



**Atlantic Coastal Fish Habitat Partnership  
Steering Committee Meeting**

October 27<sup>th</sup>, 2014

Mystic, Connecticut

## Week at a glance for ACFHP/Habitat Committee:

Date	Time	Event	Location
Mon., Oct. 27 <sup>th</sup>	8 – 5:30	ACFHP SC Meeting	Mystic Hilton
	6:30 – 8	Welcome Reception	Mystic Aquarium
Tues., Oct. 28 <sup>th</sup>	8:30 – 4:30	Habitat Committee SC Meeting	Mystic Hilton
	6:30 – 9:30	Annual Dinner	Mystic Seaport
Wed., Oct. 29 <sup>th</sup>	8:30 – 12:30	Field Trip	Meet at hotel front lobby
Thurs., Oct. 30 <sup>th</sup>	2 – 4	HC & ACFHP reports to Policy Board	Mystic Hilton

### *Field Trip*

Meet at hotel front lobby at 8:30 am. Vans will depart at 8:40 am. Vargas site will be from 8:50 – 9:05. Wequetequock will be from 9:10 – 9:35. Rutan will be from 9:40 – 10:05. Lantern Hill is from 10:35 – 10:50. Hallville is from 11:05 – 11:40, and Hyde Pond is from 12:10 – 12:20. We will return to the hotel at 12:30.

**Atlantic Coastal Fish Habitat Partnership  
Steering Committee Meeting**

October 27, 2014

Hilton Mystic  
20 Coogan Blvd. Mystic, CT

**Agenda**

**Monday, October 27**

- |   |                 |
|---|-----------------|
| <p>❖ <b>Welcome, Introductions, &amp; Approval of Agenda</b></p> <ul style="list-style-type: none"><li>• Lisa Havel new ACFHP coordinator</li></ul>   | <p>8:00 AM</p>  |
| <p>❖ <b>Climate Change Impacts to Coastal Fish Habitats</b></p> <ul style="list-style-type: none"><li>• Chesapeake Bay (<i>D. Bilkovich</i>)</li><li>• Connecticut (<i>S. Gephard</i>)</li><li>• Florida (<i>K. Smith</i>)</li><li>• Estuarine Acidification (<i>M. Topolski</i>)</li></ul>   | <p>8:10</p>     |
| <p>❖ <b>Habitat Assessment Update</b> (<i>J. Devers/J. Clingerman</i>)</p> <ul style="list-style-type: none"><li>• Winter flounder assessment update (Downstream strategies-NALCC)</li><li>• Other species and geographic regions for further work</li></ul>  | <p>9:10</p>     |
| <p>❖ <b>Review of 2012-2016 Conservation Strategic Plan</b> (<i>G. Schuler</i>)</p>   | <p>9:40</p>     |
| <p>❖ <b>Break</b></p>   | <p>10:30</p>    |
| <p>❖ <b>Implementation Updates</b></p> <ul style="list-style-type: none"><li>• Coastal development outreach action item (<i>C. Powell</i>)</li><li>• Coastal threats outreach action item (<i>W. Laney</i>)</li><li>• Fish passage action items (<i>C. Patterson</i>)</li><li>• Restoration priorities action item (<i>D. McReynolds</i>)</li></ul> | <p>10:40</p>    |
| <p>❖ <b>Implementation Planning</b> (<i>C. Powell</i>)</p> <ul style="list-style-type: none"><li>• Evaluating the success of the 2014 I. Plan</li><li>• Finalize 2015-2016 I. Plan</li></ul>  | <p>11:00</p>    |
| <p>❖ <b>Lunch</b></p>   | <p>12:00 PM</p> |
| <p>❖ <b>Diadromous Fish Habitat Assessment</b> (<i>E. Martin</i>)</p>   | <p>1:00</p>     |
| <p>❖ <b>FWS-NFHP Funding</b> (<i>J. Devers</i>)</p> <ul style="list-style-type: none"><li>• Project list submitted to USFWS</li><li>• Project ranking and ACFHP/NFHP annual review priorities</li><li>• Pending RFP and timelines for 2015-16</li></ul>   | <p>1:30</p>     |
| <p>❖ <b>Federal Urban Waters Initiative Update</b> (<i>R. Muir</i>)</p> <ul style="list-style-type: none"><li>• Regional updates</li></ul>  | <p>2:30</p>     |
| <p>❖ <b>Break</b></p>   | <p>3:00</p>     |

❖ <b>NFWF River Herring Project Update</b> ( <i>C. Shumway</i> )	3:10
❖ <b>National Fish Habitat Partnership Update</b> ( <i>S. Perry</i> )	3:30
• Major Items from September Board Meeting	
• FHP meeting at Restore America’s Estuaries in DC (Nov. ‘14)	
❖ <b>Coastal FHPs Collaboration Update</b> ( <i>K. Smith</i> )	4:00
• Major 2014 accomplishments and expected 2015 outcomes	
❖ <b>Whitewater to Bluewater Initiative Update</b> ( <i>L. Gardner</i> )	4:10
• Accomplishments to date	
• Future collaboration	
❖ <b>International Federation of Fly Fishers Details</b> ( <i>G. Erikson</i> )	4:30
❖ <b>Consideration of IFFF ACFHP membership</b> ( <i>K. Smith</i> )	4:45
❖ <b>Next Steps on the Organizational Assessment</b> ( <i>P. Campfield</i> )	4:50
• Major Findings	
• Process for developing a Sustainable FHP plan	
• Identifying new MOU Partners	
❖ <b>ACFHP Operations</b> ( <i>P. Campfield</i> )	5:10
❖ <b>Other Business</b>	5:20
❖ <b>Adjourn</b>	5:30

# Modified Scope of Work: Development of Spatially-explicit Models and Decision Support Tools for Assessing and Prioritizing Conservation Actions for Aquatic Habitats of the North Atlantic LCC

August 25, 2014

## Submitted to:

North Atlantic Landscape Conservation Cooperative  
c/o Scot Williamson  
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NALCC Funds: \$250,000

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## ABSTRACT

### 1.1 Original statement of work summary

Downstream Strategies (DS) and its partners proposed to create and implement a flexible and dynamic aquatic assessment process with the North Atlantic Landscape Conservation Cooperative (NALCC) and its partners. The focus of the original statement of work was mainly to utilize an approach for aquatic modeling which was developed and widely accepted for inland streams in the Midwest. That basic framework was to be modified slightly to be able to apply the process to coastal and estuarine environments. The initial statement proposed a total of 10-20 models to be built for estuarine and inland regions, with all spatially-explicit data and model results populating a multi-criteria decision support tool (DST) that would integrate the components of each model developed.

The overall intent of this project was to assemble data and analyze conditions to understand fish distribution, habitat, and threats to aquatic species across the NALCC region, while engaging stakeholders throughout all stages of the project to ensure compatibility of results with the specific goals of the NALCC.

### 1.2 Modification Justification

Based on discussions with the DS project manager, the NALCC assessment project coordinator, and the assessment advisory group, it was determined a modification to the original scope of work was necessary. While the overall intent of the project will not change, after one-and-a-half years of work it became apparent that the original scope of work was no longer attainable given the effort necessary and the modified needs of the stakeholders. This modified scope of work will focus on discrete modeling efforts and ensure that frameworks are well-developed and the results are adequate, useful, and accepted by the stakeholders and user-groups.

Specifically, DS will continue to work through the winter flounder case study for Narragansett Bay. The focus for this will be to produce useful products for winter flounder managers, but also to create a framework that could be applied to other coastal or estuarine species. DS will also continue to develop the Chesapeake Bay brook trout model, supplementing the existing model with new scenarios, variables, data and/or tools and allowing for increased stakeholder review and feedback. Lastly, DS will pursue development of a diadromous species modeling framework and possibly utilizing river herring as the case study.

## 2. INTRODUCTION

### 2.1 Goal and objectives

Downstream Strategies, LLC (DS) has prepared this scope of work to outline the updated requirements, timeline, schedule, and budget for the development of spatially-explicit models and decision support tools for assessing and prioritizing conservation actions for aquatic habitats of the North Atlantic Landscape Conservation Cooperative (NALCC).

Our goal is to assemble data and analyze conditions to understand fish distribution, habitat, and threats to aquatic species, while developing novel frameworks to assess estuarine and diadromous fish species. DS will reach this goal by implementing, improving, and customizing our assessment methodology specific to NALCC needs. Additionally, DS will leverage our existing datasets and novel decision support tool composition with the wealth of scientific works available to enable NALCC stakeholders to prioritize conservation and management efforts for inland, estuarine, and coastal aquatic species.

Our objectives will continue to function around a stakeholder process to compile, analyze, and model data determined to be most useful to resource managers during conservation efforts, and to produce model frameworks for estuarine and diadromous species. The process will include a detailed review and augmentation of existing datasets, development of replicable pilot models, and delivery of a readily-accessible geospatial decision support tool that will empower NALCC stakeholders during evaluation of conservation approaches.

## 3. METHODOLOGY

### 3.1 Task 1. Inland model (Chesapeake Bay watershed brook trout model)

Most of the work necessary for the brook trout model has been completed, which followed the DS methodology developed for the USFWS. To meet NALCC needs, DS will slow the model development process and allow an increased role for the stakeholder groups, which will lead to additional related analyses.

Specifically, DS perform the following tasks in order to meet the above stated needs.

- Revisit predictor variables to ensure all relevant and available data is being utilized for model development.
- Develop climate change scenarios to evaluate brook trout vulnerability to future predicted climate scenarios.
- Explore the inclusion of invasive species effects on brook trout distribution.
- Explore the inclusion of other brook trout research into this tool.
- Host a workshop fall 2014 to provide a more extensive peer-review process among brook trout professionals.

### 3.2 Task 2. Estuarine case study (Narragansett Bay winter flounder model)

Winter Flounder and the Narragansett Bay were chosen as a case study model because of the relative data richness and availability. Despite the seemingly more abundant data, creating strong models for this localized area has proven to be more difficult than the models DS created for inland habitats. Despite the challenges that remain, DS along with the ACFHP and the winter flounder technical review team have made significant progress in developing a useful model for stakeholders.

Specifically, DS perform the following tasks in order to meet the above stated needs.

- Finalize the Narragansett Bay Winter Flounder model.
- Continue to work with ACFHP and other stakeholders to ensure that resulting products from this effort will be useful and replicable.
- Create a report that outlines the process that can be used to model other coastal and estuarine species in the future. This report will document the methodology, data needs requirements, constraints, and limitations, which would provide guidance for all future efforts, and highlight data gaps.

### 3.3 Task 3. Diadromous species case study

Similar to the winter flounder case study, DS will develop a case study for diadromous species. Presently, work is under way to evaluate data availability for creating a river herring model. The exact geography of the model will be determined by data availability and stakeholder needs.

Specifically, DS perform the following tasks in order to meet the above stated needs.

- Develop a case-study diadromous model—possibly River Herring—and provide a replicable diadromous species modeling framework.
- Create a report that outlines the process that can be used to model other diadromous species in the future. This report will document the methodology, data needs requirements, constraints, and limitations, which would provide guidance for all future efforts, and highlight data gaps.

### 3.4 Task 4. Decision support tool

The DS project team will utilize the spatially-explicit model results—for the model output listed above—to populate a multi-criteria decision support tool (DST), which will integrate the components of each habitat assessment. The DST will provide a highly functional and user-friendly mechanism for resource managers to visualize, rank, and manipulate inputs to prioritize areas for conservation action. The NALCC project will realize significant efficiencies from complementary works and tools that DS has already completed as part of existing contracts with Plains and Prairie Potholes Landscape Conservation Cooperative (PPPLCC) and the Midwest Fish Habitat Partnership. Since the original statement of work, funding for a web-based decision support tool has become available. DS will incorporate NALCC model results into the web-based tool, which will negate the need for a desktop tool.

The DST is a web-based mapping tool that provides three key functions: visualization, ranking support, and futuring:

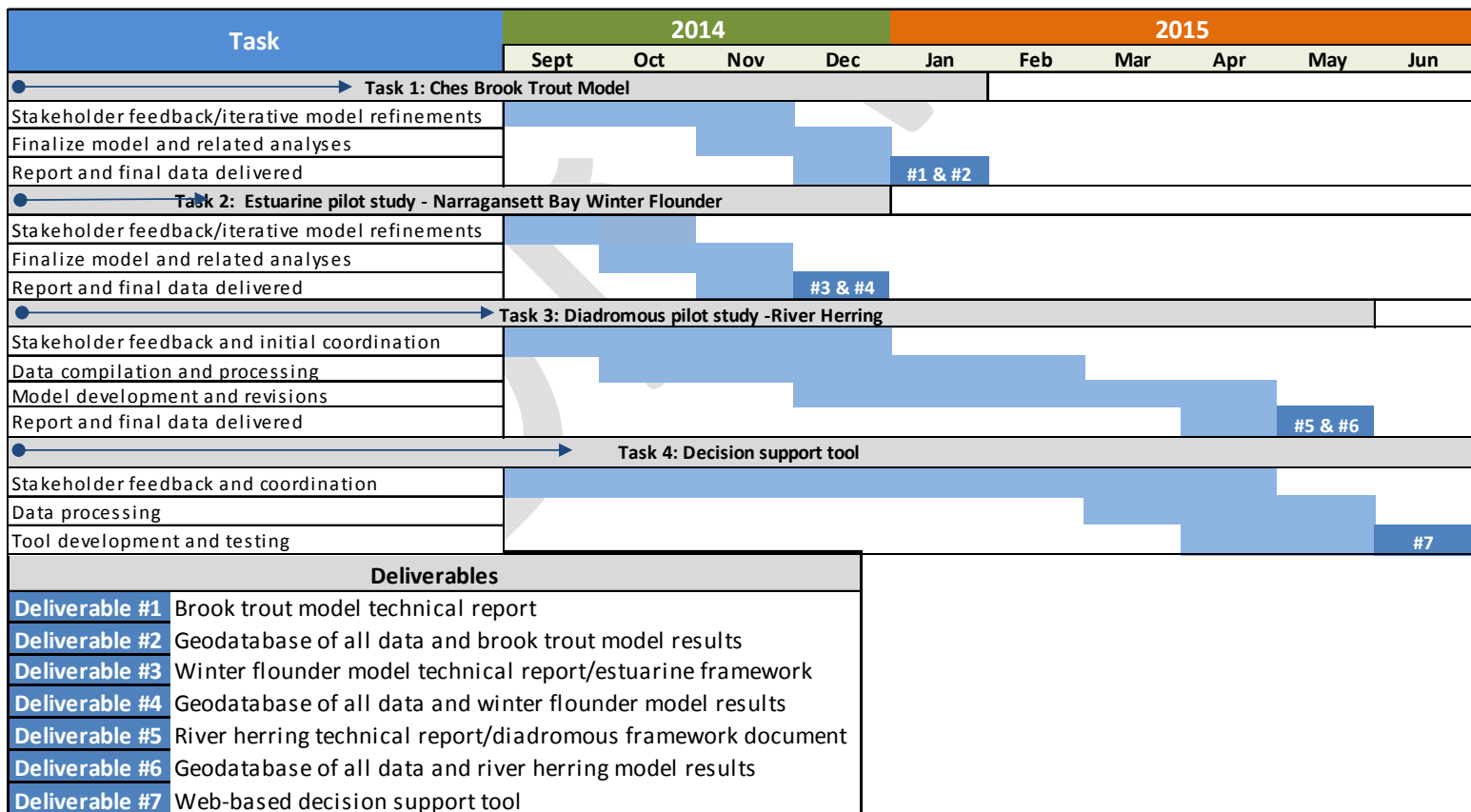
- **Visualization:** The visualization tool allows easy and intuitive exploration of all data compiled or created during modeling. This tool can be customized to zoom to and display results at varying spatial scales of interest to the NALCC.
- **Ranking support:** This tool ranks catchments within a selected HUC8 watershed (or other relevant region) based on user-defined criteria and weighting of catchment-level variables. These variables will include modeling results and predictor variables, and could also include additional socioeconomic or other variables of interest.
- **Futuring<sup>1</sup>:** The futuring tool predicts changes in the stress index for a selected catchment based on the user modifying existing stressor conditions. Additionally, changes in stressor indices within the selected catchment can then be propagated downstream with new stressor indices calculated for all downstream catchments.

As described above, the web tool has been designed for inland model results based on NHD+ framework. Similar tools will be developed when and where possible for non-inland models based on feedback from stakeholders and project budget.

## 4. TIMELINE

The original timeline for this project was two years and was scheduled to be completed by the end of 2014. Because of the issues outlined above, we present this new timeline to finish the remainder of the project tasks. The timeline below links to the following table which identifies key deliverables.

**Figure 1: Project timeline**



<sup>1</sup> Futuring functionality will only be available for inland species, in this case, the Brook Trout model.



## 5. BUDGET

The original budget for this project was \$250,000, with approximately \$114,000 of project funds remaining. Based on the revised statement of work, the new categorized budget for the remainder of the project is presented below in Table 1. Table 2 shows how the remaining budget will be allocated to the remaining tasks, rather than by work category.

**Table 1: Project budget**

Category	Description	New Budget
Personnel service	Total hours at established professional rates	\$65,480
Fringe benefits	Accounted in above item as function of rates for salaried professional staff	N/A*
Indirect overhead	5% of total (15% indirect expenses , 10% subcontractor expenses)	\$5,803
Supplies and materials	Hardware, software, printing, reproduction	10,000
Travel	Stakeholder meetings, conferences, presentations or other project related events	\$3,632
Contractual service	Decision support tool integration. Aquatic species, habitat, and GIS expertise support	\$29,600
<b>Total</b>		<b>\$114,515</b>

**Table 2: Project budget by task**

Task	Description	Budget
Task 1 – Inland model	Chesapeake Bay Brook Trout Model and related analyses	\$19,985
Task 2 – Estuarine case study	Narragansett Bay winter flounder model and framework development	\$12,695
Task 3 – Diadromous case study	Diadromous framework development and case study	\$26,465
Task 4 – Decision support tool	Development of the web-based decision support tool	\$55,370
<b>Total</b>		<b>\$114,515</b>

# ATLANTIC COASTAL FISH HABITAT PARTNERSHIP

CONSERVATION STRATEGIC PLAN

2012-2016



## For More Information

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Front cover photograph of alewives is courtesy of Jake Kritzer, Environmental Defense Fund.  
Back cover photograph of a flounder in submerged aquatic vegetation is courtesy of  
Chris Pickerell, Cornell Cooperative Extension.

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# Atlantic Coastal Fish Habitat Partnership

## *Conservation Strategic Plan 2012-2016*

### Executive Summary

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The Atlantic Coastal Fish Habitat Partnership (ACFHP) is an assembly of groups interested in the conservation of habitat for Atlantic coast diadromous, estuarine-dependent, and coastal fish species. It was formed in 2006 under the auspices of the National Fish Habitat Action Plan. Numerous human-derived threats are impacting Atlantic coastal drainages. ACFHP will work to address these threats with a broad coordinated approach, and to leverage resources from many agencies, organizations, and others to make a difference for fish habitat along the Atlantic coast.

The ACFHP Conservation Strategic Plan proposes key conservation strategies to confront pervasive threats to fish habitat along the Atlantic coast. While ACFHP is taking a collaborative coast-wide approach to addressing fish habitat needs, we realize that sub-regional prioritization may be needed to attend to more localized issues. Therefore, sub-regional Priority Habitats are identified in the Plan as well. These prioritizations were designed to focus the efforts of the Partnership in areas where ACFHP, together with our partners, can make a measurable difference for fish habitat.

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Photo of tautog by Paul Caruso, MA DMF

## Introduction

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*Healthy waterways and robust fish populations are vital to the well-being of our society. They provide clean water and sustainable fisheries. They also are vital for less tangible reasons, as anyone who has fished wild waters or canoed a tranquil stream can attest. Unfortunately, in many waters around the country, fish and the habitats on which they depend are in decline...A tremendous amount of work has been undertaken to protect, restore and enhance these aquatic habitats...Although significant gains have been made, they have not kept pace with impacts resulting from population growth and land-use changes...Given the diverse array of federal, state, tribal, local, and private jurisdictions, the need has never been greater for increased action and improved coordination of fisheries conservation measures across boundaries and jurisdictions. (AFWA, 2006)*

Developed by a coalition of anglers, conservationists, scientists, state and federal agencies, and industry leaders, and established in 2006, the National Fish Habitat Action Plan (NFHAP) seeks to protect, restore and enhance the nation's fish and aquatic communities through partnerships that foster fish habitat conservation and improve the quality of life for the American people (AFWA, 2006). NFHAP is currently composed of 17 Fish Habitat Partnerships, including the Atlantic Coastal Fish Habitat Partnership (ACFHP), and four 'candidate' Partnerships, across the United States.

From 2007-2009, the average annual value of all US marine fisheries landings was \$4 billion dollars (NMFS, 2010) and in 2006, saltwater anglers spent \$31 billion dollars (NMFS, 2008) however, the sustainability of these fisheries is at risk due to aquatic habitat damage and loss (NMFS, 2009). Many recreationally and commercially caught species use Atlantic coastal habitats for some portion of their life history.

Human use of aquatic habitats can potentially impact those habitats (NMFS, 2009) and 53% of our nation's total population currently lives in coastal counties (Woods & Poole and NOAA, 2010). ACFHP's boundary includes two of the five fastest growing coastal counties in the nation, from 1970-2011: Flagler and Osceola counties, located on the east coast of Florida (Woods & Poole and NOAA, 2010).

The issues that ACFHP will address are broad-based, and tackling them is important for the conservation of Atlantic coastal habitats. This Partnership is designed to bring diverse groups together to identify the causes of habitat declines, implement strategic corrective action, and measure and communicate progress. The end result will benefit not only a great number of species, from diadromous to marine, but a large population of human users as well.

## History

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In 2006, the Atlantic States Marine Fisheries Commission (ASMFC) was approached by the U.S. Fish and Wildlife Service (USFWS) to consider initiating a partnership under NFHAP. At that time, the existing NFHAP partners were primarily focused on freshwater habitats. ASMFC, with its existing infrastructure and administrative processes, seemed to be a logical organization to catalyze a partnership focused on coastal fish habitat. ASMFC agreed and subsequently charged its Habitat Committee with developing a coastal fish habitat partnership.

The Habitat Committee's charge led to a series of conference calls in the summer of 2006 between the Habitat Committee and NFHAP staff. In the fall, two letters indicating the ASMFC's interest and involvement with the partnership development process, and outlining efforts to date, were submitted to the NFHAP Board. In 2007, the NFHAP Board granted ACFHP 'candidate partnership' status.

Also in the fall of 2006, letters were sent to potential partners identified by the Habitat Committee, informing them of the partnership development and requesting their involvement.

### Mission

*To accelerate the conservation, protection, restoration, and enhancement of habitat for native Atlantic coastal, estuarine-dependent, and diadromous fishes through partnerships between federal, tribal, state, local, and other entities.*

In the winter of 2007, a series of informational sessions were held along the Atlantic coast, with the aim of gathering potential ACFHP partners and disseminating information on NFHAP and ACFHP activities to date. These 'Listening Sessions' were held in Florida, South Carolina, Virginia, New Jersey, and New Hampshire.

In May 2007, a coast-wide workshop was held in Baltimore, Maryland, to engage stakeholders and partners in developing and implementing ACFHP, including establishing its focus and administrative structure, as well as discussing strategies for addressing next steps. Approximately 80 participants attended, including representatives from state, federal, and non-governmental organizations. Among the many outcomes, preliminary target species and habitats were determined, and the major committees of the Partnership were created: the Interim Steering Committee, the Science & Data Working Group, and the Communications Working Group.

### Vision

*Healthy, thriving habitats of sufficient quantity and quality to support all life stages of Atlantic coastal, estuarine-dependent, and diadromous fishes*

In 2008, the ACFHP Charter and Bylaws were approved by the Interim Steering Committee and an ACFHP Coordinator was hired to assume coordination of the Partnership's activities. In March 2009, the ACFHP Memorandum of Understanding (MOU) took effect, formalizing the Partnership. In October 2009, ACFHP was approved by the National Fish Habitat Board as an official Fish Habitat Partnership under NFHAP.

As of September 2011, ACFHP has supported four on-the-ground fish habitat conservation projects, one in Maine, one in New York and two in South Carolina.



## Governance and Organization

The ACFHP MOU (available on the ACFHP web page at: [www.atlanticfishhabitat.org/2008-ACFHP-MOU.pdf](http://www.atlanticfishhabitat.org/2008-ACFHP-MOU.pdf)) is made up of 30 signatories including 16 states responsible for managing Atlantic coastal river drainage systems (see sidebar to the right for a complete list of ACFHP Partners). The Partnership hopes to bring in additional organizations committed to conserving fish habitat along the Atlantic coast in the future.

The Steering Committee is the decision-making body of ACFHP and has oversight responsibility for all ACFHP activities. It is self-directed, volunteer, and has no authority beyond that of its individual members. Each partner organization is allowed one voting member on the Steering Committee, with a cap of 25 voting members.

Working groups are organized by the Steering Committee, and members are appointed by Steering Committee members or they are volunteers. Working group chairs are not required to be current Steering Committee members. This is to facilitate as much involvement from the Partnership as possible and to share leadership opportunities. Established working groups include the Science and Data Working Group and the Communications Working Group. The Steering Committee also creates ad-hoc working groups and subcommittees in order to address issues identified by the Partnership as they arise.

The ACFHP Charter and By-Laws define the overall function, organization, and membership of the Steering Committee and working groups. This document includes guidance for meeting management and a decision structure (available on the ACFHP web page at: [www.atlanticfishhabitat.org/ACFHP-Charter-and-Bylaws.pdf](http://www.atlanticfishhabitat.org/ACFHP-Charter-and-Bylaws.pdf)).

### PARTNERS

*Albemarle-Pamlico National Estuary Program*  
*American Littoral Society*  
*American Rivers*  
*Atlantic States Marine Fisheries Commission*  
*Chesapeake Bay Foundation*  
*Connecticut Dept of Energy & Environmental Protection*  
*Delaware Dept of Natural Resources & Environmental Control*  
*Environmental Defense Fund*  
*Florida Fish & Wildlife Conservation Commission*  
*Georgia Dept of Natural Resources*  
*Houlton Band of Maliseet Indians*  
*Maine Dept of Marine Resources*  
*Maryland Dept of Natural Resources*  
*Massachusetts Division of Marine Fisheries*  
*National Oceanic and Atmospheric Administration*  
*New Hampshire Fish & Game Dept*  
*New Jersey Division of Fish & Wildlife*  
*New York State Dept of Environmental Conservation*  
*North Carolina Dept of Environment & Natural Resources*  
*Oyster Recovery Partnership*  
*Partnership for the Delaware Estuary*  
*Pennsylvania Fish & Boat Commission*  
*Rhode Island Division of Fish & Wildlife*  
*South Carolina Dept of Natural Resources*  
*The Nature Conservancy*  
*United States Fish and Wildlife Service*  
*United States Geological Survey*  
*Vermont Fish and Wildlife Department*  
*Virginia Marine Resources Commission*  
*Wells National Estuarine Research Reserve*

## Science and Data

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The Partnership has completed two science projects to date: A Species-Habitat Matrix ([ACFHP, 2009](#)) and Assessment of Existing Information on Atlantic Coastal Habitats (hereinafter referred to as ‘the Assessment’) ([Nelson et al., 2010](#)). These projects were completed to inform or verify the development of conservation objectives and priorities. The Partnership expects to further develop, analyze, or refine the outcomes of these projects primarily through the efforts of its Science and Data Working Group, as defined in [Section C](#) of this report.

The Species-Habitat Matrix is an assessment of the relative importance of specific estuarine and freshwater habitat types in terms of their value to the major life stages of over 100 fish species. The development, review, and analysis of the Species-Habitat Matrix was spearheaded by members of the ACFHP Science and Data Working Group, however it involved contributions from over 50 people, coast-wide to which scientists from state, federal, non-governmental, and academic entities contributed. It represents a coast-wide cooperative effort. The Species-Habitat Matrix Project Summary Report is available on the ACFHP web page at: [www.atlanticfishhabitat.org/Species Habitat Matrix Summary Report.pdf](http://www.atlanticfishhabitat.org/Species_Habitat_Matrix_Summary_Report.pdf)

The Assessment was conducted through a contract supervised by NOAA’s National Ocean Service. It is a database of over 500 documents, datasets, and information portals on Atlantic coastal fish species and habitats which were collected and analyzed for indicator, threat, and action information. A web-based queryable database allowing resource managers access to this information is available at <http://www8.nos.noaa.gov/bhv/spatbibindex.html>. Results are summarized in a final report available at <http://ccma.nos.noaa.gov/publications/nccostechmemo103.pdf>

## Communications and Outreach

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The Partnership has developed fact sheets, posters, and a website ([www.atlanticfishhabitat.org](http://www.atlanticfishhabitat.org)) in order to engage its partners and the broader fish habitat conservation community. The Partnership plans to continue its communications and outreach program, primarily through its Communications and Outreach Working Group, as defined in [Section D](#) of this report.

## Finances

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In 2007, the Partnership received \$10,000, through a cooperative agreement with USFWS, for use towards communications related activities and materials. In 2008, the Partnership was awarded a grant under the Multistate Conservation Grant Program which has provided funding for its development and operations. In FY10 \$70,000 in USFWS-NFHAP funding was directed towards ACFHP on-the-ground projects. And in FY11, \$74,603 was directed towards ACFHP on-the-ground projects. The Partnership plans to continue its financial capabilities primarily through its Finance Subcommittee, as defined in [Section E](#) of this report.

## Geographic Profile

### Partnership Boundary

#### Geographic Range

Maine to the Florida Keys

#### Inland Extent

Headwaters of coastal rivers

#### Marine Extent

Offshore to the edge of the continental shelf

### Subregion Boundaries

ACFHP utilizes subregional boundaries for the purposes of habitat prioritization. Subregions represent ecologically distinct units and were derived from Marine Ecoregions of the World (as established by the World Wildlife Fund and The Nature Conservancy). These include the Gulf of Maine, Virginian, Carolinian, and Floridian ecoregions which correspond to ACFHP subregions North Atlantic, Mid-Atlantic, South Atlantic, and South Florida, respectively. While these subregions are unique to ACFHP, the Partnership will work collaboratively with the appropriate partners to ensure optimal success.

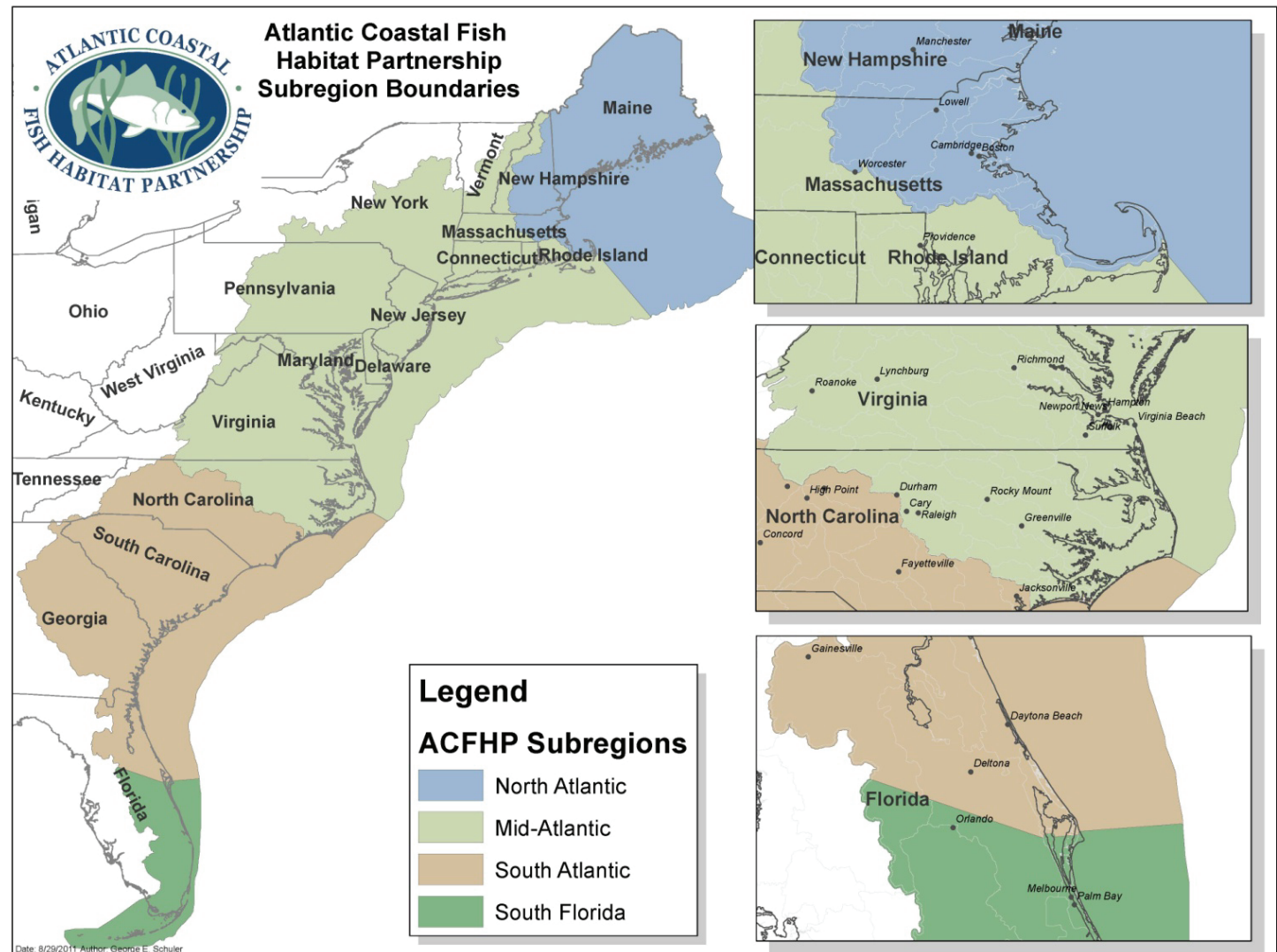


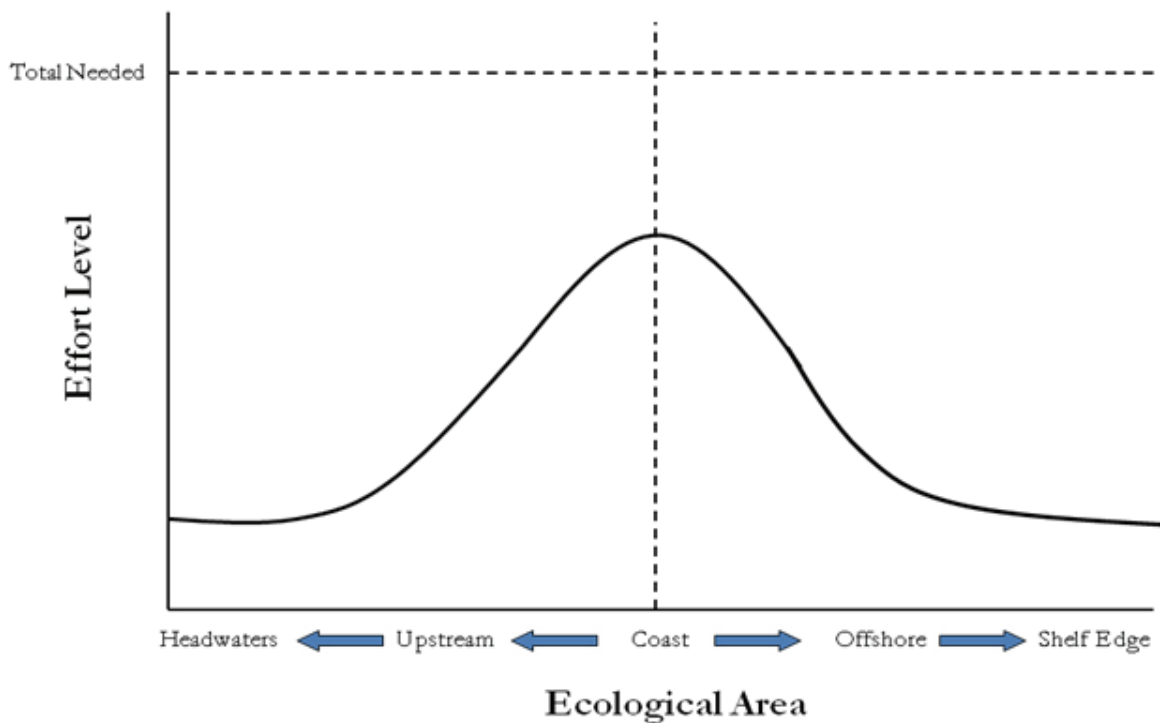
Figure 1. Atlantic Coastal Fish Habitat Partnership and Subregion Boundaries

## Effort Profile

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With its mission statement in mind, ACFHP plans to work throughout the region outlined in **Figure 1**. However, ACFHP will place less emphasis on upstream headwaters and offshore marine ecosystems and more on coastal/estuarine environments.

ACFHP will seek to ensure contiguous watershed coverage with adjacent fish habitat partnerships while seeking to minimize overlap. As ACFHP develops on-the-ground projects, it will work with these partnerships to identify where cooperation should occur and to identify new avenues for collaboration. This will ensure that ACFHP is not working in competition, but in concert with existing partnerships towards fish habitat conservation. **Figure 2** demonstrates the relative effort that will be dedicated to Atlantic coastal areas on a continuum from white water to blue water.



**Figure 2.** ACFHP Relative Effort Level in Relation to Distance from the Coast

## Purpose

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The ACFHP Conservation Strategic Plan is a broad coast-wide strategy for determining and addressing the threats affecting habitats important for all life stages of Atlantic coast diadromous, estuarine-dependent, and coastal species. The Plan is designed to address actions that the Partnership can take to improve the condition of Atlantic coast fish habitat over the next five years, with re-examination after three years of implementation.

The Plan was developed by the ACFHP Steering Committee and others and was reviewed by members of the ACFHP Science and Data Working Group. It will be provided to the Partnership-At-Large with a request for comment that will be considered during the development of future ACFHP Conservation Strategic Plans.

Implementation Plans will include steps towards achieving action items identified in this Conservation Strategic Plan and will be developed every one to two years.

Subregional action plans, with specific, time-bound, quantifiable action items will be considered in the future. Suggestions will be solicited from the ACFHP Science and Data Working Group and other regional experts.



Aerial photo of coral reef on Sand Key, FL by Craig Quirolo, Reef Relief/Marine Photobank

## Habitats

The full list of ACFHP Habitats (**Table 1**) is based on the list determined by members of the ACFHP Science Data Working Group for consideration in the ACFHP Species-Habitat Matrix. This list should not be considered a comprehensive index of all habitats along the Atlantic coast; however, these habitats were determined to best represent the range of habitats supporting Atlantic coastal, estuarine-dependent, and diadromous fishes at a coast-wide level.

**Table 1** illustrates the 25 habitat types nested within seven habitat categories (see [Appendix A. Habitat Characterizations](#) for more detailed descriptions). **Table 1** has a hierarchical design where the habitat **types** are listed under a particular habitat **category**. The habitat types are examples of particular habitat characterizations that fall within a broader habitat category.

**Table 1. ACFHP Habitats by Category and Type**

Habitat Category	Habitat Type
Marine and Estuarine Shellfish Beds	Oyster aggregations/reef
	Scallop beds
	Hard clam beds
	Shell accumulations
Coral and Live/Hard Bottom	Coral reefs
	Patch reef, soft corals, or anemones
	Live rock
Macroalgae	<i>Fucus</i> spp., <i>Laminaria</i> spp., <i>Ulva lactuca</i>
Submerged Aquatic Vegetation	Tidal fresh & oligohaline plant species
	Mesohaline & polyhaline plant species
Tidal Vegetation	Estuarine emergent marsh
	Tidal freshwater marsh
	Mangrove
Unvegetated Coastal Bottom	Loose fine bottom
	Loose coarse bottom
	Firm hard bottom
	Structured sand habitat
Riverine Bottom	Higher gradient headwater tributaries
	Lower gradient tributaries
	Higher gradient large mainstem river
	Lower gradient large mainstem river
	Low order coastal streams
	Non-tidal freshwater mussel beds
	Coastal headwater pond
	Non-tidal freshwater marsh

## Subregional Priority Habitats

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ACFHP has selected three priority habitats within each subregion using the results of the Species-Habitat Matrix as a guide, and professional judgment to factor in other considerations (such as habitat rarity or high potential for conservation). The matrix was used as a tool in developing the list of Subregional Priority Habitats, but it was not the sole factor in selecting Subregional Priority Habitats. In some cases, ACFHP specifically selected other habitats because although a habitat that ranked high in the Matrix results may be important and used by many species, it may not necessarily be threatened or in need of protection. Summary results of the Species-Habitat Matrix can be found in [Appendix B](#).

ACFHP will support efforts to accelerate the conservation, protection, restoration, and enhancement of all habitats listed in Table 1. The Subregional Priority Habitats will not be the only habitats to which ACFHP will target its strategic actions. However, given limited resources, projects addressing the Priority Habitats appropriate for the given subregion will receive heightened consideration during the next five years (2012-2016).

### ACFHP Priority Habitats by Subregion

#### *North Atlantic*

- Riverine Bottom
- Submerged Aquatic Vegetation (meso- to polyhaline)
- Marine and Estuarine Shellfish Beds

#### *South Atlantic*

- Marine and Estuarine Shellfish Beds
- Riverine Bottom
- Tidal Vegetation

#### *Mid-Atlantic*

- Riverine Bottom
- Submerged Aquatic Vegetation
- Tidal Vegetation

#### *South Florida*

- Coral and live/hardbottom
- Submerged Aquatic Vegetation (meso- to polyhaline)
- Mangrove

In some instances a habitat **category** was identified as a Subregional Priority Habitat, whereas in other cases a specific habitat **type**, falling within a habitat category, was selected as a Subregional Priority Habitat. The three priority habitats selected for each subregion are not ranked or prioritized within the subregion.

## Priority Threats

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Habitat degradation and persistent declines in Atlantic slope coastal drainage systems, which provide critical habitats for diadromous, estuarine-dependent, and coastal fish species, must be reversed. **Threats that impact important spawning and nursery habitats are of particular concern.** The Partnership has identified Priority Threats that are currently impacting habitats along the Atlantic coast. ACFHP Priority Threats are verified by the results of the Assessment. A table which relates the results of this project with ACFHP Priority Threats identified in this Plan can be found in [Appendix C](#). The Assessment Technical Memorandum NOS NCCOS 103 is available at the following location: <http://ccma.nos.noaa.gov/publications/nccostechmemo103.pdf>.

*List of Priority Threats Impacting ACFHP Habitats at a Coast-wide Scale:*

- **Obstructions to Fish Movement/Habitat Connectivity**
  - **Includes:** Dams; hydropower facilities; road crossings and culverts; thermal barriers; reduced stream flow and low flow areas caused by diversions, withdrawals, legacy effects, and reduced base flow; jetties and breakwater; tidal turbines; and beaver dams or debris jams.
  - **Importance:** This threat is a concern in estuaries as well as riverine and tidal systems, as hydrokinetic energy generation is further explored. Dams, culverts, sedimentation and other impediments to fish movement can impact and limit the survivability of fish populations and lead to local extinctions in rivers, streams, and estuaries along the Atlantic coast. Obstructions to fish movement can adversely affect populations of diadromous species as well as important estuarine fish populations and life history stages.



- **Dredging and Coastal Maintenance**
  - **Includes:** Dredging; blasting; port expansion and maintenance; dredge spoil disposal; and beach maintenance (including beach fill, mining of sand, bulldozing, sand bypass, sand bags, and shoreline stabilization).
  - **Importance:** Human activities around marinas, ports, and residential docks can have major impacts on fish habitat. The direct impacts of this threat are the removal, degradation, or smothering of habitat. Indirect impacts involve the blockage of sunlight or are linked with other threats noted in this section. This threat is serious and persistent given its on-going and reoccurring nature. Once



habitat is allowed to re-establish in impacted areas, it is impacted again. The areas of greatest impact are nursery and spawning areas; protection of these areas is vitally important to ensure sustainability of critical life stages of many species.

- **Water Quality Degradation and Eutrophication**

- **Includes:** Surface water and groundwater quality and quantity; point/non-point source pollution; nutrient loading; atmospheric deposition; and dissolved oxygen concerns.
- **Importance:** This threat can occur in all aquatic habitats. Water quality decline and eutrophication are among the most common causes of aquatic habitat degradation. For example, nutrients promoting excessive algal blooms, such as nitrogen and phosphorus, can decrease oxygen levels in the water column and cause die off of fish and other marine species. This threat is one of the most pervasive and difficult to target and reverse. Often this threat must be addressed in order for habitat restoration to be successful over the long-term.

- **Consumptive Water Withdrawal**

- **Includes:** Withdrawals for industrial, agricultural, residential, and recreational uses, such as irrigation, desalinization, and energy generation; flow concerns; and freshwater withdrawal in the salt front.
- **Importance:** Consumptive water withdrawal can lead to inadequate abundance of water quantity or flow for fish and their habitats, degraded water quality, and alter the location of the interface and salt water wedges. This is a particularly challenging threat to address because of the inherent difficulties of balancing conflicting water needs of fish and humans from a particular water body. Impacts to habitat can result from groundwater as well as surface water removals. These competing needs must be considered when decisions are made on consumptive water withdrawals.



Photo of dredge sediment dumping, Boynton Beach, FL by Steve Spring, Palm Beach County Reef Rescue/Marine Photobank

- **Sedimentation**
  - **Includes:** Suspended and deposited solids; construction of impervious surfaces in the watershed (e.g. parking lots, roads, buildings); point and non-point source runoff; and development of shorelines and riparian areas.
  - **Importance:** Sedimentation is a particularly important threat to consider when dealing with riverine or estuarine habitats. Watersheds with a high percentage of impervious surfaces and erosion often have sedimentation impacts on aquatic habitats. Sediment runoff can smother fish eggs, impact physiological and behavioral responses in fish, vegetation, shellfish beds, submerged aquatic vegetation (SAV), dislodge plants, decrease light penetration, and increase susceptibility to disease.
  
- **Vessel Operation Impacts**
  - **Includes:** Recreational and commercial vessel operation; prop washing; anchoring; grounding; and discharge.
  - **Importance:** Vessel impacts are most prevalent in shallow water estuarine and marine habitats. Vessel operation can lead to propeller scarring, shoreline erosion due to wakes and grounding, and shading from boats and associated docks.
  
- **Contamination of Water (ground and surface) and Sediments**
  - **Includes:** Heavy metal accumulation; acid precipitation; pesticides and herbicides; petrochemical spills; and pharmaceuticals.
  - **Importance:** Contamination can degrade the health of both habitats and species, especially for elements that easily bioaccumulate in tissues and sediments. Identifying the sources of and avenues to address contamination issues can be particularly challenging. An emerging concern involves the prevalence of pharmaceuticals in water supplies that affect humans and fish alike. Contamination is a major concern because it can cause lethal and sub-lethal effects, disease, locomotor impairment, abnormal mating and other behaviors, incomplete or abnormal development, inadequate nutrient balance, susceptibility to parasites, and other problems.
  
- **Invasive Species**
  - **Includes:** Introduction of invasive species, including plants, invertebrates, and vertebrates, and lack of invasive species eradication.
  - **Importance:** Demonstrated many times over, invasive species can have a major impact on fish and their habitats. Native habitat types may be outcompeted, smothered, or displaced by invasive plants (such as common reed *Phragmites australis* or water lettuce *Pistia stratiotes*) and animals (such as zebra mussel *Dreissena polymorpha*, mitten crab *Eriocheir sinensis*, and pink barnacle *Tetraclita rubescens*). The best way to address this threat is to try to prevent introductions through public education and encouraging the use of best management practices (BMPs) (e.g. in vessel transport). Once an invasive species is introduced, it is difficult or impossible to eradicate.

- **Climate Change**

- **Includes:** Sea level rise; ocean acidification; increased water temperatures; increased storm frequency and severity; habitat expansion, contraction, and fragmentation due to climate change; species geographic shifts, and eutrophication.
- **Importance:** The full impacts and timeline of impacts are still being debated. However, climate change is likely to influence all habitats and species along the Atlantic coast in some way. Climate change has the potential to strongly influence how we plan and execute habitat protection and restoration projects. The ways in which climate change influences projects will likely evolve over time as we learn more about how the atmosphere and oceans are changing.

- **Other Threats**

- Other threats to Atlantic coast fish habitat were identified. However, those threats were determined not to be as high of a priority for ACFHP, or were of a nature that could not be effectively addressed by ACFHP. Those threats included: 1) **fishing gear impacts** (including hydraulic clamming, bottom-tending gears, and recreational and commercial fishing impacts on habitat); 2) **energy development** (including tidal, wave, wind, and hydropower); 3) **aquaculture** (including pathogen transfer, entanglement, nutrient issues, and genetic sustainability); 4) **inadequate implementation of existing regulatory systems** (including permitting, zoning, land-use planning, sewage treatment, floodplain management, and fishery management); and 5) **physical impacts to fish** (including entrainment, impingement, propeller strikes, prop wash, turbines).

All of these threats can be cumulative, which can possibly cause irreversible changes to the ecosystem.



Photo of invasive lionfish: Chip Baumberger/Marine Photobank

## Goals

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ACFHP goals are modeled after the goals outlined in the National Plan, which highlight the protection, prevention, restoration, and enhancement of fish habitat.

**Goal 1:** Protect and maintain intact and healthy aquatic systems for native Atlantic coastal, estuarine-dependent, and diadromous fishes.

**Goal 2:** Prevent further degradation of fish habitats that have been adversely affected.

**Goal 3:** Restore the quality and quantity of aquatic habitats to improve the overall health of fish and other aquatic organisms (especially those habitats that play an important role in critical life history stages of fish species, e.g. nursery and spawning areas).

**Goal 4:** Restore aquatic habitats to aid in recovery of threatened or endangered species (state and federal).

**Goal 5:** Enhance the quality and quantity of aquatic habitats that support a broad natural diversity of fish and other aquatic species.

## Objectives and Strategic Actions

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To achieve its goals ACFHP has developed a series of objectives encompassing protection, restoration, science and data, communications and outreach, and financial needs and activities. Strategic actions were identified to achieve those objectives. The Partnership has considered the human drivers (indirect and direct) and the key opportunities to address Priority Threats. It has also assessed the constraints it must work within as well as its operational needs in developing the objectives and strategies in this Plan. The strategic actions are intended to guide the Partnership's activities towards achieving an overarching objective of protecting and restoring aquatic habitat, on a coast-wide scale. They focus on activities that ACFHP can reasonably work toward achieving over the next five years.

The **protection objectives** are proactive initiatives that highlight the need to address priority threats that are adversely impacting aquatic habitats along the Atlantic coast before the habitats are in need of restoration. The **restoration objectives** highlight the need to restore aquatic habitats along the Atlantic coast that have already been impacted by various human activities.

While each strategic action has a specified time frame to achieve that strategic action, many of the strategic actions (or portions of) should be considered ongoing. Once said actions have been accomplished, ACFHP will continue to carry out these actions according to the life of the Plan (five years), with an opportunity for review after three years. At the conclusion of three and again at five years, these strategic actions will be considered by ACFHP for continuation into the future, or for their conclusion.

## Section A: Habitat Protection Objectives

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

**Threat:** Obstructions to Fish Movement/Habitat Connectivity; Consumptive Water Withdrawal

**Impacted Habitat Categories:** Marine and Estuarine Shellfish Beds; Tidal Vegetation; Riverine Bottom; Coral and Live/Hard Bottom; SAV

- ✓ **A.1.1 Strategic Action:** 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. *Short-term*
- ✓ **A.1.2 Strategic Action:** 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. *Long-term*

**Protection Objective 2:** Maintain or improve water quality and hydrology in Subregional Priority Habitats that are currently functioning, through incorporation of BMPs and/or technological controls.

**Threat:** Water Quality Degradation and Eutrophication; Contamination of Water (ground and surface) and Sediments

**Impacted Habitat Categories:** Marine and Estuarine Shellfish Beds; Coral and Live/Hard Bottom; Submerged Aquatic Vegetation; Tidal Vegetation; Riverine Bottom

- ✓ **A.2.1 Strategic Action:** Define the critical water quality variables and hydrology needed to protect Subregional Priority Habitats. *Short-term*
- ✓ **A.2.2 Strategic Action:** Coordinate with partners to develop and disseminate a toolbox or guidance document of non-structural BMPs that will assist ACFHP partners in improving or protecting water quality for fish habitat. *Long-term*
- ✓ **A.2.3 Strategic Action:** Coordinate with partners to synthesize existing information in order to identify and prioritize watersheds for water quality improvement for fish habitat. *Short-term*
- ✓ **A.2.4 Strategic Action:** Encourage the use of BMPs designed to improve point/non-point discharge management that addresses the impacts of inorganic and organic contaminants, including emerging contaminants of concern for Subregional Priority Habitats. *Long-term*

**Protection Objective 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 Subregional Priority Habitats.

**Threat:** Consumptive Water Withdrawal

**Impacted Habitat Categories:** Riverine Bottom; Coral and Live/Hard Bottom; Submerged Aquatic Vegetation; Marine and Estuarine Shellfish Beds; Tidal Vegetation

- ✓ **A.3.1 Strategic Action:** Identify current work being done on this objective (e.g. Southeast Aquatic Resources Partnership and Southern Instream Flow Network, instream flow work at Federal and state agencies) and determine how ACFHP can best partner with these efforts. *Short-term*

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

**Threat:** Vessel Operation Impacts; Dredging and Coastal Maintenance; Sedimentation

**Impacted Habitat Categories:** Marine and Estuarine Shellfish Beds; Coral and Live/Hard Bottom; Submerged Aquatic Vegetation; Tidal Vegetation; Riverine Bottom

- ✓ **A.4.1. Strategic Action:** 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. *Mid-term*

**Protection Objective 5:** Maintain or increase the resiliency of Subregional Priority Habitats to the impacts of climate change.

**Threat:** Climate Change

**Impacted Habitat Categories:** Marine and Estuarine Shellfish Beds; Coral and Live/Hard Bottom; Submerged Aquatic Vegetation; Tidal Vegetation; Riverine Bottom

- ✓ **A.5.1 Strategic Action:** Work with partners to identify techniques and guidance documents that can be helpful in maintaining the priority habitats within each subregion against the adverse affects of climate change. *Short-term*
- ✓ **A.5.2 Strategic Action:** Encourage all institutions responsible for aquatic habitat management to include impacts to fish habitat in their climate change planning and modeling efforts. *Long-term*

**Protection Objective 6:** Increase public awareness of the threats facing Subregional Priority Habitats and the protection measures available to avoid and minimize those threats.

**Threat:** Obstructions to Fish Movement/Habitat Connectivity; Dredging and Coastal Maintenance; Water Quality Degradation and Eutrophication; Consumptive Water Withdrawal; Sedimentation; Climate Change; Vessel Operation Impacts; Contamination of Water (ground and surface) and Sediments; Invasive Species

**Impacted Habitat Categories:** Marine and Estuarine Shellfish Beds; Coral and Live/Hard Bottom; Submerged Aquatic Vegetation; Tidal Vegetation; Riverine Bottom

- ✓ **A.6.1 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. *Long-term*

## Section B: Habitat Restoration Objectives

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

**Threat:** Obstructions to Fish Movement/Habitat Connectivity; Consumptive Water Withdrawal

**Impacted Habitat Categories:** Marine and Estuarine Shellfish Beds; Tidal Vegetation; Riverine Bottom

- ✓ **B.1.1 Strategic Action:** Remove dams and other physical barriers in areas identified as a priority for fish movement restoration. *Mid-term*
- ✓ **B.1.2 Strategic Action:** Restore tidal hydrology in priority wetland areas (e.g. repairing or removing culverts or berms restricting flow or separating wetlands). *Mid-term*
- ✓ **B.1.3 Strategic Action:** 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. *Mid-term*
- ✓ **B.1.4 Strategic Action:** Compile information to identify barriers where fragmentation of habitats or barriers to fish movement exist. *Short-term*
- ✓ **B.1.5 Strategic Action:** 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. *Long-term*



Photo of culvert on Shoreys Brook, ME  
by Great Works Regional Land Trust



Photo of oyster sill fringe marsh, NC, by North Carolina Coastal Federation

**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).

**Threat:** Dredging and Coastal Maintenance; Water Quality Degradation and Eutrophication; Sedimentation; Climate Change; Vessel Operation Impacts; Contamination of Water (ground and surface) and Sediments; Invasive Species

**Impacted Habitat Categories:** Marine and Estuarine Shellfish Beds; Coral and Live/Hard Bottom; Submerged Aquatic Vegetation; Tidal Vegetation; Riverine Bottom

- ✓ **B.2.1 Strategic Action:** 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. *Mid-term*
- ✓ **B.2.2 Strategic Action:** Prevent and attempt to control invasion of non-indigenous species, where feasible. *Long-term*

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

**Threat:** Water Quality Degradation and Eutrophication

**Impacted Habitat Categories:** Marine and Estuarine Shellfish Beds; Tidal Vegetation; Riverine Bottom; Coral and Live/Hard Bottom; SAV

- ✓ **B.3.1 Strategic Action:** Coordinate with partners to compile a list of areas where Subregional Priority Habitats have been degraded or eliminated due to poor water quality. *Mid-term*
- ✓ **B.3.2 Strategic Action:** Support local projects that address water quality improvements that are associated with Subregional Priority Habitat improvement. *Short-term*

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

**Threat:** Climate Change

**Impacted Habitat Categories:** Marine and Estuarine Shellfish Beds; Coral and Live/Hard Bottom; Submerged Aquatic Vegetation; Tidal Vegetation; Riverine Bottom



- ✓ **B.4.1 Strategic Action:** Encourage all ACFHP-supported restoration projects address projected climate change impacts to Subregional Priority Habitats during project planning and implementation. *Long-term*

## Section C: Science and Data Objectives

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**Science and Data Objective 1:** Support ongoing research related to identifying or assessing fish habitat conservation activities and the threats to fish habitats.

- ✓ **C.1.1 Strategic Action:** Support the funding or endorsement of applied science/research projects aimed at (1) monitoring and reducing the impacts of Priority Threats on ACFHP habitats, (2) evaluating the effectiveness of fish habitat conservation techniques or methodologies, and (3) answering management questions. *Long-term*
- ✓ **C.1.2 Strategic Action:** Support research dedicated to identifying additional causes of habitat loss and the resulting effects on ACFHP species. *Long-term*

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

- ✓ **C.2.1 Strategic Action:** Develop additional products and conduct continuing analysis of the Species-habitat Matrix. *Short-term*
- ✓ **C.2.2 Strategic Action:** Continue to synthesize, update, and fill in information gaps in the Assessment, and identify new applications. *Mid-term*
- ✓ **C.2.3 Strategic Action:** 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. *Short-term*
- ✓ **C.2.4 Strategic Action:** Develop Fish Habitat Occupancy Models<sup>1</sup> and the information needed to support them. *Mid-term*
- ✓ **C.2.5 Strategic Action:** Develop project tracking and evaluation capabilities for the purpose of capturing, assessing, and reporting conservation results to stakeholders. *Long-term*



Photo of scientists collecting data on a coral reef, Key Largo, FL by (c) Wolcott Henry 2005/Marine Photobank

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<sup>1</sup> “Occupancy models that identify and delineate current habitats of priority fish species and can project habitat occupancy needs in the future are a useful tool for targeting conservation actions. Such models utilize scenarios of climate change, land use alteration, fish harvest, and other potential impacts to identify habitat types of greatest importance for conservation planning.” ([ACFHP, 2011](#))

## Section D: Communications and Outreach Objectives

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

- ✓ **D.1.1 Strategic Action:** Maintain a website that meets the needs of partners and the broader conservation community. *Short-term*
- ✓ **D.1.2 Strategic Action:** Develop/use outreach materials (e.g. display, fact sheets) that meet the needs of partners and the broader conservation community. *Short-term*
- ✓ **D.1.3 Strategic Action:** Attend events such as conferences or meetings to promote ACFHP's mission and activities and encourage new partners to join. *Short-term*

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

- ✓ **D.2.1 Strategic Action:** Develop a protocol for identifying and bringing in new partners. *Short-term*
- ✓ **D.2.2 Strategic Action:** Cooperate and exchange lessons learned with other landscape or regional partnerships and the National Fish Habitat Board. *Mid-term*
- ✓ **D.2.3 Strategic Action:** 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. *Long-term*

## Section E: Finance Objectives

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**Finance Objective 1:** Develop a mechanism and infrastructure within ACFHP for managing finances.

- ✓ **E.1.1 Strategic Action:** Establish a financial infrastructure to receive and disburse grant funds, operational funds, and other finances. *Short-term*

**Finance Objective 2:** Leverage conservation dollars.

- ✓ **E.2.1 Strategic Action:** Secure operational funding. *Short-term*
- ✓ **E.2.2 Strategic Action:** Secure project funding opportunities. *Short-term*
- ✓ **E.2.3 Strategic Action:** Identify private partners who can assist in providing matching funds to support operational and on-the-ground project activities. *Short-term*

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<http://www.woodsandpoole.com/main.php?cat=country>. Data processed by NOAA to determine coastal county summary totals and absolute and percent change. The information used in the ACFHP Conservation Strategic Plan was taken from:  
<http://stateofthecoast.noaa.gov/population/welcome.html> and  
<http://stateofthecoast.noaa.gov/population/hotspots.html> on June 21, 2011.

## Appendix A.

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### Habitat Characterizations

Note that the habitat **category** into which a habitat **type** falls is underlined.

### Marine and Estuarine Shellfish Beds

#### Oyster aggregations/reef

Structures formed by the Eastern oyster (*Crassostrea virginica*) that provide the dominant structural component of the benthos, and whose accumulated mass provides significant vertical relief (> 0.5 m).

#### Scallop beds

Areas of dense aggregations of scallops on the ocean floor. Common Atlantic coast species include: (1) the large Atlantic sea scallop (*Placopecten magellanicus*), which ranges from Newfoundland to North Carolina; (2) the medium-sized Atlantic calico scallop (*Argopecten gibbus*), which is found in waters south of Delaware; and (3) the bay scallop (*Argopecten irradians*), which occurs from Cape Cod to Florida, as well as in the Gulf of Mexico.

#### Hard clam beds

Dense aggregations of the hard clam (*Mercenaria mercenaria*) found in the subtidal regions of bays and estuaries to approximately 15 m in depth. Clams are generally found in mud flats and firm bottom areas consisting of sand or shell fragments.

#### Shell accumulations

Shells of dead mollusks sometimes accumulate in sufficient quantities to provide important habitat. Accumulations of Eastern oyster shells are a common feature in the intertidal zone of many southern estuaries.

### Coral and Live/Hard Bottom

#### Coral reefs

Reef-building corals are of the order Scleractinia, in the class Anthozoa, of the phylum Cnidaria. Coral accumulations are restricted to warmer water regions, where the average



Photo of elkhorn coral forest, Miami, FL, by B. Bischof/Marine Photobank

monthly temperature exceeds 18°C (64°F) throughout the year. Through symbiosis with unicellular algae, reef-building corals are the source of primary production in reef communities.

#### Patch reef, soft corals, or anemones

A patch reef is an isolated, often circular, coral reef usually found within a lagoon or embayment.

Soft corals are species of the anthozoan order Alcyonacea, of the subclass Octocorallia. In contrast to the hard or stony corals, most soft corals do not possess a massive external skeleton (e.g. sea pens and sea fans). Anemones are cnidarians of the class Anthozoa that possess a flexible cylindrical body and a central mouth surrounded by tentacles found in soft sediments.

#### **Live rock**

Calcareous rock that is removed from the vicinity of a coral reef with some of the life forms still living on it. These may include bacteria, coralline algae, sponges, worms, crustaceans, and other invertebrates.

#### **Macroalgae**

Large marine multi-cellular macroscopic algae (seaweeds). There are three types of macroalgae: green, brown, and red. Examples of macroalgae species found along the Atlantic coast include:

##### **Chlorophyta (green algae)**

*Ulva lactuca*, sea lettuce

##### **Phaeophyta (brown algae)**

*Fucus vesiculosus*, bladderwrack; *Laminaria* spp.; *Sargassum* spp.

##### **Rhodophyta (red algae)**

*Chondrus crispus*, Irish moss

#### **Submerged Aquatic Vegetation (SAV)**

SAV refers to rooted, vascular plants that live below the water surface in large meadows or small patches in coastal and estuarine waters. SAV can be further classified by the range of salinity of the waters in which they are found.

##### **Tidal fresh and oligohaline plant species**

Generally found in areas where salinity ranges from 0.5 to 5.0 ppt. Examples include:

*Vallisneria americana*, wild celery

*Ceratophyllum demersum*, coontail

##### **Mesohaline and polyhaline plant species**

Generally found in areas where salinity ranges from 5 ppt up to 30 ppt. Examples include:

*Zostera marina*, eelgrass

*Ruppia maritima*, widgeon grass

#### **Tidal Vegetation**

##### **Estuarine emergent marsh**

Salt marsh is an environment in the coastal intertidal zone between land and brackish water. The low marsh zone floods twice daily, while the high marsh floods only during storms and unusually high tides. Smooth cordgrass (*Spartina alterniflora*) dominates the regularly flooded low marsh along much of the Atlantic coast. In addition, salt meadow cordgrass (*Spartina patens*), saltgrass (*Distichlis spicata*), and needle rush (*Juncus* sp.) species comprise much of the vegetative community of the mid to upper salt marsh and brackish marsh.

### Tidal freshwater marsh

Tidal freshwater marsh occurs where the average annual salinity is below 0.5 ppt. It is found along free-flowing coastal rivers, and is influenced twice daily by the incoming tides. Tidal freshwater marsh can be located just upstream of the salt front, where the river essentially backs up as it meets resistance from high tides. Tidal freshwater marsh is characterized by salt intolerant plant species. These include: giant cordgrass (*Spartina cynosuroides*), sawgrass (*Cladium jamaicense*), cattails (*Typha* sp.), arrow arum (*Peltandra virginica*), pickerelweed (*Pontedaria cordata*), blue flag (*Iris virginica*), and soft stem bulrush (*Scirpus validus*).

### Mangrove

The mangrove ecological community includes four tree species collectively called mangroves. This swamp system occurs along intertidal and supratidal shorelines in southern Florida. The four species found in Florida mangrove swamps are:

*Rhizophora mangle*, red mangrove  
*Avicennia germinans*, black mangrove  
*Laguncularia racemosa*, white mangrove  
*Conocarpus erectus*, buttonwood

## Unvegetated Coastal Bottom

### Loose fine bottom

Submerged underwater bottom habitat in estuaries and oceans where the dominant sediment type is mud, silt, or sand.

### Loose coarse bottom

Submerged underwater bottom habitat in estuaries and oceans where the dominant sediment type ranges from gravel to cobble.

### Firm hard bottom

Submerged underwater bottom habitat in estuaries and oceans where embedded rock or boulders are the dominate sediment types.

### Structured sand habitat

Linear, narrow sand features that develop where a stream or ocean current promotes deposition of sand.

## Riverine Bottom

### Higher gradient headwater tributaries

Streams in which the dominant substrate is comprised of gravel and cobble. The stream slope is greater than 2%. This characterization includes 1<sup>st</sup> to 3<sup>rd</sup> order streams<sup>2</sup>.

### Lower gradient tributaries

Streams in which the dominant substrate is comprised of sand, gravel, and small cobble. The stream slope is between 0.51% and 2.0%. This characterization includes 1<sup>st</sup> to 3<sup>rd</sup> order streams.

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<sup>2</sup> "Stream order is a simple and common classification system for river and stream size. The Strahler stream ordering system uses a technique where "first" order streams are the smallest streams. Two first order streams combine to form second order streams, two second order streams combine to form a third order stream, and so on." ([NBII, 2008](#))

#### **Higher gradient large mainstem river**

Rivers in which the dominant substrate is sand, gravel, and cobble. The stream slope is between 0.51% and 2%. This characterization includes 4<sup>th</sup> order rivers and above.

#### **Lower gradient large mainstem river**

Rivers in which the dominant substrate is fine sediments (silt, mud, sand). The stream slope is between 0.51% and 2%. This characterization includes 4<sup>th</sup> order rivers and above.

#### **Low order coastal streams**

Generally low gradient 0% to 0.05% in slope. This characterization includes 1<sup>st</sup> to 3<sup>rd</sup> order streams located along the coast.

#### **Non-tidal freshwater mussel beds**

Freshwater mussel beds, located above tidal influence.

#### **Coastal headwater pond**

A pond connected to coastal streams and rivers, generally located near the headwaters.

#### **Non-tidal freshwater marsh**

A marsh that occurs in the non-tidal section along a river. The main feature of a freshwater marsh is its openness, with only low-growing or "emergent" plants. It may include grasses, rushes, reeds, typhas, sedges, and other herbaceous plants (possibly with low-growing woody plants) in a context of shallow water.



Photo of alewives by Jake Kritzer, Environmental Defense Fund

## Appendix B.

### Summary Results of the Species-Habitat Matrix by Subregion

The Species-Habitat Matrix is a tool to evaluate the relative importance of different coastal, estuarine, and freshwater habitats in terms of their value to selected fish and invertebrate species. In the tables below, “Habitat Type with Highest Overall Score” represents the sum of scores across all fish species and life stages within a habitat type. “Habitat Type with Highest Nursery Score” represents the sum of scores for the juvenile/young-of-year life stage across all fish species within a habitat type. Note that the habitat category in which a habitat type falls is shown in brackets. Raw analysis scores are shown in parentheses. To read the Species-Habitat Matrix Report Summary Report please visit the ACFHP web page at: [www.atlanticfishhabitat.org/Species\\_Habitat\\_Matrix\\_Summary\\_Report.pdf](http://www.atlanticfishhabitat.org/Species_Habitat_Matrix_Summary_Report.pdf).

Please note that the names of some habitat categories and types in Table 1 and Appendix A are modified versions of the names used in the Species-Habitat Matrix, however their descriptions are the same (with the exception of a clarifying footnote that was added in Appendix A of this Plan).

North Atlantic	Highest Score	2 <sup>nd</sup> Highest Score	3 <sup>rd</sup> Highest Score	4 <sup>th</sup> Highest Score	5 <sup>th</sup> Highest Score
Habitat Type with Highest Overall Score [Habitat Category]	Loose Fine Bottom (154.5) [Coastal Inert Substrate]	Loose Coarse Bottom (123) [Coastal Inert Substrate]	Structured Sand (108.5) [Coastal Inert Substrate]	Firm Hard Bottom and Mesohaline-Polyhaline (105) [Coastal Inert Substrate and SAV]	
Habitat Type with Highest Nursery (juv/yoy) Score [Habitat Category]	Loose Fine Bottom (52) [Coastal Inert Substrate]	Meso-Polyhaline spp. (48.5) [SAV]	Loose Coarse Bottom (38.5), Structured Sand (38), and Firm Hard Bottom (37.5) [Coastal Inert Substrate]		



<b>Mid-Atlantic</b>					
	Highest Score	2 <sup>nd</sup> Highest Score	3 <sup>rd</sup> Highest Score	4 <sup>th</sup> Highest Score	5 <sup>th</sup> Highest Score
Habitat Type with Highest Overall Score [Habitat Category]	Loose Fine Bottom (260) [Coastal Inert Substrate]	Mesohaline-Polyhaline spp. (175.5) [SAV]	Lower Gradient Large Mainstem River (147) [Riverine]	Loose Coarse Bottom (134.5) [Coastal Inert Substrate]	Structured Sand Habitat (124.5) [Coastal Inert Substrate]
Habitat Type with Highest Nursery (juv/yoy) Score [Habitat Category]	Loose Fine Bottom (93.5) [Coastal Inert Substrate]	Mesohaline-Polyhaline spp. (70.5) [SAV]	Lower Gradient Large Mainstem River (53) [Riverine]	Loose Coarse Bottom (50.5) [Coastal Inert Substrate]	Structured Sand Habitat (49) [Coastal Inert Substrate]
<b>South Atlantic</b>					
	Highest Score	2 <sup>nd</sup> Highest Score	3 <sup>rd</sup> Highest Score	4 <sup>th</sup> Highest Score	5 <sup>th</sup> Highest Score
Habitat Type with Highest Overall Score [Habitat Category]	Saltwater/Brackish Marsh (353.5) [Tidal Vegetation]	Loose Fine Bottom (295.5) [Coastal Inert Substrate]	Mesohaline-Polyhaline spp. (151.5) [SAV]	Lower Gradient Large Mainstem River (126) [Riverine]	Tidal FW Marsh (125.5) [Tidal Vegetation]
Habitat Type with Highest Nursery (juv/yoy) Score [Habitat Category]	Saltwater/Brackish Marsh (154.5) [Tidal Vegetation]	Loose Fine Bottom (109.5) [Coastal Inert Substrate]	Meso-Polyhaline spp. (79) [SAV]	Oyster Reef (55.5) [Marine & Estuarine Shellfish Beds]	Lower Gradient Large Mainstem River (53) [Riverine]

South Florida	Highest Score	2 <sup>nd</sup> Highest Score	3 <sup>rd</sup> Highest Score	4 <sup>th</sup> Highest Score	5 <sup>th</sup> Highest Score
Habitat Type with Highest Overall Score [Habitat Category]	Patch Reef, Soft Coral or Anemones Amidst Soft Sediment (322) [Other Sessile Fauna]	Primary Coral Reef Architecture (312.5) [Other Sessile Fauna]	Live Rock (303) [Other Sessile Fauna]	Firm Hard Bottom (241.5) [Coastal Inert Substrate]	Loose Fine Bottom (185.5) [Coastal Inert Substrate]
Habitat Type with Highest Nursery (juv/yoy) Score [Habitat Category]	Mesohaline-Polyhaline (139) [SAV]	Patch Reef, Soft Coral or Anemones Amidst Soft Sediment (110) [Other Sessile Fauna]	Live Rock (108.5) [Other Sessile Fauna]	Primary Coral Reef Architecture (97.5) [Other Sessile Fauna]	Mangrove (92) [Tidal Vegetation]

## Appendix C.

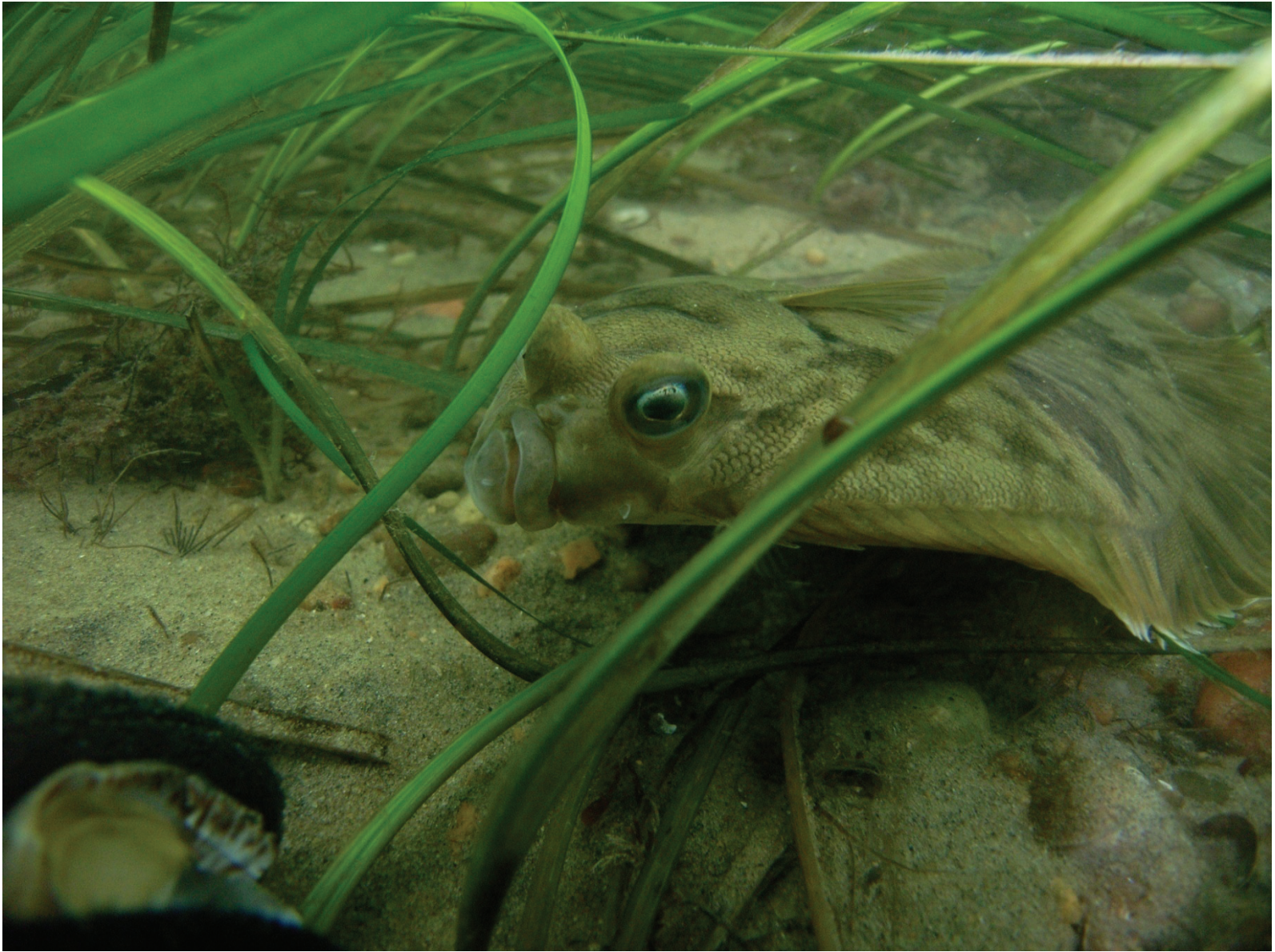
The Assessment is a database of 527 documents, datasets, and information portals on Atlantic coastal habitats which were collected and analyzed for indicator, threat, and action information<sup>3</sup>. The full report, *Assessment of Existing Information on Atlantic Coastal Fish Habitats: Development of a web-based spatial bibliography, assessment query tools, and data summaries* (NOAA Technical Memorandum NOS NCCOS 103) can be found at <http://ccma.nos.noaa.gov/publications/nccostechmemo103.pdf>.

In the table below, the information presented in the Number of Instances column and the Assessment Classified Threat Column are pulled from **Table 9. Classification of Threats as Recorded in the Assessment**, from the NOAA Technical Memorandum. Table 9 from this report groups the number of threats (instances) reported (n=1260) into threat categories. The ACFHP Priority Threat column illustrates the category(ies) (as discussed in the *Identification of Critical Threats* section of this Plan) that an Assessment Classified Threat could fall into. Other threat categories displayed in Table 9 of the NOAA Technical Memo that do not fall into an ACFHP Priority Threat category are not included here.

Assessment Classified Threat	Number of Instances	ACFHP Priority Threat
Water Quality	225	Water Quality Degradation and Eutrophication; Climate Change; Consumptive Water Withdrawal
Dams and Passage	106	Obstructions to Fish Movement/Habitat Connectivity
Climate Change	97	Climate Change
Dredging Issues	89	Dredging and Coastal Maintenance
Contaminants	84	Contamination of Water (ground and surface) and Sediments
Impervious Surfaces	64	Sedimentation

<sup>3</sup> “Indicator – any measurement or assessment of a relevant parameter”; “Threat - anything adversely affecting quality of fish habitat”; “Action – any conservation action recommended or already occurring.” (Nelson et al., 2010)

<b>Invasive Species</b>	54	Invasive Species
<b>Water Withdrawals</b>	25	Consumptive Water Withdrawal
<b>Boating issues</b>	15	Vessel Operation Impacts; Water Quality Degradation and Eutrophication
<b>Temperature</b>	8	Obstructions to Fish Movement/Habitat Connectivity
<b>Other - Stormwater Issues</b>	22	Sedimentation; Water Quality Degradation and Eutrophication
<b>Other - Agricultural Runoff</b>	20	Sedimentation; Water Quality Degradation and Eutrophication
<b>Other - Agricultural Practices</b>	17	Consumptive Water Withdrawal
<b>Other - Tidal Restriction</b>	17	Obstructions to Fish Movement/Habitat Connectivity; Consumptive Water Withdrawal
<b>Other - Riparian Buffers</b>	14	Sedimentation
<b>Other - Sedimentation</b>	14	Sedimentation
<b>Other - Shoreline Erosion</b>	10	Sedimentation; Vessel Operation Impacts
<b>Other - Sewage and Septic Issues</b>	9	Water Quality Degradation and Eutrophication; Contamination of Water (ground and surface) and Sediments
<b>Other - Marine Infrastructure</b>	5	Dredging and Coastal Maintenance
<b>Other - Storm Events</b>	3	Climate Change
<b>Other - Shoreline Hardening</b>	1	Dredging and Coastal Maintenance; Sedimentation



NATIONAL  
**FISH HABITAT**  
ACTION PLAN



## Atlantic Coastal Fish Habitat Partnership 2012-2013 Implementation Plan

The Atlantic Coastal Fish Habitat Partnership (ACFHP) 2012-2013 Implementation Plan is a subset of the 2012-2016 ACFHP Conservation Strategic Plan. It contains a set of objectives and strategic actions and related tasks that can be accomplished over the course of a two year period. The achievement of each task is lead by an individual within the Partnership with the help of a team and additional partners.

### Section A: Habitat Protection Objectives

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

**A.1.1 Strategic Action:** 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:

- Consult with appropriate ASMFC entities (i.e., diadromous species management entity; Fish Passage Working Group; TCs for each diadromous species) to determine whether there are existing priority lists for restoration, subregionally.
- 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; state diadromous restoration plans.
- Determine what scale of watershed (e.g. HUC 8, HUC 12) ACFHP wishes to address. Begin by developing a spreadsheet that lists priorities and identifies their HUCs. Compile a list of land trusts.

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

**A.4.1. Strategic Action:** 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:

- 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).

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

**A.6.1 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.

Task:

- Compile pertinent existing outreach materials from state, federal, and other groups, and distribute this information at boating courses, ACFHP website, glossy card with ACFHP logo, or through existing federal networks.

## **Section B: Habitat Restoration Objectives**

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

**B.1.2 Strategic Action:** Restore tidal hydrology in priority wetland areas (e.g. repairing or removing culverts or berms restricting flow or separating wetlands).

Task:

- Fund on-the ground projects through USFWS-NFHP funding

**B.1.3 Strategic Action:** 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.

Task:

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

**B.1.5 Strategic Action:** 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:

- Compile existing technical guidance, identify gaps and means to address, then update current information

**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).

**B.2.1 Strategic Action:** 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.

Tasks:

- Establish funding mechanisms and or ideas for funding mechanisms to do on the ground work. Seek additional funding for ACFHP (e.g. NOAA grants, FWS-NFHAP etc.) and figure out what administrative components are needed.
- Compile list of restoration partners/practitioners (e.g. NEPs, state management plans, ACFHP MOU signatories , etc.) and survey them regarding the focus and priorities in their planning area (e.g., priority habitats, priority threats, and priority implementation actions) in order to assist in steering appropriate restoration practitioners to ACFHP priority actions.

## Section C: Science and Data Objectives

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

**C.2.1 Strategic Action:** Develop additional products and conduct continuing analysis of the Species-Habitat Matrix.

### Tasks:

- Identify number of publications and specific journals to submit manuscript for the existing matrix
- Prepare outline
- Prepare publication(s); submit for review to all coauthors
- Peer-review

**C.2.3 Strategic Action:** 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:

- Check with Moe Nelson (NOS) to see if working on this strategic action fits under his work plan
- Review habitat assessments that have been done for the FHPs in Region 3 and 6 and determine if ACFHP would like a similar product.
- If steering committee and science and data committee are interested, determine if the organization that worked on the habitat assessments in Region 3 (Downstream Strategies) is available and how much they would charge or other contractor.
- 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. Work plan would include action items and a timeline.
- ID funding sources



## Section D: Communications and Outreach Objectives

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

**D.1.1 Strategic Action:** Maintain a website that meets the needs of partners and the broader conservation community.

Tasks:

- Update the Funding, Conference, Other Events, Funded Projects, Endorsed Projects, and Outreach pages
- Send out periodic Breaking News items and maintain archives

**D.1.3 Strategic Action:** Attend events such as conferences or meetings to promote ACFHP's mission and activities and encourage new partners to join.

Tasks:

- 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.

**D.2.2 Strategic Action:** Cooperate and exchange lessons learned with other landscape or regional partnerships and the National Fish Habitat Board.

Tasks:

- 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.

**D.2.3 Strategic Action:** 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:

- Identify staff working with congressional staff
- Meet with state staff who work with their delegation
- Review guides and identify Federal Representatives or Senators, particularly those that are on resources appropriation committees.

## Section E: Finance Objectives

**Finance Objective 2:** Secure operational funding for ACFHP.

**E.2.2 Strategic Action:** Secure project funding opportunities.

Tasks:

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

- Apply for NOAA Community Based Restoration funding
- Endorse applicable projects for NFWF/NOAA protection funding

**E.2.3 Strategic Action:** Identify private partners who can assist in providing matching funds to support operational and on-the-ground project activities.

Tasks:

- Identify a list of potential foundations to contact (organized by state and region).
- Identify a short list of foundations, who are particularly applicable, and schedule a phone call or meeting

**APPLICATION INSTRUCTIONS**  
**for the**  
**FY2015 Atlantic Coastal Fish Habitat Partnership Application Cycle**

The U.S. Fish and Wildlife Service (USFWS) and the Atlantic Coastal Fish Habitat Partnership (ACFHP) are jointly requesting project applications to restore and conserve habitat necessary to support coastal, estuarine dependent, and diadromous fish species. Federal funding available under the National Fish Habitat Partnership (NFHP) through the USFWS will be used to support the top ranked proposals. All proposed projects must be developed in coordination with a USFWS Fisheries Sponsoring Office (listed by state in Appendix D). In addition to submitting all application materials to the e-mail addresses below, the application should be submitted to the USFWS Fisheries Sponsoring Office.

The maximum amount for an individual project is \$50,000. These funds can only be used for on-the-ground habitat conservation and restoration projects and associated design and monitoring activities. **They may not be used for research projects. They may not be used for acquisition in fee, easement or for projects required as part of a regulatory action. They will not be used for feasibility, engineering and design projects that do not include on-the-ground habitat restoration.** All projects must have a minimum of a 1:1 contribution from other sources (less than 50% of matching funds should be from federal funding sources). All projects are expected to have received all necessary permits and be completed within 2 years of receipt of funding. Guidelines for the use of NFHP funds by the USFWS can be found at <http://www.fws.gov/policy/717fw1.html>. All applicants are encouraged to review this guidance.

To ensure available funding is being directed most effectively, projects should be geared toward meeting ACFHP's protection and restoration objectives described in its [Conservation Strategic Plan](#). Applications will be reviewed and ranked by ACFHP based on potential to help the partnership meet these objectives.

The following is required to apply:

1. **Application Form** -A blank application in word format is available on the ACFHP website at: [www.atlanticfishhabitat.org/acfhpfunding/](http://www.atlanticfishhabitat.org/acfhpfunding/). The following pages of this document provide guidance for completing the application.
2. **Photographs and Photograph Release Form** – Photographs in JPEG or TIFF format should be submitted. Release forms are also available on the ACFHP website at: [www.atlanticfishhabitat.org/acfhpfunding/](http://www.atlanticfishhabitat.org/acfhpfunding/). Forms can be signed and scanned or mailed separately.
3. **Coordination with the Sponsoring U.S. Fish and Wildlife Service Office** - Applicants are required to develop their projects in coordination with the local USFWS Fisheries Office (Appendix D) that will sponsor the project. This coordination should take place during project development, prior to application submittal. Sponsoring Fisheries Offices must enter the project in the Service's database for funding consideration. Additionally, they can provide technical assistance to applicants during project development, the application process, and during project implementation and monitoring.
4. **Copies of received permit letters from authorizing agencies**

The following is suggested but not required:

5. **Letter of Support** – Obtain a letter of support from the appropriate state natural resource agency or other pertinent supporters of your project. This letter can be from an ACFHP state contact. Contact information for ACFHP members can be found at:  
[www.atlanticfishhabitat.org/aboutus/partners/](http://www.atlanticfishhabitat.org/aboutus/partners/).

**Applications must be received by Friday, October 3, 2014 at midnight.** Applications in electronic format (MS Word format only) should be e-mailed to Julie Devers at **julie\_devers@fws.gov** and to the ACFHP coordinator, Lisa Havel at **lhavel@asmfc.org**

**Incomplete applications will not be considered.**

Applicants will be notified of their projects' ranking and funding status as that information becomes available. The amount of funding and time of availability is unknown at this time. All projects that receive Service NFHP funding are required to provide annual progress reports to the Service and project completion forms, with post project photos, to the ACFHP.

For questions, please contact:

Julie Devers  
U.S. Fish and Wildlife Service  
177 Admiral Cochrane Dr.  
Annapolis, MD 21401  
Phone: (410) 573-4508  
Email: Julie\_Devers@fws.gov

**Atlantic Coastal Fish Habitat Partnership  
Project Evaluation Form (FY2015)**

<b>Project Name:</b>	
<b>Project Location (State, County, City, and Congressional District):</b>	
<b>ACFHP Subregion:</b>	
<b>Name of Organization Requesting Funds:</b>	
<b>Project Officer:</b>	
<b>USFWS Contact:</b>	
<b>Project Type</b>	<input type="checkbox"/> Construction <input type="checkbox"/> Design <input type="checkbox"/> Planning <input type="checkbox"/> Monitoring <input type="checkbox"/> Outreach
<b>Funding</b>	Amount Requested: Total Cost:
<b>Eligible?</b>	
<b>Total Score (formula)</b>	0

Would you recommend this project for ACFHP funding or other potential funding sources?  
 yes \_\_\_ no \_\_\_ If no, why not?

I. ELIGIBILITY	yes or no	Comments
<p><u>Important Note:</u> Funds appropriated to the USFWS for implementation of the Action Plan may not be expended on ineligible activities per the checklist below. If any of these activities is integral to the project, the project may only use funds from other sources to support those specific activities. However, those funds or previously expended funds may qualify as matching funds for the project. (see USFWS - National Fish Habitat Action Plan - 717 FW 1, Sections 1.8(C) &amp; (D) - 2009)</p>		
<p><b>A. Are actions under the project required by existing regulatory programs, court order, or decree? (Note: Funds may support activities under voluntary agreements that exceed regulatory requirements for conserving habitats.)</b></p> <p align="right">Yes = ineligible for funding No = eligible for funding</p>		
<p><b>B. Will funding requested from ACFHP be used to pay costs incurred for the project before the award was granted (e.g. previous expenditures for costs such as preliminary designs, surveys, appraisals, etc.)? Note: Previous expenditures may qualify as in-kind match, including federal and non-federal funding used for eligible direct and indirect costs (see 1.8 A, B &amp; C in the guidance document).</b></p> <p align="right">Yes = ineligible No = eligible</p>		
<p><b>C. Will funds requested from ACFHP for this project be used for realty costs associated with the project (e.g. lease or purchase interests in real property or to make rental or other land use incentive payments to landowners)?</b></p> <p align="right">Yes = ineligible No = eligible</p>		
<p><b>D. Does the funding requested from ACFHP for this project involve the operation or maintenance of facilities, buildings or similar structures? (Note: This does not apply to the maintenance or construction of earthen structures.)</b></p> <p align="right">Yes = ineligible No = eligible</p>		
<p><b>E. Is the project primarily a research study? (Note: Only evaluation of the biological response to an on-the-ground project may be eligible per 1.8A5).</b></p> <p align="right">Yes = ineligible No = eligible</p>		
<p><b>F. Does the funding requested from ACFHP for this project include incentive payments (annual payments to encourage participation (e.g. some NRCS farm bill programs) )?</b></p> <p align="right">Yes = ineligible No = eligible</p>		
II. TECHNICAL AND SCIENTIFIC MERIT	Reviewer Score	
<p><b>A. Is the project's technical design adequate to achieve the proposed outcomes?</b></p> <p align="right">yes=10 no=0</p>		
<p><b>B. Does the project make use of the best available science and technology?</b></p> <p align="right">yes=20 no=0</p>		

<p><b>C. Is the project likely to meet all federal, state, and local permits within the proposed implementation schedule and is the proposed implementation schedule adequate to achieve the proposed outcomes (specifically, will project be completed within 2 years of the receipt of funding)?</b></p> <p style="text-align: right;">yes=10 no=0</p>	
<p><b>D. Will the monitoring and evaluation plan provide sufficient data and analysis (e.g. acres restored or stream miles opened for fish passage) to determine if the proposed outcomes were achieved?</b></p> <p style="text-align: right;">yes=10 no=0</p>	
<p><b>III. OUTREACH AND EDUCATION</b></p>	<p><b>Reviewer Score</b></p>
<p><b>A. The extent to which the project will disseminate information on fish habitat conservation to increase awareness and transfer knowledge on lessons learned</b></p> <p style="text-align: right;">significant (eg. Congressional visits, online tools, community event)= 20 moderate (eg. Presentations to community/posters at conferences)=10 low (eg. project summary report made publically available)=0</p>	
<p><b>IV. ACFHP PRIORITIES</b></p>	<p><b>Reviewer Score</b></p>
<p><b>A. Does the project support or address an ACFHP subregional priority habitat? (score only one region)</b></p>	
<p><i>North Atlantic</i></p>	
<p><b>Riverine Bottom</b></p> <p style="text-align: right;">supports or addresses priority habitat=20 does not address priority habitat=0</p>	
<p><b>Marine and Estuarine Shellfish Beds</b></p> <p style="text-align: right;">supports or addresses priority habitat=20 does not address priority habitat=0</p>	
<p><b>Submerged Aquatic Vegetation (meso to polyhaline)</b></p> <p style="text-align: right;">supports or addresses priority habitat=20 does not address priority habitat=0</p>	
<p><i>Mid-Atlantic</i></p>	
<p><b>Riverine Bottom</b></p> <p style="text-align: right;">supports or addresses priority habitat=20 does not address priority habitat=0</p>	
<p><b>Submerged Aquatic Vegetation</b></p> <p style="text-align: right;">supports or addresses priority habitat=20 does not address priority habitat=0</p>	
<p><b>Tidal Vegetation</b></p> <p style="text-align: right;">supports or addresses priority habitat=20 does not address priority habitat=0</p>	
<p><i>South Atlantic</i></p>	
<p><b>Marine and Estuarine Shellfish Beds</b></p> <p style="text-align: right;">supports or addresses priority habitat=20 does not address priority habitat=0</p>	
<p><b>Riverine Bottom</b></p> <p style="text-align: right;">supports or addresses priority habitat=20 does not address priority habitat=0</p>	
<p><b>Tidal Vegetation</b></p> <p style="text-align: right;">supports or addresses priority habitat=20 does not address priority habitat=0</p>	
<p><i>South Florida</i></p>	
<p><b>Coral and live / hardbottom</b></p> <p style="text-align: right;">supports or addresses priority habitat=20 does not address priority habitat=0</p>	
<p><b>Submerged Aquatic Vegetation (meso- to polyhaline)</b></p> <p style="text-align: right;">supports or addresses priority habitat=20 does not address priority habitat=0</p>	
<p><b>Mangrove</b></p> <p style="text-align: right;">supports or addresses priority habitat=20 does not address priority habitat=0</p>	
<p><b>B. Does the project support or address an ACFHP fish habitat but not one that is a priority for the subregion in which the project is located?</b></p> <p style="text-align: right;">supports or addresses an ACFHP fish habitat type(s) not identified as a priority =10 does not address an ACFHP fish habitat=0</p>	
<p><b>C. Does the project address one or more of the ACFHP habitat protection or habitat restoration objectives described in the draft conservation strategy? (score as many as apply)</b></p>	
<p><i>Habitat Protection Objectives</i></p>	
<p><b>Protection Objective 1:</b> Ensure adequate and effective fish movement past existing or potential barriers to maintain connectivity within Subregional Priority Habitats.</p> <p style="text-align: right;">high=5 medium=3</p>	

	low=1 does not meet objective=0
<b>Protection Objective 2:</b> Maintain or improve water quality and hydrology in Subregional Priority Habitats that are currently functioning, through incorporation of BMPs and/or technological controls.	high=5 medium=3 low=1 does not meet objective=0
<b>Protection Objective 3:</b> 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 Subregional Priority Habitats.	high=5 medium=3 low=1 does not meet objective=0
<b>Protection Objective 4:</b> Minimize or reduce adverse impacts to Subregional Priority Habitats associated with coastal development and water dependent activities (e.g., recreational boating, and marine transportation).	high=5 medium=3 low=1 does not meet objective=0
<b>Protection Objective 5:</b> Maintain or increase the resiliency of Subregional Priority Habitats to the impacts of climate change.	high=5 medium=3 low=1 does not meet objective=0
<b>Protection Objective 6:</b> Increase public awareness of the threats facing Subregional Priority Habitats and the protection measures available to avoid and minimize those threats.	high=5 medium=3 low=1 does not meet objective=0
<i>Habitat Restoration Objectives</i>	
<b>Restoration Objective 1:</b> Restore and enhance hydrological or physical connections between Subregional Priority Habitats to promote fish utilization and improve overall aquatic health.	high=5 medium=3 low=1 does not meet objective=0
<b>Restoration Objective 2:</b> 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).	high=5 medium=3 low=1 does not meet objective=0
<b>Restoration Objective 3:</b> Restore water quality in areas where it has degraded or eliminated Subregional Priority Habitats.	high=5 medium=3 low=1 does not meet objective=0
<b>Restoration Objective 4:</b> Maintain or increase the resiliency of Subregional Priority Habitats to the impacts of climate change through restoration activities.	high=5 medium=3 low=1 does not meet objective=0
<b>D. Is the project located in a priority area identified in an approved state or federal management plan?</b> (e.g. State Wildlife Action Plan, state or federal recovery plan, or National Estuary Program CCMP)	
project is located in a priority area identified in an approved state or federal management plan= 15 project is not located in a priority area identified in an approved state or federal management plan=0	
<b>E. Will the project address a root cause and contribute to a long-term self-sustaining solution to the problem(s) described?</b>	
	high = 15 medium = 10 low = 5 no = 0

<p><b>F. Does the project address the habitat needs of trust species?</b> (Note: trust species include species managed under a Federal Fishery Management Plan or by the Atlantic States Marine Fisheries Commission, tribal trust fish resources, fish species within Fish and Wildlife Service lands, anadromous and catadromous fishes, other interjurisdictional fishes and aquatic species, endangered, threatened, candidate, or proposed species federally listed under the Endangered Species Act)</p> <p style="text-align: right;">yes=5 no=0</p>	
<p><b>G. Are there direct social or economic benefits of the project ?</b> (i.e. enhanced recreational, commercial and subsistence fishing opportunities, increased public visitation, increased property value because of new fishing opportunities)</p> <p style="text-align: right;">yes=5 no=0</p>	
<p><b>V. QUALIFICATIONS OF APPLICANT</b></p>	<p><b>Reviewer Score</b></p>
<p><b>A. Does the applicant (and associated personnel) have the technical capacity/knowledge to conduct the scope and scale of the proposed project?</b></p> <p style="text-align: right;">yes=15 no=0</p>	
<p><b>VI. PROJECT COSTS</b></p>	<p><b>Reviewer Score</b></p>
<p><b>A. Does the project have the greatest cost effectiveness and a high likelihood of being completed within the specified budget?</b> [GOOD CHECKLIST ITEM: Is the budget realistic, sufficiently detailed, with appropriate budget breakdown and justification?</p> <p style="text-align: right;">yes=10 no=0</p>	
<p><b>B. Does the project leverage other investment by maximizing partner funding (in-kind and cash contributions) to support implementation?</b></p> <p style="text-align: right;">3:1 partner funding =20 2:1 partner funding = 10 1:1 partner funding =5 less than 1:1 = 0</p>	
<p><b>C. Are multiple groups, such as federal and state agencies, local governments, NGOs, academics, or tribal governments participating in the development and execution of the project?</b></p> <p style="text-align: right;">more than one partner involved=10 one or no partners involved=0</p>	









CHESAPEAKE  
WATERSHED  
AGREEMENT

2 0 1 4

# VISION

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*The Chesapeake Bay Program partners envision an environmentally and economically sustainable Chesapeake Bay watershed with clean water, abundant life, conserved lands and access to the water, a vibrant cultural heritage and a diversity of engaged citizens and stakeholders.*



# PREAMBLE

The Chesapeake Bay watershed is one of the most extraordinary places in America, spanning six states and the District of Columbia. As the nation's largest and most productive estuary, the Chesapeake Bay and its vast network of more than 180,000 miles of streams, creeks and rivers, holds tremendous ecological, cultural, economic, historic and recreational value for the nearly 18 million people who live, work and play in the region.

To restore and protect this national treasure, the Chesapeake Bay Program partnership (the "Partnership") was formed in 1983 when the Governors of Maryland, Virginia, Pennsylvania, the Mayor of the District of Columbia, the Chair of the Chesapeake Bay Commission and the Administrator of the Environmental Protection Agency signed the first Chesapeake Bay agreement. That initial agreement recognized the "historical decline of living resources" in the Chesapeake Bay and committed to a cooperative approach to "fully address the extent, complexity and sources of pollutants entering the Bay." For more than 30 years, this regional Partnership has become recognized as one of the nation's premier estuarine restoration efforts, implementing policies, engaging in scientific investigation and coordinating actions among the states, the District of Columbia and the federal government.

The Chesapeake Bay Program partners have made much progress in that time, but there is more to do—especially in the face of continued challenges such as changes in population, loss of farm and forest lands and changing environmental conditions. Through the 2014 Chesapeake Bay Watershed Agreement (the "Agreement"), the Partnership recommits to the Bay watershed restoration effort based in and guided by science and the lessons learned from our experiences.

One of the most important lessons the partners have learned from the past three decades is that although watershed-wide partnerships can help to coordinate and catalyze progress, implementation happens locally. Local governments are key partners in our work, as are individual citizens, businesses, watershed groups and other non-governmental organizations. Working together to engage, empower and facilitate these partners will leverage resources and ensure better outcomes.

The Partnership's experience with watershed restoration and protection efforts has shown that measurable results, coupled with firm accountability, yield the most significant results. The Partnership stands ready to embrace new ideas, technologies and policies that will help meet its goals. The Partnership is committed to improving verification and transparency of its actions to strengthen and increase public confidence in its efforts.

The 1983 Agreement laid the foundation for a cooperative program that included four jurisdictions along with the Chesapeake Bay Commission and the federal government. This new Agreement includes the seven jurisdictions in the watershed, bringing New York, West Virginia and Delaware on board with the original signatories and making them full partners in the Chesapeake Bay Program and the Chesapeake Executive Council. Due in part to a 2009 Presidential Executive Order, numerous federal agencies have also reaffirmed and augmented their longstanding and shared commitment to restoring and protecting the Chesapeake Bay.

This Chesapeake Bay Watershed Agreement acknowledges that the Partnership cannot address every issue at once and that progress must be made in a strategic manner, focusing on efforts that will achieve the most cost-effective results. Watershed restoration and protection have the potential to become integral drivers of the region's economy. To that end, the Partnership is committed to achieving restoration success while maximizing the economic benefits to local communities across the region. The signatories to this voluntary Agreement commit to achieving the restoration and protection of the Chesapeake Bay watershed and its living resources.

# PRINCIPLES

The following principles are an overarching framework by which the Chesapeake Bay Program commits to operate. They encompass the partners' collective, core values and are intended to help guide us in our work as the Partnership develops policy and takes actions to achieve this Agreement's Goals and Outcomes.

## THE PARTNERSHIP WILL:

- **Collaborate** to achieve the Goals and Outcomes of this Agreement.
- **Achieve Goals and Outcomes** in a timely way and at the least possible cost to our citizens.
- **Represent the interests of people** throughout the watershed fairly and effectively, including a broad diversity of cultures, demographics and ages.
- **Operate with transparency** in program decisions, policies, actions and reporting on progress to strengthen public confidence in our efforts.
- **Use science-based decision-making and seek out innovative technologies and approaches** to support sound management decisions in a changing system.
- **Maintain a coordinated watershed-wide monitoring and research program** to support decision-making and track progress and the effectiveness of management actions.
- **Acknowledge, support and embrace local governments** and other local entities in watershed restoration and protection activities.
- **Anticipate changing conditions**, including long-term trends in sea level, temperature, precipitation, land use and other variables.
- **Adaptively manage** at all levels of the Partnership to foster continuous improvement.
- **Seek consensus** when making decisions.
- **Use place-based approaches**, where appropriate, that produce recognizable benefits to local communities while contributing to larger ecosystem goals.
- **Engage citizens** to increase the number and diversity of people who support and carry out the conservation and restoration activities necessary to achieve the Goals and Outcomes of the Agreement.
- **Explore using social science** to better understand and measure how human behavior can drive natural resource use, management and decision-making.
- **Promote environmental justice** through the meaningful involvement and fair treatment of all people, regardless of race, color, national origin or income, in the implementation of this Agreement.

# GOALS & OUTCOMES

The commitments contained in this section are the Goals and Outcomes that the signatories will work on collectively to advance restoration and protection of the Chesapeake Bay ecosystem and its watershed. The Goals articulate the desired high-level aspects of the partners' Vision. The Outcomes related to each Goal are specific, time-bound, measureable targets that directly contribute to achieving that Goal.

The Management Strategies further described in the next section of this Agreement articulate the actions necessary to achieve the Goals and Outcomes. This work will require effort from many, including all levels of government, academic institutions, non-governmental organizations, watershed groups, businesses and individual citizens. Local government will continue to play a unique and critical role in helping the Partnership realize this shared Vision for the Chesapeake Bay. Signatories will participate in achieving the Outcomes of this Agreement in the manner described in the "Management Strategies Development and Implementation" section.

While the Goals and Outcomes are described by separate topic areas, the signatories recognize that they are interrelated. Improvements in habitat and water quality lead to healthier living resources. Environmentally literate citizens are more engaged stewards of the Chesapeake Bay's healthy watersheds. Better water quality means swimmable, fishable waters for Bay residents and visitors. Increased public access to the Bay inspires people to care for critical landscapes and honor the region's heritage and culture. Healthy fish and shellfish populations support a vibrant economy for a spectrum of fishing-related industries. The signatories recognize that all aspects of the ecosystem are connected and that these Goals and Outcomes support the health and the protection of the entire Bay watershed.

As the signatories identify new opportunities and concerns, Goals or Outcomes may be adopted or modified. Any changes or additions to Goals will be approved by the Executive Council. The Principals' Staff Committee will approve changes or additions to Outcomes, although significant changes or additions will be raised to the Executive Council for approval. Proposed changes to Goals and Outcomes or the addition of new ones will be open for public input before being finalized. Final changes or additions will be available on the Chesapeake Bay Program's website.

# GOALS & OUTCOMES

## SUSTAINABLE FISHERIES

Habitat loss, poor water quality, non-native and invasive species, toxics and fishing pressure continue to threaten the sustainability of the Chesapeake Bay's fisheries. Sustaining fish and shellfish populations contributes to a strong economy and maritime culture and supports a healthy ecosystem for all Bay watershed residents.



**GOAL:** Protect, restore and enhance finfish, shellfish and other living resources, their habitats and ecological relationships to sustain all fisheries and provide for a balanced ecosystem in the watershed and Bay.

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Blue Crab  
Abundance  
Outcome



Maintain a sustainable blue crab population based on the current 2012 target of 215 million adult females. Refine population targets through 2025 based on best available science.

Blue Crab  
Management  
Outcome



Manage for a stable and productive crab fishery including working with the industry, recreational crabbers and other stakeholders to improve commercial and recreational harvest accountability. By 2018, evaluate the establishment of a Bay-wide, allocation-based management framework with annual levels set by the jurisdictions for the purpose of accounting for and adjusting harvest by each jurisdiction.

Oyster Outcome



Continually increase finfish and shellfish habitat and water quality benefits from restored oyster populations. Restore native oyster habitat and populations in 10 tributaries by 2025 and ensure their protection.

Forage Fish  
Outcome



Continually improve the Partnership's capacity to understand the role of forage fish populations in the Chesapeake Bay. By 2016, develop a strategy for assessing the forage fish base available as food for predatory species in the Chesapeake Bay.

Fish Habitat  
Outcome



Continually improve effectiveness of fish habitat conservation and restoration efforts by identifying and characterizing critical spawning, nursery and forage areas within the Bay and tributaries for important fish and shellfish, and use existing and new tools to integrate information and conduct assessments to inform restoration and conservation efforts.



# GOALS & OUTCOMES

## VITAL HABITATS

Increasing needs for land and resources have resulted in fragmentation and degradation of many habitats across the watershed while also challenging the health of many Bay watershed species. Conserving healthy habitats and restoring the connectivity and function of degraded habitats is essential to the long-term resilience and sustainability of the ecosystem and the region's quality of life.



**GOAL:** Restore, enhance and protect a network of land and water habitats to support fish and wildlife, and to afford other public benefits, including water quality, recreational uses and scenic value across the watershed.

Wetlands  
Outcome



Continually increase the capacity of wetlands to provide water quality and habitat benefits throughout the watershed. Create or re-establish 85,000 acres of tidal and non-tidal wetlands and enhance the function of an additional 150,000 acres of degraded wetlands by 2025. These activities may occur in any land use (including urban) but primarily occur in agricultural or natural landscapes.

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Black Duck



By 2025, restore, enhance and preserve wetland habitats that support a wintering population of 100,000 black ducks, a species representative of the health of tidal marshes across the watershed. Refine population targets through 2025 based on best available science.

Stream Health  
Outcome



Continually improve stream health and function throughout the watershed. Improve health and function of ten percent of stream miles above the 2008 baseline for the Chesapeake Bay watershed.

Brook Trout



Restore and sustain naturally reproducing brook trout populations in Chesapeake headwater streams with an eight percent increase in occupied habitat by 2025.

# GOALS & OUTCOMES

## VITAL HABITATS (CONTINUED)



**GOAL:** Restore, enhance and protect a network of land and water habitats to support fish and wildlife, and to afford other public benefits, including water quality, recreational uses and scenic value across the watershed.

Fish Passage Outcome



Continually increase available habitat to support sustainable migratory fish populations in Chesapeake Bay freshwater rivers and streams. By 2025, restore historical fish migratory routes by opening 1,000 additional stream miles, with restoration success indicated by the consistent presence of alewife, blueback herring, American shad, hickory shad, American eel and brook trout, to be monitored in accordance with available agency resources and collaboratively developed methods.

Submerged Aquatic Vegetation (SAV) Outcome



Sustain and increase the habitat benefits of SAV (underwater grasses) in the Chesapeake Bay. Achieve and sustain the ultimate outcome of 185,000 acres of SAV Bay-wide necessary for a restored Bay. Progress toward this ultimate outcome will be measured against a target of 90,000 acres by 2017 and 130,000 acres by 2025.

Forest Buffer Outcome



Continually increase the capacity of forest buffers to provide water quality and habitat benefits throughout the watershed. Restore 900 miles per year of riparian forest buffer and conserve existing buffers until at least 70 percent of riparian areas throughout the watershed are forested.

Tree Canopy Outcome



Continually increase urban tree canopy capacity to provide air quality, water quality and habitat benefits throughout the watershed. Expand urban tree canopy by 2,400 acres by 2025.

# GOALS & OUTCOMES

## WATER QUALITY

Restoring the Bay’s waters is critical to overall watershed restoration because clean water is the foundation for healthy fisheries, habitats and communities across the region. However excess amounts of nitrogen, phosphorus and sediment in the Bay and its tributaries have caused many sections of the Bay to be listed as “impaired” under the Clean Water Act. The Chesapeake Bay Total Maximum Daily Load (TMDL) is driving nutrient and sediment reductions as described in the Watershed Implementation Plans (WIPs), adopted by the states and the District of Columbia, and establishes the foundation for water quality improvements embodied in this Agreement. These plans set nutrient and sediment reduction targets for various sources—stormwater, agriculture, air deposition, wastewater and septic systems.



**GOAL:** Reduce pollutants to achieve the water quality necessary to support the aquatic living resources of the Bay and its tributaries and protect human health.

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2017 Watershed Implementation Plans (WIP) Outcome



By 2017, have practices and controls in place that are expected to achieve 60 percent of the nutrient and sediment pollution load reductions necessary to achieve applicable water quality standards compared to 2009 levels.

2025 WIP Outcome



By 2025, have all practices and controls installed to achieve the Bay’s dissolved oxygen, water clarity/submerged aquatic vegetation and chlorophyll *a* standards as articulated in the Chesapeake Bay TMDL document.

Water Quality Standards Attainment and Monitoring Outcome



Continually improve the capacity to monitor and assess the effects of management actions being undertaken to implement the Bay TMDL and improve water quality. Use the monitoring results to report annually to the public on progress made in attaining established Bay water quality standards and trends in reducing nutrients and sediment in the watershed.

# GOALS & OUTCOMES

## TOXIC CONTAMINANTS

Toxic contaminants harm fish and wildlife in the Bay and its watershed and create risks to human health that limit the amount of fish that people can eat. Reducing the impacts of toxic contaminants is critical to improve the health of fish and wildlife, thereby improving their recreational value for citizens.



**GOAL:** Ensure that the Bay and its rivers are free of effects of toxic contaminants on living resources and human health.

Toxic Contaminants  
Research Outcome



Continually increase our understanding of the impacts and mitigation options for toxic contaminants. Develop a research agenda and further characterize the occurrence, concentrations, sources and effects of mercury, PCBs and other contaminants of emerging and widespread concern. In addition, identify which best management practices might provide multiple benefits of reducing nutrient and sediment pollution as well as toxic contaminants in waterways.

Toxic Contaminants  
Policy and Prevention  
Outcome



Continually improve practices and controls that reduce and prevent the effects of toxic contaminants below levels that harm aquatic systems and humans. Build on existing programs to reduce the amount and effects of PCBs in the Bay and watershed. Use research findings to evaluate the implementation of additional policies, programs and practices for other contaminants that need to be further reduced or eliminated.

# GOALS & OUTCOMES

## HEALTHY WATERSHEDS

Many small watersheds in the Bay region are currently healthy but also at risk of degradation as the demand for local lands and resources increases. Promoting the long-term conservation and protection of healthy watershed systems through stakeholder engagement, collaboration and education is critical to the health of the larger ecosystem.



**GOAL:** Sustain state-identified healthy waters and watersheds recognized for their high quality and/or high ecological value.

Healthy Watersheds  
Outcome



100 percent of state-identified currently healthy waters and watersheds remain healthy.

# GOALS & OUTCOMES

## STEWARDSHIP

The long-term success of the Chesapeake Bay restoration effort will depend on local leadership—and local action that depends primarily on a strong citizen stewardship. More than 600 local conservation and watershed organizations in our region are educating and empowering citizens to restore and protect their local streams and rivers. Tens of thousands of local citizen volunteers continue to donate their time and talent to our shared goals. Building a larger, broader, and more diverse constituency of stewards is vital to achieving many of the Goals and Outcomes outlined in this Agreement.



**GOAL:** Increase the number and the diversity of local citizen stewards and local governments that actively support and carry out the conservation and restoration activities that achieve healthy local streams, rivers and a vibrant Chesapeake Bay.

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Citizen Stewardship Outcome



Increase the number and diversity of trained and mobilized citizen volunteers with the knowledge and skills needed to enhance the health of their local watersheds.

Local Leadership Outcome



Continually increase the knowledge and capacity of local officials on issues related to water resources and in the implementation of economic and policy incentives that will support local conservation actions.

Diversity Outcome



Identify minority stakeholder groups that are not currently represented in the leadership, decision-making and implementation of conservation and restoration activities and create meaningful opportunities and programs to recruit and engage them in the Partnership's efforts.



# GOALS & OUTCOMES

## LAND CONSERVATION

The landscapes around the Bay and its tributaries are ecologically, culturally, historically and recreationally valuable to the people and communities of the region. Stimulating, renewing and expanding commitments to conserve priority lands for use and enjoyment is an integral part of furthering the watershed’s identity and spirit.



**GOAL:** Conserve landscapes treasured by citizens in order to maintain water quality and habitat; sustain working forests, farms and maritime communities; and conserve lands of cultural, indigenous and community value.

Protected Lands Outcome



By 2025, protect an additional two million acres of lands throughout the watershed—currently identified as high conservation priorities at the federal, state or local level—including 225,000 acres of wetlands and 695,000 acres of forest land of highest value for maintaining water quality. (2010 baseline year)

Land Use Methods and Metrics Development Outcome



Continually improve the knowledge of land conversion and the associated impacts throughout the watershed. By 2016, develop a Chesapeake Bay watershed-wide methodology and local level metrics for characterizing the rate of farmland, forest and wetland conversion, measuring the extent and rate of change in impervious surface coverage and quantifying the potential impacts of land conversion to water quality, healthy watersheds and communities. Launch a public awareness campaign to share this information with citizens, local governments, elected officials and stakeholders.

Land Use Options Evaluation Outcome



By the end of 2017, with the direct involvement of local governments or their representatives, evaluate policy options, incentives and planning tools that could assist them in continually improving their capacity to reduce the rate of conversion of agricultural lands, forests and wetlands as well as the rate of changing landscapes from more natural lands that soak up pollutants to those that are paved over, hardscaped or otherwise impervious. Strategies should be developed for supporting local governments’ and others’ efforts in reducing these rates by 2025 and beyond.

# GOALS & OUTCOMES

## PUBLIC ACCESS

Physical access to the Bay and its tributaries is very limited, with real consequences for quality of life, local economies and long-term conservation. Increasing public access to local waterways for fishing, swimming, boating and other activities fosters a shared sense of responsibility and increased stewardship that supports Bay watershed restoration goals.



**GOAL:** Expand public access to the Bay and its tributaries through existing and new local, state and federal parks, refuges, reserves, trails and partner sites.

Public Access  
Site Development  
Outcome



By 2025, add 300 new public access sites, with a strong emphasis on providing opportunities for boating, swimming and fishing, where feasible. (2010 baseline year)





# GOALS & OUTCOMES

## ENVIRONMENTAL LITERACY

The well-being of the Chesapeake Bay watershed will soon rest in the hands of its youngest citizens—the more than three million students in kindergarten through twelfth grade. Establishing strong, targeted environmental education programs now provides a vital foundation for these future watershed stewards.



**GOAL:** Enable every student in the region to graduate with the knowledge and skills to act responsibly to protect and restore their local watershed.

### Student Outcome



Continually increase students' age-appropriate understanding of the watershed through participation in teacher-supported, meaningful watershed educational experiences and rigorous, inquiry-based instruction, with a target of at least one meaningful watershed educational experience in elementary, middle and high school depending on available resources.

### Sustainable Schools Outcome



Continually increase the number of schools in the region that reduce the impact of their buildings and grounds on their local watershed, environment and human health through best practices, including student-led protection and restoration projects.

### Environmental Literacy Planning Outcome



Each participating Bay jurisdiction should develop a comprehensive and systemic approach to environmental literacy for all students in the region that includes policies, practices and voluntary metrics that support the environmental literacy Goals and Outcomes of this Agreement.

# GOALS & OUTCOMES

## CLIMATE RESILIENCY

Changing climatic and sea level conditions may alter the Bay ecosystem and human activities, requiring adjustment to policies, programs and projects to successfully achieve our restoration and protection goals for the Chesapeake Bay and its watershed. This challenge requires careful monitoring and assessment of these impacts and application of this knowledge to policies, programs and projects.



**GOAL:** Increase the resiliency of the Chesapeake Bay watershed, including its living resources, habitats, public infrastructure and communities, to withstand adverse impacts from changing environmental and climate conditions.

14

Monitoring and  
Assessment  
Outcome



Continually monitor and assess the trends and likely impacts of changing climatic and sea level conditions on the Chesapeake Bay ecosystem, including the effectiveness of restoration and protection policies, programs and projects.

Adaptation Outcome



Continually pursue, design and construct restoration and protection projects to enhance the resiliency of Bay and aquatic ecosystems from the impacts of coastal erosion, coastal flooding, more intense and more frequent storms and sea level rise.



# MANAGEMENT STRATEGIES

## DEVELOPMENT AND IMPLEMENTATION

Within one year of the signing of the Chesapeake Bay Watershed Agreement, the Chesapeake Bay Program's Goal Implementation Teams will develop Management Strategies for the Outcomes that support this Agreement's goals. These strategies will outline the means for accomplishing each Outcome as well as monitoring, assessing and reporting progress and coordinating actions among partners and stakeholders as necessary. Where appropriate, Management Strategies should describe how local governments, nonprofit and private partners will be engaged; where actions, tools or technical support are needed to empower local governments and others to do their part; and what steps will be taken to facilitate greater local participation in achieving the Outcome.

Participation in Management Strategies or participating in the achievement of Outcomes is expected to vary by signatory based on differing priorities across the watershed. This participation may include sharing knowledge, data or information, educating citizens or members, working on future legislation and developing or implementing programs or practices. Management Strategies, which are aimed at implementing outcomes, will identify participating signatories and other stakeholders, including local governments and nonprofit organizations, and will be implemented in two-year periods.

The signatories and other partners shall thereafter update and/or modify such commitments every two years. Specific Management Strategies will be developed in consultation with stakeholders, organizations and other agencies and will include a period for public input and review prior to final adoption. The Principals' Staff Committee will report on adoption of Management Strategies at the next Executive Council meeting and report on implementation of Management Strategies every two years.

Management Strategies may address multiple Outcomes if deemed appropriate. Goal Implementation Teams will re-evaluate biennially and update strategies as necessary, with attention to changing environmental and economic conditions. Partners may identify policy changes to address these conditions and minimize obstacles to achieve the Outcomes.

Stakeholder input will be incorporated into the development and reevaluation of each of the strategies. The Chesapeake Bay Program will make these strategies and reports on progress available to the public in a transparent manner on its websites and through public meetings of the appropriate Goal Implementation Teams and Management Board.

The Goal Implementation Teams will submit the Management Strategies to the Partnership's Management Board for review. If the Management Board determines that any strategy or plan developed prior to the signing of this Agreement meets the requirements of a Management Strategy as defined above, no new strategy needs to be developed. This includes, but is not limited to, the strategies and plans for implementing the Chesapeake Bay TMDL.

# AFFIRMATION

As Chesapeake Bay Program Partners, we recognize the need to accelerate implementation of actions necessary to achieve the Goals and Outcomes outlined herein and realize our shared Vision of a healthy and vibrant Chesapeake Bay watershed.

As Chesapeake Bay Program Partners, we acknowledge that this Agreement is voluntary and subject to the availability of appropriated funds. This Agreement is not a contract or an assistance agreement. We also understand that this Agreement does not pre-empt, supersede or override any other law or regulation applicable to each signatory.

We, the undersigned members of the Chesapeake Executive Council, re-affirm our commitment to support the Goals of this Agreement and to work cooperatively in its implementation. We agree to work both independently and collaboratively toward the Goals and Outcomes of this Agreement and to implement specific Management Strategies to achieve them. Every citizen of this great watershed is invited to join with the Partnership, uniting as a region and embracing the actions that will lead to success.

Date: June 16, 2014

For the Chesapeake Bay Commission



*Ronald E. Miller*

For the State of Delaware



*Jim Mahaffey*

For the District of Columbia



*Vernon C. Gray*

For the State of Maryland



*Arthur S. Hays*

For the Commonwealth of Pennsylvania



*Tom Corbett*

For the State of New York



*Andrew Cuomo*

For the Commonwealth of Virginia



*Lee R. Hulse*

For the State of West Virginia



*Earl Ray Tomblin*

For the United States of America  
on behalf of the Federal Government and the  
Federal Leadership Committee for the Chesapeake Bay:



*Jan McElmurry*

- U.S. Environmental Protection Agency
- U.S. Department of Agriculture
- U.S. Department of Commerce
- U.S. Department of Defense
- U.S. Department of Homeland Security
- U.S. Department of the Interior
- U.S. Department of Transportation



# CHESAPEAKE BAY WATERSHED





Chesapeake Bay Program  
*Science. Restoration. Partnership.*

## 2015 Multistate Conservation Grant Program

### Grant Proposal

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#### Executive Summary

(Limit – 2 Pages)

1. **Project Title:** Promoting Strategic Fish Habitat Conservation through Regionally-coordinated Science and Collaboration
2. **Full Legal Name of Organization:** National Fish Habitat Board. If awarded, the grant will be administered on behalf of the National Fish Habitat Board by the Association of Fish and Wildlife Agencies, 444 North Capitol Street NW, Washington DC, 20001
3. **Organization Information:**
  - a. Applicant Classification: Nongovernmental Organization
  - b. Nongovernmental Organization Classification (if applicable): 501(c)(6)
4. **Lead Applicant's Contact Information:**

Mr. Kelly Hepler, Assistant Commissioner, Alaska Department of Fish and Game and Chair, National Fish Habitat Board  
c/o Association of Fish and Wildlife Agencies  
444 North Capitol Street NW, Suite 725  
Washington, DC 20001  
Email: Kelly.hepler@alaska.gov  
Phone Number: 907-242-1907
5. **Name and Affiliation of Co-Investigator(s)/Partner(s) (if applicable):**

Gary Whelan, Michigan Department of Natural Resources  
Ryan Roberts, National Fish Habitat Board Communications Coordinator
6. **Project Length:** 1 year. This request builds on two prior one-year MSCG projects, funded in 2013 and 2014, to support Fish Habitat Partnership science and collaboration activities (see Funding Requested below).
7. **Funding Requested:**
  - a. Total Amount: \$521,600
  - b. Year 1 Amount: \$521,600
  - c. Year 2 Amount (if applicable): \$
  - d. Year 3 Amount (if applicable): \$
8. **Estimate of Partnership Funds to be Leveraged (if applicable): \$ 1,300,000**
9. **Funding Source.**
  - a. Funding Source: 100% Sport Fish Restoration Fund

**10. State Benefit Requirement:** The outcomes of this project will benefit all 50 states through regional-based Fish Habitat Partnerships.

**11. Primary National Conservation Need (NCN) Addressed:** NCN 4: Strengthening the National Fish Habitat Partnership

**12. Summary Statement (200 words or less):**

Through regional collaboration, Fish Habitat Partnerships (FHP) will compile biological and process-level information on fish habitats to meet FHP science needs and supplement the national fish habitat assessment; establish new or improved strategic goals, objectives, and priorities for conserving fish species and habitats; expand the scope of engaged partners; and, promote best management practices for implementing habitat conservation actions. Building capacity is critical to the success and sustainability of Fish Habitat Partnerships and expanding opportunities for collaboration is an essential element to meeting the goals and objectives set forth in the National Fish Habitat Action Plan (2<sup>nd</sup> Edition)..

**13. Terms and Conditions.** *Use of MSCGP Grants - All applicants must ensure that their proposed project does not fund, in whole or in part, an activity that promotes or encourages opposition to the regulated hunting or trapping of wildlife or taking of sport fish.*

I agree with the above terms and conditions.

**Project Narrative**  
(Limit – 10 Pages)

**Title** Promoting Strategic Fish Habitat Conservation through Regionally-coordinated Science and Collaboration

**Objective(s)** Priority needs identified by Fish Habitat Partnerships vary across regions, and include improving hydrography data in Alaska and Hawaii and engaging landowners in the agricultural Midwest, and setting conservation priorities for aquatic habitats across the U.S. This project will address these needs and build on the accomplishments made during the 2013 and 2014 MSCGP Grants.

Through regional collaboration, FHPs will:

- Collectively advance habitat assessments through identification of mutual data needs, data acquisition and landscape-level analysis for the benefit of fish, mussels, and other aquatic animals.



- Provide regional and system-specific fish population, habitat, and human impact data to fill data gaps and to assist the national Science & Data Committee in improving the 2015 national fish habitat assessment.
- Identify and promote best management practices for habitat conservation.
- Develop and implement methods to effectively engage local communities in fish habitat conservation projects.
- Improve strategic plans of individual FHPs.
- Establish landscape-scale linkages among FHP priorities and those of other landscape conservation efforts.

### **Problem Statement**

Conservation (protection, restoration and enhancement) of intact and degraded fish habitat across the nation is recognized as a critical issue for fish and natural resource managers and stakeholders. Lost habitat undermines the health and productivity of aquatic systems and dependent fish populations and the socioeconomic benefits derived from these resources. Healthy fish habitat is essential to effectively sustaining our nation's recreational, commercial, and subsistence fishery resources and providing benefits to the American public.

In 2003 the Association of Fish and Wildlife Agencies took a leadership role in the development of the National Fish Habitat Action Plan, which was completed in 2006. The 2<sup>nd</sup> edition of the plan (Action Plan) was published in 2012 with new objectives focused on meeting the needs and priorities for conserving fish habitat at a landscape scale, as well as providing the over-arching principles that guide the collaborative efforts of the National Fish Habitat Partnership.

The National Fish Habitat Board (Board) was established to administer the actions needed to carry out the Action Plan and support FHPs in implementing on the ground fish habitat conservation actions. The Board has identified the following operational roles for FHPs:

- Assemble the scientific assessment data needed to conserve fish habitats within their partnership areas,
- Establish strategic goals and objectives that define desired outcomes for fish species and habitats within their partnership areas,
- Identify priority places and/or issues to focus conservation action, and prioritize fish habitat conservation projects to meet goals and objectives,
- Coordinate and compile information on outputs (conservation actions) and outcomes (changes in habitat condition) for reporting to the Board and stakeholders, and
- Collaborate with other FHPs where appropriate to carry out these responsibilities.

This grant request is needed to supplement other state, federal and partner funds that are required to more fully support successful implementation of the Action Plan and further the priority work of the Fish Habitat Partnerships.

State fish and wildlife agencies benefit through:

- continued leadership on the National Fish Habitat Board;
- increased collaboration between FHPs and state fish and wildlife agencies;

- increased engagement with groups working to conserve fish habitat;
- increased coordination on marine resource issues;
- increased habitat available for fish and other aquatic organisms throughout the United States; and,
- increased capabilities to build science and data capacity.

Collaborative efforts are critical to ensuring that human and financial resources are used wisely and efficiently to effectively achieve conservation success. The nineteen Board-recognized FHPs are committed to working collaboratively to fulfill their responsibilities, as evidenced by their demonstrated willingness to work collectively to increase their abilities to implement the Action Plan (2012 MSCG) and the regional collaboration that is occurring with operational responsibilities such as resources assessments (2013 MSCG) and building FHP capacity to achieve their conservation priorities (2014 MSCG). However, to continue these collaborative efforts the FHPs need additional financial support to fully implement the objectives described in this grant proposal. Additionally, collaboration among FHPs strengthens the National Fish Habitat Partnership by focusing on processes that bring partners together to advance strategic priorities regionally as well as nationally. This approach to fish habitat conservation is a fundamental principle of the National Fish Habitat Action Plan.

### **Experience**

The National Fish Habitat Partnership is a state-led effort to address the nation's fish and aquatic habitat conservation needs. The National Fish Habitat Board, organized in 2006, is responsible for developing policies and guidance for recognizing Fish Habitat Partnerships, and for establishing national measures of success and evaluation criteria for FHPs. Since 2007, the Board has recognized 19 FHPs and in 2012 completed its first performance evaluation of FHPs. Kelly Hepler has chaired the Board since May 2008, and is supported by an interagency staff from state and federal agencies and the Association of Fish and Wildlife Agencies.

The Association of Fish and Wildlife Agencies provides significant services to NFHP and the Board and AFWA have been successful in receiving and administering a number of MSCGP Grants that have supported the National Fish Habitat Partnership. This grant request represents a continuation of that support.

### **Approach**

The National Fish Habitat Partnership brings a focused and coordinated approach to protecting, restoring, and enhancing the nation's fish habitats. This proposal strengthens that approach by supporting robust collaboration among FHPs and other large-scale conservation organizations to achieve the NFHP's national and regional priorities.

This project supports activities of the Fish Habitat Partnerships that will assist in achieving four objectives in the 2<sup>nd</sup> Edition of the National Fish Habitat Action Plan:

1. *Achieve measurable habitat conservation results* through strategic actions of Fish Habitat Partnerships that improve ecological condition, restore natural processes, or prevent the

decline of intact and healthy systems leading to better fish habitat conditions and increased fishing opportunities.

2. *Broaden the community of support for fish habitat conservation* by increasing fishing opportunities, fostering the participation of local communities – especially young people – in conservation activities, and raising public awareness of the role healthy fish habitats play in the quality of life and economic well-being of local communities.
3. *Fill gaps in the National Fish Habitat Assessment* and its associated database to empower strategic conservation action supported by broadly available scientific information, and integrate socio-economic data in the analysis to improve people’s lives in a manner consistent with fish habitat conservation goals.
4. *Communicate the conservation outcomes* produced collectively by Fish Habitat Partnerships, *as well as new opportunities and voluntary approaches for conserving fish habitat*, to the public and conservation partners.

Based on our previous experience, the distribution of funds among FHPs within each region will be flexible to meet specific and evolving needs of the collaborating FHPs; the distribution of funds across regions is not expected to change from that shown in the budget table. Regional sub-agreements will be structured around the five objectives of the Action Plan, and will identify specific tasks that will further the objectives. Sub-awards will be made to the Fish Habitat Partnerships broken down by regions, with fiscal agents administering funds on behalf of FHPs. These fiscal agents are long-term managing partners for the FHPs and provide services to the FHPs under partnership agreements therefore no competition is required for these services.

### **Expected Results or Benefits**

The project will achieve results compatible with desired outcomes identified in NCN #4. All of the expected results build upon prior work of the FHPs, much of which was supported by MSCGP funds previously awarded. Expected results and benefits include:

- Enhanced regional aquatic habitat condition assessments and landscape-scale conservation design for coastal habitats on the Atlantic and Pacific coasts (including Hawaii), coldwater habitats in the Appalachians and interior west, and the southeastern United States through collaborative efforts of FHPs.
- In three eastern FHPs, creation of an Aquatic Connectivity Assessment Program.
- Across the U.S., facilitation of prioritized, on-the-ground, partner-led fish habitat conservation projects that achieve measurable results towards Action Plan goals and strategies.
- Integrated use of habitat assessments to identify geographic focus areas and improve strategic prioritization of conservation actions and reporting of outcomes by FHPs across the United States.
- Expansion of landowner engagement in four Midwestern states by establishing landowner committees, utilizing training provided to land conservation employees in 2013. Landowner committees help to prioritize projects, record monitoring data, and showcase measurable habitat/sport fish outcomes on farms and in communities. For four Midwest Fish Habitat Partnerships, improved utilization of fish habitat condition

assessments completed in 2012 to identify spatially explicit focal areas in which to prioritize limited conservation resources, building upon the example of the Ohio River Basin FHP. This grant would improve the GIS data behind the habitat condition assessment and track monitoring data from NFHP and other fhp habitat projects. An Angler economic impact survey for the Midwest will also be developed under this application.

- Building upon progress made on the Kenai Peninsula (Alaska) in 2013, application of advanced remote sensing information (LiDAR) to map stream networks in the Mat-Su Basin to standards of the National Hydrography Dataset (NHD). This effort will be enhanced by a recently funded Alaska LCC project to establish a statewide framework to incorporate and steward updated local and regional level hydrography data into an improved NHD for Alaska.
- Through the Campaign for Western Native Trout (initiated in 2012), building and strengthening grassroots networks of support by communicating conservation needs and results using new and traditional media and events.
- Production of a spatial framework that delineates key nursery habitats on the Pacific coast, overlaying existing datasets describing potential threats to habitats and the fish inhabiting them, and integrating these analyses to set priorities for restoration and protection. This work builds upon results of a scoping “summit” held in 2013.

### **Outcomes/Benefits**

The National Fish Habitat Partnership brings a focused and coordinated approach to protecting, restoring, and enhancing the nation’s aquatic habitats. This proposal strengthens that approach by linking the oversight responsibility of the Board and the operational responsibility of the FHPs to achieve national and regional scientific and conservation goals.

More specifically, the project will:

- Enhance regional aquatic habitat condition assessments and landscape-scale conservation design for coastal habitats on the Atlantic and Pacific coasts (including Hawaii), coldwater habitats in the Appalachians and interior west, and the southeastern United States through cooperative efforts of FHPs.
- Improve strategic prioritization of conservation actions and reporting of outcomes by FHPs across the United States.
- In three eastern Fish Habitat Partnerships, initiate connectivity teams in participating FHP states and bring these teams together to initiate and develop working relationships. Collectively define and communicate the scientific basis of river restoration through connectivity improvement throughout the FHP regions. Share, update and develop connectivity assessment tools and resources specific to FHP state needs. Communicate among FHP state connectivity teams to support and build on past experiences.
- Building on work to expand landowner engagement in four Midwestern states the Midwestern FHPs will be assembling a landowner engagement guide, beginning work on an angler economic impact study, updating websites, and conducting strategic habitat conservation/GIS analysis.

- Building upon progress made on the Kenai Peninsula (Alaska) in 2013 and 2014, apply advanced remote sensing information (LiDAR) to map stream networks to standards of the National Hydrography Dataset (NHD).
- Through the Reservoir FHP analyze data sets to gain a better understanding of how reservoirs interact with their catchment. These analyses will produce criteria and guidelines that reservoir managers can advocate when partnering with agencies responsible for managing catchments.
- Support a West Coast-wide workshop to convene partners, share the results of work accomplished to date (which includes a West Coast-wide classification and inventory of databases, and collection and assimilation of fish and habitat datasets for the West Coast), and chart the course for next steps in achieving priority tasks associated with identifying and prioritizing juvenile fish habitat on the West Coast.
- In California, the CA Fish Passage Forum will refine APASS Optimized Fish Passage Barrier Prioritization Tool. This will further improve habitat quality attributes, unknown barriers and cost criteria to enhance the utility and reliability of APASS barrier optimization and support maintenance and California’s fish Passage Assessment Database. In addition, they may contract with counties to obtain cost information on 71 fish passage projects in California.

### **Certification Regarding Fishing/Hunting**

“By submitting this proposal, the organization’s primary contact and/or authorized representative identified in this grant application certifies that the (National Fish Habitat Partnership) (1) will not use the grant funds to fund, in whole or in part, any activity of the organization that promotes or encourages opposition to the regulated hunting or trapping of wildlife or the regulated taking of fish; and (2) that the grant funds will not be used, in whole or in part, for an activity, project, or program that promotes or encourages opposition to the regulated hunting and trapping of wildlife or the regulated taking of fish.”

### **Certification Regarding Partnership Funds (if applicable)**

“By submitting this proposal, the organization’s primary contact and/or authorized representative identified in this grant application certifies that the (National Fish Habitat Partnership): 1) understands that partnership fund contributions are assessed in the Association’s review and selection of its priority list of MSCGP projects, but are not considered by the USFWS to be an official non-federal match/cost-share; 2) will provide the partnership funds identified in order to complete the proposed project; 3) understands that if the promised partnership funds are not provided, and there is not a sufficient explanation, potential consequences could include a poor “quality assurance” evaluation by the National Grants Committee for the organization’s future MSCGP applications; the imposition of “special award conditions” on this proposed grant and/or future grants (pursuant to 43 CFR 12); and if the failure to provide partnership funds affects the scope/objective or deliverables or other terms and conditions of the grant, then the USFWS could take necessary enforcement and termination actions (pursuant to 43 CFR 12).”

**Budget**  
(Limit – 2 Pages)

**1. Funding Requested: \$521,600**

Amount Funded in 2013: \$490,617

Amount Funded in 2014: \$344,500 (of a total NFHP project of \$544,500)

Expenses	Fish Habitat Partnerships	2014		Total MSCGP Costs Only
		MSCGP	P.F.*	
AFWA	Personnel Costs	\$ 6,000		\$ 6,000
Eastern U.S.	Atlantic Coastal FHP, Eastern Brook Trout Joint Venture, Southeast Aquatic Resources Partnership	\$150,000		\$150,000
Midwest U.S.	Fishers & Farmers Partnership, Driftless Area Restoration Effort	\$ 80,000		\$ 80,000
U.S.	Reservoir FHP	\$ 75,000		\$ 75,000
Pacific Coast	Pacific Marine & Estuarine Partnership, California Fish Passage Forum	\$ 85,000		\$ 85,000
Alaska	Kenai Peninsula FHP, Mat-Su Basin Salmon Habitat Partnership, Southwest Alaska Salmon Habitat Partnership, Southeast Alaska FHP	\$ 70,000		\$ 70,000
Hawaii	Hawaii Fish Habitat Partnership	\$ 30,000		\$ 30,000
Total direct costs		\$496,000		\$490,500
Indirect costs		\$ 25,600		\$ 25,600
<b>Total Expenses</b>		<b>\$521,600</b>		<b>\$521,600</b>

Budget by Cost Category

Expenses	2015		Total MSCGP Costs Only
	MSCGP	P.F.*	
Personnel	\$ 5,000		\$ 5,000
Fringe ( __%)	\$ 1,000		\$ 1,000
Travel			
Supplies			
Equipment			
Contractual	\$490,000		\$490,000
Other			
Total Direct Costs	\$496,000		\$496,000
Indirect Costs (20%)	\$ 25,600		\$ 25,600
<b>Total Expenses</b>	<b>\$521,600</b>		<b>\$521,600</b>

\* Estimate of Partnership Funds to be Leveraged: \$ 1,300,000

## **Qualifications of Key Personnel**

### *Kelly Hepler, Chairman, National Fish Habitat Board*

Kelly Hepler began working at the Alaska Department of Fish and Game in 1979 as a fisheries biologist and has held increasingly complex positions throughout his career. Kelly served as director of the Division of Sport Fish and most recently as a special assistant for the previous commissioner. He represents the department in numerous national forums and is presently chair of the National Fish Habitat Board. Kelly holds a B.S. in Fish and Wildlife Management from Montana State University.

### *Ryan Roberts, Communications Coordinator, National Fish Habitat Board*

Ryan Roberts is the Communications Coordinator for the National Fish Habitat Partnership. Mr. Roberts has 8 years of experience in public relations/communications and has worked on the National Fish Habitat Partnership since 2008. Mr. Roberts created several communications toolkits for use by National Fish Habitat Partnerships and created an overall communications strategy for the partnership. Mr. Roberts' contributions were key in the development and release of the Status of Fish Habitat Partnership 2010 Assessment and the 2<sup>nd</sup> Edition of the National Fish Habitat Action Plan (2012).

Staff level leadership and management support of the work of the Board group will be provided by AFWA, USFWS, NOAA, state agencies and other partners such as NGO's.

National Fish Habitat Board Members August 2014

<http://fishhabitat.org/contacts/board>

June 2014 - In This Issue:

ACFHP Assists North Atlantic LCC

Exploring Protections for the Lower Hillsborough River

Mapping and Inventory in the Mat-Su Basin

Science and the Coastal FHPs

Two FHPs Join Forces to Celebrate the Eel River Delta

PMEP Makes Progress on West Coast-wide Assessment



The Eel River meets the Pacific near Ferndale, California.

## Science and the Coastal FHPs

*In the coming months, this sidebar will feature science-FHP connections across the United States. This issue features Hawaii FHP science connections.*

The Hawaii Fish Habitat Partnership works collaboratively with science-based initiatives intended to collect, analyze and distribute technical information for coastal fish habitat across the main Hawaiian Islands:

### Sentinel Site

Hawaii FHP restoration sites are located within the Hawaii NOAA Sentinel Site network where collaborating agencies and community representatives are using existing NOAA tools, services, and other assets to apply science-based solutions to address regional coastal challenges.

<http://oceanservice.noaa.gov/sentinelsites/hawaii.html>

### Habitat Blueprint

The Hawaii FHP is directing funds to implement aquatic habitat restoration projects within the NOAA Habitat Blueprint effort located along the south Kohala Coast of West Hawaii Island. The Habitat Blueprint provides a framework for NOAA interact strategically across programs and with other organizations to address the growing technical challenges to address coastal and marine habitat loss and degradation.

<http://www.habitat.noaa.gov/habitatblueprint/WestHawaii.html>

### Climate Change and Coastal Streams of Hawaii

All of the larger native stream fauna in Hawaii are diadromous and spend a critically important time of their life history in the coastal marine environment. The Hawaii FHP is collaborating with the U.S. Forest Service, the Pacific Islands Climate Change Cooperative, and Michigan State University to study the ecological effects the changes in stream discharges to the marine environment that are anticipated to occur with the onset of a changing climate. (Link is to a very well-produced video interview with Hawaii FHP Steering Committee member Rich MacKenzie.)

<http://www.fs.fed.us/psw/publications/video/mackenzie201210/>

*"Each of us has this special connection to the sea because we come from the sea, and you just have to measure the amount of salt in water in the human body and in the veins in our blood, and you understand that connection."*

~ Secretary of State John Kerry

## ACFHP Assists North Atlantic LCC in Completing Aquatic Habitat Assessment

The Atlantic Coastal Fish Habitat Partnership (ACFHP) has been working for the past year with the North Atlantic Landscape Conservation Cooperative (LCC) to complete an aquatic habitat



assessment of Atlantic coastal draining streams, rivers, and estuaries from Maine to Virginia. The North Atlantic LCC contracted Downstream Strategies from Morgantown, WV to create a spatially explicit data analysis and modeling system for assessing fish habitat condition across the North Atlantic. The objective of the project is to develop priority areas for future protection and restoration work.

A pilot project to assess winter flounder habitat in the Narragansett Bay is underway to refine modelling techniques that will be used for a number of prioritized estuarine and coastal species. ACFHP has worked with its partners to provide fisheries and environmental data needed to complete the modelling effort. Several partners, including Rhode Island Division of Fish and Wildlife, The Nature Conservancy, and Massachusetts Division of Marine Fisheries, have been particularly involved in providing data and technical expertise to this pilot model. ACFHP has also queried partners to determine which additional species could be modelled as part of this effort, and a draft list of potential priority species is under consideration.

Coastal fish habitat partnerships such as ACFHP can provide assistance to the Landscape Conservation Cooperatives by acting as the fish habitat conservation coordination body for LCC efforts. This fish habitat modeling project is an implemented example of how ACFHP envisions integrating with the larger landscape level U.S Fish and Wildlife Service collaboration effort.



## Two FHPs Join Forces to Celebrate the Eel River Delta

The California Fish Passage Forum and Pacific Marine and Estuarine Fish Habitat Partnership are joining forces in September to highlight the important restoration efforts underway in the Eel River Delta in California.

A perfect storm of four events is occurring in the fall, creating a unique opportunity to showcase the 196-mile long river and its tributaries, which comprise the third largest river in California.

Events include celebrating National Estuaries Week (scheduled for the week of September 23), highlighting the Eel River as a *10 Waters to Watch*, jointly funding the Salt River Ecosystem Restoration project, and hosting the fall Forum meeting in the Arcata, California area.

Both fish habitat partnerships seek to convene existing and potential funders, NFHP leaders, federal and state agency leaders, local government officials, and others to discuss the importance of the delta and showcase collaborative efforts underway in the delta. Stay tuned for more details!

## PMEP Makes Progress on West Coast-wide Assessment

## Exploring Protections for the Lower Hillsborough River

On May 28th, 35 participants gathered at the Beck Building in downtown Tampa, Florida to collaborate and share ideas about ways to continue to preserve and protect the lower Hillsborough River through participation in a dynamic workshop titled, "Exploring Best Practices for the Lower Hillsborough River." Presented by the Southeast Watershed Forum (SEWF) with partners, the Southeast Aquatic Resources Partnership (SARP) and Ecosphere Restoration Institute, and hosted by the City of Tampa Planning & Development Department, this workshop included an overview of planned activities for slated development on the river

, as well as expert presentations on low impact development (LID) techniques and a hands-on small group mapping exercise to identify potential target areas where LID/best practices could protect water quality and habitat. The river is also the focus of the city's new and expanding river walk, providing recreational and economic opportunities for people living, working and visiting the area and can showcase how low impact development enhances local quality of life.

The Hillsborough River flows into Tampa Bay, an EPA priority watershed, and has significant value as fish and manatee habitat. At the center of the river walk development is the construction of Waterworks Park and the restoration of Ulele Springs, once a drinking water source for Tampa and a green oasis. As the city grew, the spring was piped underground and the natural habitat was degraded. An extensive restoration effort (sponsored by SARP, NOAA, USFWS, the Southwest Florida Water Management District (SWFWMD), the Tampa Bay Estuary Program (TBEP), and others) to reconnect water from the springs to the Hillsborough River is under way allowing fish, manatee and other wildlife access to the fresh water and providing thriving habitat in the heart of downtown Tampa. Workshop participants were asked to keep protections and management of this and other areas of potential "prime habitat" in mind when exploring best management practices and considering key partners, potential funding sources, and possible next steps moving forward.

Ultimately, in addition to providing information about methods, the workshop presentations and discussions helped to raise awareness about the cost of and funding and technical support available for best management practices. It also provided a platform for multiple departments at the City to communicate with representatives from federal, state and local agencies, as well as developers about changes to internal processes and programs that would assist in the implementation of best management practices. Lastly, it facilitated communication about ways that the City could potentially encourage and incentivize low impact development. The project was funded by a Targeted Watershed Grant from EPA Region 4.



*Restoration of Ulele Springs along the Lower Hillsborough River. Photo credit: Lindsay Gardner, SARP.*



*Small group mapping exercise discussions. Photo credit: Lindsay Gardner, SARP.*



The Pacific Marine and Estuarine Fish Habitat Partnership is working with partners to make progress implementing its West Coast-wide juvenile fish habitat assessment.

Working in concert with The Nature Conservancy and SeaSpatial, the assessment team conducted three webinars with experts from Washington, Oregon, and California to inform the content of a State of the Knowledge report. The report, which will be finalized in August of 2014, lays the foundation for the assessment, and includes a new Coastal and Marine Ecological Classification Standard (CMECS)-based West Coast estuary classification system as well as life history information on 15 focal species:

Green sturgeon (*Acipenser medirostris*)  
 Leopard shark (*Triakis semifasciata*) Bat ray (*Myliobatis californica*)  
 Pacific herring (*Clupea pallasii*)  
 Bay shrimp (*Crangon franciscorum*)  
 Dungeness crab (*Cancer magister*)  
 California halibut (*Paralichthys californicus*)  
 English sole (*Parophrys vetulus*)  
 Starry flounder (*Platichthys stellatus*)  
 Shiner perch (*Cymatogaster aggregata*)  
 Steelhead (*Oncorhynchus mykiss*)  
 Coho salmon (*Oncorhynchus kisutch*)  
 Chinook salmon (*Oncorhynchus tshawytscha*)  
 Brown rockfish (*Sebastes auriculatus*)  
 Staghorn sculpin (*Leptocottus armatus*)

A peer review of the State of the Knowledge report will occur in July 2014 prior to the report being finalized.

Phase II of the assessment begins in July of 2014. Phase I included a West Coast-wide survey of fish experts to obtain information on existing datasets associated with fish habitat in estuaries. Phase II includes direct contact with individuals who have datasets and data summaries to obtain the data. Phase III will incorporate existing datasets into a geospatial data framework.

In early spring 2015, PMEP will convene West Coast experts to review a draft of the PMEP assessment report and take key next steps to define priorities for West Coast juvenile fish habitat restoration.

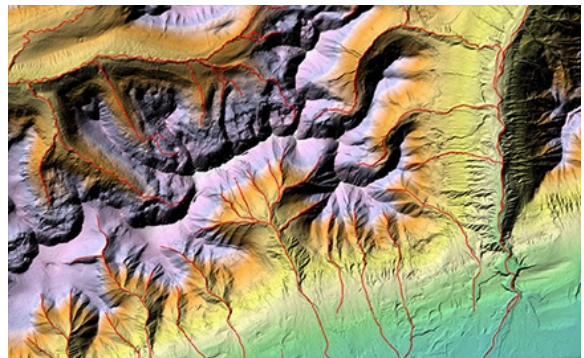


Juvenile starry flounder at the Suisun Marsh, California. Photo caption: Dave Giordano.

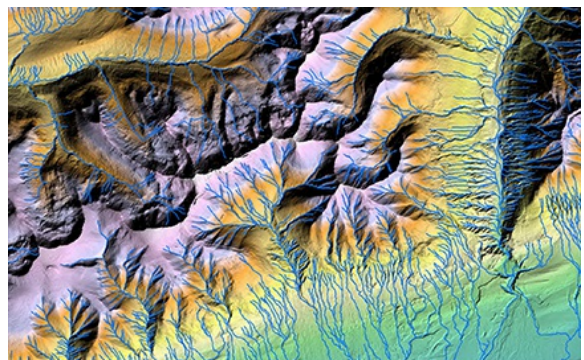
## Mapping and Inventory in the Mat-Su

Along with other Alaska Fish Habitat Partnerships (FHPs), the Mat-Su Basin Salmon Habitat Partnership and Alaska Landscape Conservation Cooperatives (LCCs) are working together in multiple areas of conservation overlap. Two primary joint efforts involve mapping and inventory, which meet climate change objectives outlined in the Mat-Su Salmon Partnership's Strategic Plan, as well as Alaska LCC strategies.

The first involves updating the National Hydrography Dataset (NHD), which the NFHP Science and Data Committee uses to evaluate the status of fish habitat across the nation every five years. In the Mat-Su (as across Alaska), this common dataset is insufficiently detailed, has inaccuracies, and is currently lacking the analytical tools that are available in other parts of the U.S. and are needed for the national evaluation. This deficit is also a significant concern to the five LCCs that cover the Alaska landscape.



Currently mapped streams (red lines) of Government Peak near Hatcher Pass on highly detailed topographic relief of the Mat-Su LiDAR project. Red lines represent currently mapped streams. Note how many stream channels in the topography are "missing" a stream line.



Newly mapped stream lines which were derived from the highly-detailed LiDAR topography. Most of the channels in the topography now show a new stream line. Once the new streams are mapped across the Mat-Su basin, they will undergo a verification process to determine which stream channels have water year round and which are seasonal.

In 2013, a statewide interagency group (which included a representative from the Mat-Su Salmon Partnership Steering Committee) formed to address the need to update the NHD in Alaska. That same year, the Alaska FHPs and LCCs secured \$300,000 in funding to facilitate upgrades to Alaska's NHD. Over the next three years, partners will support and participate in a large effort to accurately map streams in the Mat-Su Basin so they are on par with the national standards, and create the ability to use NHD+ in the future.

The second effort includes inventory data contribution to the Alaska Online Aquatic Temperature Site (AKOATS). Funded by the Western Alaska LCC, the University of Alaska is developing a comprehensive statewide inventory of current and historic continuous monitoring locations for stream and lake temperatures. This project is one component of the LCC's strategy to understand potential climate impacts to freshwater systems across Alaska, and is building on existing efforts of Alaska FHPs and other organizations throughout the state. With support from NFHP and others, Cook Inlet Keeper

(a Mat-Su Partnership member) conducted stream temperature monitoring from 2008-2012. They have analyzed the data and are using it to identify and assess climate vulnerability differences between cold and warm streams across the Mat-Su. This project is an extension of work on the Kenai Peninsula and Kenai FHP, and is being used as a model to evaluate climate change considerations within all Alaska FHPs. Inclusion of FHP project data will continue to strengthen the AKOATS network, and our ability to maximize the resiliency of salmon and other fish in the face of climate change.

[Atlantic Coastal Fish Habitat Partnership](#) | [California Fish Passage Forum](#) | [Hawaii Fish Habitat Partnership](#) | [Kenai Peninsula Fish Habitat Partnership](#) | [Mat-Su Basin Salmon Habitat Partnership](#) | [Pacific Marine and Estuarine Fish Habitat Partnership](#) | [Southeast Aquatic Resources Partnership](#) | [Southwest Alaska Salmon Habitat Partnership](#) | [Western Native Trout Initiative](#)

STAY CONNECTED



**September 2014 - In This Issue:**

**The Engaging Lifecycle of GTM NERR Oyster Reef Restoration**

**Coastal FHPs to host session at RAE Conference**

**WNTI News**

**Southeast Alaska - Home to Thousands of Estuaries**

**Eel River Delta Event Sept. 18**



Canada geese in the Eel River Delta. Photo credit: Dave Erickson.

## Coastal FHPS to host session at Restore America's Estuaries Conference in November

The Coastal FHPs are hosting a session, "Advancing estuary restoration, awareness, and science through the coastal fish habitat partnerships," on Wednesday, November 5, from 10:30am to noon in Room Maryland 3 at the Restore America's Estuaries Conference in Washington, DC.

The session will consist of two 45-minute blocks. The first block will include three speakers - Debbie Hart (Southeast Alaska FHP), Lisa Havel (Atlantic FHP), and Lindsay Gardner (SARP) - sharing examples of projects from different regions of the country, highlighting protection and restoration, science and data, and outreach and education. All of the coastal FHPs are providing content for Debbie, Lisa, and Lindsay to share.

The second block will consist of a panel comprised of David Wigglesworth (USFWS), Kelly Hepler (NFHP Board Chair), Buck Sutter (NOAA), Rua Mordecai (South Atlantic Fishery Management Council), and George Schuler (The Nature Conservancy). The panel will be discussing opportunities, challenges, messaging, coordination, and collaboration among the coastal FHPs and the governmental and nonprofit organizations represented on the panel.

***"The sea, the great unifier, is man's only hope. Now, as never before, the old phrase has a literal meaning: we are all in the same boat."***

~ Jacques Cousteau

## Western Native Trout Initiative News

## The Engaging Lifecycle of GTM NERR Oyster Reef Restoration

Submitted by the Southeast Aquatic Resources Partnership (SARP) and the Atlantic Coastal Fish Habitat Partnership (ACFHP)

The [Guna Tolomato Matanzas National Estuarine Research Reserve](#) (GTM NERR) on Florida's First Coast located in St. Johns and Flagler counties, is part of a network of 28 protected coastal areas along the United States coast from Alaska to Puerto Rico, known as the National Estuarine Research Reserve System.

The GTM NERR, which receives an average of 300,000 visitors annually, is managed by the Florida Department of Environmental Protection (DEP) in partnership with the National Oceanic and Atmospheric Administration (NOAA) for estuarine and upland environments, including coastal strand and maritime forest habitats (73,000 acres). There, scientists, educators, and restoration specialists are working with students, businesses and other members of the local community to construct valuable oyster reefs and living shorelines. These projects, which are supported by the Southeast Aquatic Resources Partnership (SARP), the Atlantic Coastal Fish Habitat Partnership (ACFHP), and others are reducing shoreline erosion, increasing sedimentation and providing nursery habitat for marine species.

Florida's native Eastern oyster (*Crassostrea virginica*) is a keystone species because of its critical role in maintaining healthy coastal ecosystems. In addition to the ecological goals of these restoration projects and in order to ensure a regular and bountiful supply of oyster shell for reef construction, a SARP-funded NOAA Community-based Restoration Program (CRP) project established an oyster shell recycling program for St. Johns County. The recycling program has provided shell for the SARP and ACFHP living shoreline projects, as well as material for future reef construction.

Significantly, the recycling and reef building projects are resulting in other outstanding educational, economic and social benefits as well.

"Over time, the area has been impacted by water pollution, increasing wave action as a result of river

Robin Knox, Project Coordinator for the Western Native Trout Initiative since 2006, will be retiring on September 30, 2014. During Robin's tenure, WNTI has directed over \$4 million in federal fish habitat funds leveraged to \$14 million public and private matching dollars for 110 priority native trout conservation projects, removing 48 barriers to fish passage, and reconnecting or improving 466 miles stream miles of native trout habitat and placing 26 protective fish barriers to conserve 570 miles of important native trout conservation populations. The WNTI Steering Committee thanks Robin for his years of dedication in preserving and protecting native trout across the western U.S. If you want to contact Robin after October 1, he can be reached at [robinknox@centurylink.net](mailto:robinknox@centurylink.net).



Robin Knox

Therese Thompson, WNTI's Director of Strategic Partnerships, will take the helm as of October 1st. Therese can be reached at [tthompson@westernnativetrout.org](mailto:tthompson@westernnativetrout.org).

## Southeast Alaska - Home to Thousands of Estuaries

traffic and channel dredging, other human-induced factors, and sea level rise," stated Andrea Small, aquatic preserve manager and lead on this project at the Reserve. "These restoration projects will not only provide benefit to the ecosystem, but they are also an important way to connect the local community to the natural environment through volunteer and educational opportunities."



View of the GTMNERR.  
Photo credit: Lindsay Gardner, SARP.

The GTMNERR Community Oyster Shell Recycling and Living Reef Construction Project was successfully initiated through the Friends of the GTM Research Reserve's partnership with the [St. Johns Technical High School \(SJTHS\)](#). Nestled within an easily accessible spot in the Reserve, off to the side of a parking area off of the A1A Hwy., piles of shell that have been collected from area restaurants are processed. Each pile has a small sign above it noting the date the shell was placed (the top date) and the date the shell will be ready for harvesting and reuse. In Florida, the oysters are required to bake in the sun for 90 days and are raked during that time to remove bacteria and pathogens and to prevent any potential cross-contamination, as many oysters sold in area restaurants are not actually local, but brought in from other states. Students from the St. John's Technical High School and many others have helped with the oyster raking and bagging.



Oyster Shell Recycling Staging Area.  
Photo credit: Lindsay Gardner, SARP.



Oyster Shells Being Processed.  
Photo credit: Lindsay Gardner, SARP.

SJTH has an Academy of Coastal and Water Resources that was established in 2011 and is dedicated to providing students with high quality, industry relevant curriculum to assure success in post-secondary education and coastal and water resources career opportunities. Through collaboration with business partners, students are engaged in applied learning and develop confidence, long lasting relationships and a

National Estuaries Week is a good reminder for us all to take a moment and reflect on the value and importance these habitats play both for us and for many of the fish species we care about.

Southeast Alaska is truly a mosaic of estuaries, with nearly 12,000 estuaries lying within 19,000 miles of shoreline that includes the island make-up of the Alexander Archipelago. Yep 12,000, that's a lot of estuaries! These biologically rich habitats unite the world's three most dominant natural realms - the terrestrial environment, the freshwater environment, and the marine environment; no wonder they provide such a valuable nursery setting for many fish species. It is also not surprising that many of our cities and communities settle in these important areas as they form important transportation corridors and provide access to vital natural resources.

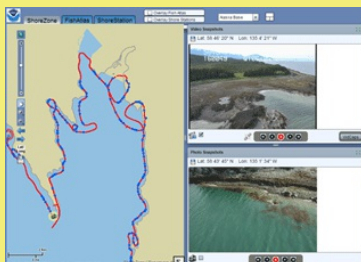
To get a better understanding of how these estuaries function in Southeast Alaska recent efforts have mapped the shoreline and assessed the unique characteristics of these estuaries that lie within the fjoral landscape that is characteristic of this region.

Through the ShoreZone Partnership the majority of Southeast Alaska is now mapped and biological data is available for the nearshore environment. You can find more information on the ShoreZone website at: <https://alaskafisheries.noaa.gov/shorezone/>.

In addition research by two Nature Conservancy scientists, "An Estuarine Classification for a Complex Fjoral Island Archipelago," which appeared in the journal *Estuaries and Coasts*, is a helpful tool for planning how to conserve these biologically rich habitats in a region that currently supports healthy and vibrant fish populations. The classification is a simple model that tests the understanding of the relationships between physical conditions and the species likely to be found in these places. An informative interview with these researchers can be found [here](#).



Distribution of estuary habitat class category mapped in the study area of Southeast Alaska.



sense of community. Students participate in a STEM program of study that focuses on coastal, environmental and water resources and a valuable hands-on curriculum designed in partnership with the St. Johns County Utilities, Guana Tolomato Matanzas Research Reserve, Florida Gateway College, and Jacksonville University's Marine Science Research Institute. They explore the environment and ecosystems through environmental and water resource classes and experience water quality testing, wetland management, wildlife, and fisheries management. In discussions with Linda Krepp, SJTHS Career Specialist and Principal Wayne King, the hands-on learning opportunities afforded by the restoration projects and work experience, have actually had a tremendous impact by offering project-based learning opportunities. At the outset of the project, then SJTHS Principal Wayne King expressed his enthusiasm for the program.

"I'm so excited about the opportunity to partner with the GTM Research Reserve on this project," said King. "Our vision here at SJTHS is to provide opportunities, through Project Based Learning for our students to apply knowledge. The Oyster Reef Restoration Program will help create awareness and provide a legacy for our students."

The oyster shell recycling process is "fed" by several area restaurants that are enrolled in the shell recycling program (current participants include Cap's on the Water, Aunt Kate's, Hurricane Patty's, Matanzas Inlet Restaurant and South Beach Grill). At the restaurants, there is an excellent opportunity to see the "supply chain" of the recycling program full circle, as there are GTM NERR-developed cards for the tables with QR codes directing smartphone users to information about the oyster reef recycling program and collection cans in the back of the restaurants (pick-ups are done three times a week).

Ensuring that there isn't any disruption in the collection process is critical to maintaining the supply of oyster shell for future restoration efforts, but also to the restaurants, as there is a tremendous cost savings/economic benefit in that they no longer have to pay waste disposal costs associated with shell being taken to area landfills. Billy Blanchard, Front of House Manager at Aunt Kate's Restaurant, is glad they can help.

"The project makes us feel more like a part of the neighborhood rather than just being a business in the neighborhood," said Blanchard. "It's our waterway and it affects us. The more we can do the better."

Ultimately, the oyster shells come to their final resting place as they are bagged and then strategically placed along the shoreline to form the reef. Bernard de Raad, owner of Cap's on the Water restaurant, sees repopulating local oyster beds as an important long term goal of the program.

"It would be a nice thing if we could get enough local oysters here," said de Raad. "[Their decline] has become a problem in this county."

Combined with the planting of marsh grass (*Spartina alterniflora*), these living shorelines are successfully recruiting oyster larvae called spat, and are providing habitat for fish and other aquatic species. Michael Shirley, Ph.D., Director of the GTM Research Reserve notes, "Over the long term we expect that these projects will protect and restore eroding coastline, subsequently improving aquatic habitat and water quality."

Given time, the continuation of the oyster shell recycling program and the expansion of the reefs at the Reserve, it is hoped that there will be ever increasing numbers of oysters supporting a variety of aquatic life in the area for years to come.

# Eel River Delta Event Sept 18 in Fortuna, Ca

A perfect storm is coming together on September 18 in Fortuna, California as landowners, tribal sovereign nations, businesses, nonprofit organizations and local, state, and federal agencies celebrate estuary restoration efforts in the Eel River Delta, the Eel River as a 2104 [10 Waters to Watch](#), and [National Estuaries Week](#). Field trips and presentations will highlight the event that is intended to celebrate the decades-long restoration efforts in the Delta.

The event is hosted by CalTrout, Humboldt RCD, the Pacific Marine and Estuarine Fish Habitat Partnership, the California Fish Passage Forum, and NOAA, and will include many of the organizations and entities that have played a critical role in restoring the Eel River Delta to a working landscape that provides habitat for fish and wildlife and the many landowners that make their living from these productive acres.

Inhabited by humans for thousands of years, the Eel River estuary is one of the most important and sensitive estuaries on the West Coast, with 8,700 acres of tidal flats, both perennial and seasonal wetlands, and about 75 miles of river channel and tidal sloughs. The Eel River Delta provides habitat for many aquatic and terrestrial species, and supports flourishing agricultural communities. Long before the "farm to table" movement, the Eel River Delta, and Ferndale in particular, supplied California with some of the world's finest dairy products. The Eel Delta still provides high quality dairy and beef products, while also hosting one of California's major salmon and steelhead runs. However, flooding, sea level and other issues challenge the viability of some agricultural operations and infrastructure such as roads and waste treatment facilities. Balancing ecosystem restoration with the promotion of high quality agriculture and infrastructure in the coastal zone is challenging, but several key projects illustrate the importance and success of this approach.

Although nearly 60% of the estuary has been lost due to the construction of levees and dikes, 10% of salt marsh habitats remain today. Restoring the estuary is a key component towards recovery of salmon, but also other sensitive and listed species.

Ecosystem restoration in the Eel Delta also affords unprecedented opportunities to improve drainage and infrastructure for the agricultural communities around the Delta. The Salt River Ecosystem Restoration Project and the Eel River Estuary Preserve Project, two of many projects within the Eel River Delta, seek to restore ecological integrity to reclaimed areas, while also enhancing agricultural productivity and prosperity in the region by providing land management options for landowners that support enhanced business security, stability and hydrological integrity.

Hydrologically intact and functional channels tend to improve drainage for farmers. It also ensures a complex and diverse estuary with



Oyster Shell Bags Awaiting  
Deployment.  
Photo credit: Lindsay Gardner,  
SARP.



Students transport bagged shell to the river to  
build the reef. Photo credit: Florida DEP.



SJTHS students planting marsh grass.  
Photo credit: GTM NERR.

suitable cover of deep channels and sloughs, connected to productive brackish wetlands that will help to increase size and fitness of juvenile salmon prior to entering the ocean, and ultimately improve overall marine survival for adults.

Numerous landowners as well as local, state, and federal agencies, industry representatives, and nonprofit organizations are working together to ensure the Eel River Delta is a working landscape that can support sustainable agriculture and other land management practices while providing healthy fish and wildlife habitats. The Eel Delta provides an historic opportunity to enhance coastal agricultural productivity while ensuring the long-term, recovery of Eel River salmon stocks capable of supporting the regional fishing economy of California's north coast.

The three projects that will be featured during the event:

**Eel River Estuary Preserve** Historically a network of extensive tidal marshlands and dunes, today the Wildlands Conservancy's Eel River Estuary Preserve encompasses an assortment of environments including tidal marsh, dunes, agricultural land, estuarine, and freshwater ponds that provide diverse habitat for a complex of species. Preserve will provide abundant opportunity for enhancement of estuarine and tidal marsh habitat and the fish, wildlife, waterfowl and rare plant species that are dependent on these habitats.

#### **Salt River Ecosystem Restoration**

The Salt River Ecosystem Restoration Project includes four key components; 1) tidal marsh enhancement; 2) Salt River channel restoration; 3) upslope sediment management, and; 4) adaptive management planning - all will assist in the hydrologic and geomorphic function of the Salt River for flood alleviation, and to provide habitat to benefit Pacific salmon, migratory waterfowl, Tidewater goby, Green sturgeon and scores of other species that once flourished in the Delta.

#### **Ocean Ranch**

Eel River Wildlife Area's Ocean Ranch Unit, owned and managed by the California Department of Fish and Wildlife, is located on the northwest portion of the Eel River estuary, about 13 miles south of Eureka, California. The Ocean Ranch project will restore tidal processes at the 375-acre Eel River Wildlife Area-Ocean Ranch Unit. The project will breach and/or remove levees to restore tidal prism and increase estuarine habitat for the benefit of north coast fish and wildlife, including coho and Chinook salmon, steelhead, and cutthroat trout.



Shoreline at the oyster reef site on the Tolomato River. Photo credit: Lindsay Gardner, SARP.



A section of installed oyster reef. Photo credit: GTMNERR.





Coho salmon spawn in the South Fork of the Eel River.  
Photo credit: eelriver.org



Oyster spat settlement at the reef.  
Photo credit: Lindsay Gardner, SARP.

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[Atlantic Coastal Fish Habitat Partnership](#) | [California Fish Passage Forum](#) | [Hawaii Fish Habitat Partnership](#) | [Kenai Peninsula Fish Habitat Partnership](#) | [Mat-Su Basin Salmon Habitat Partnership](#) | [Pacific Marine and Estuarine Fish Habitat Partnership](#) | [Southeast Aquatic Resources Partnership](#) | [Southwest Alaska Salmon Habitat Partnership](#) | [Western Native Trout Initiative](#)

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## Criteria for Atlantic Coastal Fish Habitat Partnership Memorandum of Understanding Signatories

DRAFT

### **(1) In what region(s) or watershed(s) does your organization work? Please describe.**

*The International Federation of Fly Fishers (IFFF) has seventeen regional councils in the United States, as well as significant international membership and a total membership of 13,500 members. Five of these councils overlap with the Atlantic Coastal Fish Habitat Partnership's regional area: the IFFF's Florida, South East, Chesapeake, Eastern Waters and North East Councils. Included within our Mission is the concept of practicing and educating about conservation for all fish, in all waters.*

### **(2) Why do you want to be an ACFHP Partner (or, how do you perceive that ACFHP will benefit you?)**

*Our members are intimately aware of the habitat and conservation challenges facing us as anglers in today's world. We support catch and release fishing, and a variety of other conservation measures. It is our desire to support those conservation organizations and measures that will further the long term sustainability of the fisheries in the Atlantic Coastal region.*

### **(3) Do the goals or objectives of your organization align with those of the Atlantic Coastal Fish Habitat Partnership, and can you assist implementing them? Please describe and provide your organization's guiding document(s) (eg. Strategic Plan, Conservation Plan, etc.).**

To familiarize yourself with the goals of the Partnership, please see p.16 of the Atlantic Coastal Fish Habitat Partnership Conservation Strategic Plan (2012-2016).

To familiarize yourself with the goals of the Partnership, please see p.17-22 of the Atlantic Coastal Fish Habitat Partnership Conservation Strategic Plan (2012-2016).

For Subregional Priority Habitats please see p.11 of the Atlantic Coastal Fish Habitat Partnership Conservation Strategic Plan (2012-2016).

*The IFFF supports the above goals and priorities. We are attaching an early draft of a Conservation Policy Plan we currently are developing for the IFFF.*

### **(4) Please describe how you will meet the commitments of the MOU parties, which are as follows:**

The partners to this MOU, to the extent practicable, hereby affirm their mutual understanding and agree to use their best effort to take the following steps:

1. To carry out their mutual intent to design and implement an ACFHP plan that will address on-the-ground coastal, estuarine-dependent, and diadromous fish habitat resource needs throughout the Atlantic states.
2. To work together to facilitate current and future mutually agreed upon joint coastal, estuarine-dependent, and diadromous fish habitat resource activities for the benefit of Atlantic fish habitat resources.
3. To use the resources of their agencies and organizations in a manner consistent with their mission and the mission of ACFHP, that avoids duplication and that mutually supports the efforts of other parties involved.
4. To collectively pursue funding initiatives to support the ACFHP through private, corporate, state, and federal government, and any other means that may be available.

5. To collectively pursue interagency/organization agreements, cooperative agreements, grants, and/or contracts to fund approved projects.

6. To encourage and support the participation of other appropriate agencies and organizations by mutual agreement of the partners.

*We believe the IFFF is in a unique position to address these commitments, which we hereby affirm. Our members within the Atlantic Coastal boundaries can lend a voice of support for these critical conservation efforts to local, state and federal decision makers, and provide added leadership that looks forward to assisting the Atlantic Coastal FHP in its resource allocations and funding initiatives as outlined above.*

**To be a signatory to the Atlantic Coastal Fish Habitat Partnership Memorandum of Understanding, an organization must:**

- **Work within a watershed that falls within the Partnership boundary**
- **Meet at least one Partnership goal or objective**
- **Meet ALL of the Commitments of the Parties**

*Thank you. Glenn Erikson and Tom Logan.*

**Disclaimer:** Being an ACFHP MOU partner does not preclude ACFHP from challenging an action of that partner or take legal action against them.

## Recommendations Regarding a Conservation Policy Plan

For

IFFF Conservation Committee

Tom H. Logan

June 19, 2014

Good morning Glenn and Rick. I committed some time back to give thought to recommendations I would make regarding development of a Management Plan for the Conservation Committee (Committee) of the International Federation of Fly Fishers (IFFF). Several documents have already been drafted that were intended to provide purpose and direction to the Committee regarding conservation activities, but most of these remained in draft, were never approved and/or if approved were never adopted and used in an operational way. I've reviewed as many of these documents as I could find and each of them provides information, ideas and language that can be valuable to development of an appropriate IFFF Conservation Plan. However, none of these, in my opinion, can provide the guidance to our Committee that is needed.

The Committee theoretically serves as the IFFF's organizational structure on conservation matters. However, the committee cannot fulfill this responsibility without purpose and direction that must be approved as policy and documented in a usable form. The documentation may be written as a Conservation Plan, Operational Plan, Strategic Plan, etc., with Goals and Objectives, and it can be brief or very detailed. Unfortunately, the documents I've reviewed to date generally are so detailed as to obscure clear direction and, in some cases, preclude flexibility for response to changing issues and priorities. It would be difficult to take any one of those documents and make a simple statement as to what the Committee does for the IFFF. The Committee does not need a detailed operational or strategic plan at this point.

My recommendation is that we develop what I will refer to as a **Conservation Policy Plan** (Policy Plan) for our Committee. The Policy Plan should be brief and to the point and adopted by the BOD as policy direction to the Committee for how we operate and address conservation matters on behalf of IFFF members and their continuing opportunities to fish with the artificial fly. The Policy Plan should include a **Mission or Purpose Statement** that is repeatable and clearly sets forth what the Committee does as a valued and essential function of the IFFF. It should also include **Plan Elements** that itemize broad areas of activity that all contribute in some way to sound conservation of natural resources, specifically fish species and their habitats. The Policy Plan should be specific enough for adoption as enduring policy but broad enough in its description of elements to have the flexibility to allow modification of changing priorities, issues and activities without need of policy decision. Although, some of the other documents that were intended for similar use should be reviewed and used as appropriate, I suggest that the

Conservation Plan that was adopted by the Florida Council (Florida Plan) in 2011 would serve as a useful framework for developing a Policy Plan for our Committee. You may notice that I refrain from using terms such as goals and objects. They could be used, but I think they are more appropriate for use in an operational plan. I further suggest that it likely will be appropriate to develop a more detailed operational plan, once a Policy Plan has been adopted as such. The operational plan should be specific to a 3-5-year period, reviewed periodically for evaluation and needed modification and subject to revision without need of policy decision.

### **Conservation Policy Plan Outline**

The Committee adopted the following **Mission Statement for the FFF** at its annual meeting in West Yellowstone in August 2004.

**“The mission of the Federation of Fly Fishers is to lead activities that enhance and support the fly-fishing experience for all anglers that fish with the artificial fly. Keystone to this mission is the recognition that conservation of our wetland and fishery resources is fundamental to our present and future angling experiences as fly fishers.”**

The above mission statement is a very good one that I believe is consistent with language in the IFFF Bylaws (I have not been able to review a copy for certain.), but I do not believe the Committee was in a position to adopt such a statement as mission of the FFF, as stated. Consequently, at least in part, the statement has been used only in a few instances that include the Conservation Handbook Leah Elwell prepared in 2008 and the Florida Plan I prepared in 2011. So at worst, we technically do not have a mission or purpose for the Committee and, at best, we may have one but it is not being used in a beneficial way on behalf of or by the IFFF. Perhaps the 2004 statement could be adopted in some context, but perhaps language similar to the following may be more appropriate for adoption as conservation policy for the Committee:

**‘The mission (or purpose) of the conservation committee of the International Federation of Fly Fishers is to practice and advocate those conservation activities that enhance and support the fly-fishing experience for all anglers who fish with the artificial fly. Keystone to this mission (or purpose) is the recognition that biologically sound conservation of our wetland and fishery resources is fundamental to our present and future angling experiences as fly fishers.’**

### **Plan Elements**

The Plan should include at least the following elements. Others could be added, but I consider these to be of most importance, especially outreach and action. Goals and objects could be developed from these for a more detailed operational plan, but I think elements will be good language to distinguish between policy and operational.

### **Conservation Outreach**

It is not enough to do...we must share what we do in order to advocate to others that they do the same (especially the agencies with management authority and responsibility on our behalf), solicit support

(philosophical and financial) for what we do and to inform IFFF members of what we do for them as members and fly fishers. I do not suggest at this time that we undertake a newsletter as have other organizational structures of the IFFF. I think it is much more appropriate that we focus on preparing, perhaps more technical, reports for posting on the IFFF website and Facebook and write articles suitable for publication in *Flyfisher*. Outreach is very important; otherwise, everything we do is of limited investment value, to include marketing and membership.

### **Conservation Action**

Conservation action is where we monitor activities of others and issues of conservation concern that may be either beneficial or consequential to achievement of our mission and take an appropriate position or action. The action could be to advocate support for an activity, policy, new or revised rule or for consideration of a more sound and appropriate direction, and the action could be in forms of public statement, written statement and/or published article. Monitoring should be through IFFF clubs, Councils and associations with other organizations, associations and professional contacts. All such action items should be documented and brought to our member's attention and support as outreach. The action must be consistent with our mission and not taken until proper review and research is conducted to assure any action or position taken is informed and therefore, biologically, economically and/or socially sound, as appropriate.

### **Conservation Projects**

All conservation projects in which we are currently engaged may be listed and briefly summarized as examples of the type projects the Committee, our clubs and the IFFF undertake as our demonstration of sound resource conservation practice. This element should provide a framework and guidance for projects we may undertake as necessary resources are available. This element would not provide operational detail or timeframes for specific projects. Such projects may fall appropriately under purview of our committees (perhaps sub-committees) that include, Native Fish Conservation, Steelhead, Coldwater, Warmwater, Saltwater and Quality Fishing.

### **Conservation Grants and Funding**

This element would cover our intent to maintain grants programs, such as Small Grants, other funding for conservation projects and needs that may be outside the established small Grants program and fundraising activities. Again, this would not provide the operational details of how we manage grants and funding, rather this is another element of what we do towards achievement of our mission by assisting others to practice sound conservation.

### **Strategic Conservation Partners**

Outreach and conservation action require that we look both within and outside our membership/organizational structure to develop valued relationships and partnerships with other organizations, agencies and individuals as forums for influencing sound conservation activities. Developing strategic partners generally provides a way for us to partner with others of common

interests to accomplish more than we can achieve alone or as one voice. Just as we would look to the benefits of partnering with others of sound mind and influence, we also must be sound in our role and be recognized a sound conservation voice and a partner others would seek. It also will be important that we reserve the options to act independently when appropriate as a condition of any partner commitment.

### **Conservation Education**

We must not assume that every member understands the biology of conservation or even considers how sound resource conservation may affect their continuing opportunities to fly fish or perhaps even more importantly the opportunities of our grandchildren. There will always be a need to share sufficient information with our members regarding the importance of conservation, why the IFFF maintains an organizational structure dedicated to conservation of natural resources and what we do on their behalf to advocate and influence sound conservation, specifically of fish and their habitats. Those of us who are in various teaching roles (fly tying workshops, casting clinics, presentations to clubs, etc.) must take advantage of every opportunity to discuss the importance of conservation with our members and students, not with the intent of turning every member into a scientist, but to encourage their understanding and support for the conservation work we do on their behalf. Every opportunity to speak with a member or club on any subject of fly fishing can be a classroom for conservation.

### **Recommendation**

I obviously could take the next step and actually draft what I would propose as a Conservation Policy Plan. However, I think our Committee and IFFF conservation interests would be much better served if the Plan is developed with collaborative input and support from onset through adoption and implementation. I therefore recommend that development of such a plan be considered and if it is a proposal you wish to pursue, shared with the full Conservation Committee by email for discussion during our next conference call. The discussion should be conceptual for input and to determine support and interest in participating in drafting the Plan. Should such interest exist, volunteers should be solicited to serve on a drafting sub-committee with a tentative due date for a first draft. We have some sharp new folks on the Committee and I think we would be more invested in development of the Plan if we followed this approach. I think it will be much more useful to develop this policy document for approval and then use it as a basis for development of a companion operational plan.

Thanks and let me know if you have questions.



## Organizational Analysis and Report on Recommendations

### For the Atlantic Coastal Fish Habitat Partnership

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Wendy Wilson, River Network

December 15, 2013

#### Assessment Process

River Network consultant, Wendy Wilson, conducted an organizational review of the Atlantic Coastal Fish Habitat Partnership (ACFHP) in the fall of 2013. This included reviewing on-line survey data from Steering Committee members<sup>1</sup>, email correspondence with other Steering Committee members, interviews with five participants (Kent Smith, Dawn McReynolds, Cheri Patterson, Lou Chiarella, Caroly Shumway and George Schuler) and extensive discussions with coordinator Emily Greene.

The assessment also included reviewing the ACFHP Strategic and Implementation Plans, other internal planning and budgeting information, meeting notes, and the recommendations from Water Words that Work, LLC., which conducted its own on-line survey, focus group and communications check-up. The reviewer's preliminary recommendations were presented to the Steering Committee during the November meeting.

The purpose of this document is to detail recommendations, including goals, milestones and implementations steps towards organizational excellence and development. These have been focused into three priority areas, Partner Outreach, New Participant Accessibility, and Business Development. The recommendations are purely those of the reviewer, based on 25 years of experience, and extensive work with similar organizations. We have chosen not to include directly attributable comments from those we talked with to avoid the potential misrepresentation.

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#### Comments from Interviews:

Those individuals interviewed for this assessment were in general agreement about the goals and mission of the ACFHP and that the group is taking steps towards accomplishing that mission. Comments received included the following:

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<sup>1</sup> Mark Rousseau, Emily Greene, Reid Wilson Laney, Chris Powell, Rachel Muir, January Murray, Marek Topolski, Julie Devers, and Patrick Campfield.



- We are accomplishing our mission but need more funding. In the ideal world, we would be a Coastal Marine Habitat Program.
- We are trying to coordinate others, providing science resources, and compiling guidance. Tracking what we've done and assessing what others have done.
- People say our niche is "implementation of on the ground projects". But then I hear that the agencies themselves are implementing the projects. So, maybe we are a super organism that assimilates what is being done on the ground and promotes habitat to stakeholders.
- Our role is to "Stitch the green dots together" to do more than just working through state programs, bring together lessons learned and share knowledge.
- We have no regulatory authority and too little money. Things were slow getting started, but we are now headed in the right direction, trying to be more effective.

Many observers see that ACFHP is working well together and that there is a high level of loyalty to the individuals working within it. Comments included:

- The group has exceeded my expectations already and it tackles hard things. At first we weren't ready to make decisions together because we didn't understand each other's experiences.
- There is unique knowledge in the room and this is building trust.
- Commission is starting to incorporate habitat into their strategies, creating opportunity to integrate w/ commercial and sport harvest management.
- An example of our success is that a simple planning matrix grew to become a database of 180 species and 26 habitat classifications -- that is a beautiful body of knowledge on restoration goals and threats.
- It is great to have NGO, state & federal agencies working towards a common goal.

There is also a sense that the larger restoration community still needs to connect with what ACFHP is promoting and doing. Comments along those lines included the following:

- Need more tribal engagement, more small communities, to make case to Members of Congress.
- Need to deal with "threat abatement" goals through broadening partnership.
- Reaching "down" is important.
- Should have a family of success stories on website. Highlight the stories of successful place-based conservation tasks.
- We need to make data available to help widen restoration priorities.
- The boating industry is an outreach priority now. Riparian buffers would also be good focus for practitioners.

And also there is considerable frustration with the limitations on funding for this important work. The need for additional capacity to fund raise from private sources was seen as a key to success by most observers. Comments included the following:

- I had hoped for more financial sustainability and thought there would be a federal program before things changed in 2008. Grant funding for operations is less likely than projects. Re-grants are unlikely. FR committee is a bunch of biologists.
- We need to have a Bill Gates to fund coastal marine habitat targeted to our key priorities.
- Need monetary help from NFHP. FWS helps by being on committees, but not much with money.

### Points of Agreement

- ACFHP process has created a common agenda.
- The process has been valuable for those in the field working for state and federal agencies.
- Funding is not adequate to engage all restoration practitioners that we would like.
- Communication level is good within the steering committee.
- Committees appear to be functioning.
- ACFHP would benefit from working closer with national NGOs and local groups.

### Potential Questions for Future Discussion

- How can we create a movement around our common agenda? What can we do to reinforce each other's work?
- Are we encouraging partner organizations and the public to do something towards our common agenda?
- How can we better highlight the threat assessment work as well as the success stories we fund?
- How can we reduce barriers to more NGO participation? All we've asked them to do is apply for funding which we don't have much of.

### Reviewer Observations:

*This is an accomplished organization with strong volunteer leadership.* The strong programmatic work has provided the opportunity for steering committee members to get to know each other and understand each other's programs. There seems to be a "can do" attitude within the committee. The Coordinator role is appropriately oriented towards communications and networking across the partnership.

### ACFHP's Unique Niche

Arguably, the purpose of ACFHP is to reduce human threats to sea life through scientific collaboration. As currently constituted, it appears that ACFHP's "unique niche" is to create a "collective impact" from the many different habitat conservation and restoration programs in place across the Atlantic seaboard. So far, this has focused on building tools for program managers, but *might also include* efforts to facilitate a wider discussion of how to reduce human impacts to marine habitat as well. In the future, this later focus would appeal to a much wider public audience.

*If well-articulated, ACFHP's mission has broad public appeal.* People widely support the vision of Jacques Cousteau's "flourishing sea" for their own Atlantic communities. Because of the large scale of its work, ACFHP can aspire to big goals. Also, it is helpful that there are actual places -- potentially visible to donors -- which need help, and others that have already been enhanced by ACFHP. Everyone loves a video of a place they have helped to save.

*Effective Engagement.* The ACFHP Steering Committee is necessarily large and appears to function together well with two face-to-face meetings a year. Some additional committees are functioning -- but primarily through virtual communications. The Communications and Outreach committee spanning the Whitewater to Bluewater Fish Habitat Projects has also been activated. The primary NGOs engaged with habitat restoration in the region are involved with ACFHP. As a founding partner, The Nature Conservancy is highly invested. Several other NGOs are active participants and coordinate well with ACFHP.

**Areas of Concern:**

*Limited Outreach Capacity.* By itself ACFHP has very little public visibility or capacity to reach a broad audience. ACFHP is not widely enough known to reliably expect to raise funds from the general public. The fiscal sponsorship arrangement with the Atlantic Marine Fisheries Commission appears advantageous, and should work to accept and administer potential grant funds.

ACFHP is not in a position to develop a separate fund raising infrastructure such as in most nonprofits and just becoming a legal stand-alone nonprofit would not create that capacity. The group needs to stay small and nimble and focus on communications between partners that create unique opportunities for financial development.

However, the outreach ability of existing ACFHP partners is tremendous. ACFHP has a great list of partners. The ACFHP Conservation Strategy provides a common agenda to evaluate threats, coordinate action, and measure collective results. Each agency needs to be fully integrated into ACFHP's communications plan. Engaging existing partners and leveraging their abilities should be top priority.

*Fund Raising Planning.* The greatest potential for future private fund raising for ACFHP may be through collaboration with NGO partners around one or more big-picture initiatives that no one group can do by itself. Potential coordinated initiatives-- perhaps around improved moorings, principals of living coastlines, or sea grass protection-- would help make a strong case for support to private foundations and corporations.<sup>2</sup>

The uncertainty about who can do direct fund raising with private parties needs to be addressed within ACFHP. Successful fundraising needs the leadership of an active ACFHP funding committee. This committee needs to be able to leverage the communications infrastructure of ACFHP partners as it takes on the responsibility of meeting with potential donors.

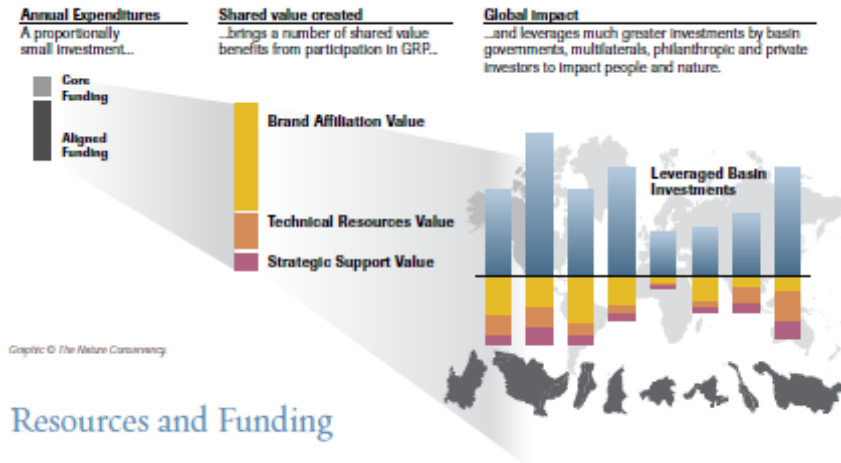
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<sup>2</sup> An example of a TU collaborative initiative is <http://www.tu.org/conservation/outreach-education/veterans-service-partnership>.

The ACFHP coordinator should be tasked to work with partner organizations to identify ideas for major projects with public engagement potential that could be shaped into collaborative initiatives. Engaging in planning activities, donor research, proposal development and coordination are tasks well within the rules for the use of federal program funds.

## Great Waters Initiative Business Plan

### Shared Value and Financial Leverage



Graphic © The Nature Conservancy

### Resources and Funding

Big visions call for big investments. The GRP vision of reconciling the competing and growing demands on the world's great rivers is a monumental task. In addition to the significant, committed support it has already received, GRP will require considerably more resources to realize this ambitious, long-term vision. With outstanding leadership, experience and scale, GRP's partners are ideally positioned to inspire and mobilize significant investments and build the momentum they need to be successful.

The projected overall five-year financial need for GRP is estimated to be \$197 million. During its first phase from 2005-2011, more than \$70 million in private funds were raised. Based on anticipated future support from some of these same funding sources and an expanded set of prospects, the goal is to raise \$85 million from private sources through 2017.

A vertically aligned funding strategy has been identified that provides coordination at the global and basin scales along with flexibility for funders to engage at whatever geographic scale and funding level best matches their interests.

**Core Funds**—support core management and functions of GRP at basin and global levels (Five-year need of \$45 million)

**Aligned Funds**—support actions in the river basins aligned directly to their GRP work (Five-year need of \$152 million)

**Leveraged Funds**—typically public funds that result from leverage through strategies and outputs in the GRP basins, but are not carried out by the GRP team.

"We're proud that the Caterpillar Foundation's investment to establish the Great Rivers Partnership has enabled freshwater projects on the three major river systems to collaborate across boundaries, leveraging best practices, enhancing outcomes and making long-term sustainability possible."

*Douglas R. Oberhelman,  
Chairman and CEO, Caterpillar Inc.*

Another example of a large-scale “partnership” initiative is the Great Waters Partnership associated with The Nature Conservancy. Their 107 page Business plan thoroughly explores how this work leverages other funding towards common goals. See: <http://bit.ly/1bkyTC1> for full plan.

**Maxed Out Steering Committee.** Implementing the ACFHP Conservation Strategy requires an “all hands on deck” effort by the existing partners as well as outreach to new partners. The current steering committee is already very engaged and geographically challenged. Getting together for a face-to-face meeting costs tens of thousands of dollars. Enlarging that committee would not necessarily make the group more effective.

But somehow the work-load needs to be distributed to new people. ACFHPs committee structure will need to expand in preparation for this next stage of work. The steering committee should consider chartering new committees and defining jobs for non-steering committee teams. Even if there are no current volunteers or staff for those positions, it helps to know what is needed so that appropriate resources can be identified.

*Limited Staffing.* The four ACFHP regions may provide opportunities for non-steering committee partners to take the lead on communications, training and coordination. Over time, ACFHP could have a goal of sponsoring regional events, hosting regional initiatives and building web-site pages geared towards local efforts. This will take additional staff coordination and growth in the staff capacity to keep everyone informed and communicating with each other.

*Minimal Partner Activities.* The lure of potential funding is strong for some potential partner groups but not for others. But there needs to be other activities that groups can be part of beyond submitting proposals for funding. ACFHP would benefit from broader NGO participation in many ways. However, partnerships need goals, and the group needs to discuss what sort of engagement is needed and what the goals should be. The steering committee should be engaged in outreach to new groups, following that discussion.

An ad-hoc partner committee could help by discussing ways ACFHP could help partners reach their own goals, perhaps through joint public events, professional growth, coordination, training, sharing tools and outreach capacity.

*Low-Profile Communications.* The Water Words that Work Communications Assessment contains valuable suggestions for changes that could increase ACFHPs appeal to a wider audience. Even though the content of ACFHPs primary work is scientific and/or scholarly, it could still be higher profile and visible to a wider public. Even within the professional restoration community, ACFHP is not a household word at this point.

That could change in the future with some work. However, ACFHP has not articulated a single threat or “call-to-action” that could be a hook for wider public engagement. The Steering Committee should consider starting a messaging effort, supported by communications professionals, to discuss a compelling vision of healthy habitat for aquatic life.

### **Consultant Recommendations:**

The next stages of organizational development for ACFHP are likely to include growth. The group could take on a number of potential new roles including the following: facilitating regional initiatives and resource-specific programs; creating a more visible public movement of citizens focused on marine habitat protection; and broadening the net of practitioners working to reinforce each other’s efforts.

ACFHP will need additional staff capacity to incorporate these new regional goals, local initiatives, and the needs of private funders into its work plans. It will demand more from our communications systems

to distill the “actionable knowledge” assembled by ACFHP for public consumption. ACFHPs structure may need to grow to include new staff and volunteer positions and roles within the organization.

*Potential for Fund Raising.* The big picture appeal of “save our sea life” is never out of fashion with the public. ACFHP has very little public profile, but a legitimate claim to being a “go-to authority” on habitat threats and the status of species of special concern. ACFHP has the ability to approach major ocean-oriented NGOs and partner with non-traditional allies to develop new program ideas that could excite donors. This should be done in collaboration with the fund raising staff of other NGOs.

*Communications -- short-term tactics.* Create web-pages that can provide a “clickable tour” out of the existing ACFHP Conservation Strategy. Use website to show what is going on across the region and provide background information on threats and key habitats.

ACFHP seems to have limited communications with “non-Steering Committee Partners”. The ACFHP website could feature the work of all ACFHP partners to improve this connection. It could be used to post upcoming volunteer events, plug volunteers into clean-up activities. Facebook and social media could be used as a distribution method for information coming from partners.

*Communications – Longer term Goals.* The ACFHP website could be a portal for citizens looking for verifiable information on the status of marine habitat. One observer noted that ACFHP should be like the Hurricane Center for breaking information on habitat threats and citizen advisories.

ACFHP should begin to develop wider email list-serves, newsletters, online forums and interactive web features and, more importantly, set goals for how many people it hopes to be able to directly contact through these venues over time. Increasing web-site visits and getting outside help for Search Optimization Planning should also be considered. In the long run, ACFHP could consider ways of helping non-funded but endorsed projects get funding through online crowd-sourcing, or “kick-starter” type programs and opportunities.

### ***Impact of ACFHP Funding***

ACFHP is spending \$119,000 a year (roughly) and giving away \$75,000 a year. This would seem an unreasonable expense if it were all just overhead towards the grants program. Certainly the hard-working members of the many committees and the coordinator have an impact well beyond the grant making process. It would be helpful to quantify those impacts as well. Recommendations towards increasing that impact are as follows:

1. Prepare a short communications piece and text on the website about the threats to the Atlantic coastal habitat and the priority conservation strategies that ACFHP promotes across the region. Currently this information is buried deep inside documents on the website rather than prominently displayed.
2. Work to increase the value over time of what other entities are doing towards those conservation strategies. Look to increase the value of the endorsement process even if a project isn't funded by ACFHP.

3. Monitor projects that are funded more closely. If funded, the project sponsors currently receive a fact-sheet about ACFHP and a news release. Steering Committee members may visit the site, but often little information is collected until a Project completion reports goes to USFWS. (Julie Devers then has additional survey questions that she may ask them to answer.) In the future, ACFHP might promote the volunteer opportunities that these projects include and talk to leaders about how their work fits into ACFHP's agenda.
4. Currently, ACFHP gets about 20 project funding requests each year and funds a handful of them. What happens to those that aren't funded? It would be worth a phone call to each project leader to learn more about the project and ask if there are ways to work together to approach community foundations, other agencies or local businesses.
5. Finance committee should be able to use these unfunded projects as a basis for partnerships with entities with a higher public profile such as National Geographic, Pew Ocean Program, and the Chesapeake Bay Foundation.
6. Research the approved wetland mitigation banking entities in the region and consider if there are long-term partnering opportunities.

***Suggestions for Identifying Partners:***

1. Create an inventory of regional NGOs and University-based groups that support the overall goals of coastal habitat restoration -- even if they are not directly involved in on-the-ground projects. Advocacy groups should be approached to see how they might participate. Groups such as the North Carolina Coastal Federation, South Carolina Coastal Federation, and various Baykeepers, have a lot of communications capacity that could help ACFHP. Marine Labs, such as at Duke University and the Carolina Regional Integrated Science Assessment should also be approached to engage with ACFHP to apply research and information.
2. ACFHP should consider assigning an Ad-hoc Partnership committee to discuss what -- besides funding projects -- would be of most benefit to prospective new partners. What do we want these new partners to do? What "mutually reinforcing activities" could we encourage to further our conservation priorities? Are there other carrots that can be offered to get more work done on the ground? Consider which sectors of society are currently impacting marine habitat and how to reach out to them (boating, real estate development, transportation agencies, etc.) Assign committee leads to meet with individual sector leaders, share presentation and learn about their goals.
3. Consider how the ACFHP committee structure could be expanded to include these new prospective partners. The current committee structure doesn't have anywhere for new groups to plug in.
4. Although the current system of excel spreadsheets may be adequate for the coordinator at this time, an expanded Outreach Committee will need a way to store more contact information on more people. A Constituent Relationship Management software package (as discussed in the WWW Communications Assessment) would help to group maintain data about prospective partners and track of communications with them.

5. Provide stronger connections to the work of other groups on the website and help circulate social media stories of interest sent out by other groups.
6. Develop a power point “road show” about the ACFHP vision of success.

**Key Recommendations**

<b>Priority Focus Areas</b>	<b>Goals</b>	<b>Suggested Milestones</b>	<b>Implementation Steps</b>
<b>Partner Outreach</b>	<i>ACFHP becomes a platform for mutually-reinforcing activities of its partners.</i>	<p>Assure that the coastal habitat work of current Partners is fully represented on ACFHP website. (Spring, 2014)</p> <p>Assure that ACFHP is included in partner outreach programs. (Spring 2014)</p> <p>Steering Committee members using power point road show to talk with their agency leaders. (Fall, 2014)</p>	<p>Make the ACFHP Strategic Plan a series of web pages -- rather than just a pdf document --with partner activities linked in appropriate places.</p> <p>All partner websites link to ACFHP.</p> <p>Prepare a Power point “road show” that all Partners can use.</p>
<b>Increased accessibility for new Partners</b>	<i>Increase NGO participants and capacity of ACFHP to engage wider public audiences</i>	<p>Website provides clear regional messages about priority threats to coastal habitat. (Spring 2015)</p> <p>Partnership committee members take on assignments to recruit new partners (Spring 2015)</p>	<p>Develop a list of regional “how you can help” public strategies.</p> <p>Partner recruitment inventory: watershed and wetland groups; advocacy groups, Marine labs, national NGOs; agencies.</p> <p>Establish online forums and interactive capability.</p>
<b>Business Development</b>	<i>Increase expenditures for coastal habitat through leveraged resources.</i>	<p>Document extent of leveraged resources. (Summer, 2014)</p> <p>Define future potential</p>	<p>SC and Coordinator to discuss appropriate roles regarding fund raising responsibilities.</p>



<p><b>Business Development</b></p>	<p><i>Establish plan for increasing contributions from agencies.</i></p>	<p>collaborative initiatives w/ existing partners. (Summer, 2014)</p> <p>SC adopts business development plan. (Spring 2015)</p> <p>Launch fund raising collaboration with one or more national NGO partners. (Spring 2015)</p> <p>ACFHP Partners go to potential funders for local projects within new initiatives. (Fall, 2015)</p>	<p>Recruit members to financial committee.</p> <p>Financial committee meets with key leaders in national groups to outline collaborative work.</p>
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***Additional Suggestions Organizational Best Management Practices***

New management practices will make growth easier for ACFHP. In the next few years, ACFHP could benefit from several new organizational tools, including the following:

1. Leadership Transition Plan. Including terms, recruitment needs and prospective new members for the Steering Committee.
2. Steering Committee Work Plan. Including individual roles, tasks and deadlines for committee members.
3. Finance Committee. This is in the works I believe, but should include a few members that are not on the Steering Committee.
4. Partner outreach committee. As described in the section above.
5. Consider training from Water Words that Work workshop for Steering Committee members.
6. Consider finding an advisor for social media planning, help set goals for group and tasks for coordinator and steering committee.

*Thanks for your thoughtfulness throughout this process!*

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