

An aerial photograph of a coastal region. A multi-lane road runs diagonally from the bottom left towards the top right. To the right of the road is a dense green forest. Further right is a sandy beach that meets the ocean. In the background, there are buildings and a larger body of water under a blue sky with some clouds.

U.S. Ocean Action Plan

# **A Report for the Subcommittee on Integrated Management of Ocean Resources:**

*Top 10 Marine and Coastal  
Cooperative Conservation  
Lessons Learned*



This report is presented to the Subcommittee on Integrated Management of Ocean Resources Co-Chairs Dr. Gerhard Kuska, Council on Environmental Quality; Mary Glackin, National Oceanic and Atmospheric Administration; Chris Kearney, Department of the Interior; and Craig Hooks, Environmental Protection Agency, on behalf of the Cooperative Conservation Lessons Learned Task Team. Team members included:

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## EXECUTIVE SUMMARY

The Subcommittee on Integrated Management of Ocean Resources (SIMOR) was formed in March 2005 as part of the ocean governance structure described in the President's Ocean Action Plan ([www.oceans.ceq.gov](http://www.oceans.ceq.gov)). SIMOR focuses on implementing ocean, coastal, and Great Lakes management actions that will benefit from interagency coordination. Its work is designed to complement the efforts of individual Departments and Agencies, as well as other interagency groups.

SIMOR seeks to identify and promote opportunities for collaboration and cooperation among federal agencies and to build partnerships among federal, state, tribal and local authorities, the private sector, international partners, and other interested parties. These cooperative efforts will help develop and implement management strategies that ensure continued conservation of coastal and marine habitats and living and non-living resources while also ensuring that the American public enjoys and benefits from those same resources. In March 2006, SIMOR issued its formal workplan which describes specific activities intended to promote responsible use and management of our ocean and coastal resources.

The SIMOR identified four priorities as initial focus areas:

- Regional and local collaboration
- Use of ocean science and technology in ocean resource management
- Enhance ocean, coastal, and Great Lakes resource management to improve use and conservation
- Enhance Ocean Education

As its first work item under the regional and local collaboration focus area, SIMOR sought to capitalize on existing efforts to promote cooperative conservation and partnerships by highlighting examples of successful collaboration in this document. This document provides some case study examples in order to encourage and advance partnerships in coastal and marine areas.

This report of the top 10 marine and coastal cooperative conservation lessons learned identifies lessons that states and regions could apply to their individual regional contexts. Building on the 2005 White House Conference on Cooperative Conservation, this report also includes recent examples from several SIMOR agencies, and other existing reports on cooperative resource management.

Each lesson is illustrated by examples of cooperative conservation partnerships. These examples come from around the country and include various combinations of partners including federal and state agencies, tribes, citizen groups, and non-profit organizations. Lessons learned include:

- 1. Build leadership capacity** — Develop champions and proponents of your efforts among a diverse set of stakeholders and at a variety of levels, from agency directors to watershed coordinators. Empower others to take initiative and get involved.
- 2. Encourage diverse and meaningful participation** — Not only should all relevant stakeholders be actively involved when planning and developing local and regional partnerships and cooperative conservation projects, but the “right people” need to be at the table (e.g., community and opinion leaders, good communicators, people who understand the issues and have the backing of their associated organizations).

**3. Secure a strong knowledge foundation** — Integrate accurate scientific and technical knowledge, including community-based and traditional knowledge, into problem solving. Conservation decisions and activities need to take into consideration accurate information to put forward innovative, robust alternatives for decision-makers and to ensure that implementation is met with success.

**4. Create incentives and remove obstacles** — Encourage and sustain partnerships and collaborations through economic, fiscal, social, psychological, or cultural incentives and by removing barriers to participation.

**5. Have a clear road map** — Establish mutually agreed upon measurable goals and objectives, and include timeframes and mechanisms for evaluation. Often, the process of crafting these elements fosters ownership and helps establish meaningful working relationships, which is valuable in and of itself. While many projects include elaborate monitoring programs to measure progress, it is equally important to evaluate these results and establish a process to ensure that iterative decision-making reflects what was learned through monitoring and evaluation.

**6. Maintain effective communication** — Describe and agree to a shared vision, clarify roles and responsibilities and how agencies and organizations will work together early in the process. Include what the group hopes to accomplish, how it will work together, how decisions will be made on issues of shared concern, and the responsibilities of agencies, organizations, and individuals involved. Create mechanisms for ongoing communication to learn from successes and obstacles.

**7. Be a good partner** — Work to establish trust and transparency among partners. Develop a clear decision-making process, take time to learn what is important to partners, and stay committed to the effort.

**8. Take advantage of low hanging fruit** — Start with problems that are easily solved. Action is motivating.

**9. Educate to foster a sense of shared stewardship** — Take field trips, plan work days, and involve local community groups and schools. These types of activities are key to engaging, recruiting, and enlisting the many stakeholders and decision-makers required for long-term conservation efforts to succeed.

**10. Leverage funding and resources** — Do not rely on one source of financial support. By encouraging partner matches, projects are more secure, opportunities are provided for private sector involvement, and visibility of the effort is elevated.



## INTRODUCTION

The Subcommittee on Integrated Management of Ocean Resources (SIMOR) was formed in March 2005 as part of the ocean governance structure described in the President's Ocean Action Plan ([www.ocean.ceq.gov](http://www.ocean.ceq.gov)). SIMOR focuses on implementing ocean, coastal, and Great Lakes management actions that will benefit from interagency coordination. SIMOR's work is designed to complement the efforts of individual departments and agencies, as well as other interagency groups.

SIMOR seeks to identify and promote opportunities for collaboration and cooperation among federal agencies and to build partnerships among federal, state, tribal and local authorities, the private sector, international partners, and other interested parties. These cooperative efforts will help develop and implement management strategies that ensure continued conservation of coastal and marine habitats and living and non-living resources while also ensuring that the American public enjoys and benefits from those same resources. In March 2006, SIMOR issued a formal workplan, developed with the active involvement of 19 SIMOR agencies, which describes specific activities intended to promote responsible use and management of our ocean and coastal resources.

This Work Plan is organized by four priority focus areas:

- Regional and local collaboration
- Use of ocean science and technology in ocean resource management
- Enhance ocean, coastal, and Great Lakes resource management to improve use and conservation
- Enhance Ocean Education

As its first work item under the regional and local collaboration focus area, SIMOR sought to capitalize on existing efforts to promote cooperative conservation and partnerships by highlighting successful collaboration in this document. This report provides some lessons learned and examples in order to encourage and advance partnerships in coastal and marine areas.

The report presented here was developed with the participation of a five member work team comprised of the Department of the Interior, the U.S. Fish and Wildlife Service, the Environmental Protection Agency, the Department of Defense, the Department of Transportation, and the National Oceanic and Atmospheric Administration. Building on the 2005 White House Conference on Cooperative Conservation, the work team reviewed case studies, drawing especially on examples from coastal and marine areas, as well as analyses assembled from the conference. Work team representatives also compiled examples of cooperative conservation from within their own offices, and reviewed existing reports on cooperative conservation. These were compiled and broad themes were identified across the examples. From these themes, lessons learned were derived for marine and coastal cooperative conservation.

The heart of this document is built around key lessons, which are illustrated by relevant examples from around the country involving various combinations of federal, state, tribal, and non-governmental organizations working in partnerships to conserve marine and coastal resources.

## COOPERATIVE CONSERVATION LESSON #1: Build leadership capacity

Cooperation does not happen spontaneously. It happens only when someone takes the first step to build relationships and take initiative. Leadership is a critical factor in making cooperative conservation work. Cooperative conservation efforts take place in a variety of settings, from ecosystems that are urban or rural, degraded or pristine. The resources may be of local or national importance, and face little or great development pressure. Likewise, the leader that emerges in any given cooperative conservation effort varies. He or she may be a fisherman, a nonprofit organization member, a local council person, or a representative from a state, tribal or federal government. Leadership can also come in the form of a group or entity rather than an individual, such as a watershed council, state agency, or the federal government.

A common characteristic of successful leaders in cooperative conservation efforts is that they tend to reflect the values of the community and know what works there. They are good communicators, have the ability to bring about change and set things in motion, and are committed to turning a vision into reality. Perhaps most importantly, they know how to engage, respect, and empower others and find new or leverage existing resources.

### Maine Wetlands Protection Coalition

The Maine Wetland Protection Coalition has taken the lead in spearheading wetlands conservation in Maine. The Coalition is comprised of partners including the U.S. Fish and Wildlife Service Gulf of Maine Coastal Program, Maine Department of Inland Fisheries and Wildlife, The Nature Conservancy, Maine Coast Heritage Trust, Ducks Unlimited, Inc. and Trust for Public Lands. Established in 1989, the Coalition works to implement wetland conservation priorities of the North American Waterfowl Management Plan in Maine, using funding from the North American Wetlands Conservation Act.



Kennebec Estuary, Maine. — USFWS

The Coalition provides leadership and fosters leadership capacity in two important ways. First, Coalition members are leaders in their respective organizations, where they are able to motivate change and involvement within their organizations by the nature of their position. Second, Coalition members work cooperatively and synergistically, capitalizing on the skills of conservation biologists and land protection specialists from the member organizations so that they accomplish more than any of the organizations could achieve independently. For example, a land trust can work with landowners to best protect a parcel with conservation importance and provide advice on tax benefits, federal representatives can help obtain access to federal grant programs, and the state may be able to hold and manage the land for conservation in perpetuity.

Under the Coalition's leadership, more than 11,000 acres in the Kennebec Estuary have been permanently protected since 1992. By taking advantage of the collective strengths of each Coalition member, this habitat conservation success story continues to grow.

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## Winyah Bay, South Carolina

Leadership has been key to the success of the South Carolina Winyah Bay Focus Area Landscape Conservation Initiative. Initially, leadership capacity was established by forming the Winyah Bay Focus Area Task Force, a coalition of public and private organizations and landowners that agreed on common goals to protect and restore coastal habitats. The composition of the task force includes members who are recognized as significant leaders from the federal, state, and private conservation sectors and credible members from the local landowner community. Moreover, the Chair of the Task Force has proven to be a strong individual, is both motivational and inspirational, and has the time and commitment to devote to leading the Task Force. This individual has served as the Task Force's public "face."

Leadership capacity was further expanded by engaging key stakeholders (e.g., individuals, groups, and business owners) outside the Task Force to aid the overall conservation effort. Stakeholders outside the Task Force were usually engaged in response to specific issues (e.g., threats from proposed highway projects or developments) or to help accomplish specific projects (e.g., specific land conservation targets). These local leaders were sometimes invited to Task Force and committee meetings to help them become better informed about their issue(s) of interest and discuss possible strategies to achieving the desired outcomes. At other times, individual Task Force members would work privately with local leaders to provide information and technical assistance. These individuals proved to be invaluable assets, bringing a local perspective and the respect of the community to each issue they were involved in. Under the leadership of the Task Force, and with the assistance of local leaders, more than 56,000 acres have been protected in the coastal wetlands of Winyah Bay since 1992.

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## Coral Reef Conservation Program – Outreach and Education

Federal and state/territory resource management agencies expressed a need for both increased funding and targeted technical assistance to build human capacity for effectively carrying out coral reef outreach and education programs for their residents. NOAA's Coral Reef Conservation Program worked with partners to develop a three-year capacity building initiative that identified training needs, developed regional training workshops and provided two years of follow-up technical assistance from NOAA and outreach experts. Collaborative assessments by jurisdiction and by region focused on gaps in human/staff capacity and available training, rather than on desired projects. Project development was addressed in another branch of the Coral Reef Conservation Program. Funds were awarded to 6 jurisdictions through a small-grant program to address a range of key gaps and development of performance measures. Partners included approximately 60 federal, state, territory government agency and non-governmental partners from American Samoa, the Commonwealth of Northern Mariana Islands, Florida, Guam, Hawaii, Puerto Rico, and the U.S. Virgin Islands, including five National Marine Sanctuaries.



*Thanks to a NOAA/National Science Teachers Association (NSTA) partnership, science teachers from around the country learned about current coral ecosystems science and participated in engaging activities in a symposium at the 2006 NSTA national conference. — NOAA Coral Reef Conservation Program*

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## Coral Reef Conservation Program – Local Action Strategies

The NOAA Coral Reef Conservation Program is working with partners in seven states and territories to implement Coral Reef Local Action Strategies (LAS). LAS are three-year, locally-led roadmaps for collaborative action among federal, state, territory, and non-governmental partners to identify and implement priority actions needed to reduce threats to coral reef resources. LAS are designed to link national priorities for coral reef conservation with local priorities and needs as identified by local leadership.

Developing the strategies involved thousands of stakeholders and advanced coordination and cooperation among federal, state, and local agencies. Hundreds of new partnerships have been established to implement projects. Over 730 priority projects were identified by local leaders and more than 400 projects are underway in several priority threat areas. Over \$24 million has been leveraged from governmental and nongovernmental sources for implementation. Federal partners include the Department of the Interior; Agriculture, Justice and Transportation as well as the U.S. Coast Guard and the Environmental Protection Agency.

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*A Coral Reef Conservation Program Fellow conducts a children's marine education program as part of the Commonwealth of the Northern Mariana Islands' (CNMI) Local Action Strategies public awareness initiative. — Qamar Schuyler*

## COOPERATIVE CONSERVATION LESSON #2: Encourage diverse and meaningful participation

Partners in a marine or coastal cooperative conservation effort can include anyone who has an interest in conservation. This can range from state and federal agencies, conservation groups, local elected officials, chambers of commerce, environmental education organizations, private landowners, students, tribes, and industries, among others. It is important to include all key interest groups to maximize strengths, increase credibility, reduce duplication of effort, and make optimal use of limited funds.

While identifying who should be involved is important, ensuring that they are actually able to participate is another issue. It is important to consider the different needs and constraints of participants in order to ensure their participation is both possible and productive.

- When considering who should ideally participate, it is helpful to ask questions such as:
- Who has a “stake” in the issue? Who is likely to be affected by the issues and how they are resolved?
- Who has authority over the issues or resources involved? Who can officially act on any proposals or ideas?
- Who has necessary expertise? What information, data, and knowledge is critical to addressing the issues at hand and who can provide it?
- Who has “veto” power? Who has the ability to slow progress?
- Who has the necessary resources? Whose help (financial or otherwise) will you need to follow through with the process or projects?
- Who cares, for whatever reason? Who has energy and passion about the place or the issues?



## Lake Superior Coaster Brook Trout Initiative

Along the shores and in the tributaries of Lake Superior, coaster brook trout were once abundant. However, during the past century, populations have been severely depleted and in some cases eliminated. With the possibility of listing coasters on the Endangered Species Act looming on the horizon, there has been an increasing sense of urgency to act among many interests concerned about the fate of the native fish.

As a result, participants in coaster brook trout recovery reads like a “Who’s Who” of Midwest fisheries conservation. The diversity has been a key ingredient to the success of this effort, due to the complexity of jurisdictional responsibility and the technical issues involved. Coaster brook trout habitat spans three states, two countries, and is owned by federal and state agencies, tribes, and private landowners. Compounding these jurisdictional complications, until recently, little was known about the species. Due to these unique challenges, it was important that any effort to recover this species include all players with a stake in the issue as well as those that could contribute technical expertise.



Staff transferring coaster brook trout eggs from a hatchery into a prepared spawning bed in Whittlesey Creek. — USFWS

Today, twenty-six government agencies, tribal entities, non-profit organizations, and universities from across Michigan, Minnesota, Wisconsin, and Ontario are bringing together their research and knowledge to restore coaster brook trout. Agencies from the surrounding states and provinces with primary jurisdiction over Lake Superior and the sport fishery have been involved including the Michigan, Minnesota, and Wisconsin Departments of Natural Resources and the Ontario Ministry of Natural Resources. Of the federal agencies involved, the Forest Service and the Park Service have authority over federal lands, many of which encompass coaster brook trout habitat. The U.S. Fish and Wildlife Service and the U.S. Geological Survey have provided biological, technical, and research expertise. Tribes have brought their technical capabilities and have been key advocates for native species restoration motivating others to engage in the initiative. The non-governmental organizations involved, including several chapters of Trout Unlimited, have provided funding and have been key advocates of the effort. Finally, land owner involvement has been essential to protecting and restoring habitat on private lands.

To begin the recovery process, this assortment of partners worked together to develop the *Brook Trout Restoration Plan for Lake Superior*. Guided by the Plan, coaster brook trout surveys and habitat assessments were conducted, hatcheries worked to propagate coasters, the National Wildlife Refuge System developed the Whittlesey Creek National Wildlife Refuge to protect important streams, and habitat was restored on two Indian reservations. This holistic plan is ensuring the continued re-establishment of coaster brook trout by providing long-term habitat protection and access to new spawning and rearing habitat. As a result, coasters are now returning to historic streams in the upper Great Lakes.

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## The National Fish Habitat Action Plan

A new initiative, the National Fish Habitat Action Plan, is striving to bring all the players involved in aquatic habitat conservation to the same table to pool resources and prioritize conservation needs at a national scale. The Action Plan was borne out of a recommendation of the Sport Fishing and Boating Partnership Council, a group established to advise the U.S. Department

of the Interior. The Council, itself made up of a diverse array of interests, from anglers to industry representatives, recognized the need for a nationally coordinated cooperative effort to address the decline of aquatic species.

While the states, represented by the Association of Fish and Wildlife Agencies, took the lead, their efforts would not have come to fruition without the broad support and involvement of other major stakeholders. The effort currently benefits from the involvement of over 18 federal agencies, including the U.S. Fish and Wildlife Service, NOAA, the U.S. Geological Survey, and the EPA among others, as well as over 500 non-governmental organization supporters.

The newly established National Fish Habitat Governing Board that will oversee this partnership effort includes representatives of outdoor industries, federal and state governments, Native American tribes, and conservation and recreational organizations. What is noteworthy about this partnership is the level of influence the individuals on the Board bring to the effort. The Board is made up of agency heads, organization presidents, directors, and vice-presidents. While the conservation work is just beginning, the right people are at the table to make sure that efforts across agencies and organizations are coordinated, efficient, and aligned.

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### **The Great Lakes Regional Collaboration**

Convened through an Executive Order calling for a regional collaboration to protect and restore the Great Lakes ecosystem, the Great Lakes Interagency Task Force (IATF) was created in 2004. After extensive discussions, the federal IATF, the Council of Great Lakes Governors, the Great Lakes Cities Initiative, Great Lakes tribes and the Great Lakes Congressional Task Force convened the Great Lakes Regional Collaboration (GLRC). The GLRC includes the IATF, the Great Lakes states, local communities, tribes, non-governmental organizations, and other interests in the Great Lakes region. A full list of Task Force Members can be viewed at [www.epa.gov/glnpo/collaboration/taskforce/members.html](http://www.epa.gov/glnpo/collaboration/taskforce/members.html).



*Aerial view of the Great Lakes. — USFWS*

The GLRC is a cooperative effort that encourages diverse and meaningful participation in Great Lakes restoration. All relevant stakeholders in Great Lakes restoration and protection issues have been involved since the GLRC's formation. At the first Conveners Meeting on December 3, 2004, members of the President's Cabinet, the Great Lakes governors, congressional delegations, mayors, and tribal leaders met and forged an intergovernmental partnership, and officially voiced their support for a coordinated strategy to further protect and restore the Great Lakes. In addition, 400 regional leaders and stakeholders attended the meeting. Collaboration partners rallied around a shared vision of a restored, sustainable Great Lakes ecosystem, generating optimism.

A formal framework for the GLRC defined the process for developing a Great Lakes restoration and protection strategy. The Framework encourages broad and meaningful participation by all entities with an interest in the protection and restoration of the Great Lakes ecosystem.

The GLRC invited and encouraged public involvement in the development of the Great Lakes Restoration and Protection Strategy to ensure that a broad range of interests were considered as the strategy was developed and implemented. The strategy teams were made up of technical experts from many diverse backgrounds. More than 1,500 people are working together on the specific issues identified as crucial to the health of the Great Lakes ecosystem.

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*More information: [www.glrc.us](http://www.glrc.us) or [www.epa.gov/greatlakes/collaboration/](http://www.epa.gov/greatlakes/collaboration/)*

### **California Joint Management Plan Review**

NOAA's National Marine Sanctuary Program is finishing a joint management plan review for three sanctuaries in Northern California—the Monterey Bay, Gulf of the Farallones and Cordell Bank National Marine Sanctuaries, all of which are contiguous along the California coast. This review process has involved a diversity of stakeholders along every step of the way.

Work began to update the plans in 2001 with a series of twenty public meetings that generated more than 12,500 comments for consideration. These meetings were followed by numerous issue specific workshops and the formation of workgroups, both of which included experts from local, state and federal agencies, as well as the public. The action plans that resulted from these workgroups and meetings were subject to review by both the general public and the Sanctuary Advisory Councils which are themselves comprised of local citizens and agency representatives. Those issues and action plans that the stakeholders determined to be the most pressing were compiled into a draft management plan which began the final review process in the fall of 2006. The Final Joint Management Plan will be completed in 2007 and will guide the National Marine Sanctuaries Program's mission to conserve, protect and enhance the biodiversity, ecological integrity and cultural legacy of the sanctuaries while balancing human uses with long-term resource protection.

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## **COOPERATIVE CONSERVATION LESSON #3: Secure a strong knowledge foundation**

Decisions based on a strong foundation of knowledge are those that result from complete consideration of relevant scientific information as well as traditional knowledge. Decisions involving marine and coastal resources are often contentious and increasingly complex. There are few natural resource management issues that do not involve scientific uncertainty, risk, or gaps in available information and data. Part of this is driven by our improved understanding of biological systems and the consequences that management actions can have on natural resources. Consequently, cooperative conservation efforts need to find ways to learn about the issues together and take into consideration traditional science and community-based knowledge such as observations from local fishermen or tribal elders.

### **Nushagak River Watershed, Alaska**

Traditional knowledge, the product of generations of learning and experience in native communities with the lands, waters, fish, plants, wildlife, and other natural resources, is being incorporated into planning activities occurring in the Nushagak River Watershed in Alaska. The Bristol Bay Native Association and the Curyung Tribal Council have received grants from the U.S. Fish and Wildlife Service's Alaska Coastal Program and Tribal Wildlife Grant Program to develop a Traditional Use Area Conservation Plan in the Nushagak River Watershed.



As part of the planning activities, and with the assistance of The Nature Conservancy of Alaska (TNC), tribal groups developed a data gap analysis and assessed the traditional ecological knowledge of the watershed. Existing biological datasets of the watershed were digitized and maps were prepared to present to the Nushagak-Mulchatna Watershed Council.

A threats analysis is also underway to assess the sources of stress to species, ecosystems, and subsistence use. Priority areas will be identified for conservation. Sustainable and compatible management strategies will be based on biological values and threats identified by members of the local community. All of these elements will be incorporated into a strategic action plan including conservation strategies and recommendations to reduce or eliminate threats and conflicts. The result will be a scientifically based conservation plan that incorporates traditional knowledge from the local community.

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### **Cameron Creole Watershed Marsh Terracing Project, Louisiana**

The Louisiana Department of Transportation and Development, with the Federal Highway Administration, the Cameron Parish Police Jury, and a host of resource and regulatory agencies, public groups, and private entities, joined forces a few years ago on the Cameron Creole Watershed Marsh Terracing Project. This successful effort used science and an innovative technical approach to mitigate transportation impacts and save an eroding coastal marsh area near Louisiana Highway 27.



*Terrace construction. — Ducks Unlimited*

A construction project on Highway 27 called for reconstructing the roadway and improving paved shoulders, necessitating the displacement of existing ditches containing wetlands. The impact required suitable compensatory mitigation. During the planning and project development phase, it was determined that the nearby marsh area of a coastal wildlife refuge was suffering major deterioration from erosion by wind and wave action, allowing salt-water intrusion into lower salinity areas. The combined effect was killing vegetation that stabilized the marsh.

After meeting with the Cameron Parish Policy Jury, the Louisiana Department of Transportation and the Federal Highway Administration identified Highway 27 improvements as an opportunity to address their concerns over the threat to the ecosystem while achieving impact mitigation that would provide the greatest value for the public's transportation investment. After several meetings where the threats to the refuge were presented and alternatives were discussed, the partnership agreed to an innovative remedial solution.

The conclusion was to create energy-absorbing “plowed” terraces, considered to be an experimental technique at the time. Using a design with nature concept, the Ducks Unlimited technical staff recommended a ‘V’-shape terrace, so that regardless of wind direction, the terrace would provide a dampening of wind and wave action, providing a greater, more frequent calming effect in the open water areas downwind of the terraces. In the end, approximately 28 miles of ‘V’-shaped marsh terracing devices were installed, protecting over 3,226 acres of open water and 20 miles of brackish marsh shoreline.

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## National Cooperative Fisheries Research

NOAA engages in a wide variety of cooperative scientific investigations with the commercial and recreational sectors of the fishing industry. These studies use the knowledge of fishermen and other stakeholders to augment observations on the abundance, distribution, and ecology of managed species; improve survey and research designs; enhance fishing gear effectiveness and reduce environmental effects of fishing; minimize the catch of unwanted organisms (e.g., non-target fish species, turtles, and birds); improve public confidence in the safety of harvested product, and build mutual understanding and respect among scientists and stakeholders. Fishermen and members of the public involved in cooperative research gain a better understanding of and confidence in the science used in fishery management decisions.

One primary example of this type of work is the development of salmon excluders for the Alaska Pollock fishery. NOAA's National Marine Fisheries Service is working with the fishing industry to develop gear modifications that allow the release of salmon from pollock trawls. Salmon and pollock occur together in Alaskan waters but require different management strategies. Cooperative studies resulted in the development of devices that significantly reduce the number of salmon taken per haul. By 2006, excluder designs reduced Chinook salmon bycatch by 40% while lowering the pollock catch by only 2%. The aim of the cooperative program is to achieve a 60-80% reduction of salmon bycatch while keeping pollock losses to less than 5%. Such initiatives improve the precision of fishery harvest and conservation actions.

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*NOAA Fisheries Pacific Islands Fisheries Science Center (PIFSC) researchers aboard a commercial fishing vessel insert sophisticated PIT (Passive Integrated Transponder) Tags into spiny lobster. — NOAA*

## Protecting Right Whales

The right whale population numbers about 300 individuals, making it one of the world's most critically endangered species. Cooperative conservation efforts involving NOAA Fisheries and NOAA's Ocean Service, non-governmental organizations, academia, and industry are attempting to reduce threats posed by the two major causes of mortality to these animals— ship strikes and fishing gear entanglements.

In an effort to reduce the number of large whales that die as a result of ship strikes, NOAA added new recommended traffic routes to nautical charts for vessels entering or departing the ports of Jacksonville and Fernandina, Florida, and Brunswick, Georgia, as well as Cape Cod Bay, Massachusetts. The recommended routes are designed to reduce ship strikes but also take into account safety of navigation and economic impact to mariners. Right whales typically travel south in the winter from waters off Canada and New England to calving and nursery areas off Florida and Georgia. In the spring, females and their calves return to feeding grounds in Cape Cod Bay. Both journeys involve traversing heavily used shipping lanes. The recommendations also include proposed speed restrictions of 10 knots or less in three major regions of the East Coast. The measures were developed as a result of extensive discussions with stakeholders including the shipping industry.



*Two fishermen rigging their trap with an acoustic release device. — NOAA*

The Right Whale Research Program brings together the interest and expertise of NOAA scientists, the National Fish and Wildlife Foundation, academic researchers, private sector inventors, and the fishing industry to develop and implement new practices and equipment to reduce the likelihood of right whale entanglement in fishing gear. Vertical lines secured to bottom traps for retrieving gear often pose serious threats to right whales. Between 2004 and 2006, the Right Whale Research Program supported efforts to develop vertical lines that break away if struck by an object moving through the water, such as a right whale. They have also supported efforts looking at acoustically released pop-up buoys for retrieving gear and business plans for converting ground lines in the Maine lobster industry from floating to non-floating lines.

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## **COOPERATIVE CONSERVATION LESSON #4: Create incentives and remove obstacles**

Effective cooperative conservation partnerships are created and sustained by providing a variety of incentives to participants and by removing obstacles that may stand in their way. Incentives are traditionally thought to be financial, but social, psychological, and cultural motivators are often equally as effective.

Reward systems need to support good-intentioned, innovative approaches to problem solving. Partnerships which focus on objectives, not procedures, and which evaluate performance in terms of how well these objectives are being achieved, tend to foster more resourceful, solution-oriented behavior. Budget systems that provide flexibility in the way that funding is made available across program lines and budget cycles are also important to encouraging participation.

On another level, simply getting a cooperative partnership started and fostering a contagious combination of hopefulness and determination may be enough to attract other spirited leaders. Once something is up and running, even hesitant people run so as not to miss the boat.

Two of the most limiting obstacles to participation are a lack of technical capabilities to accomplish a task and limited resources. One possible way to remove these barriers is to provide these assets where they are needed. While this can be a challenge, often interested participants just need to know where to get started.

### **Maine Atlantic Salmon Conservation Fund, Maine**

The Maine Atlantic Salmon Conservation Fund (MASCF) has supported over 100 projects since 2000, from providing tools to help communities tackle difficult resource issues to funding habitat protection and restoration projects. Recognizing that there is no quick fix to Atlantic salmon recovery, MASCF believes that in order to set the stage for recovery, communities and landowners in salmon watersheds need to be engaged. MASCF operates quietly in the background, providing technical support and critical funding that enables local conservation groups, private landowners, and agencies to implement projects that benefit salmon and other migratory fish like alewife, American shad, and American eel.

The National Fish and Wildlife Foundation (NFWF) and the U.S. Fish and Wildlife Service's (FWS) Gulf of Maine Coastal Program work together to implement the program in partnership with the Atlantic Salmon Commission, the Atlantic Salmon Federation, the Maine State Planning Office, Land for Maine's Future Program, the National Oceanic and Atmospheric Administration, the University of Maine-Machias, the Wild Blueberry Commission, and local conservation groups, providing both funding and technical assistance.



NFWF and FWS work together to implement the program, providing both funding and technical assistance. With NFWF raising funds to cover its administrative costs, 100% of the appropriation goes to on-the-ground projects. NFWF is also able to provide valuable insights gained from experience with partnerships elsewhere in the country. At the field level, FWS provides technical support to help partners identify, prioritize, and implement successful restoration and protection projects.

With financial resources and technical assistance, MASCF manages to effectively thwart two barriers to involvement: lack of money and lack of know-how. As a result, thousands of acres of habitat have been permanently protected, miles of habitat re-opened to fish passage, and people of all ages and backgrounds are engaged in the challenge.

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*U.S. Fish and Wildlife employee releases endangered Atlantic salmon fry. — USFWS*

### **Penobscot River Restoration Project, Maine**

One of the projects funded under the Maine Atlantic Salmon Conservation Fund is the Penobscot River Restoration Trust, which has undertaken an ambitious plan to revive not only native fisheries but social, cultural and economic traditions of the river and its surrounding habitat. The multiple benefits inherent in the project yield multiple incentives for stakeholders to support the effort. Partners in the Penobscot River Restoration Project include the Penobscot Indian Nation, American Rivers, Atlantic Salmon Federation, Maine Audubon, Natural Resources Council of Maine, Trout Unlimited, U.S. Department of the Interior, NOAA Fisheries, the State of Maine, and PPL Corporation (dam owners).

The Penobscot River Restoration project is one of the largest, most ambitious river restoration projects in our nation's history. In a landmark agreement, a plan for restoring the Penobscot River was filed with the Federal Energy Regulatory Commission in June of 2004. The plan proposes to:

- Restore self-sustaining populations of native sea-run fish, such as the endangered Atlantic salmon, by improving access to nearly 1,000 miles of historic habitat.
- Renew opportunities for the Penobscot Indian Nation to exercise sustenance fishing rights.
- Create new opportunities for tourism, business, and communities.
- Resolve longstanding disputes and avoid future uncertainties over the regulation of the river.
- Benefit wildlife along the river corridor, including birds of prey and struggling groundfish populations in the Gulf of Maine.

As part of the agreement, the Penobscot River Restoration Trust will remove two large dams near the ocean, decommission and install a more natural fishway at a third dam, and make improvements at four other dams restoring access to nearly 1,000 miles of river, all while

maintaining hydropower production. Project partners include the U.S. Fish and Wildlife Service and NOAA Fisheries who are dedicated toward supporting the Penobscot River Restoration Project by providing funding and technical support. NOAA Fisheries Restoration Center funding toward this projects totals approximately \$1.6 million over the last several years while the U.S. Fish and Wildlife Service's Coastal Wetlands Program awarded the project a \$1 million dollar grant in January 2007 and over \$4.5 million to date. Further federal cost share funding has been requested in the President's FY2008 budget to support purchasing the dams as well as planning and implementation of restoration activities and studies necessary to inform the removal process.

The Penobscot River Restoration Project has created a winning situation for all parties involved. The effort benefits a variety of stakeholders, from tribes who stand to gain increased fishing opportunities from habitat improvements, to private power companies who stand to increase power generation at existing dams, to the public who will see increases in wildlife and habitat.

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### **Winyah Bay, South Carolina**

In the Winyah Bay Focus Area, the greatest incentive for encouraging and sustaining collaboration was the understanding that bigger and better conservation projects could be achieved by working together under common visions and goals. In some cases, simply making potential partners aware that there were opportunities to participate was all that was needed to engage them in the effort.

Another important incentive was helping people understand how large-scale habitat conservation (e.g., conservation easements on private lands) would also help protect and preserve cultural and historical resources, traditional rural land use patterns, and the “way of life” important to local residents. Making this connection was key to facilitating widespread, vocal, public support for conservation in order to influence national, state, and local politics. As a result of this broad-based support, decision-makers responded by directing targeted funding to conserving the area through grants, line items, and earmarks; establishing the Waccamaw National Wildlife Refuge; and by withholding support for new highway projects through the Focus Area.



*Winyah Bay Focus Area partners at work restoring wetland vegetation. — USFWS*

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### **Fish Friendly Farming**

The Friendly Farming Program is a cooperative program that provides incentives for private landowners to implement environmental improvements in vineyard systems. The program is currently found in Sonoma, Napa, and Mendocino counties in California and is targeted mainly toward improving conditions for anadromous salmonids. Landowners enroll their property in the program, attend a series of workshops on environmentally-friendly land management practices, and complete a detailed farm conservation plan for the property, which recommends Best Management Practices and specific conservation projects. Projects include creek and river corridor revegetation and restoration; erosion repairs on sites such as gullies and old roads; and

eradication of invasive, non-native plants in natural habitats. Two dam removal/modification projects are currently in the planning or design phase.

The plans and sites are reviewed and certified by three regulatory agencies including NOAA Fisheries and two state agencies. These same agencies, which include the California Department of Fish and Game and the Regional Water Quality Control Boards, as well as the Natural Resource Conservation Service and local agricultural entities, participated in the technical advisory committee that designed the program. The certified grower receives a letter from each agency recognizing that their self-determined actions are expected to help in species recovery, conservation of species habitats and improvement in water quality conditions. This third party certification gives the program credibility to those outside of the agricultural community.

The agencies have found that many growers are interested in agency perspectives on their operations, and suggestions regarding projects and restoration priorities when provided through this cooperative, non-confrontational program. Many growers are pleased to find that their practices are often in-line with common agency recommendations. NOAA Fisheries has provided over \$300,000 in funding for both operational costs (through contracts) and project implementation (through competitive grant processes) since program inception that has resulted in leveraged funding of much greater amounts. Well over 50,000 acres have been enrolled in the program since 2001 resulting in numerous improvement projects.

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## **COOPERATIVE CONSERVATION #5: Have a clear road map**

Cooperative conservation efforts will not drive themselves. There are bumps in the road, detours to be taken, and destinations to be reached. To effectively steer cooperative conservation efforts onto the path to success, there needs to be a structure that provides a clear vision, measurable goals and objectives, and mechanisms to evaluate progress.

Visions can motivate individuals to take action and guide their efforts on specific goals. While simple in concept, these statements can be quite powerful in focusing former adversaries or participants not used to working together on a goal that they all share in common. Experience suggests that before a group can develop visions and goals, there must be a clear and widely recognized problem statement. This statement helps to establish a common understanding of the conditions that warrant a cooperative conservation effort. In the process of developing such a statement, the participants also develop a sense of accomplishment and start to build relationships and trust that the group can work together.

In addition to visions, many groups craft goals, objectives, actions, and mechanisms for evaluating success. The following definitions describe these elements in greater detail:

- **Visions:** Visions are general statements of where the effort wants to go and what it will accomplish over a given time span, usually long-term. Visions should be comprehensive enough to capture the effort's overall mission.
- **Goals:** Less general than visions, goals describe what is needed to obtain the vision, refer to components of overall effort, and are often quantifiable.
- **Objectives:** Elaborations of goals, objectives describe types of management or activities and are quantifiable where possible.



- **Actions:** Explain who is going to do what, where, and when. Actions should articulate how to implement the objectives and be quantified if possible.
- **Mechanisms for evaluation:** A process for how progress will be assessed; a plan for monitoring the effect actions have in reaching goals and objectives and how these results will be tied back to decision making.

These five elements are often folded into an implementation plan. Some cooperative conservation groups may choose to attend a facilitated workshop, or work regularly with a neutral party to reach consensus and avoid getting bogged down. In the end, the differences between a goal and an objective are not as critical as getting issues on the table for discussion and agreeing on how to move forward.

### Chesapeake Bay Program

By the 1970's, it had become increasingly obvious that the Chesapeake Bay was degraded. Bay grasses had died back to a fraction of their historical coverage, large parts of the bay were devoid of oxygen, the water was murky, and some species of fish and shellfish had dramatically declined. Extensive scientific studies were undertaken to determine the causes of the problem. By the early 1980's, there was scientific consensus that nitrogen and phosphorus were the primary culprits. It was also clear that states throughout the Bay's watershed were contributing to the problem. In 1983, the first Chesapeake Bay Agreement was signed by the Governors of Maryland, Virginia, and Pennsylvania, the District of Columbia, the Chesapeake Bay Commission (representing the legislative bodies of those states), and the U.S. Environmental Protection Agency. In 1987, the second Chesapeake Bay Agreement was signed, which affirmed the regional watershed approach adopted in 1983.



*Volunteers dump oyster shells over board as part of a Chesapeake Bay restoration activity. — NOAA*

In June 2000, Chesapeake Bay Program partners built on these previous agreements by adopting the Chesapeake 2000 Agreement, a strategic plan to achieve a vision for the future of the Chesapeake Bay—a vision that includes abundant, diverse populations of living resources fed by healthy streams and rivers, sustaining strong local and regional economies, and a unique quality of life. The 2000 Agreement includes specific goals to restore water quality. Among these is the goal to continue efforts to achieve and maintain the 40 percent reduction of nitrogen and phosphorus entering the mainstem of the Chesapeake Bay, as agreed to in the 1987 agreement. A subsequent agreement specified this load in pounds of nitrogen and phosphorus and allocated it to the Bay jurisdictions. This goal is notable for several reasons:

- It is based on scientific consensus on one of the most well-studied ecosystems in the world;
- It can be communicated to and understood by the general public, elected officials, and others;
- It is specific, quantifiable, and can be allocated to particular political jurisdictions or river basins;
- It is perceived as fair, yet flexible. Each jurisdiction is free to develop its own strategy to meet the goal based on local land uses, existing programs, and resources.

- It has the political support of the leaders of the Bay States and the U.S. EPA, as well as the broad support of local governments, the public, and an array of interest groups.

The 2000 Agreement has other goals and specific objectives that include habitat protection and restoration, land use, stewardship, and community engagement. The evolution of the Chesapeake Bay Agreement illustrates the progression from a common vision to a specific goal that is implemented through a series of specific actions. In the Chesapeake Bay, the emphasis has evolved from an initial focus on the mainstem of the Bay to actions taken by individuals and local governments throughout the watershed.

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### **The Comprehensive Everglades Restoration Plan, Florida**

The Comprehensive Everglades Restoration Plan (CERP) provides a framework and guide to restore, protect, and preserve the water resources of central and southern Florida, including the Everglades. It covers 16 counties over an 18,000-square-mile area. It includes more than 60 elements, will take more than 30 years to construct, and will cost an estimated \$7.8 billion. With this expansive timeframe and associated cost, it is crucial to know that planned activities are having the desired effect on the ecosystem.

While CERP has comprehensive goals, objectives, and action items, one of its innovative planning elements is a separate body established to evaluate the progress of the plan. The RECOVER (Restoration Coordination and Verification) is an arm of CERP responsible for linking science to a set of system-wide planning, evaluation and assessment tasks. The objectives of RECOVER are to:

- Evaluate and assess Comprehensive Plan performance
- Refine and improve the plan during the implementation period, and
- Ensure that a system-wide perspective is maintained throughout the restoration program



*A Great White Egret in the Florida Everglades. — USFWS*

RECOVER is composed of three technical teams. The Assessment Team is primarily responsible for measuring the actual performance of implemented projects and interpreting that performance based on the analysis of information obtained from research, monitoring, modeling, and other relevant resources. The Evaluation Team is primarily responsible for forecasting the performance of plans and the designs relative to desired objectives by using predictive modeling and other tools. The Planning Team is primarily responsible for developing recommendations to improve Plan performance and integrating RECOVER with appropriate planning activities with other agencies.

RECOVER has provided an essential framework to support CERP in meeting its goals and vision by applying a system-wide and integrative perspective to planning and implementation. RECOVER conducts scientific and technical evaluation and assessments for improving CERP's ability to restore, preserve, and protect the south Florida ecosystem while providing for the region's other water-related needs.

Having a structure that incorporates evaluation into the overall structure of the planning effort ensures that information is available to measure progress made toward reaching desired goals,

and that this information is incorporated back into decision-making. This enables managers to correct their course if projects are not having the desired results. Also, when projects are successful, there is data on hand to promote this success to decision-makers and other partners to engender additional support.

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### **Southern California Wetlands Recovery Project**

The Southern California Wetlands Recovery Project (SCWRP) is a broad-based partnership, chaired by the California Resources Agency and supported by the State Coastal Conservancy, which has public agencies, non-profits, scientists, and local communities working cooperatively to acquire and restore rivers, streams, and wetlands in coastal Southern California. The project's geographic scope is from Point Conception in Santa Barbara County to the Mexico boarder. Using a non-regulatory approach and an ecosystem perspective, SCWRP is working to identify wetland acquisition and restoration priorities, prepare plans for these priority sites, pool funds to undertake these projects, implement priority plans, and oversee post-project maintenance and monitoring. The goal of the program is to accelerate the pace, the extent, and the effectiveness of coastal wetland restoration.

NOAA Fisheries Southwest Region participates in the project and chairs the Wetlands Managers Group which is responsible for drafting the regional restoration plan and advising the Governing Board on regional priorities. Other Federal agencies involved include the U.S. Fish and Wildlife Service and the Environmental Protection Agency.

The Bolsa Chica Lowlands Restoration Project is being implemented through this program and is resulting in the restoration of approximately 749 acres of wetland habitat. Several hundred acres of the project area was opened for tidal exchange in the fall of 2006 and is expected to result in the creation or enhancement of nesting and feeding areas for threatened and endangered birds and spawning and rearing habitat for numerous species of marine fish.

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### **Texas Cooperative Assessment, Integrated Remediation and Restoration Project**

NOAA's vision and leadership of a collaborative Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) process catalyzed the adoption of the Cooperative Assessment, Integrated Remediation and Restoration (CAIRR) Project paradigm. This is a team effort consisting of Federal agencies such as the EPA, U.S. Fish and Wildlife Service and the Army Corps of Engineers as well as the appropriate state agencies, non-governmental groups and the private sector parties at the center of the CERCLA process. The CAIRR project process leads to the rapid completion of remedial actions and restoration construction at the project sites. Empowered by the shared fundamental goal for the "betterment of the environment and natural resources," the teams find they can often handle all the challenges presented and deliver results to the public. The CAIRR paradigm permits comprehensive coverage of all CERCLA issues associated with a site, fosters good working relationships among the trustees, the responsible parties and the local community and results in nearly universal support for these restoration actions. Four sites in Texas have come through this project since August 2004.

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## COOPERATIVE CONSERVATION #6: Maintain effective communication

Cooperative conservation connects many organizations and individuals in new working relationships. As a result, one of the first challenges is to determine how to communicate across institutional barriers and identify responsibilities. Who makes the decisions? Who follows through with ideas? Who interacts with the media? With a new barrage of questions like these, new people, and new working relationships engaged to answer them, establishing a clear communicating strategy becomes imperative. Some groups establish a policy governing board; others designate a coordinator who serves as the main point person. When government agencies with varying authorities for a resource are involved, many clarify the structure of their interactions in a formal Memorandum of Understanding. It is also helpful for the group as a whole to identify ground rules for the process that keep discussions civil and productive. Some groups document the structure and expectations of their process in formal Operating Agreements.

### Houston-Galveston Navigation Channel-Beneficial Users Group

Galveston Bay is home to one of the most productive fisheries on the Gulf Coast and the country's second largest port, Houston. The Houston-Galveston Navigation Channels allow ships to reach the ports in this area. When dredging was proposed to deepen and widen the navigation channels, a controversy was ignited over the potential environmental and economic impacts of dredging and what to do with the dredged material. To address key environmental issues and concerns, the U.S. Army Corps of Engineers (ACE) established an Interagency Coordination Team (ICT), the first of its kind.



*Marsh planting with the Natural Resource conservation Service and Port of Houston Volunteers. — USFWS*

In 1990, a coalition of government agencies formed the Beneficial Users Group (BUG), a subcommittee of the ICT, to identify environmentally responsible ways to utilize material dredged during the expansion of the Houston Ship Channel. Partners include the ACE, U.S. Fish and Wildlife Service, NOAA Fisheries, U.S. Natural Resources Conservation Service, as well as the Port of Houston Authority, the Texas Parks and Wildlife Department, and the Texas General Land Office.

Over the last 16 years, BUG has met monthly to discuss progress on their 50-year plan to utilize dredged material. This group maintains effective communication through constant consultation among the agencies on different projects, and by operating under an agreement by consensus framework. Early on, the agencies in the BUG recognized the need for constant communications, both informal and formal, and have developed a mutual trust and understanding to work for the greater good of the dredging project and Galveston Bay. The collaborative efforts of the BUG have been facilitated by a chairman who is widely considered an exemplary communicator.

Using a collaborative process, the ICT and BUG are meeting commercial navigation needs by deepening and widening the ship channel for safer navigation and creating more than 4,000 acres of wetlands in Galveston Bay using dredged material. To date, over 2,000 acres of wetlands have been created, 2 new islands have been created for birds and boaters (Evia Island and Redfish Island) and 172 acres of oyster reefs have been built.

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## Project SHARE

Project SHARE was created in 1994 through the efforts of concerned landowners, salmon anglers, businesses, and various government agencies to establish a forum to protect and enhance Atlantic salmon habitat in the five downeast rivers of Maine. Project SHARE's goal is to provide members with an integral tool for communication and information transfer between the various parties interested in Atlantic salmon restoration.

The organization's mission is to conserve and protect Atlantic salmon habitat in the Dennys, Machias, East Machias, Pleasant, and Narraguagus rivers. The mission is based on the premise of voluntary participation by area landowners; businesses; local, state, and federal government; academia; conservation organizations; research and educational interests; and any other entity interested in the healthy functioning of these riverine ecosystems. Key to building cooperative partnerships among the membership has been to focus on communication.

Project SHARE seeks to enhance participation and communication by making all meetings and membership open to all interested stakeholders. Project SHARE has also spearheaded many educational workshops that have brought people together to share ideas and strategies for salmon restoration. Others have brought large landowners together with state and federal agencies to discuss viable restoration options that will help to bring the numbers of salmon back to Maine.

By all accounts, Project SHARE has been a success. When the Federal Register notice was published on the listing of Atlantic Salmon in 2000, the concept of Project SHARE received a strong endorsement and was an important factor in the Federal Services decision to recommend that the State of Maine assume the lead role in the management of activities that could impact the species. While this story continues to unfold, if the recovery of this species was dependent upon a common understanding of priorities and a commitment to get the job done founded in solid cooperation and communication, then Atlantic salmon fishing in Maine will be a reality in the future.

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## Point Loma Ecological Conservation Area Partnership

The Point Loma peninsula is an important area for biodiversity in the southern California ecological region. Point Loma represents a four-mile long mosaic of development and sensitive natural areas unique in Southern California. Many of the peninsula's natural communities remain intact because of limited development and public access at the U.S. Navy facility, which is the largest land holding on Point Loma. With a growing scarcity of native coastal habitat, protection of Point Loma Peninsula is critical to maintaining healthy populations of native species, especially those that are vulnerable to non-native competition and predators.

In 1995, the U.S. Navy (Commander, Navy Region Southwest), in partnership with the U.S. Coast Guard, the National Park Service, Department of Veteran Affairs, and the City of San Diego, entered into a Memorandum of Understanding (MOU) with the U.S. Fish and Wildlife Service in order to minimize the risk for loss to ecosystems on Point Loma from the cumulative effects of development and other land use. The MOU among the Point Loma land-owning partners



Point Loma Ecological Conservation Area viewed to east across entrance to San Diego Bay toward Peninsula of San Diego.  
— Andy Yatsko

established a 650-acre, non-contiguous Ecological Conservation Area on Point Loma to maintain the long-term viability of sensitive biological areas. Called the Point Loma Ecological Conservation Area Partnership (PLECA), the agreement provides important links between the biological resource areas that serve as functional wildlife corridors.

PLECA formed a Working Group to guide the partnership. The Working Group meets regularly to discuss implementation of the MOU, coordinate the management of their respective portions of the PLECA, and discuss proposed construction and resource management projects on Point Loma. The regular, bi-monthly PLECA Working Group meetings have fostered a commonality of understanding and purpose that ensures that individual landowners have not inadvertently exercised land management initiatives that are fundamentally incompatible with the requirements of their neighbors.

The Working Group has also been a catalyst for a regular reassessment of the effectiveness of the PLECA MOU's original concepts and protocols. On several occasions, the Working Group was able to clarify protocols and mitigation standards in the MOU to make implementation more effective. The Working Group's forum has improved general communication among the respective federal and local agencies and has proved to be an available context for resolving potential land use conflicts before they become problematic. As a result of the MOU and the Working Group's guidance, there has been no new development within the segregated PLECA habitat during the decade following the MOU's implementation and it has become a commonly accepted environmental planning tool for the area.

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### **Suisun Marsh Management Plan, California**

The Suisun marsh is the largest contiguous brackish water wetland in the western United States. It currently consists of approximately 52,000 acres of managed wetlands and 6,300 acres of tidal wetlands. It is an important wetland on the Pacific Flyway, providing food and habitat for migratory birds. The lands and waters of this unique ecosystem are also home to a wide variety of plants, fish and wildlife, many of which are protected under the Endangered Species Act and depend on a careful balance of fresh and salt water for their survival.

The Suisun Marsh Management Plan, under development by the Suisun Marsh Charter Group, will address tidal wetland restoration, managed wetlands operations, maintenance and public use. All members share a vision of an implementation plan for Suisun Marsh that protects and enhances Pacific Flyway and existing wildlife values, endangered species, and water quality while allowing for the continuation of agriculture, duck hunting and fishing. Members of the Charter Group include NOAA Fisheries Southwest Region, U.S. Bureau of Reclamation, U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, several state agencies, and the Suisun Resource Conservation District which represents local landowners, hunting clubs and other stakeholders. Plan development is being managed through an MOU process to insure that the many divergent interests in this important estuary system are represented and that roles in the process are clear.

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## COOPERATIVE CONSERVATION #7: Be a good partner

Cooperative conservation work is all about partnerships. Essential ingredients for effective partnerships include focusing on common interests, building trust, being transparent, operating in good faith, respecting each participant's view, being willing to learn about each other's needs and interests, and staying committed to the effort. Fundamentally, successful cooperative conservation efforts are built on human relationships. As a result, nurturing these relationships is often key to the success of the effort.

Cooperative conservation partnerships come in all shapes and sizes. Some are loosely structured while others are quite formal. Some groups are open to anyone who is interested, others are not. Regardless of how they are structured, making partnerships work is challenging and takes commitment. Common issues partnerships face include selecting a leader, ensuring that all the right people are involved, and moving beyond any hostility that may exist among members. To get through the "forming and storming stages," having a transparent decision-making structure helps to establish trust among participants. Creating opportunities to learn about each others interests and celebrate achievements can build a sense of shared purpose. Participants of cooperative conservation efforts talk about the importance of simple things like organizing shared meals, trips, or other activities outside the immediate work of the group, allowing participants to get to know each other as individuals.

### Shared Strategy for the Puget Sound, Washington

Ever since Puget Sound's Chinook salmon, summer chum, and bull trout were listed under the Endangered Species Act, there has been a growing sense of urgency in the Pacific Northwest. Salmon numbers and harvests have fallen for decades, despite actions taken by governments, tribes, and industries to protect them.

While federal agencies usually write endangered species plans, leaders in the Puget Sound felt a new approach was needed to recover salmon: planning should build on local efforts already underway. Shared Strategy, both a non-profit and a regional initiative, works from the ground up with support from citizens, local and tribal governments, environmental, and business interests. All levels of government are involved with local stakeholders, an effort made possible by the Washington State Legislature's support for local and regional decision-making. NOAA Fisheries and the U.S. Fish and Wildlife Service support and participate in Shared Strategy.

The effort has brought unlikely collaborators to the same table: farmers and tribes that have been in a gridlock over the use of tidal flats that are important for agriculture and salmon habitat; developers and environmental organizations who disagree what the phrase "sustainable development" means; and local political leaders caught in the middle. Despite these challenges, in 2005 a salmon recovery plan was written and was recently approved by NOAA.

As anyone involved with Shared Strategy will attest, one thing those involved with the effort know how to do is throw a party. Picnics are held often on tribal reservations and local beaches to celebrate small achievements and to work through differences. Farmers bring the produce and tribes supply the fish. While many come to the event with arms crossed, they leave with their



*Citizens of Bainbridge Island study the way salmon use the nearshore environment of the region. — Dan Kowalski*

bellies full and their minds open to seeing their opponents as people with whom they share similar values about what they want for the future of their families and their community.

Meetings often start with “ice breakers” where participants are asked to share their favorite past time, food, or vision for the Puget Sound. The effect of these activities is that participants in the Shared Strategy effort have come to see each other as individuals outside the stereotypes of “farmers,” “tribes,” “developers,” and “environmentalists” and are able to find solutions to the challenges of recovering salmon in Puget Sound based on shared interests and shared residency of the Puget Sound.

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### **Northwest Straits Marine Conservation Initiative**

In northwest Washington, from the Strait of Juan de Fuca and northern Puget Sound to the Canadian border, the Northwest Straits Marine Conservation Initiative is providing a way for local, tribal, state and community representatives to work together to protect vital marine resources. Halting the significant degradation of marine resources in the Northwest Straits requires the concerted efforts of many agencies, organizations and individuals.

U.S. Senator Patty Murray (D-WA) and U.S. Congressman Jack Metcalf (R-WA) recognized that the fabric of the Northwest Straits ecosystem was unraveling and negatively impacting local economies and communities. In 1997, Senator Murray and Representative Metcalf initiated a strong bipartisan alliance to help protect the marine waters of Washington State. It was clear that problems and trends crossed geographical and jurisdictional lines, so the two officials formed the Murray-Metcalf Northwest Straits Citizens Advisory Commission to explore how these problems might be addressed. The result was the Northwest Straits Marine Conservation Initiative, authorized by Congress in 1998.

This federally funded program takes a “bottom-up” approach to protecting and restoring the marine resources of the Northwest Straits. It blends well-founded science with grassroots consensus building through the actions of seven marine resources committees. Each of these committees is citizen-based, with representatives from the scientific community, local and tribal governments, and economic, recreational and conservation interests.

Ensuring good partnership practices has been key to sustaining this effort. Part of this is ensuring that meetings are open to the public and providing public comment periods. Another important element comes from the reputations of the leaders. Senator Murray and Representative Metcalf are widely considered to be fair players that operate in good faith. The bipartisan nature of their leadership has also helped facilitate an atmosphere of goodwill. Conveners of the Initiative also make listening a priority— and being responsive to volunteers that give their time, and encouraging others to listen as well.

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*Volunteer for Forage Fish Inventory Project sampling for surf smelt eggs. — Friends of the San Juans*

## Washington State Forest Practices Habitat Conservation Plan

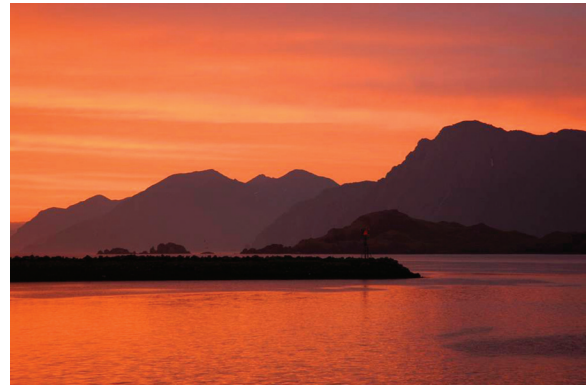
To protect the natural and economic resources inherent in Washington State's coastal and upper watersheds, a 50-year Habitat Conservation Plan was developed. The plan will safeguard Washington's streams and forests that provide habitat for more than 70 aquatic species, including 13 populations of salmon and steelhead. The programmatic, statewide plan covers 60,000 miles of streams running through 9.3 million acres of forest land.

The result of more than a decade of collaboration, the Plan was approved by NOAA Fisheries and the U.S. Fish and Wildlife Service who recognize that Washington's Forest Practice Rules meet federal Endangered Species Act requirements for aquatic species covered under the plan. This was a multi-stakeholder effort to improve protection of aquatic and riparian habitat on forestlands regulated under the state's Forest Practices Act and rules which included participation by the U.S. EPA. Operations conducted in compliance with the rules will minimize and mitigate near-term habitat damage and provide for long-term habitat recovery while allowing for economic and productive use of covered lands. The Habitat Conservation Plan is already serving as a model for similar efforts in Northern California on private lands.

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More information: [www.nwr.noaa.gov/Salmon-Habitat/Habitat-Conservation-Plans/Washington-Forest-Practices/Index.cfm](http://www.nwr.noaa.gov/Salmon-Habitat/Habitat-Conservation-Plans/Washington-Forest-Practices/Index.cfm)*

## Aleutian Islands Habitat Conservation Area

NOAA worked collaboratively with the North Pacific Management Council, the fishing industry, and environmental groups to devise a landmark suite of new protection measures against habitat injuries caused by bottom trawling. All parties involved in this process support the new protection measures. These measures included establishing the largest marine protected area in the United States—the Aleutian Islands Habitat Conservation Area, which is approximately 363,000 square miles. Additional habitats in the Gulf of Alaska slope and seamounts were also protected. These areas conserve a diverse range of habitats that support deep sea corals, productive fisheries, and marine mammals.



*Sunset in the Aleutian Island community of Adak from Sweeper Cove off Kuluk Bay. — USFWS*

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## COOPERATIVE CONSERVATION LESSON #8: Take advantage of low hanging fruit

Action is motivating. By starting with problems or issues that are more easily solved and involve hands-on projects, people feel that they have accomplished something, which instills hope and encourages continued collaboration. It also creates a sense among those involved that, in fact, they truly can make a difference. If cooperative conservation is all about talking in a room, chances are good that people will slowly disengage.



## **Morro Bay, California**

The California State Coastal Conservancy, a state agency, went to work to protect Morro Bay after becoming aware that the community perceived the Bay to be threatened by erosion and sedimentation. Resource managers, politicians, and citizens were all concerned that the Bay was filling and becoming shallower, which eventually would be detrimental to navigation, tourism, migratory birds, endangered species, and the surrounding community.

The Conservancy started small by talking to citizens about the resource. Long time residents in the community explained how parts of the back Bay had once been open water but were now becoming increasingly terrestrial. As a way to respond to their concerns, the Conservancy, the State Coastal Commission, and the county hosted a forum at which approximately a hundred politicians, government professionals, environmentalists, and business people gathered to discuss the Bay. The consensus of the participants was that, while there were many issues of concern such as public access, water quality, and development, the predominant concern was sedimentation.

Given this focus, the Conservancy went to the Coastal San Luis Resource Conservation District and entered into a six year partnership to reduce sedimentation of Morro Bay. The District worked with landowners to manage grazing through installing fences, plugging gullies, and implementing rotation systems. The Conservancy, with matching funds from other farmers and the Natural Resource Conservation Service, paid for these improvements.

The Conservancy then turned its attention to restoring the floodplain in the lower drainage areas. With the help of the Coastal Conservancy, the Resource Conservation District purchased agricultural land in the lower watershed, and restored parts of the floodplain to its natural condition.

At the same time, the Conservancy was helping to organize groups to increase community awareness, education, and involvement. Friends of Morro Bay was established for advocacy, the Morro Bay Foundation was founded for research and education, and a Morro Bay Task Force was set up to help involve local residents. So much interest grew out of these activities that local residents decided to apply to become part of the National Estuary Program. In the early 1990s, a local assembly person helped get the bay designated as a State Estuary. Shortly thereafter the Bay was accepted into the National Estuary Program.

Staff at the Conservancy believe that part of the reason for Morro Bay's designation was strong community involvement. Support was built from inside the community and was not imposed from the outside. Manageable issues that were meaningful to people and provided a focal point around which action could occur provided an incentive for others to take action and build additional cooperative efforts.

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## **Tomales Bay Biodiversity Inventory, California**

The Tomales Bay Biodiversity Inventory (TBBI) engages students, teachers and the community to experience the scientific process first-hand and contribute high quality data to local conservation efforts. The TBBI was launched to discover and inventory the organisms occurring in Tomales Bay, which is adjacent to Point Reyes National Seashore. The project is the only one of its kind on the West Coast. Its goal is to inventory, identify, and describe the thousands of species found within the bay waters and along the shoreline. The TBBI is also developing



*Aerial view of Tomales Bay. — USFWS*

checklists, reports, maps, databases, and natural history profiles that describe the biology of this rich seascape to a wide audience. Results from the TBI project will provide the basic information needed to make sound, science-based management decisions for preserving the incredible biodiversity of this important coastal estuary.

Biodiversity inventories are considered innocuous studies in the community and are generally supported by everyone. This, coupled with the program's student-centric focus, has proven to be a non-controversial method to begin learning more about this ecosystem. The success of this inventory program has helped the Tomales Bay Watershed Council win a \$460,000 grant from the State of California to develop an integrated watershed management plan for west Marin County that will improve water quality and species habitats.

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### **Bahia Grande Estuary Restoration, Texas**

The Bahia Grande is an 11,000 acre complex of three estuarine basins, which were once a highly productive shallow water system. In the 1930's, the Port of Brownsville dredged the Brownsville ship channel and the resulting spoil banks cut off the water supply for this tidal system. The Bahia Grande was changed into an arid ecosystem, and its drifting sands became the source of numerous health and industrial problems in the Brownsville area.



*Restoration of the Bahia Grande Estuary. — Carrie Robertson.*

The Bahia Grande Estuary Restoration project stands out as one effort where significant community interest resulted in a large public-private coalition to support one of the biggest wetland restoration projects in the United States. As a project that did not require much technical expertise, the restoration work was easily accomplished, setting the stage for additional hands-on restoration projects in the future. Federal partners include the U.S. Fish and Wildlife Service, the EPA, and the Natural Resources Conservation Service. Everyone is working toward the common goal of restoring a productive nursery for recreationally and commercially important fish and shellfish species, birds and wildlife. Nearly 50 groups (among them are universities, school children, fishing organizations, and private landowners) have joined forces to address the restoration of Bahia Grande including through organized, hands-on restoration efforts such as the replanting of native mangrove stands in the project.

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### **California Fish Passage Forum**

NOAA participates in a multi-agency, multi-stakeholder collaborative effort known as the California Fish Passage Forum. The mission of the Fish Passage Forum is to protect and restore salmonid species by promoting collaboration among public and private sectors for fish passage improvement projects and programs. The Forum provides a mechanism to identify, classify, and remediate fish passage barriers for anadromous fish. Restoration programs, such as those sponsored by the NOAA Restoration Center and the California Grassroots Salmon Initiative, provide cost-share funding for implementing these projects. NOAA staff provides engineering and technical support for new, "fish-friendly" stream crossing designs.

Accomplishments of the Fish Passage Forum include the California Habitat Restoration Project Database, which captures, manages, and disseminates data about habitat restoration projects in California benefiting anadromous fish. In addition to serving as a comprehensive repository for information about California habitat restoration projects, the geo-referenced project locations in the database enable geographical analyses of projects, aiding analysis of past trends and planning of future restoration work. Working with partners, the Fish Passage Forum has surveyed and identified over 13,000 migration barriers, removed 605 barriers (including culverts), opened 95 stream miles by treating or removing culverts, and opened 451 stream miles by removing other barriers. There is substantial evidence of successful fish re-colonization of upstream watersheds.



*An event at West Weaver Creek to celebrate a fish passage project. — NOAA*

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## **COOPERATIVE CONSERVATION #9: Educate to foster a sense of shared stewardship**

Education need not be relegated to the confines of a classroom; it can come in many forms. Field trips and work days that get stakeholders out on the water or onto a beach, while simultaneously talking with each other can be key in engaging and recruiting participants in cooperative conservation efforts and can play an important role when it comes to convincing decision-makers of needed management changes. Often, activities that take people out of office settings and get them digging in the mud foster a shared sense of ownership over the problem and the solution.

Many efforts cultivate a sense of place by organizing joint field trips or clean-up activities. In so doing, these efforts simultaneously promote a sense of community, build relationships, and demonstrate the potential for improvement. Informal field trips enable participants to get to know each other as individuals rather than business acquaintances or even adversaries. Keeping an element of tangibility and activity enables people to see a problem in new ways and to feel compelled to do something about it.

### **Coral Reef Restoration, Hawaii**

Hawaii's coral reefs are home to an abundance of marine invertebrates and fishs, nearly 28 percent found only in Hawaii. The spread of invasive, non-native marine algae is one of the greatest threats to Hawaii's coral reefs and other near shore marine ecosystems. As alien algae spreads, it grows over and smothers coral reefs and native algal communities, killing extensive areas of native habitat. Coral reef and native algae restoration is making significant strides toward restoring and protecting Hawaii's coral reef ecosystems by removing alien algae and restoring native species in Kane'ohē Bay and Waikiki, O'ahu, and by fostering community stewardship through education and volunteerism. The initiative, which was sparked by a small group of agencies led by The Nature Conservancy and the University of Hawaii, has evolved into one of the largest grassroots partnerships in the state, and includes federal, state, and county agencies, local businesses, and thousands of volunteers from across the island.



Removing alien algae from high priority coral reefs is key to the long-term survival of Hawaii's reefs and the abundance of life that thrives there. Volunteers have removed more than 88 tons of the alien algae *G. salicornia* at more than a dozen community-based events over the past three years. The Nature Conservancy recently developed and is testing a floating platform barge with a mechanized removal device, greatly increasing removal efficiency. The University of Hawaii, Waikiki Aquarium, Hawaii Coral Reef Research Initiative, and the Hawaii Institute of Marine Biology are also exploring a new invasive algae control technique using a native Hawaiian sea urchin (*Tripnuestes gratilla*) to graze any remaining invasive algae, and thereby helping to prevent re-establishment after mechanical removal.



*Hundreds of volunteers remove non-native algae from the reefs of Waikiki, O'ahu. — Bruce Casler*

The State Division of Aquatic Resources, the Coordinating Group on Alien Pest Species, and The Nature Conservancy are now reaching out to communities statewide, offering education and volunteer opportunities for control, early detection, and rapid response to curtail the spread of invasive algae in other areas, and more importantly, to stop new infestations before they become established.

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*More information: [www.nature.org/wherework/northamerica/states/hawaii/](http://www.nature.org/wherework/northamerica/states/hawaii/)*

### **Anacostia River, Washington D.C.**

The Anacostia Watershed Society offers a “Day on the River” learning program to Washington, D.C. metropolitan area youth. The watershed covers 170 square miles and includes portions of two Maryland counties as well as the eastern half of the District of Columbia.

“Day on the River” begins with an introductory slide presentation. Students then begin a five mile canoe trip down the Anacostia’s “Kingfisher Canoe Trail.” They disembark twice along the way, at the recently restored 60 acre Kenilworth wetland and at the National Park Service’s Kenilworth Aquatic Gardens. Here, they learn about identifying the local flora and fauna and how to monitor water quality.

The program provides teachers with classroom follow-up activities that reinforce lessons learned on the river. Both classroom and outdoor activities are designed to exercise students in science, math, English, history, and principles of ecology and watershed protection, emphasizing the student’s connection to the natural world.

*More information: [www.anacostiaaws.org/About/history.html](http://www.anacostiaaws.org/About/history.html)*

### **Coral Reef Task Force**

The United States is one of many nations around the world working to halt the coral reef crisis and protect, restore, and sustainably use coral reef ecosystems. The United States Coral Reef Task Force was established in 1998 by Presidential Executive Order 13089 to lead U.S. efforts to preserve and protect coral reef ecosystems. The Task Force has been instrumental in building partnerships and strategies for on-the-ground action to conserve coral reefs. The Task Force works in cooperation with state, territorial, commonwealth, and local government agencies,

nongovernmental organizations, the scientific community, and commercial interests to further the understanding and conservation of our coral reef ecosystems.

Task Force Members meet biannually to discuss key issues, propose new actions, present progress reports, and update the coral community on past accomplishments and future plans. Meetings rotate between Washington D.C. and member jurisdictions. Recent meetings have been held in the U.S. Virgin Islands, the Republic of Palau, and Guam. During these meetings, Task Force Members go on field trips to see local coral reef ecosystems and the challenges and opportunities experienced by local managers. In the 2006 meeting in the Virgin Islands, Task Force members and participants were taken on several trips, including a land-based excursion around St. Thomas to understand the impacts of sedimentation and development on coral reefs, sea-based trips to see the coral reef systems first-hand, and air-based trips to provide a big picture view of the ecosystem. Not only does this serve to further educate Task Force members, but this also allows interaction outside of a meeting room where members have an opportunity to learn about each other and their respective jurisdictions.

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### **Coastal Ecosystem Learning Centers**

In 1996, the Coastal America Partnership launched a network of Coastal Ecosystem Learning Centers (CELCs). The CELC network combines the resources of federal agencies with marine educational centers. Since 1996, 19 CELCs have been established, spanning the East and West Coasts, Great Lakes, Gulf of Mexico, Alaska, and Hawaii. Most CELCs are aquaria, but marine science centers and a fishing museum are also part of the network. The goal of each CELC is to educate and involve the public in protecting the nation's coastal and ocean ecosystems.

The federal agency and CELC partnership is mutually beneficial. The federal agencies provides each CELC with access to experts, up-to-date information for exhibits, summer and community outreach programs, educational publications, training, field trip sites, research vessels, and scientific data. Each CELC benefits federal partners through outreach messages provided to millions of annual visitors to CELCs. In addition, the CELCs provide community volunteers with opportunities to participate in protection, preservation and restoration projects around the country.

Federal agency staff have worked with learning centers on a variety of projects, including:  
Helping a Girl Scout group develop a badge program about marine conservation

- Providing technical expertise, equipment, and resources for a community-based wetland restoration and monitoring program
- Providing lectures, field trips, and a day aboard a federal research vessel as part of a one-week teacher training program
- Participating in Student Ocean Conferences where students discuss, debate, and interact with federal partners involved in marine conservation and management
- Providing speakers and information about careers in marine science, conservation, and management at CELCs' Career and Ocean Exploration Days.

Through this unique partnership, CELCs are educating citizens of all ages about the importance of our nation's coasts and involving them in protecting and restoring our coastal resources.

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## **COOPERATIVE CONSERVATION LESSON #10: Leverage funding and resources**

Do not rely on one source of financial support. Whenever possible, leverage funding and resources from partner organizations. By encouraging partner matches, projects are more secure. Aside from the financial benefits, encouraging outside sources of funding also provides opportunities for private sector involvement where otherwise there would be little occasion for their contribution. In turn, when the private sector is involved, the effort's visibility is elevated and brand recognition is established.

### **North American Wetlands Conservation Act**

The North American Wetlands Conservation Act (NAWCA) of 1989 provides matching grants to organizations and individuals who have developed partnerships to carry out wetlands conservation projects in the United States, Canada, and Mexico for the benefit of wetlands-associated migratory birds and other wildlife. NAWCA was passed, in part, to support activities under the North American Waterfowl Management Plan, an international agreement that provides a strategy for the long-term protection of wetlands and associated uplands habitats needed by waterfowl and other migratory birds in North America.

NAWCA provides for a Standard and a Small Grants Program. Both are competitive and require that grant requests be matched by partner contributions at no less than a 1-to-1 ratio. The Standard Grants Program supports projects in Canada, the United States, and Mexico that involve long-term protection, restoration, and/or enhancement of wetlands and associated upland habitats. In Mexico, partners may also conduct projects involving technical training, environmental education and outreach, organizational infrastructure development, and sustainable-use studies. The Small Grants Program operates only in the United States, but supports the same type of projects and adheres to the same selection criteria and administrative guidelines as the U.S. Standard Grants Program.

While Congress appropriated \$39.4 million in FY2006 to fund the NAWCA's Grants Program, a large portion of the funding comes from partner contributions. From September 1990 through September 2006, more than 3,230 partners have been involved in 1,580 Standard and Small Grants Programs' projects combined. More than \$770.8 million in Act grants has leveraged some \$1.5 billion in matching funds and \$884.8 million in nonmatching funds to affect approximately 23.3 million acres of wetlands and associated uplands across the continent.

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*More information: [www.fws.gov/birdhabitat/Grants/NAWCA/Act.shtm](http://www.fws.gov/birdhabitat/Grants/NAWCA/Act.shtm) or [www.grants.gov](http://www.grants.gov)*

### **Sandy Island Mitigation Bank, South Carolina**

The Federal Highway Administration, South Carolina division, worked closely with the South Carolina Department of Transportation and numerous environmental partners to develop and purchase a Wetlands Mitigation Bank totaling 16,825 acres located in Horry and Georgetown Counties south of Myrtle Beach, South Carolina. The Sandy Island Mitigation Banking Agreement provides for offsite mitigation credits to be used to compensate for impacts to wetland resources resulting from future construction activities in the Coastal Plain of South Carolina. Funding for the mitigation bank came from state and federal governments as well as the Nature Conservancy.

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## U.S. Fish and Wildlife Service Coastal Program

The Coastal Program works cooperatively with federal, state, and local governments, as well as non-governmental partners to protect and restore priority habitat to recover listed species, preclude listing of candidate species, and increase the number of self-sustaining federal trust species. Through its network of field coordinators, the Coastal Program establishes voluntary agreements to provide funding and technical assistance to its partners to support on-the-ground projects in 22 priority areas across the country. An average of three non-federal dollars are leveraged for every federal dollar spent. Since 1994, over 145,000 coastal wetland acres and over 1,400 miles of coastal streams have been restored and over 1.7 million acres of coastal habitat has been protected.



*Alaskan steeppass fish ladders installed at Plymouth Pond. — USFWS*

In one example of how the program works at the project level, the Gulf of Maine Coastal Program provided \$20,000 through the Maine Habitat Restoration Partnership grant to install two fishways at the Plymouth Pond Dam, part of the Sebasticook River watershed. This amount was matched by over \$98,000. Funds were acquired from a variety of funding sources including the Natural Resources Conservation Service, NOAA's National Marine Fisheries Service, and private foundations including the Fish America Foundation, the Town of Plymouth, the Maine Department of Marine Resources, and the National Fish and Wildlife Foundation.

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## NOAA Restoration Center's Community-based Restoration Program

In 2006, NOAA celebrated the 10-year anniversary of the Community-based Restoration Program. The program started in 1996 with a few small coastal restoration projects and now funds over 200 projects per year. The program tackles large and small-scale projects including complex dam removals and coral reef repairs. Citizen and partner involvement is the cornerstone of this highly successful program, which restored over 6,000 acres of habitat and opened 70 miles of streams for migratory fish in 2006. National and regional partners including non-profit organizations, state and local governments, and community groups provide additional leverage and expertise in implementing habitat restoration projects. Over the program's 10-year history, almost 120,000 volunteers have participated in on-the-ground restoration projects that improve coastal and marine habitat.



*Volunteers at a Wisner salt marsh planting. — NOAA*

Since its inception, the Community-based Restoration Program has dispersed over \$44 million in grant and contract funds which have had a part in generating over \$106 million in matching funds. Millions of dollars in additional funding have come in the form of in-kind contributions such as regional NOAA and other government employees working on a project or volunteer hours from inside the community. The NOAA Restoration Center often aids organizations with managing their grants as well.

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More information: [www.nmfs.noaa.gov/habitat/restoration/](http://www.nmfs.noaa.gov/habitat/restoration/)*

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