



**NOAA FISHERIES**

# Habitat Enterprise Strategic Plan

2016-2020

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# Introduction

Habitat provides the foundation for life in oceans, estuaries, lakes, and rivers, and is critical to supporting NOAA Fisheries mandates to sustain fisheries and recover protected resources, as well as many coastal communities. This strategic plan for the NOAA Fisheries Habitat Enterprise identifies habitat management priorities for the next five years (fiscal years 2016 to 2020), and was developed with input from internal and external partners. It will be used to help prioritize habitat conservation activities around the country, align those activities with department and agency goals and mandates (see Appendix 1), and measure progress. In order to be most effective, the NOAA Fisheries Habitat Enterprise works across NOAA and with external partners to protect, maintain, and restore (i.e., conserve) habitats that provide important ecological and societal benefits. The Habitat Enterprise intends to strengthen its relationships, particularly with external partners and the internal science community. This plan serves as a starting point from which to establish and strengthen these connections.

The NOAA Fisheries Habitat Enterprise definition of the term “conservation” includes habitat protection and restoration.

The NOAA Fisheries Habitat Enterprise is composed of representatives from the Office of Habitat Conservation and habitat representatives from each of five NOAA Fisheries Regional Offices. The vision of the Habitat Enterprise is to ensure healthy ecosystems, sustainable living marine resources, and resilient coastal communities thrive through innovative solutions, management flexibility, adaptability, and science excellence. Its mission is to protect and restore habitat to sustain fisheries, recover protected species, and maintain resilient coastal ecosystems and communities (see Appendix 2 for more detailed information on the Habitat Enterprise and its programs).

Habitat conservation is critical to our coastal economy. Coastal states contributed 81% of U.S. employment and 84% of total U.S. gross domestic product in 2012<sup>1</sup>. Many communities in these states rely on healthy marine, estuarine, and riverine habitat for recreation, tourism, and commercial activities. For example, in 2012, the U.S. commercial and recreational saltwater fishing industries generated more than \$199 billion in sales and supported 1.7 million jobs<sup>2</sup>. Without healthy habitat such as free-flowing rivers, vibrant coral reefs, salt marsh nurseries, and kelp forests, these economic opportunities would suffer.

Habitat also serves as natural infrastructure that protects life and property by reducing effects of storm damage, erosion, and coastal flooding. The nation’s ocean and coastal resources annually provide nonmarket value (e.g., storm surge protection, wildlife viewing, beach visits, snorkeling) of more than \$100 billion<sup>3</sup>. Habitat conservation projects can improve infrastructure (e.g., new or modified bridges, culverts, agricultural levees), enhance public safety (e.g., removal of obsolete dams that have become

<sup>1</sup> The National Ocean Economics Program and the Center for the Blue Economy. 2014. State of the U.S. Ocean and Coastal Economies. 84p. Available at <http://www.oceaneconomics.org/Download/>.

<sup>2</sup> National Marine Fisheries Service. 2014. Fisheries Economics of the United States, 2012. U.S. Dept. Commerce, NOAA Tech. Memo. NMFSF/SPO137, 175p. Available at: <https://www.st.nmfs.noaa.gov/st5/publication/index.html>.

<sup>3</sup> The National Ocean Economics Program and the Center for the Blue Economy. 2014. State of the U.S. Ocean and Coastal Economies. 84p. Available at <http://www.oceaneconomics.org/Download/>.

safety hazards), and support a diversified coastal economy. As climate change intensifies coastal storms, habitat conservation will become increasingly important to protect life and property, and will serve as the foundation for the nation's fisheries and many of its protected resources.

While the need for habitat conservation is growing, these resources are under increasing threats from the effects of climate change, coastal development, and pollution. For example, coastal wetlands—prime nurseries for many species—are being lost at a rate of about 80,000 acres per year. This rate of loss is 20,000 more acres per year than was lost during the six-year period of 1998–2004<sup>4</sup>. Other habitat types are experiencing similar losses as well. There are more than 6 million barriers to fish passage within the rivers of the United States<sup>5</sup> and more than 60% of coastal rivers and bays are moderately to severely degraded by nutrient runoff<sup>6</sup>. In addition, each year as many as 150 oil spills and hazardous substance releases occur across the nation. This strategic plan outlines the Habitat Enterprise's role in addressing these types of challenges over the next five years.

## NOAA Habitat Blueprint

In 2011, NOAA developed the Habitat Blueprint principles to increase the effectiveness of habitat conservation across the country. In 2015, the Habitat Blueprint principles were formalized as an agency-wide approach for habitat conservation in the NOAA National Habitat Policy. NOAA uses the Habitat Blueprint principles to direct habitat conservation planning and decision-making. The following principles inform the decisions necessary to achieve the goals and objectives of this plan:

- Prioritize resources and activities across NOAA to monitor, understand, and improve habitat conditions.
- Implement innovative place-based habitat solutions to address coastal and marine resource challenges.
- Make natural resource decisions and recommendations in an ecosystem context that considers competing priorities.
- Foster and leverage partnerships.
- Integrate and improve the delivery of habitat science across disciplines to facilitate conservation actions.
- Anticipate and address changes to coastal and ocean habitats due to environmental change, including development, climate, and other pressures.

The NOAA Habitat Focus Areas (HFA) (see map in Appendix 3) are prime examples of how the Habitat Blueprint principles are applied. Working with partners both internally and externally, NOAA has established 10 HFAs across the country. These serve

4 T.E. Dahl and S.M. Stedman. 2013. Status and trends of wetlands in the coastal watersheds of the Conterminous United States 2004 to 2009.

5 U.S. Department of the Interior, Fish and Wildlife Service and National Oceanic and Atmospheric Administration, National Marine Fisheries Service. (46 p.) [http://www.habitat.noaa.gov/pdf/Coastal\\_Watershed.pdf](http://www.habitat.noaa.gov/pdf/Coastal_Watershed.pdf).

6 U.S. Fish and Wildlife Service. 2011. National Fish Passage Program Annual Report and Future Outlook.

7 Boesch, D.F., R.H. Burroughs, J.E. Baker, R.P. Mason, C.L. Rowe, and R.L. Siefert. 2001. Marine Pollution in the United States. Prepared for the Pew Oceans Commission. Arlington, VA.

as demonstration areas to enhance targeted, collaborative habitat conservation and science. The HFAs bring together a wide variety of partners to leverage resources and make measurable progress toward discrete habitat-related objectives. Work in these areas demonstrates the far-reaching effects habitat conservation can have on coastal ecosystems and economies. These focus areas are further described under Goal 3 of this plan.

## Partnerships

The goals and crosscutting strategies outlined below are enhanced by partnerships to be successful. Ecosystems frequently cross geographic as well as jurisdictional boundaries, so effective habitat conservation efforts must also cross these boundaries and engage relevant partners at every level. The Habitat Enterprise fosters partnerships to develop and advance priorities and solutions, leverage and coordinate resources, and maximize the effects of its habitat protection and restoration actions. It depends on partnerships to improve scientific understanding of habitats and ecosystem service valuation, enhance public understanding of habitat value, and help communicate about habitat conservation challenges and best practices.

The Habitat Enterprise refines priorities, sets conservation thresholds, and continually seeks to improve habitat conservation efforts at national and local scales. To do so, it works with groups such as regional fishery management councils and interstate marine fisheries commissions; federal, state, and local agencies; tribal nations; private and business sectors; academia; nongovernmental organizations; and coastal communities. In addition, the Habitat Enterprise works across NOAA and supports the agency in using its full array of habitat-related missions, mandates, and resources.

## Overview of the Strategic Plan

This strategic plan identifies four goals and six crosscutting strategies to conserve habitat in support of NOAA's fisheries and protected resources and coastal community resilience, as well as to enhance organizational excellence.

The four goals of the plan are:

1. Conserve habitat for managed fisheries and protected resources.
2. Restore NOAA fisheries and protected resources impacted by oil and other hazardous substance releases.
3. Increase resilience of coastal ecosystems, communities, and economies through habitat conservation.
4. Invest in staff development and improve the impact of people, programs, and services.

## Goal 1: Conserve Habitat for Managed Fisheries and Protected Resources

Goal 1 is focused on strengthening how the Habitat Enterprise addresses its core mandates of supporting managed fisheries and protected resources. It targets six key habitat types depended on by NOAA fisheries and protected resources and their prey: coastal wetlands, rivers, coral reefs (deep and shallow), natural hard bottom (e.g., oyster reefs, rocky reefs), and submerged aquatic vegetation. While work is not exclusive to these areas, they represent the major priorities. Strategies to advance conservation for each of these habitat types share the themes of refining priority conservation areas, implementing targeted protection and restoration measures, and developing best practices and conservation policies.

Work under this goal supports the continued development of ecosystem-based fishery management measures, and the recovery of protected resources whose populations are limited by habitat loss and degradation; including many of the “Species in the Spotlight.” The Habitat Enterprise will work with the NOAA Fisheries Offices of Sustainable Fisheries, Protected Resources, Aquaculture, Science and Technology, and regional Science Centers, the National Ocean Service Office for Coastal Management, other NOAA offices, regional fishery management councils, interstate marine fisheries commissions, and many other partners to plan for and implement these strategies.

## Goal 2: Restore NOAA Fisheries and Protected Resources Impacted by Oil and Other Hazardous Substance Releases

Goal 2 is centered on restoring injured NOAA fisheries and protected resources in the wake of an oil spill or other hazardous substance releases through the Natural Resources Damage Assessment (NRDA) process. Strategies under this goal focus on activities such as preparedness for spills, especially in high-risk areas, and developing innovative, streamlined, and coordinated restoration options to incentivize settlements and expedite on-the-ground restoration. The Habitat Enterprise provides oversight, enhances public involvement, and practices publicly transparent decision-making to return fisheries and protected resources and the habitat they depend on to the condition they were in before they were damaged.

Work also focuses on maintaining NRDA-specific scientific and policy skills to effectively and efficiently implement the program and mandates through time, as frequencies and locations of spills vary. This enables NOAA to maximize responsiveness to spills and to target and leverage restoration activities for the greatest benefit to NOAA fisheries and protected resources and the public. The Habitat Enterprise works closely with partner offices in the National Ocean Service Office of Response and Restoration and the NOAA Office of General Counsel to coordinate and implement these actions through the Damage Assessment Remediation and Restoration Program, as well as with other NOAA offices; federal, state, and tribal agencies; industry; and many others.

### Goal 3: Increase Resilience of Coastal Ecosystems, Communities, and Economies through Habitat Conservation

Goal 3 advances innovative habitat conservation approaches to achieve the NOAA-wide priority of increasing resilience of ecosystems, communities, and economies. Objectives under this goal promote place-based conservation through 10 HFAs, landscape-scale protection and restoration through five conservation partnerships, and habitat-based solutions to threats posed by climate change.

The Habitat Enterprise will work closely with NOAA Fisheries partners, the National Ocean Service, other NOAA line offices, federal and state partners, commercial and recreational stakeholders, coastal communities, nongovernmental organizations, and academic institutions to promote the role of habitat in coastal resilience. In addition, this goal is designed to increase the ability to aid recovery from natural disasters and evolve in the face of a changing climate by ensuring climate science is considered in habitat conservation work.

### Goal 4: Invest in Staff Development and Improve the Impact of People, Programs, and Services

Goal 4 demonstrates the Habitat Enterprise's commitment to its workforce and to improving the way in which it carries out its work. It is focused on enhancing training and career development, clarifying roles and responsibilities, highlighting connections between day-to-day work and long-term strategic goals, and measuring progress along the way. This goal is designed to create a culture of empowerment and success throughout the organization.

## Cross-Cutting Strategies

In developing this plan, it was recognized that several strategies are essential for achieving virtually all of this plan's goals and objectives. Rather than listing them under each objective, they are called out as crosscutting strategies to highlight their importance. They include:

1. Prioritize conservation actions
2. Develop conservation targets
3. Advance habitat science needed for management
4. Strengthen partnerships
5. Improve communications and stakeholder engagement
6. Develop national policy and guidance

All of these strategies are forward looking, and will need further planning and discussion with internal and external partners to guide their implementation. Prioritization of conservation actions is called for throughout this plan. Working with partners to implement this, as well as the other cross-cutting strategies listed above, will be an ongoing process that includes engaging partners to strengthen conservation work nationwide.

# Table of Goals, Objectives, and Strategies

## NOAA Fisheries Habitat Enterprise Vision

Healthy ecosystems, sustainable living marine resources, and resilient coastal communities thrive through innovative solutions, management flexibility, adaptability, and science excellence.

## NOAA Fisheries Habitat Enterprise Mission

Protect and restore habitat to sustain fisheries, recover protected species, and maintain resilient coastal ecosystems and communities.

### Goal 1: Conserve Habitat for Managed Fisheries and Protected Resources

O1: By 2020, contribute to reducing the rate of wetland loss in coastal watersheds.

- S1: Prioritize areas for conservation*
- S2: Restore 10,000 acres of tidal wetlands in priority areas*
- S3: Strengthen wetland protection measures*
- S4: Develop national coastal wetlands policy*

O2: By 2020, increase access to historic riverine rearing and spawning habitat for targeted diadromous fish species.

- S1: Prioritize fish passage actions*
- S2: Address fish passage barriers and other riverine conservation needs*
- S3: Align conservation efforts*

O3: By 2020, conserve priority shallow coral areas, including preventing 80,000 metric tons of sediment from reaching shallow coral reefs downstream of at least five watersheds.

- S1: Identify and support implementation of priority conservation actions*
- S2: Develop improved techniques for coral propagation*
- S3: Enhance mitigation approaches*

O4: Conserve deep-sea habitats by supporting measures to reduce deep-sea coral and sponge bycatch in fisheries, and support regional fishery management council consideration of protecting deep-sea habitat containing coral and sponge ecosystems nationally.

- S1: Locate and characterize deep-sea coral and sponge ecosystems*
- S2: Work with partners to protect the ecological function of deep-sea coral and sponge ecosystems*

O5: By 2020, protect and/or restore hard-bottom habitat (e.g., rocky reef, oyster reef, cobble/boulder) at five sites.

- S1: Identify and prioritize hard-bottom sites for conservation*
- S2: Implement targeted restoration*
- S3: Improve conservation techniques*
- S4: Implement the National Shellfish Initiative*

O6: By 2020, through NOAA Fisheries authorities, manage for no net loss of submerged aquatic vegetation (SAV).

- S1: Assess SAV population status and health*
- S2: Develop conservation best practices*
- S3: Implement targeted restoration*
- S4: Strengthen SAV protection and mitigation*

Natural Resource Damage Assessment

Goal 2: Restore NOAA Fisheries and Protected Resources Impacted by Oil and Other Hazardous Substance Releases

O1: Settle 25 Natural Resource Damage Assessment (NRDA) cases by 2020, resolving responsible party liability to fully restore injured NOAA fisheries and protected resources.

- S1: Be prepared for spills in high-risk areas
- S2: Incentivize responsible parties to settle
- S3: Ensure settlements account for full restoration
- S4: Focus on settlements in priority areas

O2: Advance the restoration of NOAA fisheries and protected resources by finalizing 25 NRDA restoration plans and completing the implementation of 10 plans by 2020.

- S1: Streamline restoration planning
- S2: Enhance public involvement in restoration planning
- S3: Innovate to expedite on-the-ground restoration
- S4: Ensure coordinated oversight of the full restoration cycle

O3: Capitalize on NRDA-related expertise and tools to benefit NOAA fisheries and protected resources for five local/regional habitat priorities (e.g., geographies, topic areas) by 2020.

- S1: Support trust resources regulatory processes
- S2: Align NRDA restoration with trust resource priorities
- S3: Support significant non-NRDA incidents
- S4: Benefit trust resources restoration in state-led cases
- S5: Collaborate in local and regional restoration prioritization

Resilience

Goal 3: Increase Resilience of Coastal Ecosystems, Communities, and Economies through Habitat Conservation

O1: By 2020, demonstrate measurable progress toward achieving the objectives for each Habitat Focus Area (HFA), and use the HFAs as models to promote collaborative habitat conservation for multiple benefits.

- S1: Execute actions in HFA implementation plans
- S2: Develop an evaluation process to measure HFA progress and guide future funding decisions
- S3: Maximize community engagement to ensure long-term sustainability
- S4: Share lessons learned

O2: Participate in five landscape-scale conservation partnerships.

- S1: Gulf of Mexico
- S2: Chesapeake Bay
- S3: Puget Sound
- S4: Great Lakes
- S5: San Francisco Bay/Delta

O3: By 2020, identify and implement targeted conservation approaches to build resiliency of coastal ecosystems and communities threatened by climate change and extreme weather events in each region.

- S1: Conduct risk assessments and prioritizations
- S2: Develop climate adaptation best practices
- S3: Implement climate adaptation measures

Organization

Goal 4: Invest in Staff Development and Improve Impact of People, Programs, and Services

O1: By 2020, become the best place to work in NOAA.

- S1: Improve professional development and training
- S2: Recognize employee performance
- S3: Improve communication

O2: Use the Habitat Enterprise Strategic Plan to direct staff and budget resource allocation on an annual basis.

- S1: Develop annual operation plans
- S2: Align staff resources with strategic priorities
- S3: Develop budget initiatives

Cross-Cutting Strategies

The strategies below apply to multiple goals and objectives.

- S1: Prioritize conservation actions
- S2: Develop conservation targets
- S3: Advance habitat science needed for management
- S4: Strengthen partnerships
- S5: Improve communications and stakeholder engagement
- S6: Develop national policy and guidance

# Habitat Enterprise Goals, Objectives, and Strategies

## Goal 1: Conserve Habitat for Managed Fisheries and Protected Resources

**Objective 1:** By 2020, contribute to reducing the rate of wetland loss in coastal watersheds.

- **Strategy 1: Prioritize areas for conservation.** Identify areas for wetland protection and restoration in regions where sites have not yet been prioritized.
- **Strategy 2: Restore 10,000 acres of tidal wetlands in priority areas.** Restore wetlands in areas identified under Strategy 1 and in known priority sites such as the Gulf of Mexico, Whidbey Basin (Puget Sound), Outer Oregon Coast, San Francisco Bay Delta, and the Southern California Bight. Conservation actions could include levee removal or setbacks, tide gate removal or modification, fill removal, sediment replenishment, invasive species control, and revegetation.
- **Strategy 3: Strengthen wetland protection measures.** Strengthen wetland protection by enhancing coordination between essential fish habitat (EFH) consultations and other regulatory actions and through measures to address topics such as: requesting compensatory mitigation that replaces lost acreage as well as ecological function in a timely fashion; creating upland buffer areas for anticipated wetland migration; and the beneficial reuse of sediment sources for protecting and creating estuarine wetlands.
- **Strategy 4: Develop national coastal wetlands policy.** Develop a NOAA Fisheries national policy on coastal wetland conservation (in conjunction with a planned national NOAA Fisheries mitigation policy; see Cross-Cutting Strategies) to highlight conservation of wetlands in coastal watersheds. The policy will direct NOAA Fisheries programs to work with partners to target conservation efforts where they will achieve gains in coastal wetlands. The policy would address topics such as focusing wetland conservation programs to locate at least 33% of all wetland protection and restoration acres in coastal watersheds, indicating wetland restoration as the preferred use for appropriate dredged material, and replacing wetland acres as well as function in wetland mitigation or compensation plans.

**Objective 2:** By 2020, increase access to historic riverine rearing and spawning habitat for targeted diadromous fish species.

- **Strategy 1: Prioritize fish passage actions.** Identify fish passage priorities and other riverine restoration and protection needs (e.g., off channel habitat) in regions where priorities have not yet been identified.
- **Strategy 2: Address fish passage barriers and other riverine conservation needs.** Improve fish passage in priority areas and implement projects to address other riverine habitat conservation needs. Conservation actions may include removing

or modifying dams and culverts, constructing fish ladders, capturing and hauling fish around barriers, repairing stream bank and upland erosion sites, reestablishing off-channel habitat, and modifying project operations (e.g., flows).

- **Strategy 3: Align conservation efforts.** Identify opportunities to improve alignment of targeted restoration with Federal Power Act (FPA) and Endangered Species Act (ESA) related conservation efforts.

**Objective 3:** By 2020, conserve shallow coral areas, including preventing 80,000 metric tons of sediment from reaching shallow coral reefs downstream of at least five watersheds.

- **Strategy 1: Identify and support implementation of priority conservation actions.** Conduct high-priority habitat restoration and protection activities identified in the elkhorn/staghorn coral (*Acropora*) recovery plan; sanctuary, monument, and watershed management plans; and HFA implementation plans to address key stressors (e.g., land-based sources of pollution, fishing, climate, invasive species, and physical impacts).
- **Strategy 2: Develop improved techniques for coral propagation.** Investigate and implement new techniques for propagation of ESA-listed and other coral species to restore coral habitat.
- **Strategy 3: Enhance mitigation approaches.** Continue to develop innovative mitigation approaches (e.g., mitigation banks, in lieu fee programs, tool for defining a unit of credit for coral, and programmatic mitigation approach for corals) to protect and restore shallow corals from impacts resulting from permitted activities and unplanned events.

**Objective 4:** Conserve deep-sea habitats by supporting measures to reduce deep-sea coral and sponge bycatch in fisheries, and support regional fishery management council consideration of protecting deep-sea habitat containing coral and sponge ecosystems nationally.

- **Strategy 1: Locate and characterize deep-sea coral and sponge ecosystems.** Work with partners to prioritize areas for conservation by sponsoring surveys of areas suspected or known to contain deep-sea corals

## Improving Fish Passage in the Penobscot River

The Penobscot River is home to 11 migratory fish species, three of which are listed under the Endangered Species Act, including Atlantic salmon (a NOAA Species in the Spotlight). Since 2003, NOAA has provided significant funding and technical assistance to the Penobscot River Restoration Trust and other partners for an ecosystem-level effort with the goal of improving fish access throughout the watershed. These efforts will rebuild migratory fish runs that will benefit the larger Gulf of Maine and improve water quality, recreation, and tribal cultural resources.

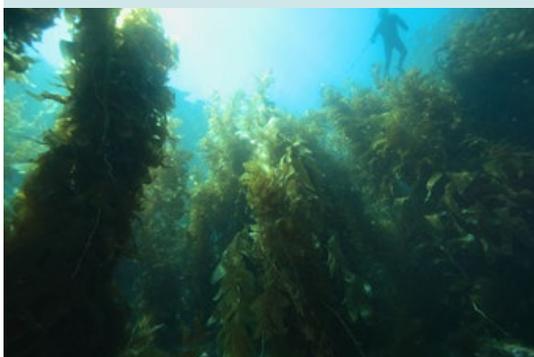
NOAA's support for the Penobscot River Restoration Project (PRRP) resulted in the removal of the two lowermost dams on the river, Great Works and Veazie. In addition, using NOAA's regulatory authorities, NOAA staff consulted on a new fish lift installed at the Milford dam, now the first dam on the river, and a fish by-pass channel recently completed at the Howland dam at the confluence of the Piscataquis and Penobscot rivers. To ensure the promise of the PRRP is fully realized, NOAA continues to work with partners to identify and implement dam and barrier removal and fish passage projects throughout the watershed as part of Habitat Focus Area efforts under NOAA's Habitat Blueprint. NOAA is exploring opportunities for restoration aligned with four hydropower dams in the watershed that will be undergoing FERC relicensing over the next 10 years.



## Restoring Rocky Reefs and Abalone in California

Once iconic in southern California, abalone fisheries have been closed for decades due to massive population declines caused by overfishing and disease. Two abalone species are federally endangered (including white abalone, a NOAA Species in the Spotlight) and five species are protected from fishing. The State of California and NOAA abalone recovery plans indicate that increasing abalone densities in key areas, coupled with rocky reef restoration projects, will help accelerate abalone recovery.

NOAA is working with partners along the West Coast to recover abalone. The first step is to restore kelp forest and rocky reef habitat, which involves transforming areas known as “urchin barrens” back to functioning kelp forests. Urchins devour any kelp or algae in their path, creating barrens devoid of kelp. More than 28 acres of kelp forest and rocky reefs off the Palos Verdes coast in southern California have been restored by removing approximately 2 million urchins. Captive breeding and outplanting of abalone to these restored sites ensures the long-term stability of the restored kelp forest. Recent successes in spawning and rearing white abalone in the lab and outplanting green abalone suggest that larger-scale projects are feasible in the future.



and sponges, monitoring bycatch, and developing scientific modeling and other methods to improve ability to predict the location of deep-sea coral and sponge communities.

- **Strategy 2: Work with partners to protect the ecological function of deep-sea coral and sponge ecosystems.** Work with regional fishery management councils as well as marine national monument and national marine sanctuary managers to protect areas known and predicted to contain deep-sea coral and sponge communities in the U.S. Exclusive Economic Zone.

**Objective 5: By 2020, protect and/or restore hard-bottom habitat (e.g., rocky reef, oyster reef, and cobble/boulder) at five sites.**

- **Strategy 1: Identify and prioritize hard-bottom sites for conservation.** Identify sites for targeted conservation, such as those within the southern California Bight for white abalone recovery, the Atlantic cod Habitat Areas of Particular Concern (HAPC) for groundfish, and the Gulf of Mexico and the Chesapeake Bay for oysters.
- **Strategy 2: Implement targeted conservation.** Protect and restore priority hard-bottom habitats through techniques such as abalone outplanting and sea urchin control for the recovery of rocky reef and kelp forests, oyster reef restoration and construction, fishing gear restrictions, and EFH consultations.
- **Strategy 3: Improve conservation techniques.** Develop improved conservation measures and restoration techniques for hard-bottom habitats based on the most recent scientific research (e.g., assessments of HAPC efficacy and restoration success, development of abalone spawning methodologies, development of larger-scale oyster restoration techniques).
- **Strategy 4: Implement the National Shellfish Initiative.** Work with internal and external partners to advance shellfish conservation, advance science efforts such as ecosystem service research, and improve coordination with aquaculture (NOAA Office of Aquaculture).

Objective 6: By 2020, through NOAA Fisheries authorities, manage for no net loss of submerged aquatic vegetation (SAV).

- **Strategy 1: Assess SAV population status and health.** Expand current knowledge of SAV habitat population status, trends, and supporting habitat, and reasons for loss or growth in targeted areas. Develop and maintain historical, current, and future data documenting changes in the areal extent and health of SAV habitat.
- **Strategy 2: Develop conservation best practices.** Develop and recommend improved SAV conservation techniques with science partners. Complete national restoration and protection guidelines to increase SAV habitat conservation success.
- **Strategy 3: Implement targeted restoration.** Restore SAV in targeted areas using conservation best practices such as seeding, transplanting, prop scar restoration, water-quality improvements, and reducing turbidity and wave energy to improve conditions necessary for successful SAV establishment and expansion.
- **Strategy 4: Strengthen SAV protection and mitigation.** Engage the U.S. Army Corps of Engineers and other partners to protect SAV from negative impacts, including both physical disturbance and degraded water quality from local and watershed-based sources, through regulatory authorities such as Magnuson-Stevens Fishery Conservation and Management Act (MSA) EFH provisions, ESA, and Fish and Wildlife Coordination Act (FWCA). See Cross-Cutting Strategy 4, which also speaks to strengthening partnerships to improve water quality necessary for successful implementation of the strategies of this objective.

## Goal 2: Restore NOAA Fisheries and Protected Resources Impacted by Oil and Other Hazardous Substance Releases

Objective 1: Settle 25 Natural Resource Damage Assessment (NRDA) cases by 2020, resolving responsible party liability to fully restore injured NOAA fisheries and protected resources.

- **Strategy 1: Be prepared for spills in high-risk areas.** Increase the efficiency of spill response, damage assessment, settlement, and restoration planning by supporting activities such as risk assessments to identify key areas at high risk for oil spill, improved baseline resource information in those areas (e.g., Arctic), and a national database of sampling protocols and techniques.
- **Strategy 2: Incentivize responsible parties to settle.** Enhance collaboration with industry on cost-effective restoration that maximizes NOAA trust resource benefits by developing innovative approaches, including early/upfront restoration (e.g., restoration before full case resolution), restoration banking (e.g., conservation land banks, fee credit purchase policies), and combined settlements with multiple small responsible parties.
- **Strategy 3: Ensure settlements account for full restoration.** Ensure all aspects of NOAA trust responsibilities, such as resource monitoring and long-term stewardship, are fully reflected in settlements.
- **Strategy 4: Focus on settlements in priority areas.** As part of the annual prioritization of all NRDA cases, focus settlement in priority areas (e.g., Hudson/Raritan Estuary, Puget Sound, northern Gulf of Mexico).

## Advancing Coordinated Gulf of Mexico Ecosystem Recovery and Resilience

NOAA remains heavily involved in the Gulf of Mexico following the Deepwater Horizon oil spill. NOAA provides expertise in science, natural resource management, and policy, and supports coordinated, holistic approaches to restore, protect, and sustain a resilient Gulf of Mexico ecosystem across work including the three programs below.

- **Natural Resource Damage Assessment (NRDA):** As a trustee agency for the NRDA, NOAA works with the Gulf states and other federal trustee agencies to help restore fisheries, wetlands, and wildlife impacted by the spill—and bring lasting benefits to the Gulf region for generations to come.
- **Gulf Environmental Benefit Fund (GEBF):** NOAA serves in an advisory role to the National Fish and Wildlife Foundation (NFWF), helping to shape priorities and project selection, and to provide a holistic perspective on comprehensive restoration.
- **Resources and Ecosystems Sustainability, Tourist Opportunities, and Revived Economies of the Gulf Coast States Act of 2012 (RESTORE Act):** NOAA provides technical and scientific support to the RESTORE Council in both program and project development.



**Objective 2: Advance the restoration of NOAA fisheries and protected resources by finalizing 25 NRDA restoration plans and completing implementation of 10 plans by 2020.**

- **Strategy 1: Streamline restoration planning.** Streamline NRDA restoration plan development and implementation through actions, including conducting programmatic consultations (e.g., ESA and EFH), increasing participation in regional planning, and exploring restoration actions that address multiple cases and leverage non-NRDA funding sources.
- **Strategy 2: Enhance public involvement in restoration planning.** Facilitate restoration planning, including public review of restoration plans, by improving use of tools such as social media, GIS-based mapping, and program websites.
- **Strategy 3: Innovate to expedite on-the-ground restoration.** Identify and expand the use of innovative and creative approaches to expedite restoration of NOAA fisheries and protected resources, such as expanding the targeted use of early/upfront restoration and restoration banking and leveraging non-NRDA funding.
- **Strategy 4: Ensure coordinated oversight throughout all restoration stages.** Enhance restoration management, fiscal oversight, and publicly transparent decision-making by developing and expanding use of tools that facilitate collaboration across federal and state co-trustees (e.g., interagency agreements, project tracking and reporting, and administrative record repositories).

**Objective 3: Capitalize on NRDA-related expertise and tools to benefit NOAA fisheries and protected resources for five local/regional habitat priorities (e.g., geographies, topic areas) by 2020.**

- **Strategy 1: Support trust resource regulatory processes.** Support and provide staff training on the use of tools, such as the Habitat Equivalency Analysis, to aid in determining appropriate mitigation requirements (e.g., for wetlands, SAV, and coral).
- **Strategy 2: Align NRDA restoration with trust resource priorities.** Where appropriate under NRDA procedures, implement NRDA restoration that addresses ESA recovery and MSA planning, or similar regional/ecosystem priorities.

- **Strategy 3: Support significant non-NRDA incidents.** Capitalize on rapid response and restoration capacity for incidents of high national or regional significance (e.g., non-NRDA vessel groundings on coral).
- **Strategy 4: Benefit trust resource restoration in state-led cases.** Explore opportunities to further support state-led NRDA cases where important benefits to affected NOAA fisheries and protected resources can be realized.
- **Strategy 5: Collaborate in local and regional restoration prioritization.** Coordinate with key programs that can have synergistic benefits to NOAA fisheries and protected resources in areas of oil spills and other hazardous releases and impacts (e.g., RESTORE, Gulf Environmental Benefit Fund, Department of Justice community service programs, and state and local enforcement actions).

### Goal 3: Increase Resilience of Coastal Ecosystems, Communities, and Economies through Habitat Conservation

Objective 1: By 2020, demonstrate measurable progress toward achieving the objectives for each Habitat Focus Area (HFA), and use the HFAs as models to promote collaborative habitat conservation for multiple benefits (see map of HFA locations in Appendix 3).

- **Strategy 1: Execute key actions in HFA implementation plans.** Implement priority actions that support achieving the objectives of each HFA.
- **Strategy 2: Develop an evaluation process to measure HFA progress and guide future funding decisions.** Design and implement an evaluation process to support the evaluation of progress within HFAs and their effectiveness at improving habitat conservation outcomes.
- **Strategy 3: Maximize community engagement to ensure long-term sustainability.** Establish collective objectives and strengthen local capacity and commitment within the community to ensure long-term sustainability of conservation actions in HFAs.
- **Strategy 4: Share lessons learned.** Share successes and lessons learned from work carried out in HFAs. Work within NOAA and externally to promote habitat conservation for multiple benefits and to inform other conservation efforts.

#### Promoting Collaborative Conservation in the West Hawai'i Habitat Focus Area

This 25-mile stretch on the northwestern coast of the Island of Hawai'i contains one of the state's longest contiguous coral reefs. It is also home to federally listed endangered and threatened species (including the Hawaiian monk seal, a Species in the Spotlight), and supports an abundance of corals and fish of which nearly a quarter are found nowhere else in the world. NOAA is collaborating with many state, nonprofit, and community-based partnerships in the area to conserve the healthy reef system and address threats and impacts to this economically and culturally important place. The cumulative impact of multiple threats—including development, sedimentation, drought, fires, aquarium fisheries, and invasive species—threatens the reefs and forests, and the animals that depend upon them. A delicate balance is required between the needs of humans and those of the natural resources. NOAA is working with partners to:

- Reduce sediment and measurably improve the condition of priority ecological targets.
- Reduce vulnerability of communities (human and natural) to localized effects of climate change.
- Engage communities in managing regional coastal resources.



## Collaborating in a Formal Partnership to Protect and Restore the Chesapeake Bay

The Chesapeake Bay watershed, which spans six states and the District of Columbia, is the nation's largest and most productive estuary. The Bay's 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 in the region. NOAA has been a partner in the Chesapeake Bay Program since 1984. In June 2014, NOAA joined the states and other partners in committing to a new Chesapeake Bay Watershed Agreement, which established 10 goals to advance the restoration and protection of the Bay watershed. NOAA identified four of these goals on which to focus its activities: Sustainable Fisheries, Vital Habitats, Environmental Literacy, and Climate Resiliency. NOAA will also support monitoring and research to inform decision-making, track progress, and evaluate effectiveness of management actions.



## Objective 2: Participate in five landscape-scale conservation partnerships.

- **Strategy 1: Gulf of Mexico.** Influence, implement, and support the coordination of restoration and conservation actions through the Gulf ecosystem restoration initiatives to conserve coastal wetland, oyster, and SAV habitat; replenish and protect living coastal and marine resources; and enhance community resilience.
- **Strategy 2: Chesapeake Bay.** Use leadership roles in the Chesapeake Bay Program to restore native oyster habitat, support well-managed fisheries and improve fish passage, enhance environmental literacy, and use coastal observations to evaluate the health and status of the ecosystem.
- **Strategy 3: Puget Sound.** Coordinate resources and efforts with agency, tribal, and nongovernmental partners through the Puget Sound Coordinated Investment Initiative to accelerate salmon recovery and implement large-scale projects that provide additional benefits such as flood risk reduction, agricultural viability, and community resilience.
- **Strategy 4: Great Lakes.** Work with the Great Lakes Restoration Initiative to implement habitat conservation projects that will remove habitat-related Beneficial Use impairments leading to the delisting of Areas of Concern.
- **Strategy 5: San Francisco Bay/Delta.** Participate in the California Eco Restore initiative to advance habitat protection, enhancement, and restoration for migratory salmonids and green sturgeon.

## Objective 3: By 2020, identify and implement targeted conservation approaches to build resiliency of coastal ecosystems and communities threatened by climate change and extreme weather events in each NOAA Fisheries Region.

- **Strategy 1: Conduct risk assessments and prioritizations.** The Habitat Enterprise focuses the ecological benefits that can be derived from habitat conservation. Under the appropriate circumstances, habitat conservation can improve resiliency for ecosystems, communities, and the economies built on them. The Habitat Enterprise will work with NOAA line offices, regional fishery management councils, and external partners to evaluate risks and prioritize habitat conservation

actions to address key climate threats to both NOAA fisheries and protected resources and communities, including flooding, drought, storm surge, sea level rise, and sedimentation.

- **Strategy 2: Develop climate adaptation best practices.** Continue to develop, and adapt as needed, best practices and guidance for incorporating climate and extreme weather adaptation considerations into habitat conservation actions, relating to restoration, EFH consultations, Federal Energy Regulatory Commission (FERC) licensing/relicensing agreements, and fishery management actions.
- **Strategy 3: Implement climate adaptation measures.** Implement conservation techniques in each region directly or through conservation recommendations, including natural and nature-based infrastructure projects, floodplain restoration, levee setbacks, upland buffers, removing or modifying stream and tidal barriers, and freshwater management (e.g., modified reservoir operations, off-channel storage, and groundwater injection/retention). These measures will help address circumstances related to too much fresh water (flooding) as well as too little (drought).

## Goal 4: Invest in Staff Development and Improve Impact of People, Programs, and Services

### Objective 1: By 2020, become the best place to work in NOAA.

- **Strategy 1: Improve professional development and training.** Assess staff training needs and implement individual development plans to address those needs. Encourage rotational exchanges for Habitat Enterprise staff to gain experience in other places within the Enterprise.
- **Strategy 2: Recognize employee performance.** Recognize performance differences meaningfully.
- **Strategy 3: Improve communication.** Improve two-way information flow with leadership regarding on Enterprise goals and progress toward goals and priority actions. Also improve information flow on what an ideal work environment looks like and the progress being made toward that environment.

### Objective 2: Use the Habitat Enterprise Strategic Plan to direct staff and budget resource allocation on an annual basis.

- **Strategy 1: Develop annual operation plans.** Develop annual operation plans to measure regular progress toward the goals and objectives of this Habitat Enterprise Strategic Plan. Use the Strategic Plan to inform annual budgeting and spend plans.
- **Strategy 2: Align staff resources with strategic priorities.** Incorporate actions from the annual operation plans into staff performance plans, where appropriate.
- **Strategy 3: Develop budget initiatives.** Develop future budget initiatives based on Habitat Enterprise Strategic Plan goals.

## Developing Habitat Conservation Objectives with Regional Fishery Management Councils

The Habitat Enterprise is working with the regional fishery management councils to implement ecosystem-based fisheries management and to focus habitat conservation actions where they will have the greatest benefit to fish stocks. For example, NOAA is working with the Pacific Fishery Management Council to evaluate the relative risk of anthropogenic stressors, such as nutrient input and offshore oil development, on habitats used by bocaccio, lingcod, black rockfish, and English sole at different life stages.

The results of the risk assessments will allow NOAA to develop specific management objectives and actions to decrease the species' exposure to priority habitat stressors. NOAA is also working with partners in the Mid-Atlantic Fishery Management Council to develop policies and measurable objectives for habitat areas that are ecologically important to multiple fish species (e.g., key nursery habitats in specific geographic areas), and to integrate habitat considerations into the Council's ecosystem approach to fisheries management. These efforts will help NOAA, the regional fishery management councils, and other federal agencies ensure that the most important habitat areas support resilient fisheries and productive ecosystems.



## Cross-Cutting Strategies

The following cross-cutting strategies apply to all four of the goals within this plan. As with those goals, particularly 1-3, working with partners to establish activities for the cross-cutting strategies will be key to their success.

- **Strategy 1: Prioritize conservation actions.** Work with partners to prioritize the habitats, geographies, and habitat limited species listed in the objectives under Goal 1 above; and target conservation efforts to address them. This work will also include activities such as:
  - Implement priority recovery plan habitat-related actions, including a focus on Office of Protected Resources' "Species in the Spotlight."
  - Identify priority habitat-limited fishery species.
  - Implement priority actions identified in HFAs, within regional ecosystem-based conservation partnerships, and other areas.
- **Strategy 2: Develop conservation targets.** Continue to work with partners to further define near and long-term restoration and protection targets within habitat types and priority areas (e.g., how much habitat needs to be protected and restored, where, for what ultimate ecosystem service and target species' population goals and needs) and the incremental steps needed to achieve the targets. This strategy will include working with regional fishery management councils to develop habitat conservation objectives for habitat-limited species and incorporating them into Fishery Ecosystem/Management Plans.
- **Strategy 3: Advance habitat science needed for management.** Continue efforts to build on and implement the Habitat Assessment Improvement Plan (HAIP) and other science plans, working with NOAA Fisheries Office of Science and Technology, Science Centers, and other partners to identify and address key science needs for habitat management decisions, such as:
  - Measuring the effectiveness and ecosystem service benefits and values of habitat conservation actions.
  - Increasing understanding of the relationship between habitat and managed/protected species (ecosystem linkages).
  - Determining climate and extreme weather effects on habitat and species.
  - Identifying and monitoring the adverse effects and driv-

ers of fishing and nonfishing impacts on habitats (off-shore, coastal, and estuarine, e.g., physical damage, red tide and hypoxia).

- Mapping and modeling deep-sea, rocky reef, and SAV habitat and locations.
- Monitoring and incorporating water column habitat data into stock assessments.
- **Strategy 4: Strengthen partnerships.** Promote internal and external partnerships to advance shared habitat priorities and solutions, leverage and coordinate resources, maximize impact, and enhance stakeholder and community engagement. The Habitat Enterprise works closely with partners to conserve the nation's habitat. In addition to continuing existing partnerships, the following are key opportunities for strengthening and expanding partnerships in the next five years:
  - Strengthen linkages with the commercial and recreational fishing and aquaculture industries: Enhance collaboration with regional fishery management councils, interstate marine fisheries commissions, state agencies, the National Fish Habitat partnership, and fishing industries to conserve habitat.
  - Improve water quality: Strengthen partnerships with the Environmental Protection Agency (EPA), U.S. Department of Agriculture (USDA), and others to improve water quality in the Chesapeake Bay, Caribbean, Gulf of Mexico, Hawaii, and other areas where addressing land-based sources of pollution is important.
  - Improve flows and freshwater management: Strengthen partnerships with the U.S. Army Corps of Engineers (USACE), Bureau of Reclamation, states, and other partners to address water quantity and quality issues in coastal systems.
  - Ensure energy development considers potential habitat impacts: Enhance relationships with alternative and fossil fuel energy industries in Hawaii, the Greater Atlantic, Gulf of Mexico, and other areas to ensure habitat is conserved alongside energy development and production.
  - Enhance fish passage and coastal fisheries: Work with the National Fish Habitat Partnership to open additional river miles to diadromous fish and to improve additional river and nearshore habitat conditions for fisheries and protected resources and their prey.
  - Align NOAA Fisheries' regulatory and nonregulatory habitat conservation mechanisms: Enhance targeted

## Using Science to Assess Habitat Important for Fisheries

The intensity and distribution of Norton Sound seabed mining operations off Nome, Alaska have increased rapidly since 1996, due to high gold prices and the success of a reality television series. Because of a lack of site-specific information, it was unknown whether the mining boom was harming seafloor habitat for the commercially important red king crab.

In response to concerns raised by the North Pacific Fishery Management Council and Crab Plan Team, the Alaska Habitat Conservation Division (HCD) funded research and established collaborative partnerships to investigate the issue. Methods typically used to assess marine habitat would not work in Nome due to extreme environmental factors. HCD worked closely with the researchers from Florida International University, Alaska Department of Fish & Game, Norton Sound Economic Development Commission, and local residents—including members of the crab and mining industries—to test an Unmanned Surface Vessel equipped with multibeam sonars and imaging sonar. More than 70 kilometers of transects were surveyed near Nome and benthic structures were readily apparent.

The results from this study will be used to identify important crab habitat and inform subsequent permit reviews to ensure adequate protection is in place in Norton Sound.



coordination between EFH and ESA consultations, FERC licensing/relicensing agreements, restoration projects, and other conservation actions.

- Enhance cross-NOAA coordination on habitat issues: Use the NOAA Habitat Conservation Team, NOAA's Regional Collaboration Teams, and matrix programs such as the Coral Reef Conservation Program to increase coordination for habitat conservation and science.
- **Strategy 5: Improve communications and stakeholder engagement.** Develop improved techniques with NOAA partners to:
  - Increase stakeholder engagement.
  - Communicate the value of habitat conservation.
  - Communicate habitat conservation issues, challenges, solutions, and best practices.
  - Improve understanding of why habitat is important to key stakeholders and potential partners.
- **Strategy 6: Develop national policy and guidance.** Develop and/or influence national policy, regulations, or guidelines to encourage consideration of habitat issues and increase the effectiveness of habitat conservation activities.
  - Implement the NOAA National Habitat Policy by supporting NOAA's sharpened focus on habitat using the full array of habitat related missions, mandates, and resources.
  - Work across NOAA offices to develop NOAA Fisheries' compensatory mitigation policy and guidance to provide recommendations and standards for compensation of habitat loss subject to NOAA programs and authorities such as MSA EFH provisions, ESA, and NRDA (e.g., provide guidelines for establishing listed species habitat banks, in lieu fee programs).
  - Convene a workshop for Fishery Management Council representatives and NOAA Fisheries Habitat experts to enhance the effectiveness of Essential Fish Habitat protection measures.
  - Help NOAA revise the NOAA National Artificial Reef Plan, as needed, to clarify the agency's position on the purpose, siting, and design of artificial reefs based on the most recent bathymetric and benthic data available.
  - Complete the Guidance for Considering the Use of Living Shorelines to help increase understanding of different living shorelines approaches, the permitting and consultation processes, and the different NOAA programs involved.
  - Implement the Coastal and Marine Ecological Classification Standard (CMECS) for benthic habitat data collected by the Habitat Enterprise.

## Implementation Strategy and Evaluation

The Habitat Enterprise will use this plan in guiding annual planning. Each year, the Enterprise will also evaluate progress toward accomplishing the objectives and adjust planned activities for the subsequent year accordingly. Commitments identified in annual operating plans will be reflected in the performance plans of Habitat Enterprise staff where appropriate to ensure a close alignment between daily work, annual plans, and five-year goals.

# Appendix 1: Alignment with Department of Commerce and NOAA Priorities

NOAA Fisheries is a line office of NOAA, which is located within the Department of Commerce (DOC). The Habitat Enterprise's strategic plan was informed by the strategic plans and planning documents of DOC, NOAA, and NOAA Fisheries, as well as strategic plans developed by Regional Offices, Science Centers, and other NOAA Fisheries headquarters offices.

Strategic plans and planning documents that currently guide NOAA Fisheries:

- Department of Commerce Strategic Plan for fiscal years 2014–2018 (2014)
- NOAA's Next Generation Strategic Plan (2010)
- NOAA Annual Guidance Memorandum (2015)
- NOAA Fisheries Priorities and Annual Guidance for FY 2016 (2015)

In addition to these overarching documents, there are many issue-specific plans and strategies that help guide the work of the Habitat Enterprise, including the NOAA Fisheries Ecosystem-based Fishery Management Policy, the NOAA Fisheries Climate Science Strategy, and numerous Executive Orders and White House guidance documents. While only the overarching NOAA and DOC priority documents are described in detail below, all relevant plans and strategies will be considered in the implementation of this strategic plan.

## Department of Commerce Strategic Plan

The DOC is comprised of 12 bureaus that work in five key areas: trade and investment, innovation, environment, data, and operational excellence. NOAA furthers the Department's mission with stewardship of the ocean's resources—these resources contribute more than \$250 billion annually to the nation's economy. Specifically tied to the NOAA mission in the Department of Commerce Strategic Plan (2014) are the following goal, objective, and key strategies:

### The DOC Strategic Goal, Objective, and Strategies Most Relevant to NOAA Fisheries

#### *Environmental Goal*

Ensure communities and businesses have the necessary information, products, and services to prepare for and prosper in a changing environment.

#### *DOC Objective 3.4*

Foster healthy and sustainable marine resources, habitats, and ecosystems through improved management and partnerships.

#### *DOC Strategies for Objective 3.4*

- **Strengthen capabilities to assess and monitor fish and protected resources:** Ensuring sustainable populations of living marine resources is a key Departmental mandate. NOAA will increase the precision of stock assessments, and perform more robust monitoring. NOAA will use ecosystem management to ensure sustainable living marine resources. Integrated biological, physical, and chemical data and ecosystem modeling will be incorporated into fish stock and protected species assessments. More advanced technologies for monitoring living marine resources and ecosystems will be developed.
- **Improve recovery of listed species through innovative partnerships:** International, federal, state, local, tribal, and nongovernmental organizations play a role in conservation. NOAA will strengthen partnerships with these stakeholder groups to ensure greater collaboration toward the recovery and conservation of protected species in marine and coastal ecosystems. Greater collaboration will improve the quality and execution of conservation plans.
- **Enhance place-based conservation:** Through its coastal management and place-based conservation programs, NOAA will expand protections at current sites and add protections at new sites. This approach preserves the economic and environmental benefits of these special places.
- NOAA initiatives such as the Habitat Blueprint framework will employ partnerships to improve habitat conditions for fisheries and for coastal and marine life.

### **NOAA's Next Generation Strategic Plan**

The Next Generation Strategic Plan (2010) conveys NOAA's mission and future vision, as well as the road map for achieving the vision as laid out through the long-term goals and objectives. With the release in 2010 of NOAA's Strategic Plan and Executive Summary, and in the 2013 Addendum, Dr. Kathryn Sullivan, then Acting Under Secretary of Commerce for Oceans and Atmosphere, called on NOAA to focus on the following areas:

- **Climate:** Through collaborative strategies, continue to advance the observations, modeling, and research necessary to understand climate change and its impacts; and transition mature climate science into regular, reliable, and relevant information services.
- **Weather:** NOAA will build a "Weather ready" nation by preserving and improving its ability to provide timely and accurate forecasts and warnings for the protection of life and property through science, technology, infrastructure improvements, and collaborative efforts with partners.
- **Oceans:** NOAA will advance our efforts to ensure the long-term sustainability of marine fisheries and recovery of protected species and their habitats.
- **Coasts:** NOAA will deliver integrated data, information, products, and services needed to support resilient coastal communities and economies.
- **Science and Technology:** NOAA will focus on developing systems level understanding of ecosystems and phenomena—across missions and disciplines—with the goal of increasing the resilience of ecosystems, economies, and communities.

- **Engagement:** NOAA will expand efforts to listen and respond to our customers' and stakeholders' concerns and better relate NOAA mission responsibilities and activities to those concerns.
- **Organization and Administration:** NOAA will further capitalize on recent initiatives to cut costs and improve effectiveness.

As one of five NOAA line offices, NOAA Fisheries' mission is most closely tied to the goal for Healthy Oceans identified in the Draft Goal Implementation Plan, 2012:

*Healthy Oceans Goal: Marine fisheries, habitats, and biodiversity sustained within healthy and productive ecosystems.*

The Healthy Oceans goal is to ensure that ocean, estuarine, and related ecosystems—and the NOAA fisheries and protected resources that inhabit them—are resilient and sustainable in the face of increasing threats and changing conditions. A sound understanding of these ecosystems, communication of this knowledge to decision-makers and stakeholders, and the capacity and resources to support key NOAA programs are critical to achieving this goal. Strategic objectives for this goal:

- Improved understanding of ecosystems to inform resource management decisions.
- Recovered and healthy marine and coastal species.
- Healthy habitats that sustain resilient and thriving marine resources and communities.
- Sustainable fisheries and safe seafood for healthy populations and vibrant communities.

## NOAA's FY 2016 Annual Guidance Memorandum (AGM)

The purpose of the Annual Guidance Memorandum (AGM) is to focus the agency's corporate attention on near-term execution challenges and a balanced implementation of NOAA's strategy across mission areas, given mandates, stakeholder priorities, and the fiscal outlook. The AGM is released on an annual basis, so the annual implementation plans for this strategic plan will reflect the most current guidance.

From the FY 2016 AGM Priorities:

*NOAA Priority: Provide information and services to make communities more resilient.*

- Implement next-generation stock assessments for species within NOAA's jurisdiction through advancements in monitoring and data collection.
- Make measurable progress on recovery of protected species.
- Increase operational services that promote coastal resiliency.

*NOAA Priority: Achieve organizational excellence*

- Under the direction of the Chief Scientist, strengthen alignment of research and development activities to effectively and efficiently support NOAA's operational missions, including accelerating research advances to application.

## NOAA Fisheries Priorities and Annual Guidance for FY 2016 (2015)

NOAA Fisheries' annual guidance memo provides direction to all NOAA Fisheries employees in executing mission responsibilities by establishing a framework for development of annual priority milestones. These priorities consider the core mission functions in context of current fiscal conditions.

For FY 2016, NOAA Fisheries will focus on the following core priorities:

- Ensure the productivity and sustainability of fisheries and fishing communities through sciencebased decision-making and compliance with regulations.
- Recover and conserve protected resources through the use of sound natural and social sciences.
- Improve organizational excellence.

All other NOAA Fisheries programs, projects, and investments should be designed and conducted in a manner that supports these three core mission functions. NOAA Fisheries' approach to these priorities and supporting functions will be guided by the following overarching principles:

- **Advance innovative solutions to emerging challenges (science and stewardship):** NOAA Fisheries will lead innovation and serve as a catalyst to spur innovation.
- **Cultivate our partnerships:** NOAA Fisheries will engage the expertise and capabilities of our partners from the international, federal, tribal, and state communities; academia; and nongovernmental sectors.
- **Improve internal and external communications and raise awareness of the NOAA Fisheries mission:** We will strive toward a “no surprises” approach to communicating with our stakeholders and, where practicable, build consensus on expectations and the identification of critical factors to measure success.
- **Improve our decisions and knowledge by transforming data capabilities and access in order to support our mission.** NOAA Fisheries will provide robust data and science utilizing the best available infrastructure and by anticipating customer's needs.

# Appendix 2: NOAA Fisheries Habitat Enterprise Organizational Structure, Plan Development, Core Mandates, and Programs

The NOAA Fisheries Habitat Enterprise works across NOAA and with external partners to protect, maintain, and restore habitats that provide important ecological and societal benefits. Work focuses on sustaining managed fisheries, recovering protected resources, and improving the resiliency of coastal communities.

## Organizational Structure and Strategic Plan Development

The NOAA Fisheries Habitat Enterprise is composed of the staff of Office of Habitat Conservation (three divisions: Habitat Protection, Restoration Center, and the Chesapeake Bay Office); the Habitat Conservation Divisions located in the Regional Fisheries Offices; and the habitat management-related components of the four West Coast Region Area Offices. In 2014, the leadership of these offices and divisions came together to establish the National Habitat Leadership Team (NHLT).

The NHLT works collaboratively across NOAA and externally to build support, articulate priorities, and drive implementation of habitat management initiatives designed to meet national and regional habitat needs. The NHLT uses the Habitat Blueprint principles to direct its conservation planning and decision-making (see Introduction). These principles were formalized as an agency-wide approach for habitat conservation in the NOAA National Habitat Policy. Building off of these principles and policy, the NHLT led development of this Strategic Plan with input from both internal and external habitat partners. And as discussed in the Partnerships sections, the Habitat Enterprise will continue to work with and rely on these partners to develop collective priorities and implement the Strategic Plan.

## Mission

The NOAA Fisheries Habitat Enterprise protects and restores habitat to sustain fisheries, recover protected species, and maintain resilient coastal ecosystems and communities.

## Vision

Healthy ecosystems, sustainable living marine resources, and resilient coastal communities thrive through innovative solutions, management flexibility, adaptability, and science excellence.

## Core Mandates

The core mandates and authorities for the Habitat Enterprise include (this list is not inclusive of all mandates and authorities):

- Magnuson Stevens Fishery Conservation and Management Act (MSA)
- Federal Power Act (FPA)
- Endangered Species Act (ESA)
- Fish and Wildlife Coordination Act (FWCA)
- Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA)
- Chesapeake Bay Protection and Restoration Executive Order (CBEO)
- Coral Reef Conservation Act (CRCA)
- Estuary Restoration Act (ERA)
- Oil Pollution Act (OPA)
- Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)
- NOAA Authorization Act of 1992 (Public Law 102567), reauthorized in 2002 (Public Law 107372)

## Programs

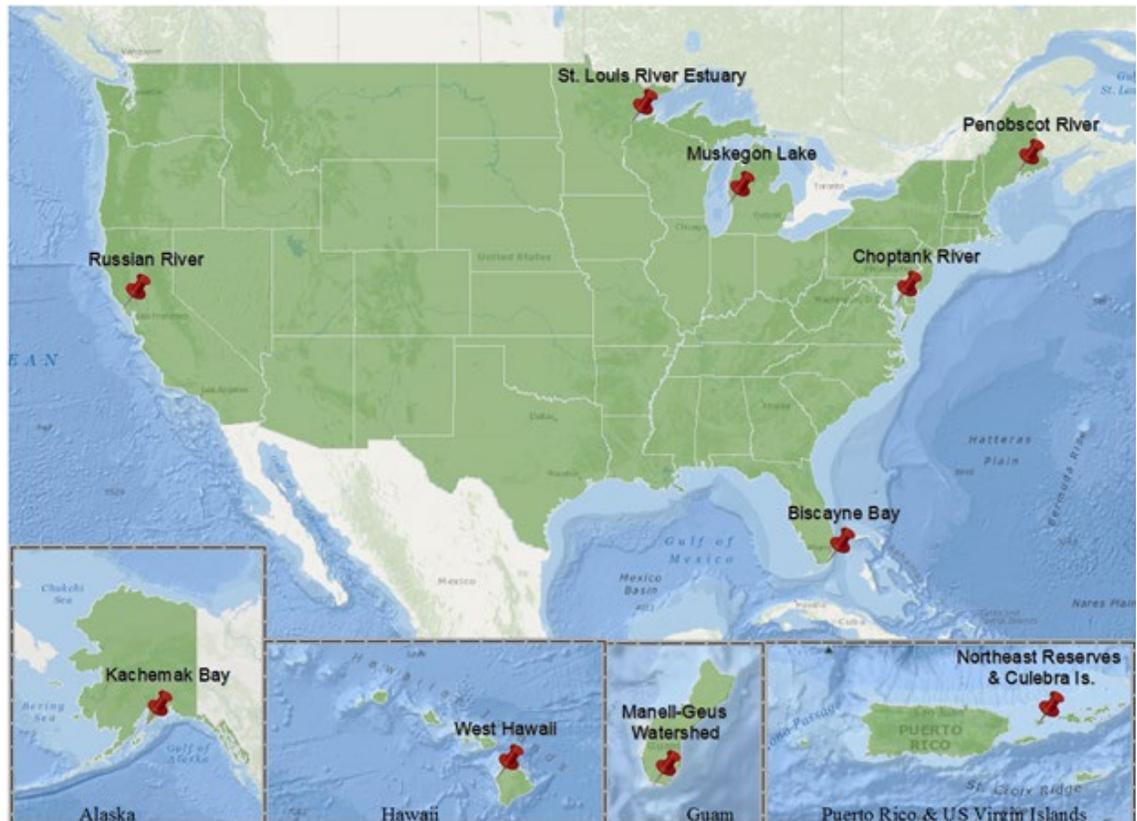
The major programs and activities of the Habitat Enterprise include:

- ***Protecting essential fish habitat (EFH):*** In coordination with the regional fishery management councils, the EFH program describes and identifies EFH for all federally managed fish during each stage of their lives from eggs to adults, and evaluates the effects of proposed federal fishery management actions on such habitats. The program also provides NOAA with thousands of opportunities each year to guide coastal development in a manner that protects vital fish habitat while supporting economic opportunity. Through required consultations NOAA provides recommendations to avoid, minimize, mitigate, or otherwise offset adverse effects of federal activities on marine, coastal, and riverine EFH for federally managed species. A federal activity is classified as a federally authorized, funded, permitted, or proposed action. Actions requiring EFH consultations may include proposed coastal construction projects, applications for dredging and filling wetlands, waste discharge permits, military activity, renewable and traditional energy proposals, and other federal funding and permit activities that may adversely affect EFH.
- ***Providing fish passage at hydroelectric dams and other water-control structures:*** This program promotes passage for migratory fish past hydroelectric dams that block valuable upstream river habitats or downstream passage to the ocean. NOAA can require fish passage through the development of mandatory conditions under the Federal Power Act for the safe, timely, and effective passage of migrating fish at hydro-power dams licensed by the Federal Energy Regulatory Commission (FERC). NOAA can also recommend broader measures for the protection, mitigation, or enhancement of migratory fish and their habitat (e.g., instream flows). These unique roles and responsibilities granted to NOAA also present a limited window of opportunity for NOAA action, because license renewals are generally approved for 30 to 50 years.

- ***Protecting deep sea corals:*** NOAA implements the MSA Deep Sea Coral Research and Technology Program to identify and map locations of deep sea corals and to analyze and provide regional fishery management councils with scientific information needed to manage and protect these habitats. The MSA also provides the councils with discretionary authority to designate zones to protect deep sea corals identified by the program from physical damage from fishing gear. NOAA implements this work in coordination with other federal agencies and research institutions.
- ***Conserving shallow-water coral reefs:*** The NOAA Coral Reef Conservation Program's (CRCP) mission as authorized by P.L. 106562 is to preserve, sustain, and restore the condition of coral reef ecosystems; to promote the wise management and sustainable use of coral reef ecosystems to benefit local communities and the nation; and to develop sound scientific information on the condition of coral reef ecosystems and the threats to these ecosystems. Over the past five years, CRCP has emphasized its efforts on understanding and addressing the top three recognized threats to coral reef ecosystems: climate change impacts, fishing impacts, and impacts from land-based sources of pollution. The CRCP also maintains national level responsibilities that include mapping, monitoring, and education/outreach in support of these three threats. The CRCP is implemented through internal NOAA partners across the line offices and external partners via grants and cooperative agreements.
- ***Targeting restoration of habitats:*** The Habitat Enterprise works closely with partners to implement restoration of coastal, marine, and riverine habitats for rebuilding fisheries, recovering protected species, and improving the resiliency of coastal communities. The Habitat Enterprise provides financial assistance and a full range of restoration expertise and services for habitat restoration projects nationwide. Services support regional and local strategic planning, project design, engineering, environmental compliance and permitting, implementation, oversight, and project evaluation. Staff members lead and support coordination efforts across NOAA, and a large variety of other federal and nonfederal partners, to identify shared habitat priorities and focus resource investments. This work is implemented through several programs coordinated across NOAA, including the Community-based Restoration Program; Coastal Wetlands Planning, Protection, and Restoration Act; Great Lakes Restoration Initiative; and Coral Reef Conservation Program.
- ***Restoring habitat injured by oil and other hazardous substance releases:*** Every year, NOAA responds to as many as 150 oil spills and other hazardous substance releases across the nation through the Damage Assessment Remediation and Restoration Program (DARRP). Following the model of providing broad expertise and services noted above, NOAA plans and implements restoration for coastal and marine resources threatened or injured by oil spills, other hazardous substance releases, or vessel groundings. This work involves restoration activities for Natural Resource Damage Assessment (NRDA) and natural resource trustee responsibilities for all active cases. The DARRP includes partner program offices, the Office of General Counsel for Natural Resources, and the Office and Response and Restoration (within the National Ocean Service).

- **Protecting and restoring the Chesapeake Bay:** The NOAA Chesapeake Bay Office (NCBO) applies expertise in oyster restoration, fisheries, environmental literacy, and environmental observations to protect and restore the Chesapeake Bay. NCBO programs are integrated to provide an ecosystem-based approach to management. NCBO implements NOAA's mandate, authorized by P.L. 107372, to coordinate programs and activities of the agency to support the Chesapeake Bay Program, including the Chesapeake Bay Watershed Agreement and Executive Order 13508. NCBO carries out programs in habitat assessment and characterization supporting oyster restoration; fisheries research and ecosystem modeling; environmental literacy and community engagement; and ecosystem observations.

## Appendix 3: Habitat Focus Areas



# Appendix 4: List of Acronyms and Abbreviations

AKRO	Alaska Regional Office
CRCP	NOAA's Coral Reef Conservation Program
CWPPRA	Coastal Wetlands Planning, Protection and Restoration Act
DOC	Department of Commerce
EFH	Essential fish habitat
ESA	Endangered Species Act
FERC	Federal Energy Regulatory Commission
FPA	Federal Power Act
FWCA	Fish and Wildlife Coordination Act
FY	Fiscal year, October 1 through September 30
GARFO	Greater Atlantic Regional Fisheries Office
HAIP	Habitat Assessment Improvement Plan
HAPC	Habitat Areas of Particular Concern
HCD	NOAA Fisheries Regional Habitat Conservation Division
HFA	Habitat Focus Area
HP	Habitat Protection Division
MMPA	Marine Mammal Protection Act
MSA	Magnuson Stevens Fishery Conservation and Management Act
NCBO	NOAA Chesapeake Bay Office
NEPA	National Environmental Policy Act
NGO	Nongovernmental organization
NHLT	National Habitat Leadership Team
NOAA	National Oceanic and Atmospheric Administration
NOAA Fisheries	NOAA National Marine Fisheries Service
NOS	NOAA National Ocean Service
NRDA	Natural Resources Damage Assessment
NWS	NOAA National Weather Service
OAR	NOAA Office of Oceanic and Atmospheric Research

OHC	NOAA Fisheries Office of Habitat Conservation
PIRO	Pacific Islands Regional Office
PR	NOAA Fisheries Office of Protected Resources
RC	NOAA Restoration Center
RESTORE Act	Resources and Ecosystems Sustainability, Tourist Opportunities and Revived Economies of the Gulf Coast States Act
SAV	Submerged aquatic vegetation
SERO	Southeast Regional Office
SF	NOAA Fisheries Office of Sustainable Fisheries
WCRO	West Coast Regional Office