

**Dredging and Pile Driving Monitoring Plan**  
**Sturgeon Monitoring During Pile Driving**  
**60-day Report**  
**11/23/2014 – 01/17/2015**  
*for the*  
**New NY Bridge Project**

**Revision 0**  
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**Figure 1. GPS Transects December 10, 2014 (4-foot Piles)**

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## **1.0 Introduction**

This report summarizes the methods and results of sturgeon monitoring during permanent pile driving of six foot and four foot diameter piles for the period of November 23, 2014 to January 17, 2015. 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 September 23, 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 [REDACTED] piles [REDACTED] from the pile driving barge and a small vessel per the Plan. A barge-based monitor was on site for all piles except [REDACTED] on December 22, 2014<sup>1</sup>. A vessel-based monitor was on site for all piles driven during the reporting period (Appendix A).

On December 10, 2014 impact pile driving occurred at [REDACTED]. Per 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 December 10, 2014. Pile driving occurred during the flood and ebb current; subsequently, the fish monitoring crew completed several circular and sawtooth patterns north and south of the existing Tappan Zee Bridge during the appropriate current.

Vessel-based monitoring was performed onboard a TZC large crew boat on January 8, January 15, and January 16 due to substantial ice in the local marinas and Hudson River. TZC suspended small-vessel operation on January 8, 2015 and utilized three large, (approximately forty feet long) steel-hulled crew boats within the construction area. Vessel-based monitors conducted transects while aboard the crew vessel using a GPS unit throughout pile driving and up to an hour after, conditions permitting per the plan (Appendix A).

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<sup>1</sup> See NCR-0238 for more information.

### **3.0 Results**

A total of [REDACTED] piles were impact driven from November 23, 2014 through January 17, 2015. [REDACTED] piles were impact driven at [REDACTED] piles were partially impact driven at [REDACTED] and [REDACTED] piles were impact driven to final tip elevation at [REDACTED]

Monitoring activities and results from four-foot diameter piles are summarized in Appendix A.

#### **3.1 Observed Sturgeon**

No sturgeon were observed during the reporting period.

#### **3.2 Observed Non-sturgeon Species**

A total of seven fish, not including sturgeon, were observed during the reporting period. Observed species and quantities include six Atlantic menhaden and one striped bass. A summary of the dates, times, condition of the fish, and location of fish observed is provided in Appendix A.

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<sup>2</sup> Seven piles driven to final tip elevation.

<sup>3</sup> Eight piles were partially driven to reach splicing elevation or to allow adequate boom length for the IHC S-800 impact hammer.

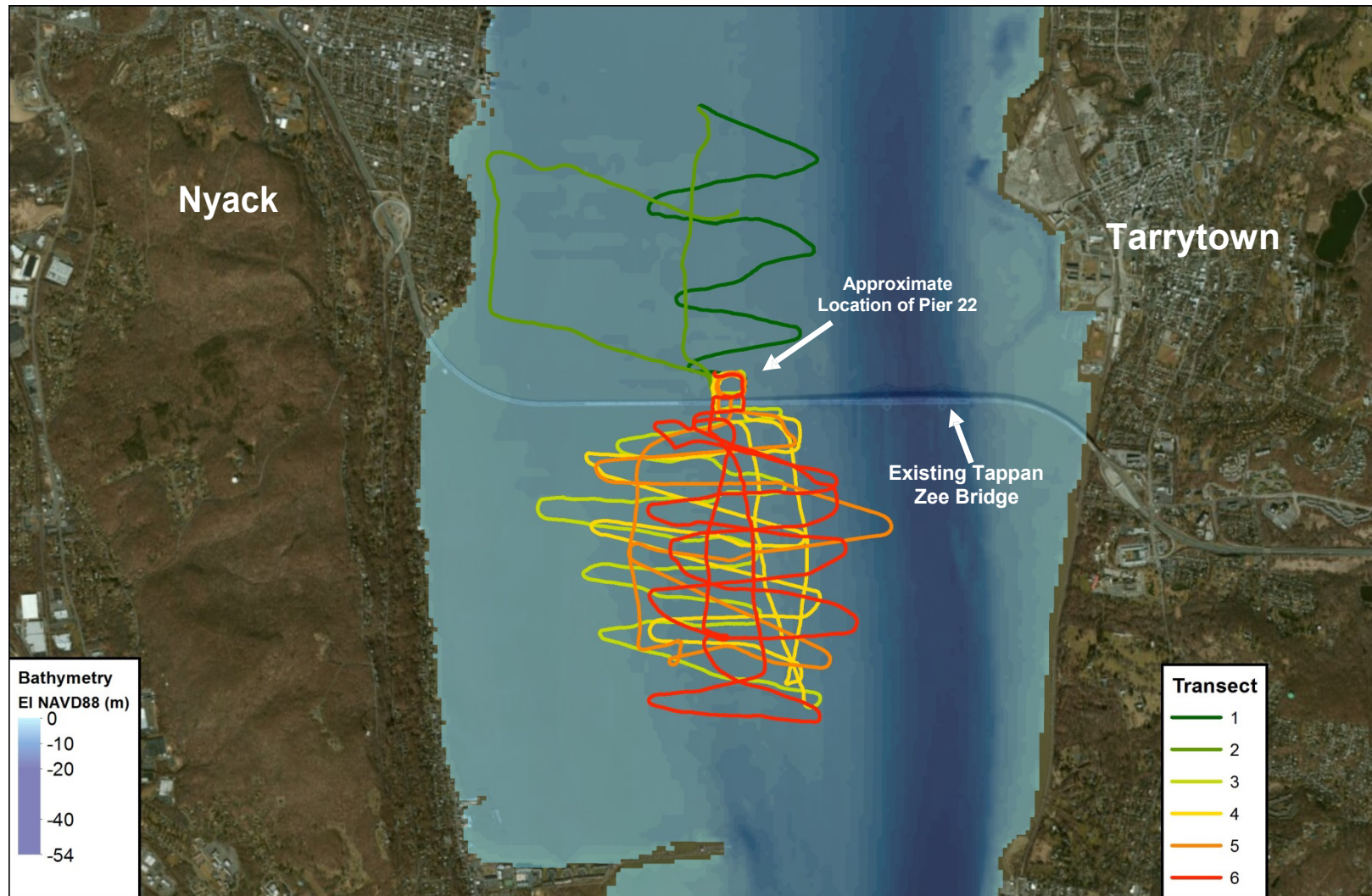


Figure 1.  
GPS Transects  
December 10, 2014



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## **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**  
**11/23/2014 - 1/17/2015**

Report Date: 1/23/2015  
Reporting Period: 11/23/2014 - 1/17/2015  
Number of Sturgeon Observed: 0

Date	Start - End Times of Impact Pile Driving	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)
12/2/2014	9:31 - 14:29	9:30 - 14:30	9:31 - 15:25	1	Atlantic Menhaden	NA	Stunned	10:02	41 03.7322°N / 73 54.2918°W
				0	NA	NA	NA	NA	NA
				0	NA	NA	NA	NA	NA
12/3/2014	10:32 - 13:33	10:30 - 13:38	10:32 - 14:47	0	NA	NA	NA	NA	NA
				0	NA	NA	NA	NA	NA
				0	NA	NA	NA	NA	NA
12/4/2014	8:38 - 12:47	8:35 - 12:48	8:35 - 16:23 <sup>a</sup>	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
				1	Striped Bass	NA	Stunned	14:30	41 04.3076°N / 73 53.7610°W
				1	Atlantic Menhaden	NA	Stunned	14:31	41 04.3076°N / 73 53.7610°W
	0	NA		NA	NA	NA	NA		
	0	NA		NA	NA	NA	NA		
14:52 - 15:43	14:52 - 15:45	0	NA	NA	NA	NA	NA		
12/8/2014	10:00 - 13:09	10:00 - 12:30	10:00 - 14:18	0	NA	NA	NA	NA	NA
				1	Atlantic Menhaden	NA	Freshly Dead	12:24	41.07174°N / 73.89574°W
				1	Atlantic Menhaden	NA	Decaying	14:10	41.06535°N / 73.89319°W
12/10/2014	12:59 - 16:56	12:57 - 17:00	11:05 - 17:50	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
12/18/2014	9:11 - 13:36	9:10 - 13:37	9:12 - 14:40	0	NA	NA	NA	NA	NA
				1	Atlantic Menhaden	NA	Stunned	11:09	41 03.9942°N / 73 53.1286°W
				0	NA	NA	NA	NA	NA
				1	Atlantic Menhaden	NA	Freshly Dead	13:38	41 03.7372°N / 73 53.9562°W
12/22/2014	10:57 - 12:12	b	10:56 - 13:17	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
				0	NA	NA	NA	NA	NA
12/23/2014	8:42 - 11:53	8:42 - 12:17	8:41 - 13:00	0	NA	NA	NA	NA	NA
				0	NA	NA	NA	NA	NA
				0	NA	NA	NA	NA	NA
				0	NA	NA	NA	NA	NA
1/8/2015	11:28 - 13:56	11:28 - 13:38	10:11 - 14:50 <sup>c</sup>	0	NA	NA	NA	NA	NA
				0	NA	NA	NA	NA	NA
				0	NA	NA	NA	NA	NA
1/15/2015	12:03 - 14:54	11:42 - 15:15	12:01 - 16:00 <sup>c</sup>	0	NA	NA	NA	NA	NA
				0	NA	NA	NA	NA	NA
				0	NA	NA	NA	NA	NA
				0	NA	NA	NA	NA	NA
1/16/2015	8:37 - 12:28	8:38 - 12:28	8:35 - 13:51 <sup>c</sup>	0	NA	NA	NA	NA	NA
				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.

<sup>a</sup> Monitoring continued per Dredging and Pile Driving Monitoring Plan until official sunset at 16:23.

<sup>b</sup> Barge-based monitoring not documented per plan. See NCR-0238 for more information.

<sup>c</sup> Vessel-based monitoring occurred aboard a TZC crew boat due to ice conditions in the river. Two observers remained aboard the TZC vessel through-out pile driving and monitored the construction zone (River Mile 27) per Dredging and Pile Driving Monitoring Plan.