UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Silver Spring, MD 20910

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# FINDING OF NO SIGNIFICANT IMPACT (FONSI)

On the Issuance of a Scientific Research Permit (Permit No. 16549) to the S.O. Conte Anadromous Fish Research Center (CAFRC) to Conduct Research Activities on Endangered Wild and Captive Shortnose Sturgeon

National Marine Fisheries Service

**Background**:
On April 4, 2012, the National Marine Fisheries Service, Office of Protected Resources (NMFS PR) received a completed scientific research permit application from the U.S. Geological Survey, Biological Resources, S.O. Conte Anadromous Fish Research Center, Turner Falls, MA 01376, to take wild and captive shortnose sturgeon in the Connecticut and other Gulf of Maine (GOM) Rivers.

In accordance with the National Environmental Policy Act (NEPA), NMFS prepared an Environmental Assessment (EA) analyzing the impacts on the human environment associated with issuing the permit [*Environmental Assessment on the Issuance of a Scientific Research Permit (Permit No. 16549) to the S.O. Conte Anadromous Fish Research Center (CAFRC) to Conduct Research Activities on Endangered Wild and Captive Shortnose Sturgeon*]. In addition, a Biological Opinion was issued under section 7 of the Endangered Species Act (ESA) [*Biological Opinion on the Permits and Conservation Division's proposal to issue a Scientific Research Permit Number 16549 to the S.O. Conte Anadromous Fish Research Center (CAFRC) to Conduct Research Activities on Endangered Wild and Captive Shortnose Sturgeon pursuant to section 10(a)(1)(A) of the Endangered Species Act of 1973.]* The analyses in the EA, as informed by the Biological Opinion, support the following findings and determination.

**Analysis:**
The National Oceanic and Atmospheric Administration's Administrative Order 216-6 (May 20, 1999) for implementing NEPA, 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 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 proposed actions would take place in the freshwater river segments of the shortnose sturgeon's range and would not take place in national marine sanctuaries nor . in areas having designated EFHs as defined under the Magnuson Stevens Act. Additional objectives include captive animal research in the Conte Anadromous Fish Research Center in Turner Falls, MA, which would also not impact the marine environment.

(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 impacts on biodiversity or ecosystem function within the affected action areas are expected by authorizing take of wild animals as well as other procedures in the permit to study captive shortnose sturgeon. The impacts to bottom substrate would typically be during capture; however, due to the minimal bottom contact by authorized gear in localized areas— including the proposed mitigation measures set forth in the permit for trawling—NMFS expects minimal disturbance of the benthic organisms and substrate. The bottom substrate of the proposed areas for sampling consists of sandy loam sediment, mud flats, and some deep and shallow rocky substrate in the channels and .drop-offs of elevated shoreline.

Due to the nature of netting necessary to take sturgeon in the wild, NMFS expects that some other non-targeted species would become enmeshed in such activity. Ecosystem function would not be substantially impacted, however, because these non-targeted species would be removed from the nets and released at the site of capture at short intervals and thus 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 permit is not expected to have substantial adverse impacts on public health or safety. The activity of researchers' preservation of genetic materials, as required by NMFS in research protocols, would involve the use of pre-measured 5 to 20 ml samples of alcohol and/or formalin contained in individual sealed vials for preservation, storage, and transportation of tissue samples. NMFS considers the risk to be negligible because of the small volume contained in individual vials; if broken; these amounts would not endanger researchers, the public, or the environment.

(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: Issuing a permit to researchers to conduct scientific research on wild shortnose sturgeon would have adverse effects on individual animals, but the effects are not expected to be significant at the population or species level. Likewise, any by-catch of non-target species encountered would be returned immediately to the water, minimizing the exposure of by-catch to handling stress. Also, protected sea turtles or marine mammals would not be encountered while netting in the freshwater locations proposed; thus, no provisions are required to protect these species in conditions of the permit.

Negative impacts of maintaining captive-bred, non-releasable shortnose sturgeon at this research facility would be limited to the facility. Some of the captive animals would be sacrificed in the course of research and those not needed for further research are proposed to be euthanized. Captive sturgeon would be fed and maintained properly, given daily care, treated humanely, and provided medical care as necessary.

With respect to other listed animals in the action area, dwarf wedgemussel are invertebrate mollusks found endangered under the ESA. In Massachusetts, the species was historically known from the mainstem of the Connecticut River, several of its tributaries, and four other rivers in the southeastern and northeastern parts of the state. However, it is now believed extirpated from most of these sites (USFWS 2012). Although the applicant and the researchers associated with his study are able to identify the dwarf wedgemussel, they have not observed the species in the last twenty years. Consequently, it is highly unlikely that the researchers will interact with this species.

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

Response: There are no known social or economic impacts associated with the proposed action. Therefore, there would be no significant social or economic impacts interrelated with natural or physical environmental effects.

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

Response: A *Federal Register* notice (77 FR 21750) was published on April 11, 2012, allowing other agencies and the public to comment on the action. All agency comments were appropriately addressed and none of the comments indicated the proposed action was controversial, and none addressed the proposal's potential effects on the quality of the human environment. No comments from the public were received on the application.

(7) Can the proposed action be reasonably 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 proposed activities would not be expected to result in significant impacts to any unique areas mentioned above. Additionally, NMFS concluded these activities would result in minimal disturbance to the physical environment including the bottom substrate. No national marine sanctuaries or coral reef ecosystems occur in the freshwater action area of the Connecticut River; thus, none would be affected.

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

Response: Potential risks of issuing a permit to take shortnose sturgeon are not unique or unknown, nor is there significant uncertainty about impacts from taking sturgeon in the manner proposed. Monitoring reports from other permits or actions of similar nature, and published scientific information on impacts of research on shortnose sturgeon indicate that

taking sturgeon in the manner described in the EA would not result in significant adverse impacts to the human environment or the target or non-target species. There is also considerable scientific information available on the minimal likelihood of such impacts.

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

Response: Overall, the proposed action of issuing a permit to take of wild and captive shortnose sturgeon in the manner conditioned in the permit would be expected to have no more than short-term effects on individual endangered shortnose sturgeon, excepting the incidental mortality authorized for three wild animals annually taken from the Connecticut River, as well as the early life stages collected from parents from the GOM Rivers and the Connecticut River; however, no effects on other aspects of the environment would be anticipated. Further, 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 take place in any district, site, highway, structure, or object listed in or eligible for listing in the National Register of Historic Places; thus, none would be impacted. The proposed action would also not occur in an area of significant scientific, cultural or historical resources and would not cause their loss or destruction.

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

Response: Issuing the proposed permit would not be expected to result in introduction or spread of non-indigenous species to other watersheds. The U.S. Geological Survey has documented several aquatic nuisance species occurring in the proposed research area having potential to be spread by research into adjacent watersheds. However, the applicant has agreed to follow certain permit conditions proposed by NMFS minimizing the potential spread of these aquatic nuisance species. The research activities would also not involve discharging bilge water or other issues of concern relative to non-indigenous species.

(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 research permit would not be precedent-setting nor would it affect any future decisions. NMFS has issued numerous scientific research permits to study shortnose sturgeon pursuant to Section 10 of the ESA; thus, this is not the first permit NMFS has issued for this type of research activity. Further, issuance of a permit 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 applicants, would be evaluated

upon its own merits relative to the criteria established in the 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 permit is not expected to violate any Federal, State, or local laws for environmental protection. NMFS has sole jurisdiction for issuance of such permits for shortnose sturgeon and has determined the proposed research activities are consistent with applicable provisions of the ESA. Further, the permit contains language stating the permit does not relieve the Permit Holder of the responsibility for obtaining other permits, or 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 having a substantial effect on the target species or non-target species?

Response: NMFS concluded that issuing the proposed permit would have adverse effects on individual shortnose sturgeon, including take of fertilized embryo from the wild and captive animals. These adverse effects, however, would not result in cumulative impacts on shortnose sturgeon, as was determined in the Biological Opinion prepared for this action. Negative impacts of maintaining captive, non-releasable shortnose sturgeon at this research facility would be limited to the facility.

In conclusion, the biological opinion concluded that the proposed action would not likely jeopardize the continued existence of the shortnose sturgeon that are the subject of this permit, nor of any other species expected to be adversely affected. The action also would not destroy or adversely modify designated critical habitat because no critical habitat has been designated in the action area. NMFS also expects the proposed research activities not to appreciably reduce the species' likelihood of survival and recovery in the wild by adversely affecting their birth, death, or recruitment rates.

Overall, the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions would be minimal and not significant. The data generated by the research activities associated with the proposed action would help determine movement patterns, habitat use, population parameters and life history characteristics of shortnose sturgeon found in the action area.

## DETERMINATION

In view of the information presented in this document and the analyses contained in the EA prepared for issuance of the permit, pursuant to the ESA, and the ESA section 7 Biological Opinion, it is hereby determined that the issuance of Permit No. 16549 would 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, reaching the conclusion of no significant impacts. Accordingly, preparation of an Environment Impact Statement (EIS) for this action is not necessary.

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Date