

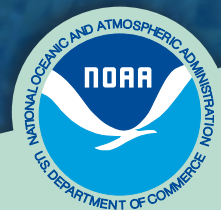
The Endangered Species Act Section 6 Program Report



Cooperative Conservation with the States

FY 2003–2008

NOAA



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*An online version of this report is available at
<http://www.nmfs.noaa.gov/pr/conservation/states/>.*

On the cover: A juvenile green turtle in Sargassum habitat within a loop current eddy, Gulf of Mexico off Florida. *Photo by B. Witherington, Florida Fish and Wildlife Conservation Commission; NMFS permit #1506.*

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The Endangered Species Act Section 6
Program Report

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Executive Summary

The National Marine Fisheries Service (NMFS) first received almost \$1 million in funding in 2003 for cooperative conservation with states¹ and has since made significant progress in developing an Endangered Species Act (ESA) Section 6 Program. Section 6 of the ESA authorizes NMFS to form cooperative agreements with state natural resources agencies and to provide financial assistance to those agencies for developing conservation programs for threatened and endangered marine and anadromous species. The original 6 cooperative agreements (signed prior to 2003) have more than doubled to 14, and now include agreements with Delaware, Florida, Georgia, Hawaii, Maine, Maryland, Massachusetts, New Jersey, New York, North Carolina, Puerto Rico, South Carolina, the U.S. Virgin Islands, and Washington. In 2003, NMFS also instituted a grant program for states that has since provided a total of \$4.7 million in federal funding to support research, management, and outreach projects for listed and candidate² species. These projects have already benefited over a dozen species, including Hawaiian monk seals, elkhorn coral, loggerhead sea turtles, smalltooth sawfish, and shortnose and Atlantic sturgeon. NMFS is actively developing partnerships with other states, and, as the number of state partners engaged in this program continues to increase, so too will the number of conservation actions implemented for listed and candidate species.

¹ Section 3 of the ESA defines “state” to include U.S. territories.

² Candidate species are defined as 1) those species that are the subject of a listing petition and for which NMFS has determined listing may be warranted pursuant to ESA section 4(b)(3)(a), and 2) those species that are not the subject of a petition, but for which NMFS has announced initiation of a status review of the species (71 FR 61022; 10/17/2006). A complete list of current candidate species can be found at: www.nmfs.noaa.gov/pr/species/esa/other.htm.



Introduction

States play an essential role in conserving and recovering species that have been listed under the Endangered Species Act (ESA). In recognition of the importance of the states' role when passing the ESA in 1973, Congress included a section, titled Cooperation with the States, that provided a mechanism for establishing federal-state conservation partnerships. Under section 6 of the ESA, the National Marine Fisheries Service (NMFS) is authorized to work cooperatively with states and provide federal assistance to support the development of state conservation programs for threatened and endangered marine and anadromous species. States may also receive support for monitoring the status of candidate and recently recovered, or delisted³ species. Because of its emphasis on cooperative partnerships, the Section 6 Program is an excellent example of the type of federal-state partnerships articulated in President Bush's 2004 Executive Order 13352, "Facilitation of Cooperative Conservation."

NMFS first received dedicated funding for the Section 6 Program in fiscal year (FY) 2003 at just under \$1 million dollars. While funding has remained essentially the same over the last five years, NMFS has actively expanded the program by establishing cooperative agreements with eight additional states and by instituting a grant program. This report describes funded activities and accomplishments of the ESA Section 6 Program during its first six years from FY 2003 to FY 2008.

Cooperative Agreements

Section 6 of the ESA evolved out of "the realization that the successful development of an endangered species program depended upon a good working arrangement between federal and state agencies."⁴ The mechanism for formalizing such working arrangements is a section 6 cooperative agreement.

³ Delisted species are those that were formerly listed as threatened or endangered under the ESA. A current list of species that NMFS has delisted can be found at: <http://www.nmfs.noaa.gov/pr/species/esa/other.htm>.

⁴ H.R. Report 95-333; May 16, 1977.

"The Congress finds and declares that...encouraging the States and other interested parties, through Federal financial assistance and a system of incentives, to develop and maintain conservation programs which meet national and international standards is a key to meeting the Nation's international commitments and to better safeguarding, for the benefit of all citizens, the Nation's heritage in fish, wildlife, and plants."

Source: ESA section 2(a)

Section 6(c) of the ESA lays out criteria concerning a state agency's conservation program for threatened and endangered species that, when met, qualify a state's program as "adequate and active" and thus eligible for a section 6 agreement. Once a state, through its respective natural resources agency or agencies, enters into an agreement with NMFS, it becomes eligible to receive federal funding to support the development of conservation programs for listed species and the monitoring of candidate and recovered species that reside within the state.

NMFS currently holds agreements with 14 states; the newest agreement was signed with Washington in 2008 (Exhibit 1). Since FY 2003, when NMFS first received an appropriation from Congress to support this program, the number of ESA section 6 agreements has more than doubled. Several more states, including Virginia, California, and the Commonwealth of the Northern Mariana Islands, have initiated efforts to develop section 6 agreements with NMFS. If the current trend continues, the NMFS Section 6 Program will continue to expand at a pace of at least one new agreement per year.

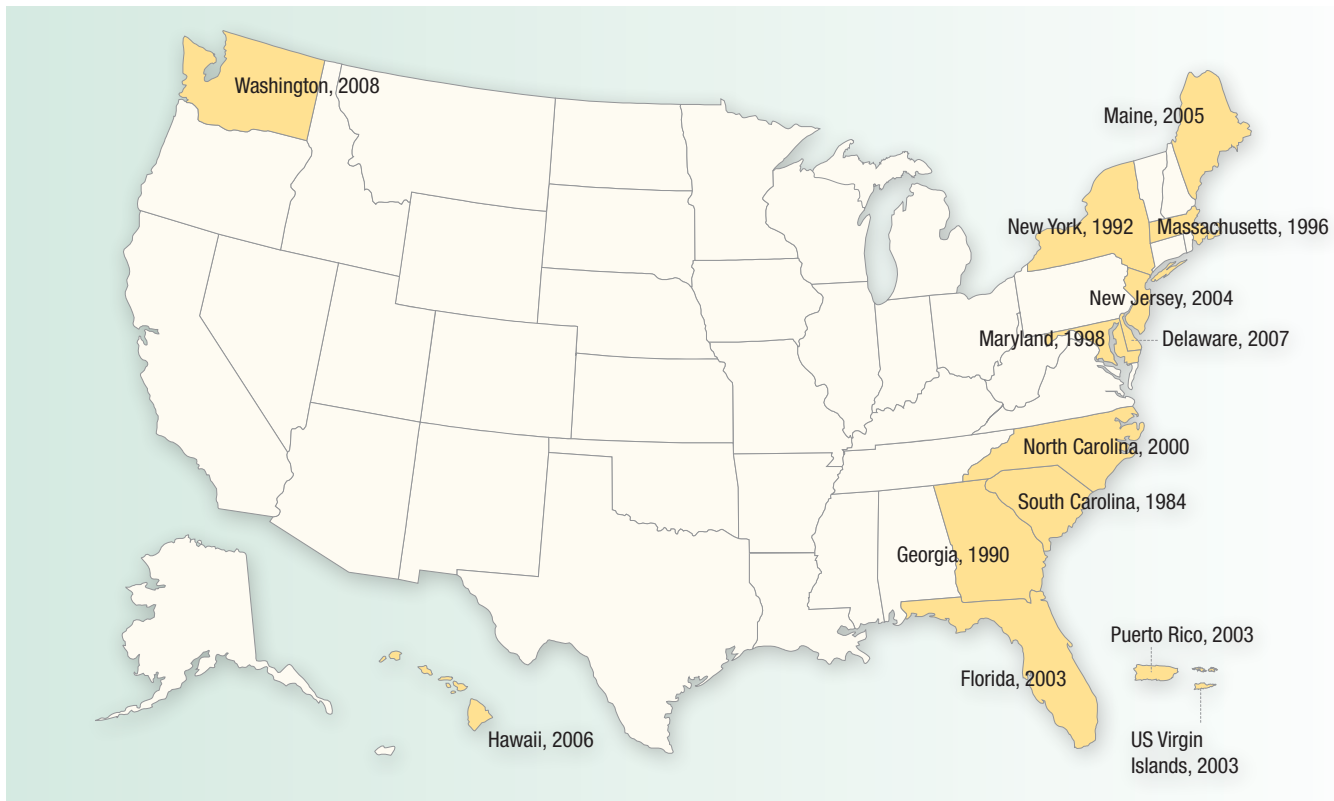


Exhibit 1: Current ESA Section 6 Agreements and Inception Dates

Protected Species Cooperative Conservation Grant Program

Using the funding provided by Congress in FY 2003 and thereafter, NMFS instituted and continues to administer the Protected Species Cooperative Conservation (PSCC) Grant Program. The primary objective of the PSCC Grant Program is to support conservation, management, research, monitoring, and outreach activities that benefit listed species, recently recovered species, or candidate species. Levels of available federal funding have varied annually, ranging from approximately \$670,000 to \$930,000. Section 6 requires a state match of 10% or 25% of the federal funding, and in most years, states have provided well over the minimum required match (Exhibit 2).⁵

⁵ Section 6(d)(2) of the ESA limits the federal share of project costs to 75%; however, if two or more states partner on a particular project, the federal share

Together with state matching funds, the program has provided an annual average of almost \$1.2 million in support of marine and anadromous species conservation efforts.

Funded projects have ranged from small management measures to large multi-year research projects. Projects have involved development and implementation of management plans, scientific research, and public education and outreach efforts. Funding has supported work for thirteen different species, particularly sea turtles, sturgeon, and smalltooth sawfish (Exhibit 3). A complete list of funded PSCC grants is available at the NMFS Office of Protected Resources website: <http://www.nmfs.noaa.gov/pr/conservation/states/funded.htm>.

may be increased to 90%.



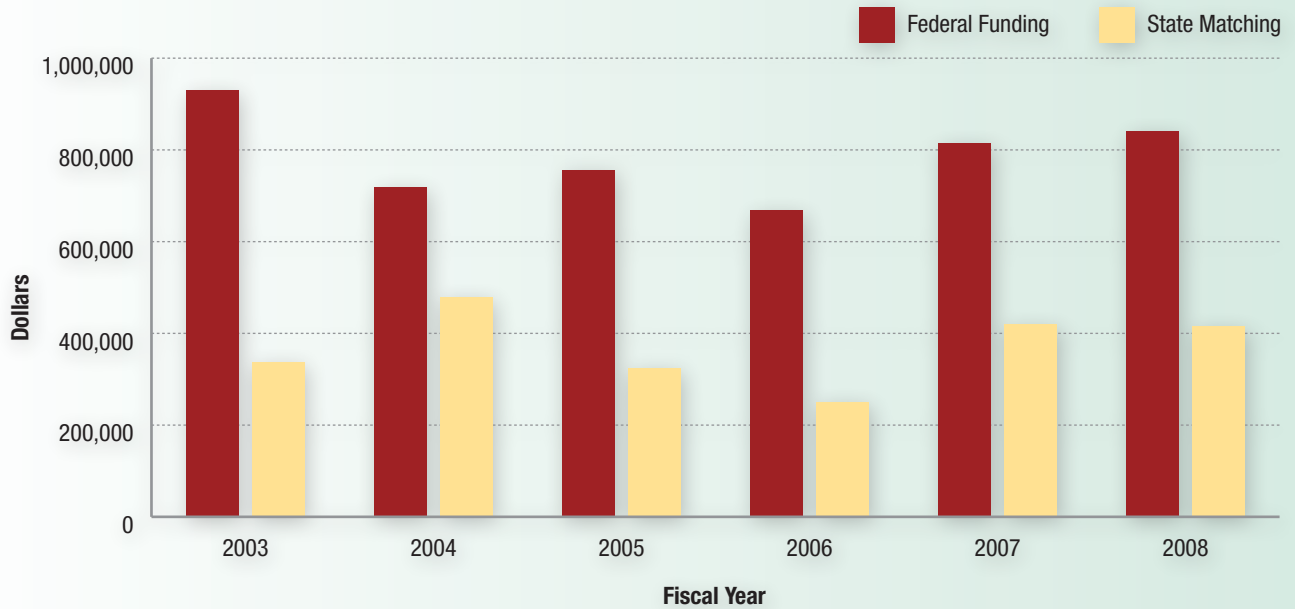


Exhibit 2: Federal and State Matching Funds Provided Annually Through the PSCC Program

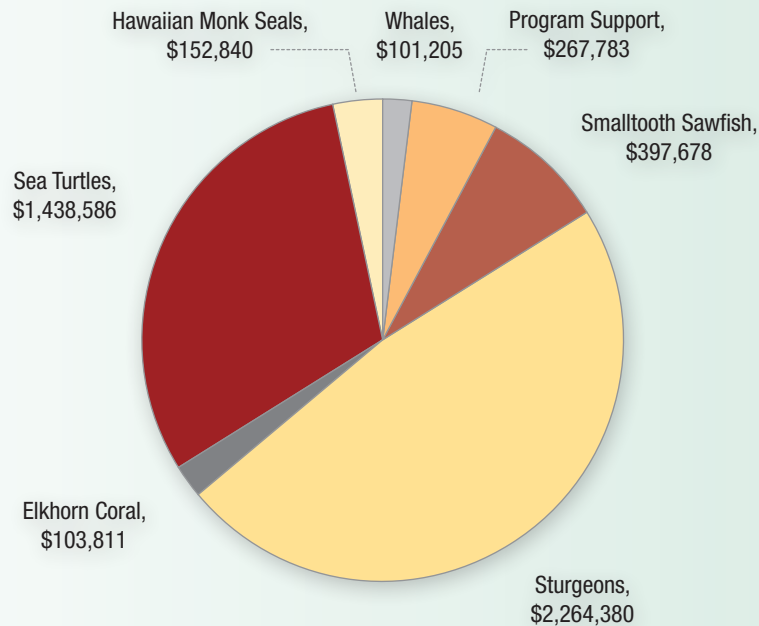


Exhibit 3: Federal Funding Awarded During FY 2003–2008 by Species or Species Groups

Five species of sea turtles have received support: Kemp's ridley, hawksbill, leatherback, loggerhead, and green sea turtles. Funding for sturgeon has mainly been for shortnose and Atlantic sturgeon projects; however, one grant has also addressed Gulf sturgeon. Funding indicated as "program support" could not be categorized according to species and includes grants that have supported workshops and meetings, development of conservation plans, or general program development.

A request for proposals to the PSCC Grant Program is made annually and is published in the *Federal Register* each summer. The deadline for proposal submission typically occurs mid-fall. Grant proposals selected for funding are those that demonstrate a direct conservation benefit to a species and/or its habitat. Management proposals must demonstrate that the proposed work will contribute to species recovery. For example, previously funded management projects have addressed mitigation of specific threats and factors inhibiting recovery of the species. Research projects must be designed to either fill existing data gaps or provide new information that can be applied to recovery or management of a listed species. Previously funded research activities have, for example, focused on defining and characterizing threats to the species, identifying and assessing important habitats (e.g., foraging habitats, spawning habitats), and evaluating methods to reduce or mitigate threats to the species. Public education and

outreach activities have also been funded that have improved or increased public understanding and participation in specific conservation activities. More detailed descriptions of funded activities are provided for each state in the remainder of this report.

Every state that currently holds a section 6 agreement has participated in the PSCC Grant Program. Delaware and Washington, which have the newest section 6 agreements, have both applied for funding for the first time in the FY 2009 grant cycle, which had not yet concluded at the time this report was published. The distribution of federal funding and grants awarded during FY 2003–FY 2008 has varied by state (Exhibit 4) and is a function of several factors, including duration of the state's section 6 agreement, the number of proposals submitted annually, and costs associated with particular types of activities.

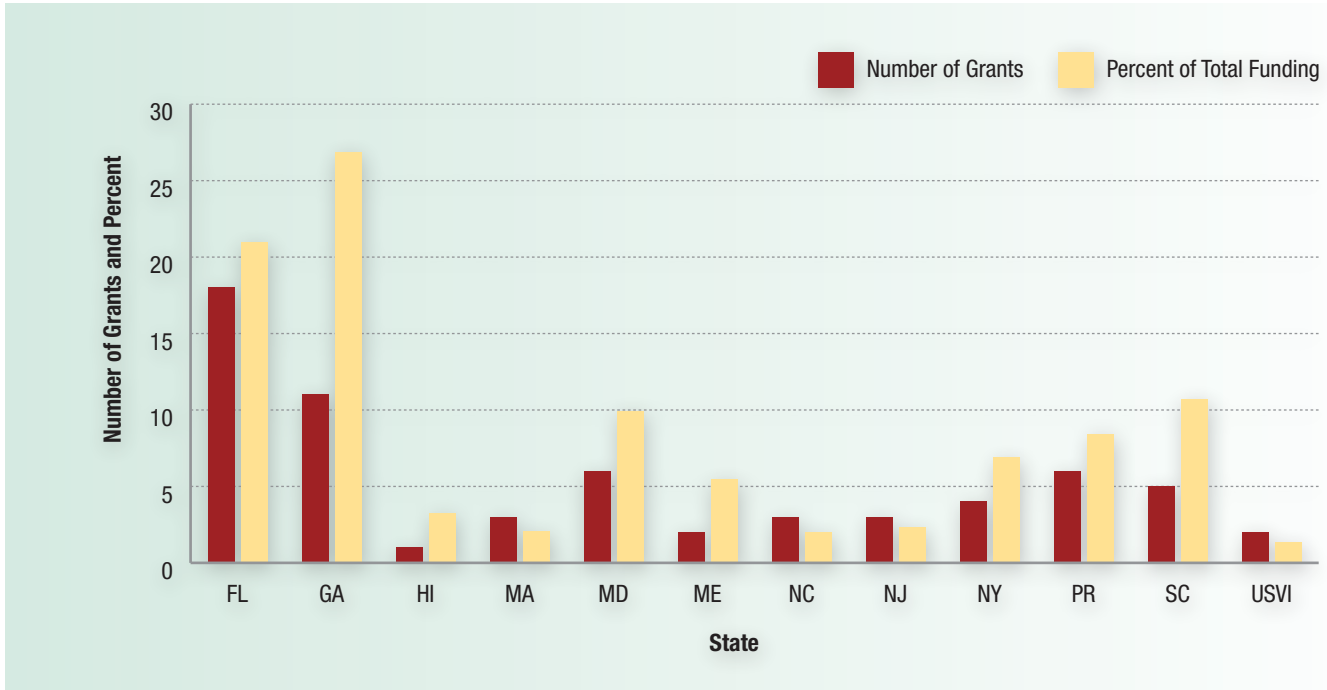
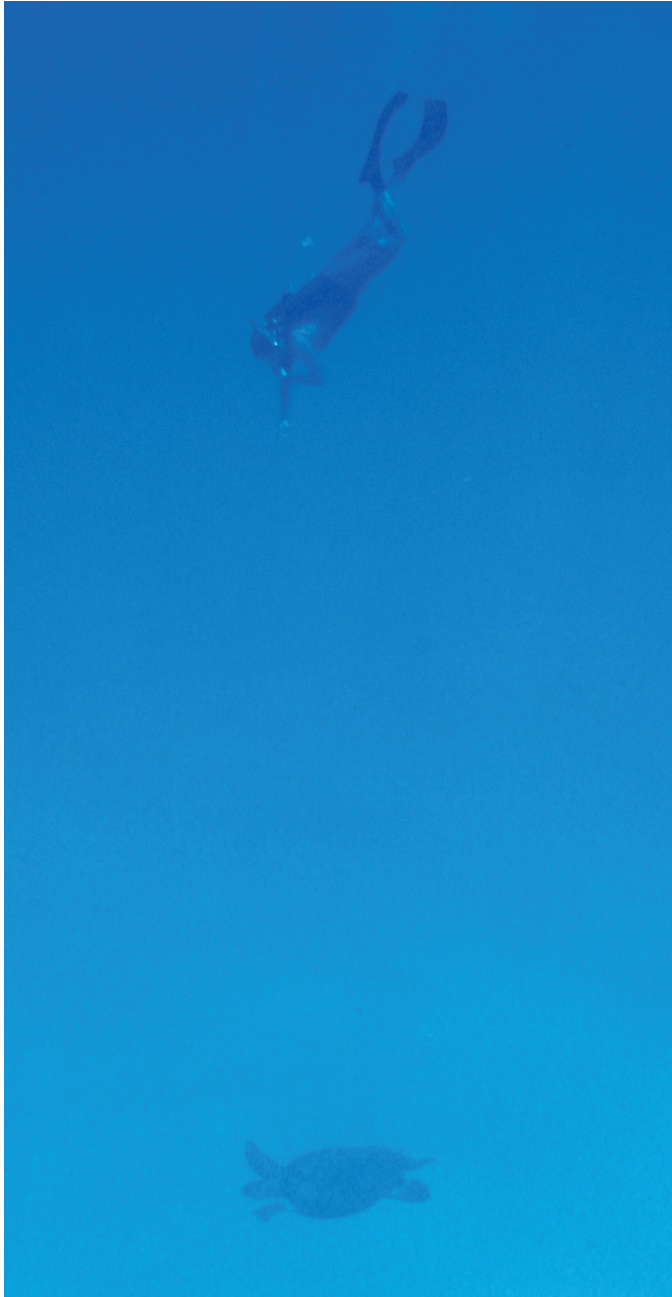


Exhibit 4: Grants and Percent of PSCC Grant Program Funding by State During FY 2003–2008





Pursuit of adult male hawksbill at Mona Island, Puerto Rico.
Photo R.P. van Dam; NMFS permit #1518.

Recovering Listed Species

While recovery of listed species is undertaken by numerous federal, state, local, tribal, and non-governmental organizations, state cooperation through the Section 6 Program forms a vital component of NMFS's recovery program. After a species is listed, section 4 of the ESA mandates that a recovery plan be developed and implemented for the conservation and survival of the species.

Recovery plans are often developed with assistance and input from states, and the Section 6 Program provides a means for NMFS to engage with the states to implement the plans. Section 6 agreements and the associated funding have become one of the most effective ways to implement recovery measures identified in these plans. As more state partnerships are formed through the Sector 6 Program and as additional funding becomes available, more listed species will benefit. Ultimately, the goal of these efforts is to bring species to the point where protections under the ESA are no longer necessary.

Accomplishments by State

The following pages describe the activities of states currently engaged in a cooperative agreement with NMFS under the Section 6 Program. Each state is undertaking different projects for particular species listed in their section 6 agreement (Exhibit 5). Species covered in a state's section 6 agreement include species designated as threatened or endangered under the ESA, NMFS candidate species and species of concern, and species which the state and NMFS agree are urgently in need of conservation programs.



		Delaware	Florida	Georgia	Hawaii	Maine	Maryland	Massachusetts	New Jersey	New York	North Carolina	Puerto Rico	South Carolina	U.S. Virgin Islands	Washington
Marine Mammals	Blue whale (<i>Balaenoptera musculus</i>)														
	Fin whale (<i>Balaenoptera physalus</i>)														
	Humpback whale (<i>Megaptera novaeangliae</i>)														
	North Atlantic right whale (<i>Eubalaena glacialis</i>)														
	North Pacific right whale (<i>Eubalaena japonica</i>)														
	Sei whale (<i>Balaenoptera borealis</i>)														
	Southern resident killer whale (<i>Orcinus orca</i>)														
	Sperm whale (<i>Physeter macrocephalus</i>)														
	Hawaiian monk seal (<i>Monachus schauinslandi</i>)														
	Steller sea lion (<i>Eumetopias jubatus</i>)														
Sea Turtles	Green sea turtle (<i>Chelonia mydas</i>) ⁶														
	Hawksbill sea turtle (<i>Eretmochelys imbricata</i>)														
	Kemp's ridley sea turtle (<i>Lepidochelys kempii</i>)														
	Leatherback sea turtle (<i>Dermochelys coriacea</i>)														
	Loggerhead sea turtle (<i>Caretta caretta</i>)														
Fishes	Atlantic sturgeon (<i>Acipenser oxyrinchus oxyrinchus</i>)														
	Green sturgeon (<i>Acipenser medirostris</i>)—Northern Distinct Population Segment														
	Green sturgeon (<i>Acipenser medirostris</i>)—Southern Distinct Population Segment														
	Shortnose sturgeon (<i>Acipenser brevirostrum</i>)														
	Sand tiger shark (<i>Carcharias taurus</i>)														
	Smalltooth sawfish (<i>Pristis pectinata</i>)														
Invertebrates	Elkhorn coral (<i>Acropora palmata</i>)														
	Staghorn coral (<i>Acropora cervicornis</i>)														
	Pinto abalone (<i>Haliotis kamtschatkana</i>)														

Exhibit 5: Threatened, Endangered, and Candidate Species and NMFS Species of Concern⁷ Included in Each State's Section 6 Agreement

⁶ Green turtles are listed as threatened, except for breeding populations of green turtles in Florida and on the Pacific coast of Mexico, where they are listed as endangered.

⁷ Species of Concern (SOC) are those species about which NMFS has some concerns regarding status and threats, but for which insufficient information is available to indicate a need to list the species under the ESA. Funding for Species of Concern is not provided through the Section 6 Program but through the NMFS Proactive Species Conservation Grant Program (<http://www.nmfs.noaa.gov/pr/species/concern/grant.htm>). A complete list of NMFS SOC can be found at: <http://www.nmfs.noaa.gov/pr/species/concern/#list>.

Delaware

Delaware Department of Natural Resources
and Environmental Control
Division of Fish and Wildlife
89 Kings Highway
Dover, DE 19901
www.fw.delaware.gov/Pages/FWPPortal.aspx

Cooperative Agreement Signed:
December 11, 2007

Accomplishments

Delaware first entered into an ESA section 6 agreement with NMFS in 2007 and is the newest Atlantic coast state to enter the program. The addition of Delaware to the program expands endangered species recovery efforts in the Northeast by filling the existing gap between two states with active section 6 agreements with NMFS—New Jersey and Maryland. An agreement with Delaware may foster cooperative conservation efforts among these states for sea turtles, sturgeon, and large whales, and may foster collaborative studies within the Delaware River and Bay systems.

In September 2008, Delaware submitted its first grant proposal to the PSCC Grant Program. The proposal addresses Atlantic sturgeon, currently a candidate species. Historically, the Delaware River once supported one of the largest stocks of Atlantic sturgeon in the United States, but by the early 1900s the population had collapsed, most likely as a result of overfishing. Population estimates have also indicated that Atlantic sturgeon abundance in the Delaware River has continued to decline over the last 20 years, and currently, this species is listed as endangered by the State of Delaware. Since 1991, the Delaware Division of Fish and Wildlife has conducted surveys of juvenile and sub-adult Atlantic sturgeon in the lower Delaware River and has tagged nearly 1,900 fish. Results of this work and associated habitat studies have been providing valuable information about the Delaware River population of this candidate species.



Cathy Martin, a state biologist, releases a juvenile Atlantic sturgeon and an incidentally-caught shortnose sturgeon (foreground) near Artificial Island, Delaware River. *Photo courtesy of Delaware Department of Natural Resources and Environmental Control.*



Florida

Florida Fish and Wildlife Conservation
Commission
Farris Bryant Building
620 S. Meridian St.
Tallahassee, FL 32399-1600
www.myfwc.com

Cooperative Agreement Signed: *July 1, 2003*

map active and inactive research projects; identify information gaps for certain geographic areas, species and life stages; and make recommendations on approaches to standardize and coordinate the various studies to better monitor state-wide population trends. Through this proactive effort, the FWC identified 12 ongoing studies for inclusion in a network of long-term monitoring sites.

Efforts to monitor annual trends in abundance of loggerheads and green turtles at one long-term study site, Florida Bay, have been supported through the Section 6 Program. While nesting beach surveys are the best measure of trends in the number of nests and nesting females, complementary in-water studies are necessary to track trends in other parts of the population such as immatures and males. The project to study sea turtles in Florida Bay has been ongoing for 19 years and has allowed for the capture and tagging of 967 sea turtles. When these tagged turtles are subsequently recaptured, researchers can measure growth, monitor changes in health, and determine patterns of residency over periods as long as a decade or more.

The FWC has also conducted projects to advance our understanding of threats to listed sea turtles and potential management responses. One such project involved identifying and describing diseases affecting sea turtles. Evidence of disease is present in at least 20% of the 1,000-2,000 sea turtles that are found dead or debilitated in Florida each year. Understanding, monitoring, and addressing these diseases are thus essential components of recovery efforts. Another project involved analysis of recently hatched sea turtles (neonates) for ingestion of certain pollutants (e.g., tar and plastics). This study has produced one of the only assessments of pollution and its threat to the survival of neonate turtles in the Western Atlantic and eastern Gulf of Mexico.

Unique to Florida is the ongoing work to monitor and conserve the endangered U.S. distinct population segment of smalltooth sawfish. This prehistoric member of the shark

Accomplishments

The Florida Fish and Wildlife Conservation Commission (FWC) has made extensive efforts to study and manage listed sea turtles that occur in Florida waters. With one of the greatest nesting concentrations of loggerheads in the world, significant nesting concentrations of green turtles and leatherbacks, and important feeding areas for loggerheads, green turtles, Kemp's ridleys, hawksbills, and leatherbacks, Florida has a large role and interest in sea turtle conservation. To develop a comprehensive understanding of the numerous sea turtle research efforts within the state, the FWC used PSCC grant funding to conduct a state-wide assessment of all in-water sea turtle studies. The goal of this assessment was to inventory and



Dip net capture of a post-hatchling loggerhead sea turtle near the western Gulf Stream off Florida. Photo courtesy of B. Witherington, FWC; NMFS permit #1506.

family has been extirpated from most of its former range, which extended from Texas to Florida and up the East Coast to Cape Hatteras, NC; smalltooth sawfish are now mainly found only around the southern parts of peninsular Florida. The FWC received PSCC grant funding to monitor this species and to examine its habitat use. Results of this work have assisted NMFS' effort to identify critical habitat for this species. Also, in partnership with the Florida Museum of Natural History, the FWC has conducted extensive public outreach efforts to minimize the impact of one of the most prevalent threats to this species, incidental entanglement in fishing line.



Juvenile smalltooth sawfish captured by FWC researchers near the mouth of the Caloosahatchee River, Florida. *Photo courtesy of Gregg Poulakis, Florida Fish and Wildlife Conservation Commission; NMFS permit #1475.*

Grant History

Year	Title	Duration (Years)	Federal Funding	State Match
2007	Electronic tagging supplies for maximizing data collection on the smalltooth sawfish in Charlotte Harbor, Florida	1	\$36,380	\$12,126
2006	Enhancement of work to identify diseases of sea turtles in Florida	1	\$15,754	\$5,862
2006	Pelagic neonate and juvenile sea turtles in Gulf and Atlantic surface waters off Florida: Distribution, densities, threats, habitat descriptions, and behavior	2	\$104,600	\$55,225
2006	Long-term monitoring of smalltooth sawfish in Charlotte Harbor	3	\$221,490	\$76,929
2006	Technology for enhancing recovery: Evaluation of GPS-linked satellite tags for sea turtles	1	\$19,350	\$7,816
2006	Long-term study of sea turtles in Florida Bay	3	\$70,059	\$23,448
2006	In-water studies of marine turtles in Florida	2	\$32,075	\$14,191
2005	Support and enhancement of the Florida Sea Turtle Stranding and Salvage Network	1	\$49,761	\$16,613
2004	Monitoring smalltooth sawfish in Charlotte Harbor	1	\$55,364	\$18,455
2004	Long-term studies of sea turtles in Florida Bay	1	\$31,227	\$10,409
2004	Neonate sea turtles	1	\$33,974	\$16,783
2004	Educating the public about the smalltooth sawfish	1	\$26,444	\$26,444
2003	Developing statewide in-water research on sea turtles	1	\$92,958	\$30,986
2003	Monitoring smalltooth sawfish in Charlotte Harbor	1	\$58,000	\$26,119
2003	Reproductive movements and behaviors in loggerhead sea turtles	1	\$53,166	\$18,317
2003	Threats to neonate sea turtles in Atlantic Floridian waters	1	\$50,350	\$16,783
2003	Long-term studies of sea turtles in Florida Bay	1	\$28,600	\$15,289
2003	Sea turtle mortality study	1	\$10,000	\$3,333
	Total		\$989,552	\$395,994



Georgia

Georgia Department of Natural Resources
2 Martin Luther King, Jr. Dr., SE
Suite 1252 East
Atlanta, GA 30334
www.gadnr.org/

Cooperative Agreement Signed: *August 6, 1990*

Accomplishments

The Georgia Department of Natural Resources (GA DNR) holds the second oldest section 6 cooperative agreement with NMFS after South Carolina. Since entering the agreement in 1990, GA DNR has pursued numerous research and management projects for sturgeon and sea turtles with the support of PSCC Grant Program funding. Among the most recent projects being pursued for sea turtles is the analysis of loggerhead sea turtle reproductive behavior using novel genetic techniques. Results of this work will provide critically needed information for this declining population of loggerheads and will help build more realistic demographic models and more accurate estimates of nesting female population size.

The southeastern United States supports the largest loggerhead nesting population in the Atlantic region, making conservation and management efforts for the species critical in this region. Elucidating patterns of population structure and the processes that shape them are central to the development of appropriate management units and effective management strategies.

GA DNR is also pursuing efforts to mitigate the impacts of boat strikes on sea turtles. Boat collisions are a

known source of mortality for sea turtles, and in Georgia, the number and proportion of stranded sea turtles with propeller wounds has increased dramatically over the past decade. Very little data are available on sea turtle and boat interactions, but this study takes a first step by evaluating the nature of these interactions through controlled experiments with artificial turtle carapaces. The researchers will then examine various modifications to outboard motors to determine those most effective in reducing lethal interactions.

Among the most recent projects being pursued for sturgeon species in Georgia is the ongoing study in the St. Mary's and Satilla Rivers to determine whether Atlantic sturgeon have been extirpated from these rivers (Exhibit 6). Although both rivers historically supported populations of Atlantic and shortnose sturgeon, neither species had been documented in either river system since the early 1990s. NMFS is currently considering whether to propose certain populations of Atlantic sturgeon for listing under the ESA, and the U.S. Fish and Wildlife Service is considering whether restocking of these rivers is warranted. GA DNR's study will provide needed data on the current population

status and habitat conditions of Atlantic sturgeon populations in these rivers and will inform both decisions under consideration by federal managers. GA DNR has also conducted similar studies to evaluate population status and habitat use within two other major river systems, the Altamaha and the Ogeechee. These studies have provided much-needed data on the status of the populations in these rivers, the location of important foraging and spawning habitats, and estimates of incidental catch in commercial fisheries.



A young-of-year Atlantic sturgeon captured in the lower Altamaha River. Ongoing work indicates that juvenile Atlantic sturgeon are relatively abundant in the lower Altamaha River estuary during summer months. *Photo courtesy of University of Georgia Sturgeon Research Team; NMFS permit #1420.*

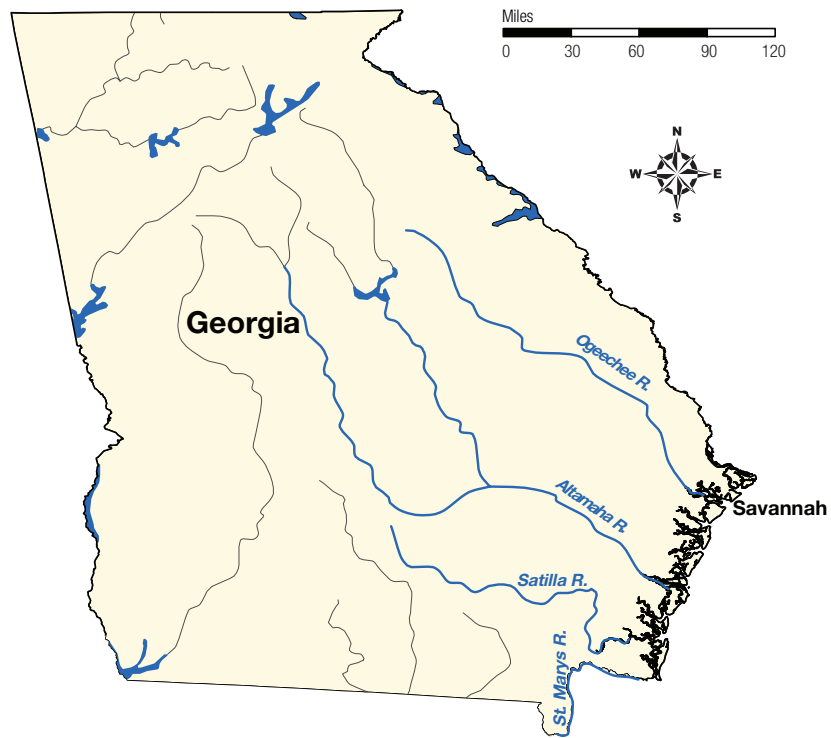


Exhibit 6: Georgia river systems where PSCC Grant funded work has been conducted.



Loggerhead biopsy sampling. *Photo courtesy of GA DNR; GA DNR permit #29-WCH-07-89.*



Grant History

Year	Title	Duration (Years)	Federal Funding	State Match
2008	Reproductive behavior in female loggerhead turtles: characterizing site fidelity, intra-seasonal clutch frequency, and relatedness using genetic mark-recapture	3	\$187,062	\$62,355
2008	Status of Atlantic sturgeon in the St. Mary's and Satilla Rivers	2	\$197,006	\$84,693
2006	Population dynamics, essential habitats, and factors affecting abundance of Atlantic sturgeon in the Altamaha River, GA	3	\$386,400	\$150,013
2006	Population dynamics and essential habitats of shortnose sturgeon in the Ogeechee River, GA	3	\$225,900	\$83,383
2006	Analysis of loggerhead turtle population structure in the southeastern U.S. using novel microsatellite markers and mitochondrial DNA sequences	1	\$36,000	\$12,000
2005	Methods to reduce propeller wounds in sea turtles	1	\$25,500	\$8,500
2005	Anadromous fish recovery in the Apalachicola-Chattahoochee-Flint Basin: Gulf sturgeon and Alabama shad	1	\$95,644	\$10,655
2004	Atlantic sturgeon population and habitat in the Altamaha River	1	\$96,716	\$37,640
2004	Investigation of loggerhead turtle habitat use in Georgia	1	\$63,750	\$21,250
2003	Population and critical habitats of Atlantic sturgeon	1	\$105,600	\$40,162
2003	Investigations of inter- and post-nesting habitat use of sea turtles	1	\$74,628	\$24,875
Total			\$1,494,206	\$535,526



A stranded loggerhead sea turtle with propeller wounds. *Photo courtesy of GA DNR.*

Hawaii

Hawaii Department of Land and
Natural Resources
1151 Punchbowl Street
Honolulu, HI 96813
www.hawaii.gov/dlnr/

Cooperative Agreement Signed: *August 29, 2006*

public education and outreach efforts designed to promote stewardship of marine wildlife and to minimize adverse interactions between beach-goers and other ocean users and monk seals and other protected marine species. Achievements of this project to date include strengthening the Kauai Volunteer Monk Seal Response Network by adding approximately 50 new volunteers; successfully managing over 250 haul-out and several pupping events; and contributing to a state-wide Hawaiian monk seal count.

Incidental take of monk seals and ESA-listed sea turtles in state-managed fisheries has been a growing concern in Hawaii. As part of the funded project, DLNR is also developing a conservation plan to minimize and mitigate the incidental take of these species in state-managed fisheries. PSCC funds have allowed DLNR to recruit and hire two new staff to head this effort.



Hawaiian monk seal pup and mother. Photo by Justin Viezbicke, DLNR-HIHWNMS; NMFS permit #932-1489 and #848-1695.

Accomplishments

In August 2006, the state of Hawaii, through the Department of Land and Natural Resources (DLNR), entered into a section 6 agreement with NMFS. They received their first PSCC grant in FY 2007 to support ongoing efforts to conserve and manage Hawaiian monk seals. Hawaiian monk seals are currently one of the world's most critically endangered marine species; they are listed as endangered under the ESA and categorized as depleted under the Marine Mammal Protection Act. Threats facing this species include reduced prey availability, interactions with fisheries (e.g., entanglement), human disturbance (e.g., human encroachment in pupping areas), disease, and marine pollution.

Through the FY 2007 PSCC grant cycle DLNR received funding to support management of monk seals on the island of Kauai, where human interactions with monk seals is a continual problem, and to further develop their community-based response network. Funding is also supporting state-wide

Grant History

Year	Title	Duration (Years)	Federal Funding	State Match
2007	Cooperative conservation of Hawaiian monk seals and sea turtles: Optimizing state agency and community participation in management, monitoring, outreach, and recovery	1	\$152,840	\$75,663



Maine

Maine Department of Marine Resources
21 State House Station
Augusta, ME 04333-0021
www.maine.gov/dmr/index.htm

Accomplishments

With the signing of its section 6 agreement, the Maine Department of Marine Resources (ME DMR) began the development of its endangered species conservation program, which includes large whales, sea turtles, and shortnose sturgeon. In 2007, ME DMR received funding for collaborative research with the University of Maine to investigate the distribution and abundance of shortnose sturgeon in the Penobscot River. Although known to historically occupy the Penobscot River, the shortnose sturgeon was thought to have been eliminated from this and many other rivers within its former range. However, the accidental rediscovery of this species within the Penobscot in 2006 rekindled interest in investigating its status. Section 6 funding has allowed for the continuation and expansion of a pilot study to assess the abundance of shortnose sturgeon in the Penobscot River so that a more robust population estimate can be derived. Research activities currently include capturing, tagging, and tracking shortnose sturgeon. Fish tagged with ultrasonic transmitters, which allow researchers to continuously monitor fish movements through acoustic receiver arrays stationed throughout the river system, are providing data on habitat use as well as seasonal distribution patterns. This project directly addresses several research objectives identified in the 1998 NMFS Shortnose Sturgeon Recovery Plan.⁸

ME DMR was also recently awarded a grant to assess entanglement risk of large whales. This is the first PSCC grant

⁸ The 1998 NMFS Shortnose Sturgeon Recovery Plan: <http://www.nmfs.noaa.gov/pr/recovery/plans.htm>.

Cooperative Agreement Signed: May 16, 2005

awarded to support research on large whales. Humpback and fin whales are two of the federally endangered large whales that occur in Maine. Protective measures, such as area closures and gear modifications, are being used to reduce entanglement risk of these species. However, more information is needed to determine how whale behavior influences entanglement risk. The current study, which was initiated in June 2008, is designed to examine feeding and diving behavior of large whales over rocky benthic habitats off the coast of Maine and assess how risk of entanglement varies with feeding behaviors, depth, and bottom type. This information will inform decisions regarding the potential use of floating, low profile fishing line in Maine's lobster fishery instead of sinking line, which may be more difficult to use in certain rocky habitats. By assessing the potential entanglement risk for these whales in different habitats, this study will inform management decisions regarding additional protective measures needed for reducing risk of entanglement but still allowing for a safe and efficient lobster fishery. This study is a collaborative effort between the ME DMR, Woods Hole Oceanographic Institute, and Ocean Works Group, Inc.



Shortnose sturgeon with an identification tag. Photo courtesy of Stephen Fernandes, University of Maine; NMFS permit #1595.

Grant History

Year	Title	Duration (Years)	Federal Funding	State Match
2008	The use of Dtags to assess risk of entanglement for humpback and fin whales in Maine coastal fishing waters	1	101,205	35,062
2007	Investigation into the distribution and abundance of shortnose sturgeon in the Penobscot River, Maine	3	\$281,393	\$302,975
		Total	\$382,598	\$ 338,037



Researchers use a 50-foot cantilevered pole to carefully attach a special "Dtag" with suction cups to the dorsal surface of the whale. The tag, which is programmed to remain attached for about four hours, will record sound, depth, and behavior.

Photo courtesy of the ME DMR; NMFS permit #605-1904.



Maryland

Maryland Department of Natural Resources
Tawes State Office Building
580 Taylor Avenue
Annapolis, MD 21401
www.dnr.state.md.us/

Cooperative Agreement Signed: *July 20, 1998*

data collected here with other in-water turtle studies along the East Coast. Information collected through this study has not only contributed to providing a better understanding of the biology and ecology of sea turtles within Maryland's portion of the Chesapeake Bay but has contributed to a more comprehensive understanding of sea turtle status and health within the region.

MD DNR has also made efforts to establish baseline health information for endangered shortnose sturgeon throughout the region. Blood chemistry, hormone levels, sex ratios, and general health were assessed for shortnose sturgeon captured in the Delaware and Cooper Rivers. Blood chemistry and hormone data were also collected from hatchery-reared, 'control' fish to establish reference values. Sex and reproductive status of fish were confirmed through laparoscopy, which is an invasive but highly reliable method. Researchers underwent careful training to ensure proper application of this technique and plan to use this technique to test less invasive and non-invasive means of identifying gender and maturity level. Blood and health data will help lead to a better understanding of how certain factors such as age, sex, diet, water and sediment contaminants, disease, and other factors affect blood chemistry values. Ultimately, these data will allow researchers to identify what factors are affecting the health of shortnose sturgeon populations.

Accomplishments

To support sea turtle conservation efforts, in 2001 the Maryland Department of Natural Resources (MD DNR) initiated a study of listed sea turtles in the Maryland portion of the Chesapeake Bay. At that time, the Bay was identified as an important area in need of research to provide a better understanding of seasonal distribution, movements, genetic origin, and baseline health of sea turtles. Beginning in FY 2003, Maryland received a PSCC grant to support this project. The study involved sampling sea turtles that were incidentally captured in pound nets; this sampling was made possible by the cooperation and voluntary participation of Maryland pound net fishermen. Turtles were measured, weighed, sampled for blood and tissue, tagged, and released. Between July 2001 and May 2007, a total of 112 sea turtles were examined, the majority of which were loggerhead and Kemp's ridley turtles. The blood and tissue sampling results will allow researchers to compare the

Grant History

Year	Title	Duration (Years)	Federal Funding	State Match
2006	Sea turtle tagging and health assessment study in the Maryland portion of the Chesapeake Bay	1	\$43,773	\$15,003
2005	Distribution and movement of shortnose sturgeon	1	\$87,594	\$16,061
2004	Sea turtle tagging and health assessment	1	\$38,560	\$18,177
2004	Distribution and health of shortnose sturgeon	1	\$124,875	\$10,377
2003	Sea turtle tagging and health assessment	1	\$45,800	\$15,267
2003	Distribution, movement, and health assessment of shortnose sturgeon	1	\$126,500	\$20,169
		Total	\$467,102	\$95,054



Anchored gill nets being used to capture shortnose sturgeon in the Delaware River near Bordertown, New Jersey. *Photo by Mark Matsche, MD DNR; NMFS permit #1486.*



Massachusetts

Massachusetts Department of
Fish and Game
Route 135
Westborough, MA 01581
www.mass.gov/dfwele

Cooperative Agreement Signed: July 8, 1996

With the assistance of section 6 grant funding, the state has taken a lead role in fostering important partnerships between the various parties involved in sea turtle disentanglement activities. Key improvements have been made to the MASTDN, a large volunteer network overseen by the Provincetown Center for Coastal Studies and with active members from numerous organizations, including the New England Aquarium, the University of New Hampshire, Massachusetts Audubon Society, Massachusetts Environmental Police, Coalition for Buzzard's Bay, and the U.S. Coast Guard. Training sessions were conducted, a reporting hotline was staffed and maintained around the clock, and additional disentanglement "kits" were purchased for the network. In the past, lack of dedicated and trained responders, adequate equipment, and timely reporting meant that entangled turtles were either lost after being reported or died from the entanglement before action could be taken.

Accomplishments

Massachusetts, which has held an ESA section 6 agreement with NMFS since 1996, has a long-standing history of marine endangered species conservation. The state's protective efforts for endangered North Atlantic right whales, for example, have involved conducting annual surveillance and monitoring, gear modification research, and implementation of fixed fishing gear modification requirements. More recently, the state has received two PSCC grants, in FY 2006 and FY 2007, to further develop a Massachusetts Sea Turtle Disentanglement Network (MASTDN) and support management efforts for listed sea turtles. Four ESA-listed sea turtle species occur in Massachusetts waters: Kemp's ridley, green, leatherback, and loggerhead. Historically, Massachusetts has had the highest recorded numbers of stranded sea turtles among the Northeastern states.



An entangled leatherback turtle is carefully hauled on board. *Photo courtesy of the MASTDN; NMFS permit #1557.*

This ongoing disentangle-ment response work not only contributes to bycatch reduction, but offers the opportunity to collect valuable data on listed sea turtles. As a result of standardizing response procedures and reporting in Massachusetts, high quality data are now being collected from both live and dead entangled turtles. During disentangle-ment events, responders collect morphometric data (e.g., carapace length and width), take skin and mucous samples, and attach identification and passive acoustic tags to the turtles. Fishing gear that is removed from the turtles is turned over to NMFS, and valuable information about how turtles are entangled and the type and nature of the gear is collected. From this growing base of information, NMFS and the Massachusetts Division of Marine Fisheries (MA DMF) will be able to make better decisions about how to minimize entanglement risk for sea turtles.

Another project supported by the Section 6 Program is the Leatherback Health Assessment, originally funded in FY 2003.



A leatherback turtle at the surface. Photo credit: Kara Dodge, Large Pelagic Research Center; NMFS permit #1557.

This is a collaborative effort between MA DMF and the New England Aquarium to collect health data on entangled leatherback sea turtles during actual disentangle-ment responses and to evaluate the severity of entanglement wounds. The goal of this work is to collect baseline health information and characterize the nature and impact that entanglements have on these turtles over time. This effort represents the first detailed health evaluation of live, entangled leatherbacks.

Grant History

Year	Title	Duration (Years)	Federal Funding	State Match
2007	Massachusetts sea turtle disentangle-ment network	3	\$77,907	\$39,586
2006	Massachusetts sea turtle disentangle-ment network	1	\$25,030	\$8,684
2003	Massachusetts leatherback sea turtle health study	1	\$20,000	\$5,000
		Total	\$122,937	\$53,270



New Jersey

New Jersey Department of
Environmental Protection
Division of Fish and Wildlife
P.O. Box 400
Trenton, NJ 08625-0400
www.state.nj.us/dep/

Cooperative Agreement Signed: July 28, 2004

funded to locate and document occurrences of early life stage shortnose sturgeon in the Delaware River, an area where little such data are available for this endangered species. The state contracted with Environmental Research and Consulting to complete this work, which included tagging and tracking adult shortnose sturgeon and sampling for sturgeon eggs and larvae. Aquatic habitat was also mapped and characterized based on water depth and current velocity. Data from this work will be used in identifying and protecting key shortnose sturgeon spawning and nursery areas. Results obtained through this project, including known spawning and nursery area boundaries, and numbers and types of early life stages collected, are also directly contributing to the NMFS Draft Shortnose Sturgeon Status Review Report, which is expected to be completed by early 2009.

Accomplishments

With the signing of its section 6 agreement with NMFS in 2004, the New Jersey Division of Fish and Wildlife (NJ DFW) submitted two proposals to the PSCC Grant Program and received funding for both. One project involved hosting a workshop to bring together managers and species experts to identify conservation priorities for marine mammals and sea turtle species found in New Jersey state waters. Representatives from 13 agencies and organizations, including New Jersey state and neighboring state natural resources agencies, NMFS, the Marine Mammal Stranding Center, and several aquaria, participated in the workshop. Through directed discussions, participants identified focal species, prioritized the threats to these species, and developed a list of immediate and future conservation actions that could be taken by NJ DFW to further the recovery of these species.

More recently, in September 2008, NJ DFW submitted a final grant report for a study examining the early life history stages of shortnose sturgeon in the Delaware River. This study was



Larval shortnose sturgeon (15.2 mm total length) collected in the lower non-tidal Delaware River. Photo courtesy of Hal Brundage, Environmental Research and Consulting, Inc.; NMFS permit #1486.

Grant History

Year	Title	Duration (Years)	Federal Funding	State Match
2006	Investigations of shortnose sturgeon early life history stages in the Delaware River	2	\$85,560	\$28,520
2004	Marine mammal and sea turtle workshop	1	\$18,000	\$6,000
2004	Status determination process for New Jersey's marine fishes	1	\$4,875	\$1,625
Total			\$108,435	\$36,145

New York

New York State Department of
Environmental Conservation
625 Broadway
Albany, NY 12233
www.dec.ny.gov/

Cooperative Agreement Signed: *April 20, 1992*

Foundation for Marine Research and Preservation, and Atlantis Marine World. This workshop provided training and information for enforcement agents and managers on appropriate techniques, relevant laws, protocols, and important safety issues. Then, in 2006, the Coordinator garnered PSCC grant funding to organize and host a marine endangered species workshop, which brought together state and federal managers, academics, and various species experts, to review information on marine endangered species, identify information gaps, and to share ideas regarding the conservation needs of the endangered and threatened marine species found within New York's waters. The results of the workshop are currently assisting NY DEC in the development of a Marine Endangered Species Management Plan to direct future conservation efforts.

NY DEC has also received a PSCC grant to investigate movement and habitat use of mature Atlantic sturgeon within the Hudson River Estuary and in near-shore ocean waters. To date, NY DEC researchers and their cooperators, which include the Atlantic States Marine Fisheries Commission and the U.S. Fish and Wildlife Service, have collected, tagged, and tracked 178 mature Atlantic sturgeon. Through this effort, researchers have been able to describe seasonal movements and habitat use, locate spawning aggregations, and identify near-shore ocean areas where fish concentrate. The new information provided by this study is allowing state managers to better protect key sturgeon habitat.

Accomplishments

The New York State Department of Environmental Conservation (NY DEC) holds one of the oldest ESA section 6 agreements with NMFS. Prior to 2003, when federal funding first became available for states through the Section 6 Program, New York's endangered species conservation efforts were limited to contracting with external partners. Since 2003, NY DEC has been very active in developing a comprehensive endangered species conservation program. With their initial PSCC grant, NY DEC hired a biologist to develop and coordinate a Marine Endangered Species Program for the state.

Soon after being hired, the Marine Endangered Species Program Coordinator organized a Sea Turtle Disentanglement and Response training event in cooperation with NMFS, the Provincetown Center for Coastal Studies, the Riverhead

Grant History

Year	Title	Duration (Years)	Federal Funding	State Match
2007	New York State marine endangered species coordination program	3	\$211,120	\$70,914
2005	Marine endangered species workshop	1	\$25,982	\$6,496
2005	Habitat use of Hudson River Atlantic sturgeon	1	\$80,000	\$44,000
2004	Marine Endangered Species Coordination Program	1	\$60,000	\$40,000
	Total		\$377,102	\$161,410



North Carolina

North Carolina Wildlife Resources
Commission
1701 Mail Service Center
Raleigh, NC 27699
www.ncwildlife.org/index.htm

Cooperative Agreement Signed:
April 7, 2000

of health status, but will allow more accurate modeling of species recovery and more accurate assessments of rehabilitation of injured and sick turtles. Prior to this study, data to evaluate the health status of any listed sea turtles within the United States were scarce.

The North Carolina Division of Marine Fisheries (NC DMF), though a memorandum of understanding with WRC, has also been conducting activities to document and minimize fisheries interactions with listed turtles. With a small section 6 grant, NC DMF conducted by-catch monitoring for gillnet fisheries within estuarine waters and established a fishermen logbook reporting system. Using these data, NC DMF was able to better characterize the nature of gear interactions with listed sea turtles, estimate total incidental take (lethal and non-lethal), and evaluate current measures to minimize and mitigate this incidental take. These data also informed the agency on how to best direct their limited resources towards locations and times when fisheries interactions were shown to be more prevalent. Outreach efforts conducted as part of this funded work were also successful in increasing the awareness among commercial fishermen of the need to reduce interactions with federally protected sea turtles and lead to their increased participation in management efforts.

Accomplishments

For many years, the North Carolina Wildlife Resources Commission (WRC) has been involved with research efforts to evaluate the health status of loggerhead sea turtles in North Carolina. This ongoing work provides an understanding of the health and disease conditions of wild turtles, and what environmental factors may be contributing to indirect mortality of turtles and therefore affecting species recovery. In collaboration with researchers from North Carolina State University and NOAA, WRC is documenting baseline hematological, physiological, biochemical, microbiological, and parasitological parameters for loggerhead turtles captured in estuarine waters. From these data, researchers can analyze how the health indices they derive vary with season, sex, and size. The results will not only provide a baseline for future monitoring

Grant History

Year	Title	Duration (Years)	Federal Funding	State Match
2004	North Carolina sea turtle health assessment	1	\$64,663	\$100,000
2003	Sea turtle health assessment	1	\$20,000	\$6,000
2003	Sea turtle by-catch monitoring program	1	\$10,000	\$2,741
		Total	\$94,663	\$108,741

Puerto Rico

Programa de Especies Protegidas
Departamento de Recursos Naturales y
Ambientales de Puerto Rico
A.P. 366147
San Juan, Puerto Rico 00936
www.drna.gobierno.pr/

Cooperative Agreement Signed:
May 21, 2003

Accomplishments

The Puerto Rico Department of Natural and Environmental Resources (DRNA) has been a very active participant in the PSCC Grant Program since entering into an ESA section 6 agreement in 2003. Much of their section 6 funding has been directed towards understanding the ecology and population status of hawksbill and green turtles around the islands of Puerto Rico. The most important feeding ground for green turtles is located in the Culebra Archipelago of Puerto Rico, where critical habitat has been designated and where abundance surveys have been conducted since the 1980s. Critical habitat has also been designated in Puerto Rico for hawksbill sea turtles, which have been studied there for about 16 years. Data on genetic composition, health, disease prevalence (e.g., fibropapillomatosis⁹), and habitat use patterns are also being collected. These long-term in-water surveys have been the primary and sometimes the only source of information on these listed turtles in Puerto Rico, and such long-term datasets are essential to an understanding of population dynamics. In addition, DRNA and their collaborators have been providing rare, direct estimates of time-to-maturity for these species; these data are critical to developing accurate life history and population models. As coastal development in Puerto Rico continues to increase, data from this work will inform decisions regarding habitat



Measuring the carapace length of a juvenile hawksbill turtle captured off of Mona Island, Puerto Rico. *Photo R.P. van Dam; NMFS permit #1518.*



Serge Aucoin, a DNRA field technician, hand captures a previously tagged hawksbill turtle at Monito Island, Puerto Rico. Information collected from this animal includes somatic growth rate, movement since last capture, and genetic origin. *NMFS permit #1518.*

⁹ Fibropapillomatosis (FP) is characterized by tumorous growths, which can range in size from very small to extremely large, and are found both internally and externally. Large tumors can interfere with feeding and essential behaviors, and tumors on the eyes can cause permanent blindness.



protections and management measures necessary to recover these listed turtles.

With the listing of elkhorn coral under the ESA in May 2006, DRNA has also become engaged in monitoring the nearshore populations of this threatened species. Coral reefs worldwide are in decline, and in the Caribbean alone, an estimated 80% of all coral cover has been lost within the last three decades. The causes of this decline are varied and include disease, coral bleaching (loss of symbiotic algae), destructive fishing

practices, overgrowth by macroalgae, sedimentation, and ocean acidification. The causes for decline can operate on local, regional, and global scales; thus, research efforts at each of these scales are appropriate. The efforts being undertaken by DRNA complement other coral studies currently taking place in deeper waters within the wider Caribbean region and are expected to provide data to inform the design of coral reef conservation and restoration measures and the design of future marine protected areas.

Grant History

Year	Title	Duration (Years)	Federal Funding	State Match
2008	Habitat and population assessment of marine turtle aggregations inhabiting Puerto Rico coastal waters	3	\$172,648	\$192,390
2007	Elkhorn coral spatial distribution and long-term monitoring of population dynamics in Puerto Rico	1	\$43,811	\$36,452
2005	Habitat use and status surveys of marine turtles in Puerto Rico	1	\$85,015	\$71,218
2005	Elkhorn coral population dynamics in Puerto Rico	1	\$60,000	\$71,130
2004	Habitat and population assessment of marine turtle aggregations	1	\$55,500	\$119,666
2003	Status of marine turtle aggregations	1	\$88,150	\$68,791
Total			\$505,124	\$559,647

South Carolina

South Carolina Department of
Natural Resources
Rembert C. Dennis Building
1000 Assembly Street
Columbia, SC 29201
www.dnr.sc.gov/index.html

Cooperative Agreement Signed: *October 1, 1984*

With funding through the Section 6 Program, SC DNR has been investigating the biology and ecology of endangered shortnose sturgeon and co-occurring Atlantic sturgeon within many of the major rivers within the state, including the Savannah, Edisto, Santee, Cooper, Congaree, Wateree, Saluda, Waccamaw, Black, Great Pee Dee and Broad Rivers, as well as Winyah Bay, Lake Marion and Lake Moultrie (Exhibit 7). The shortnose sturgeon is among the most primitive of bony fishes and was actually listed as endangered in 1967 under the Endangered Species Preservation Act, a predecessor to the ESA. Among the causes cited for the decline of this species are construction of dams and subsequent loss of habitat and access to and from spawning sites. To understand whether these fish can access different habitats within the Santee-Cooper River system, researchers tracked fish movements and discovered that fish can undertake large scale upstream migrations, navigate the extensive lake system and access suitable riverine spawning habitat. A second study was conducted in the Santee-Cooper system to verify whether hypothetically dam-locked sturgeon could emigrate to downstream habitats. Results of these studies have provided information on genetic connectivity of these sturgeon populations, allowed for the identification of key habitats, and contributed to the recovery goals of the Shortnose Sturgeon Recovery Plan. These studies have also provided valuable data regarding whether and under what conditions these fish can pass over dams, information essential to implementing effective water use management.

The Atlantic sturgeon does not currently receive any protections under the ESA but is considered a candidate for listing. Results of work funded through the Section 6 Program have contributed to the recently completed status review of this species and will be valuable in informing NMFS's decision whether to propose the species or distinct population segments of the species for listing under the ESA.

Accomplishments

Although the South Carolina Department of Natural Resources (SC DNR) has been conducting sea turtle research, monitoring nesting beaches, and participating in the multi-regional Sea Turtle Stranding and Salvage Network for decades, the SC DNR has only recently applied for funding to support sea turtle management activities. Two proposals addressing sea turtle stranding efforts are currently being considered under the FY 2009 PSCC Grant Program. Funding decisions on these proposals will be made later this year.



A young Atlantic sturgeon alongside a tag injector for scale. *Photo courtesy of SC DNR.*



Grant History

Year	Title	Duration (Years)	Federal Funding	State Match
2008	Savannah River studies	2	\$75,000	\$25,000
2006	Inter-basin transfer, migration, and habitat use by shortnose sturgeon in the Lower Santee River and Winyah Bay System, South Carolina	3	\$132,345	\$45,757
2006	Santee-cooper shortnose sturgeon monitoring II	2	\$33,071	\$13,307
2005	Santee-cooper shortnose sturgeon monitoring	1	\$44,192	\$49,482
		Total	\$505,124	\$559,647

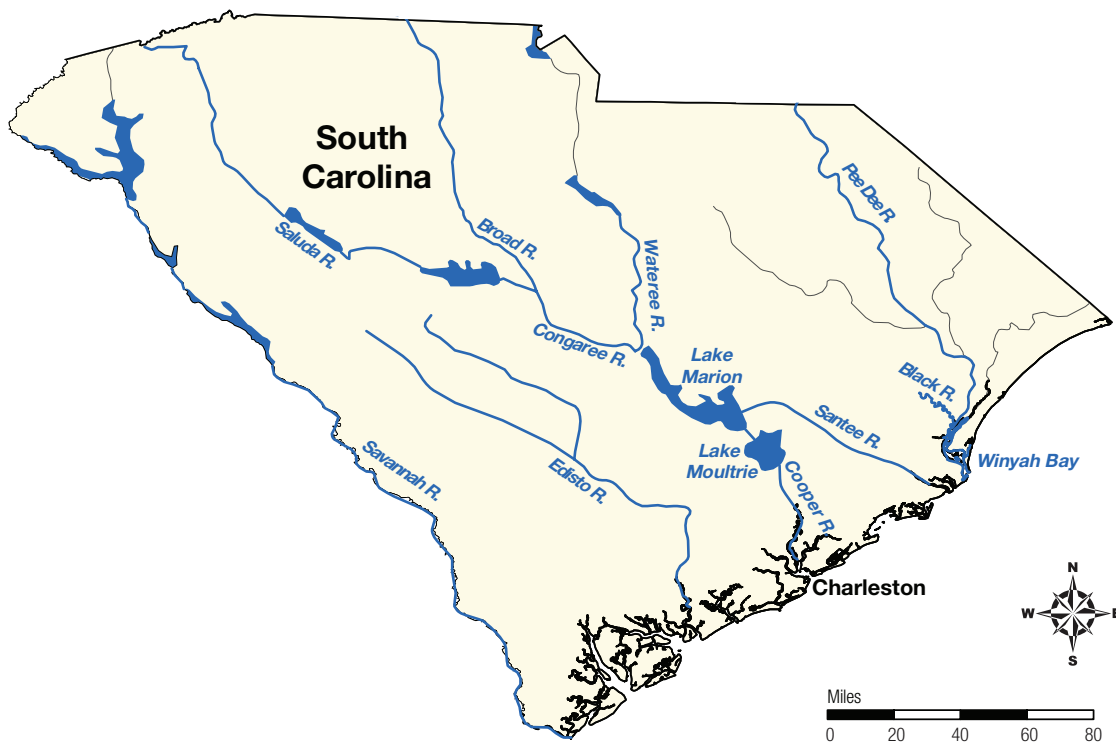


Exhibit 7: South Carolina river systems where PSCC Grant funded work has been conducted.

U.S. Virgin Islands

U.S. Virgin Islands Department of Planning
and Natural Resources
45 Mars Hill, Frederiksted
St. Croix, Virgin Islands 00840
www.dpnr.gov.vi/

Cooperative Agreement Signed: *July 11, 2003*

the impacts of domestic animals, introduced species, boat strikes, and poaching on threatened and endangered sea turtles. Through these outreach efforts, the DPNR was able to increase stewardship and interest in sea turtle conservation and dramatically increase cooperation with local tour operators and sport fishermen, who have incidental interactions with listed sea turtles.

A second management project supported through a PSCC grant is the work being conducted to reduce injury and mortality of leatherback sea turtles as a result of boat collisions. The USVI Division of Fish and Wildlife (DFW) has documented an increase in the number of injured and stranded leatherbacks bearing propeller wounds during several recent nesting seasons around Sandy Point National Wildlife Refuge, the largest nesting beach for leatherbacks in the United States and the first sea turtle nesting beach ever to be proposed as critical habitat under the ESA. Most boaters were unaware of boat speed restrictions in the area and were unaware of the presence of endangered leatherbacks so close to shore. To address this issue, the USVI DFW partnered with the West Indies Marine Animal Research and Conservation Service to install marker buoys around Sandy Point Wildlife Refuge, establish a “no-wake” zone, and increase local fishermen and recreational boaters’ awareness of the presence of leatherbacks in this area.

Accomplishments

The U.S. Virgin Islands (USVI) Department of Planning and Natural Resources (DPNR) has a long history of endangered species conservation and management and has been successful in garnering two PSCC grants. The first grant was awarded in 2003 to support an ongoing sea turtle survey around St. Thomas and St. John and to support the development and production of public outreach materials. The survey effort is designed to monitor the region’s sea turtle populations and responses to potential threats, such as the dramatic rise in recreational and commercial boating within the USVI, the alteration of habitat due to airport, harbor, and other construction, and modification to benthic habitat as a result of hurricanes. The outreach materials were developed to address the considerable confusion regarding existing sea turtle regulations and to better inform the public about

Grant History

Year	Title	Duration (Years)	Federal Funding	State Match
2005	Navigational aids and boater outreach: Protection of leatherbacks at Sandy Point National Wildlife Refuge	1	\$41,859	\$16,103
2003	Endangered marine species research and stranding response	1	\$20,000	\$0
		Total	\$61,859	\$16,103

Note: Pursuant to the Insular Areas Act of 1977 (48 U.S.C. 1496a), certain insular areas, including the U.S. Virgin Islands, are exempt from the state matching requirements of section 6 of the ESA.



Washington

Washington Department of Fish
and Wildlife
600 Capital Way N.
Olympia, WA 98501-1091
www.wdfw.wa.gov/

Cooperative Agreement Signed: *January 25, 2008*

understanding of any potential fishery impact on threatened green sturgeon within Washington state waters, WDFW recently submitted a PSCC grant proposal to study green sturgeon abundance, temporal and spatial distributions, and population structure within Washington coastal estuaries. Up until the last several years, very little was known about this particular species. Thus, this work will contribute to a better understanding of this protected species and potential management efforts that can be employed to facilitate recovery.

Accomplishments

Washington's ESA section 6 agreement was signed in early 2008 and is the first such agreement with a West Coast state. This agreement will facilitate identification and implementation of high priority conservation projects benefiting listed marine mammals, sea turtles, and marine fish in Washington. This agreement also provides the opportunity for NMFS and the Washington Department of Fish and Wildlife (WDFW) to expand their partnership in conserving and recovering endangered and threatened species in the Pacific Northwest.

WDFW is currently one of the primary responders to strandings of Steller sea lions, orcas, and large whales in Washington. WDFW also has a long history of conducting collaborative research on Steller sea lions to document population trends, investigate wintering diet and foraging ecology, and map haul-out sites. In its first year of eligibility, WDFW has submitted a section 6 grant application to support additional monitoring of Steller sea lions in the region. This work seeks to continue the important work of documenting status and trends of the Eastern stock of Steller sea lions and to compare two different methodologies currently employed by different agencies to conduct such surveys.

WDFW has also been a partner in addressing incidental take or by-catch issues for threatened and endangered species. Most notably, WDFW has participated in fishery observer programs, implementation of fishery gear modifications, and removal of derelict fishing gear. To gain further



Two male (bull) Steller sea lions battle. *Photo courtesy of NMFS.*

Contacts

Any State or U.S. Territory that wishes to enter into a Section 6 Program agreement with NMFS should contact one of the program coordinators below for guidance on how to apply.

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NMFS Office of Protected Resources
301-713-1401

Amanda Johnson
NMFS Northeast Regional Office
978-281-9300, x6513

Karla Reece
NMFS Southeast Regional Office
727-824-5348

Scott Rumsey
NMFS Northwest Regional Office
503-872-2791

Scott Hill
NMFS Southwest Regional Office
562-980-4029

Krista Graham
NMFS Pacific Islands Regional Office
808-944-2238

Kaja Brix
NMFS Alaska Regional Office
907-586-7824





National Marine Fisheries Service

1315 East West Highway
SSMC 3, F/PR
Silver Spring, Maryland 20910
www.nmfs.noaa.gov