Dredging and Pile Driving Monitoring Plan Sturgeon Monitoring During Pile Driving 60-day Report 6/8/2014 – 8/2/2014

for the

New NY Bridge Project

August 8, 2014

Prepared by

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New NY Bridge Project Dredging and Pile Driving Monitoring Plan

1.0 Introduction

This report summarizes the methods and results of sturgeon monitoring during permanent pile driving of piles for the period of June 8, 2014 to August 2, 2014. Sturgeon monitoring was conducted per the Dredging and Pile Driving Monitoring Plan, Revision 2 (the Plan) for the New NY Bridge Project (the Project). This Plan was developed to comply with applicable requirements of the New York State Department of Environmental Conservation (NYSDEC) Permit DEC ID 3-9903-00043/00012 issued on March 25, 2013 (NYSDEC Permit) and the April 2014 Endangered Species Act Section 7 Consultation Biological Opinion (BO) issued by the National Marine Fisheries Service (NMFS).

| 2.0 Monitoring | Metnoas | | | | | |
|---|--|--|---|--|---|--|
| Tappan Zee Cons piles at | tructors, LLC (TZC) | and | piles | | | heac |
| monitor were on si | te for all piles driven | | | vesser per the rate | ani. A barge-b | aseu |
| July 1, 2014 where driven at ea ea construction zone partially driven and prior to TZC restril 15:56 while active | onitor was on site for the vessel-based restbound (Appendix prior to the complet of their restruck at a king these piles. A pile driving occurred parge based monito | nonitor was not A). Due to a m ion of pile drivin later time. The vessel-based m | present for pile iss communicating for the day. If vessel-based conitor was not pand from 16:07 - | driving from 15:0 ion the vessel mo Pile rew departed the present for pile drives at 16:08 during ac | 6 – 16:10 for onitor departed construction iving from 15: tive pile driving | piles d the were zone :49 – ig on |
| | impact pile driving o | | | | | Per |
| the Plan, one vess | sel monitored the Hu | udson River for | injured or dead | fish from the star | rt of pile drivir | na to |

one hour after all pile driving was completed for the day. Figure 1 provides the GPS transects completed by the fish monitoring crew on July 18, 2014. At 12:30 a sturgeon was observed in the vicinity of by an AKRF vessel performing Sturgeon Acoustic Telemetry work, at the time the sturgeon was observed the TZC fish monitoring crew was near the end of transect 3 (Figure 1). The location of the fish is provided in Figure 1. Refer to Section 3.1, Appendix A, and Appendix B for more information. Pile driving occurred during ebb current; subsequently, the fish monitoring crew completed several circular and sawtooth patterns south of the existing Tappan Zee Bridge. Fish Monitoring crews continued to monitor for fish while transiting between piers.

New NY Bridge Project Dredging and Pile Driving Monitoring Plan

3.0 Results

| A total of | piles were installed a | | | June 8, 2014 installed at | through August 2, 2014. |
|------------------------------|---|--------|--------------------|------------------------------|-------------------------|
| A total of | piles were installed at | pil | es were installed | l at | through August 2, 2014. |
| at | piles were installed at piles were installed a | | oiles were install | ed at | piles were installed at |
| Monitoring ac Appendix A. | tivities and results fron | n both | | | piles are summarized in |

3.1 Observed Sturgeon

During the reporting period two (2) sturgeon were observed with the contruction zone. One (1) sturgeon was observed when no impact pile driving was occurring and one (1) sturgeon was observed while impact pile driving was occurring (Appendix A, Appendix B). On July 2, 2014 at 14:58 an AKRF vessel was notified that a dead sturgeon was observed near when no impact pile driving was occurring. The sturgeon was decaying at the time of observation (Figure 2). AKRF personnel completed a *Sturgeon Sighting Protocol Form* detailing the incident and handling of the fish (Appendix B). On July 18, 2014 at 12:30 an AKRF vessel identified a dead sturgeon near when impact pile driving was occurring. The sturgeon was decaying at the time of observation (Figure 3). AKRF personnel did not notify the TZC vessel-based monitors who were monitoring both at the time. AKRF personnel completed a *Sturgeon Sighting Protocol Form* and Sturgeon Data Collection Form detailing the incident and handling of the fish (Appendix B).

Neither fish contained a Passive Integrated Transponder (PIT) tag or other identifying tag. A fin clip was not collected for both fish.

3.2 Observed Non-sturgeon Species

A total of 27 fish, not including sturgeon, were observed during the reporting period. Observed species and quantities include 13 menhadden, five (5) catfish, five (5) eel, two (2) striped bass, one (1) unidentified species (confirmed not to be sturgeon), and one (1) white perch. A summary of the dates, times, condition of the fish, and location of fish observed is provided in Appendix A.

Dredging and Pile Driving Monitoring Plan

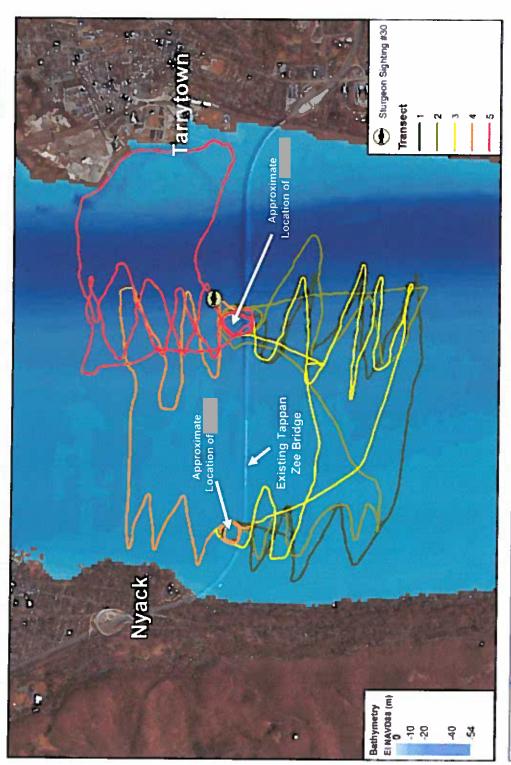




Figure 1. GPS Transects July 18, 2014 (4-foot Piles)

AND INVESTIGES PROCESSESSES FREE American Free Grains Tray offices 195455 "ZADE vironments" Design & S. Map Cocks Delibration Montering 2014 (6-11), ENVIAND PROCESSES



Figure 2. Sturgeon observed on July 2, 2014. Photo provided by AKRF



Figure 3. Sturgeon Observed on July 18, 2014. Photo provided by AKRF.

New NY Bridge Project Dredging and Pile Driving Monitoring Plan

APPENDIX A

Summary of Pile Driving Sturgeon Monitoring Activities

Appendix A Summary of Pile Driving Sturgeon Monitoring Activities New NY Bridge Project NMFS 60-Day Report 6/8/2014 - 8/2/2014

TAPPAN ZEE CONSTRUCTORS, LLC

Report Date: 8/8/2014 Reporting Period: 6/8/2014 - 8/2/2014 Number of Sturgeon Observed: 2

| Date | Barge-Based Monitoring Time | Vessel-Based Monitoring Time | Number of Fish Observed | Species | Sturgeon Specimen Log Number | Condition of Fish When Observed | Time Observed | Location Observed (Lat/Long or Barge Name) |
|---|-----------------------------------|------------------------------------|----------------------------|------------------------|---------------------------------|------------------------------------|---------------|---|
| 6/9/2014 | 8:15 - 12:18 | 8:34 - 13:24 | 0 | NA NA | NA | NA NA | NA | NA |
| -,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | | | 0 | NA NA | NA NA | NA NA | NA | NA NA |
| | NA NA | 9:45 | 2 | Menhadden ^a | NA NA | Stunned | 9:45 | 41 04.1597°N / 073 53.7939°W |
| 6/10/2014 | 14:25 - 17:56 | 14:44 - 19:04 ^b | 0 | NA NA | NA NA | NA NA | NA NA | NA NA |
| | 14.23 - 27.30 | 14:44 - 19:04 | - 0 | NA NA | NA NA | NA NA | NA NA | NA NA |
| | | 1 | Ö | NA NA | NA NA | NA NA | NA NA | NA NA |
| | 8:55 - 12:07 | | 0 | NA | NA NA | NA NA | NA NA | NA NA |
| |] 8:55 - 12:07 | | 0 | NA | NA | NA NA | NA | NA NA |
| | | _ | 0 | NA | NA NA | NA NA | NA | NA |
| | 10:21 - 11:27 | . | 0 | NA NA | NA NA | NA NA | NA NA | NA NA |
| 6/11/2014 | | 8:55 - 18:28 | 2 | Menhadden | NA | Stunned | 13:15 | 41 03.7410°N / 073 52.5791°W |
| | - | | 0 | NA NA | NA | NA NA | NA . | NA NA |
| | 13:40 - 17:45 | | 1 | Menhadden | NA | Decaying | 14:52 | 41 03.9896°N / 073 52.3776°W |
| | 13.40-17.43 | | 0 | NA NA | NA NA | NA NA | NA NA | NA NA |
| | - | | | NA NA | NA NA | NA NA | NA NA | - NA NA |
| | - | | l ö | NA NA | NA NA | NA NA | NA NA | NA NA |
| | | | 1 | Menhadden | NA NA | Stunned | 8:43 | 41 04.5468°N / 073 54.8067°W |
| | | | | Menhadden | NA NA | Stunned | 9:17 | 41 04.9357°N / 073 54.7330°W |
| | 8:37 - 11:31 | | ô | NA NA | NA NA | NA NA | NA NA | NA |
| 6/12/2014 | 1 | 0.42 50.10 | 0 | NA | NA NA | NA NA | NA NA | NA NA |
| 6/12/2014 | <u> </u> | 8:42 - 20:10 | 0 | NA | NA NA | NA | NA NA | NA NA |
| | 15:13 - 18:18 | | 0 | NA | NA | NA | NA | NA |
| | <u> </u> | 1 | 0 | NA | NA NA | NA . | NA NA | NA |
| | 18:38 - 19:21 | | 1 | Menhadden | NA NA | Stunned | 19:54 | 41 04.7153°N / 073 54.6879°W_ |
| | | | 1 | Menhadden | NA NA | Decaying | 7:26 | 41 04.3649°N / 073 52.2941°W |
| 6/13/2014 | 7:17 - 8:39 | 7:19 - 9:50 | 1 | Menhadden | NA NA | Dead | 7:43 | 41 04.7266°N / 073 52.5082°W |
| -,, |] /.1/ - 0.33 | 11.2 | 0 | NA | NA NA | NA | NA | NA |
| | | | 0 | NA . | NA NA | NA | NA . | NA NA |
| | 1 | l : | 0 | NA | NA . | NA . | NA | NA NA |
| 6/16/2014 | 11:45 - 14:30 | 11:45 - 15:00 | 1 | Menhadden | NA NA | Dead | 13:48 | 41 04.6595°N / 073 54.6709°W |
| | ļ | | 1 1 | Menhadden | NA NA | Decaying | 14:08 | 41 04.3486°N / 073 55.8667°W |
| | 0.00 41.70 | | 0 | NA NA | NA NA | NA NA | NA NA | NA NA |
| | 9:00 - 11:20 | | 1 | Eel | NA NA | | 11:35 | |
| | <u> </u> | - 1 | 0 | NA NA | NA NA | Decaying NA | NA NA | 41 04.6885°N / 073 54.8167°W NA |
| 6/17/2014 | · | 9:00 - 16:05 | 0 | NA NA | NA I | NA . | NA NA | NA NA |
| 0,27,2014 | 1 | 5.00 20.03 | 0 | NA NA | NA NA | NA NA | NA NA | NA NA |
| | 10:40 - 15:15 | l 1 | i | Striped Bass | NA NA | Decaying | 15:44 | 41 05.1910°N / 073 52.7826°W |
| | 1 | i I | 0 | NA | NA NA | NA NA | NA | NA |
| | 1 | | 0 | NA | NA . | NA | NA | NA |
| | | | 1 | Catfish | NA | Decaying | 10:23 | 41 03.8820°N / 073 54.7116°W |
| | | | 0 | NA | NA | NA | NA | NA |
| 6/19/2014 | 9:30 - 14:10 | 9:50 - 15:10 | 1 | White Perch | NA NA | Dead | 12:15 | 41 04.2523°N / 073 54.9781°W |
| | | | 0 | NA | NA NA | NA | NA | NA |
| | | | 1 | Catfish | NA NA | Decaying | 14:41 | 41 04.9481°N / 073 54.6840°W |
| | | | 0 | NA | NA | NA | NA | NA |
| | | | 0 | NA NA | NA . | NA NA | NA NA | NA NA |
| 6/23/2014 | 9:00 - 16:00 | 9:09 - 16:57 | 0 | NA NA | NA NA | NA NA | NA NA | NA NA |
| | | } | 0 | NA NA | NA NA | NA NA | NA NA | NA NA |
| | | | 1 | Catfish | NA NA | Decaying | 15:59 | 41 04.8952°N / 073 54.3841°W |
| | | | - i | NA NA | NA NA | NA NA | NA NA | NA |
| | | ļ | 0 | NA NA | NA NA | NA NA | NA . | NA NA |
| e la elean | | | 0 | NA NA | NA | NA | NA NA | NA NA |
| 6/26/2014 | 9:32 - 13:33 | 9:32 - 14:35 | 0 | NA | NA | NA NA | NA NA | NA NA |
| | | [| 0 | NA | NA | NA | NA | NA |
| | | | 0 | NA | NA NA | NA | NA | NA |
| 6/27/2014 | 13:20 - 16:30 | 13:14 - 17:36 | 0 | NA | NA | NA NA | NA NA | NA . |
| .,, | 25.20 25.50 | | 0 j | NA | NA | NA | NA | NA |

Appendix A Summary of Pile Driving Sturgeon Monitoring Activities New NY Bridge Project NMFS 60-Day Report 6/8/2014 - 8/2/2014

TAPPAN ZEE CONSTRUCTORS, LLC

Report Date: 8/8/2014 Reporting Period: 6/8/2014 - 8/2/2014 Number of Sturgeon Observed: 2

| | Barge-Based Monitoring Time | Vessel-Based Monitoring Time | Number of Fish Observed | Species | Sturgeon Specimen Log Number | Candition of Fish When Observed | Time Observed | Location Observed (Lat/Long or Barge Name) | | | | | | |
|---|-----------------------------------|------------------------------------|----------------------------|--------------------|---------------------------------|------------------------------------|---------------|---|---|-------|-------|-------|----|-------|
| | - | | 0 | NA NA | NA | NA | NA NA | NA | | | | | | |
| | 1 | | 1 | Eel | NA | Decaying | 10:14 | Bob Hill Crane | | | | | | |
| 6/30/2014 | 8:46 - 15:53 | 8:46 - 17:00 | 0 | NA NA | NA_ | NA | NA NA | NA NA | | | | | | |
| | | 1 | 1 | Eel | NA | Decaying | 12:21 | 41 04.6264°N / 073 S4.3516°W NA | | | | | | |
| - | | | 0 | NA NA | NA NA | NA | NA NA | NA NA | | | | | | |
| | | 1 | 0 | NA NA | NA NA | NA NA | NA NA | NA NA | | | | | | |
| 7/1/2014 | 8:35 - 16:10 | 8:37 - 15:05 ^d | 0 | NA | NA . | NA | NA | NA NA | | | | | | |
| | | | 0 | NA | NA | NA NA | NA | NA | | | | | | |
| | | | 0 | NA | NA | NA NA | NA . | NA | | | | | | |
| 7/2/2014 | NANA | NA NA | 1 | Sturgeon | Sturgeon Sighting #29 | Decaying | 14:58 NA | 41.078134°N / 73.892252°W NA | | | | | | |
| | | | 0 | NA NA | NA NA | NA NA | NA NA | NA NA | | | | | | |
| 7/7/2014 | 9:35 - 13:52 | 9:39 - 14:59 | 0 | NA NA | NA NA | NA NA | NA NA | NA NA | | | | | | |
| 7,7,2014 | 5,55 - 25,52 | 3.03 | 0 | NA NA | NA NA | NA NA | NA NA | NA | | | | | | |
| | | l | 0 | NA | NA_ | NA | NA | NA NA | | | | | | |
| 7/0/2014 | 15:10 - 16:41 | 15:26 - 17:40 | 1 | Catfish | NA | Decaying | 15:41 | 41,6976°N / 73.87614°W | | | | | | |
| 7/8/2014 | 13:10 - 10:41 | 13.20 - 17.40 | 0 | NA NA | NA NA | NA NA | NA | NA | | | | | | |
| | | | 0 | NA | NA | NA | NA 0.03 | NA | | | | | | |
| 7/9/2014 | 7:17 - 9:00 | 7:18 - 10:18 | 1 | Menhadden | NA NA | DeadNA | 8:03 NA | 41 04.8117°N / 073 52.6733°W NA | | | | | | |
| | | | 0 | NA NA | NA NA | NA NA | NA NA | NA NA | | | | | | |
| | | + | | NA NA | NA NA | NA NA | NA NA | NA NA | | | | | | |
| | • | | 1 | American Eel | NA NA | Decaying | 12:33 | 41 04.1030°N / 073 54.3210°W | | | | | | |
| 7/11/2014 | 10:40 - 15:11 | 10:42 - 16:23 | 0 | NA | NA | NA NA | NA | NA | | | | | | |
| ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | | | 0 | NA . | NA | NA | NA | NA NA | | | | | | |
| | | l | 1 | Striped Bass | NA | Decaying | 16:06 | 41 04.1453°N / 073 54.5401°W | | | | | | |
| 7/14/2014 | 8:00 - 9:42 | 8:00 - 10:42 | 0 | NANA | NA | NA | NA NA | NA | | | | | | |
| 7/14/2014 | 0.00 - 5.42 | 0.00 - 10.42 | 0 | NA NA | NA NA | NA NA | NA | NA NA | | | | | | |
| | | | - | NA NA | NA NA | NA NA | NA NA | NA NA | | | | | | |
| 7/15/2014 | 8:45 - 12:05 | 8:45 - 13:08 | 0 | NA NA | NA NA | NA NA | NA NA | NA NA | | | | | | |
| | | | 0 | NA | NA NA | NA NA | NA | NA NA | | | | | | |
| 7/16/2014 | 17:08 - 17:40 | 17:09 - 18:34 | 0 | NA | NA | NA | NA | NA | | | | | | |
| | | | 0 | NA | NA | NA NA | NA | NA | | | | | | |
| | | | 0 | NA | NA NA | NA NA | NA | NA DESCRIPTION (DES COCCOON) | | | | | | |
| | 0.70 4436 | | 1 | Sturgeon | Sturgeon Sighting #30 | Decaying NA | 12:30 NA | 41.072562°N / 073.886589°W NA | | | | | | |
| | 8:20 - 14:35 | | 0 | NA NA | NA NA | NA NA | NA | NA NA | | | | | | |
| | • | | ŏ | NA. | NA NA | NA NA | NA | NA NA | | | | | | |
| 7/18/2014 | 1 | 8:21 - 15:40 | 0 | NA | NA NA | NA | NA | NA NA | | | | | | |
| | | | | | | | | 1 | ő | NA NA | NA NA | NA NA | NA | NA NA |
| | | | 0 | NA | NA | NA NA | NA NA | NA NA | | | | | | |
| | 8:21 - 12:37 | | 0 | NA | NA NA | NA Dead | NA 12:07 | NA 4100 Hoosier Crane | | | | | | |
| | | | 1 | Unknown Catfish | NA NA | Decaying | 12:44 | 41 04.2250°N / 073 54.7058°W | | | | | | |
| | _ | + | ō | NA NA | - NA | NA NA | NA | NA NA | | | | | | |
| 7/21/2014 | 8:01 - 10:30 | 8:01 - 11:26 | 0 | NA NA | NA NA | NA NA | NA | NA | | | | | | |
| ., , | | | 0 _ | NA | NA | NA | NA | NA | | | | | | |
| | | | . 0 | NA NA | NA NA | NA NA | NA | NA . | | | | | | |
| 7/22/2014 | 14:54 - 15:09 | 14:54 - 18:10 | 0 | NA | NA | NA NA | NA NA | NA NA | | | | | | |
| .,,, | | | -0 | NA | NA NA | NA NA | NA NA | NA NA | | | | | | |
| | _ | | 0 | NA NA | NA NA | NA NA | NA NA | NA NA | | | | | | |
| | · · | | 0 | NA NA | NA NA | NA NA | NA NA | NA | | | | | | |
| | | | 0 | NA NA | NA | NA | NA | NA | | | | | | |
| | 8:03 - 15:10 | 1 | 0 | NA | NA _ | NA NA | NA NA | NA | | | | | | |
| | | | 0 | NA . | NA NA | NA NA | NA | NA NA | | | | | | |
| | | | 0 | NA_ | NA | NA | NA NA | NA NA | | | | | | |
| | 1 | 8:00 - 17:11 | 0 0 | NA NA | NA NA | NA NA | NA NA | NA NA | | | | | | |
| 7/24/2014 | | 8:00 - 17:11 | | NA. | | | | | | | | | | |
| 7/24/2014 | | | | N≞ | I NA I | I NA | I NA 1 | NA. | | | | | | |
| 7/24/2014 | | | 0 | NA NA | NA NA | NA NA | NA NA | NA NA | | | | | | |
| 7/24/2014 | 9:08 - 16:10 | | | | NA NA | NA NA | NA NA | NA NA | | | | | | |
| 7/24/2014 | 9:08 - 16:10 | | 0 | NA | NA | NA NA | NA | NA NA | | | | | | |

Appendix A Summary of Pile Driving Sturgeon Monitoring Activities New NY Bridge Project

TAPPAN ZEE CONSTRUCTORS, LLC

NMFS 60-Day Report 6/8/2014 - 8/2/2014

Report Date: 8/8/2014 Reporting Period: 6/8/2014 - 8/2/2014 Number of Sturgeon Observed: 2

| Date | | Barge-Based Monitoring Time | Vessel-Based Monitoring Time | Number of Fish Observed | Species | Sturgeon Specimen Log Number | Condition of Fish When Observed | Time Observed | Location Observed (Lat/Long or Barge Name) |
|-----------|--|-----------------------------------|------------------------------------|----------------------------|---------|---------------------------------|------------------------------------|---------------|---|
| | | | | 1 | Eel | NA NA | Decaying | 9:35 | 41 04.3602°N / 073 54.8046°W |
| | | | | 0 | NA | NA NA | NA | NA NA | NA NA |
| 7/25/2014 | | 8:40 - 12:35 | 8:40 - 13:39 | 0 | NA | NA . | NA NA | NA NA | NA NA |
| | | | | 0 | NA | NA NA | NA | NA | NA |
| | | | | 0 | NA | NA NA | NA | NA | NA NA |
| | | | | 0 | NA | NA NA | NA | NA | NA NA |
| | | | | 0 | NA | NA NA | NA | NA | NA |
| | | | ı | 0 | NA | NA NA | NA NA | NA | NA |
| | | 9:44 - 16:17 | | 0 | NA | NA NA | NA | NA | NA |
| | | | ì | 0 | NA | NA | NA | NA | NA |
| 7/28/2014 | | | 9:47 - 17:17 | Ö | NA | NA NA | NA | NA. | NA |
| į | | | | 0 | NA | NA NA | NA | NA | NA |
| | | 44.53.4437 | | 0 | NA | NA NA | NA NA | NA NA | NA |
| ĺ | | | | 0 | NA | NA NA | NA | NA | NA |
| į | | 11:52 - 14:37 | | 0 | NA | NA NA | NA | NA NA | NA |
| Ì | | | | ō | NA | NA NA | NA | NA | NA |
| 7/30/2014 | | 10:44 - 11:30 | 10:44 - 12:15 | Ö | NA | NA NA | NA | NA | NA |
| | | | | 0 | NA | NA NA | NA NA | NA NA | NA NA |
| 3/24/2014 | | 0.40 47.30 | 0.40 43.00 | 0 | NA | NA NA | NA NA | NA | NA |
| 7/31/2014 | | 9:49 - 12:28 | 9:49 - 13:28 | 0 | NA | NA NA | NA | NA NA | NA |
| | | | | 0 | NA | NA NA | NA | NA | NA |
| | | | | 0 | NA NA | NA NA | NA | NA. | NA NA |
| | | | | 0 | NA | NA | NA | NA | NA |
| 8/1/2014 | | 8:03 - 12:17 | 8:05 - 13:14 | 0 | NA | NA NA | NA | NA | NA NA |
| | | | | ó | NA | NA NA | NA | NA | NA |
| | | i | | 0 | NA | NA | NA | NA | NA NA |

Notes: Non-sturgeon species are not recovered for data collection.

^{*} Fish observed by monitoring vessel prior to start of impact pile driving.

 $^{^{\}rm h}$ Impact pile driving began at 14:44 per GZA field log.

f Manitoring times based on GZA field log, barge monitoring form not available. Confirmed with site superintendent the sturgeon observer did not observe a fish.

⁴ Vessel based monitor departed construction zone prematurely due to miscommunication with TZC.

^{*}Sturgeon carcass observed on a day where no pile driving of piles greater than 4-ft in diameter occurred. Fish was collected by AKRF on behalf of NYSTA.

Sturgeon collected by and documentation collected by AKRF Vessel. TZC monitoring vessel was not notified to the presence of the fish.

APPENDIX B

Sturgeon Sighting Protocol Forms and Sturgeon Data Collection Forms

The New NY Bridge Project



STURGEON SIGHTING FORM

For use in Documenting Sightings of Dead or Injured Sturgeon in the Hudson River that were not Reported during the New York State Thruway Authority and National Marine Fisheries Service's Approved Sturgeon Monitoring Program.

8/4/2014

On Wednesday July 02, 2014, the New York State Thruway Authority was notified by Tappan Zee Constructors (TZC) of a sturgeon sighting in the Hudson River, at which time the Thruway Authority initiated the response process. The Thruway Authority notified NYSDEC and the FHWA, which notified the NMFS Greater Atlantic Region office. The Thruway Authority conducted a site visit to photo-document the status of the sturgeon at the time it was notified by TZC. AKRF was on site at the time of the sturgeon sighting and was able to respond immediately. The dead sturgeon was found floating in the river within the NMFS-defined Action Area¹ by one of TZC's crew boat captains approximately 0.5 miles north of the Tappan Zee Bridge near Tarrytown in Westchester County, NY (41.078134 N, -73.892252 W) (see attached map of location and Action Area).

At the time of the Thruway Authority's response, the sturgeon was moderately decomposed, the eyes were cloudy, the gills were whitish in color or missing, and the carcass was bloated and floating. This sturgeon appeared to have been dead for at least 48 hours when it was found; DEC biologists concurred with this estimate. There were no obvious external injuries, with the exception of some decay on the caudal peduncle. It is not likely that this sturgeon was struck by a vessel based on the absence of any significant external injuries. The length of the sturgeon was measured to be approximately 48 inches. Based on its length and the presence of scutes anterior to the anal fin, it was determined that this fish was an Atlantic sturgeon based on its total length and the presence of scutes above the anal fin (see attached photo-documentation). Sturgeon biologists at NYSDEC confirmed the species ID. The sturgeon has not yet been checked for the presence of internal tags (including PIT, sonic, etc.) but will be re-examined as soon as possible. There were no external tags.

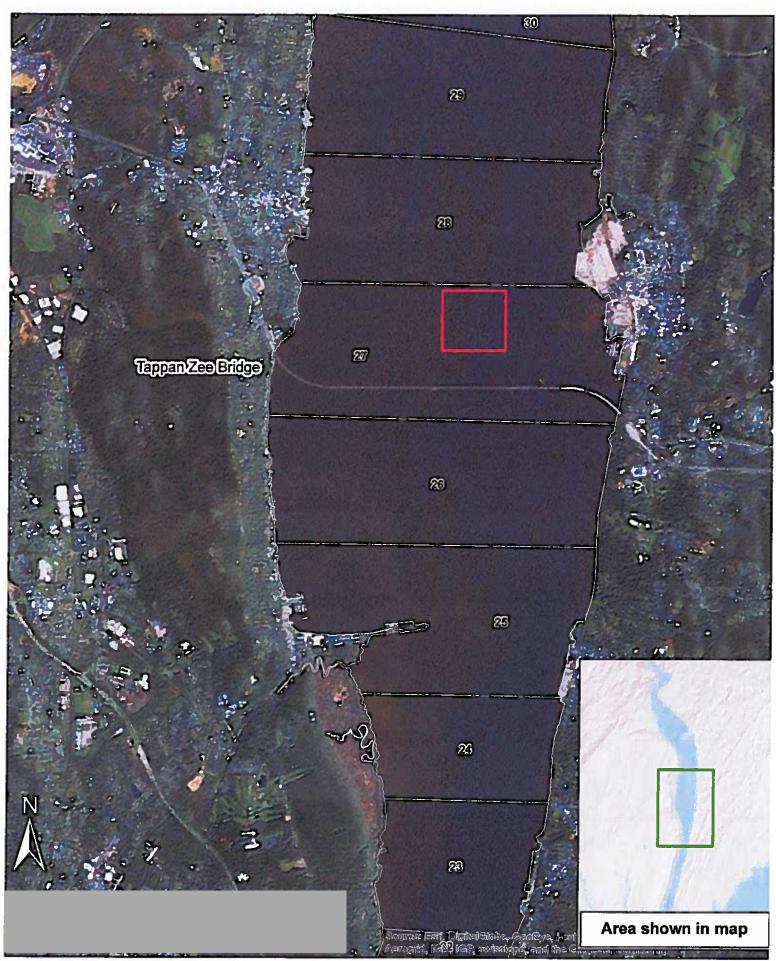
The sturgeon was found in close proximity to the bridge, however it had been dead for at least 2 days. During the 48-hour period prior to the sighting, dredging was not occurring, but pile driving was occurring. Project-related vessel movement within the Action Area was also occurring. There was no obvious external injuries that would suggest a cause of death. Therefore, dredging and vessel strikes

The New NY Bridge Project Contract D214134 PIN 8TZ1.00 TANY12-18b

As defined by NMFS in its Biological Opinion for this project, "the action area is defined in 50 CFR 402.02 as "all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action." The action area includes the project footprint where work to construct the new bridge and remove the old bridge will take place, including dredging and armoring of the river bottom. The action area also includes the area of the river where increased underwater noise levels and changes in water quality will be experienced and the transit route that barges will use when transporting dredged material to the offloading site in upper New York Harbor for upland disposal."

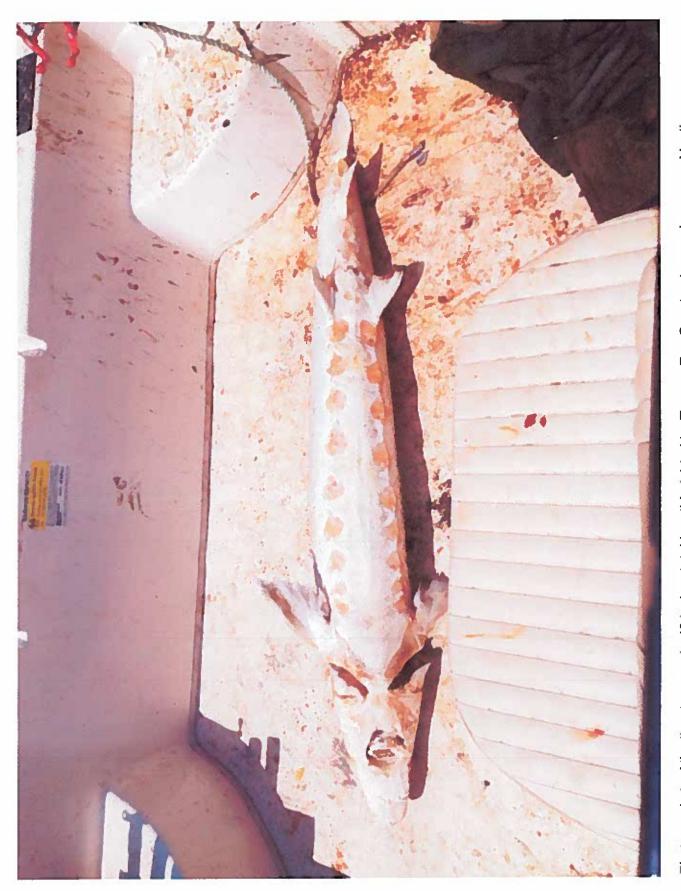
can be ruled out as the potential source of mortality. Since it was not possible to conduct a necropsy, barotrauma caused by pile-driving activities can not be discounted. However, exposure to pile-driving noise would not have been likely to have been the direct cause of mortality given the Environmental Performance Commitments implemented during pile driving to protect sturgeon that may be in the vicinity (i.e., noise attenuation, pile tapping).

The cause of sturgeon mortality in this case can not be conclusively determined. However, the Thruway Authority concludes that it is unlikely that this sturgeon mortality was directly related to the project for the reasons discussed above. No necropsy was conducted because the sturgeon was determined to be unsuitable for necropsy given its advanced stage of decay. Following the Thruway Authority's response, the sturgeon was removed from the river and placed above the high tide line at Kingsland Point County Park in Westchester County.



Location of sturgeon sighting on July 2, 2014 0.5 miles upstream of the Tappan Zee Bridge Atlantic sturgeon (~ 48 inches total length)

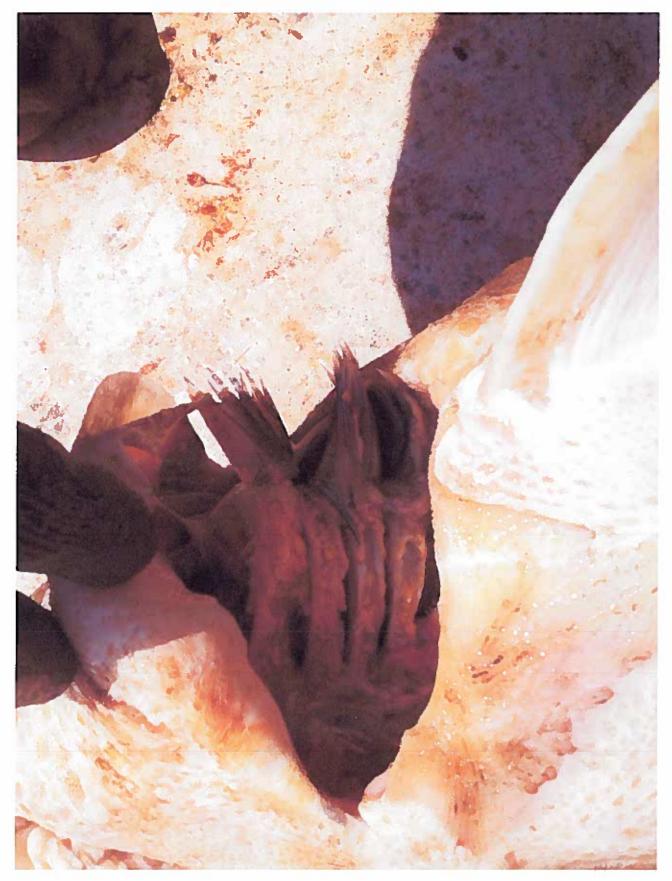




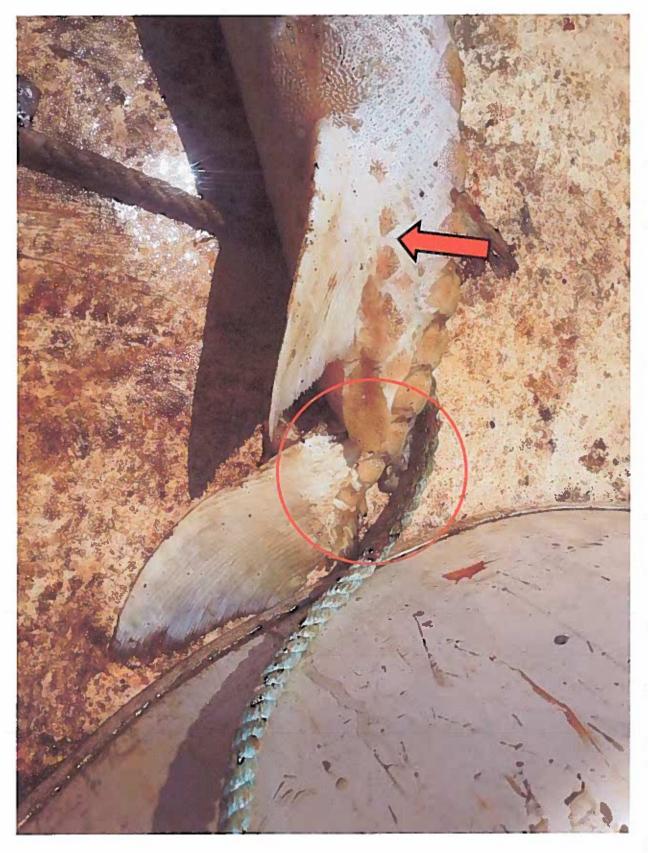
Photograph 1 - Atlantic sturgeon (~48 inches total length) sighted by Tappan Zee Constructors and recovered by the Thruway Authority from the river approximately 0.5 miles upstream of the Tappan Zee Bridge on July 2, 2014. Photo provided by AKRF.



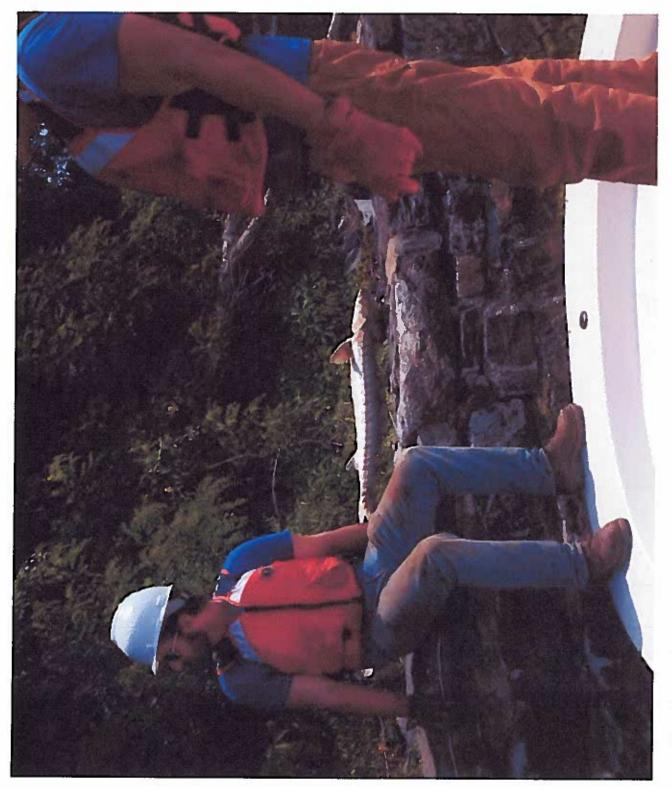
Photograph 2 - Atlantic sturgeon (~48 inches total length) sighted by Tappan Zee Constructors and recovered by the Thruway Authority from the river approximately 0.5 miles upstream of the Tappan Zee Bridge on July 2, 2014. Photo provided by AKRF.



Photograph 3 - Whitish gills indicated that this sturgeon was in the advanced stages of decomposition and was unsuitable for necropsy. Photo provided by AKRF,



Photograph 4 - Species identification for this Atlantic sturgeon was determined based on body size (~48 inches total length) and the presence of scutes (armored scales) above the anal fin (indicated by the arrow). Damage to the tail of this fish (encircled) has been attributed to decomposition of muscle tissue and skin at the caudal peduncle. Photo provided by AKRF.



Photograph 5 - This Atlantic sturgeon was relocated from the river to the shoreline, above the high tide line and behind a sea wall. Photo provided by AKRF.

The New NY Bridge Project



STURGEON SIGHTING FORM

For use in Documenting Sightings of Dead or Injured Sturgeon in the Hudson River that were not Reported during the New York State Thruway Authority and National Marine Fisheries Service's Approved Sturgeon Monitoring Program.

8/4/2014

On Friday July 18, 2014, the New York State Thruway Authority was notified by AKRF, Inc. of a sturgeon sighting in the Hudson River at which time the response process was initiated. The Thruway Authority notified NYSDEC and the FHWA, which notified the NMFS Greater Atlantic Region office. The Thruway Authority conducted a site visit to photo-document the status of the sturgeon.

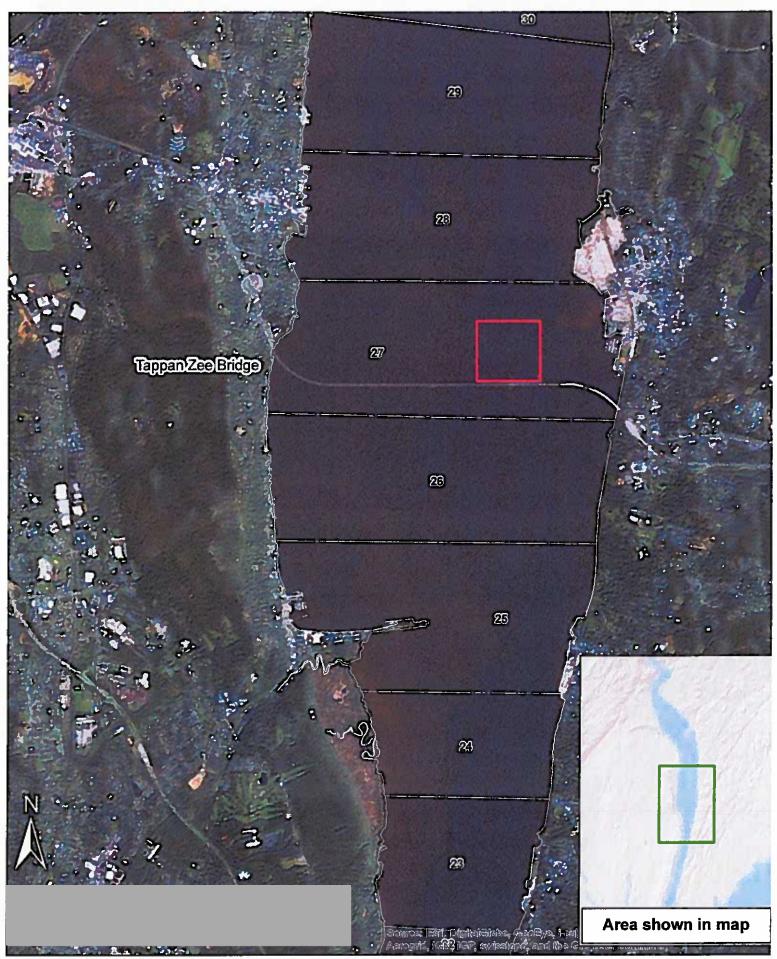
On Friday July 18, 2014, a dead sturgeon was discovered within the NMFS-defined Action Area¹ by the AKRF field crew immediately north of the Tappan Zee Bridge and just west of the navigation channel in Tarrytown in Westchester County, NY less than 0.2 miles north of the Tappan Zee Bridge (41.072562 N, -73.886589 W) (see attached map of location and Action Area).

When the sturgeon was sighted by AKRF on Friday July 18, 2014 it was moderately decomposed. The total length of the sturgeon was measured to be approximately 27 inches. At the time of the sighting, the fish was already several days old; the eyes were opaque, the gills were whitish or missing, and there was a moderate odor of decay. The fish did have a laceration on the caudal peduncle that indicates it was struck by a vessel. Based on the length of the rostrum it is suspected that this was an Atlantic sturgeon (see attached photodocumentation); however, a conclusive identification could not be made. Scutes above the anal fin were not apparent. Sturgeon biologists at NYSDEC have not yet confirmed the species ID. Assuming this fish was an Atlantic sturgeon, it was most likely a subadult based on its total length and the time of the year during which it was observed. The sturgeon was checked for the presence of internal and external tags (including PIT, sonic, etc.) and was found to have none.

During the 48-hour period prior to the sighting, dredging was not occurring, but pile driving was occurring. Project-related vessel movement within the Action Area was occurring. The cause of sturgeon mortality in this case remains undetermined and the Thruway Authority is unable to determine if the mortality was project related. Although pile driving was in progress at the time of the

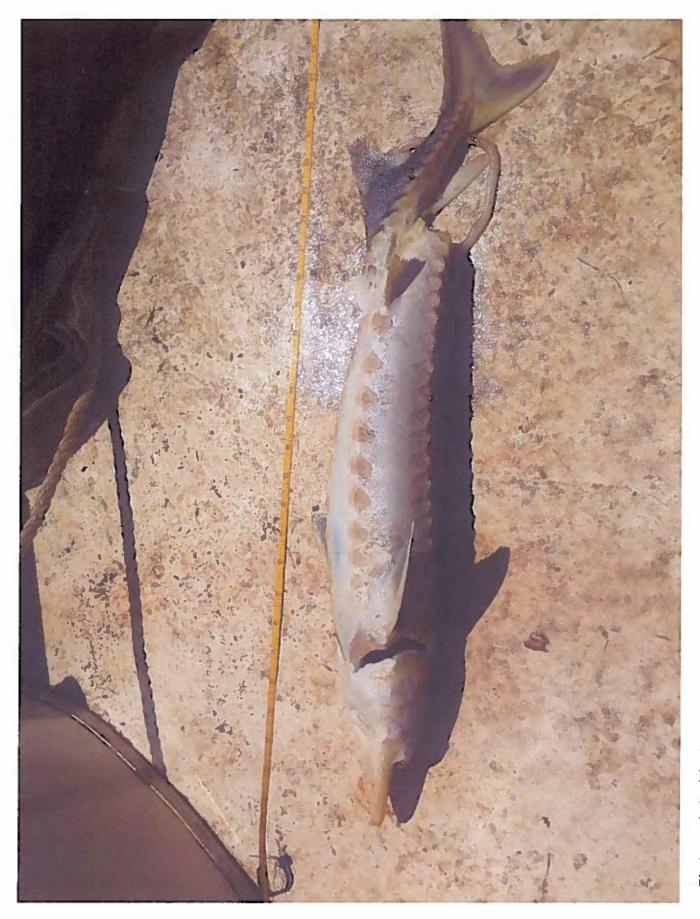
As defined by NMFS in its Biological Opinion for this project, "the action area is defined in 50 CFR 402.02 as "all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action." The action area includes the project footprint where work to construct the new bridge and remove the old bridge will take place, including dredging and armoring of the river bottom. The action area also includes the area of the river where increased underwater noise levels and changes in water quality will be experienced and the transit route that barges will use when transporting dredged material to the offloading site in upper New York Harbor for upland disposal."

sighting, the sturgeon was already in an advanced stage of decomposition when it was found. Moreover, it's not possible to determine if the vessel strike was the cause of mortality or if it occurred post-mortem. Because of the advanced stage of decomposition, the sturgeon has not been sent to the NMFS-approved lab for necropsy to determine the cause of mortality. At the conclusion of the Thruway Authority's response, the sturgeon was removed from the river and placed above the high tide line at Kingsland Point County Park on the Westchester side of the Hudson. The sturgeon was painted orange to indicate that it has been documented.

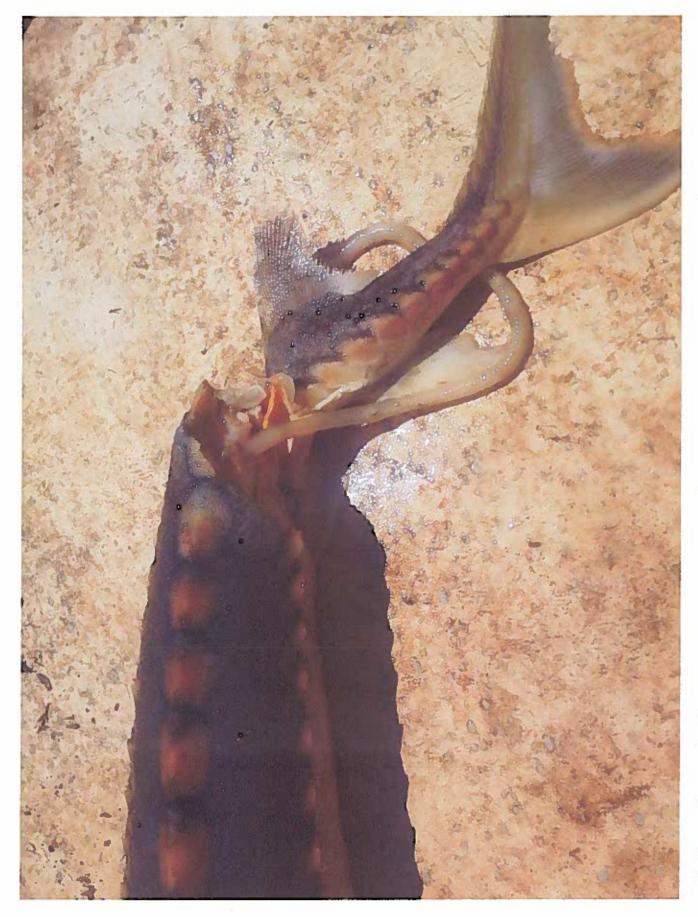


Location of sturgeon sighting on July 18, 2014
< 0.2 miles upstream of the Tappan Zee Bridge
Unconfirmed Atlantic sturgeon (~ 27 inches total length)

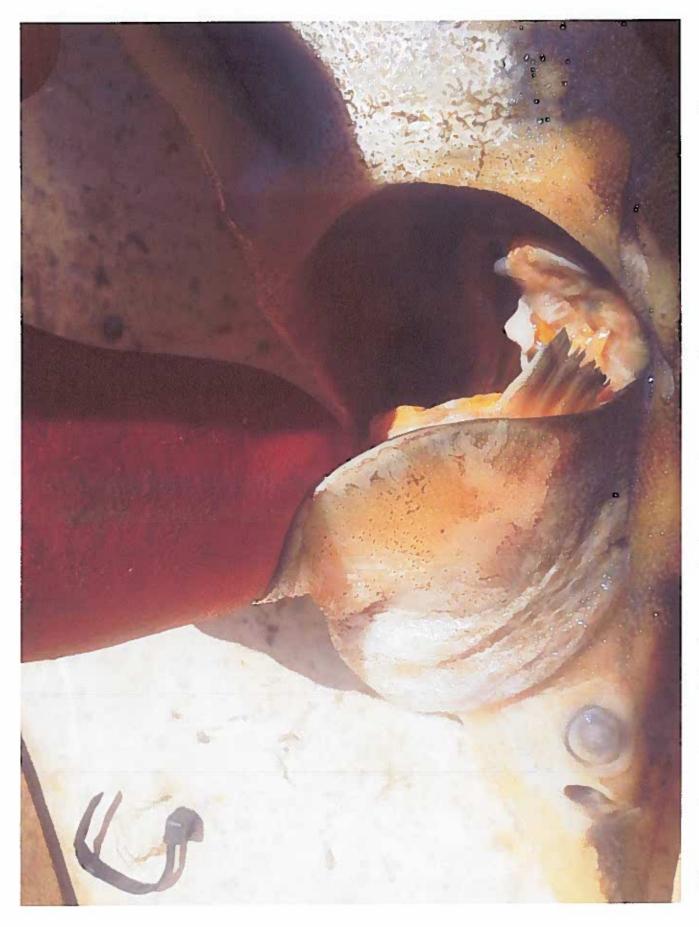




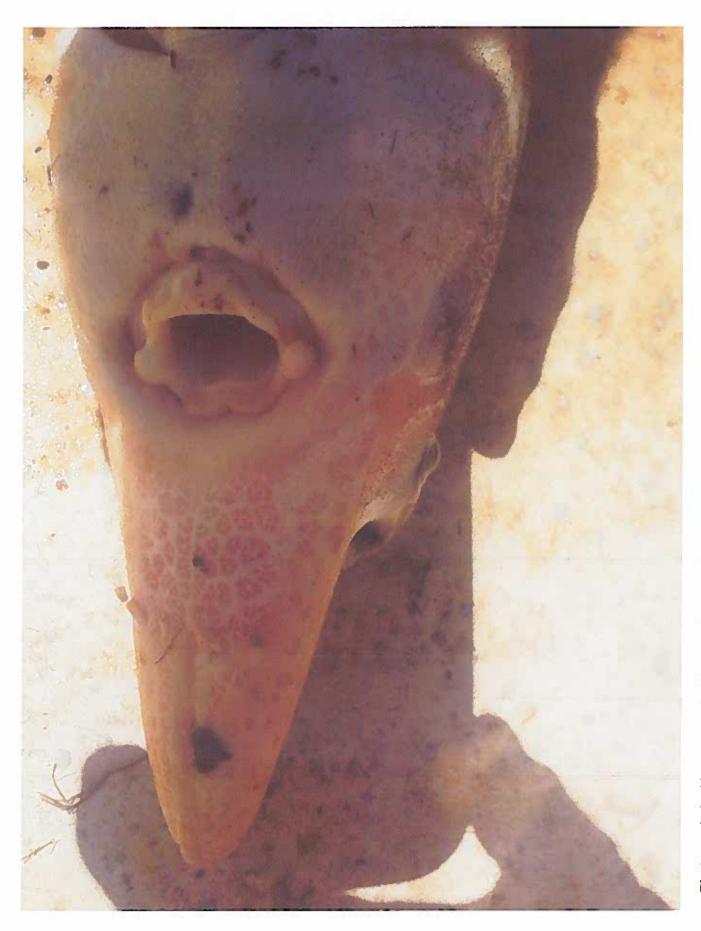
Photograph 1 - Atlantic sturgeon (~27 inches total length) sighted and recovered by the Thruway Authority from the river immediately upstream (< 0.1 miles) of the Tappan Zee Bridge on July 18, 2014. Photo provided by AKRF.



Photograph 2 - Atlantic sturgeon (~27 inches total length) sighted and recovered by the Thruway Authority from the river immediately upstream (< 0.1 miles) of the Tappan Zee Bridge on July 18, 2014. Photo provided by AKRF.



Photograph 3 – Whitish and missing gill filaments indicated that this sturgeon was in the advanced stages of decomposition and was unsuitable for necropsy. Photo provided by AKRF.



Photograph 4 - Narrow mouth width relative to the interorbital width, which is characteristic of an Atlantic sturgeon. Photo provided by AKRF.

STURGEON DATA COLLECTION FORM

For use in documenting sturgeon injury or mortality incidental to a federal action and exempted pursuant to a NMFS issued incidental take statement

| OBSERVER'S CONTACT INFO | RMATION Last K | cebs | 4.1 | SEC 7 UNIQUE IDENTIFIE Assigned by NMFS) | ER (PCTS No. | |
|--|--|---|---|---|---------------------|--|
| Name: First Justin Agency Affiliation NYSTA / Address 7250 Park Hence MD Area code/Phone number | AKRE Email | Krbs@akr | | DATE REPORTED: Month Day Day Day DATE EXAMINED: Month Day Day Day | | |
| SPECIES: (check one) shortnose sturgeon Atlantic sturgeon Unidentified Acipenser species Check "Unidentified" if uncertain. See reverse side of this form for aid in identification. | River/Body of W Descriptive local | later Hulson tion (be specific) | City <0.2 m f of the | nore (bay, river, sound, inlet, etc. Tarrytown iles north of the novigation chan ongitude -73.88658 | State NY Tappan Z-e | |
| CARCASS CONDITION at time examined: (check one) 1 = Fresh dead 2 = Moderately decomposed 3 = Severely decomposed 4 = Dried carcass 5 = Skeletal, scutes & cartilage TAGS PRESENT? Examined for Tag # Nore present | SEX: Undetermined Female Ma How was sex deter Necropsy Eggs/milt prese Borescope or external tags included Tag Type | mined? int when pressed | Fork leng Total leng Length Mouth wi Interorbit Weight | gth Actual estimate dth (inside lips, see reverse side) al width (see reverse side) actual estimate | cm / in kg / lb | |
| CARCASS DISPOSITION: (che 1 = Left where found 2 = Burled 3 = Collected for necropsy/salvage 4 = Frozen for later examination 5 = Other (describe) | | Carcass Necrop Yes X No Date Necropsied: Necropsy Lead: | sied? | PHOTODOCUMENT Photos/vide taken? Disposition of Photos/Vid | Yes No | |
| , | Yes X No How preserved | | Disposit | ion (person, affiliation, u | se) | |
| | | | | | | |
| imments: Species identification fin were not present. Mouth width relat | was not con Rostern was Nely necron | fired Length | Approxim | conclusive. Scules a ed to be an Atlants with width | borth an | |

APPENDIX F

Incident Report: Sturgeon Take - Tappan Zee Replacement Project

Photographs should be taken and the following information should be collected from all sturgeon (alive and dead) found in association with the TZ project. Please submit all necropsy results (including sex and stomach contents) to NMFS upon receipt.

| Observer's full name: Ross Exter, AKRF |
|--|
| Reporter's full name: Justin Korbs, AKRF |
| Species Identification: Unconfirmed, but likely Atlantic stycon |
| Describe project activities (i.e., dredging, pile driving, etc.) ongoing within 24 hours of observation: Pile dr. vessel activity |
| Date animal observed: 18 July 2014 Time animal observed: 1230 Date animal collected: 18 July 2014 Time animal collected: 1230 |
| Environmental conditions at time of observation (i.e., tidal stage, weather): Mid-lising File, fartly Cloudy, Calm |
| Water temperature (°C) at site and time of observation: Describe location of fish and how it was documented (i.e., observer on boat): Observer on boat - 4 KRE field error. Tresturgen was first abserved flow in the over just -pstream (20.2-iles) of the Tappan Zee Bridge. |
| Sturgeon Information: Species Possible Athatic |
| Fork length (or (stallength)) 27 inches Weight Not ressured |
| Condition of specimen/description of animal Makeratly decomposed. Laccation on the cardal pedencie indicating |
| Makerately decomposed. Laccation on the caudal pedencle indicating - possible visual strike. Exes opeque, gill filaments whitishora beent, medicate adoc of decay. |
| Fish Decomposed: NO SLIGHTLY MODERATELY Fish tagged: YES NO Please record all tag numbers. Tag # |
| Photograph attached: YES / NO |
| (please lahel species, date, geographic site and vessel name on back of photograph) |

| Survey Informati | on | Observation type (circle): Survey | | | y) Res | ponse | | |
|----------------------------|------------------|-----------------------------------|-------------|--|----------------|---|-----------------|--|
| Date: 7/18/ 201 | Pate: 7/18/ 2014 | | | | | Vessel: Parker | | |
| Construction Activ | ity: PO 1H . | al P2738 | Survey Star | rt Time: O(| 500 | Survey End Tin | ne: 1635 | |
| Weather/Water C | Conditions (S | urvey Only |) | | | | | |
| Air Temperature (| °C): 25 | | Wind Direc | ction: N | 0 | Wind Speed (m | ph): 5 | |
| Cloud Cover: Clea | | | | Precipitati | ion: None | | | |
| Wave height: ∠1 | | | | 1 | : Ebs /Flox | 3 | | |
| Water Temperature | e (°C): 25. | <i>L</i> | | 1 | inity (ppt): 1 | | | |
| GPS Transect Inf | ormation | | | | | | | |
| Transect ID Number | Start Time | Finish Time | | Starting I | oc. | ì | Finish Loc. | |
| 20140718-1 | 821 | 941 | 410 04.00 | 46 73 | 54. 7569 | 410 04, 3120 | 73 53 2866 | |
| 20140718-2 | 941 | 1113 | 4104 . 3120 | 23° 53 | , z886 | i e | 1 7384.7472 | |
| 20140714-3 | 1113 | 1239 | 41.04.35 | 04 7306 | 4.7472 | 410 04.1605 | 7354.6784 | |
| 20140718-4 | 1239 | 1351 | 41004.10 | | | | 7353.2876 | |
| 2014 07.18-5 | 1351 | 1540 | 4104.21 | J03 73° | 33,2876 | -1104.3691 | 17383.2740 | |
| | | | | | • | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| Observations (Sur | vey Only) | | | | | | | |
| Other Fish Species | - - | | | | | | | |
| Species ID | Quantity | Time Observed | Transect | ant Niumhar - I i contion I incomind (1 of/1 offi) | | Condition (stunned, freshly dead, decaying) | | |
| Unidentificable Coufish | l | 1244 | 4 | | 40 04 225 | 73 54.7068 | dearing (sever) | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

| | T COUCE ASSESSED A | Tomicol ing Di | | | |
|--|--------------------|--|-----------------|---------------------------------------|------|
| Pisciverous/Scavenging Bird Activity C | bserved (Circle): | Y | (N) | · · · · · · · · · · · · · · · · · · · | |
| 0859 Hommer office in air at 1338 Hammer office of pik at but havely low over 1358 Hammer office of but havely low over 1358 Hammer office of the same | | (Fled off Love homer off limer on the more in cranering cease more off | on 5 th pile as | | |
| Sturgeon Information Sturgeon Observed (circle): Y | (N) | Recov | rered (circle): | Y N | |
| Time Observed: | Species (SN/AT | | Fish ID*: | · · · · · · · · · · · · · · · · · · · | |
| Location Recovered (Lat/Lon): | | | Time Rec | overed; | |
| Water Depth @ Recovery Loc. (ft): | Rec | overy Method: | <u> </u> | | |
| | ow . | <u> </u> | · - | | |
| Condition/Dispostion: | | | | · · · · · · · · · · · · · · · · · · · | |
| Photo #s: | Pho | to Description | s: | | × 4: |
| Weight (g): | TL (mm): | | FL (mm): | | |
| Interorbital Width (mm): | Mouth Width (n | nm); | Fin Clip? | Y N | |
| PIT Tag Present? Y N | PIT Tag Fitted? | Y N | PIT Tag# | !; | |

Return Method:

Incident Report

Time Returned:

Salvage

Location Returned (Lat/Lon):

Water Depth @ Return Loc. (ft):

Sturgeon Forms Completed (circle): Sample Collection

^{*}YYYYMMDDXXZZ (XX = Chronological sample # for ea. date, ZZ = Chronological fish # in ea. sample

Dredging and Pile Driving Monitoring Plan Sturgeon Monitoring During Pile Driving 60-day Report 6/8/2014 – 8/2/2014

for the

New NY Bridge Project

August 8, 2014

Prepared by

Tappan Zee Constructors, LLC 555 White Plains Road, Suite 400 Tarrytown, NY 10591



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| 3.0 | | ılts | | | | | | |
| | 3.1 | Observed Sturgeon | | | | | | |
| | 3.2 | Observed Non-sturgeon Species | | | | | | |

FIGURES

Figure 1. GPS Transects July 18, 2014 (4-foot Piles)

Figure 2. Sturgeon Observed on July 2, 2014

Figure 3. Sturgeon Observed on July 18, 2014

APPENDICES

Appendix A: Summary of Pile Driving Sturgeon Monitoring Activities

Appendix B: Sturgeon Sighting Protocol Forms and Sturgeon Data Collection Forms

New NY Bridge Project

Dredging and Pile Driving Monitoring Plan

1.0 Introduction

This report summarizes the methods and results of sturgeon monitoring during permanent pile driving of piles for the period of June 8, 2014 to August 2, 2014. Sturgeon monitoring was conducted per the Dredging and Pile Driving Monitoring Plan, Revision 2 (the Plan) for the New NY Bridge Project (the Project). This Plan was developed to comply with applicable requirements of the New York State Department of Environmental Conservation (NYSDEC) Permit DEC ID 3-9903-00043/00012 issued on March 25, 2013 (NYSDEC Permit) and the April 2014 Endangered Species Act Section 7 Consultation Biological Opinion (BO) issued by the National Marine Fisheries Service (NMFS).

2.0 Monitoring Methods

| Tappan Zee Constructors, LLC (TZC) conducted impact pile driving monitoring for permanent |
|--|
| piles at piles at |
| from the pile driving barge and a small vessel per the Plan. A barge-based |
| monitor were on site for all piles driven during the reporting period. |
| A vessel based monitor was on site for all piles driven during the reporting period with the exception of July 1, 2014 where the vessel-based monitor was not present for pile driving from 15:06 – 16:10 for piles driven at Pier 8 eastbound (Appendix A). Due to a miss communication the vessel monitor departed the construction zone prior to the completion of pile driving for the day. Pile and were partially driven and then restruck at a later time. The vessel-based crew departed the construction zone prior to TZC restriking these piles. A vessel-based monitor was not present for pile driving from 15:49 – 15:56 while active pile driving occurred on and from 16:07 – 16:08 during active pile driving on The barge based monitor was present for these time periods and recorded no fish were observed. |
| On July 18, 2014 impact pile driving occurred at two locations simultaneously the Plan, one vessel monitored the Hudson River for injured or dead fish from the start of pile driving to one hour after all pile driving was completed for the day. Figure 1 provides the GPS transects completed by the fish monitoring crew on July 18, 2014. At 12:30 a sturgeon was observed in the vicinity of by an AKRF vessel performing Sturgeon Acoustic Telemetry work, at the time the sturgeon was observed the TZC fish monitoring crew was near the end of transect 3 (Figure 1). The location of the fish is provided in Figure 1. Refer to Section 3.1, Appendix A, and Appendix B for more information. Pile driving occurred during ebb current; subsequently, the fish monitoring crew completed several circular and sawtooth patterns south of the existing Tappan Zee Bridge. Fish Monitoring crews continued to monitor for fish while transiting between piers. |

New NY Bridge Project

Dredging and Pile Driving Monitoring Plan

3.0 Results

| A total of | | piles were | impact driven from | n June 8, 2014 | through August 2, 2014 |
|--------------|----------------------------|------------|---------------------|-----------------|-------------------------|
| | piles were installed | at | and pile w | as installed at | |
| A total of | _ | piles wer | e impact driven fro | m June 8, 2014 | through August 2, 2014 |
| | piles were installed a | t | piles were installe | ed at | piles were installed |
| at | piles were installed a | at | piles were insta | alled at | piles were installed a |
| | piles were installed | at . | | | |
| Monitoring a | activities and results fro | m both | | | piles are summarized in |

3.1 Observed Sturgeon

During the reporting period two (2) sturgeon were observed with the contruction zone. One (1) sturgeon was observed when no impact pile driving was occurring and one (1) sturgeon was observed while impact pile driving was occurring (Appendix A, Appendix B). On July 2, 2014 at 14:58 an AKRF vessel was notified that a dead sturgeon was observed near when no impact pile driving was occurring. The sturgeon was decaying at the time of observation (Figure 2). AKRF personnel completed a *Sturgeon Sighting Protocol Form* detailing the incident and handling of the fish (Appendix B). On July 18, 2014 at 12:30 an AKRF vessel identified a dead sturgeon near when impact pile driving was occurring. The sturgeon was decaying at the time of observation (Figure 3). AKRF personnel did not notify the TZC vessel-based monitors who were monitoring both at the time. AKRF personnel completed a *Sturgeon Sighting Protocol Form* and Sturgeon Data Collection Form detailing the incident and handling of the fish (Appendix B).

Neither fish contained a Passive Integrated Transponder (PIT) tag or other identifying tag. A fin clip was not collected for both fish.

3.2 Observed Non-sturgeon Species

A total of 27 fish, not including sturgeon, were observed during the reporting period. Observed species and quantities include 13 menhadden, five (5) catfish, five (5) eel, two (2) striped bass, one (1) unidentified species (confirmed not to be sturgeon), and one (1) white perch. A summary of the dates, times, condition of the fish, and location of fish observed is provided in Appendix A.

Dredging and Pile Driving Monitoring Plan

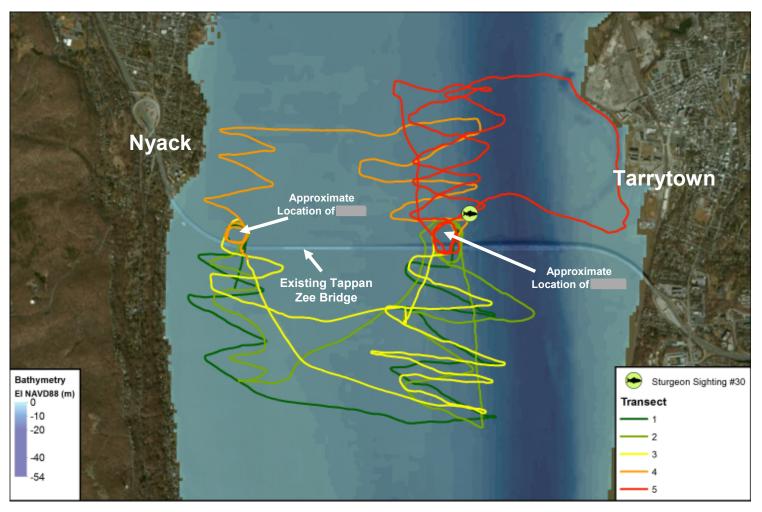




Figure 1. GPS Transects July 18, 2014 (4-foot Piles)



Document Path: Vigri sn/3GIS Projects/459974 Fluor AmericanBr Granite TraylorBros/195455 T2JDEnvironmental Design/GIS/Map Docs/Draft/Sturgeon Monitoring/2014-06-11 ENV MAP July Transects.mxd



Figure 2. Sturgeon observed on July 2, 2014. Photo provided by AKRF



Figure 3. Sturgeon Observed on July 18, 2014. Photo provided by AKRF.

New NY Bridge Project

Dredging and Pile Driving Monitoring Plan

APPENDIX A

Summary of Pile Driving Sturgeon Monitoring Activities

Appendix A Summary of Pile Driving Sturgeon Monitoring Activities New NY Bridge Project NMFS 60-Day Report 6/8/2014 - 8/2/2014

TAPPAN ZEE CONSTRUCTORS, LLC

Report Date: 8/8/2014 Reporting Period: 6/8/2014 - 8/2/2014 Number of Sturgeon Observed: 2

| Date | Moni | e-Based litoring ime | Vessel-Based Monitoring Time | Number of Fish Observed | Species | Sturgeon Specimen Log Number | Condition of Fish When Observed | Time Observed | Location Observed (Lat/Long or Barge Name) |
|-------------|--------|----------------------------|------------------------------------|----------------------------|------------------------|---------------------------------|------------------------------------|---------------|---|
| 6/9/2014 | 8:15 - | - 12:18 | 8:34 - 13:24 | 0 | NA | NA | NA | NA | NA |
| | | | | 0 | NA | NA NA | NA Stanzand | NA 0.45 | NA |
| | N | NA | 9:45 | 0 | Menhadden ^a | NA NA | Stunned | 9:45 NA | 41 04.1597°N / 073 53.7939°W NA |
| 6/10/2014 | 14:25 | 5 - 17:56 | 14:44 - 19:04 ^b | 0 | NA NA | NA NA | NA NA | NA NA | NA NA |
| | 14.23 | 7-17.50 | 14.44 - 13.04 | 0 | NA NA | NA NA | NA NA | NA NA | NA NA |
| | | | | 0 | NA NA | NA NA | NA NA | NA NA | NA NA |
| | 0.55 | 12:07 | | 0 | NA | NA | NA | NA | NA |
| | 8:55 - | - 12:07 | | 0 | NA | NA | NA | NA | NA |
| | | | | 0 | NA | NA | NA | NA | NA |
| | 10:21 | - 11:27 | | 0 | NA | NA | NA | NA | NA . |
| 6/11/2014 | | | 8:55 - 18:28 | 2 | Menhadden | NA | Stunned | 13:15 | 41 03.7410°N / 073 52.5791°W |
| | | | | 0 | NA Na shaddan | NA NA | NA Danasira | NA 14.52 | NA |
| | 13:40 |) - 17:45 | | 1 | Menhadden | NA NA | Decaying | 14:52 NA | 41 03.9896°N / 073 52.3776°W |
| | 13.40 | , 17.43 | | 0 | NA NA | NA NA | NA NA | NA NA | NA NA |
| | | | | 0 | NA NA | NA NA | NA NA | NA NA | NA NA |
| | | | | 0 | NA NA | NA NA | NA NA | NA NA | NA NA |
| | | | | 1 | Menhadden | NA | Stunned | 8:43 | 41 04.5468°N / 073 54.8067°W |
| | 0.27 | - 11:31 | | 1 | Menhadden | NA | Stunned | 9:17 | 41 04.9357°N / 073 54.7330°W |
| | 8:37 - | - 11:31 | | 0 | NA | NA | NA | NA | NA |
| 6/12/2014 | | | 8:42 - 20:10 | 0 | NA | NA | NA | NA | NA |
| 0/12/2014 | | | 0.42 - 20.10 | 0 | NA | NA | NA | NA | NA |
| | 15:13 | 3 - 18:18 | | 0 | NA | NA | NA | NA | NA |
| | | | | 0 | NA | NA | NA | NA | NA O |
| | 18:38 | 3 - 19:21 | | 1 | Menhadden | NA | Stunned | 19:54 | 41 04.7153°N / 073 54.6879°W |
| | | | | 1 | Menhadden | NA | Decaying | 7:26 | 41 04.3649°N / 073 52.2941°W |
| 6/13/2014 | 7:17 - | - 8:39 ^c | 7:19 - 9:50 | 1 | Menhadden | NA | Dead | 7:43 | 41 04.7266°N / 073 52.5082°W |
| | | | | 0 | NA NA | NA NA | NA NA | NA NA | NA NA |
| | | | | 0 | NA NA | NA NA | NA NA | NA NA | NA NA |
| 6/16/2014 | 11:45 | 5 - 14:30 | 11:45 - 15:00 | 1 | Menhadden | NA NA | Dead | 13:48 | 41 04.6595°N / 073 54.6709°W |
| 0,10,2014 | 11.45 | 7 14.50 | 11.45 15.00 | 1 | Menhadden | NA NA | Decaying | 14:08 | 41 04.3486°N / 073 55.8667°W |
| | | | | 0 | NA | NA NA | NA NA | NA | NA |
| | 9:00 - | - 11:20 | | 0 | NA | NA | NA | NA | NA |
| | | | | 1 | Eel | NA | Decaying | 11:35 | 41 04.6885°N / 073 54.8167°W |
| | | | | 0 | NA | NA | NA | NA | NA |
| 6/17/2014 | | | 9:00 - 16:05 | 0 | NA | NA | NA | NA | NA |
| | 10:40 |) - 15:15 | | 0 | NA | NA | NA | NA | NA |
| | | | | 1 | Striped Bass | NA | Decaying | 15:44 | 41 05.1910°N / 073 52.7826°W |
| | | | | 0 | NA NA | NA NA | NA NA | NA NA | NA NA |
| | _ | | | 0 | | NA NA | NA Docaving | NA 10:23 | |
| | | | | 0 | Catfish NA | NA NA | Decaying NA | 10:23 NA | 41 03.8820°N / 073 54.7116°W NA |
| 6/19/2014 | 9:30 - | 9:30 - 14:10 | 9:50 - 15:10 | 1 | White Perch | NA NA | Dead | 12:15 | 41 04.2523°N / 073 54.9781°W |
| 0, 10, 2017 | 5.50 | 120 | 1.50 15.10 | 0 | NA | NA NA | NA NA | NA | NA NA |
| | | | | 1 | Catfish | NA NA | Decaying | 14:41 | 41 04.9481°N / 073 54.6840°W |
| | | | | 0 | NA | NA NA | NA NA | NA | NA |
| | | | | 0 | NA | NA | NA | NA | NA |
| 6/23/2014 | 0.00 | - 16:00 | 9:09 - 16:57 | 0 | NA | NA | NA | NA | NA |
| 0/23/2014 | 9:00 - | - 10.00 | J.U3 - 10.37 | 0 | NA | NA | NA | NA | NA |
| | | | | 0 | NA | NA | NA . | NA | NA O |
| | | | | 1 | Catfish | NA | Decaying | 15:59 | 41 04.8952°N / 073 54.3841°W |
| | | | | 0 | NA NA | NA NA | NA NA | NA NA | NA NA |
| | | | | 0 | NA NA | NA NA | NA NA | NA NA | NA NA |
| 6/26/2014 | 9:32 - | - 13:33 | 9:32 - 14:35 | 0 | NA NA | NA NA | NA NA | NA NA | NA NA |
| | | | | 0 | NA NA | NA NA | NA NA | NA NA | NA NA |
| | | | | 0 | NA | NA NA | NA | NA | NA NA |
| 6/27/2014 | 12:20 |) - 16:30 | 13:14 - 17:36 | 0 | NA | NA | NA | NA | NA |
| 0/2//2014 | 13:20 | 7 - 10.30 | 13.14 - 17:30 | 0 | NA | NA | NA | NA | NA |

1

Appendix A Summary of Pile Driving Sturgeon Monitoring Activities New NY Bridge Project NMFS 60-Day Report 6/8/2014 - 8/2/2014

TAPPAN ZEE CONSTRUCTORS, LLC

Report Date: 8/8/2014 Reporting Period: 6/8/2014 - 8/2/2014 Number of Sturgeon Observed: 2

| Date | | Barge-Based Monitoring Time | Vessel-Based Monitoring Time | Number of Fish Observed | Species | Sturgeon Specimen Log Number | Condition of Fish When Observed | Time Observed | Location Observed (Lat/Long or Barge Name) |
|-----------|---|-----------------------------------|------------------------------------|----------------------------|-----------------------|---------------------------------|------------------------------------|---------------|---|
| | | | | 0 | NA | NA | NA | NA | NA |
| | | | | 1 | Eel | NA | Decaying | 10:14 | Bob Hill Crane |
| 6/30/2014 | | 8:46 - 15:53 | 8:46 - 17:00 | 0 | NA 5-1 | NA NA | NA Danasia | NA 12.21 | NA |
| | | | | 0 | Eel NA | NA NA | Decaying NA | 12:21 NA | 41 04.6264°N / 073 54.3516°W NA |
| | - | | | 0 | NA NA | NA NA | NA NA | NA NA | NA NA |
| | | | | 0 | NA NA | NA NA | NA NA | NA NA | NA NA |
| 7/1/2014 | | 8:35 - 16:10 | 8:37 - 15:05 ^d | 0 | NA | NA | NA | NA | NA |
| | | | | 0 | NA | NA | NA | NA | NA |
| | | | | 0 | NA | NA | NA | NA | NA |
| 7/2/2014 | | NA | NA | 1 | Sturgeon | Sturgeon Sighting #29 | Decaying | 14:58 | 41.078134°N / 73.892252°W |
| | | | | 0 | NA | NA NA | NA NA | NA NA | NA NA |
| 7/7/2014 | | 9:35 - 13:52 | 9:39 - 14:59 | 0 | NA NA | NA NA | NA NA | NA NA | NA NA |
| 7/7/2014 | | 3.33 - 13.32 | 3.33 - 14.33 | 0 | NA NA | NA NA | NA NA | NA NA | NA NA |
| | | | | 0 | NA | NA | NA | NA | NA |
| 7/0/2014 | | 15.10 16.41 | 15.26 17.40 | 1 | Catfish | NA | Decaying | 15:41 | 41.6976°N / 73.87614°W |
| 7/8/2014 | | 15:10 - 16:41 | 15:26 - 17:40 | 0 | NA | NA | NA | NA | , NA |
| | | | | 0 | NA | NA | NA | NA | NA |
| 7/9/2014 | | 7:17 - 9:00 | 7:18 - 10:18 | 1 | Menhadden | NA | Dead | 8:03 | 41 04.8117°N / 073 52.6733°W |
| 1,0,=0=1 | | | | 0 | NA | NA | NA | NA | NA |
| | | | | 0 | NA NA | NA NA | NA NA | NA NA | NA |
| | | | | 0 | NA American Eel | NA NA | NA Docaving | NA 12:33 | NA 04 4020°N / 072 F4 2240°N |
| 7/11/2014 | | 10:40 - 15:11 | 10:42 - 16:23 | 0 | NA NA | NA NA | Decaying NA | 12.55 NA | 41 04.1030°N / 073 54.3210°W NA |
| 7/11/2014 | | 10.40 - 15.11 | 10.42 - 10.23 | 0 | NA NA | NA NA | NA NA | NA NA | NA NA |
| | | | | 1 | Striped Bass | NA | Decaying | 16:06 | 41 04.1453°N / 073 54.5401°W |
| 7/11/2011 | _ | | 0.00 40 40 | 0 | NA | NA | NA NA | NA | NA |
| 7/14/2014 | | 8:00 - 9:42 | 8:00 - 10:42 | 0 | NA | NA | NA | NA | NA |
| | | | | 0 | NA | NA | NA | NA | NA |
| 7/15/2014 | | 8:45 - 12:05 | 8:45 - 13:08 | 0 | NA | NA | NA | NA | NA |
| , -, - | | | | 0 | NA NA | NA NA | NA NA | NA NA | NA |
| 7/16/2014 | - | 17:08 - 17:40 | 17:09 - 18:34 | 0 | NA NA | NA NA | NA NA | NA NA | NA NA |
| 7/10/2014 | - | 17.08 - 17.40 | 17.09 - 16.54 | 0 | NA NA | NA NA | NA NA | NA NA | NA NA |
| | | | | 0 | NA | NA NA | NA NA | NA | NA NA |
| | | | | 1 | Sturgeon ^f | Sturgeon Sighting #30 | Decaying | 12:30 | 41.072562°N / 073.886589°W |
| | | 8:20 - 14:35 | | 0 | NA | NA | NA | NA | NA |
| | | | | 0 | NA | NA | NA | NA | NA |
| 7/18/2014 | | | 8:21 - 15:40 | 0 | NA | NA | NA | NA | NA |
| . , | - | | | 0 | NA NA | NA NA | NA NA | NA NA | NA NA |
| | | | | 0 | NA NA | NA NA | NA NA | NA NA | NA NA |
| | | 8:21 - 12:37 | | 0 | NA NA | NA NA | NA NA | NA NA | NA NA |
| | | | | 1 | Unknown | NA | Dead | 12:07 | 4100 Hoosier Crane |
| | | | | 1 | Catfish | NA | Decaying | 12:44 | 41 04.2250°N / 073 54.7058°W |
| | | | | 0 | NA | NA | NA | NA | NA |
| 7/21/2014 | | 8:01 - 10:30 | 8:01 - 11:26 | 0 | NA | NA | NA NA | NA | NA |
| | | | | 0 | NA NA | NA NA | NA NA | NA NA | NA NA |
| | | | | 0 | NA NA | NA NA | NA NA | NA NA | NA NA |
| 7/22/2014 | | 14:54 - 15:09 | 14:54 - 18:10 | 0 | NA NA | NA NA | NA NA | NA NA | NA NA |
| | | | | 0 | NA | NA NA | NA NA | NA | NA NA |
| | | | | 0 | NA | NA | NA | NA | NA |
| | | | | 0 | NA | NA | NA | NA | NA |
| | | | | 0 | NA | NA | NA NA | NA | NA |
| | | 8:03 - 15:10 | | 0 | NA NA | NA NA | NA NA | NA NA | NA NA |
| | | | | 0 | NA NA | NA NA | NA NA | NA NA | NA NA |
| | | | | 0 | NA NA | NA NA | NA NA | NA NA | NA NA |
| 7/24/2014 | | | 8:00 - 17:11 | 0 | NA NA | NA NA | NA NA | NA NA | NA NA |
| | | | | 0 | NA | NA NA | NA NA | NA | NA NA |
| | | | | 0 | NA | NA | NA | NA | NA |
| | | 9:08 - 16:10 | | 0 | NA | NA | NA | NA | NA |
| | | | | 0 | NA | NA | NA NA | NA | NA |
| | | | | 0 | NA NA | NA NA | NA NA | NA NA | NA NA |
| | | | | 0 | NA | NA | NA | NA | NA |

Appendix A **Summary of Pile Driving Sturgeon Monitoring Activities New NY Bridge Project NMFS 60-Day Report** 6/8/2014 - 8/2/2014

TAPPAN ZEE CONSTRUCTORS, LLC

Report Date: 8/8/2014 Reporting Period: 6/8/2014 - 8/2/2014

Number of Sturgeon Observed: 2

| Date | | Barge-Based Monitoring Time | Vessel-Based Monitoring Time | Number of Fish Observed | Species | Sturgeon Specimen Log Number | Condition of Fish When Observed | Time Observed | Location Observed (Lat/Long or Barge Name) |
|-----------|--|-----------------------------------|------------------------------------|----------------------------|---------|---------------------------------|------------------------------------|---------------|---|
| | | | | 1 | Eel | NA | Decaying | 9:35 | 41 04.3602°N / 073 54.8046°W |
| | | | | 0 | NA | NA | NA | NA | NA |
| 7/25/2014 | | 8:40 - 12:35 | 8:40 - 13:39 | 0 | NA | NA | NA | NA | NA |
| | | | | 0 | NA | NA | NA | NA | NA |
| | | | | 0 | NA | NA | NA | NA | NA |
| | | | | 0 | NA | NA | NA | NA | NA |
| | | | | 0 | NA | NA | NA | NA | NA |
| | | | 9:47 - 17:17 | 0 | NA | NA | NA | NA | NA |
| | | 9:44 - 16:17 | | 0 | NA | NA | NA | NA | NA |
| | | | | 0 | NA | NA | NA | NA | NA |
| 7/28/2014 | | | | 0 | NA | NA | NA | NA | NA |
| | | | | 0 | NA | NA | NA | NA | NA |
| | | 11:52 - 14:37 | | 0 | NA | NA | NA | NA | NA |
| | | | | 0 | NA | NA | NA | NA | NA |
| | | | | 0 | NA | NA | NA | NA | NA |
| | | | | 0 | NA | NA | NA | NA | NA |
| 7/30/2014 | | 10:44 - 11:30 | 10:44 - 12:15 | 0 | NA | NA | NA | NA | NA |
| | | 9:49 - 12:28 | | 0 | NA | NA | NA | NA | NA |
| 7/31/2014 | | | 9:49 - 13:28 | 0 | NA | NA | NA | NA | NA |
| 7/31/2014 | | | | 0 | NA | NA | NA | NA | NA |
| | | | | 0 | NA | NA | NA | NA | NA |
| | | | | 0 | NA | NA | NA | NA | NA |
| | | | | 0 | NA | NA | NA | NA | NA |
| 8/1/2014 | | 8:03 - 12:17 | 8:05 - 13:14 | 0 | NA | NA | NA | NA | NA |
| | | | | 0 | NA | NA | NA | NA | NA |
| | | | 0 | NA | NA | NA | NA | NA | |

Notes: Non-sturgeon species are not recovered for data collection. ^a Fish observed by monitoring vessel prior to start of impact pile driving.

^b Impact pile driving began at 14:44 per GZA field log.

⁶ Monitoring times based on GZA field log, barge monitoring form not available. Confirmed with site superintendent the sturgeon observer did not observe a fish.

 $^{^{\}rm d}$ Vessel based monitor departed construction zone prematurely due to miscommunication with TZC.

e Sturgeon carcass observed on a day where no pile driving of piles greater than 4-ft in diameter occurred. Fish was collected by AKRF on behalf of NYSTA.

f Sturgeon collected by and documentation collected by AKRF Vessel. TZC monitoring vessel was not notified to the presence of the fish.

APPENDIX B

Sturgeon Sighting Protocol Forms and Sturgeon Data Collection Forms

The New NY Bridge Project



STURGEON SIGHTING FORM

For use in Documenting Sightings of Dead or Injured Sturgeon in the Hudson River that were not Reported during the New York State Thruway Authority and National Marine Fisheries Service's Approved Sturgeon Monitoring Program.

8/4/2014

On Wednesday July 02, 2014, the New York State Thruway Authority was notified by Tappan Zee Constructors (TZC) of a sturgeon sighting in the Hudson River, at which time the Thruway Authority initiated the response process. The Thruway Authority notified NYSDEC and the FHWA, which notified the NMFS Greater Atlantic Region office. The Thruway Authority conducted a site visit to photo-document the status of the sturgeon at the time it was notified by TZC. AKRF was on site at the time of the sturgeon sighting and was able to respond immediately. The dead sturgeon was found floating in the river within the NMFS-defined Action Area¹ by one of TZC's crew boat captains approximately 0.5 miles north of the Tappan Zee Bridge near Tarrytown in Westchester County, NY (41.078134 N, -73.892252 W) (see attached map of location and Action Area).

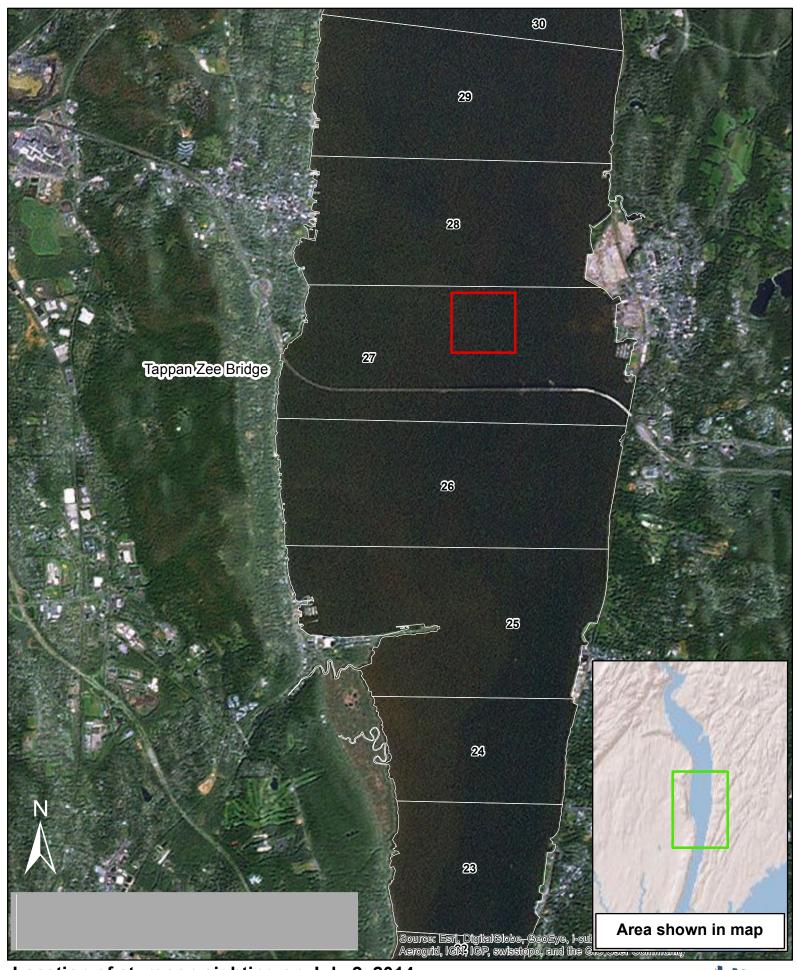
At the time of the Thruway Authority's response, the sturgeon was moderately decomposed, the eyes were cloudy, the gills were whitish in color or missing, and the carcass was bloated and floating. This sturgeon appeared to have been dead for at least 48 hours when it was found; DEC biologists concurred with this estimate. There were no obvious external injuries, with the exception of some decay on the caudal peduncle. It is not likely that this sturgeon was struck by a vessel based on the absence of any significant external injuries. The length of the sturgeon was measured to be approximately 48 inches. Based on its length and the presence of scutes anterior to the anal fin, it was determined that this fish was an Atlantic sturgeon based on its total length and the presence of scutes above the anal fin (see attached photo-documentation). Sturgeon biologists at NYSDEC confirmed the species ID. The sturgeon has not yet been checked for the presence of internal tags (including PIT, sonic, etc.) but will be re-examined as soon as possible. There were no external tags.

The sturgeon was found in close proximity to the bridge, however it had been dead for at least 2 days. During the 48-hour period prior to the sighting, dredging was not occurring, but pile driving was occurring. Project-related vessel movement within the Action Area was also occurring. There was no obvious external injuries that would suggest a cause of death. Therefore, dredging and vessel strikes

As defined by NMFS in its Biological Opinion for this project, "the action area is defined in 50 CFR 402.02 as "all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action." The action area includes the project footprint where work to construct the new bridge and remove the old bridge will take place, including dredging and armoring of the river bottom. The action area also includes the area of the river where increased underwater noise levels and changes in water quality will be experienced and the transit route that barges will use when transporting dredged material to the offloading site in upper New York Harbor for upland disposal."

can be ruled out as the potential source of mortality. Since it was not possible to conduct a necropsy, barotrauma caused by pile-driving activities can not be discounted. However, exposure to pile-driving noise would not have been likely to have been the direct cause of mortality given the Environmental Performance Commitments implemented during pile driving to protect sturgeon that may be in the vicinity (i.e., noise attenuation, pile tapping).

The cause of sturgeon mortality in this case can not be conclusively determined. However, the Thruway Authority concludes that it is unlikely that this sturgeon mortality was directly related to the project for the reasons discussed above. No necropsy was conducted because the sturgeon was determined to be unsuitable for necropsy given its advanced stage of decay. Following the Thruway Authority's response, the sturgeon was removed from the river and placed above the high tide line at Kingsland Point County Park in Westchester County.



Location of sturgeon sighting on July 2, 2014 0.5 miles upstream of the Tappan Zee Bridge Atlantic sturgeon (~ 48 inches total length)





Photograph 1 - Atlantic sturgeon (~48 inches total length) sighted by Tappan Zee Constructors and recovered by the Thruway Authority from the river approximately 0.5 miles upstream of the Tappan Zee Bridge on July 2, 2014. Photo provided by AKRF.



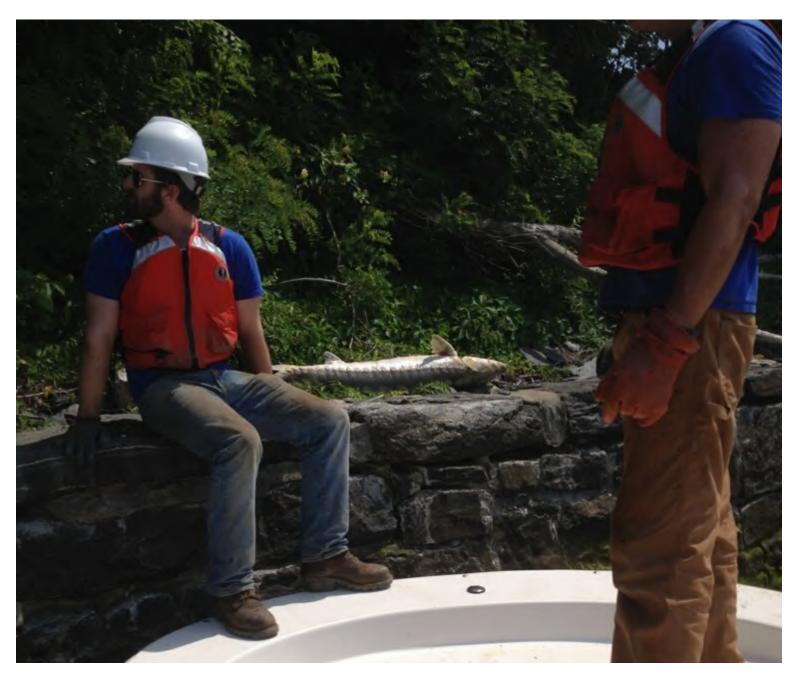
Photograph 2 - Atlantic sturgeon (~48 inches total length) sighted by Tappan Zee Constructors and recovered by the Thruway Authority from the river approximately 0.5 miles upstream of the Tappan Zee Bridge on July 2, 2014. Photo provided by AKRF.



Photograph 3 - Whitish gills indicated that this sturgeon was in the advanced stages of decomposition and was unsuitable for necropsy. Photo provided by AKRF.



Photograph 4 - Species identification for this Atlantic sturgeon was determined based on body size (~48 inches total length) and the presence of scutes (armored scales) above the anal fin (indicated by the arrow). Damage to the tail of this fish (encircled) has been attributed to decomposition of muscle tissue and skin at the caudal peduncle. Photo provided by AKRF.



Photograph 5 - This Atlantic sturgeon was relocated from the river to the shoreline, above the high tide line and behind a sea wall. Photo provided by AKRF.

The New NY Bridge Project



STURGEON SIGHTING FORM

For use in Documenting Sightings of Dead or Injured Sturgeon in the Hudson River that were not Reported during the New York State Thruway Authority and National Marine Fisheries Service's Approved Sturgeon Monitoring Program.

8/4/2014

On Friday July 18, 2014, the New York State Thruway Authority was notified by AKRF, Inc. of a sturgeon sighting in the Hudson River at which time the response process was initiated. The Thruway Authority notified NYSDEC and the FHWA, which notified the NMFS Greater Atlantic Region office. The Thruway Authority conducted a site visit to photo-document the status of the sturgeon.

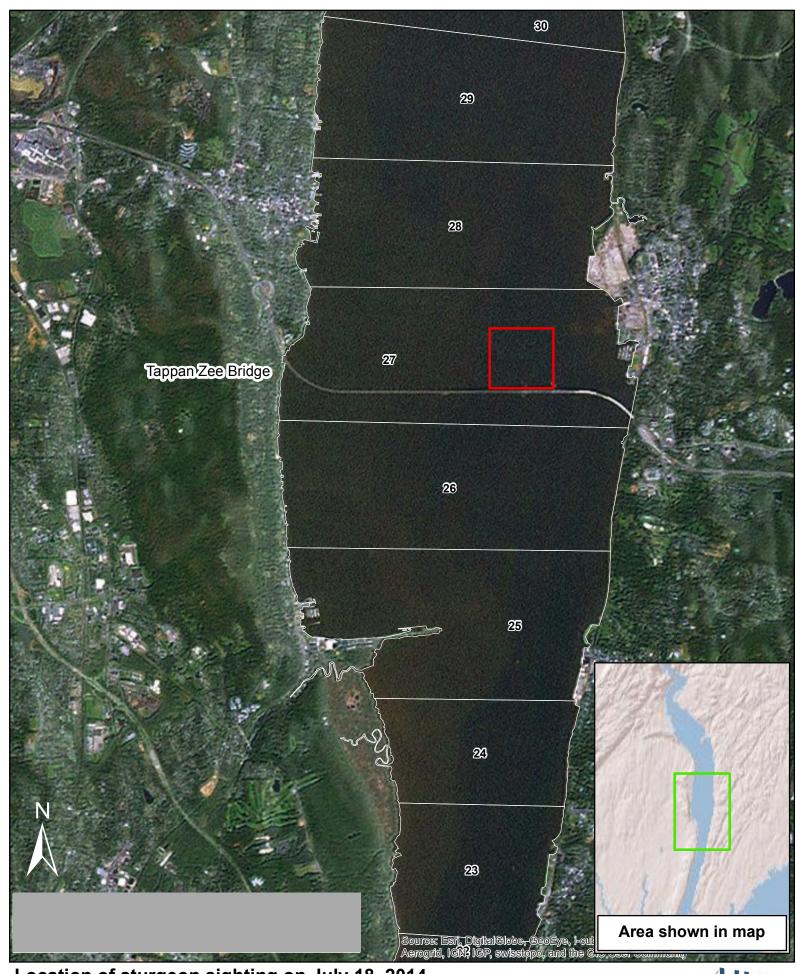
On Friday July 18, 2014, a dead sturgeon was discovered within the NMFS-defined Action Area¹ by the AKRF field crew immediately north of the Tappan Zee Bridge and just west of the navigation channel in Tarrytown in Westchester County, NY less than 0.2 miles north of the Tappan Zee Bridge (41.072562 N, -73.886589 W) (see attached map of location and Action Area).

When the sturgeon was sighted by AKRF on Friday July 18, 2014 it was moderately decomposed. The total length of the sturgeon was measured to be approximately 27 inches. At the time of the sighting, the fish was already several days old; the eyes were opaque, the gills were whitish or missing, and there was a moderate odor of decay. The fish did have a laceration on the caudal peduncle that indicates it was struck by a vessel. Based on the length of the rostrum it is suspected that this was an Atlantic sturgeon (see attached photodocumentation); however, a conclusive identification could not be made. Scutes above the anal fin were not apparent. Sturgeon biologists at NYSDEC have not yet confirmed the species ID. Assuming this fish was an Atlantic sturgeon, it was most likely a subadult based on its total length and the time of the year during which it was observed. The sturgeon was checked for the presence of internal and external tags (including PIT, sonic, etc.) and was found to have none.

During the 48-hour period prior to the sighting, dredging was not occurring, but pile driving was occurring. Project-related vessel movement within the Action Area was occurring. The cause of sturgeon mortality in this case remains undetermined and the Thruway Authority is unable to determine if the mortality was project related. Although pile driving was in progress at the time of the

As defined by NMFS in its Biological Opinion for this project, "the action area is defined in 50 CFR 402.02 as "all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action." The action area includes the project footprint where work to construct the new bridge and remove the old bridge will take place, including dredging and armoring of the river bottom. The action area also includes the area of the river where increased underwater noise levels and changes in water quality will be experienced and the transit route that barges will use when transporting dredged material to the offloading site in upper New York Harbor for upland disposal."

sighting, the sturgeon was already in an advanced stage of decomposition when it was found. Moreover, it's not possible to determine if the vessel strike was the cause of mortality or if it occurred post-mortem. Because of the advanced stage of decomposition, the sturgeon has not been sent to the NMFS-approved lab for necropsy to determine the cause of mortality. At the conclusion of the Thruway Authority's response, the sturgeon was removed from the river and placed above the high tide line at Kingsland Point County Park on the Westchester side of the Hudson. The sturgeon was painted orange to indicate that it has been documented.



Location of sturgeon sighting on July 18, 2014 < 0.2 miles upstream of the Tappan Zee Bridge Unconfirmed Atlantic sturgeon (~ 27 inches total length)





Photograph 1 - Atlantic sturgeon (~27 inches total length) sighted and recovered by the Thruway Authority from the river immediately upstream (< 0.2 miles) of the Tappan Zee Bridge on July 18, 2014. Photo provided by AKRF.



Photograph 2 - Atlantic sturgeon (~27 inches total length) sighted and recovered by the Thruway Authority from the river immediately upstream (< 0.2 miles) of the Tappan Zee Bridge on July 18, 2014. Photo provided by AKRF.



Photograph 3 – Whitish and missing gill filaments indicated that this sturgeon was in the advanced stages of decomposition and was unsuitable for necropsy. Photo provided by AKRF.



Photograph 4 – Narrow mouth width relative to the interorbital width, which is characteristic of an Atlantic sturgeon. Photoprovided by AKRF.

STURGEON DATA COLLECTION FORM

For use in documenting sturgeon injury or mortality incidental to a federal action and exempted pursuant to a NMFS issued incidental take statement

| OBSERVER'S CONTACT INFO | RMATION | 1. | | EC 7 UNIQUE IDENTIFIER (PCTS No. ssigned by NMFS) |
|---|--|---|---|--|
| Name: First Justin Agency Affiliation NYSTA // Address 7250 Park Hanaver, MD Area code/Phone number | Last K 4KRF Email Lay Drive 21076 | (TB) ; Krebs@akrf.o | M | ATE REPORTED: onth 2 Day 18 Year 20 14 ATE EXAMINED: |
| Area code/Phone number | 646-388- | 9662 | | onth 2 Day / 8 Year 20 / 9 |
| SPECIES: (check one) shortnose sturgeon Atlantic sturgeon Unidentified Acipenser species Check "Unidentified" if uncertain. See reverse side of this form for aid in identification. | River/Body of W Descriptive local Bridge and | dater Hudson tion (be specific) < | City_ O.2 mil of the | re (bay, river, sound, inlet, etc) Tarrytown State NY es north of the Tappan Zee north of the Tappan Zee novigation chance gitude - 73. 28658 W (Dec. Degrees) |
| CARCASS CONDITION at time examined: (check one) 1 = Fresh dead 2 = Moderately decomposed 3 = Severely decomposed 4 = Dried carcass 5 = Skeletal, scutes & cartilage | SEX: Undetermined Female Ma How was sex determ Necropsy Eggs/milt presen Borescope | | Fork length Total length Length Mouth widt Interorbital | |
| TAGS PRESENT? Examined for Tag # None present | or external tags inclu Tag Type | uding fin clips? Ye | | Scanned for PIT tags? Yes No of tag on carcass |
| CARCASS DISPOSITION: (che 1 = Left where found 2 = Burled 3 = Collected for necropsy/salvage 4 = Frozen for later examination. 5 = Other (describe) Placed a file line and behind the Kingsland Park in | | Carcass Necropsid Yes No Date Necropsied: Necropsy Lead: | ed? | PHOTODOCUMENTATION: Photos/vide taken? Yes No Disposition of Photos/Video: |
| J | Yes X No How preserved | | Dispositio | on (person, affiliation, use) |
| | | | | |
| mments: Species identification Fin were not present Mentle wild the color | was not con Rostrum was | firmed Length | was income | conclusive. Scutes above the and to be an Atlantic stugger. Ital width. |

APPENDIX F

Incident Report: Sturgeon Take - Tappan Zee Replacement Project

Photographs should be taken and the following information should be collected from all sturgeon (alive and dead) found in association with the TZ project. Please submit all necropsy results (including sex and stomach contents) to NMFS upon receipt.

| 0 - 1 - 1 - 1 - 1 |
|---|
| Observer's full name: Ross Exter, AKRF |
| Reporter's full name: Justin Krobs, AKRF |
| Species Identification: Unconfirmed, but likely Atlantic studies |
| Describe project activities (i.e., dredging, pile driving, etc.) ongoing within 24 hours of observation: Pile driving, vessel activity |
| Date animal observed: 18 July 2014 Time animal observed: 1230 Date animal collected: 18 July 2014 Time animal collected: 1230 |
| Environmental conditions at time of observation (i.e., tidal stage, weather): Mid-lising file, fartly Cloudy, Calm |
| Water temperature (°C) at site and time of observation: Describe location of fish and how it was documented (i.e., observer on boat): Observer on boat - A KRE field crow. Trestageon was first abserved flow: In the over just apstram (co.2 miles) of the Tappan Zee Bridge. |
| Sturgeon Information: Species Possible Atlantic |
| Fork length (or total length) 27 inches Weight Not ressured |
| Condition of specimen/description of animal Moderately decomposed. Lacration on the caudal pedencie inclinating Possible vessel strike. Eyes of aque, gill filaments whitishora beent, moderate -dor of decay. |
| Fish Decomposed: NO SLIGHTLY MODERATELY SEVERELY Fish tagged: YES NO Please record all tag numbers. Tag # |
| Photograph attached: YES / NO |
| (please label species, date, geographic site and vessel name on back of photograph) |

Tappan Zee Hudson River Crossing Vessel-Based Monitoring Data Form

| Survey Information | Observation type (circle): Survey | Response |
|---------------------------------|-----------------------------------|-----------------------|
| Date: 7/18/ 2019 | Crew: JLC SAM | Vessel: Parteer |
| Construction Activity: Porth at | Survey Start Time: 0600 | Survey End Time: 1635 |

Weather/Water Conditions (Survey Only)

| Air Temperature (°C): 25 | Wind Direction: W Wind Speed (mph): 5 |
|------------------------------|---------------------------------------|
| Cloud Cover: Clear | Precipitation: Nore |
| Wave height: LIGH | Tide stage: 666 / flood |
| Water Temperature (°C): 25.4 | Water Salinity (ppt): 🗘 🚶 |

GPS Transect Information

| Transect ID Number | Start Time | Finish Time | Starting Loc. | Finish Loc. |
|--------------------|------------|-------------|---|---------------------------|
| 20140718-1 | 821 | 941 | 41° 04. 0046 73° 54. 7569 | 410 04, 3120 730 63, 2886 |
| 20140718-2 | 941 | 1113 | 41°04.3120 73° 53, 2886 | 41°04.3504 73°54.7472 |
| 20140718-3 | 1113 | 1239 | 41°04.364 73°54,7472 | 410 04.1605 73 54.6784 |
| 20140718-4 | 1239 | 1351 | 41004.1605 73054.6189 | 4184263 7353.2876 |
| 2014 0-218-5 | 1351 | 1540 | 41°04.2603 73°53.2876 | 4104.3694 7383.2740 |
| | | | | |
| | | | | |
| | | | *************************************** | |
| | | | | |
| | | | | |
| | | | | |

Observations (Survey Only)

| Other Fish Specie | es: | | | | |
|----------------------------|----------|------------------|-----------------|------------------------------|---|
| Species ID | Quantity | Time Observed | Transect Number | Location Observed (Lat/Long) | Condition (stunned, freshly dead, decaying) |
| Unidentificable Costish | <u>l</u> | 1244 | ě. | 41° 04 2250 75° 54.7068 | deaxing (sever) |
| | | | | | |
| | | | | | |
| | | | | | |

^{*}YYYYMMDDXXZZ (XX = Chronological sample # for ea. date, ZZ = Chronological fish # in ea. sample

| Discoverage/Servencing Bird Activity Observed (Circle) | X. | NI NI | |
|--|---------------------------------|--|---|
| Pisciverous/Scavenging Bird Activity Observed (Circle): Comments/Additional Observations: Obs 8 Hommer Standing up at | Y | (N) | |
| 0700 14 files total up at 0721 Hammer off cradle in air at 0730 Hammer on pile was template bubbles not actile as of 737 no hitting | | | |
| 0821 First strike is begin hammering at 0823 Observed start of hammering at 1322 Observed start of hammering at 1331 Hammond Offy themmer off pike at 1338 H off pike at 1338 H off pike at 1338 H off pike at 1407 h overly low over 1407 Hammer off and pile at 1407 H offy Hammer off and pile at 1407 H offy Hammering in progress e 14030 H | ammer on 6th pi ammer of 6th | pile pile ns on The pile lle + disconnected@ | : |
| Sturgeon Information | | | - |

Sturgeon Observed (circle): Y Recovered (circle): \mathbf{Y} N Time Observed: Species (SN/AT): Fish ID*: Location Recovered (Lat/Lon): Time Recovered: Water Depth @ Recovery Loc. (ft): Recovery Method: Recovered From (circle): River Scow Condition/Dispostion: Photo #s: Photo Descriptions: Weight (g): TL (mm): FL (mm): Interorbital Width (mm): Mouth Width (mm): Fin Clip? Y N PIT Tag Present? Y N PIT Tag Fitted? PIT Tag #: N Location Returned (Lat/Lon): Time Returned: Water Depth @ Return Loc. (ft): Return Method: Sturgeon Forms Completed (circle): Sample Collection Incident Report Salvage

^{*}YYYYMMDDXXZZ (XX = Chronological sample # for ea. date, ZZ = Chronological fish # in ea. sample