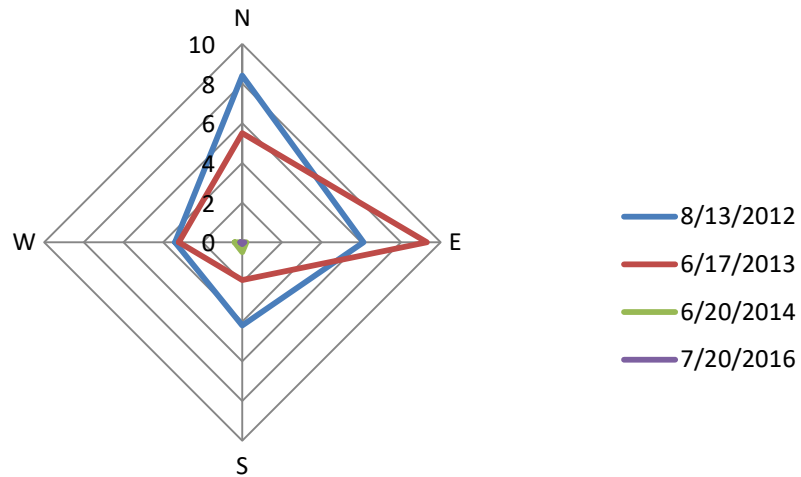
2016 – Top chain fixed. fully grown in



Scar area

12m² → 0.3m²

116 - Edge



105 - Edge

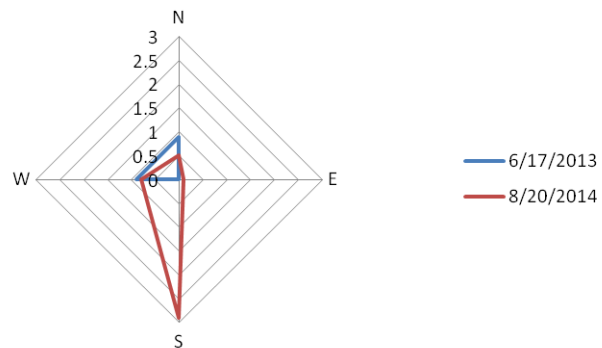


Figure 6. Fouled mooring dragging the bottom.

Coecles Harbor, Shelter Island NY, 2018



Planning process underway:

- Soren Dahl is contact soren.dahl@dec.ny.gov
- Concerns with ownership of mooring and liability
- Baymen concerned with interaction with scallop drags



West Falmouth Harbor

- 8 moorings installed in 2014 (Massport eco-moorings), 8 in 2013 (ACFHP Eco-mooring and Hazelett).
- Shallow site and some moorings dragged on the bottom
- Moorings were retro-fitted throughout the season with additional floats, etc.



Quissett Harbor

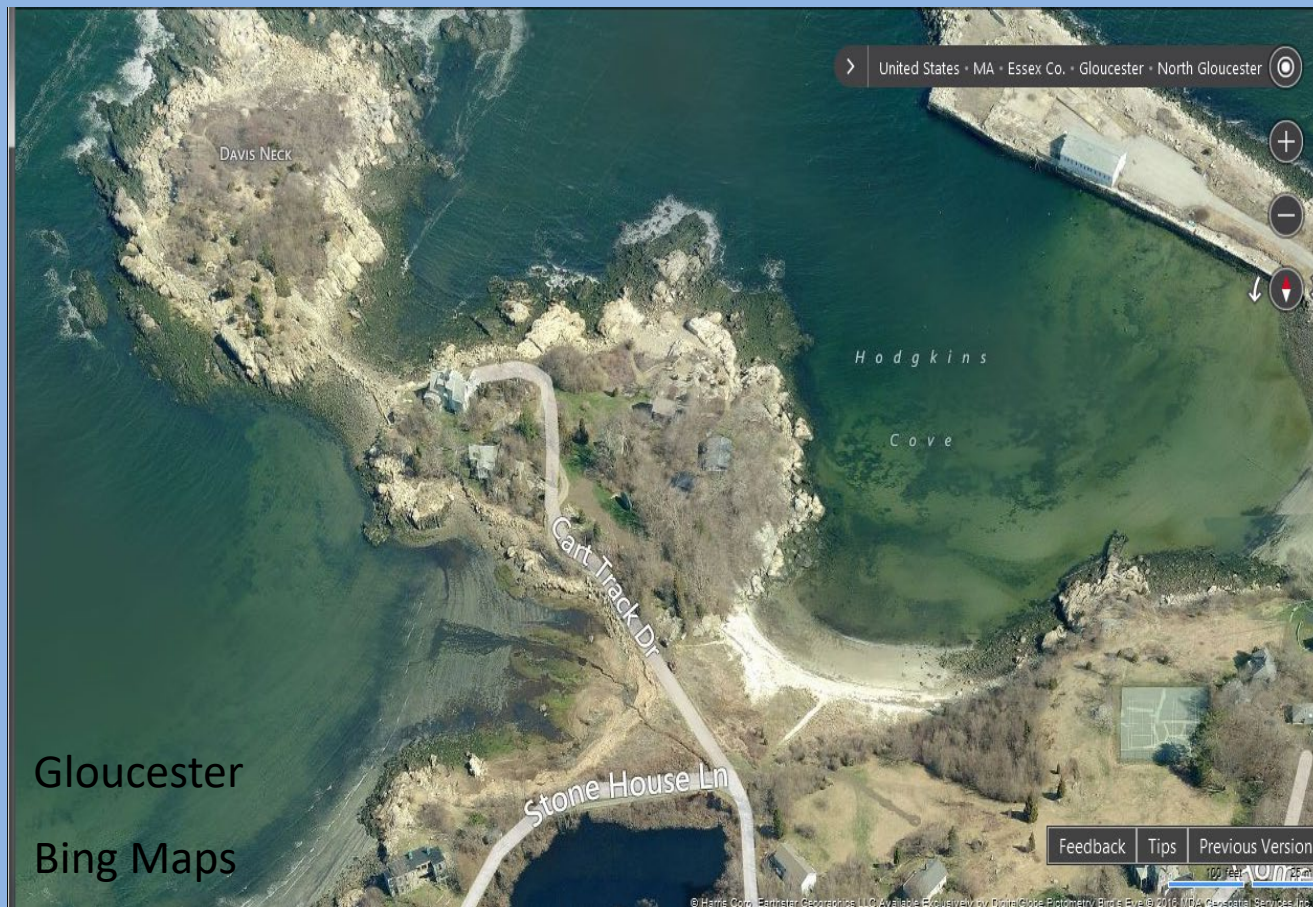
- 8 moorings installed in 2014 (Massport eco-moorings)



- Monitored 8 moorings installed in 2014 (Massport) 8 installed in 2011 (ANEP)
- Deep site with defined scars
- Evidence of seeding within some scars by 2015
- Eco rope wrapped around shackle on several.
- Some helixes not installed in former scars
- 717 chain was dragging and missing subsurface buoy

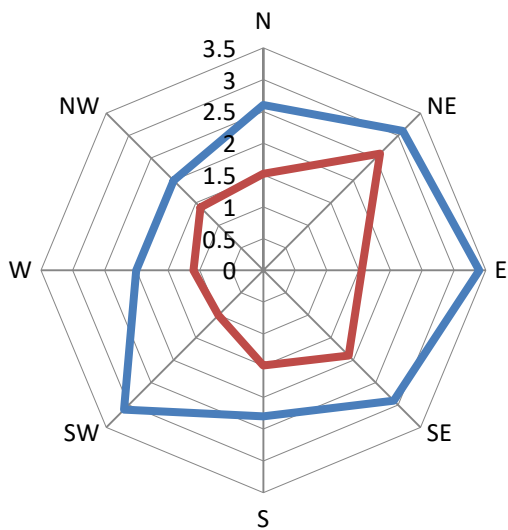
Manchester Outer Harbor
Massachusetts.

2010 Lighthawk flight, DMF photo.



- Monitored 6 moorings
- Very patchy eelgrass and hard to define scars.
- Bottom shackle dragging in some

WF 134



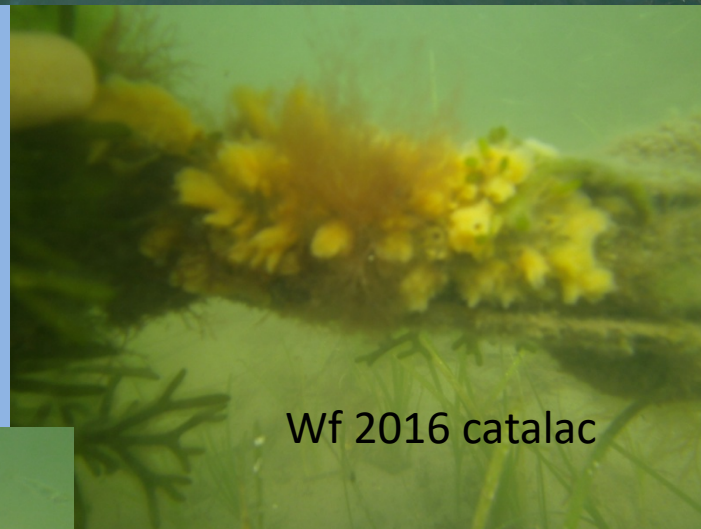
8/19/2014
9/20/2016



Wf 2014 catalac



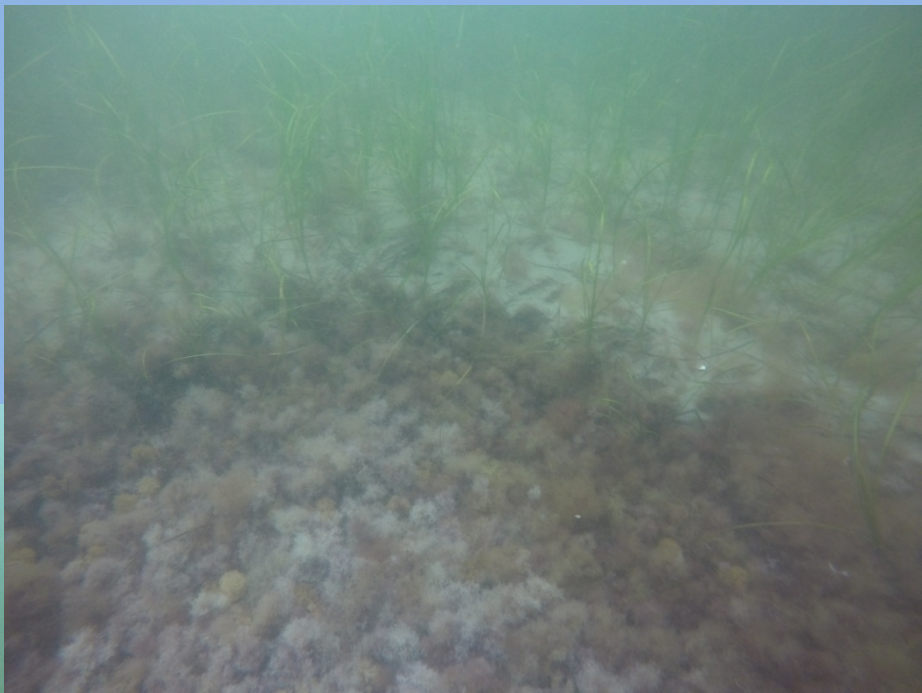
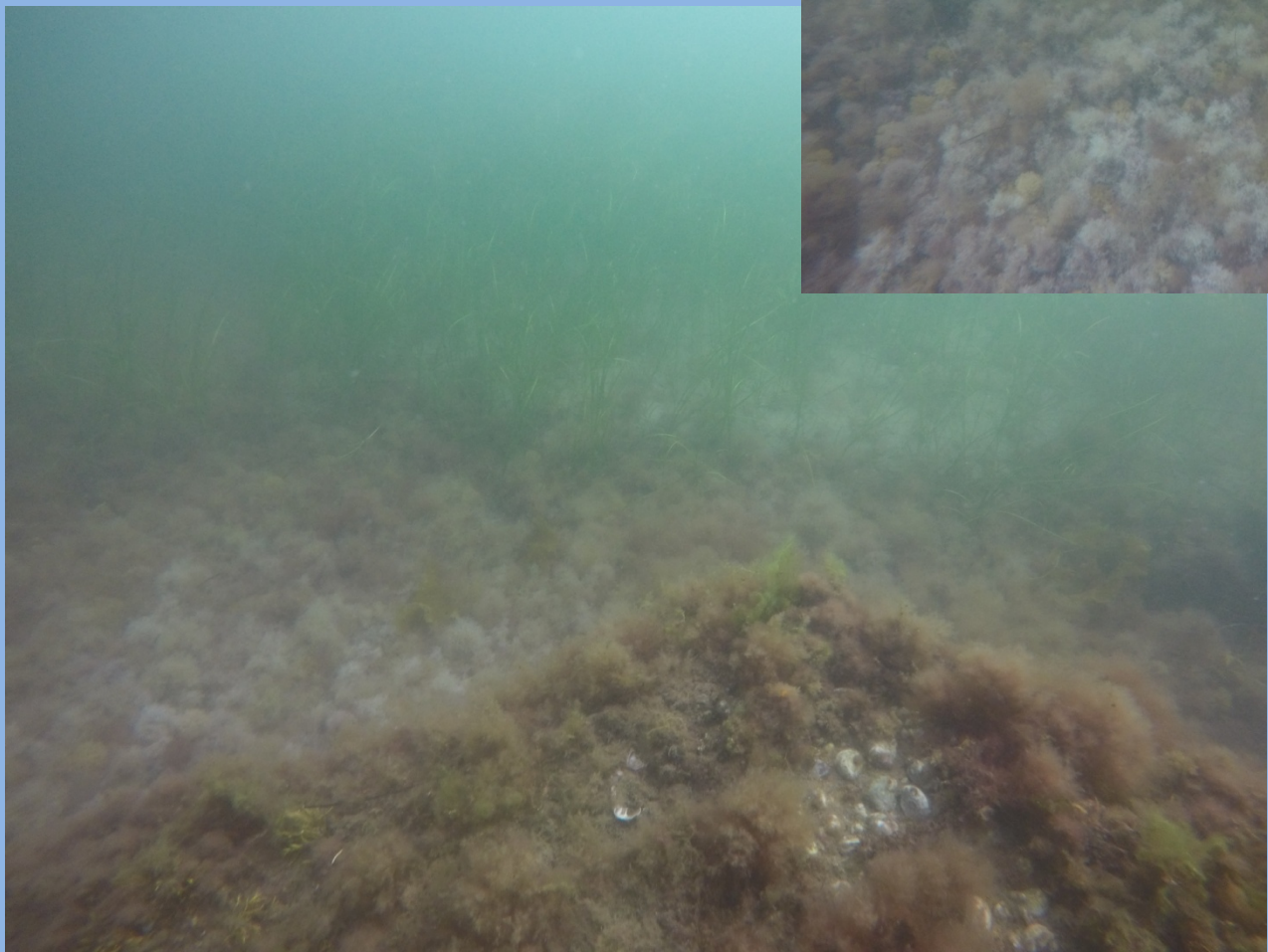
Wf 2014 catalac



Wf 2016 catalac



Wf 2016 catalac



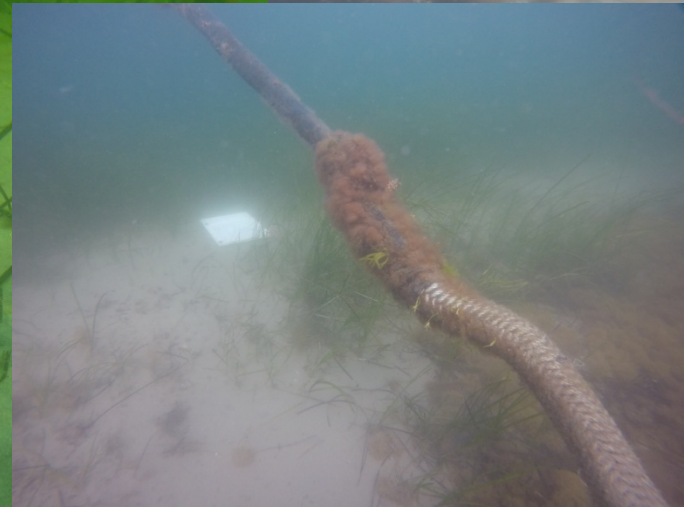
M714	04-Sep-14	0.00
M714	01-Sep-15	25.17
M714	15-Aug-17	8.39



G114 in 2015



G114 in 2016



G114 in 2018



Current application of Conservation moorings

- Pro-active municipal and private use
- Permit condition for new projects adjacent to eelgrass or other resource areas to reduce turbidity
- Permit requirement for re-licensing moorings within eelgrass
- mitigation alternative for project impacts to eelgrass beds



Supporting Local Fishing Communities
Since 1935





- Markets

- Geographically

- Demographics

- Bi-Products

- Sustainability

- Cyclic Fishery

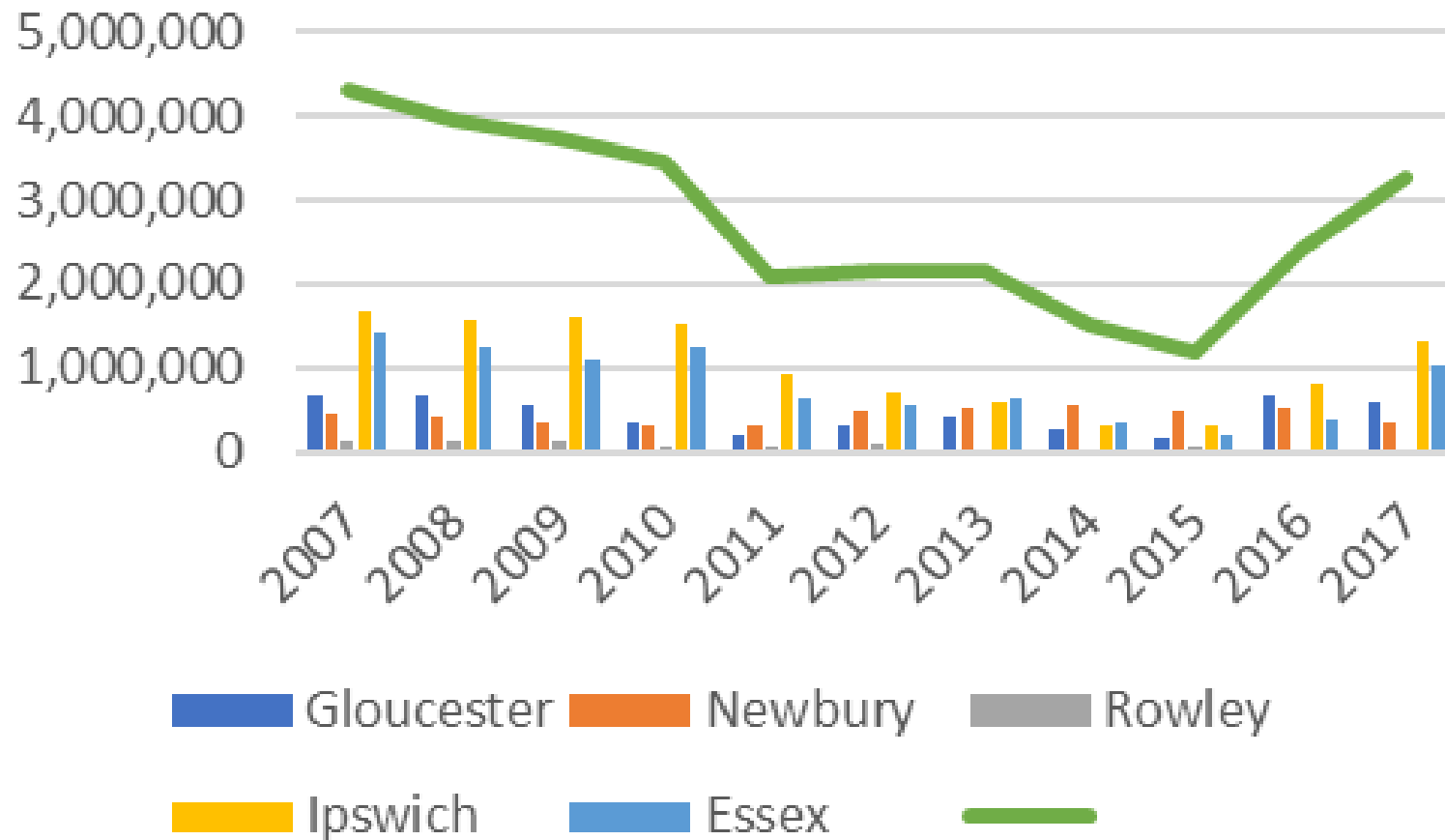
- Control Licenses

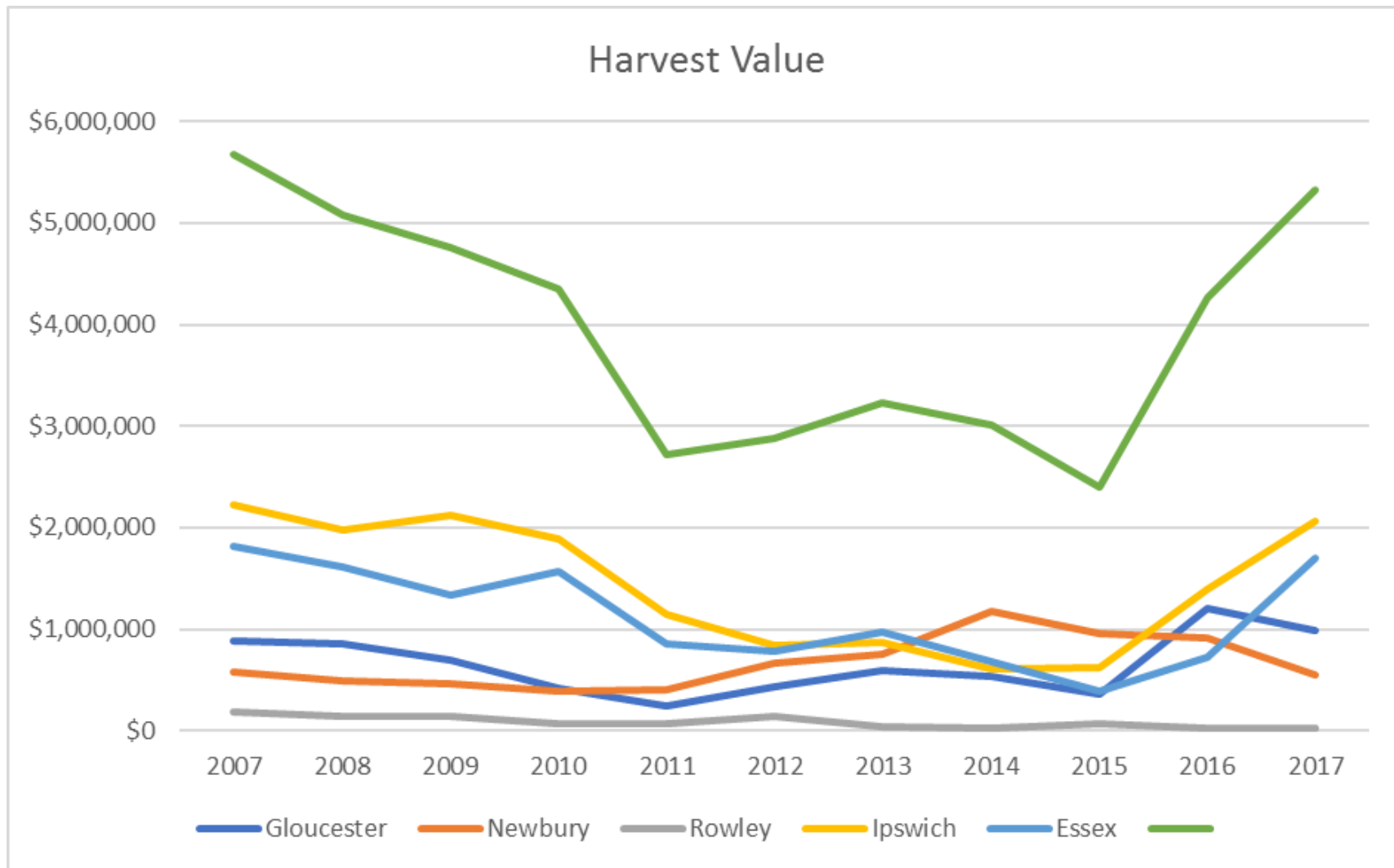
- No Mechanical Harvest

- Processing—Water Use

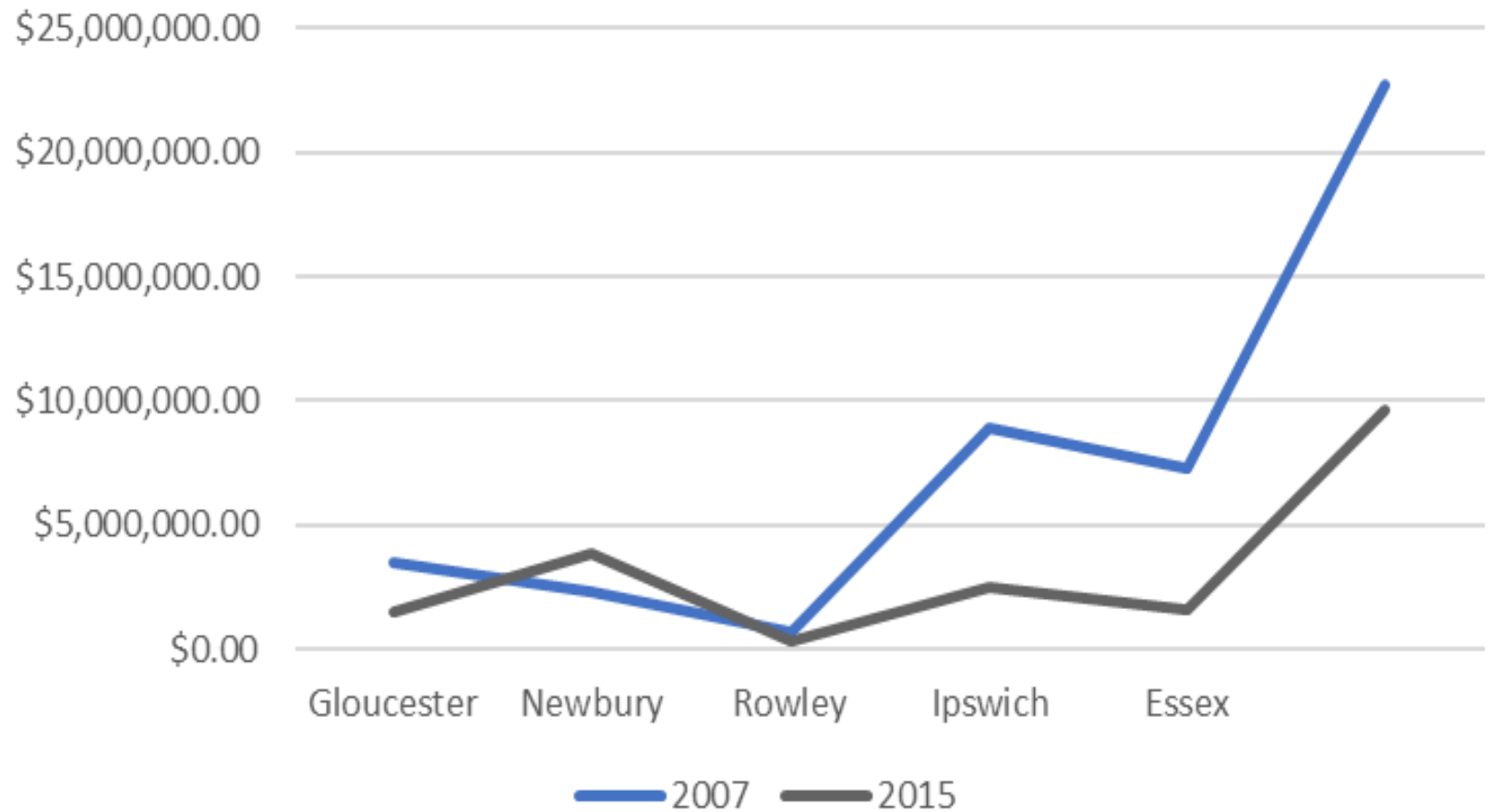


Harvest Quantity





Economic Impact



Essex, MA 2017

Harvest Value \$1.6 Mil

136 Licenses

\$11,764.00 per License

“The Great Marsh”

475 Licensed Harvesters

\$500 / day

\$500 / week

\$500 / month



Industry Challenges

- 1. Aging Harvesters / Lack of New Entrants**
- 2. Shucking Labor**
- 3. Pollution from Upstream**
- 4. Demographics of “Fried Clam” customers**
- 5. Sea Level Rise**





Supporting Local Fishing Communities
Since 1935

U.S. FISH AND WILDLIFE SERVICE

Aquatic Connectivity Team

and

Coastal Resilience Team

USFWS NORTHEAST REGIONAL PRIORITIES

- Supporting Our Workforce
- Connecting People to Nature
- Strategic Conservation
 - Aquatic Connectivity
 - At-Risk Species
 - Coastal Resilience
 - Watersheds and Landscapes

USFWS NORTHEAST REGIONAL PRIORITIES

- Supporting Our Workforce
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- Strategic Conservation
 - Aquatic Connectivity
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 - Coastal Resilience
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AQUATIC CONNECTIVITY TEAM

- USFWS Northeast Region - all programs
 - Fisheries and Aquatic Conservation
 - Refuges
 - Ecological Services
 - Migratory Birds
 - Wildlife and Sportfish Restoration
- Why? – Multiple programs working on same goals

AQUATIC CONNECTIVITY VISION

“To restore sustainable fish and wildlife populations and ensure healthy, safe and connected river systems for people throughout the Northeast. We make this possible by working with partners to open and reconnect waters to improve habitat and protect communities.”



WHAT DOES SUCCESS LOOK LIKE?

- Implementing projects that maximize benefits to both society and wildlife
- Grow support for conservation programs
- Support other strategic conservation efforts



Before Restoration



After Restoration

HOW DO WE ACHIEVE SUCCESS?

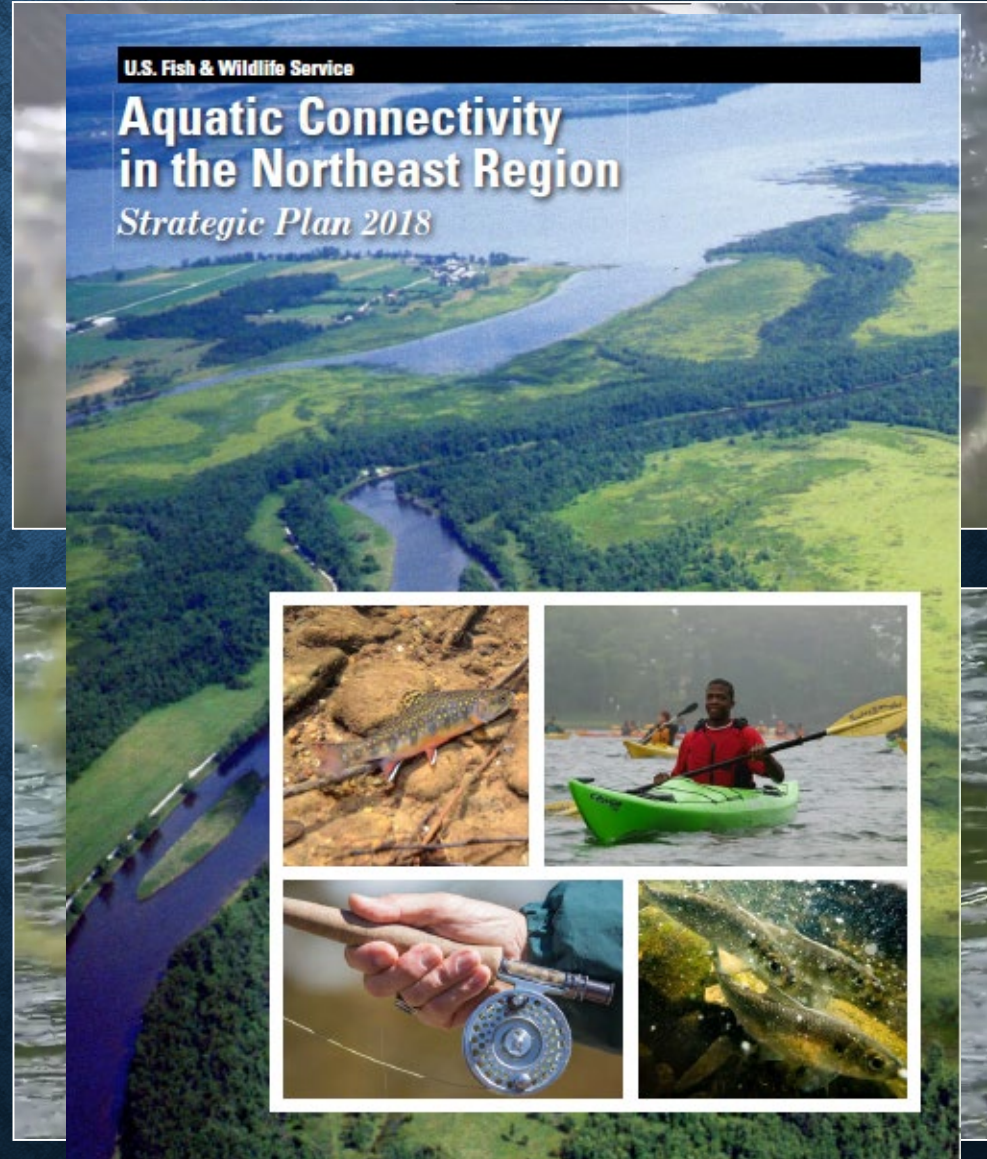
❑ Strategic Plan

❑ Ecological and socioeconomic priorities

- Investigate how priorities can merge with states

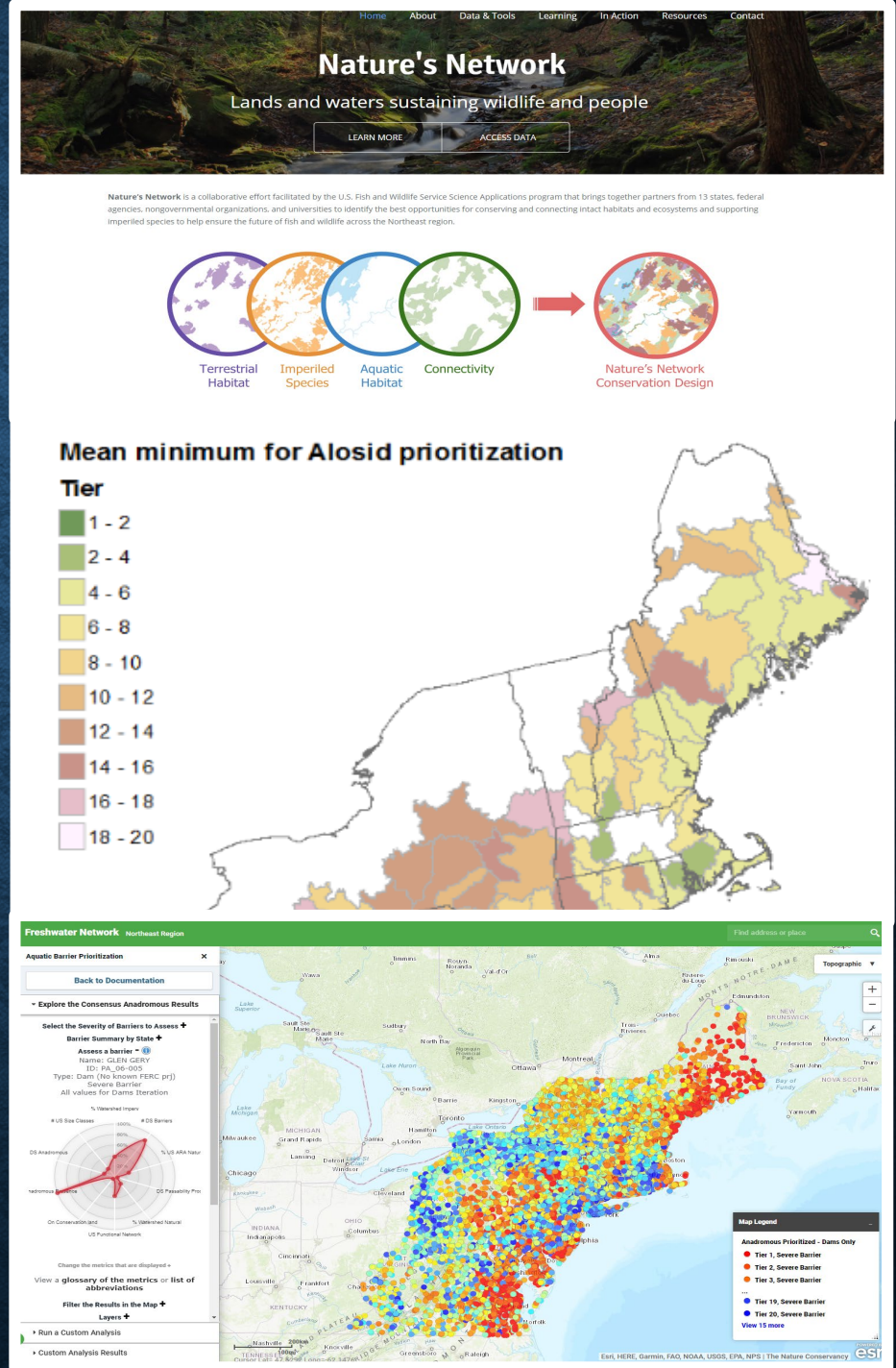
❑ Direct resources to those priorities

- Prioritize watersheds
- Prioritize within watersheds

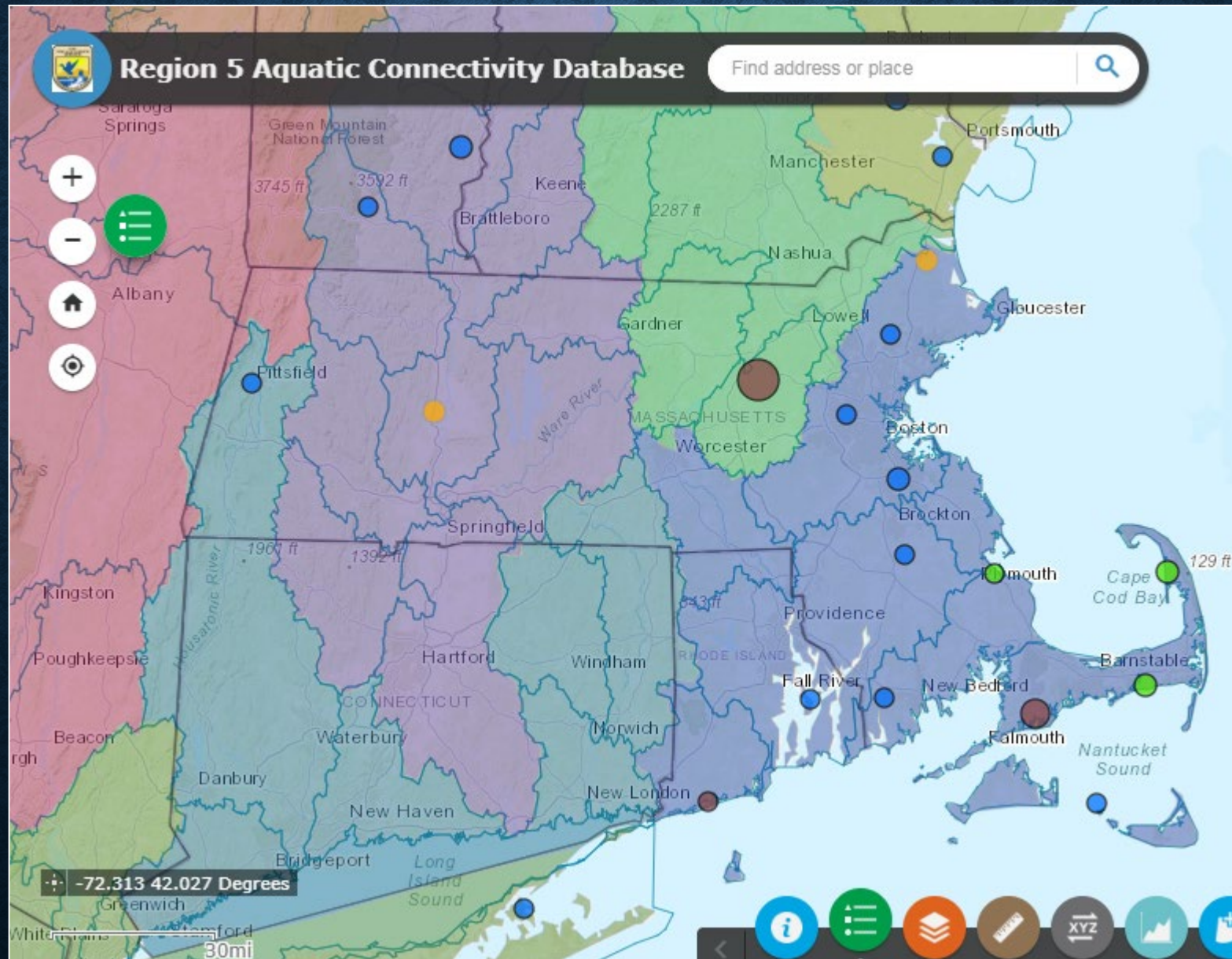


PLANNING

- ❑ Defining Priorities
 - ❑ Datasets, decision support tools
 - ❑ naturesnetwork.org
 - ❑ Staff knowledge
 - ❑ Partner knowledge
- ❑ What does it mean?
 - ❑ Not the only place we'll work
 - ❑ Focus for shared investment



ACCOMPLISHMENTS - FUTURE PROJECTS DATABASE



ACCOMPLISHMENTS – FUTURE PROJECTS DATABASE

- No funding limit
- Any stage of project development
- Currently- 269 potential projects
- Updated twice per year

Uses

- Infrastructure Bill data call
- Hurricane Sandy funding
- Prioritize projects for new funding



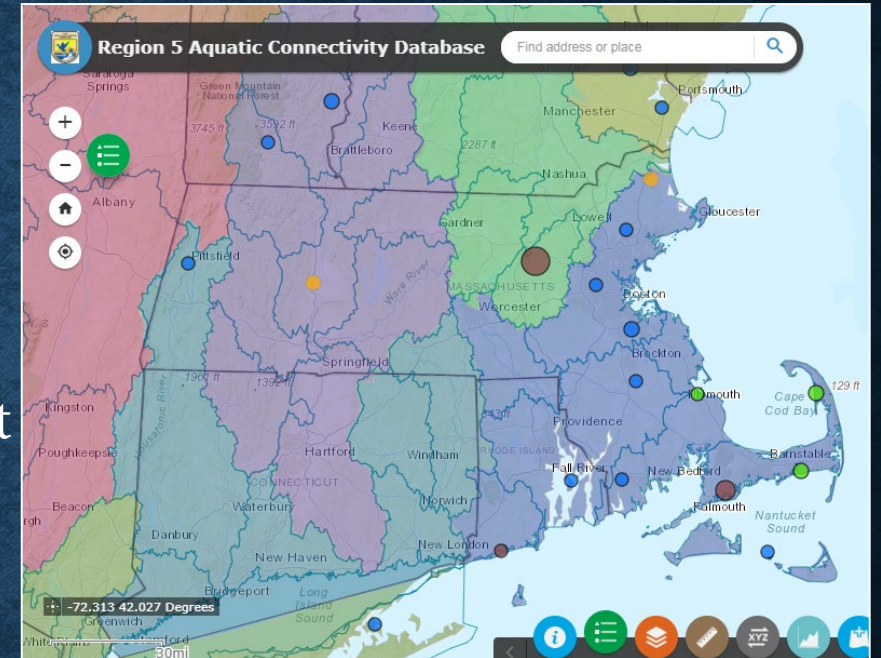
ACCOMPLISHMENTS – NAACC SUPPORT

- Program has
 - 277 active lead observers
 - 33,799 crossing assessments
 - 40,000 assessments from other protocols
- Current Sandy funding exhausted
- FAC, Refuges, ES, and SA contributed \$ to training/database
- Leveraging funds from states and other sources



A LOOK AHEAD

- ☐ Future projects database
- ☐ NAACC Communications support
- ☐ Communications
- ☐ Conservation Opportunities: Shared investment watersheds & Hydropower
- ☐ In-house projects
- ☐ Training and equipment
- ☐ At-risk species & Coastal Resilience



COASTAL RESILIENCE TEAM

- Strategic plan focuses primarily on the 3 Atlantic Coast Joint Venture bird species; working to incorporate fish and other aquatic species
- Meetings focus on opportunities for collaboration and identifying resource needs to support each other



Saltmarsh Sparrow



Black Duck



Black Rail

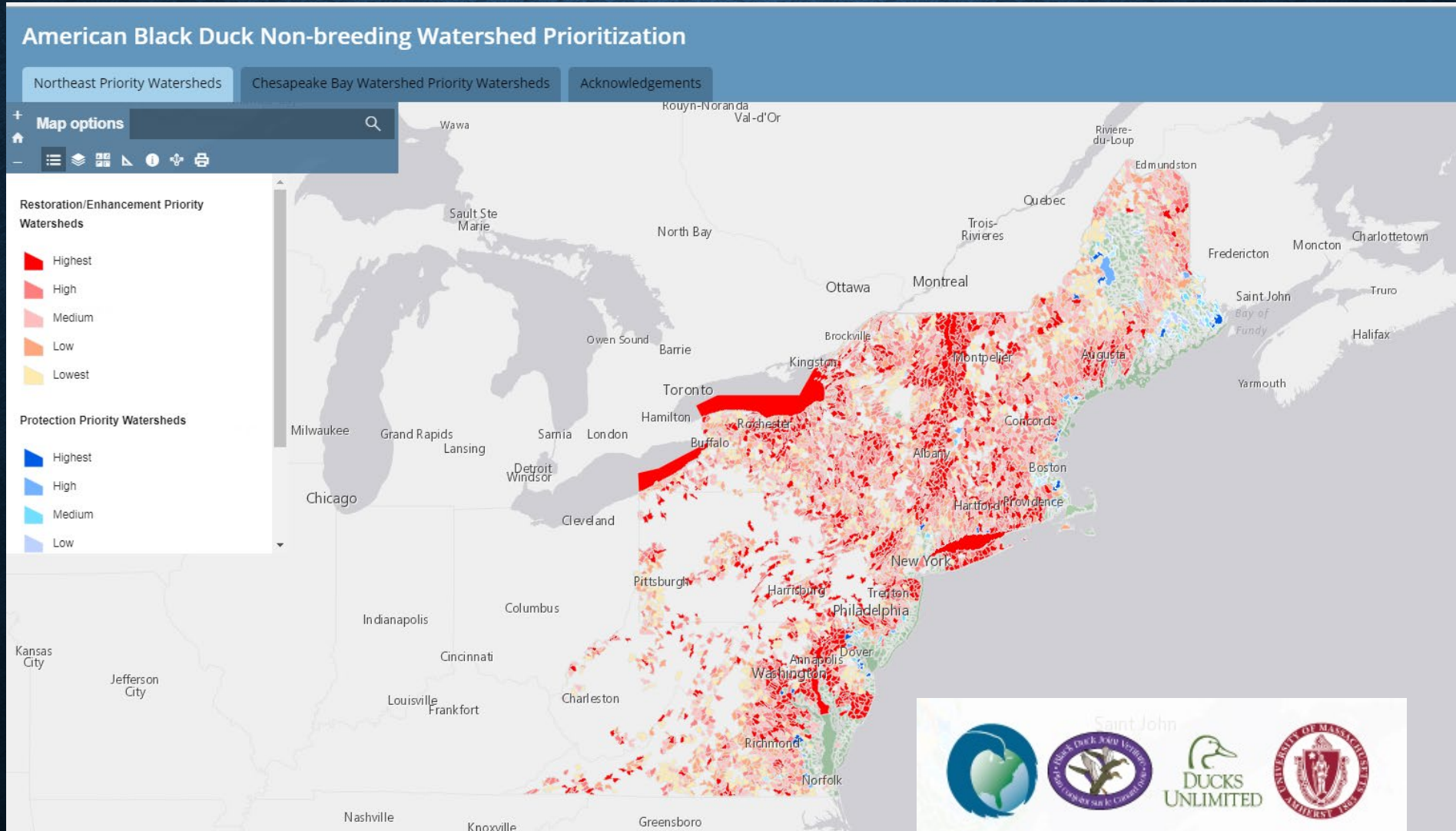
COASTAL RESILIENCE BIRD SPECIES

ACJV FLAGSHIP GOALS

- Set measurable and time bound population objectives
- Set habitat objectives to achieve population objectives
- Provide tools and resources to advance implementation

Habitat Objectives

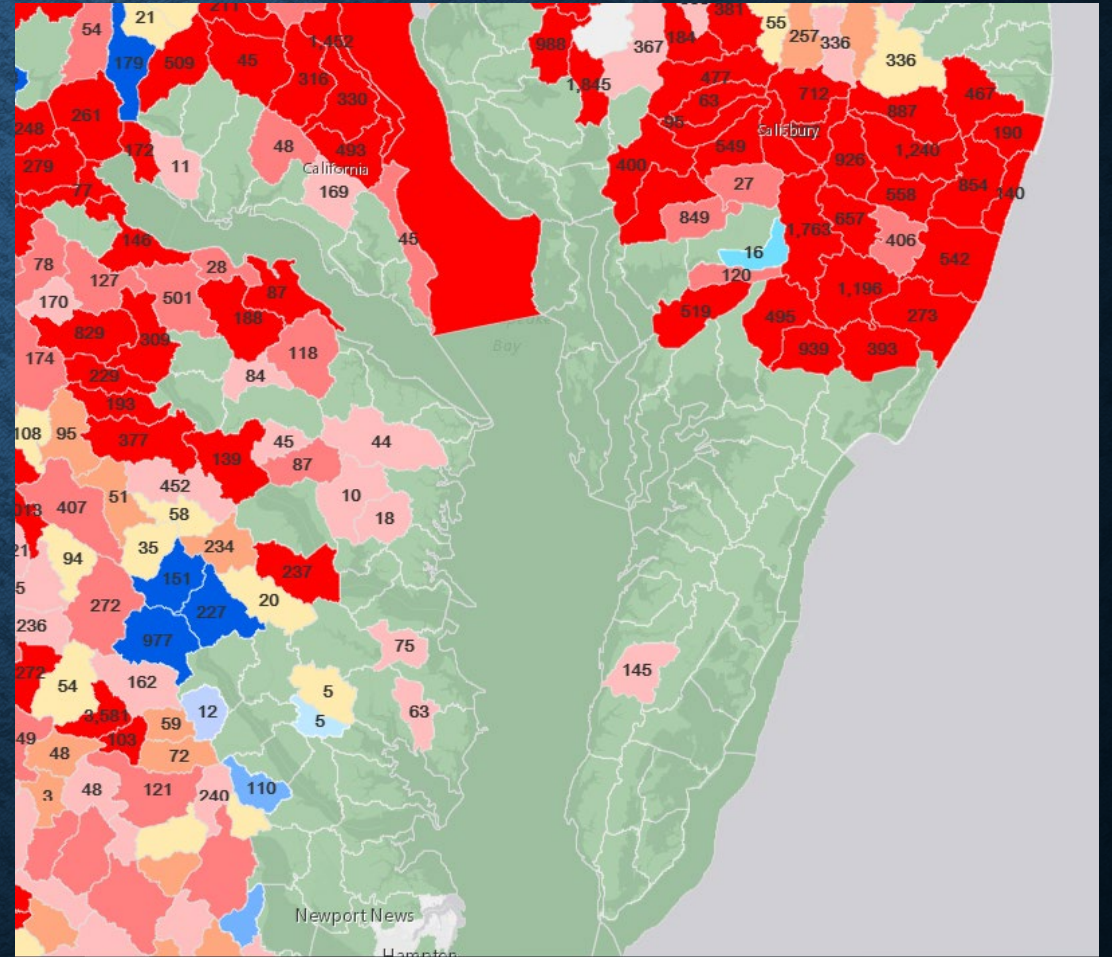
Black Duck Decision Support Tool v1.0:



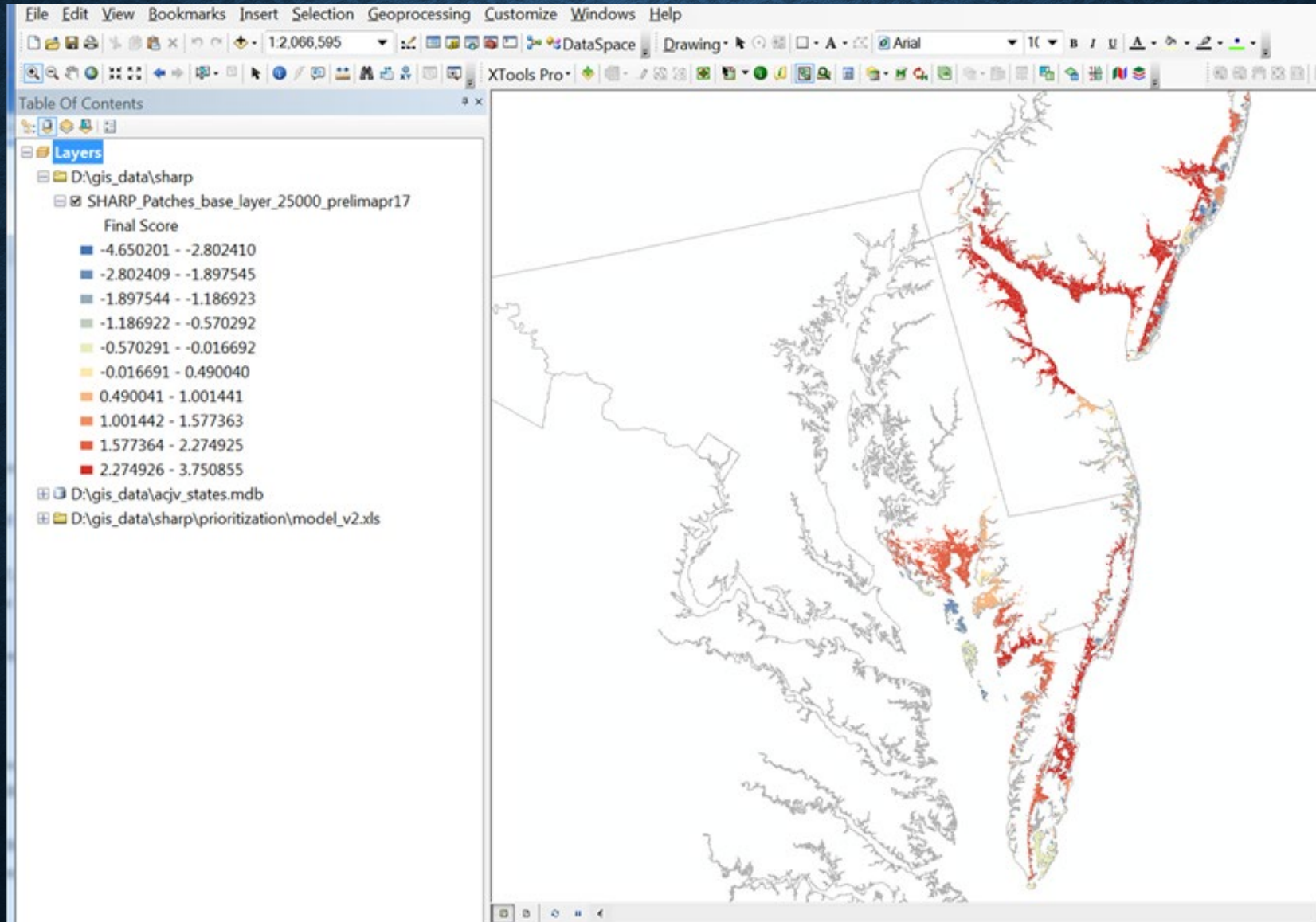


HABITAT OBJECTIVES

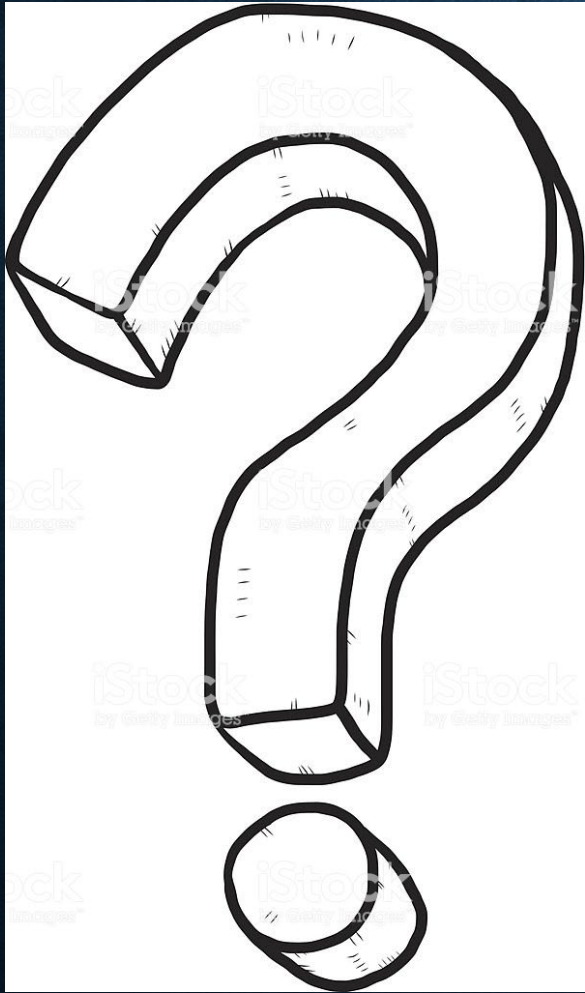
- **REDS** = Restore/ Enhance (not enough food energy)
- **BLUES** = Protect (not enough food energy is in protected status)
- **GREENS** = Maintain (maintain current food energy and add more as needed)



HABITAT OBJECTIVES: SALTMARSH SPARROW TOOL



HABITAT OBJECTIVES: BLACK RAIL



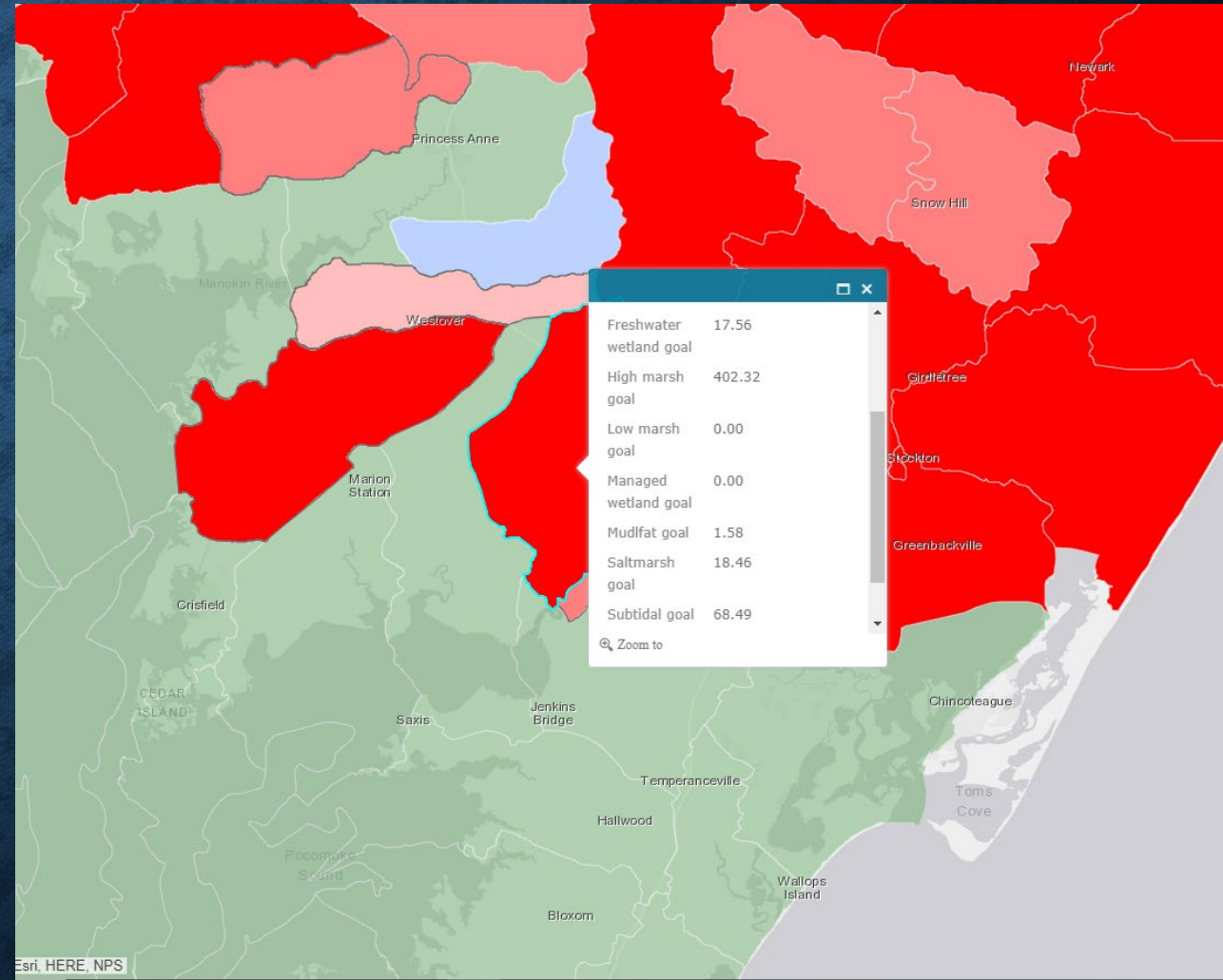
- Habitat requirements extremely subtle and poorly understood - cannot be remotely sensed
- At least 50% of BLRA habitat will need to be inland
- Remainder in transition zone and salt marsh
- Prioritize areas around known BLRA - FL, SC, NJ

SALTMARSH CONSERVATION BUSINESS PLAN

- Second draft in development
- Identifies strategies and actions necessary to conserve suite of salt marsh specialist birds
- Strategies developed through lens of most imperiled species (high marsh) first

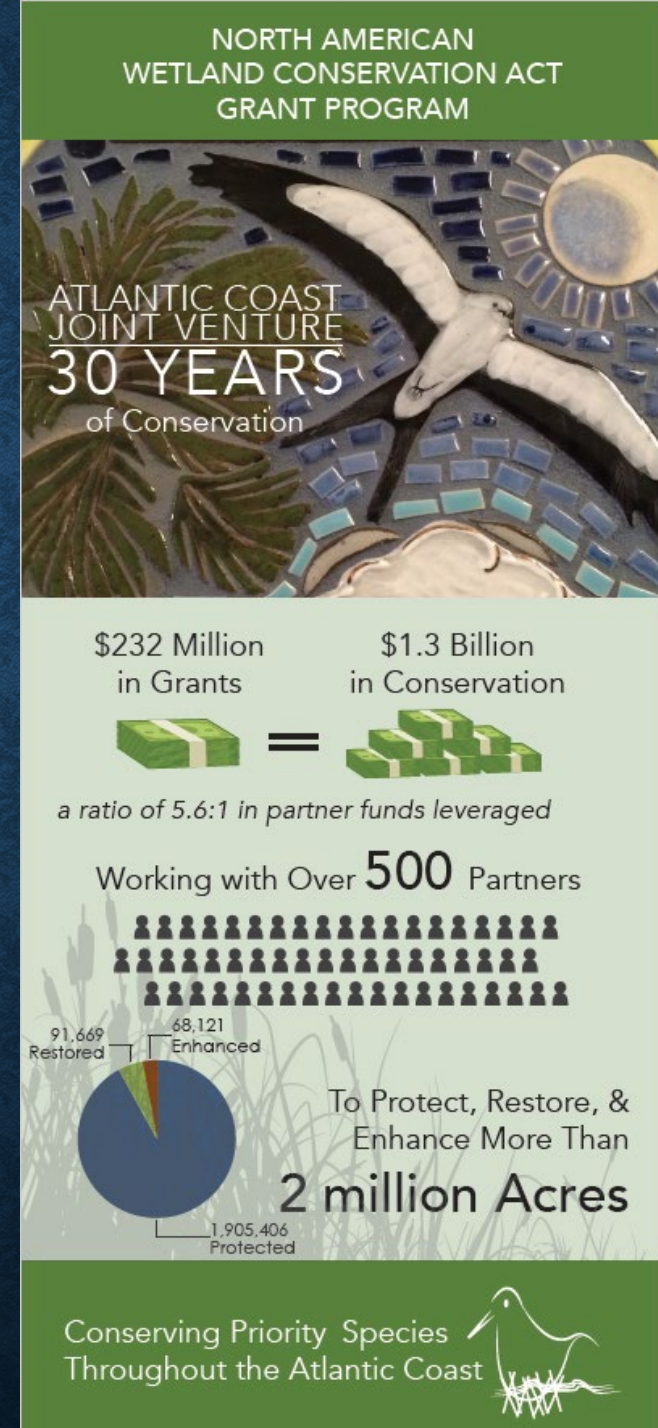
TRANSLATING OBJECTIVES AND TOOLS INTO IMPLEMENTATION

National Fish and Wildlife Foundation
Strategic Plan (Chesapeake Bay) –
aligning Black Duck priorities with
water quality priorities

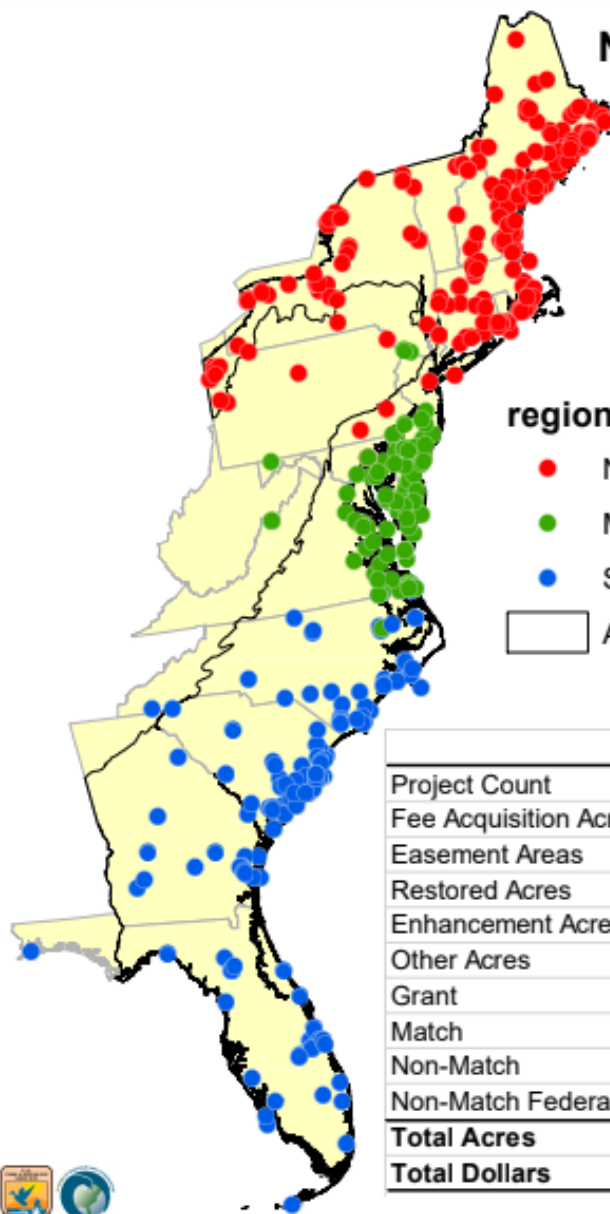


North American Wetland Conservation Act

- Major source of conservation dollars in ACJV
- >\$232M spent since inception (leveraging >\$1.3B in match)
- >2M acres protected
- ~159,000 acres restored/enhanced



NAWCA Grants in the Atlantic Coast Joint Venture 1991 - 2018



region

● North Atlantic

● Mid-Atlantic

● South Atlantic including PR and USVI

□ ACJV Administrative Boundary

Puerto Rico & U.S. Virgin Islands



	Mid-Atlantic	North Atlantic	South Atlantic	Total
Project Count	101	252	164	517
Fee Acquisition Acres	138,544	246,044	330,046	714,634
Easement Areas	55,337	1,060,051	129,092	1,244,480
Restored Acres	50,236	26,142	17,364	93,741
Enhancement Acres	10,534	9,074	55,898	75,507
Other Acres	312	4,379	17,140	21,830
Grant	\$ 63,132,582	\$ 86,892,804	\$ 103,446,956	\$ 253,472,342
Match	\$ 188,858,263	\$ 256,472,405	\$ 436,878,905	\$ 882,209,573
Non-Match	\$ 37,197,046	\$ 82,311,445	\$ 190,787,450	\$ 310,295,941
Non-Match Federal	\$ 30,120,497	\$ 56,433,989	\$ 84,700,458	\$ 171,254,944
Total Acres	254,963	1,345,691	549,539	2,150,193
Total Dollars	\$ 319,308,388	\$ 482,110,643	\$ 815,813,770	\$ 1,617,232,800

WISHLIST: EXPERIMENT WITH INNOVATIVE MARSH PRACTICES

- Develop new BMPs to enhance existing marsh and facilitate marsh migration

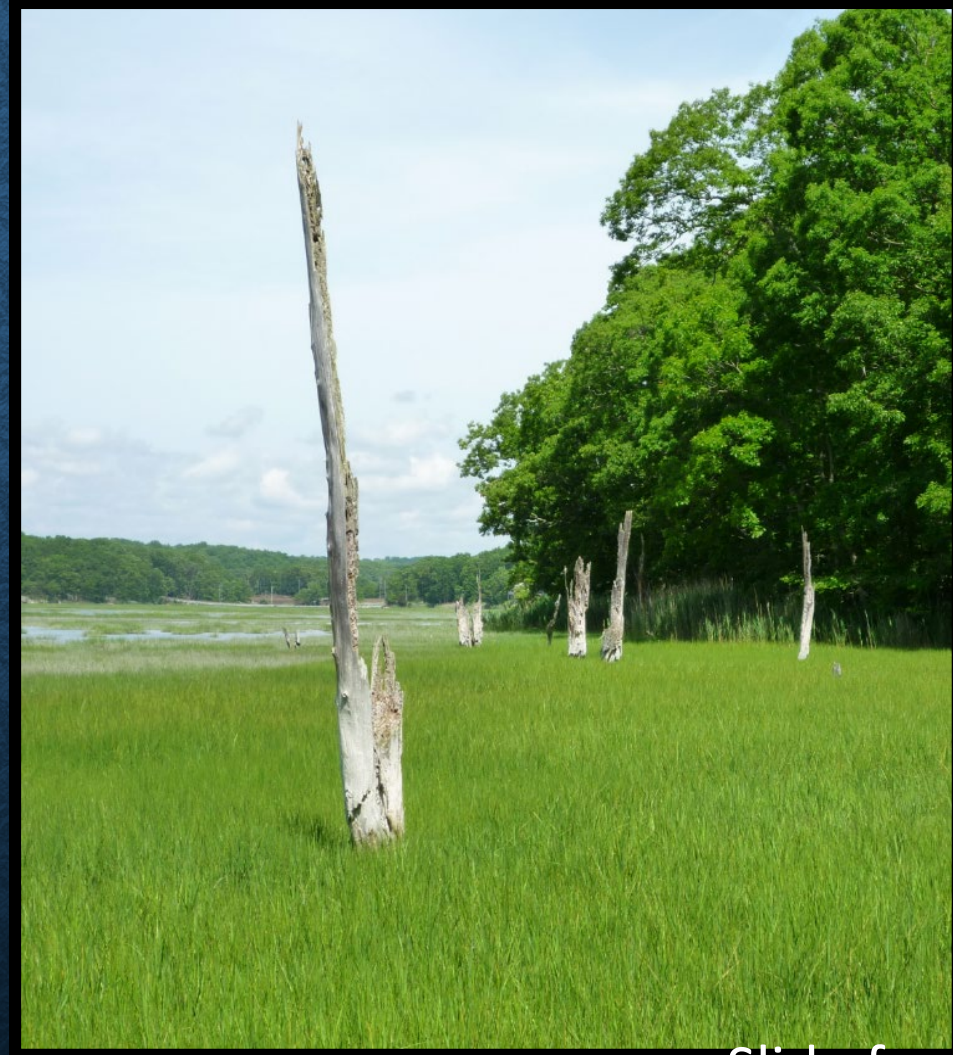


Wishlist: Experiment with facilitated marsh migration

Experimental tree cuts



Dead tree removal



Slide from Elphick

WISHLIST: BLRA HABITAT PRIORITIZATION

- Need creative and technical thinkers to help identify a means of prioritizing the landscape at multiple scales



WISHLIST: NEXUS WITH AQUATIC CONNECTIVITY

- Identify dams with potential to nourish priority marsh patches if removed
- Prioritize based on value to fish passage and marsh birds



Photo: USFWS/Suzanne Paton

Atlantic Coastal Fish Habitat Partnership

November 2018

Operations Budget Report

January-December 2018	
Source	Cost
NFHP FY17	\$75,000
MSCG FY18	\$12,000
Wallop-Breaux FY18	\$26,354
NOAA mapping projects	\$11,712
TOTAL	\$125,066

January-December 2019	
Source	Cost
NFHP FY18	\$66,125 (+\$9K rollover)
MSCG FY19	\$10,000
Wallop-Breaux FY19	\$27,895
NOAA mapping projects	\$16,000
TOTAL	\$120,020

Atlantic Coastal Fish Habitat Partnership

November 2018

Operations Budget Report

January-December 2018	
Source	Cost
NFHP FY17	\$68,182
MSCG FY18	\$10,910
Wallop-Breaux FY18	\$26,354
NOAA mapping projects	\$9,760
TOTAL	\$115,106

January-December 2019	
Source	Cost
NFHP FY18	\$60,113 (+\$9K rollover)
MSCG FY19	\$8,333
Wallop-Breaux FY19	\$27,895
NOAA mapping projects	\$13,023
TOTAL	\$109,364