

## Attachment: Additional Correspondence & Consultation



## United States Department of the Interior

NATIONAL PARK SERVICE  
DENVER SERVICE CENTER  
12795 W. ALAMEDA PARKWAY  
P.O. BOX 25287  
DENVER, COLORADO 80225-0287

In reply refer to:  
D5217 (DSC-DC)  
NAMA 150274

February 11, 2010

John Nichols  
NOAA/NMFS  
Chesapeake Bay Program Office  
Habitat Conservation Division  
410 Severn Ave., Suite 107A  
Annapolis, Maryland 21403

Subject: Lincoln Memorial Reflecting Pool Environmental Assessment

Dear Mr. Nichols,

The National Park Service received your comments on the Environmental Assessment, dated January 21, 2010, for the proposed rehabilitation of the Lincoln Memorial Reflecting Pool in Washington D.C.

Subsequent to the publication of the Environmental Assessment, the National Park Service entered the design development phase of the project and conducted additional design review, engineering evaluations, and financial analysis on the project. These studies, in addition to the comments received from your agency, helped to inform the NPS on factors not previously considered in the conceptual design phase, which has given justification to the NPS to modify and refine what was previously described in the original Environmental Assessment.

The Revised Preferred Alternative combines elements of previously considered options that are described in the EA. In the new Revised Preferred, the water supply will be drawn from the Tidal basin, as recommended in your comments, using existing piping and the associated headwall. Once the Reflecting Pool is filled, the water will be continuously re-circulated. Discharge will be accommodated by reversing the flow in the same existing line, through the existing headwall to the Tidal Basin.

The Revised Preferred alternative eliminates the need for any line to the Potomac River. The National Park Service anticipates that the Revised Preferred will eliminate the impacts to submerged aquatic vegetation and the nursery and forage habitat for anadromous fish which may have resulted from the previous preferred alternative. However, we would appreciate written confirmation from your office.

The Revised Preferred alternative including the diagram of the Revised Alternative is attached for your review. If you have any questions or require additional information, please contact me at 303 969-2277, or by email at [terri\\_urbanowski@nps.gov](mailto:terri_urbanowski@nps.gov). Thank you in advance for your assistance.



Terri Urbanowski  
Project Manager

Enclosure

cc:

John Piltzecker, Superintendent, National Mall and Memorial Parks

Steve Lorenzetti, Deputy Superintendent, National Mall and Memorial Parks

Jill Cavanaugh, The Louis-Berger Group

Diane Pavek, Research and T&E Coordinator, National Capital Region



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P.O. BOX 25287  
DENVER, COLORADO 80225-0287

In reply refer to:  
D5217 (DSC D & C)  
NAMA 150274

February 22, 2010

Julie Crocker  
Section 7 Biologist for the Shortnose Sturgeon  
NOAA Fisheries Service, Northeast Regional Office  
Protected Resources Division  
One Blackburn Drive  
Gloucester, MA 01930

**Subject:** National Park Service concurrence with ESA in Environmental Assessment of the Rehabilitation of the Lincoln Reflecting Pool.

Dear Ms. Crocker,

The National Park Service received comments on the Environmental Assessment, dated January 21, 2010, from John Nichols, for the proposed Rehabilitation of the Lincoln Memorial Reflecting Pool in Washington D.C. . Mr. Nichols comments indicated the presence of Shortnose Sturgeon, (*Acipenser brevirostrum*) in the Potomac River.

Subsequent to the publication of the Environmental Assessment, the National Park Service entered the design development phase of the project and conducted additional design review, engineering evaluations, and financial analysis on the project. These studies, in addition to the comments received from your agency, helped to inform the NPS on factors not previously considered in the conceptual design phase, which has given justification to the NPS to modify and refine what was previously described in the original Environmental Assessment.

The Revised Preferred Alternative combines elements of previously considered options that are described in the EA. In the new Revised Preferred, the water supply will be drawn from the Tidal basin using existing piping and the associated headwall. Once the Reflecting Pool is filled, the water will be continuously re-circulated. The Revised Preferred alternative eliminates the need for any line to the Potomac River.

Occurrence of the shortnose sturgeon in the tidal basin is possible, but unlikely. The substrate within the tidal basin does not meet the requirement of suitable spawning grounds due to the muddy bottom. (email, Mary Willeford Bair, Natural Resource Specialist, National Mall & Memorial Parks). Occurrence, therefore, is anticipated to be limited to the occasional transient

individual. Currently, no screen exists on the intake structure; however, potential impact on the occasional transient individual is lessened by the following factors.

- Velocity of the water entering the pipe will be low: 0.25 feet per second
- Duration of water intake to refill the pool is planned to occur 2 times per year, each lasting approximately 3 ½ days.
- Some additional make-up water may be required during peak evaporation periods. The primary source for make-up water is reuse from the WWII fountain. Additional water required for make-up water to the Reflecting Pool would occur during peak summer months and would last for approximately 8 ½ hours every 10-11 days.

Based on the information above, we request your concurrence on the determination of Not likely to Adversely Affect the shortnose sturgeon.

The Revised Preferred alternative including the diagram of the Revised Alternative is attached for your review. If you have any questions or require additional information, please contact me at 303 969-2277, or by email at [terri\\_urbanowski@nps.gov](mailto:terri_urbanowski@nps.gov). Thank you in advance for your assistance.

Sincerely,

Terri Urbanowski  
Project Manager

Enclosure

Cc:

John Piltzecker, Superintendent, National Mall and Memorial Parks  
Steve Lorenzetti, Deputy Superintendent, National Mall and Memorial Parks  
Jill Cavanaugh, The Louis-Berger Group  
Diane Pavsek, Research and T&E Coordinator, National Capital Region

**Cavanaugh, Jill**

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**From:** Terri\_Urbanowski@nps.gov  
**Sent:** Thursday, February 25, 2010 2:10 PM  
**To:** Joel\_Gorder@nps.gov; Cavanaugh, Jill  
**Cc:** Perry\_Wheelock@nps.gov; Steve\_Lorenzetti@nps.gov; Diane\_Pavek@nps.gov; Elaine\_Rideout@nps.gov  
**Subject:** Fw: Lincoln Reflecting Pool EA

NOAA's response to our Revised Preferred Alternative. I will pdf this and put it on PEPC. I am still waiting to hear from Julie Crocker regarding Section 7 informal consultation.

Terri

----- Forwarded by Terri Urbanowski/DENVER/NPS on 02/25/2010 12:06 PM -----

John.Nichols@noaa.gov  
02/25/2010 01:17 PM EST  
EA  
To: Terri\_Urbanowski@nps.gov  
cc:  
Subject: Re: Fw: Lincoln Reflecting Pool

Terri:

NMFS has reviewed the Description of the Revised Preferred Alternative, dated February 2010, for the Lincoln Memorial Reflecting Pool Rehabilitation. The revised plans have fully addressed our agency concerns by:

- 1) eliminating intake/discharge directly to the Potomac River; siting a reversible intake/discharge system in the Tidal Basin;
- 2) making use of alternative water sources for maintaining water levels in the pool throughout the year (ground water from the World War II memorial pool, municipal water);
- 3) constructing a water treatment system for the pool, which will result in cleaner discharge to the Tidal Basin during annual inspections.

Thank you for the opportunity to comment on this project. If you have any questions, or need for additional comments, please contact me by E-Mail, or at (410) 267-5675.

----- Original Message -----

From: Terri\_Urbanowski@nps.gov  
Date: Tuesday, February 16, 2010 2:46 pm  
Subject: Fw: Lincoln Reflecting Pool EA

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>  
> ----- Forwarded by Terri Urbanowski/DENVER/NPS on 02/16/2010 12:45 PM  
> -----  
>  
>  
> Terri Urbanowski  
>  
> To:  
> julie.crocker@NOAA.gov, john.nichols@NOAA.gov  
>  
> 02/11/2010 08:16 cc:  
>  
> AM MST Subject: Lincoln  
> Reflecting Pool EA

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>  
> Julie and John,  
>  
> Attached is an email copy of our response to the NOAA comments. We  
> have a better and simpler solution.  
>  
> I would like to talk to you to verify that our new preferred  
> alternative eliminates your concerns.  
>  
> Since we have received comments from you, I'm am asking you for a  
> written follow-up. This is an ARRA project, and we are on a very tight  
> time frame.  
> Any help you can provide with a quick turnaround, would be greatly  
> appreciated.  
>  
> Hope this week's weather has not created problems for you,  
>  
> Sincerely,  
>  
> Terri (See attached file: Response to NOAA.doc) (See  
> attached file: NAMA 150274 - Revised Preferred Alternative  
> description.doc)  
>  
> Project Manager  
> Denver Service Center  
> National Park Service  
> 12795 West Alameda Parkway  
> Lakewood, CO 80288-2838  
>  
> 303 969-2277  
> 303 218-8204 cell  
> 303 969-2238 fax



UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
NATIONAL MARINE FISHERIES SERVICE  
NORTHEAST REGION  
55 Great Republic Drive  
Gloucester, MA 01930-2276

FEB 26 2010

Terri Urbanowski  
National Park Service  
Denver Service Center  
12795 W. Alameda Parkway  
PO Box 25287  
Denver, Colorado 80225-0287

RE: Lincoln Reflecting Pool

Dear Ms. Urbanowski,

This is in response to your letter dated February 22, 2010 requesting consultation pursuant to Section 7 of the Endangered Species Act (ESA) of 1973, as amended, regarding a proposal by the US National Park Service (NPS), to make improvements at the Lincoln Reflecting Pool located in Washington, DC. The NPS has made the preliminary determination that the project is not likely to adversely affect any species listed as threatened or endangered by NOAA's National Marine Fisheries Service (NMFS) and has requested that NMFS concur with this determination. The project is being funded with money from the American Recovery and Restoration Act (ARRA) of 2009.

#### **Proposed Action**

NPS is proposing to make improvements at the Lincoln Reflecting Pool. These improvements will involve structural work and security improvements as well as improvements to the pool's water system. NPS is proposing to draw the water supply to fill the pool from the Tidal Basin through an existing intake pipe. A screen with ¼" mesh (6mm) will be installed at the end of the intake. Water velocities at the point of intake will be 0.25 feet per second or less. The pool will be emptied and filled two to three times a year, with water continuously circulated through the pool through a series of sand filters. Any backwash resulting from the filtration process would discharge to the sanitary sewer system.

Once the Reflecting Pool is filled, the water will be continuously re-circulated. Any water lost to evaporation will be recharged by capturing and re-treating the groundwater from the World War II Memorial pool and redirecting it to the Reflecting Pool. The municipal potable water supply will serve as the backup to supplement the make up water in the Reflecting Pool. In rare instances water may be withdrawn from the intake located in the Tidal Basin during warmer months to make up for water lost during evaporation. Once per year, typically in late February, the tidal basin will be completely emptied and





cleaned. During this annual event, the water from the tidal basin will be flushed out through the intake pipe and will be discharged to the Tidal Basin after passing through a series of screens and filters. All construction necessary for the improvements will occur on land, with no impacts to adjacent waters.

#### **NMFS Listed Species in the Action Area**

Work associated with the proposed improvements will occur on National Park Service land in Washington DC, adjacent to the Lincoln Memorial and the Lincoln Reflecting Pool. The majority of work will occur on land with minor improvements to the intake pipe (i.e., addition of screen) occurring in the tidal basin. Water to be used to fill the pool will be withdrawn from the Tidal Basin, an inlet of the Potomac River. The action area is defined as "all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action" (50CFR§402.02). For this project, the action area includes the project footprint as well as the underwater area where effects of the intake and discharge of water will be experienced. Due to the low velocity of the intake, the aquatic portion of the action area will be limited to the Tidal Basin.

The federally endangered shortnose sturgeon (*Acipenser brevirostrum*) is known to be present in the Chesapeake Bay and has been documented in the Potomac River. Through March 2008, the incidental capture of 73 individual shortnose sturgeon in Maryland waters of the Chesapeake Bay has been reported via the Fish and Wildlife Service's Atlantic Sturgeon reward program. Two fish were recaptured within one to two weeks of their initial capture date (February 1999 in the mainstem of the Bay and then in the Sassafras River and May/June 2000 in the mainstem of the Bay). All of these fish were captured alive in either commercial or recreational fisheries.

Most of the shortnose sturgeon documented in the reward program have been caught in the upper Bay, from Kent Island to the mouth of the Susquehanna River and the C&D Canal, in Fishing Bay and around Hoopers Island in the middle Bay, and in the Potomac River (Litwiler 2001, Skjveland et al. 2000; Welsh et al, 2002). Twelve shortnose sturgeon have been captured in the Potomac River since 1996. The eleven shortnose sturgeon captured in the Potomac River and reported via the FWS reward program were documented in the following locations: six at the mouth of the river (May 3, 2000, March 26, 2001, two on March 8, 2002, December 10, 2004, May 22, 2005); one at the mouth of the Saint Mary's River (April 21, 1998); one at the mouth of Potomac Creek (May 17, 1996); one at rkm 63 (March 22, 2006); one at rkm 57 (Cobb Bar, December 23, 2007); and, one at rkm 48 (March 14, 2008). Additionally, one adult female was captured by USGS researchers within the Potomac River (at rkm 103) in September 2005.

An ongoing tagging and telemetry study of shortnose sturgeon in the Potomac River began in 2004 (Kynard 2007). Three shortnose sturgeon (the 9/22/05, 3/22/06 and 3/14/08 fish mentioned above) have been tagged with CART tags (Combined Acoustic and Radio Transmitting). While the sex and reproductive status of the 2008 fish is unknown, the 2005 and 2006 fish were both females with late stage eggs. Tracking has demonstrated that the two females spent the majority of the year in a 79-km reach between river km 141-63. The female tagged in 2005 migrated upstream in April 2006

and again in April 2009 to a 2-km reach (river km 187–185) containing habitat determined to be suitable for spawning (Kynard et al. 2007). Water temperatures during the time the fish was on the presumed spawning grounds were suitable for spawning. The fish tagged in 2008 has not been detected by the telemetry array that is within the Potomac River. This suggests that the fish either shed the tag or that the fish has left the Potomac River. Information available to date indicates that the 2005 and 2006 fish have remained within the Potomac River since they were tagged with both fish overwintering in the Potomac River near Mattawoman Creek. As noted above, one of the females was documented at the presumed spawning grounds near Little Falls in the spring of 2006 and again in the spring of 2009. The occurrence of pre-spawning females in the Potomac River as well as movements consistent with spawning migrations suggests that a spawning population of shortnose sturgeon continues to exist in this river system.

While an extensive study of shortnose sturgeon in the Potomac River has not been conducted, the data resulting from the tracking of the two females by Kynard et al. (2007) provides valuable information on habitat use and the likely distribution of the species within the River. The two tracked fish have been concentrated in a 102 km stretch of the river, from rkm 187 (Chain Bridge) to rkm 85 (just downstream of the confluence with the Port Tobacco River). The researchers also indicate that not much change would be expected in the size of the foraging-overwintering concentration area even with a larger sample size of tracked adults. The type of habitat used did not change based on season, with the majority of time spent in the channel or channel edge, with very few excursions to shoal habitat. The range of water depth used was 7.0 – 21.3 meters. The limited use of areas outside of the deep water channel is likely due to the lack of forage items in those habitats, which is supported by evidence of limited shortnose sturgeon forage items in the River (Kynard et al. 2007). As shortnose sturgeon use similar habitats throughout their range, it is possible to make some conclusions regarding the likelihood of shortnose sturgeon to occur in a particular location. Shortnose sturgeon are typically found in the deepest areas (i.e., greater than 3 meters) with suitable dissolved oxygen (i.e., greater than 5 parts per million); often this type of habitat occurs in deepwater navigation channels. While foraging, shortnose sturgeon can also be found in shallower water over mudflats of shellfish beds. During the winter or during the summer while seeking out thermal refugia, shortnose sturgeon are known to occur in deep holes. These assumptions regarding shortnose sturgeon distribution are well supported by the Kynard et al. (2007) study as they found that shortnose sturgeon were largely restricted to the deep water channel as forage items in shallower areas were limited.

The intake that will be used to fill the pool originates in the Tidal Basin. The Tidal Basin is a muddy bottomed man made inlet adjacent to the Potomac River. On an incoming tide, gates at the entrance of the basin are pushed open and the basin fills with water. During slack tide the gates are closed. The gates open when the tide ebbs.

The entrance to the Tidal Basin is located approximately 7 miles downstream of the Little Falls Dam. Although the population dynamics and migration patterns of shortnose sturgeon in the Potomac River have not been documented, based on patterns of habitat usage in other river systems, NMFS believes that the region of the river where the Tidal

Basin is located is used as a migratory pathway for adult shortnose sturgeon traveling to and from the spawning grounds. Due to the intermittent nature of flows into the Tidal Basin and the separation of the basin from the mainstem of the Potomac River by the tidal gates, it is extremely unlikely that any shortnose sturgeon would be present in the Tidal Basin. Shortnose sturgeon eggs are demersal and are concentrated at the spawning grounds and would not be present at the Tidal Basin. Shortnose sturgeon larvae are typically found in the channel and while this life stage may swim or drift past the Tidal Basin, individuals are likely to be restricted to the deepwater channel.

Several species of listed sea turtles are known to be present in the Chesapeake Bay. Endangered leatherback (*Dermochelys coriacea*), Kemp's ridley (*Lepidochelys kempi*), and green sea turtles (*Chelonia mydas*) and threatened loggerhead (*Caretta caretta*) sea turtles are present in the Chesapeake Bay during the warmer months, typically when water temperatures are greater than 11°C, between mid-April and late November. Sea turtles have been occasionally documented in the Potomac River but are not thought to occur upstream of Ragged Point, Virginia. No sea turtles are expected to occur in the action area.

#### **Effects of the Action**

As noted above, the intake to be used for filling the tidal pool already exists. No construction will be required in the Potomac River where shortnose sturgeon occur. While the intake pipe is not currently screened, a ¼" mesh screen will be added. The addition of the screen will not cause any effects to shortnose sturgeon as work will be limited to attaching the screen to the existing pipe and will occur in the Tidal Basin where shortnose sturgeon are unlikely to occur.

While the presence of shortnose sturgeon in the tidal basin would be unlikely, NMFS has considered the potential for entrainment or impingement of shortnose sturgeon on or in the intake pipe in the unlikely event that a shortnose sturgeon did enter the tidal basin. As noted above, a ¼" screen will be installed and intake velocities will be 0.25 feet per second or less. The pool will be completely emptied and filled twice a year, with the intake being operational for approximately 3.5 days each time. To make up for water lost due to evaporation during the summer months, water may also be withdrawn for approximately 8.5 hours every 10-11 days during the summer. The best available information indicates that all mobile life stages of shortnose sturgeon (i.e., swimming larvae, juveniles and adults) have swimming abilities such that they are capable of avoiding impingement or entrainment at intakes with intake velocities of 0.5 feet per second or less. As intake velocities at this intake will be less than that, and non-swimming life stages (i.e., eggs or demersal larvae) will not occur in the tidal basin, it is extremely unlikely that any shortnose sturgeon will be impinged or entrained at the intake. As such, any effects of impingement or entrainment are discountable.

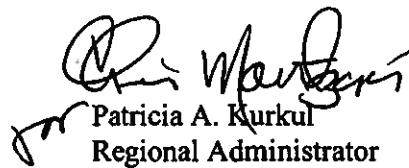
As noted above, once per year the pool will be completely drained, with water discharging back into the Tidal Basin via the intake pipe. Water will pass through a series of screens and sand filters ensuring that there is no trash or other solid objects discharged to the river. As explained above, the water in the pool is filtered riverwater.

No pollutants or chemical contaminants will have been introduced to the water prior to discharge back into the river. As such, this discharge is not expected to have any impact on water quality in the Tidal Basin or the Potomac River. As such, the effects of this annual discharge on shortnose sturgeon will be insignificant.

**Conclusion**

Based on the analysis that all effects of the proposed project, if adverse, will be insignificant or discountable, NMFS is able to concur with the determination that the action proposed by NPS is not likely to adversely affect any listed species under NMFS jurisdiction. Therefore, no further consultation pursuant to section 7 of the ESA is required. Reinitiation of consultation is required and shall be requested by the Federal agency or by NMFS, where discretionary Federal involvement or control over the action has been retained or is authorized by law and: (a) If new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered in the consultation; (b) If the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in the consultation; or (c) If a new species is listed or critical habitat designated that may be affected by the identified action. Should you have any questions about this correspondence please contact Julie Crocker at (978) 282-8480 or by e-mail (Julie.Crocker@noaa.gov).

Sincerely,



Patricia A. Kurkul  
Regional Administrator

Ec: Nichols, F/NER4 – Annapolis

File Code: Sec 7 NPS Lincoln Memorial Reflecting Pool improvements

PCTS I/NER/2010/00558