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

FINDING OF NO SIGNIFICANT IMPACT

ON THE EFFECTS OF THE ISSUANCE OF A SCIENTIFIC RESEARCH PERMIT (File No. 16439) TO CONDUCT SCIENTIFIC RESEARCH ON SHORTNOSE STURGEON IN THE HUDSON RIVER ESTUARY

National Marine Fisheries Service

On April 22, 2011, the National Marine Fisheries Service, Office of Protected Resources (NMFS PR) received a new scientific research permit application from the New York State Department of Environmental Conservation (NYSDEC) 21 South Putt Corners Rd., New Paltz, NY 12561 to conduct shortnose sturgeon research in the Hudson River Estuary.

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 Effects of the Issuance of a Scientific Research Permit (File 16439) to Conduct Research on Shortnose Sturgeon in the Hudson River*. In addition, a Biological Opinion was issued under Section 7 of the Endangered Species Act (ESA) (*Biological Opinion on the Permits, Conservation and Education Division's proposal to issue a Scientific Research Permit (Number 16439 to the New* York *State Department of Environmental Conservation (Kathryn Hattala, Responsible Party) for research on shortnose sturgeon* in the Hudson River *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.

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 research activities include boating and netting activity taking place in the Hudson River. However, no coral reef, seagrass beds and other sensitive ecosystems occur in the action areas of the proposed activities, and thus none would be affected. However, designated EFH does exist for federally managed species in the Hudson River within the action area. Specifically, coinciding with the proposed research activities of gill netting, trawling and boating activities, the tidally mixed areas have designated EFH that could be impacted.

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However, with respect to the proposed research activities, NMFS PR concluded minimal potential impacts to EFH of managed species would be caused. Further, because prey of managed species, potentially captured as by-catch in gill nets, would be returned unharmed, few indirect impacts are anticipated.

NMFS PR contacted the Northeast Regional Office of Habitat Conservation by email on June 3, 2011 asking for concurrence with our conclusion that the permitted activities would not likely impact EFH for other managed species in the action area. The Office agreed with NMFS PR on October 12, 2011 (by email received from Karen Greene and Diane Rusanowsky) that the proposed use of anchored and drift gill nets and trawls to capture shortnose sturgeon in the Hudson River would have minimal impacts on designated Essential Fish Habitat in these areas. Thus, no further consultation was necessary.

(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. 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 off drop-offs of elevated shoreline. Thus, the impacts to bottom substrate would typically be during capture; however, due to the minimal contact by nets in localized areas— in addition to the proposed mitigation measures set forth in the permit for trawling—NMFS expects minimal disturbance of the benthic organisms and substrate.

Due to the nature of netting, NMFS would expect some other non-targeted species 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. It is also expected some sub-adult and adult Atlantic sturgeon (*Acipenser oxyrinchus oxyrinchus*) would be taken during sampling for shortnose sturgeon. Atlantic sturgeon is currently a candidate species proposed for listing under NMFS jurisdiction, co-occurring with shortnose sturgeon in the described action area. A proposed rule for listing Atlantic sturgeon was published on October 4, 2010; however, the species does not receive protections under the ESA until a final rule becomes effective. Consequently, should a listing of Atlantic sturgeon occur coinciding with the applicants' research activities, the effects on Atlantic sturgeon would be analyzed at that time. In the interim, the researcher would monitor gill nets closely, and if an Atlantic sturgeon is captured, NMFS would request similar netting protocols and standard research conditions in the permit for shortnose sturgeon be used for ensuring Atlantic sturgeon survival.

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

Response: Issuance of the permit modifications is not expected to have substantial adverse impacts on public health or safety. These actions would involve the use of 95% ethanol pre-measured in vials for preservation, storage, and transportation of tissue samples. Premeasured MS-222 powder would also used for anesthetizing shortnose sturgeon during surgery.

Researchers would handle these chemicals safely and be advised in the permit to dispose of the chemicals 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, but the effects are not expected to be significant, and have not been shown to be significant at the population or species level. Further, the permit activities require standard NMFS research and mitigation protocols to minimize stress and harmful effects on the species. Because the netting activity and numbers of fish captured would be high, up to four incidental mortalities of shortnose sturgeon are authorized or anticipated in the permitted activities over five years of research. In the Biological Opinion produced for this action, NMFS concluded issuance of the permit would not likely jeopardize the continued existence of the endangered shortnose sturgeon.

Likewise, NMFS believes any by-catch encountered would be returned immediately to the water with minimal exposure to handling stress. That is, because nets would typically be checked at varied short intervals by temperature, NMFS considers virtually all by-catch would be released alive. Atlantic sturgeon is considered a NMFS "species of concern" occurring in action area in small numbers; hence, there is potential for Atlantic sturgeon to be captured as by-catch. Accordingly, the researchers would monitor nets closely and if this sturgeon species is captured, appropriate measures would be taken to ensure its survival. Also, in the event a protected marine mammal or other protected non-target species is encountered while boating or netting, researchers would be directed by permit conditions to avoid contact with the animals, and would also be advised on how to protect these animals and minimize stress if captured. Critical habitat has yet to be designated for shortnose sturgeon; thus, none would be affected. Likewise, there is none specified for other listed animals in the action area.

(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 actions. 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 (76 FR 33703) was published on June 9, 2011, allowing other agencies and the public to comment on the action. No comments from the public were received on the application. All agency comments were appropriately addressed within the scoping summary of the EA and responses were included in the decision memos for the permits. None of the comments were controversial and none addressed the proposal's potential effects on the quality of the human environment.

(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 research methods in the proposed permits have been analyzed under the current EA, and the activities would not be expected to result in significant impacts to any unique areas mentioned above. The proposed action area flows through the Hudson River Valley National Heritage Area stretching from Troy to New York City which contains a rich assemblage of natural features and nationally significant cultural and historical sites. Recreational opportunities abound in local parks, protected open space, and greenways (http://www.hudsonrivervalley.com). However, due to the nature of the fishery research proposed in the study, none of the parkland or historical sites would be affected.

Also, the action area overlaps four separate locations set aside as the Hudson River Estuarine Research Reserve. The Estuarine Reserve, administered by multiple agencies, including the NYSDEC and NOAA, encompasses about 5,000 acres of freshwater and brackish tidal wetlands and uplands distributed at four sites spanning the middle 100 miles of the river. The Estuarine Reserve is highlighted online at http://www.dec.ny.gov/lands/4915.html. Nevertheless, the applicant is not proposing any boating or netting activities in aquatic habitats within the reserve. Consequently, NMFS PR considers the proposed fishery research would have very limited environmental impact, if any, to the Estuarine Reserve areas.

Additionally, with respect to anticipated effects on EFH by gill nets, trawls and boating activities, NMFS concluded these would result in minimal disturbance to the physical environment, including the bottom substrate and any portion having 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 permits of similar nature, and published scientific information on impacts of research on shortnose sturgeon, indicate the proposed activities would not result in significant adverse impacts to the human environment or the 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: In addition to the applicant's current permit (Permit 1547-02), expiring on October 31, 2011, there are two other shortnose sturgeon permits authorized in Hudson River Estuary. Although the applicant's current permit has some similar objectives as the proposed new action, its authorized activity would be expired when the permit expires. Also, neither of the other two permits have similar objectives as proposed in File 16439. Researchers in the first permit (Permit 1575), have completed their study documenting the presence of shortnose sturgeon near the proposed new Tappan Zee Bridge crossing (RM 26-29); and Permit 1580, documenting shortnose sturgeon collected during the annual Hudson River Biological

Monitoring Program (BMP) trawl, sampling the entire river stem, but with only limited take authorized. Consequently, each of the actions, including the proposed action, would be expected to have no more than short-term effects on individual endangered shortnose sturgeon and no effects on other aspects of the environment. The incremental impacts of the actions 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: 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 conditions proposed by NMFS (outlined in the accompanying EA) minimizing the potential spread of these aquatic nuisance species. Therefore, the proposed research activities would not be expected to result in introduction or spread of non-indigenous species to other watersheds. 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 Endangered Species Act; thus, this is not the first permit NMFS has issued for this type of research activity. Issuance of a permit or permit modification, 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. The permit contains language stating the permit does not relieve the Permit Holder of the responsibility to obtain other permits, or 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 the proposed procedures would have potential adverse effects on individual shortnose sturgeon. However, because shortnose 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 to the species.

Because a new proposed listing was published for the Atlantic sturgeon on October 4, 2010, NMFS PR considered the future potential for cumulative effects on Atlantic sturgeon as by-catch in these studies. Accordingly, NMFS established in the permit's provisions for monitoring interactions with Atlantic sturgeon, placing conditions in the permit detailing procedures to be used if an Atlantic sturgeon is incidentally captured. In particular, the permit is conditioned outlining how Atlantic sturgeon should be handled with similar protocols protective for shortnose sturgeon. NMFS concludes since researchers would be monitoring their nets closely, if Atlantic sturgeon or other by-catch were captured, appropriate measures would be in place to ensure survival.

Likewise, NMFS considered potential impacts on marine mammal interactions with researcher's nets. Although based on historical records, interactions would be extremely rare; sampling methods used to minimize contact would also be conditioned to minimize adverse effects of boating and netting activities of researchers.

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. 16439 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.

for James H. Lecky
Director, Office of Protected Resources

11/21/11
Date