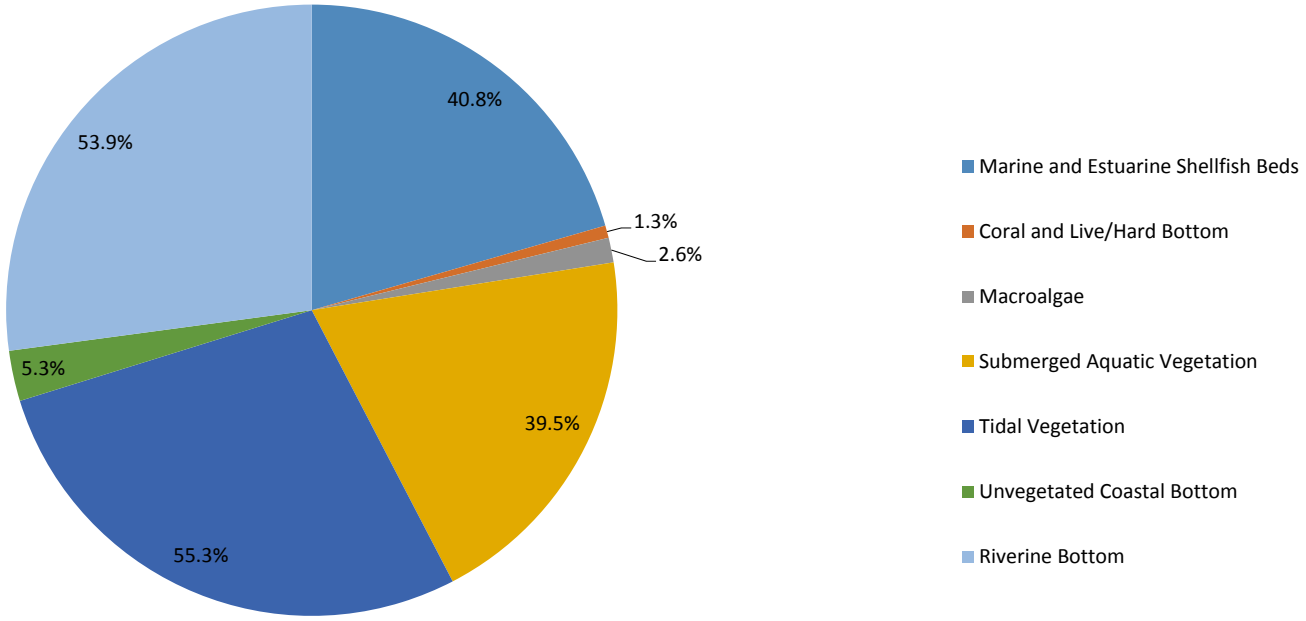
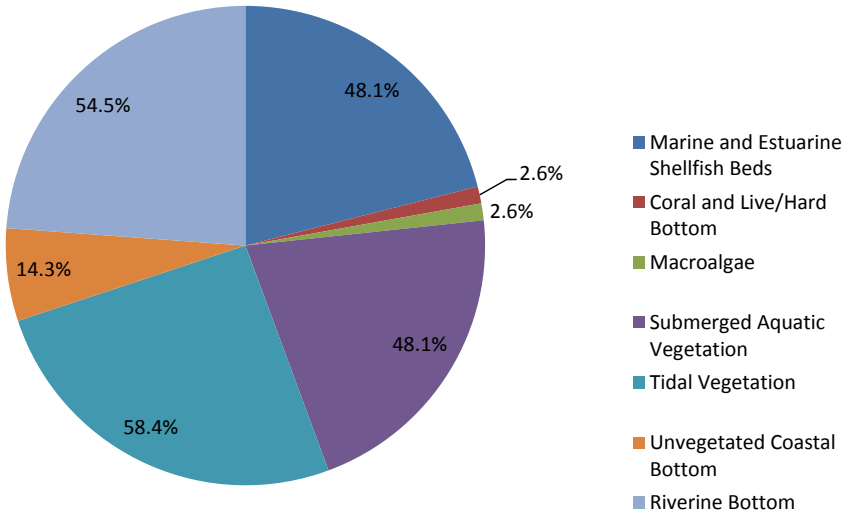
Which habitats are you currently working to restore? Please check the THREE habitats on which you currently dedicate the majority of your time.



Which habitats do you anticipate working to restore over the next five years? Please check the THREE habitats on which you anticipate dedicating the majority of your time.

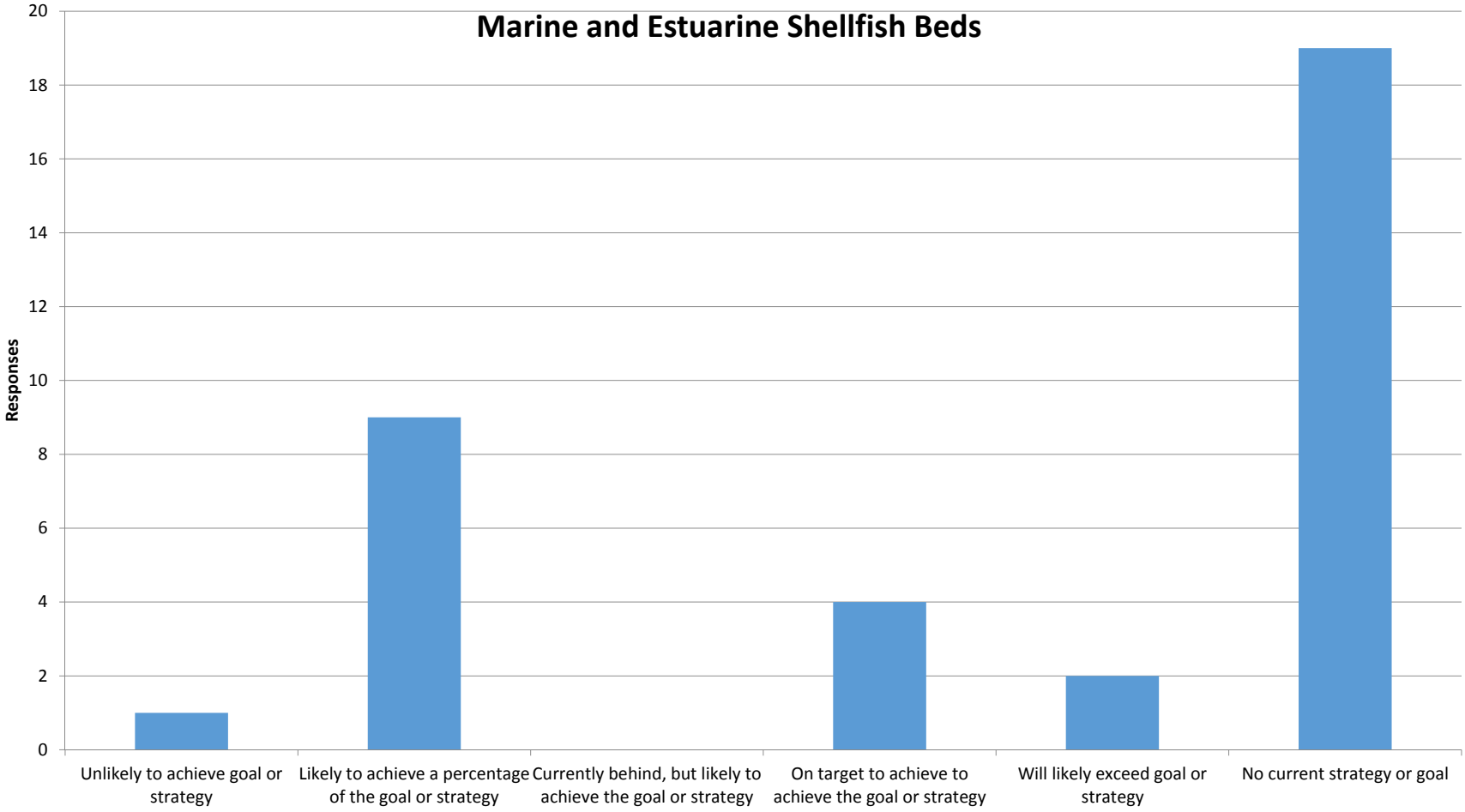


Which habitats do you anticipate working to restore over the next five years? Please rank each of the choices below with a range between very unlikely to very likely.

Answer Options	Very Unlikely	Unlikely	Undecided	Likely	Very Likely	Rating Average	Response Count
Marine and Estuarine Shellfish Beds	13	12	6	10	23	3.28	64
Coral and Live/Hard Bottom	44	5	5	0	2	1.41	56
Macroalgae	38	13	5	2	0	1.50	58
Submerged Aquatic Vegetation	13	8	9	16	18	3.28	64
Tidal Vegetation	9	3	8	16	27	3.78	63
Unvegetated Coastal Bottom	22	14	8	10	3	2.26	57
Riverine Bottom	10	9	2	12	30	3.68	63
						answered question	69
						skipped question	12

For each habitat type, which local, state, regional, or federal restoration strategy or goal are you primarily seeking?

Answer Options	Restore or enhance # acres by this date	Remove or replace # of barriers by this date	# miles reconnected through fish passage by this date	Current restoration work is not guided by a local, state, regional, or federal goal or strategy	Other (please specify below)	Rating Average	Response Count
Marine and Estuarine Shellfish Beds	19	0	0	13	6	2.22	38
Coral and Live/Hard Bottom	3	0	0	17	4	3.55	24
Macroalgae	1	0	0	17	3	3.83	21
Submerged Aquatic Vegetation	21	1	0	14	2	2.19	38
Tidal Vegetation	27	1	1	11	5	1.90	45
Unvegetated Coastal Bottom	7	0	0	17	2	3.13	26
Riverine Bottom	3	12	19	10	1	2.82	45
If Other (please specify)							9
						answered question	61
						skipped question	20


Marine and Estuarine Shellfish Beds
Responses
20
18
16
14
12
10
8
6
4
2
0
Unlikely to achieve goal or strategy
Likely to achieve a percentage of the goal or strategy
Currently behind, but likely to achieve the goal or strategy
On target to achieve to achieve the goal or strategy
Will likely exceed goal or strategy
No current strategy or goal

Which statement below best describes current progress towards the strategy or goal you are primarily seeking to achieve for each habitat listed?

Answer Options	Unlikely to achieve goal or strategy	Likely to achieve a percentage of the goal or strategy	Currently behind, but likely to achieve the goal or strategy	On target to achieve to achieve the goal or strategy	Will likely exceed goal or strategy	No current strategy or goal	Other (please specify below)	Rating Average	Response Count
Marine and Estuarine Shellfish Beds	1	9	0	4	2	19	3	4.54	38
Coral and Live/Hard Bottom	0	1	0	1	0	22	2	5.75	26
Macroalgae	0	0	0	0	0	22	2	6.00	24
Submerged Aquatic Vegetation	3	9	1	2	0	20	1	4.34	36
Tidal Vegetation	3	9	4	11	0	12	3	3.82	42
Unvegetated Coastal Bottom	0	3	1	0	0	19	1	5.35	24
Riverine Bottom	1	14	3	10	5	7	2	3.63	42
If Other (please specify)									7
								answered question	58
								skipped question	23

Bad data ?

Which of the following threats are you currently working to address for each habitat type? Please check all that apply.															
Answer Options	Obstructions to Fish Movement/Habitat Connectivity	Dredging and Coastal Maintenance	Water Quality Degradation and Eutrophication	Consumptive Water Withdrawal	Sedimentation	Vessel Operation Impacts	Water Contamination (ground and surface) and Sediments	Invasive Species	Climate Change	Not currently working to address a threat	Rating Average	Response Count			
Marine and Estuarine Shellfish Beds	0	4	10	0	4	1	3	1	2	15	6.53	40			
Coral and Live/Hard Bottom	0	1	0	0	0	0	0	0	0	28	9.72	29			
Macroalgae	0	0	3	0	0	0	0	1	0	25	9.21	29			
Submerged Aquatic Vegetation	0	4	16	0	1	2	1	1	0	11	5.50	36			
Tidal Vegetation	4	8	5	0	1	0	0	8	8	11	6.36	45			
Unvegetated Coastal Bottom	0	7	1	0	1	0	0	0	0	18	7.48	27			
Riverine Bottom	32	1	5	0	3	0	0	1	0	7	2.90	49			
Other (please specify)												7		Other Responses:	

Atlantic Coastal Fish Habitat Partnership Restoration Practitioners Survey

In your opinion, are there particular habitats in need of restoration, or threats in need of correction, which are currently under addressed in your geographic and along the east coast? (300 character limit)

Answer Options	Response Count
	42
answered question	42
skipped question	39

Relative to the scale of degradation caused by dams: the funding, incentives, and on-the-ground project management for dam removals all need to be dramatically increased.
Water Quality is being addressed by the Chesapeake Bay TMDL, but the goals are massive and it is unclear whether states and localities are able to fulfill their obligations. Ensuring progress throughout this process is a major concern.
shell fish bed restoration
One of the most significant threats to shellfish in the South Atlantic is that it is not managed for it's habitat value, rather only as a harvestable resource. While there are still good numbers, without future conservation of the resource the populations will most likely continue to decline.
high marsh
Salt Pond habitat degraded by intense shoreline development affecting water quality with non-point surface water runoff, and contaminated groundwater from inadequate waste disposal treatment.
I think all these issues are addressed. The corrections are too slow in coming! Lost in a quagmire of public debates and miss used funding to re-study the same issue. Money wasted on paper work and not on the physical solution. Breaching a dam that everyone except a small handful of people should not take 45 years.
56 river miles of Florida's Ocklawaha River--the southernmost suitable striped bass spawning habitat in the U.S.--needs to be restored to free-flowing again from Silver Springs to the St. Johns River which would be made possible by the breaching of Rodman (Kirkpatrick) Dam.
seabed disturbance due to shellfish and finfish harvesting with mobile gear
Water quality improvements (stormwater and wastewater) are needed before SAV restoration can be successful but water quality is underadressed due to the size of the problem and scale of resources needed to address it fully
[illegible]

ACFHP Implementation Plan Status to April 2015

Ft. Lauderdale, FL – April 20th – 22nd, 2015

The Process -in 2012

- Conservation Strategic Plan has:
  - 16 Objectives
  - 37 Strategic Actions
  - 79 Tasks
- We winnowed this for the Implementation Plan to:
  - 9 Objectives
  - 14 Strategic Actions
  - 29 Tasks

What we are going to do today

- Review the process and our commitments
- Review the current status of each Task
- Agree on the current status of each Task
- Decide on future actions:

  Continue with no changes or additional Tasks added

  Continue Tasks selected & add new non-selected Tasks

  Selectively add additional Objectives, Strategic Actions and Tasks

  Winnow a new set of Objectives, Strategic Actions and Tasks

Task Status Color Code

This Power Point has color coding to categorize each selected Task.

- Item(s) Selected - Red
- Completed tasks – Blue
- Ongoing tasks– no endpoint - Yellow
- Ongoing tasks – with endpoint, not complete – Orange
- To Do or Action needed tasks– no activity yet - Green

Habitat Protection Objectives:

OBJECTIVES Selected:

1. Ensure adequate and effective fish movement past existing or potential barriers to maintain connectivity within Sub-regional Priority Habitats.

4. Minimize or reduce adverse impacts to Sub-regional Priority Habitats associated with coastal development and water dependent activities (e.g. recreational boating, and marine transportation).

6. Increase public awareness of the threats facing sub-regional priority habitats and the protection measures available to avoid and minimize those threats.

Habitat Protection Objectives:

OBJECTIVES Not Selected:

2. Maintain or improve water quality and hydrology in Sub-regional Priority Habitats that are currently functioning, through incorporation of BMPs and/or technological controls.

3. Define the water flows and volumes needed to sustain the structure and function of healthy aquatic ecosystems (including groundwater and surface water interactions, maintaining appropriate salinity regimes) and ameliorate consumptive water usage where detrimental to Sub-regional Priority Habitats.

5. Maintain or increase the resiliency of Sub-regional Priority Habitats to the impacts of climate change.

Protection Objective 1: Ensure adequate and effective fish movement past existing or potential barriers to maintain connectivity within Sub-regional Priority Habitats.

STRATEGIC ACTION Selected:

1. Coordinate with partners to synthesize existing information in order to identify and prioritize watersheds for conservation where fragmentation of, or barriers to, fish dispersal are a potentially critical threat to be addressed.

STRATEGIC ACTION Not Selected:

1. Coordinate with partners to develop and disseminate a “standardized toolbox” of fish passage technologies (techniques and methodologies) and guidance to assist ACFHP partners in the development and implementation of effective fish passage protocols designed to alleviate this threat for new projects.

Protection Objective 1: Ensure adequate and effective fish movement past existing or potential barriers to maintain connectivity within Sub-regional Priority Habitats.

Strategic Actions 1: Coordinate with partners to synthesize existing information in order to identify and prioritize watersheds for conservation where fragmentation of, or barriers to, fish dispersal are a potentially critical threat to be addressed.

TASKS Selected:

1. Consult with appropriate ASMFC entities (diadromous species management entity; Fish Passage Working Group; TCs for each diadromous species) to determine whether there are existing priority lists for restoration, subregionally.

3. Compile existing lists, i.e, American Rivers in NC through the Aquatic Connectivity Team, is presently compiling a list of priority barriers. In NH, get Restoration Partners priority list; compile FERC filed diadromous fish restoration plans for watersheds in which they have been prepared; TNC NE Connectivity Project

7. Determine (Science and Data Committee task) what scale of watershed (HUC 8?, HUC 12?) ACFHP wishes to address.

Protection Objective 1: Ensure adequate and effective fish movement past existing or potential barriers to maintain connectivity within Sub-regional Priority Habitats.

Strategic Actions 1: Coordinate with partners to synthesize existing information in order to identify and prioritize watersheds for conservation where fragmentation of, or barriers to, fish dispersal are a potentially critical threat to be addressed.

TASKS: Not Selected

2. Coordinate with existing National Estuary Programs and partnerships (APNEP-NC, PREP-NH; DEBEP?; IRNEP-FL, Narragansett Bay NERR

4. Contact each Regional Alliance (i.e., SAA, MAR) to determine whether they have developed priority watershed lists.

5. Work with partners to make the lists, i.e., during ASMFC Shad and River Herring Habitat Plan development (Amendment 3; plans due 2014, so defer this action; we think that ACFHP makes this recommendation to ASMFC-HC, who in turn will make it to ASMFC SRHTC for implementation, with information developed to come back to ASMFC-HC and back to ACFHP) encourage development of priority lists.

6. Look in state Wildlife Action Plans to see if there are priority lists, and/or information which can contribute to the development of such lists.

Protection Objective 4: Minimize or reduce adverse impacts to Sub-regional Priority Habitats associated with coastal development and water dependent activities (e.g. recreational boating, and marine transportation).

Strategic Action 1: Identify current work being done on this objective (e.g. guidance on dredging and low impact development) and determine how ACFHP can best partner with these efforts.

TASK Selected:

2. Communicate impacts to audiences that can make a difference; e.g., for recreational boating scouring impacts, communicate with Recreational Boating and Fishing Foundation to disseminate our guidance; also state boat annual licensing offices within DNRs or other state agencies.

TASK Not Selected:

1. State and federal representatives on SC and SDWG contact local zoning commissions (or other local govt entities), tell story of maintaining habitat for fish from broad Atlantic coast or sub-region perspectives, include $$ values of intact habitats.

Protection Objective 6: Increase public awareness of he threats facing Sub-regional Priority Habitats and the protection measures available to avoid and minimize those threats.

Strategic Action: Develop and disseminate public outreach materials on the adverse impacts of human activities on fish and fish habitat as well as ways to avoid and minimize those impacts.

TASKS: No specific – this is ongoing

Habitat Restoration Objectives

Objectives Selected:

1. Restore and enhance hydrological or physical connections between Sub-regional Priority Habitats to promote fish utilization and improve overall aquatic health.

2. Restore Sub-regional Priority Habitats, such as replanting eelgrass beds or restoring oyster beds, in locations where threats have been minimized or removed (does not include dam or other barrier removal).

Objectives Not Selected:

3. Restore water quality in areas where it has degraded or eliminated Subregional Priority Habitats.

4. Maintain or increase the resiliency of Subregional Priority Habitats to the impacts of climate change through restoration activities.

Restoration Objective 1: Restore and enhance hydrological or physical connections between Sub-regional Priority Habitats to promote fish utilization and improve overall aquatic health.

STRATEGIC ACTIONS Selected:

2. Restore tidal hydrology in priority wetland areas (e.g. repairing or removing culverts or berms restricting flow or separating wetlands).

3. Identify priority areas in each sub-region where Priority Habitats have been degraded or eliminated by past alterations to hydrology, and where conditions for restoration of habitats exist.

5. Coordinate with partners to compile fish movement/habitat restoration techniques and guidance documents to aid partners in the planning, design, implementation, and monitoring of effective fish movement improvement projects.

Restoration Objective 1: Restore and enhance hydrological or physical connections between Sub-regional Priority Habitats to promote fish utilization and improve overall aquatic health.

STRATEGIC ACTIONS Not Selected:

1. Remove dams and other physical barriers in areas identified as a priority for fish movement restoration.

4. Compile information to identify barriers where fragmentation of habitats or barriers to fish movement exist.

Restoration Objective 1: Restore and enhance hydrological or physical connections between Subregional Priority Habitats to promote fish utilization and improve overall aquatic health.

Strategic Action 2: Restore tidal hydrology in priority wetland areas (e.g. repairing or removing culverts or berms restricting flow or separating wetlands).

TASK Selected:

2. Fund on-the ground projects through USFWS-NFHAP funding

Task Not Selected:

1. Consult with NERRS regarding salt marsh restoration projects (culverts, berms, water control structures, etc.); instream flow models.

Restoration Objective 1: Restore and enhance hydrological or physical connections between Subregional Priority Habitats to promote fish utilization and improve overall aquatic health.

Strategic Action 3: Identify priority areas in each subregion where Priority Habitats have been degraded or eliminated by past alterations to hydrology, and where conditions for restoration of habitats exist.

TASKS Selected:

1. Determine where partners are already working to remove barriers, to identify priorities and gaps.

TASK Not Selected:

2. Solicit proposals for barrier removal in identified priority watersheds.

Restoration Objective 1: Restore and enhance hydrological or physical connections between Subregional Priority Habitats to promote fish utilization and improve overall aquatic health.

Strategic Action 5: Coordinate with partners to compile fish movement/habitat restoration techniques and guidance documents to aid partners in the planning, design, implementation, and monitoring of effective fish movement improvement projects.

TASKS:

- *No 2012 tasks identified for this action.*

Restoration Objective 2: Restore Subregional Priority Habitats, such as replanting eelgrass beds or restoring oyster beds, in locations where threats have been minimized or removed (does not include dam or other barrier removal).

STRATEGIC ACTION Selected:

1. Restore Subregional Priority Habitats in each subregion where:
   (a) they have been damaged or destroyed by past declines in water quality or human activities, such as dredging, filling, development, or vessel operation; AND
   (b) conditions for restoration of habitats exist; AND
   (c) goal(s) of habitat restoration can be maintained.

STRATEGIC ACTION Not Selected:

2. Prevent and attempt to control invasion of non-indigenous species, where feasible.

Restoration Objective 2: Restore Subregional Priority Habitats, such as replanting eelgrass beds or restoring oyster beds, in locations where threats have been minimized or removed (does not include dam or other barrier removal).

Strategic Action 1: Restore Sub-regional Priority Habitats in each sub-region where: (a) they have been damaged or destroyed by past declines in water quality or human activities, such as dredging, filling, development, or vessel operation; AND (b) conditions for restoration of habitats exist; AND (c) goal(s) of habitat restoration can be maintained.

TASKS Selected:

1. Establish funding mechanisms and or ideas for funding mechanisms to do on the ground work. Seek additional funding for ACFHP, eg. NOAA grants, FWS-NFHAP etc. (figure out what admin components are needed).

2. Compile list of projects by survey of the committee and or partners (NEP state management plans and etc) on what sub-regional priority habitats they are focusing and specifics on restoration sites.

3. Develop assessment criteria to in order to prioritize?

Restoration Objective 2: Restore Subregional Priority Habitats, such as replanting eelgrass beds or restoring oyster beds, in locations where threats have been minimized or removed (does not include dam or other barrier removal).

Strategic Action 1: Restore Sub-regional Priority Habitats in each sub-region where: (a) they have been damaged or destroyed by past declines in water quality or human activities, such as dredging, filling, development, or vessel operation; AND (b) conditions for restoration of habitats exist; AND (c) goal(s) of habitat restoration can be maintained.

TASKS Not Selected:

4. Prioritized list based on ability of project to be sustainable

5. Steer restoration practitioners to sub-regional priority habitats via compiled list of sub-regional priority habitat restoration projects.

6. Gap analysis. What needs to be done and is not getting done for sub-regional priority habitats

Science & Data Objectives

OBJECTIVE Selected:

2. Work to achieve ACFHP Science and Data Needs (ACFHP, 2011) and fulfill science and data responsibilities established by NFHAP.

OBJECTIVE Not Selected:

1. Maintain or increase the resiliency of Sub-regional Priority Habitats to the impacts of climate change through restoration activities.

Science and Data Objective 2: Work to achieve ACFHP Science and Data Needs (ACFHP, 2011) and fulfill science and data responsibilities established by NFHAP.

STRATEGIC ACTIONS Selected:

1. Develop additional products and conduct continuing analysis of the Species-habitat Matrix.

2. Continue to synthesize, update, and fill in information gaps in the Assessment, and identify new applications.

3. Beginning with the results of the Assessment and the work conducted by the National Fish Habitat Science and Data Committee, refine data and associated GIS layers to produce maps and other products that can be used to inform the goals and objectives laid out in this plan and to develop time-bound, spatially-explicit, and quantitative conservation objectives in future Plans or revisions to the Strategic Conservation Plan.

Science and Data Objective 2: Work to achieve ACFHP Science and Data Needs (ACFHP, 2011) and fulfill science and data responsibilities established by NFHAP.

STRATEGIC ACTIONS Not Selected:

4. Develop Fish Habitat Occupancy Models and the information needed to support them.

5. Develop project tracking and evaluation capabilities for the purpose of capturing, assessing, and reporting conservation results to stakeholders.

Science and Data Objective 2: Work to achieve ACFHP Science and Data Needs (ACFHP, 2011) and fulfill science and data responsibilities established by NFHAP.

Strategic Action 1: Develop additional products and conduct continuing analysis of the Species-habitat Matrix.

TASKS Selected:

1. Identify number of publications and specific journals to submit manuscript for the existing matrix

2. Prepare outline

3. Prepare publication(s); submit for review to all coauthors

4. Peer-review

Science and Data Objective 2: Work to achieve ACFHP Science and Data Needs (ACFHP, 2011) and fulfill science and data responsibilities established by NFHAP.

Strategic Action 2: Continue to synthesize, update, and fill in information gaps in the Assessment, and identify new applications.

TASKS Selected:

1. Check with Caroly to see if fits under his work plan
2. Subcommittee conference call to ID work plan
3. ID funding sources if needed

Science and Data Objective 2: Work to achieve ACFHP Science and Data Needs (ACFHP, 2011) and fulfill science and data responsibilities established by NFHAP.

Strategic Action 3: Beginning with the results of the Assessment and the work conducted by the National Fish Habitat Science and Data Committee, refine data and associated GIS layers to produce maps and other products that can be used to inform the goals and objectives laid out in this plan and to develop time-bound, spatially-explicit, and quantitative conservation objectives in future Plans or revisions to the Strategic Conservation Plan.

TASKS Selected:

1. Check with Moe to see if fits under his work plan

2. Review habitat assessments that have been done for the FHPs in Region 3 and 6 and determine if ACFHP would like a similar product.

3. If steering committee and science and data committee are interested, determine if the organization that worked on the habitat assessments in Region 3(I think it was Downstream Strategies) is available and how much they would charge.

4. Subcommittee conference call to take ideas from the National Assessment and Midwest FHP's assessments and make a work plan to make them useful at a regional scale and for coastal habitats. Workplan would include action items and a timeline.

5. ID funding sources

Science and Data Objective 2: Work to achieve ACFHP Science and Data Needs (ACFHP, 2011) and fulfill science and data responsibilities established by NFHAP.

Strategic Action 3: Beginning with the results of the Assessment and the work conducted by the National Fish Habitat Science and Data Committee, refine data and associated GIS layers to produce maps and other products that can be used to inform the goals and objectives laid out in this plan and to develop time-bound, spatially-explicit, and quantitative conservation objectives in future Plans or revisions to the Strategic Conservation Plan.

TASK Not Selected:

6. Give contractor guidance on the incorporation of existing maps and/or data layers and/or geodatabases (species occurrence, impervious surface, ag. use, wetlands inventory, SAV). Determine how a coastal assessment would differ from inland assessments.

Communication & Outreach Objectives

OBJECTIVES Selected:

1. Develop or maintain physical or virtual information or avenues for communicating information to partners and the broader conservation community.

2. Develop or maintain relationships with partners and the broader conservation community.

Communications and Outreach Objective 1: Develop or maintain physical or virtual information or avenues for communicating information to partners and the broader conservation community.

STRATEGIC ACTIONS Selected:

1. Maintain a website that meets the needs of partners and the broader conservation community.

3. Attend events such as conferences or meetings to promote ACFHP's mission and activities and encourage new partners to join.

STRATEGIC ACTION Not Selected:

2. Develop/use outreach materials (e.g. display, fact sheets) that meet the needs of partners and the broader conservation community.

Communications and Outreach Objective 1: Develop or maintain physical or virtual information or avenues for communicating information to partners and the broader conservation community.

Strategic Action 1: Maintain a website that meets the needs of partners and the broader conservation community.

TASKS Selected:

1. Update the Funding, Conference, Other Events, Funded Projects, Endorsed Projects, and Outreach pages

2. Send out periodic Breaking News items and maintain archives

TASK Not Selected:

3. Add a “Whitewater to Bluewater” page, or link to one

Communications and Outreach Objective 1:
Develop or maintain physical or virtual information or avenues for communicating information to partners and the broader conservation community.

Strategic Action 3: Attend events such as conferences or meetings to promote ACFHP's mission and activities and encourage new partners to join.

TASKS Selected:

1. Present at American Fisheries Society Annual Meeting and/or Restore America's Estuaries Conference

Communications and Outreach Objective 2: Develop or maintain relationships with partners and the broader conservation community.

STRATEGIC ACTIONS Selected:

2. Cooperate and exchange lessons learned with other landscape or regional partnerships and the National Fish Habitat Board.

3. Promote the missions of ACFHP and NFHAP by participating in NFHAP's legislative strategy to further the objectives of all fish habitat partnerships and coordinate such activities with the legislative staff in each partner organization.

STRATEGIC ACTION Not Selected:

1. Develop a protocol for identifying and bringing in new partners.

Communications and Outreach Objective 2: Develop or maintain relationships with partners and the broader conservation community.

Strategic Action 2: Cooperate and exchange lessons learned with other landscape or regional partnerships and the National Fish Habitat Board.

TASK Selected:

2. Develop individual FHP and joint messaging strategies that would identify key target audiences and generate core messages for members of the partnerships to communicate clearly and consistently with those audiences.

TASK Not Selected:

1. Hold joint FHP Communications and Outreach meetings quarterly via conference call and/or WebEx to provide regular, focused coordination of overall communications and outreach efforts.

Communications and Outreach Objective 2: Develop or maintain relationships with partners and the broader conservation community.

Strategic Action 3: Promote the missions of ACFHP and NFHAP by participating in NFHAP's legislative strategy to further the objectives of all fish habitat partnerships and coordinate such activities with the legislative staff in each partner organization.

TASKS:

- *No 2012 tasks identified for this action*
- Lisa has been working with the NFHAP Board on this.

Finance Objectives

OBJECTIVE Selected:

2. Secure ACFHP operational funding.

Objective Not Selected:

1. Develop a mechanism and infrastructure within ACFHP for managing finances.

Finance Objective 2: Secure operational funding for ACFHP.

STRATEGIC ACTIONS Selected:

2. Secure project funding opportunities.

3. Identify private partners who can assist in providing matching funds to support operational and on-the-ground project activities.

STRATEGIC ACTION Not Selected:

1. Leverage conservation dollars.

Finance Objective 2: Secure ACFHP operational funding.

Strategic Action 2: Secure project funding opportunities.

TASKS Selected:

2. Solicit, rank, and submit a list of priority projects to FWS for FY13 NFHP funding.

3. Apply for NOAA Community Based Restoration funding

THEN……..

1. Endorse applicable projects for NFWF/NOAA protection funding

Finance Objective 2: Secure ACFHP operational funding.

Strategic Action 3: Identify private partners who can assist in providing matching funds to support operational and on-the-ground project activities.

TASK Selected:

Identify a short list of foundations and schedule a phone call or meeting

Summary Status of the 29 Tasks Selected

- Completed tasks – Blue - 13
- Ongoing tasks– no endpoint - Yellow - 9

  (no specific task identified for 2)
- Ongoing tasks – with endpoint, not complete – Orange - 8
- To Do or Action needed tasks– no activity yet - Green - 2

  (no tasks identified for 1)

ACFHP
Conservation Strategic Plan

Ft. Lauderdale, FL

April 20th – 22nd, 2015

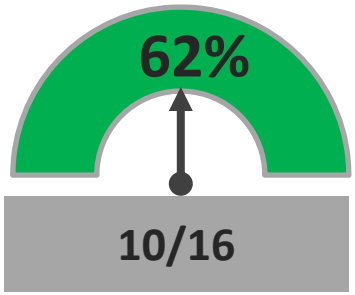
Looking Back/Looking Forward

- **What did we do** (i.e. performance)? Which goals and objectives were completed? What strategic actions were successfully implemented?
- **Did it matter** (i.e. impact)? Was there/What were the measurable impacts?
- **What have we learned?** Should we do something different? Have we learned something to share?

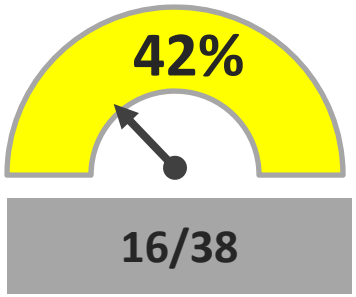
Performance: Overall

What did we do?

Objectives Tackled:



Actions Tackled:

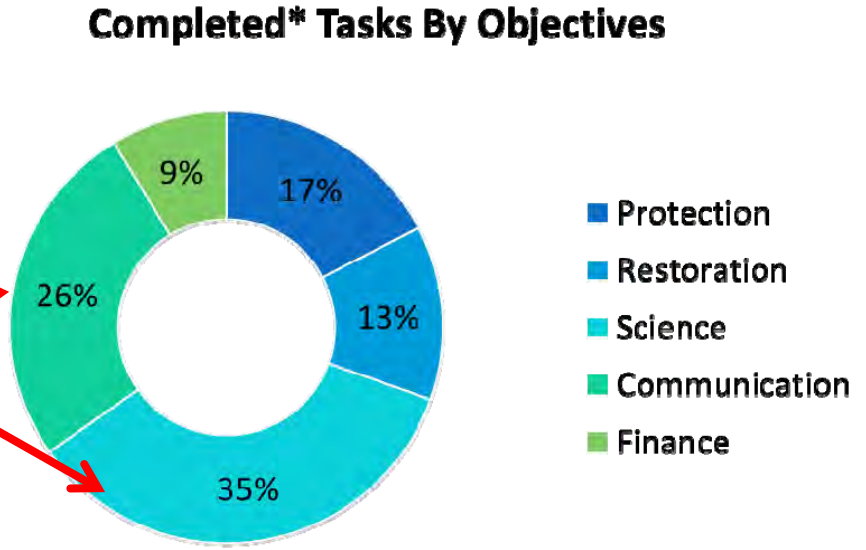


Progress on Tasks:

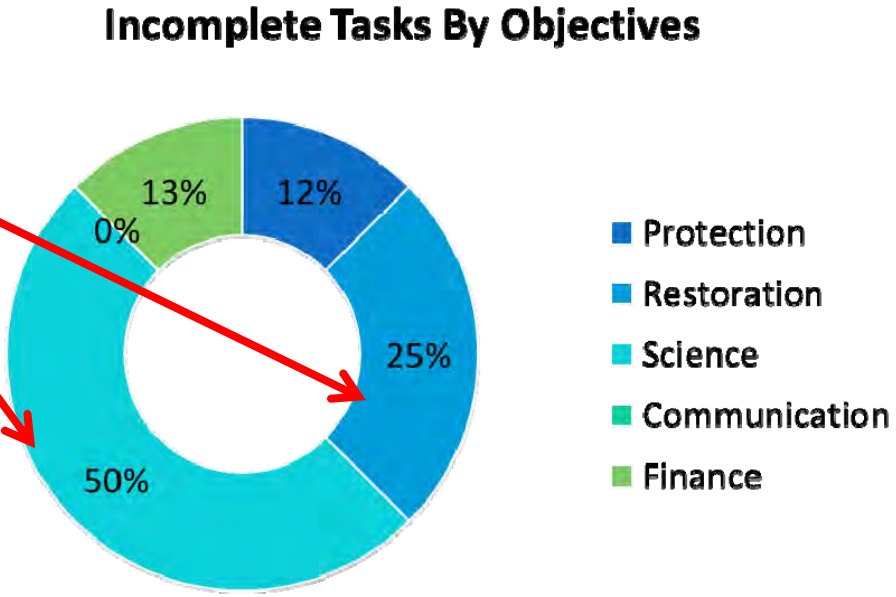
Complete*	**23**	**72%**
Incomplete	**8**	**25%**
No Activity	**1**	**3%**

Overall, we performed at a fairly high level with respect to our Conservation Strategic Plan. We tackled over half of the plan's objectives and just under half of the strategic actions outlined in 2012. We completed the majority of tasks we set for ourselves as well.

Performance-wise, **Communications** and **Science** were s our most accomplished areas over the past few years.



However, we overestimated our ability to accomplish **Science** tasks and our **Restoration** performance was enhanced by being able to fund on-the-ground projects.



Questions: Performance

- Are our strategic actions being implemented as planned? *Why or why not?*
- Which objectives or strategic actions are receiving less attention than others? Should we revisit these?
- What do our previous answers suggest as to how (and when) we should adapt or change our strategic plan?

Impact: Overall

What have we produced?

- **Protection**
- **Restoration**
- **Science & Data**
- **Communications**
- **Finance**

How do we want to document or track our results and impacts? Right now, we don't have a good approach.

Questions: Impact

- What have been our measurable results or impacts so far?
  - Protection, Restoration, Science, Communications and Finance?
- Are these the impacts or results that are needed (Do they contribute to change? Are other outcomes a higher priority?)
- How long-lived or “leverageable” are our impacts?

Next Strategic Plan (2016 – 2021)

- What do we want to do for the next plan?
  - What are our strengths for our next plan?
  - New threats (e.g. ocean acidification)?
  - New tools/efforts we can directly work on?
  - How do we move forward with next CSP (timing, process, etc.)?

NFHP Funded ACFHP Projects

2009 – Present

2014 Funding

Oyster Reef and Salt Marsh Restoration in Stump Sound, North Carolina

Oyster Reef Restoration in Great Bay Estuary, New Hampshire

2014

Project Name	Amount Requested	Total Cost	Applicant
Atlantic Coastal Fish Habitat Partnership Operations FY14	$30,000	$150,256	Atlantic Coastal Fish Habitat Partnership/Atlantic States Marine Fish Commission
Seagrass, Mangrove and Tidal Marsh Restoration for Fish Habitat in Lake Worth Lagoon, FL	$50,000	$2,660,309	Palm Beach County Department of Environmental Resources Management
Oyster Reef and Salt Marsh Habitat Restoration, Stump Sound, Holly Ridge, NC	$34,463	$78,087	North Carolina Coastal Federation
Barrier Removal, Westecunk Creek, Eagleswood, NJ	$50,000	$184,200	Barnegat Bay Partnership - Ocean County College
Oyster Reef Restoration, Great Bay Estuary, Rockingham County, NH NFHAP	$38,744	$129,281	The Nature Conservancy, NH Chapter
CFE Pond Lily Dam Removal, West River, New Haven County, CT	$50,000	$667,963	Connecticut Fund for the Environment/Save the Sound
Daniel Island Shoreline Stabilization and Restoration – Wando River – Berkeley County / City of Charleston, SC	$30,000	$225,000	City of Charleston
Cape Fear River Fisheries Enhancement Project	$49,948	$198,048	Cape Fear River Watch
Sawyer Mill Dam Removals, Bellamy River, Dover, NH	$15,000	$118,000	Sawyer Mill Associates, Inc.
Pelican Island Phase IV Hard Bottom Creation, Indian River Lagoon, Sebastian, FL NFHAP	$42,000	$102,037	Coastal Resources Group, Inc.
South Middleton Dam removal (design phase), Ipswich River, Middleton, Essex County, MA	$20,000	$75,400	Ipswich River Watershed Association
St. Lucie County Ontogenetic Fish Corridor – Phase I: Mid-Shelf Hard Bottoms, FL	$49,600	$127,172	St. Lucie County
Millstone River Dam Removal Initiative: Restoring Migratory Fish Passage	$50,000	$395,396	Stony Brook-Millstone Watershed Association
Oyster Reef Restoration Within Historically Impacted Grand Strand Tidal Swash Estuaries	$45,981	$99,787	Coastal Carolina University
Oyster Reef Construction and Enhancement, Indian River Lagoon, Brevard County, FL NFHAP	$45,000	$65,000	Brevard County Natural Resources Management Department
Barrier Removal, Davis Creek, Worcester County, MD	$34,850	$61,900	U.S. Fish and Wildlife Service Chesapeake Bay Field
Living Shorelines Project, Potomac River, Leesylvania, VA	$50,000	$95,048	Northern Virginia Regional Commission (NVRC)
Cotton Gin Mill Dam Removal, Satucket River, Plymouth Co.,	$50,000	$85,000	The Nature Conservancy
China Lake Outlet Stream Design and Permitting Study to Remove Masonry Dam in Vassalboro, ME NFHAP	$20,000	$35,000	Sebasticook Regional Land Trust
	$725,586	$5,402,628	Total

Atlantic Coastal Fish Habitat Partnership Operations FY14

- Three in-person Atlantic Coastal Fish Habitat Partnership meetings
  - Two steering committee meetings - to address specific tasks from the ACFHP Conservation Strategic Plan
  - One Science and Data Working Group meeting
    - determine priorities for new science and data projects
    - advance ongoing projects
- Atlantic State Marine Fisheries Commission
  - Funding Amount Requested: $75,000
  - Total Cost of Project: $105,256
- ACFHP funding
  - NFHP - $30,000 ($12,857)
- Partner funding
  - AFWA – Multi-state grant: $35,876
  - ASMFC – Wallop-Breaux: $39,380

Oyster Reef and Salt Marsh Habitat Restoration, Stump Sound, Holly Ridge, NC

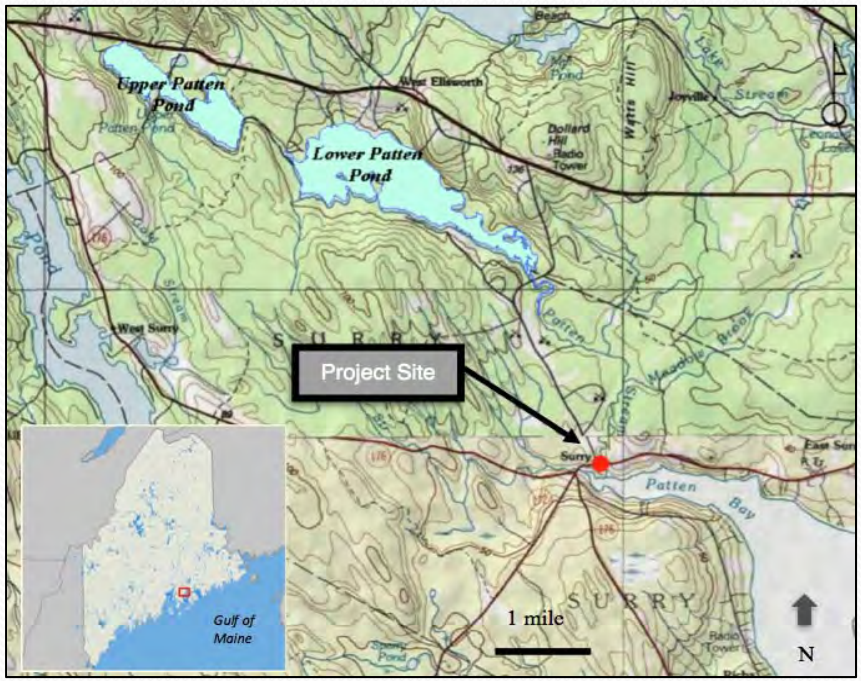
- Protect 200 ft of estuarine shoreline in Stump Sound, Holly Ridge, North Carolina
  - restore 0.05 acres of fringing oyster (*Crassostrea virginica*) reef
  - Resore 0.07 acres of tidal salt marsh (*Spartina alterniflora*) habitat.
- North Carolina Coastal Federation
  - Funding amount requested: $34,463
  - Total cost of project: $78,087
- ACFHP Funding
  - NFHP - $24,657 ($10,567 indirect)
  - NOAA - $9,806

Oyster Reef Restoration, Great Bay Estuary, Rockingham County, NH

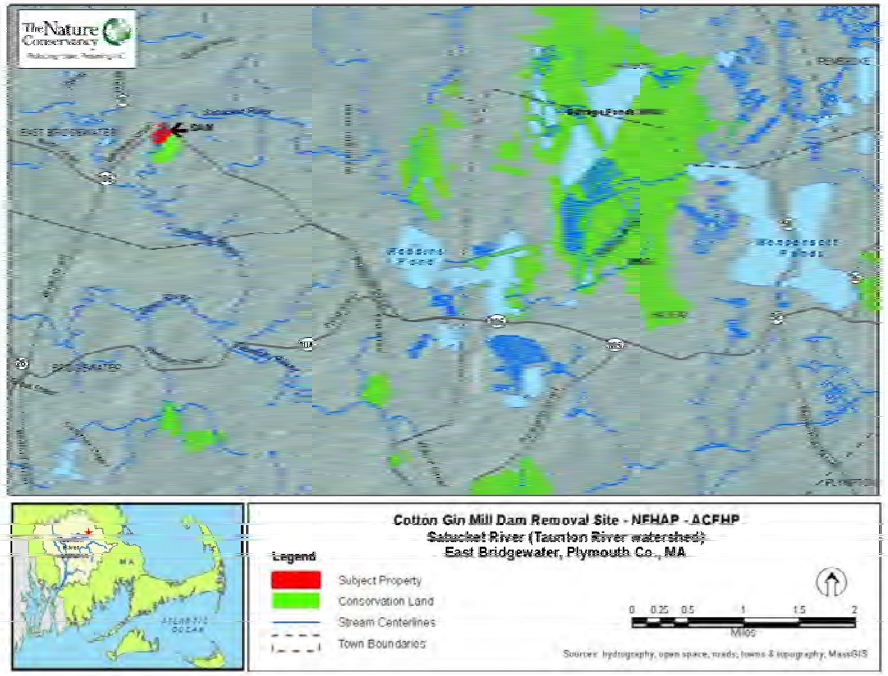
- Restore two acres of native oyster reef and 0.5M oysters in Great Bay Estuary (GBE) using proven reef restoration methods
  - Reef foundation constructed on river bottom with surf clam shell spread by a barge
  - Finish layer is oyster seed in the form of spat on recycled oyster shell
- The Nature Conservancy
  - Funding amount requested: $ 38,744
  - Total Cost of project: $129,281
- ACFHP funding:
  - NFHP: $40,525 ($17,368)

2015 Proposed Funding

Renewing Diadromous Fish Passage, Patten Stream, Maine



Cotton Gin Mill Dam Removal and Fish Passage Project, Satucket River, Massachusetts



2015 proposed

Project Name	Amount Requested	Total Cost	Applicant
Atlantic Coastal Fish Habitat Partnership Operations FY15	$75,000	$150,256	Atlantic Coastal Fish Habitat Partnership/Atlantic States Marine Fish Commission
Renewing Diadromous Fish Passage, Patten Stream, Surry, ME	$50,000	$234,548	Town of Surry
Cotton Gin Mill Dam Removal and Fish Passage Project, Satucket River, East Bridgewater, MA	$50,000	$500,000	The Nature Conservancy
CFE Pond Lily Dam Removal, West River, New Haven County, CT	$50,000	$667,963	Connecticut Fund for the Environment/Save the Sound
Daniel Island Shoreline Stabilization and Restoration – Wando River – Berkeley County / City of Charleston, SC	$30,000	$225,000	City of Charleston
Cape Fear River Fisheries Enhancement Project	$49,948	$198,048	Cape Fear River Watch
Sawyer Mill Dam Removals, Bellamy River, Dover, NH	$15,000	$118,000	Sawyer Mill Associates, Inc.
	$244,948	$1,943,559	Total

Atlantic Coastal Fish Habitat Partnership Operations FY15

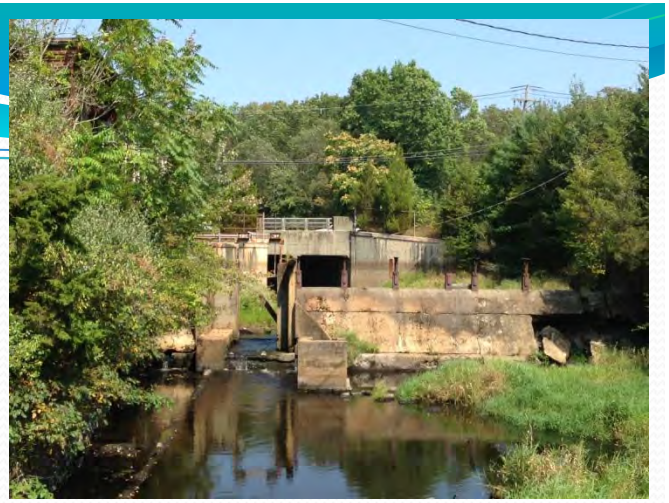
- Three in-person Atlantic Coastal Fish Habitat Partnership meetings
  - Two steering committee meetings - to address specific tasks from the ACFHP Conservation Strategic Plan
  - One Science and Data Working Group meeting
    - determine priorities for new science and data projects
    - advance ongoing projects
- Atlantic State Marine Fisheries Commission
  - Funding Amount Requested: $75,000
  - Total Cost of Project: $105,256
- Proposed ACFHP funding
  - NFHP - $30,000 ($12,857)
- Partner funding
  - AFWA – Multi-state grant: **$35,876? - $50,000?**
  - ASMFC – Wallop-Breaux: **$39,380? or less?**

Renewing Diadromous Fish Passage, Patten Stream, Surry, ME

- Nature-like fishway to restore access to 20 stream miles and 1,200 alewife spawning acres in Patten Stream in Surry

- Town of Surry, ME
  - Funding amount requested: $50,000
  - Total cost of the project: $234,548
- Proposed ACFHP Funding
  - NFHP - $12,000
  - NOAA - $13,000 (or maybe $13,550?)
- Other Funding
  - Proposed FWS – NFPP Funding - $84,000

Cotton Gin Mill Dam Removal and Fish Passage Project, Satucket River, East Bridgewater, MA



- Remove the dam
  - Connectivity to 4.4 river miles upstream
  - Fish passage from the ocean to Robbins Pond
  - 124 acres of spawning habitat.
  - Future improvements to Monponsett Ponds would provide 528 more acres.
- The Nature Conservancy
  - Funding amount requested: $50,000
  - Total cost of the project: $500,000
- Proposed ACFHP Funding
  - NFHP - $50,000 ($21,429)
- Other Funding
  - NFWF Sandy Resiliency - $401,308

CFE Pond Lily Dam Removal, West River, New Haven County, CT

- Remove dam
- Restore 2.6 miles of the West River and 76 acres of Konold's Pond to migratory fish passage

- Connecticut Fund for the Environment/Save the Sound
  - Funding amount requested: $50,000
  - Total cost of the project: $667,963
- Proposed ACFHP funding
  - NFHP - $50,000
- Other funding
  - USFWS – Sandy resiliency - $628,425

2009-2014 NFHP funded projects

http://www.atlanticfishhabitat.org/projects/fundedprojects/

Project Name	NFHAP Funds	Non-FWS Contributions	Total Project Costs	Completion Date
FY10 Alewife Brook/Scoy Pond and Staudinger's Pond Alewife Access and Habitat Enhancement, NY	$51,000	$30,000	$60,000	not completed
FY10 Goose Creek Dam Eel Passage Restoration Project, SC	$39,000	$36,391	$75,391	August, 2012
FY11 Restoring Diadromous Fish Passage and Habitat to Shorey's Brook, South Berwick, ME	19,410	$319,193	$343,603	November, 2011
FY11 Shoreline and Spartina Marsh Stabilization Along the Atlantic Intracoastal Waterway in SC	$35,148	$35,655	$70,802	Summer 2012
FY12 Restoring the Mangroves of the Indian River Lagoon	$71,429	$64,375	146,069	Summer 2014
FY12 James River Atlantic Sturgeon Habitat Restoration	$43,200	$159,560	$202,760	July, 2013
FY 12Eelgrass Restoration with Conservation Moorings in Buzzards Bay, MA	$27,387	$11,612	$38,999	May, 2014
FY13 Expanding Marine Meadow Habitat in Peconic Estuary, NY	$39,149	$68,587	116,739	November, 2014
FY13 Restoring Coastal Fish Habitat Using Oysters, Mussels, and Marsh Grass at Guana Peninsula, FL	$44,910	$46,137	$91,047	June, 2014
FY14 Atlantic Coastal Fish Habitat Partnership Operations	$51,000	$75,256	$105,256	ongoing
FY14 Oyster Reef and Salt Marsh Habitat Restoration, Stump Sound, Holly Ridge, NC	$49,233	$36,356	$78,087	ongoing
FY14 Oyster Reef Restoration, Great Bay Estuary, Rockingham County, NH	$55,349	$90,537	$129,281	ongoing
Total	**$526,215**	**$898,403**	**$1,424,618**	

NALCC Aquatic Habitat Assessment

USFWS

Downstream Strategies

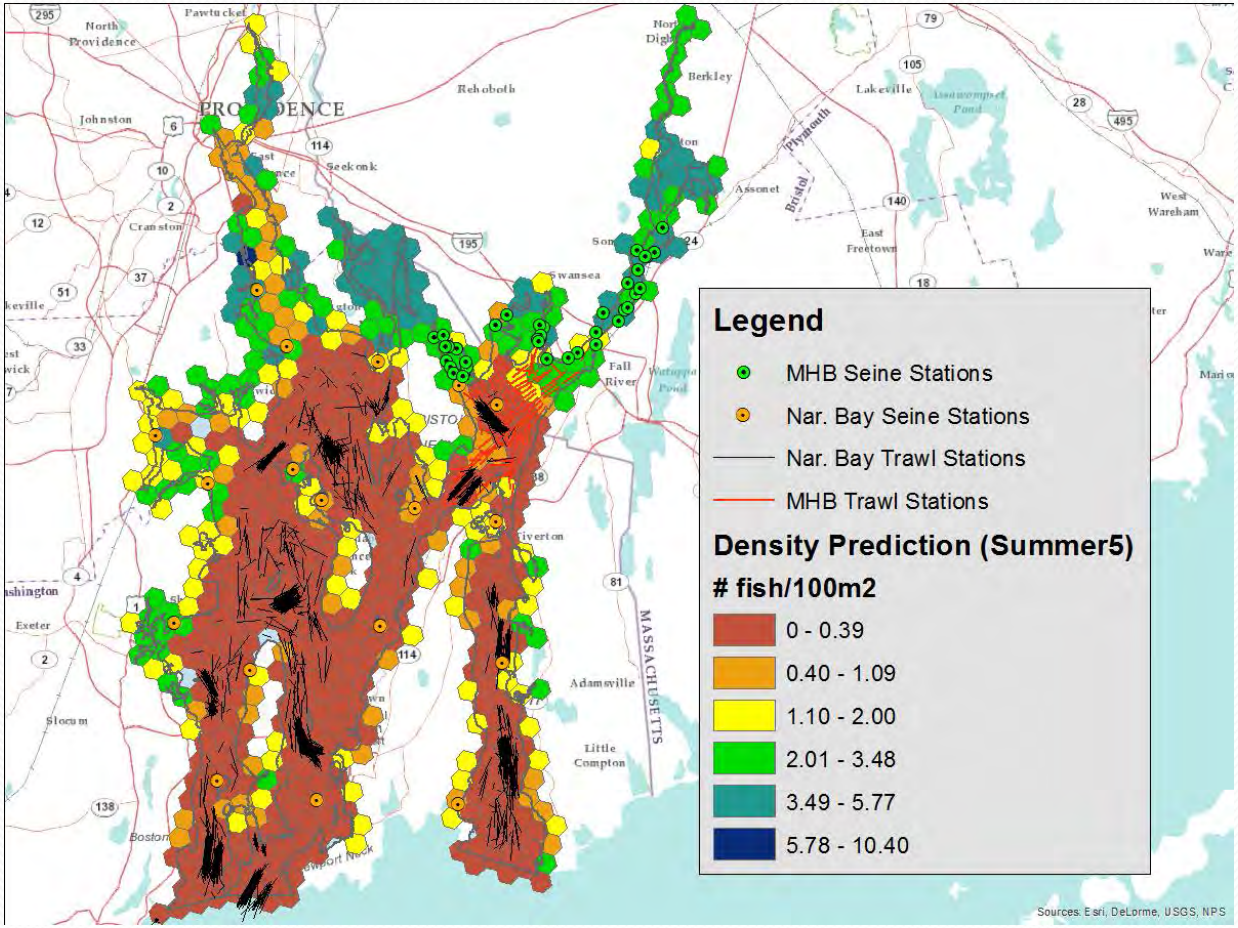
ACFHP

EBTJV

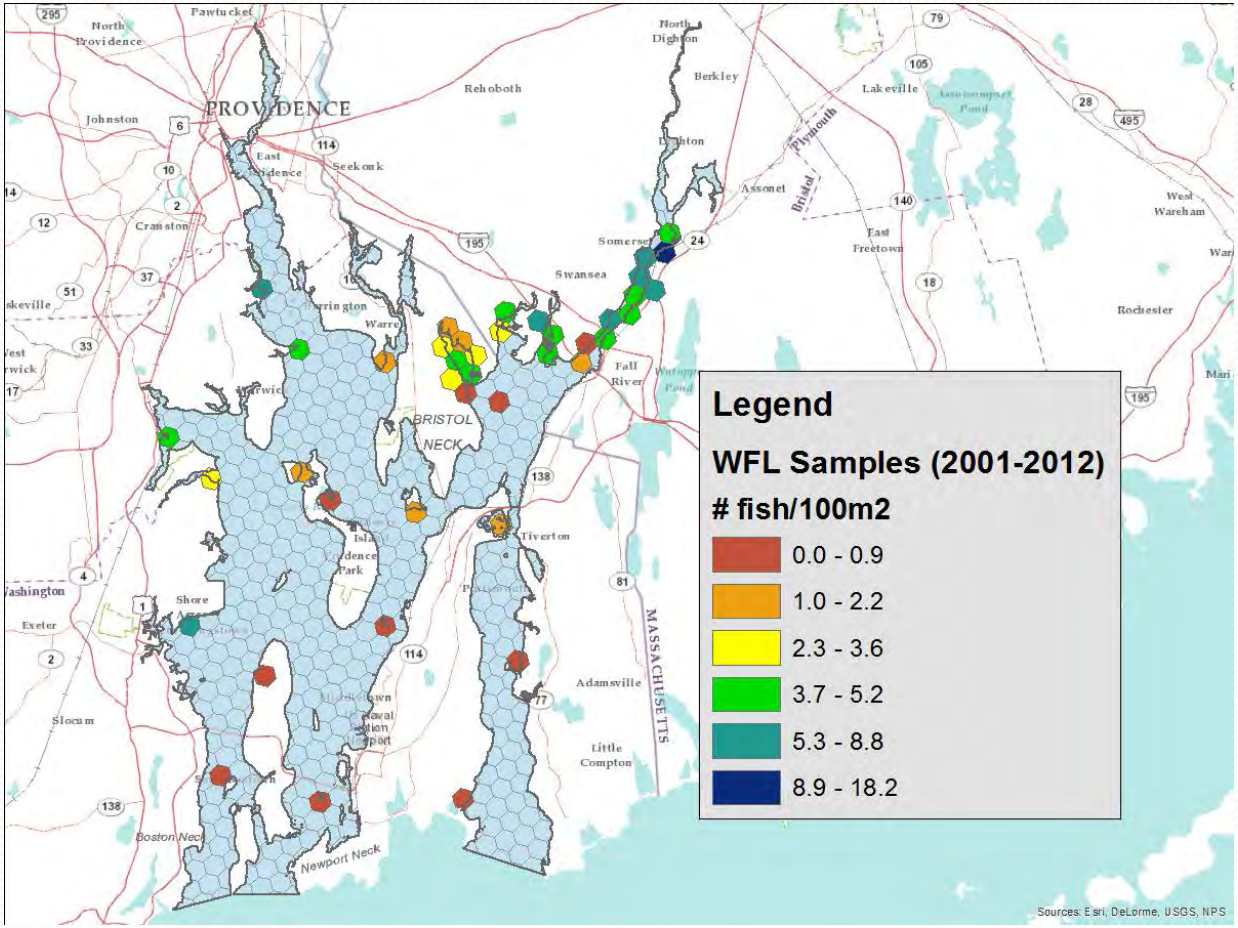
Winter Flounder

- Narragansett Bay
  - Trawl and seine combined – not accepted
  - Seine only - complete
  - Trawl only – future?
- Long Island Sound
  - Trawl and seine combined – not trying
  - Trawl only – working on this
    - Collecting predictor data – Caroly
  - Seine only – not enough data?
- Final Report
  - Intro, Narragansett Bay Seine Only, Long Island Sound Trawl Only, Lessons Learned – discuss drawbacks of trying to use two gear types for predictive model

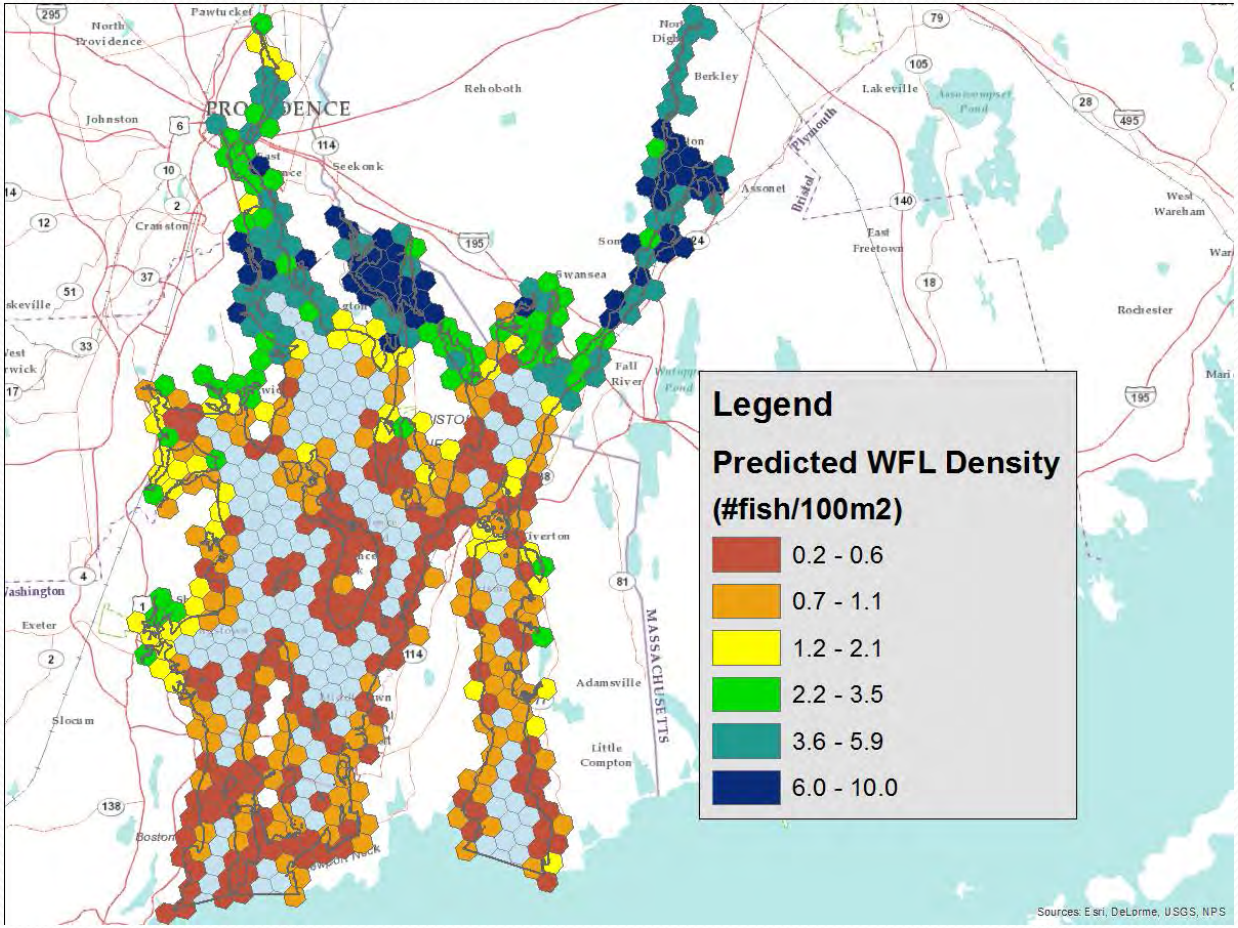
Seine and Trawl



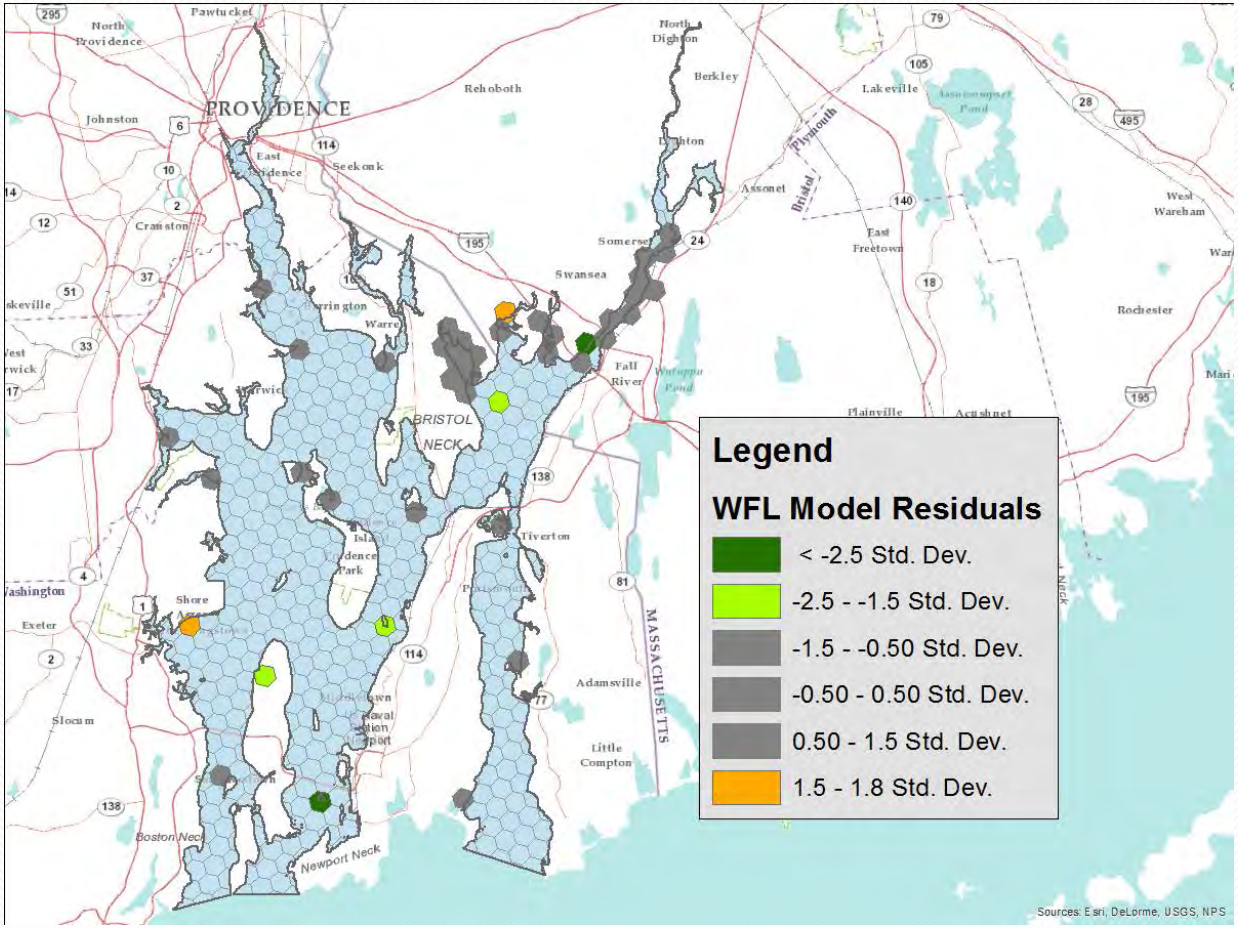
Seine Only - Sample Sites

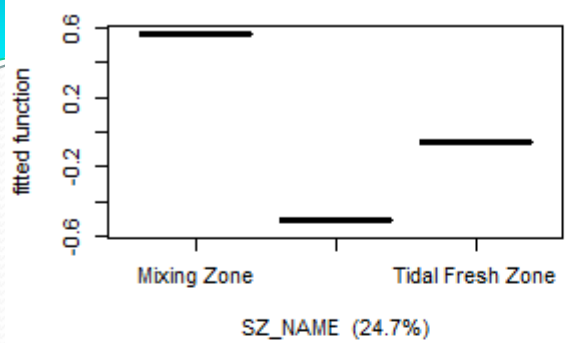


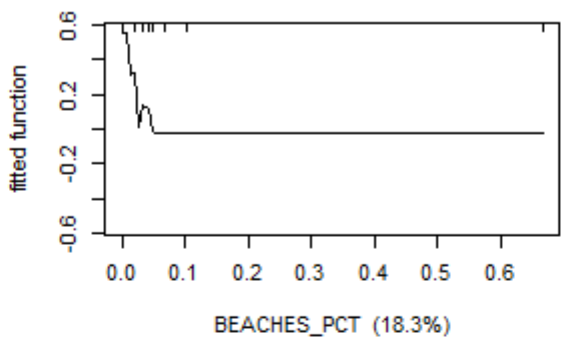
Seine Only – Predicted Density

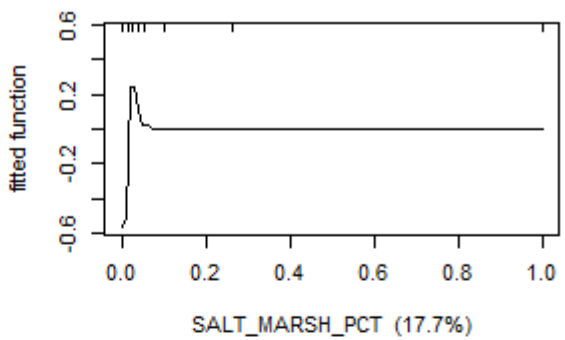


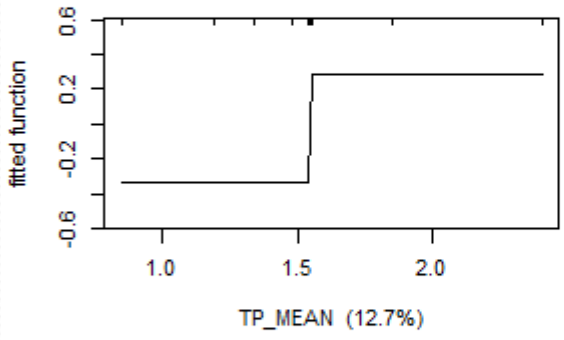
Residuals

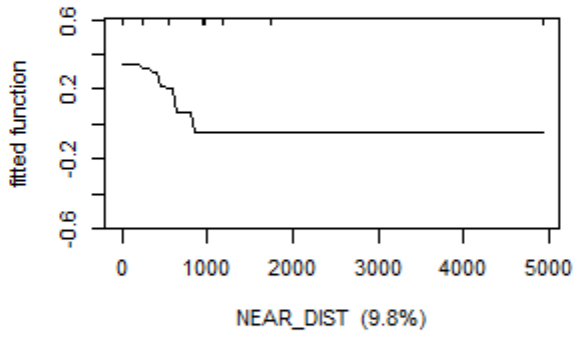

Legend
WFL Model Residuals
< -2.5 Std. Dev.
-2.5 - -1.5 Std. Dev.
-1.5 - -0.50 Std. Dev.
-0.50 - 0.50 Std. Dev.
0.50 - 1.5 Std. Dev.
1.5 - 1.8 Std. Dev.
PROVIDENCE
BRISTOL NECK
MASSACHUSETTS
Sources: Esri, DeLorme, USGS, NPS

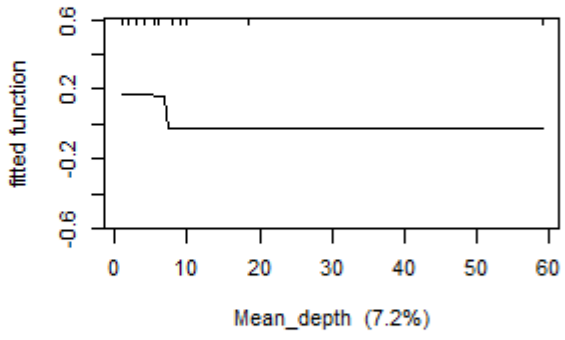

fitted function
0.6
0.2
-0.2
-0.6
Mixing Zone
Tidal Fresh Zone
SZ_NAME (24.7%)

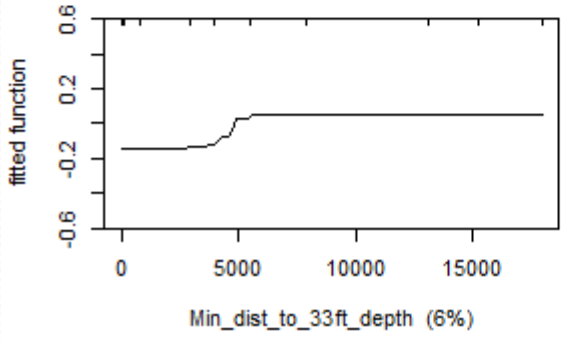

fitted function
0.6
0.2
-0.2
-0.6
0.0 0.1 0.2 0.3 0.4 0.5 0.6
BEACHES_PCT (18.3%)

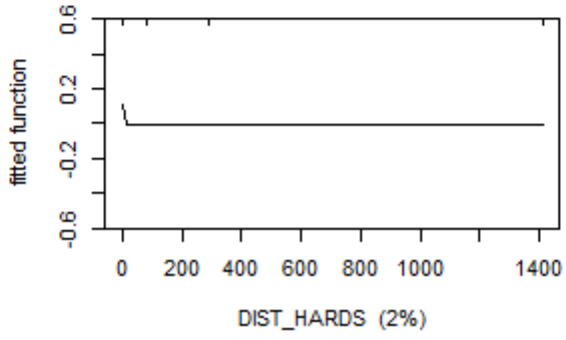

fitted function
0.6
0.2
-0.2
-0.6
0.0 0.2 0.4 0.6 0.8 1.0
SALT_MARSH_PCT (17.7%)

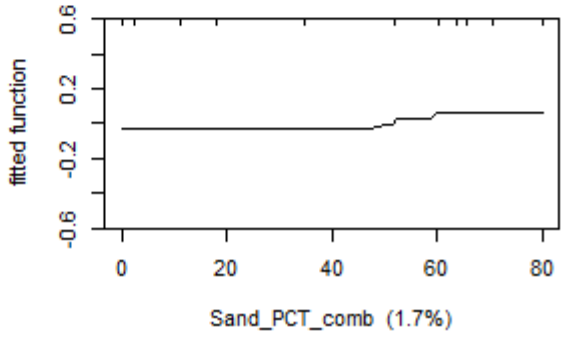

fitted function
0.6
0.2
-0.2
-0.6
1.0 1.5 2.0
TP_MEAN (12.7%)


fitted function
0.6
0.2
-0.2
-0.6
0 1000 2000 3000 4000 5000
NEAR_DIST (9.8%)

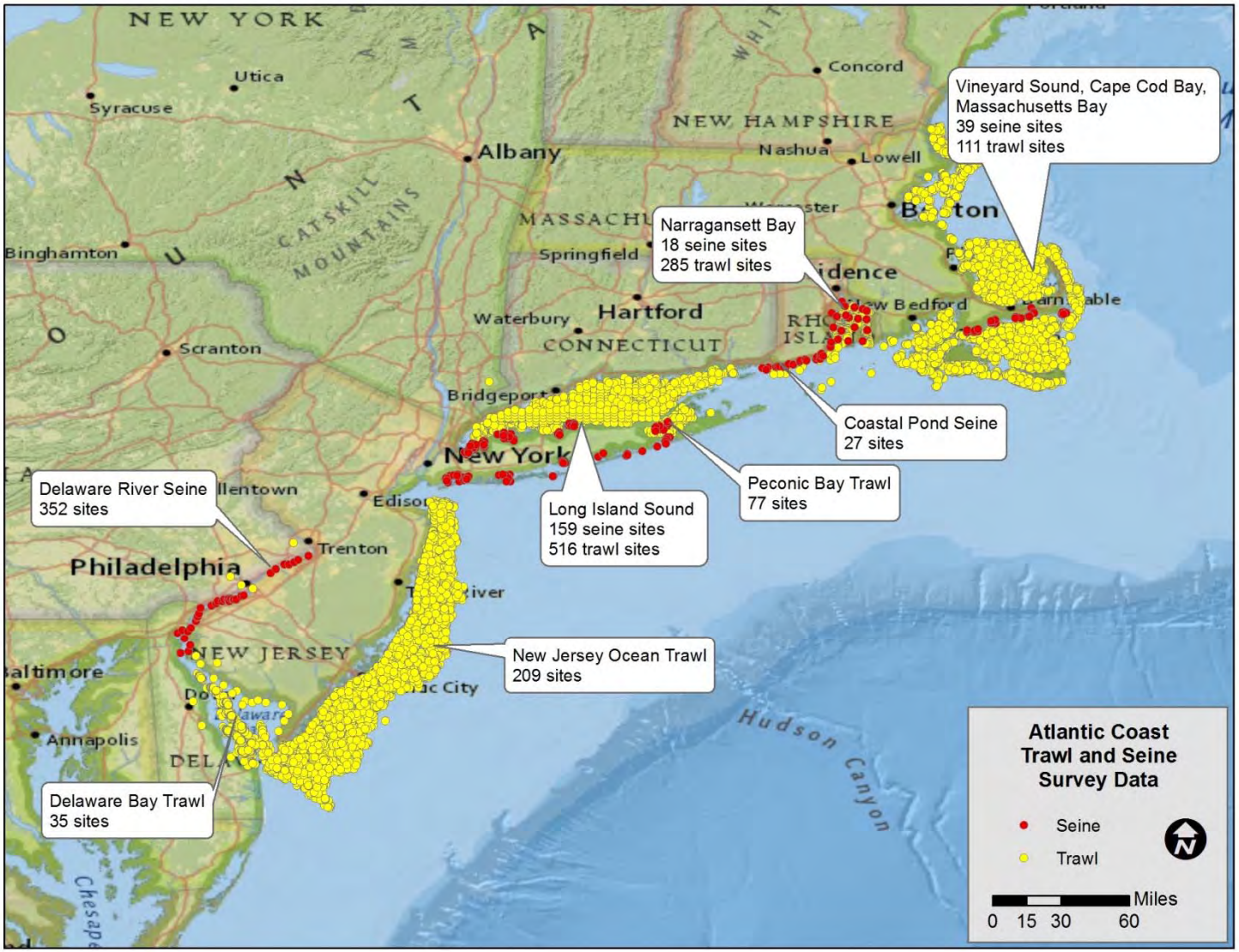

fitted function
0.6
0.2
-0.2
-0.6
0 10 20 30 40 50 60
Mean_depth (7.2%)


fitted function
0.6
0.2
-0.2
-0.6
0 5000 10000 15000
Min_dist_to_33ft_depth (6%)


fitted function
0.6
0.2
-0.2
-0.6
0 200 400 600 800 1000 1400
DIST_HARDS (2%)


fitted function
0.6
0.2
-0.2
-0.6
0 20 40 60 80
Sand_PCT_comb (1.7%)

Seine and Trawl Data



River Herring

- Build a predictive model based on available stock assessment data –
  - Abundance influenced by effectiveness of fish ladder not by habitat
- Build a predictive model using presence/absence
  - Not enough absence data
- Use surrogate species – white perch, white suckers
  - TC did not like this – not enough data – no confidence
- Use data that TU put together for NFWF and TNC has already mapped to create a decision support tool
- Nothing
  - Find funding for TNC to develop decision support tool
  - Use leftover NALCC funds to do more winter flounder models

National Fish and Wildlife Foundation
River Herring Project Update
C. Shumway, MRWC April 21, 2015

Goals, Outcome, Locations

Partners: TNC (Mari-Beth De-Lucia, Alison Bowden, Erik Martin)
ACFHP (Lisa Havel, Caroly Shumway (MRWC), Cheri Patterson)

Goal: to prioritize, plan, and strategize river herring needs by convening expert working groups in the SNE, Mid-Atl., and SE regions.

Deliverable: Final report with summary of threats, water quality impact, and ranked, actionable, habitat restoration priorities for next 10 years for river herring

Locations:

- Chesapeake Bay watershed
- Delaware River
- Hudson River
- Connecticut River
- Santee-Cooper River
- Gilbert-Stuart River (aka Narrow R/; aka Pettascquamscutt River)

Why were these focal rivers chosen?

NFWF's River Herring Program and the resulting NFWF Business Plan for river herring conservation describes a comprehensive 10-year strategy to guide NFWF conservation investments to achieve a 300% increase in river herring spawning runs in key rivers along the eastern seaboard from 2008.

NFWF chose watersheds with historic or current important spawning runs that have a long time-series of measurable counts.

Work Accomplished

◆ Chesapeake: One workshop on the Chesapeake Bay drainages (May 7-8, 2014): White Paper, Report
◆ Delaware: Meeting and webinar for the Delaware River Fish and Wildlife Management Cooperative
◆ Connecticut River: Worked with 30 experts within Connecticut River Atlantic Salmon Commission River Herring Subcommittee
◆ Santee-Cooper: Presentation and restoration discussion with 15 experts at Southern Divison – American Fisheries Society 2015 meeting
◆ Hudson River: Used threat assessment and priorities from Hudson River Habitat Restoration Plan (2014).
◆ Gilbert Stuart: Webinar and phone interviews

To Do:
Final Report April 30, 2015
? Webinar for public outreach

Chesapeake Bay

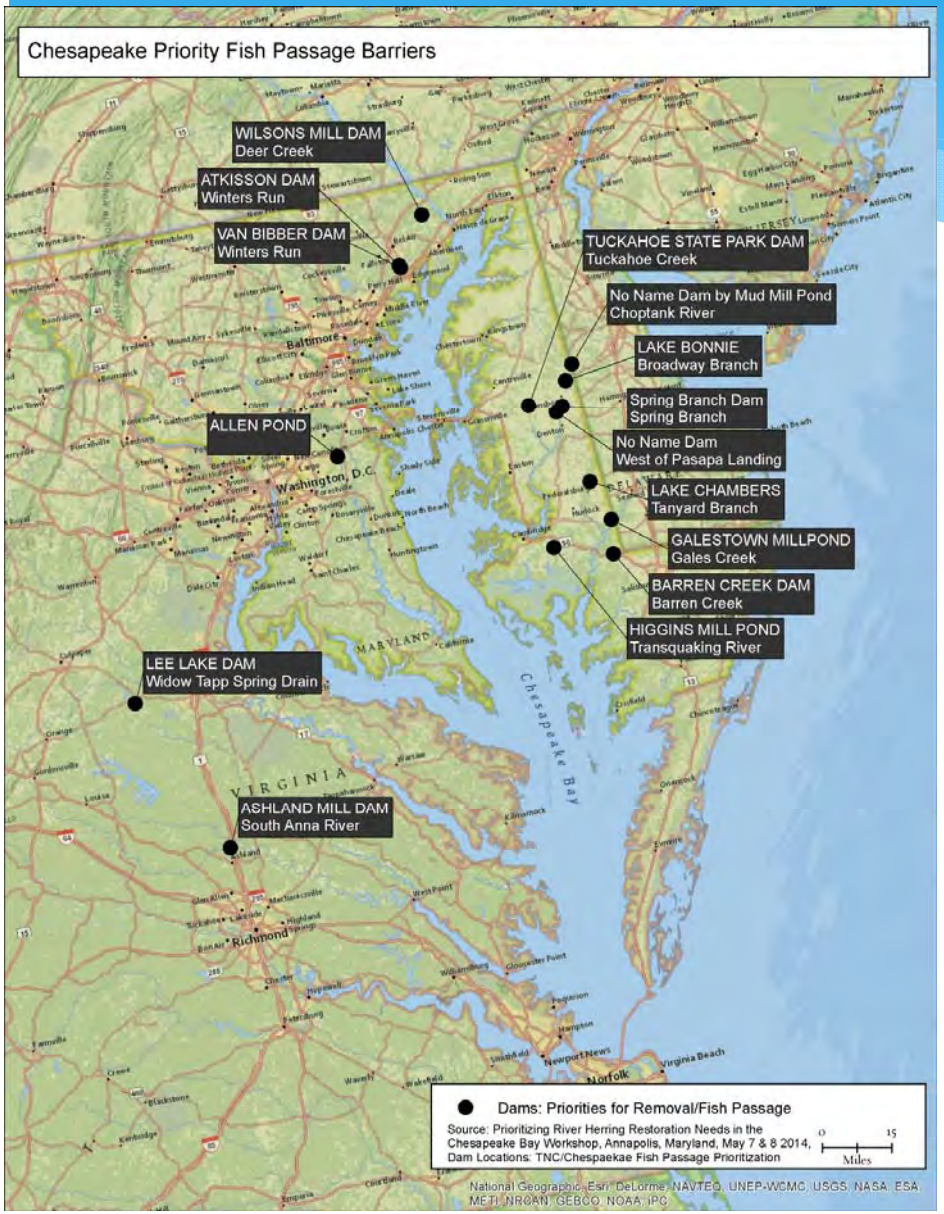
Threats

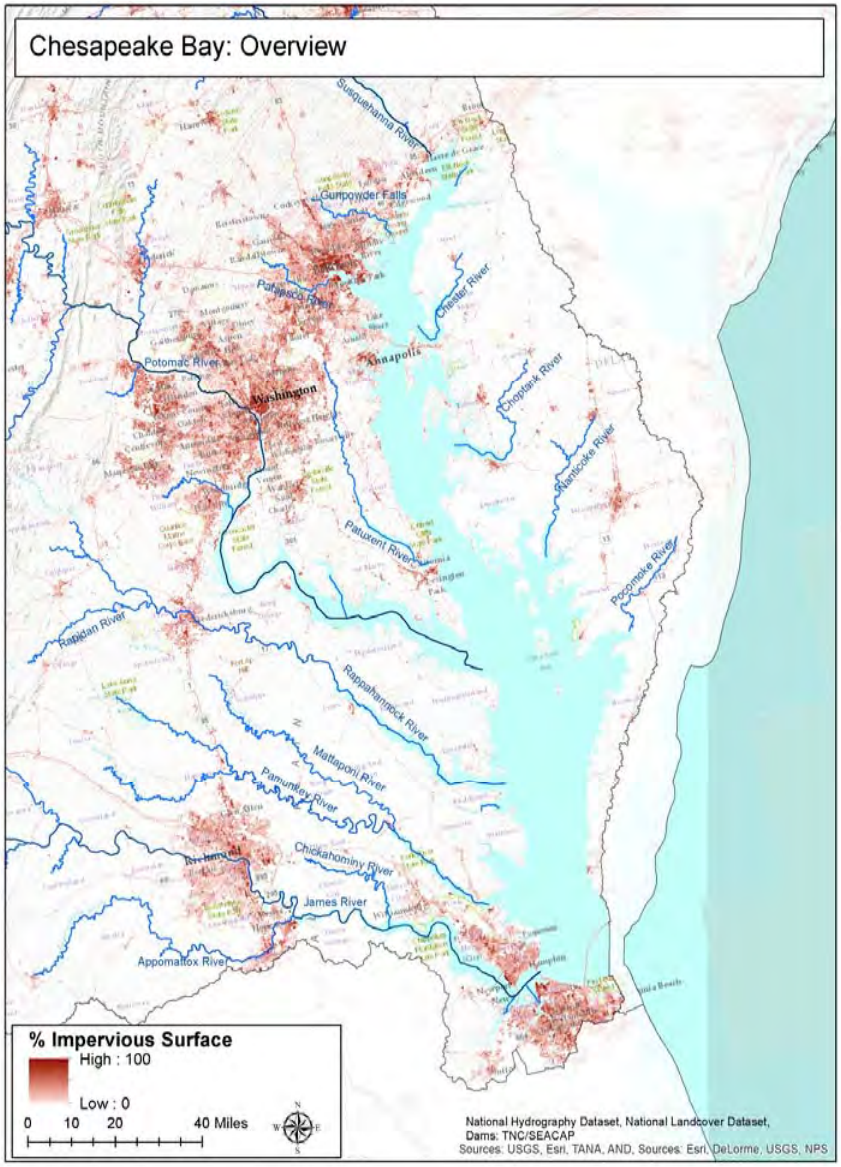
* Water Quality/Imp. Surfaces (H)
* Urbanization/Land Conversion
* Dams and Other Barriers (H)
* Predation by invasive catfish (M)
* Sedimentation (M)
* Climate Change and Climate Variability (M)

Restoration Priorities

- Reduce Impervious surfaces thru land protection, comp plan development, zoning
- Fish Passage Improvement

Chesapeake Bay





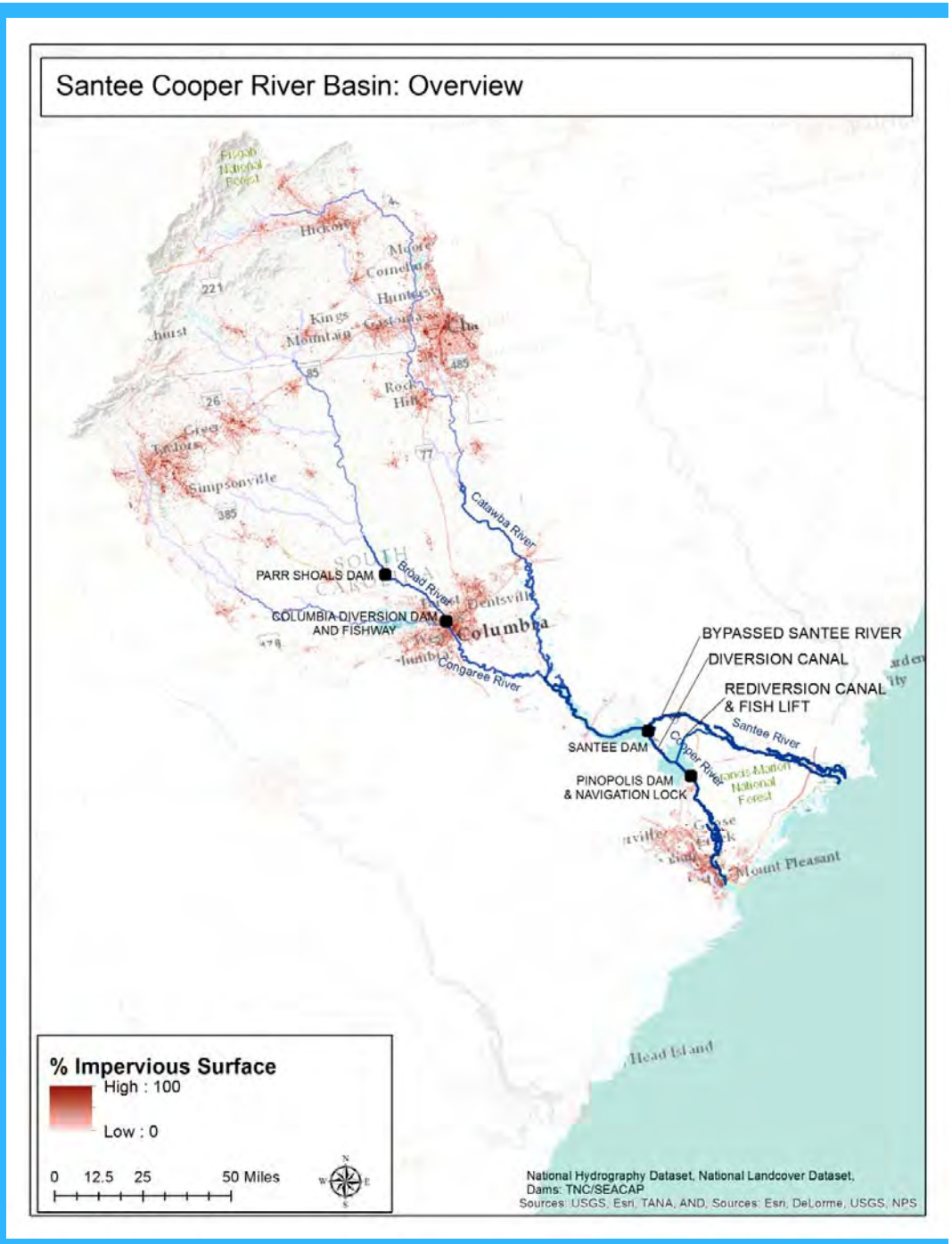
Santee-Cooper River

Threats

- Barriers
- Predation (cormorants,fish)
- SAV destruction by power companies

Restoration Priorities

- Fish Passage Improvement



Delaware River

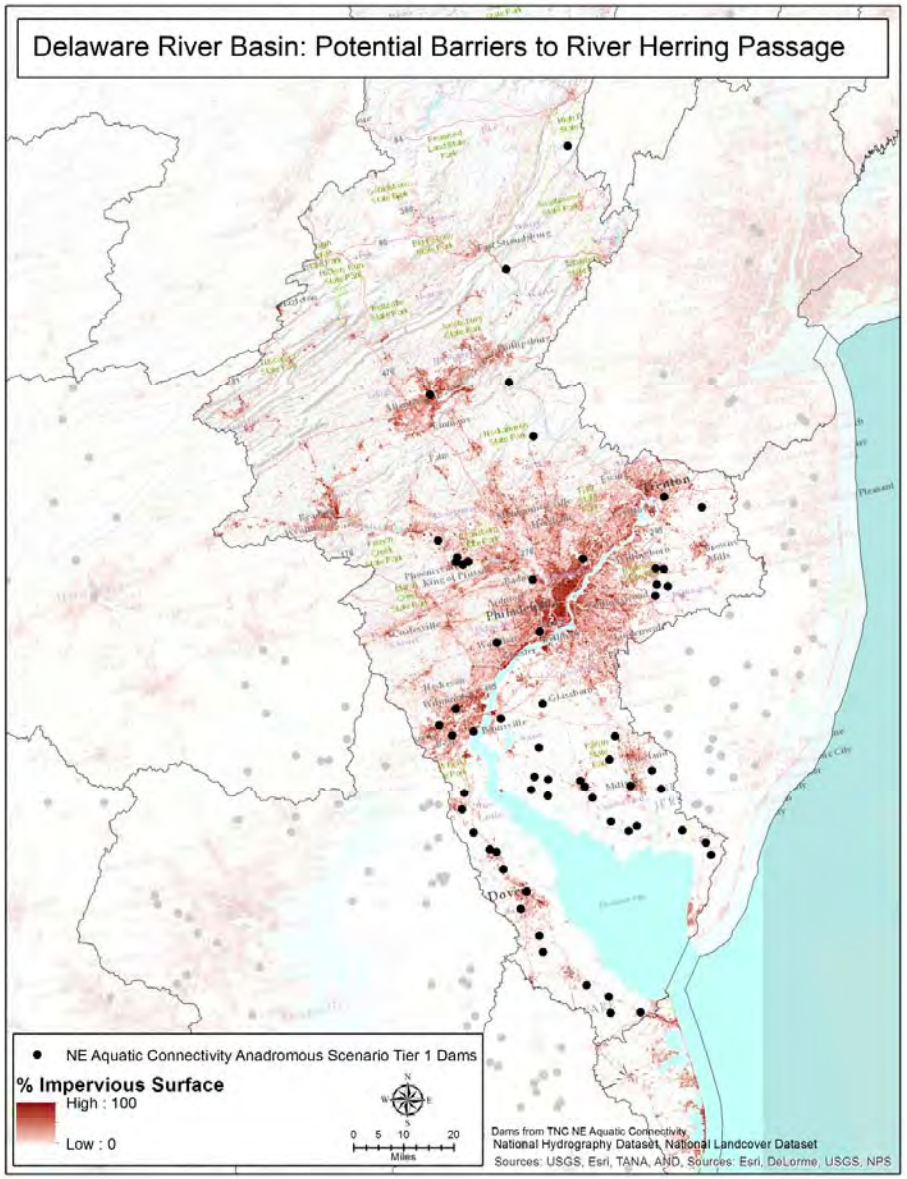
Threats

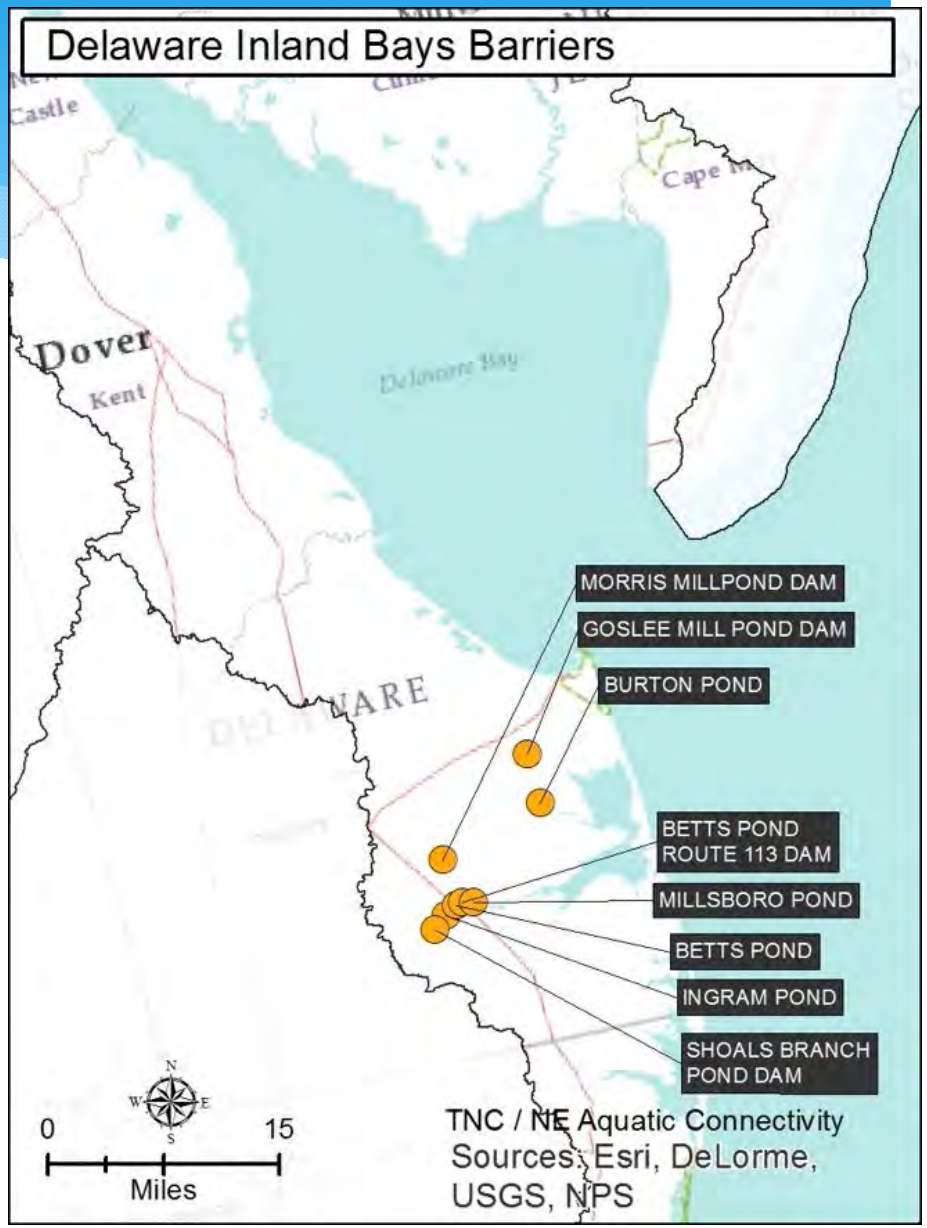
- Barriers on tributaries
- Altered predator-prey
- Impingement and entrainment
- Urbanization
- Water Quality

Restoration Priorities

- Assess efficacy of fish passages
- Dam removal
- Assess water quality and riparian impact (NJ, DE)

Delaware River





Hudson River

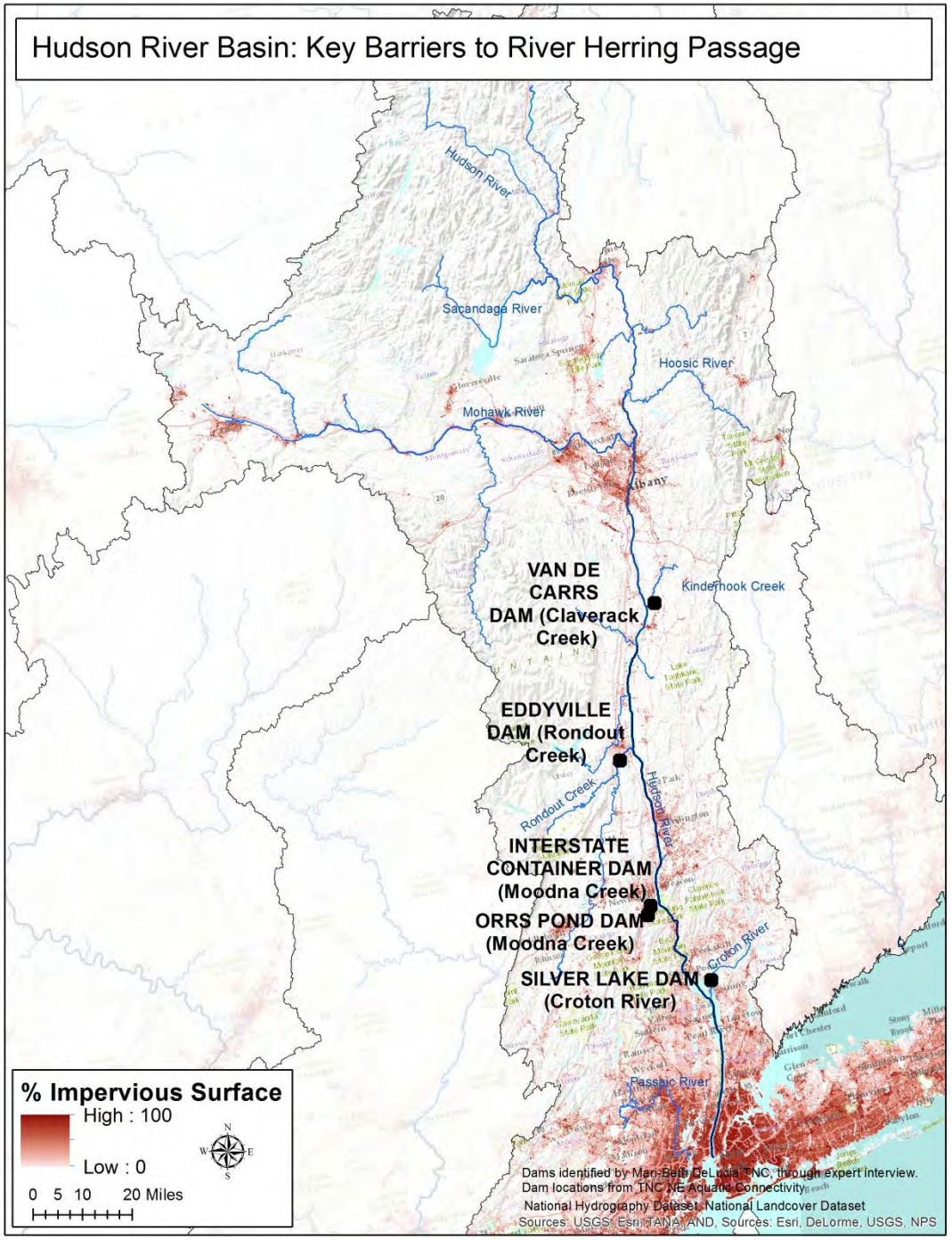
Threats

- Habitat loss (shallow water habitat)
- Loss of Habitat Complexity
- Zebra Mussels
- Sea Level Rise
- Urbanization
- Barriers

Restoration Priorities

- Side Channel Restoration
- Floodplain Restoration
- Fish Passage Improvement

Hudson River (continued)



Connecticut River

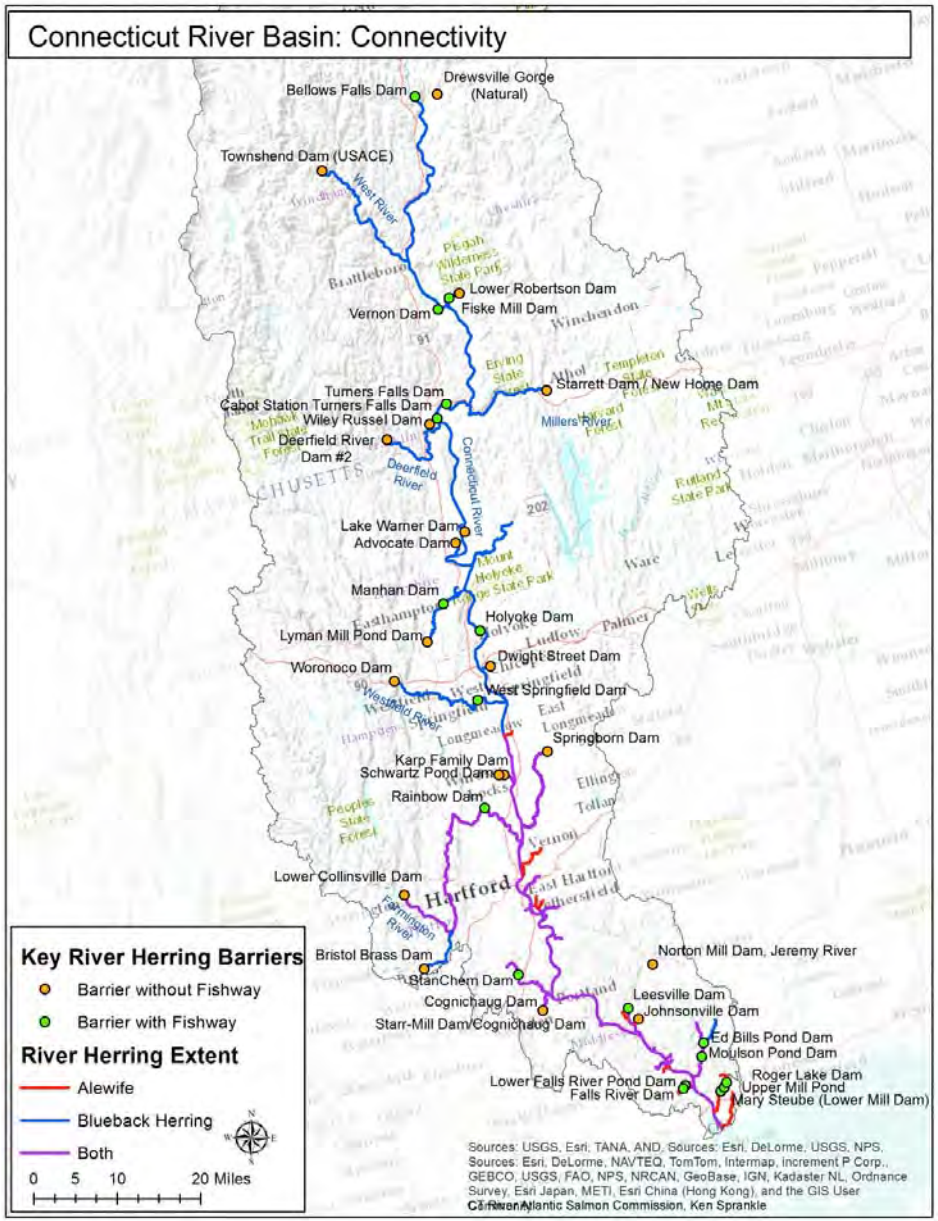
Threats

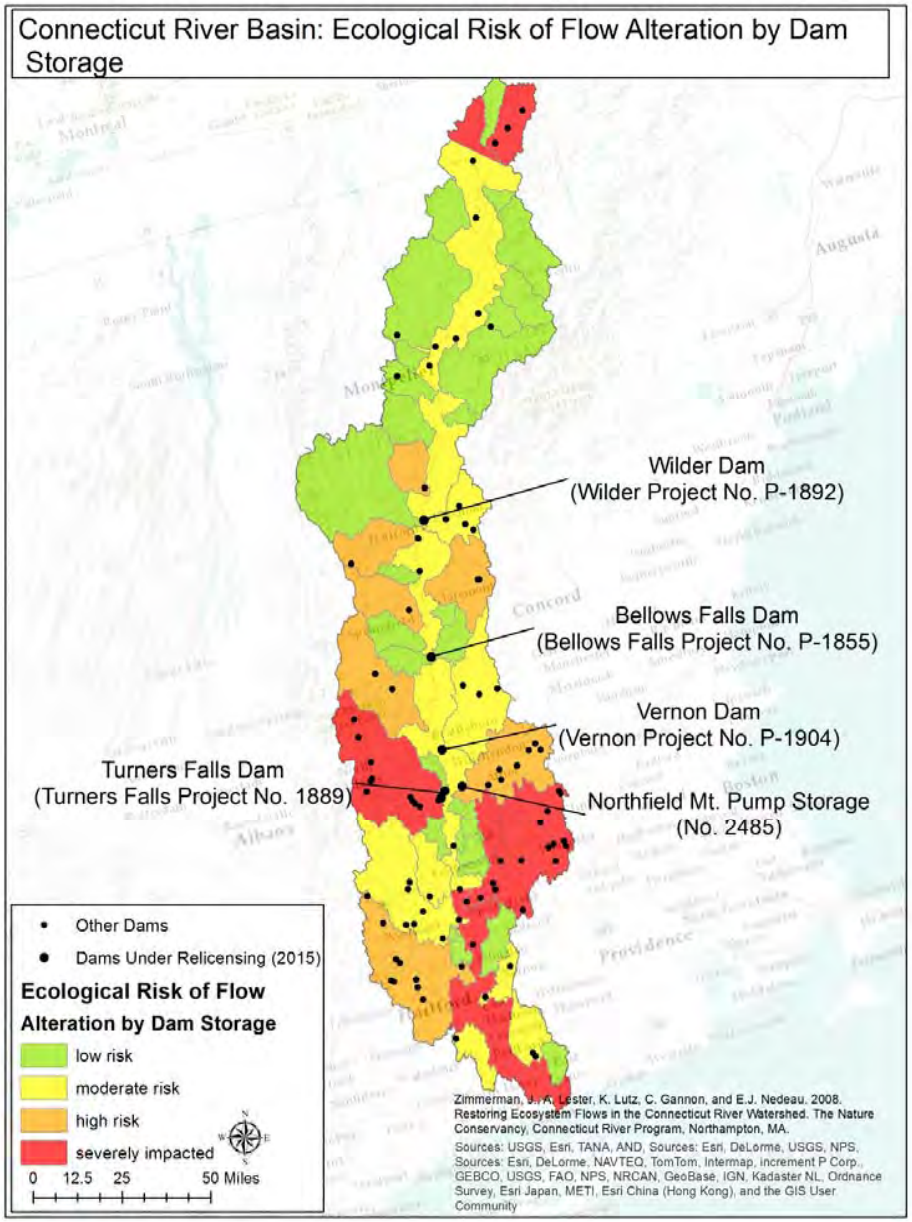
- Climate change (H)
- Barriers (H)
- Ocean bycatch (H)
- Water Quality (M)
- Habitat degradation (M)
- Culverts (M)

Restoration Priorities

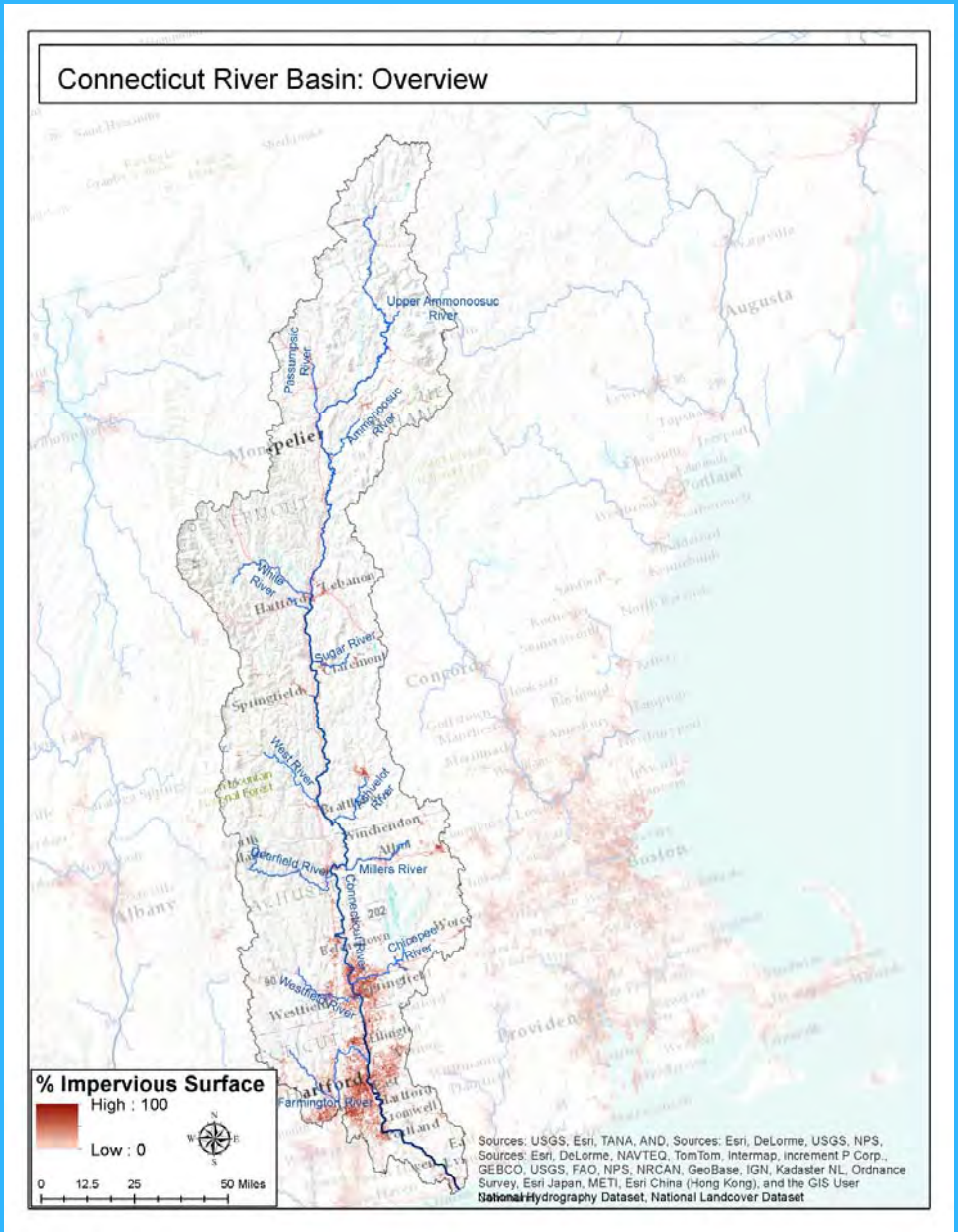
- Fish Passage Improvement at large dams
- Barrier removal and fish passage improvement
- Policy and demonstration projects for culverts
- Green infrastructure/LID for water quality

Connecticut River





Connecticut River (continued)



Gilbert Stuart (aka Narrow River)

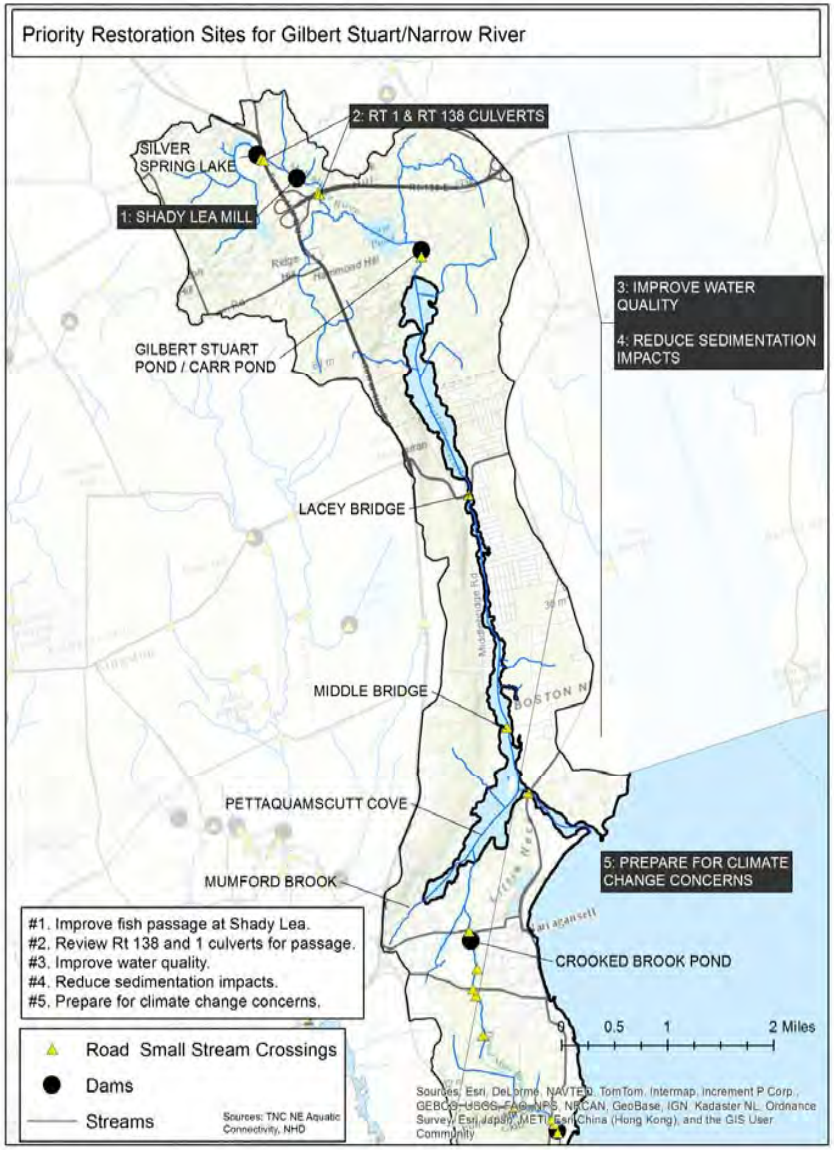
Threats

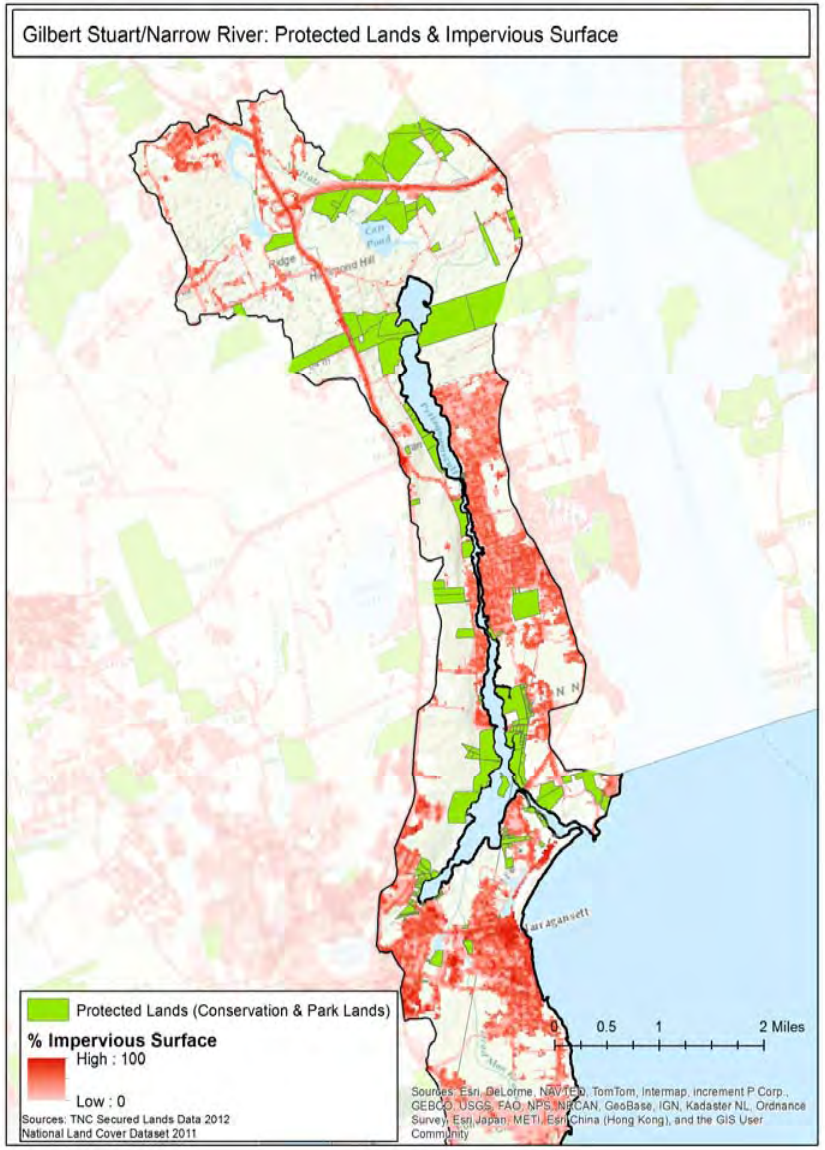
- Barriers
- Water Quality
- Ocean Bycatch
- Sedimentation
- Sea Level Rise

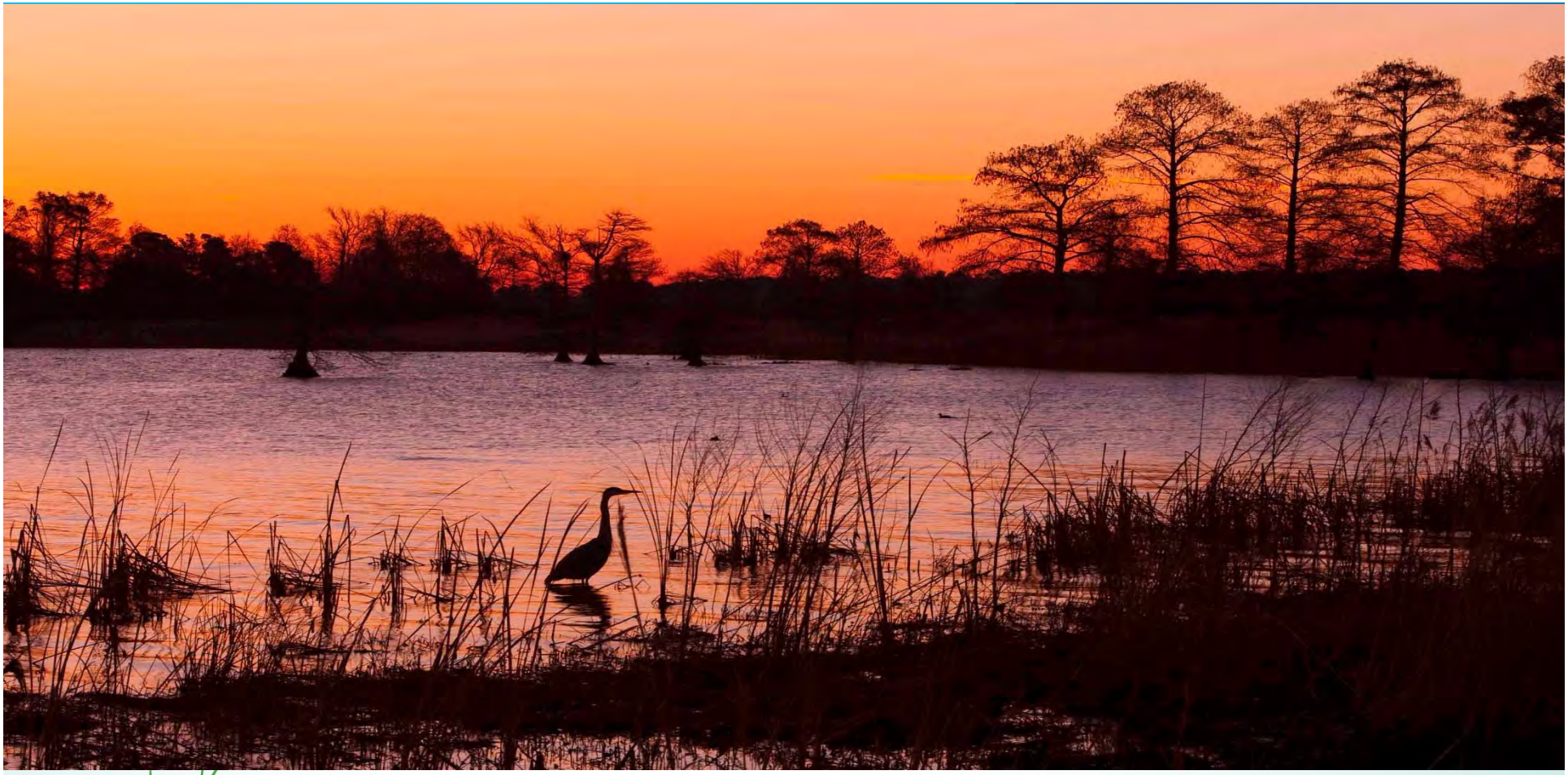
Restoration Priorities

- Fish Passage Improvement (dams and culverts)
- Improve water quality
- Reduce sedimentation
- Prepare for climate change

Gilbert Stuart (aka Narrow River)







North Carolina
Coastal Federation

Working Together for a Healthy Coast

OVERVIEW

Our Mission

The N.C. Coastal Federation empowers coastal residents and visitors from all walks of life to protect and restore the water quality and critically important natural habitats of the N.C. coast.

North Carolina Coastal Federation
Working Together for a Healthy Coast

Bird's Eye

501(c)3 conservation nonprofit

Three offices: Manteo, Ocean, Wrightsville Beach (Raleigh)

30 staff—scientists, educators, planners, advocates

29-member volunteer board of directors—fishermen, bankers, lawyers, philanthropists, etc.

5,000+ volunteers and students annually

Dozens of federal, state, local and other partners

North Carolina
Coastal Federation
Working Together for a Healthy Coast

Membership

Membership is open to anyone.

Currently more than 16,000 members and supporters.

North Carolina Coastal Federation

Working Together for a Healthy Coast

Budget

2015 operating budget: $2 million

Restoration, protection and education projects: $3.5 million

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Coastal Federation
Working Together for a Healthy Coast

Program Areas

- **Restoring and preserving** habitat and water quality
- **Advocating** for stronger environmental standards, laws and enforcement
- **Educating** students, community members and community leaders

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Restore and Preserve

- Oyster reef restoration
- Wetlands restoration: coastal marsh and large-scale wetlands
- Stormwater retrofits
- Living shorelines
- Land acquisition and easements
- Science: monitoring and modeling

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Advocate

- Champion low-impact development (LID)
- Advance natural beach preservation
- Support sensible coastal development and resource management
- Increase public access
- Support consistent and reasonable adoption and enforcement of laws, rules
- Safeguard estuarine shorelines

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Educate

- Accurate and timely information
- Hands-on learning
- Students, adults, professionals, governments
- Field trips, workshops, conferences, publications.

North Carolina
Coastal Federation
Working Together for a Healthy Coast

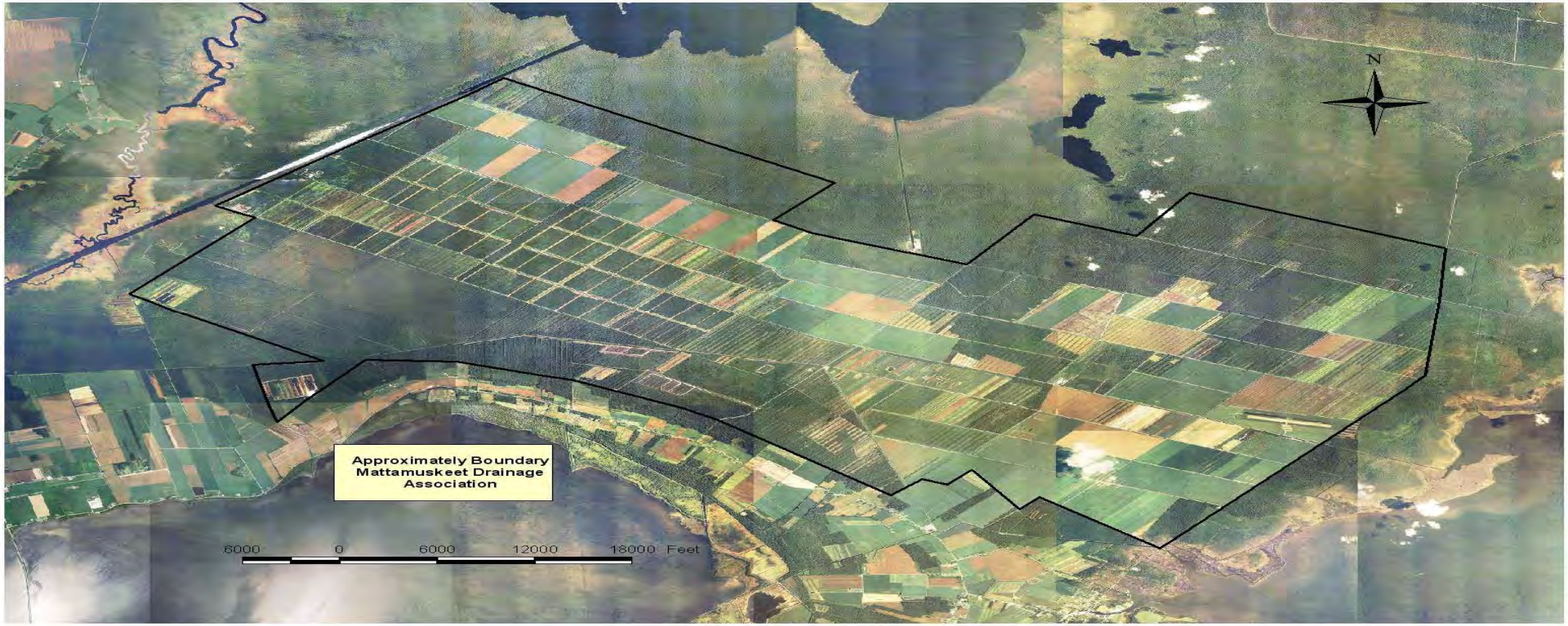
Projects of Interest to ACFHP

$5 million federal economic stimulus grant: over 60 acres of oyster reefs,140 jobs coast-wide.

Projects of interest to ACFHP

Mattamuskeet Drainage Association

- 42,500 acres
- Billions of gallons pumped annually
- Innovative partnership keeps runoff out of coastal waters, prevents subsidence



Projects of interest to ACFHP

- North River Farms
- 6,000 wetlands restoration
- More than 200 acres of shellfish waters opened

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Coastal Federation
Working Together for a Healthy Coast

Projects of Interest to ACFHP: Environmental Restoration = Jobs

WECT NEWS 6 HD
WHERE NEWS COMES FIRST

"Stimulus money funds oyster rehabilitation, jobs"

StarNews ONLINE

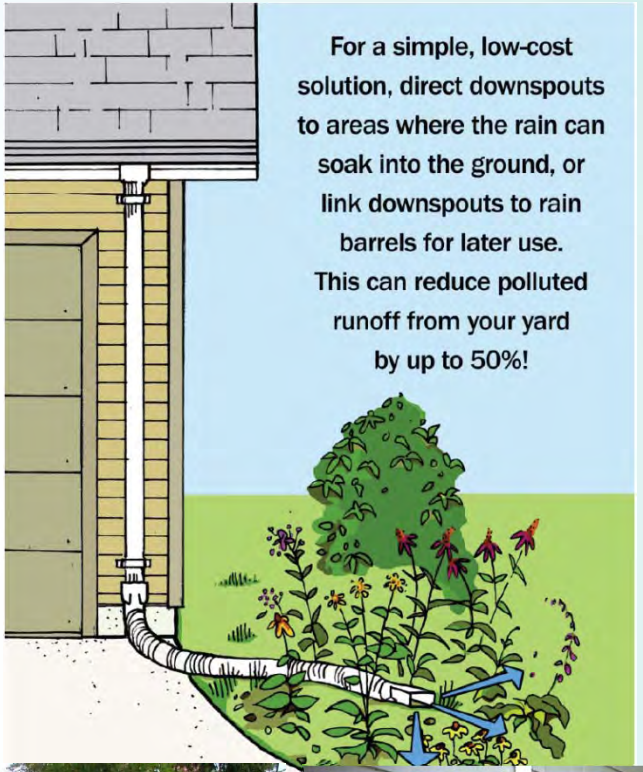
Stimulus money funds building local oyster reefs

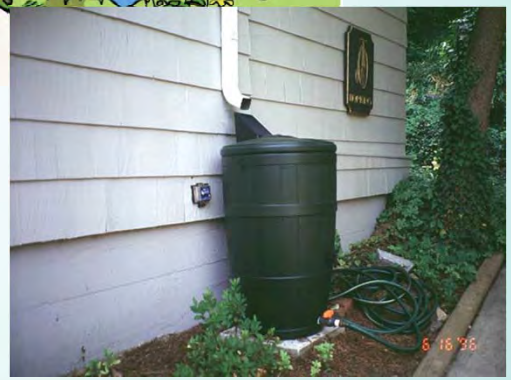
Organizers hope restocking addresses oyster population shortage along coast

"It helps us in more ways than one," said Steven Galloway, 21. "It's work for now. It's good money. Then in a few years, we'll have more oysters and fish. It's sort of win-win all the way around."

North Carolina Coastal Federation
Working Together for a Healthy Coast

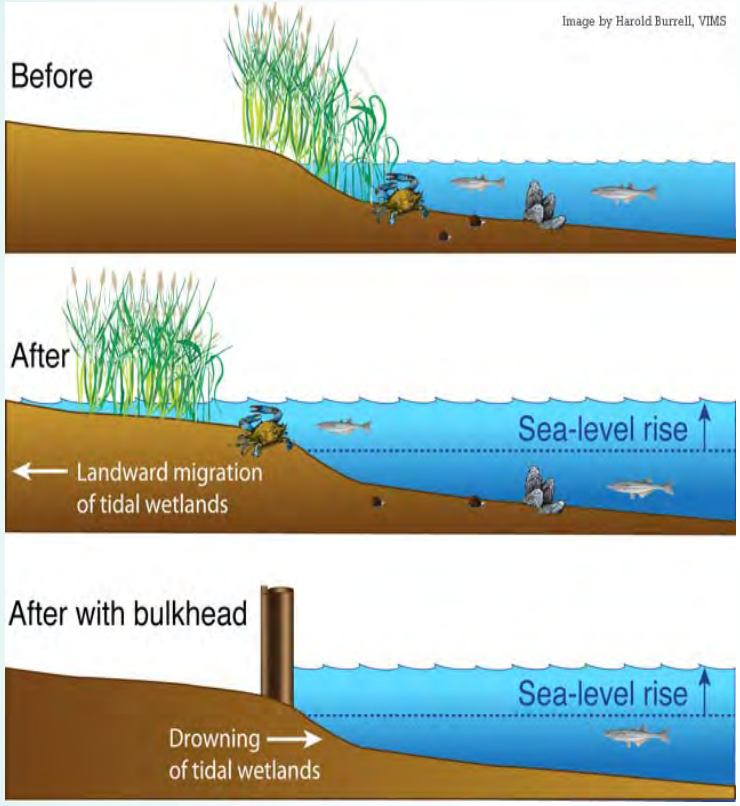
Projects of Interest to ACFHP: Low Impact Development (LID) & Smart Yards





Projects of Interest to ACFHP: living shorelines

Protect and restore natural vegetative buffers



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WWW.NCCOAST.ORG

WWW.COASTALREVIEW.ORG

Christine Miller, Assistant Director
3609 N.C. 24 (Ocean)
Newport, NC 28570
252-393-8185
christinem@nccoast.org

ACFHP SCIENCE AND DATA NEEDS

C. Shumway (Chair)
Marek Topolski (Vice-Chair)

April 21, 2015

ACFHP Science/Data Tasks

MATRIX

1. Create searchable database (and map?) of species and references for matrix
2. Improve matrix, incorporating rarity/vulnerability to climate change/(seasonality ?)

ASSESSMENT

1. Improve assessment of existing information; add regional info

WEB-BASED TOOL

1. Create decision-support tools that incorporate NALCC modeling, matrix, and assessment

Current Members, Science and Data Committee

* Jeff Beal
* Alison Bowden
* Michael Celestino
* Jaclyn Daly
* Mari-Beth Delucia
* Julie Devers
* Roman Jesien
* Dan Kircheis
* Danielle Kreeger
* Jacob Kritzer
* William Lellis
* Rachel Muir
* David (Moe) Nelson
* David O'Brien
* Jay Odell
* Willian Shadel
* Caroly Shumway
* Albert Spells
* Marek Topolski
* Robert van Dolah
* Alan Weaver
* Bartholomew Wilson
* Craig Woolcott

Proposed Timeline

- Agree on Sci/Data Tasks (Steering Committee)
- Check with current members to see if want to remain on committee
- Set up Conference Call (May); In-Person meeting (June) date and location; assign subcommittees
- Follow-up with subcommittees

Grassy Flats Restoration Project

Kent Smith, Florida Fish and Wildlife Conservation Commission

Eric Anderson, Project Manager, Palm Beach County Department of Environmental Resources Management

Lake Worth Lagoon

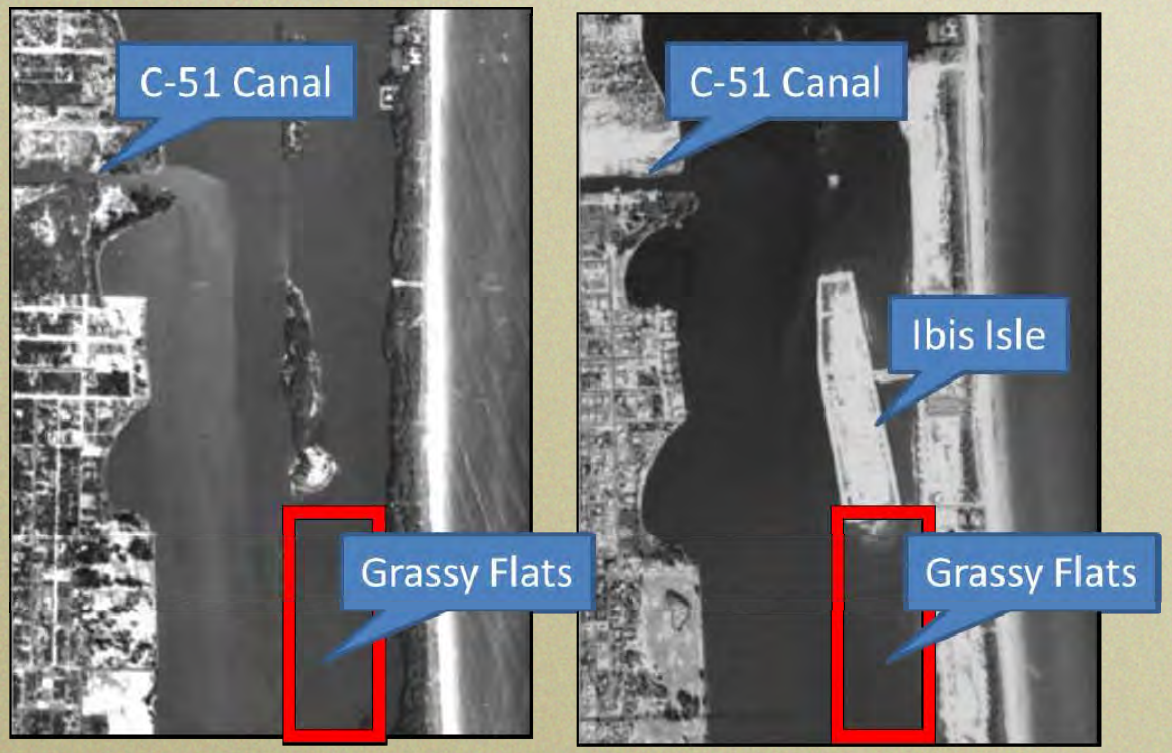
- Located between Village of North Palm Beach and the Town of Ocean Ridge
- 20 mi long, ½ mi wide, 6-10’ deep
- Resources include:
  - 1,689 acres of seagrass
  - 283 acres of mangroves
  - 5 acres of oysters

Muck in the Lake Worth Lagoon

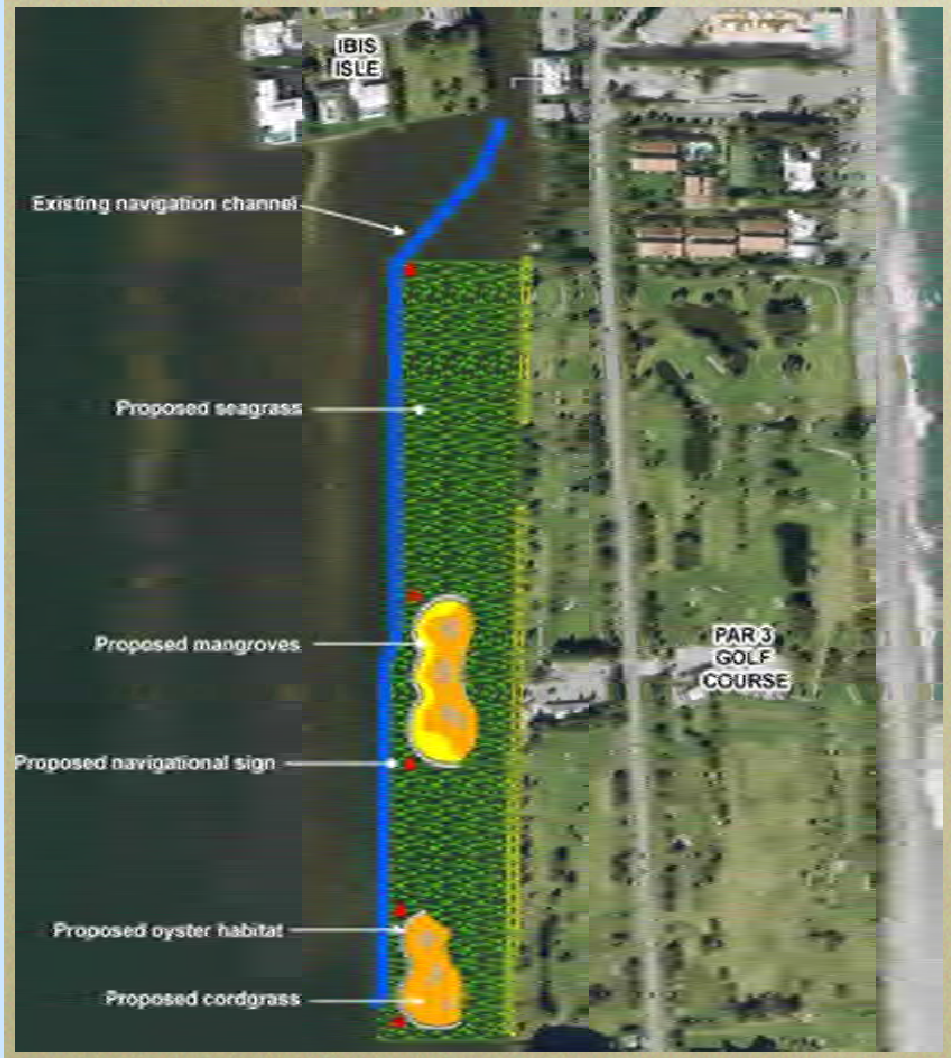
- Fine-grained, organic rich sediment
- Primarily from stormwater discharge
- Blankets natural sand substrate
- Reduces available benthic habitat
- Decreases biodiversity
- Easily re-suspended

Stormwater Discharges

- Main source of stormwater discharge is C-51 Canal, just northwest of project site



Grassy Flats



Partners sharing cost

$3.4 million

- USFWS ($777K)
- FDEP / NOAA ($110K)
- USACE ($842K)
- LWLPP FDEP ($960K)
- PBC ($800K)
- FWC (in-kind)
- WPBFC (in-kind)
- MIA (in-kind)

US Army Corps of Engineers.

West Palm Beach Fishing Club

Endorsed by Atlantic Coastal Fish Habitat Partnership

Marine Industries Association of Palm Beach County, Inc.

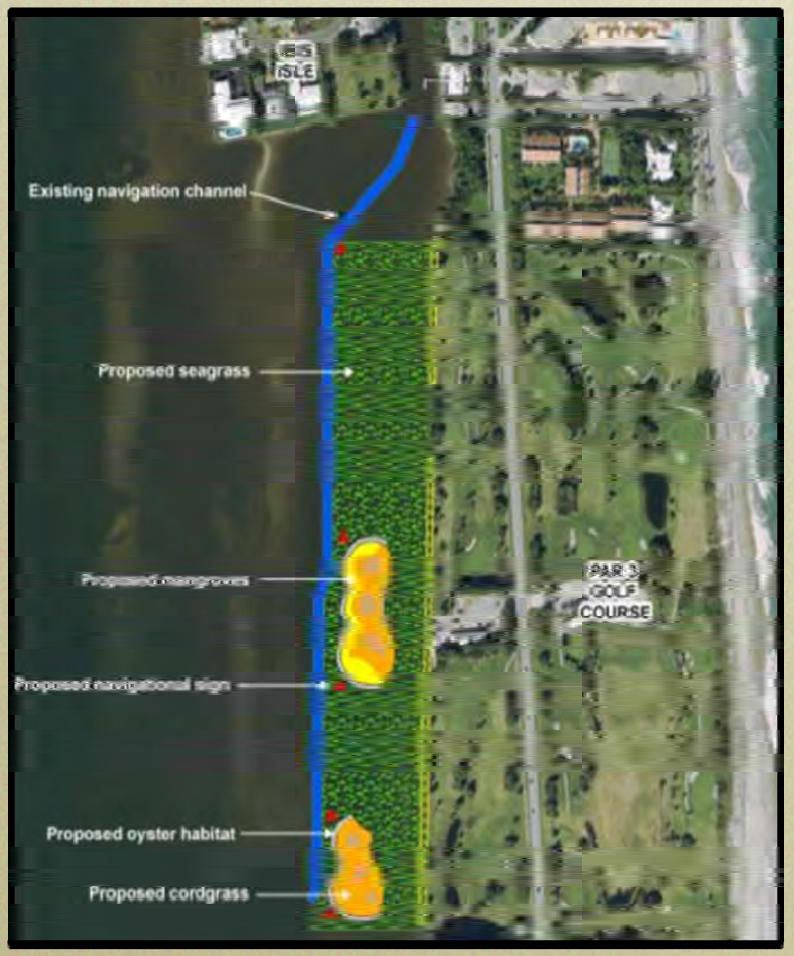
Project Goals

- Place approximately 52,000 cubic yards of sand over 12.2 acres to cap muck sediments and construct two islands

- Create 10.5 acres of seagrass habitat, 1.1 acres of salt marsh, 0.3 acres of mangroves, 0.3 acres of tidal flats, and 0.6 acres of artificial reef/oyster habitat

- Place approximately 2,800 tons of limestone rock to stabilize the two islands and provide a hard surface for the growth of oysters

- Plant approximately 2,900 red mangroves and 25,000 plugs of smooth cordgrass



- Import of 17,000 cy of Sand from South Lake Worth Inlet (beneficial re-use)

- Placement of 2,758 tons of limestone Rock

EASTMAN AGGREGATE ENTERPRISES, LLC

Grassy Flats

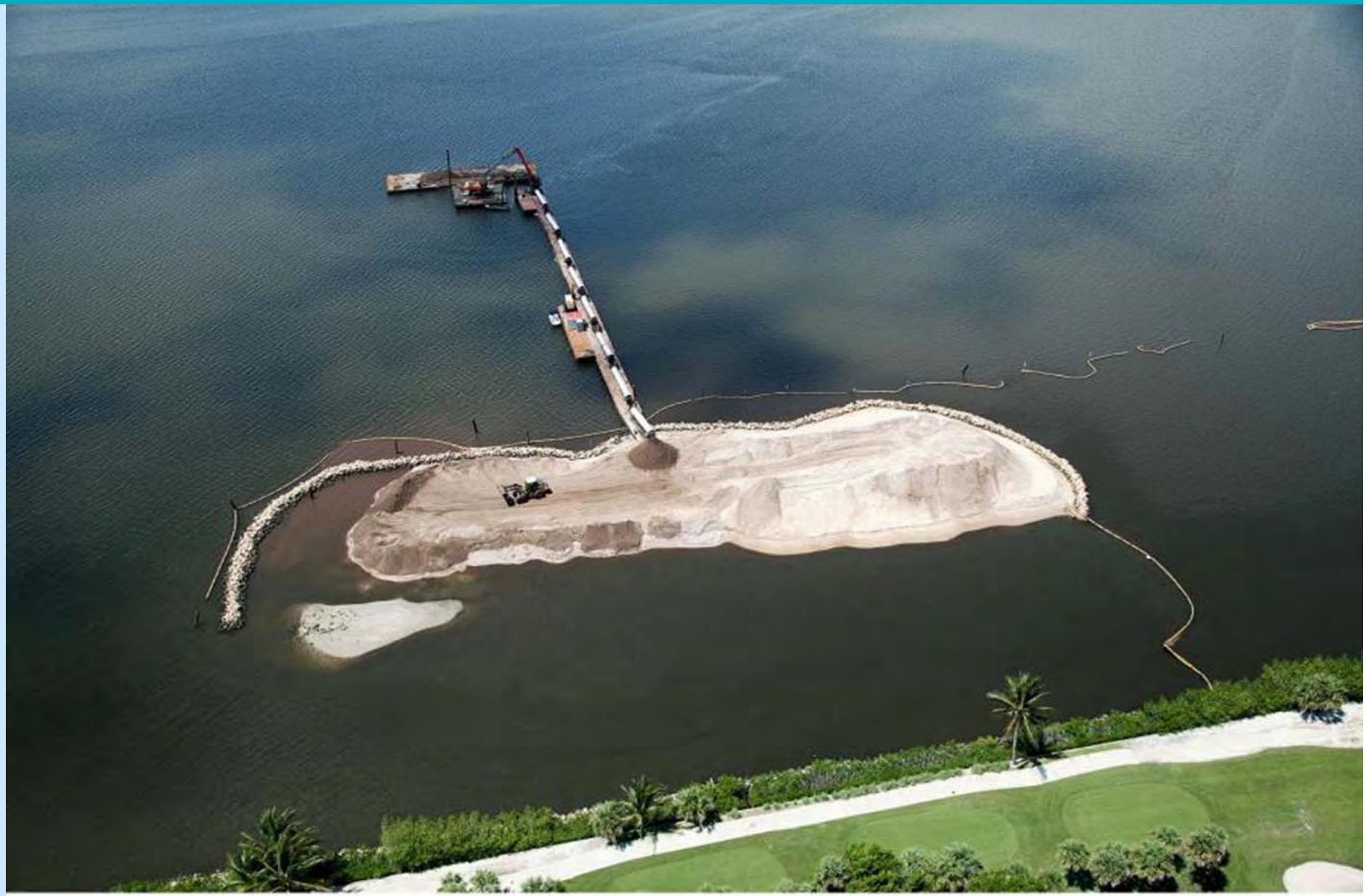
SMITH AERIAL PHOTOS 08-06-14

- Import 10,000 cy of Sand Hypoluxo Natural Area
- Import 25,000 cy of Sand from Okeeheelee Park

EASTMAN AGGREGATE ENTERPRISES, LLC

Grassy Flats

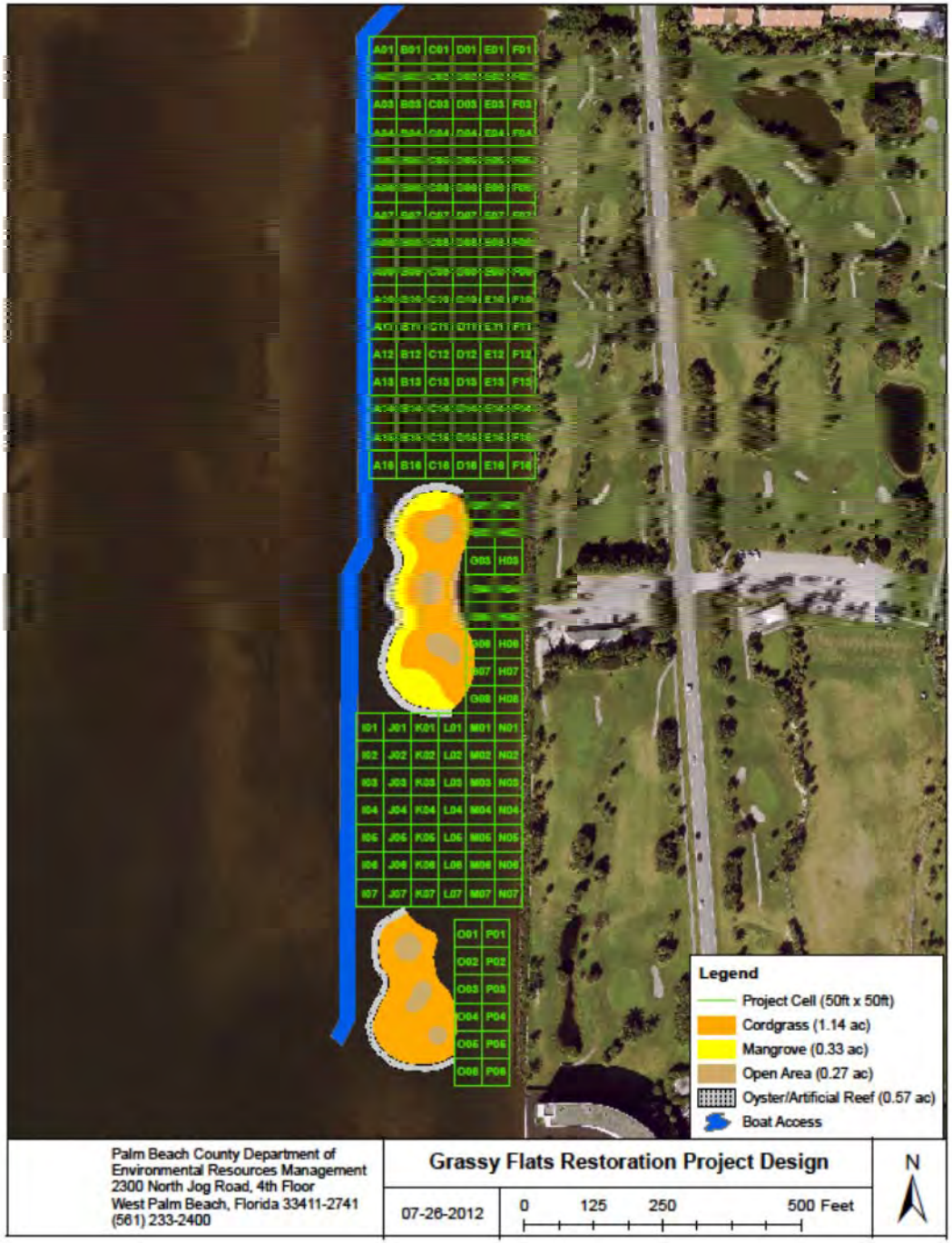
SMITH AERIAL PHOTOS 08-06-14



EASTMAN
AGGREGATE ENTERPRISES, LLC

Grassy Flats

SMITH AERIAL PHOTOS 09-08-14



- Create 10.5 acres of seagrass habitat by capping muck sediments
- 166 50’ x 50’ grids
- Broadcasted sand in 100 grids

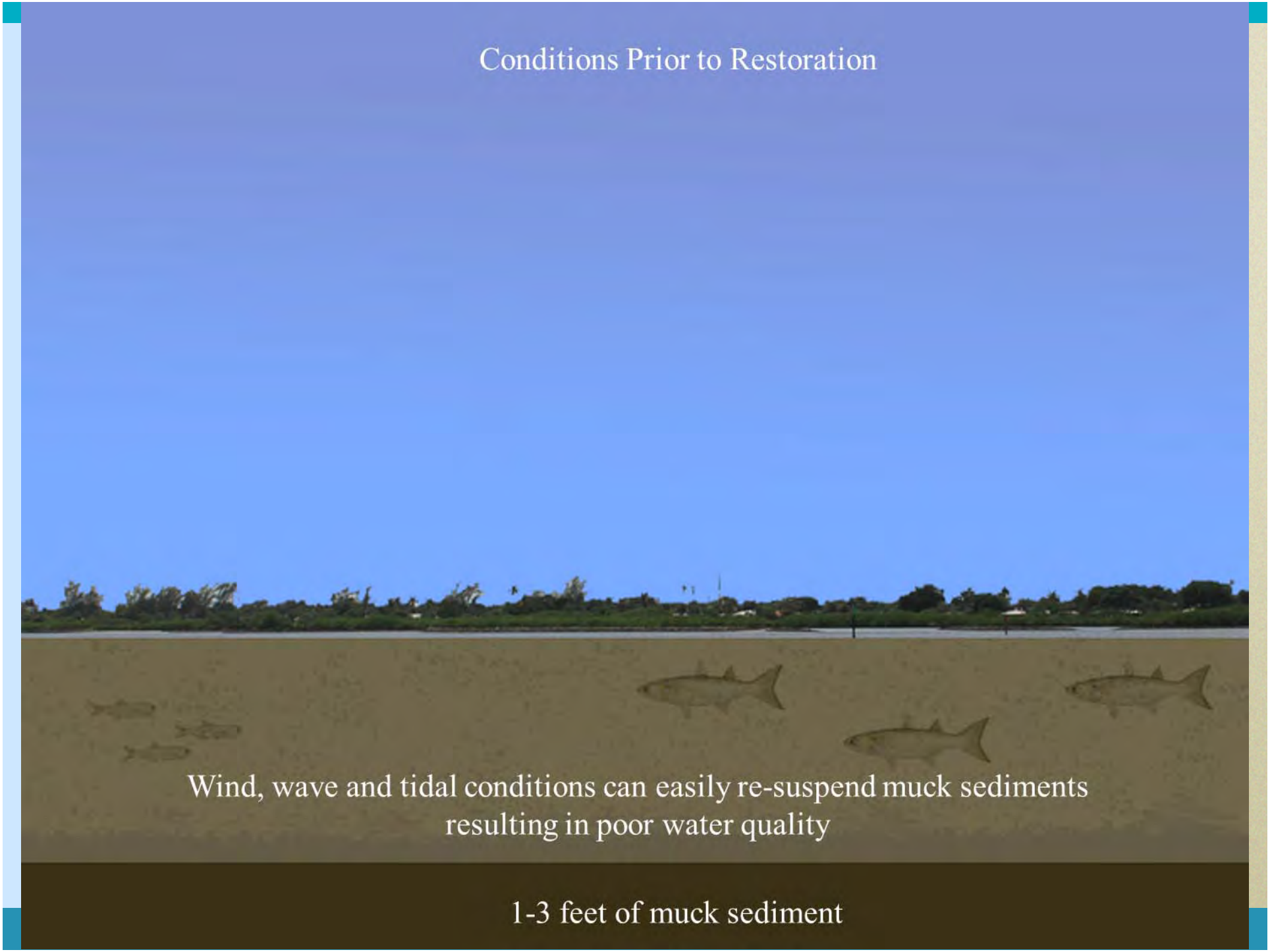
- 17 - 50’ conveyors
- 24 platform barges
- 1 sand broadcaster
- 2 generators
- 1 loader
- 2 long stick excavator
- 1 transport barge

EASTMAN
AGGREGATE ENTERPRISES, LLC

Grassy Flats

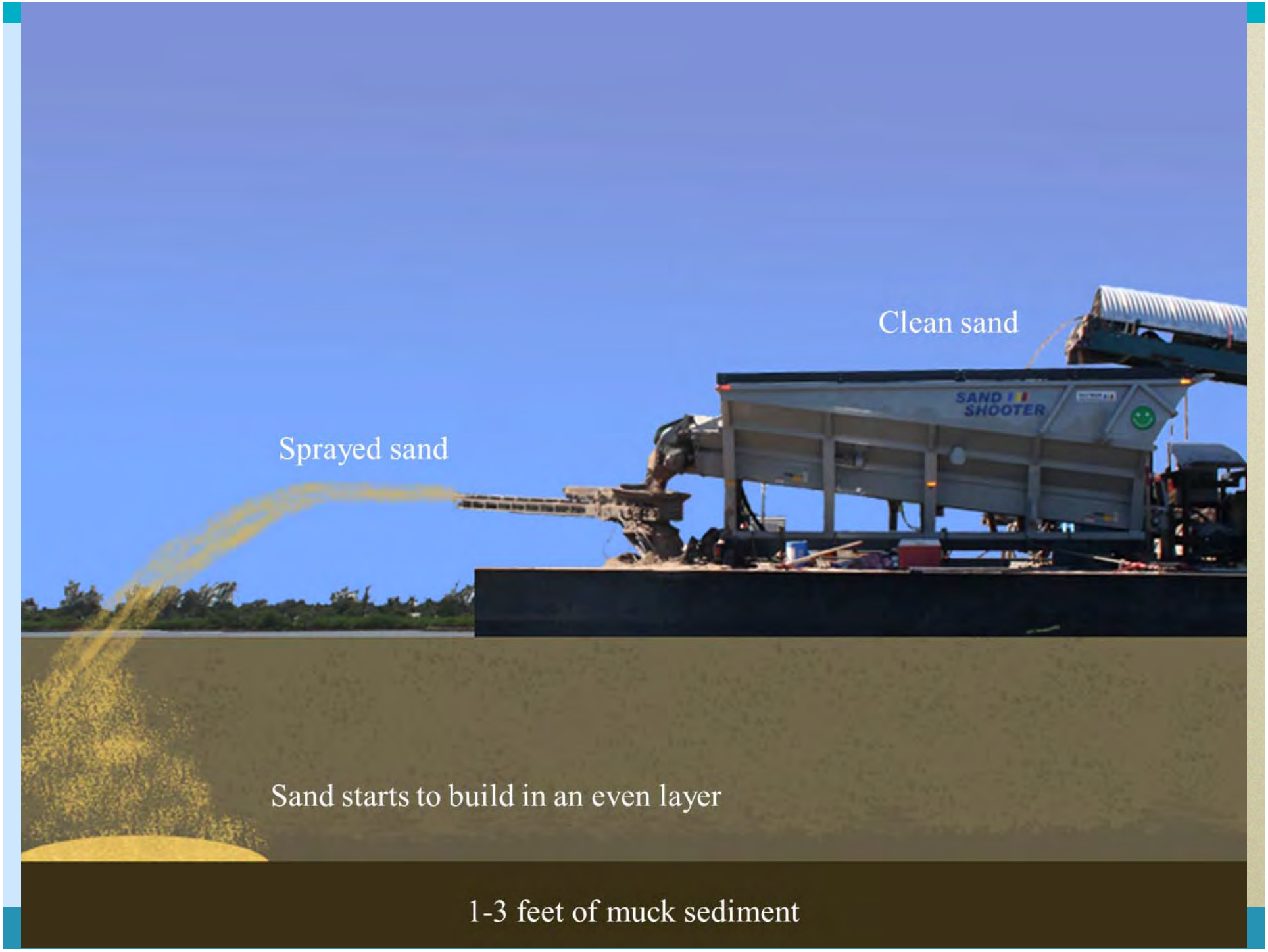
SMITH AERIAL PHOTOS 12-06-14

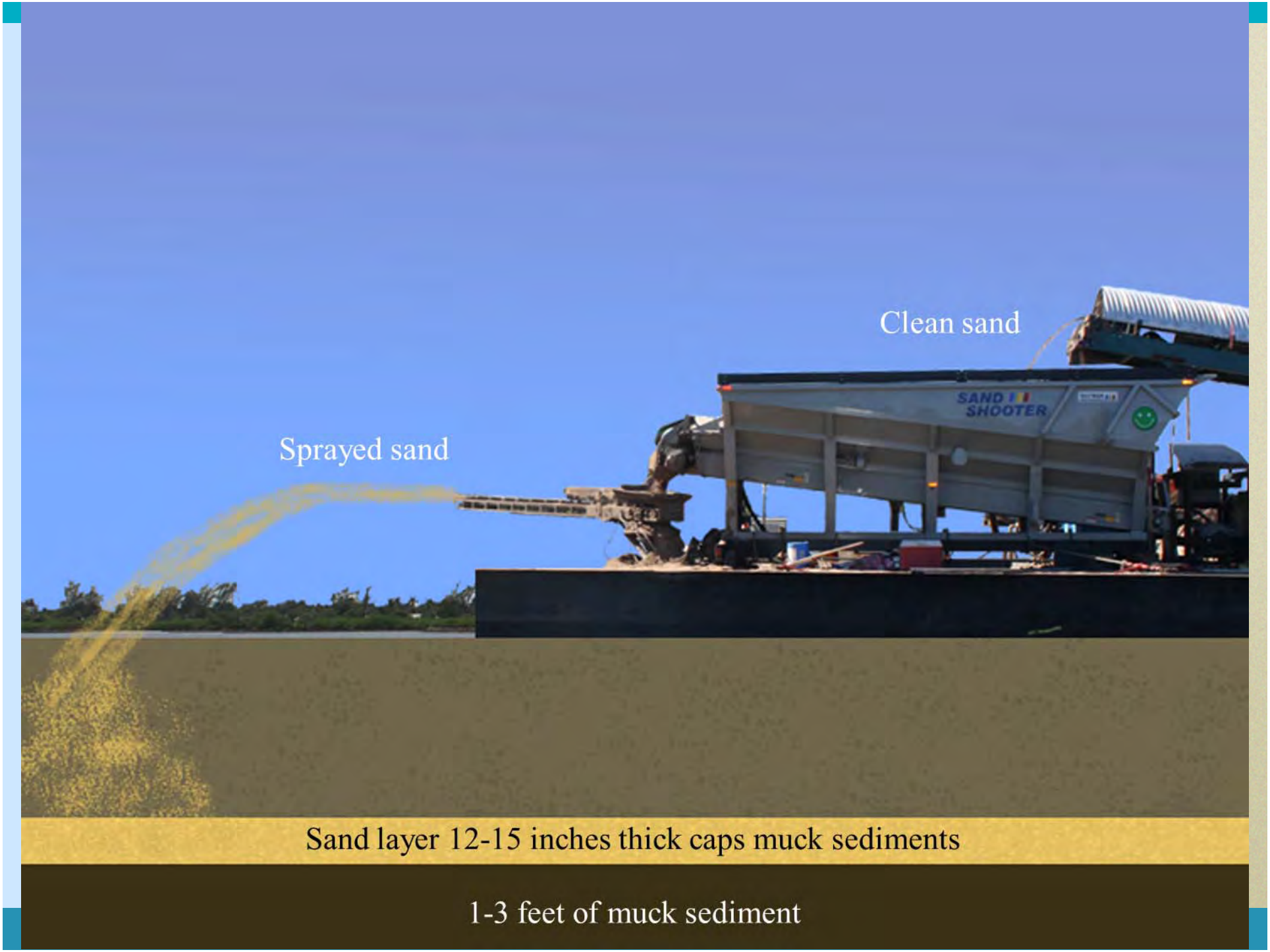
Muck Capping Process


Conditions Prior to Restoration
Wind, wave and tidal conditions can easily re-suspend muck sediments resulting in poor water quality
1-3 feet of muck sediment


SAND
SHOOTER
Water column with suspended sediments
1-3 feet of muck sediment


Clean sand
Sprayed sand
SAND SHOOTER
Spray sand over the water's surface to create an even layer of coverage over muck sediments
1-3 feet of muck sediment


Clean sand
SAND SHOOTER
Sprayed sand
Sand starts to build in an even layer
1-3 feet of muck sediment


Clean sand
Sprayed sand
SAND SHOOTER
Sand layer 12-15 inches thick caps muck sediments
1-3 feet of muck sediment

End of restoration

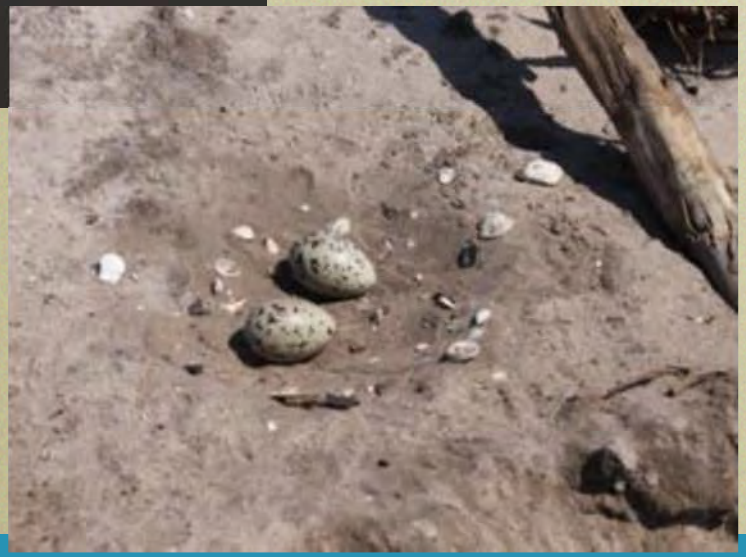
Water quality improves as muck layer is capped by sand and is no longer re-suspended

Sand layer 12-15 inches thick caps muck sediments

1-3 feet of muck sediment


Conditions after restoration
Fish Art © Diane Rome Peebles
Sand layer compacts muck and stabilizes sediments
Ideal for seagrass and shallow water habitat


AMERICAN OYSTERCATCHERS AT GRASSY FLATS

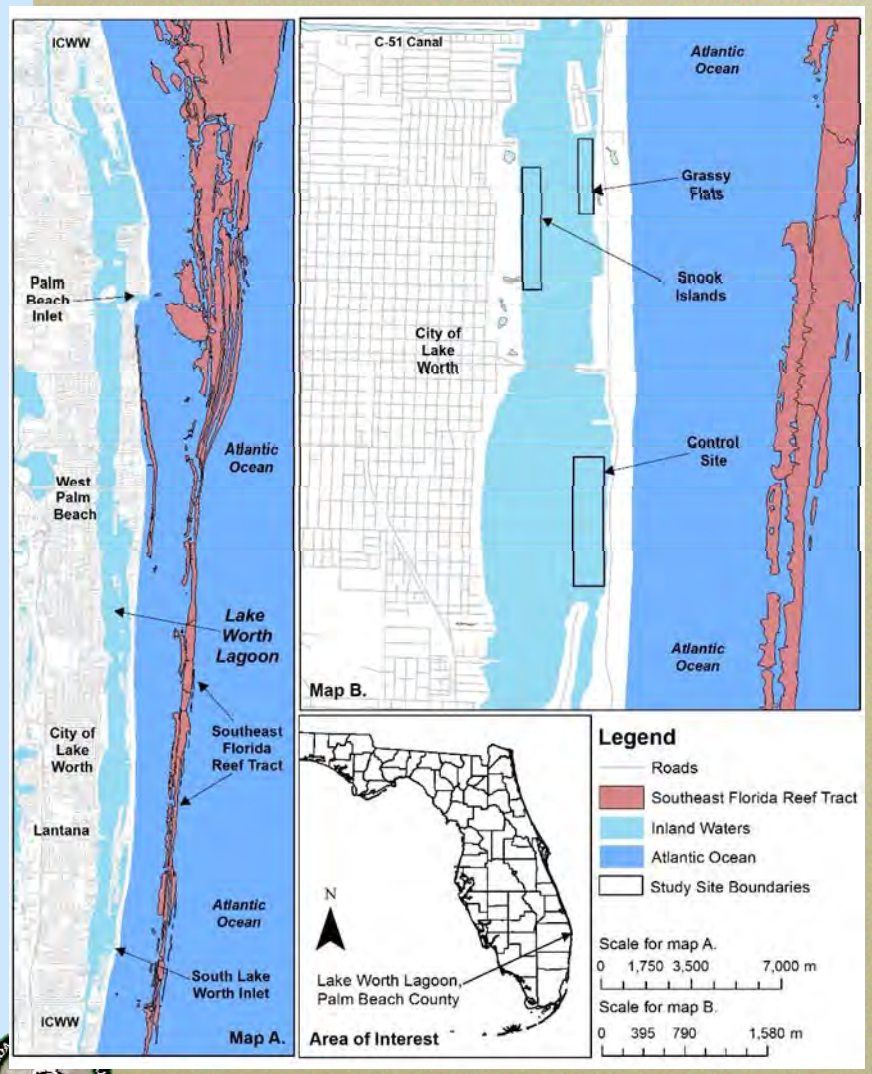


FWC and FAU Fisheries Monitoring in Lake Worth Lagoon

Kent Smith, Florida Fish and Wildlife Conservation Commission

Dr. Scott Markwith, Florida Atlantic University

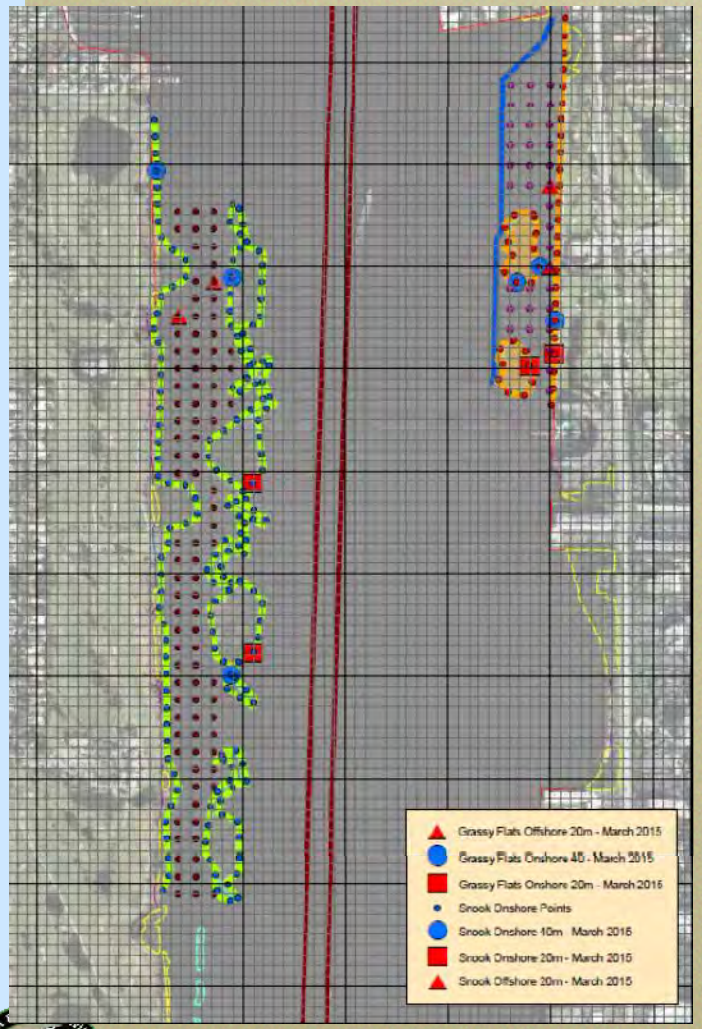
Goal



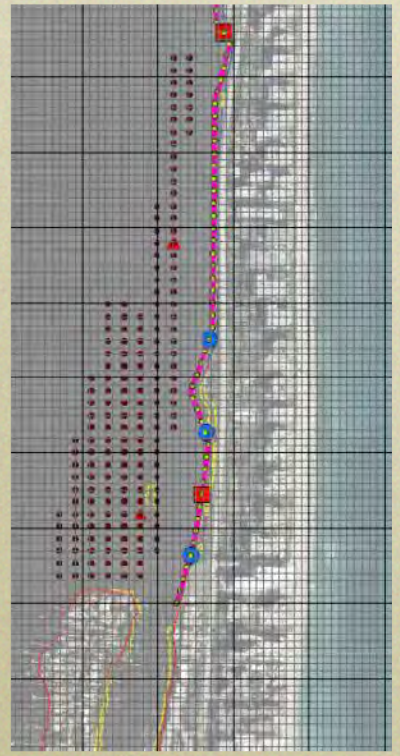
- Assess utilization Grassy Flats restoration project site by juvenile and adult fish species common in the Central Lake Worth Lagoon.

Methods

Methods

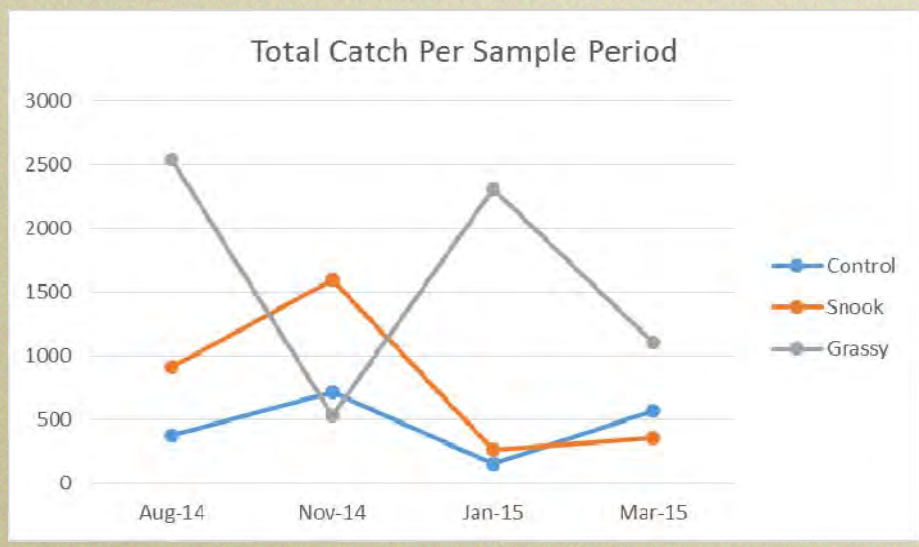


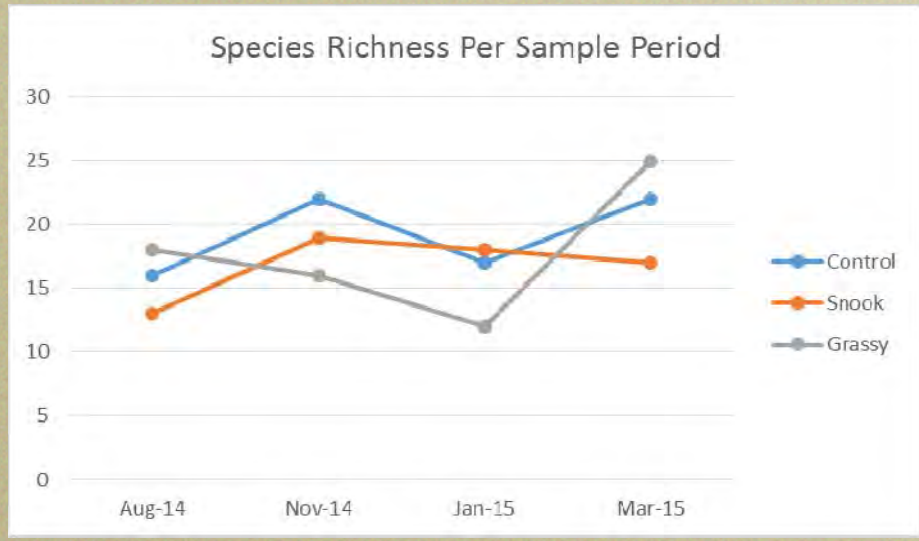
- Events in Aug `14, Nov `14, Jan `15, & Mar `15.
- 21.3 m seine and a 40 m scinc
- Inshore and offshore
- Sites: Grassy Flats, Snook Islands (established restoration site), Control Site



Preliminary 1st Year Results

- 11,463 fish over 4 events.
- 58 species of fish total.
  - Not including 3 blue crab species, and 1 shrimp.
- 96% of catch is composed of bay anchovy, menhaden, mojarras, scaled herring, and checkered puffers.





Preliminary 1st Year Results

Scientific Name	Common Name	Grassy Flats	Snook Islands	Control
Achirus lineatus	Lined Sole	7		1
Albula vulpes	Bonefish	3		2
Anchoa hepsetus	Broad-striped anchovy		1	
Anchoa mitchilli	Bay anchovy	4878	797	416
Archosargus probatocephalus	Sheepshead	1	3	7
Ariopsis felis	Hardhead sea catfish	8		
Bathygobius soporator	Frillfin goby		1	
Brevoortia spp.	Menhadens	380	1	310
Calamus spp.	Porgies	1		
Caranx latus	Horse-eye jack		2	7
Centropomus undecimalis	Common Snook	5	3	
Chilomycterus schoepfii	Striped burrfish	1	1	5
Citharichthys spilopterus	Bay Whiff	3	1	3
Ctenogobius boleosoma	Darter goby	3	6	5
Ctenogobius smaragdus	Emerald goby	3		
Cynoscion nebulosus	Spotted seatrout	2	1	
Dasyatis sabina	Atlantic Stingray	1	2	2
Diapterus auratus	Irish mojarra	439	331	96
Diodon holocanthus	Longspined porcupinefish		1	
Elops saurus	Ladyfish	1		
Eucinostomus gula	Jenny mojarra	134	971	333
Eucinostomus jonesii	Slender mojarra	2	9	8
Eucinostomus harengulus	Tidewater mojarra	50	469	179
Eucinostomus spp.	Mojarras	339	370	167
Eugerres plumieri	Striped mojarra	1		
Gastropsetta frontalis	Shrimp flounder		2	
Gerres cinereus	Yellow fin mojarra		4	
Gobionellus oceanicus	Highfin goby	7		1
Gobiosoma bosc	Naked Goby			1
Haemulon parra	Sailor's grunt		1	
Harengula jaguana	Scaled herring			54
Hippocampus erectus	Lined seahorse			
Jenkinsia lamprotaenia	Dwarf round herring	1		1
Lagodon rhomboides	Pinfish	1		2
Leiostomus xanthurus	Spot	7		7
Lobotes surinamensis	Tripletail			
Lutjanus griseus	Grey snapper	3		
Membras martinica	Rough silverside	1		
Menidia spp.	Silversides	10		1
Microgobius thalassinus	Green goby	24		
Micropogonias undulatus	Atlantic croaker	1		
Mugil cephalus	Flathead grey mullet	22		6
Mugil curema	White mullet	29		27
Mugil rubrioculus	Red eye mullet	2		
Oligoplites saurus	Letherjacket	3		3
Opisthonema oglinum	Atlantic thread herring	2		
Orthopristis chrysoptera	Pigfish			
Prionotus tribulus	Bighead searobin			
Sciaenops ocellatus	Red drum			1
Scorpaena plumieri	Spotted scorpionfish	1		
Selene vomer	Lookdown	1		
Sphoeroides nephelus	Southern puffer	3		2
Sphoeroides testudineus	Checkered pufferfish	111		49
Sphyraena barracuda	Great barracuda	4		9
Strongylura marina	Atlantic needlefish			
Strongylura notata	Redfin needlefish			4
Synodus foetens	Inshore lizardfish			4
Trachinotus falcatus	Permit			
	Total Catch	6495		3147
	Species Richness	40		35

Note:

- 3 Bonefish at Grassy (caught after construction)
- 5 Snook at Grassy (2 caught during construction and 3 after construction)