Finding of No Significant Impact
for Issuance of a Protected Species Conservation Grant to the South Carolina Department of Natural Resources (Award No. NA10NMF4720036) to Conduct Research on Atlantic Sturgeon and Shortnose Sturgeon

National Marine Fisheries Service

The National Marine Fisheries Service, Office of Protected Resources (NMFS PR) proposes to provide financial assistance in the form of a grant to the South Carolina Department of Natural Resources (SCDNR) to conduct research on Atlantic and shortnose sturgeon. This award would be issued through the Protected Species Cooperative Conservation Grant Program (CFDA no. 11.472, Unallied Science Programs) authorized under section 6 of the Endangered Species Act (ESA) of 1973 as amended (16 U.S.C. 1535). The award would be for three years (1 July 2010 – 30 June 2013). South Carolina DNR would be partnering with the North Carolina Division of Marine Fisheries (NCDMF), North Carolina State University, and the University of Georgia (UGA) to complete the proposed work. Because the partnership includes another state government (NC), and in accordance with section 6(d)(2) of the ESA, the Federal Government would provide 90 percent of the cost of the project, and the states would provide the remaining 10 percent. This financial assistance award is planned to extend for three years and is subject to semi-annual review by NMFS. The grant would support conservation activities for Atlantic sturgeon (*Acipenser oxyrinchus oxyrinchus*), a candidate for listing under the ESA, and the endangered shortnose sturgeon (*Acipenser brevirostrum*) in South Carolina, North Carolina, and Georgia.

In accordance with the National Environmental Policy Act (NEPA), NMFS prepared an Environmental Assessment (EA) analyzing the impacts on the human environment associated with award issuance (*Issuance of a Protected Species Conservation Grant to the South Carolina Department of Natural Resources (Award No. NA10NMF4720036) to Conduct Research on Atlantic Sturgeon and Shortnose Sturgeon, March 2010*). The analyses in the EA, which is hereby incorporated by reference, support the following findings and determination.

The applicant is requesting funds to (1) development, installation, and maintenance of an acoustic receiver array to track the movement of shortnose and Atlantic sturgeon in North Carolina (Roanoke, Chowan, Meherrin, and Cape Fear rivers), South Carolina (Savannah, Combahee, Edisto, Cooper, Santee, and Winyah Bay system), and Georgia (Altamaha, Ogeechee and Satilla rivers) rivers, coastal waters, and the Intracoastal Waterway; (2) collecting, acoustic and satellite tagging and monitoring the movements of 20 to 30 each of Atlantic sturgeon and shortnose sturgeon each year (i.e., 60 to 90 total per species over the life of the project) to identify and assess the use of spawning and other habitat and interbasin and coastal movements; (3) development and

testing of a less invasive procedure for aging of these two species based on relative DNA telomere length from small tissue samples; and (4) participation in multiple types of stakeholder outreach efforts. Such data and information sharing is critical for recovery planning, and in particular, for identifying appropriate management units and actions and critical habitats.

The National Oceanic and Atmospheric Administration's Administrative Order 216-6 (May 20, 1999) contains criteria for determining the significance of the impacts of a proposed action. In addition, the Council on Environmental Quality (CEQ) NEPA implementing regulations at 40 C.F.R. 1508.27 state that the significance of an action should be analyzed both in terms of "context" and "intensity." Each criterion listed below is relevant to making a finding of no significant impact and has been considered individually, as well as in combination with the others. The significance of this action is analyzed based on the NAO 216-6 criteria and CEQ's context and intensity criteria. These include:

1. Can the proposed action reasonably be expected to cause substantial damage to the ocean and coastal habitats and/or essential fish habitat (EFH) as defined under the Magnuson - Stevens Act and identified in Fishery Management Plans?

   Response: The project's proposed research activity, including boating and netting activities, would not take place in national marine sanctuaries. Also, no coral reef ecosystems occur in the action area and thus none would be affected. However, designated EFH would overlap with a section of the proposed action area. Although the researcher's boats would pass through and over the water column in the action area where EFH does exist, NMFS determined this portion of the researcher's activities would not adversely impact the physical environment, including any portion considered EFH. It is anticipated that there would be minimal disturbance to benthic communities associated with boat operations and netting activities.

   NMFS PR requested concurrence on whether the proposed action as conditioned would have adverse impacts on designated EFH in the action area. The EFH coordinator for NMFS, Southeast Office of Habitat Conservation was contacted and agreed by email that the proposed boating, netting, and sediment sampling would have no more than minimal impact to EFH.

2. Can the proposed action be expected to have a substantial impact on biodiversity and/or ecosystem function within the affected area (e.g., benthic productivity, predator-prey relationships, etc.)?

   Response: No substantial impact on biodiversity or ecosystem function within the affected area is expected. It is anticipated that there would be minimal disturbance to benthic communities associated with boat operations and netting activities.

   Due to the nature of netting, researchers would expect some other non-target species such as American shad (*Alosa sapidissima*), Atlantic menhaden (*Brevoortia tyrannus*), blueback herring (*Alosa aestivalis*), alewife (*Alosa pseudoharengus*), gizzard shad (*Dorosoma cepedianum*), striped bass (*Morone saxatilis*), largemouth bass (*Micropterus salmoides*), white perch (*Morone americana*), common carp (*Cyprinus carpio*), crappie (*Pomoxis* sp.); channel catfish (*Ictalurus punctatus*), brown bullhead (*Ictalurus nebulosus*), white catfish (*Ameiurus catus*), and various sucker species (*Castomidae sp.*) would become enmeshed. However, non-

target fish would be removed from the net and released at the site of capture at short intervals, and it is believed that virtually all by-catch would be released alive without long-term effects on predator-prey relationships.

3. Can the proposed action reasonably be expected to have a substantial adverse impact on public health or safety?

   Response: Issuance of the award is not expected to have substantial adverse impacts on public health or safety that could reasonably be expected by the proposed research activities. This action would involve the use of 95% ethanol pre-measured in vials for preservation, storage, and transportation of tissue samples. MS-222 powder, used for anesthetizing shortnose and Atlantic sturgeon during surgery, would also be transported in premeasured amounts and mixed onboard. The researchers would wear gloves and masks during mixing of the chemical; therefore, direct contact with the alcohol or MS-222 would be eliminated. Additionally, researchers would be advised in the permit to dispose of the anesthetic safely following state approved measures.

4. Can the proposed action reasonably be expected to adversely affect endangered or threatened species, their critical habitat, marine mammals, or other non-target species?

   Response: The proposed research activities could potentially have adverse effects on individual endangered shortnose sturgeon or ESA candidate Atlantic sturgeon including mortality, but this action is not expected to have adverse population-level impacts. NMFS made a not likely to adversely affect determination for this action under section 7 of the ESA. Previous permitted actions have already been analyzed under ESA section 7.

   The award activities require standard NMFS research and mitigation protocols to minimize stress and harmful effects on shortnose and Atlantic sturgeon. Critical habitat has yet to be designated for shortnose sturgeon; thus, none would be affected.

   In the unlikely event marine mammals or sea turtles are encountered while netting, researchers would be directed by award conditions to avoid contact with the animals. In the unlikely event researchers do come into contact with any marine mammals or sea turtles, either through boating or netting activities, the Northeast Regional Office and USFWS suggested appropriate precautionary measures that would be required. Namely, netting would not be deployed when animals are observed within the vicinity of the research; and animals would be allowed to either leave or pass through the area safely before net setting is initiated. Also, in all boating activities (including travel to acoustic arrays outside of the netting area), researchers would be advised to watch for marine mammals and sea turtles to avoid harassment or interaction.

5. Are significant social or economic impacts interrelated with natural or physical environmental effects?

   Response: There would be no significant social or economic impacts interrelated with natural or physical environmental effects. Only researchers would be affected by this action.

6. Are the effects on the quality of the human environment likely to be highly controversial?

Response: The effects on the quality of the human environmental are not likely to be controversial. This project is similar to other existing projects that have negligible effects on the human environment and are not controversial.

7. Can the proposed action reasonably be expected to result in substantial impacts to unique areas, such as historic or cultural resources, park land, prime farmlands, wetlands, wild and scenic rivers, essential fish habitat, or ecologically critical areas?

Response: The activities in this proposed award would not be expected to result significant impacts to any unique areas mentioned above. The only unique area which may be impacted, but not substantially, is essential fish habitat. However, the EFH coordinator for NMFS, Southeast Office of Habitat Conservation was contacted and stated by email that the proposed boating, netting, and sediment sampling would have no more than minimal impact to EFH.

8. Are the effects on the human environment likely to be highly uncertain or involve unique or unknown risks?

Response: Potential risks by proposed research methods are not unique or unknown, nor is there significant uncertainty about impacts. Monitoring reports from other projects of a similar nature and published scientific information of impacts on sturgeon indicate the proposed activities would not result in significant adverse impacts to the human environment or the species. There is considerable scientific information available on the likely impacts on sturgeon from the proposed action.

9. Is the proposed action related to other actions with individually insignificant, but cumulatively significant impacts?

Response : Overall, the proposed action would be expected to have no more than short-term effects on Atlantic and shortnose sturgeon and no effects on other aspects of the environment. The incremental impact of the action when added to other past, present, and reasonably foreseeable future actions discussed in the environmental assessment would be minimal and not significant.

10. Is the proposed action likely to adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural or historical resources?

Response: The action would not adversely affect any district, site, highway, structure, or object listed in or eligible for listing in the National Register of Historic Places. The proposed action would also not cause loss or destruction of significant scientific, cultural or historical resources. The proposed action will not occur in the aforementioned areas.

11. Can the proposed action reasonably be expected to result in the introduction or spread of a non-indigenous species?

Response: The U.S. Geological Survey has documented several aquatic nuisance species occurring in the action area that may potentially be spread by the actions of the proposed research. However, the applicant has agreed to follow certain conditions proposed by NMFS (see Section VII of the Environmental Assessment) to minimize potential spread of these aquatic nuisance species. Therefore, the proposed research activities would not be expected to result in the introduction or spread of non-indigenous species to other watersheds.

12. Is the proposed action likely to establish a precedent for future actions with significant effects or represent a decision in principle about a future consideration?

Response: The decision to issue this award would not be precedent setting and would not affect any future decisions. NMFS has issued numerous awards to study sturgeon. Issuance of an award to a specific individual or organization for a given research activity does not in any way guarantee or imply NMFS would authorize other individuals or organizations to conduct the same research activity. Any future request received, including those by the applicant, would be evaluated upon its own merits relative to the criteria established in the MMPA, ESA, and NMFS' implementing regulations.

13. Can the proposed action reasonably be expected to threaten a violation of Federal, State, or local law or requirements imposed for the protection of the environment?

Response: Issuance of the proposed award is not expected to violate any Federal, State, or local laws for environmental protection. This award would not relieve the applicant of the responsibility to comply with other Federal, State, local, or international laws or regulations.

14. Can the proposed action reasonably be expected to result in cumulative adverse effects that could have a substantial effect on the target species or non-target species?

Response: The proposed procedures would have potential adverse impacts on individual Atlantic and shortnose sturgeon. However, because sturgeon are a robust species and respond well to the types of handling proposed, the cumulative effects on the population are not likely long-term or significant on the species. NMFS expects that the proposed research activities would not appreciably reduce Atlantic or shortnose sturgeon likelihood of survival and recovery in the wild by adversely affecting their birth rates, death rates, or recruitment rates. In particular, NMFS expects the proposed research activities not to affect adult sturgeon in a way that appreciably reduces the reproductive success of adults, the survival of young, or the number of young that annually recruit into the breeding populations of any of the species.

While there may be some minor impacts to fish captured in gillnets, no substantial effects are expected. Nets would be continuously monitored and all fish would most likely be released alive.

NMFS also considered impacts of possible sea turtle and marine mammal interactions during sturgeon research. Researchers are required to keep watch avoid interaction and harassment of marine mammals and sea turtles, and in the unlikely event a captured marine mammal or sea turtle dies, or is severely injured, all activities must cease. Given these conditions and the rarity of interactions based on previous work, it is unlikely that this action would have adverse

or substantial effects on these animals.

DETERMINATION

In view of the information presented in this document and the analysis contained in the Environmental Assessment (EA) prepared for Issuance of Award No. NA10NMF4720036, pursuant to NEPA, it is hereby determined that the issuance of Award No. NA10NMF4720036 will not significantly impact the quality of the human environment as described above. In addition, all beneficial and adverse impacts of the proposed action have been addressed to reach the conclusion of no significant impacts. Accordingly, preparation of an Environment Impact Statement for this action is not necessary.

APR 22 2010

James H. Lecky
Director, Office of Protected Resources

Date