

**New NY Bridge
Sturgeon Acoustic Telemetry
60-day Summary**



Deployment 6 Summary

Period: December 1, 2013 through February 28, 2014

Regulatory Requirements

Condition 40A of the NYSDEC Permit ID 3-9903-00043/00012 requires that the Project install stationary receivers capable of detecting sonic tags in the vicinity of any Authorized Activities. Data downloads shall occur every 60 days at minimum. "Following each data download, a report shall be submitted with data files, and a summary of fish present and/or moving through the construction zone."

The Endangered Species Act Section 7 Consultation Biological Opinion dated April 10, 2013, Term and Condition #10 to implement Reasonable and Prudent Measure #4, requires that "Information collected from any stationary receivers must be downloaded at least every 60 days. Preliminary reports containing information on the number of tagged sturgeon detected must be provided to NMFS on a regular basis, but no less frequently than every 60 days. If reports cannot be provided on that frequency, FHWA must provide an explanation to NMFS within the 60 day period and provide the report as soon as possible."

The following is the summary of detections from December 1, 2013 through February 28, 2014. As discussed previously with NMFS and NYSDEC, the submittal of the 60-day report for this period was delayed due to unfavorable weather conditions and ice on the Hudson River. The next 60-day report will cover the period from March 1 through April 30, 2014 and is expected to be submitted by May 23, 2014, two weeks following the completion of the next receiver download.

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Equipment and Location

Station	Deployment Location		Deployment Date and Time		Equipment Information			
	Latitude	Longitude	Date	Time	Vemco Receiver	Sync Tag ^b	Temp Tag	Lotek Receiver
St01	41.07458	-73.90994	11-Mar-14	01:03:52pm	122371	65006	--	--
St02 ^a	41.07491	-73.89890	18-Mar-14	4:54:34pm	122372	65011	--	--
St03	41.06591	-73.91053	11-Mar-14	3:43:29pm	122373	65008	--	--
St04	41.06618	-73.89923	11-Mar-14	4:23:36pm	122888	65010	--	--
St05 ^a	41.07371	-73.89345	7-Aug-13	07:45:36am	122891	65002	--	--
St06	41.07455	-73.88854	19-Mar-14	9:00:46am	122892	65014	--	265126 ^d
St07 ^a	41.07854	-73.87450	16-Oct-13	12:31:45pm	122887	65012	--	265127 ^e
St08	41.07276	-73.87302	18-Mar-14	01:22:34pm	122890	65013	--	--
St09 ^a	41.06912	-73.89254	18-Mar-14	11:11:42am	122893	65001	--	--
St10 ^a	41.06469	-73.89198	18-Sep-13	09:38:32am	122894	65003	--	265121 ^e
St11	41.06679	-73.87352	18-Mar-14	3:27:07pm	122889	65015	--	265119 ^d
St12	41.07645	-73.88470	10-Mar-14	12:18:37pm	122884	65016	--	--
St13	41.07606	-73.88082	10-Mar-14	04:40:15pm	122885	65017	--	--
St14	41.07290	-73.88536	10-Mar-14	03:50:17pm	122886	65019	13339	--
St15	41.07320	-73.88226	10-Mar-14	5:41:18pm	122883	65018	--	--
St16 ^a	41.07239	-73.87858	14-Oct-13	04:02:17pm	122879	65020	--	--
St17	41.06896	-73.88779	10-Mar-14	04:15:50pm	122881	65021	--	--
St18	41.06916	-73.88338	10-Mar-14	5:04:22pm	122880	65022	--	--
St19	41.06887	-73.87803	10-Mar-14	3:32:40pm	122876	65023	--	--
St20	41.06647	-73.88057	10-Mar-14	01:26:37pm	123572	65005	13338 ^c	--
St21	41.06591	-73.88511	10-Mar-14	11:56:17am	122877	65004	--	--
St22	41.06581	-73.87696	10-Mar-14	12:36:59pm	122878	65007	--	--
St23	41.07447	-73.91332	19-Mar-14	11:38:26am	122871	65024	--	--
St24	41.07335	-73.90403	11-Mar-14	1:55:50pm	122872	65027	--	--
St25	41.06873	-73.90501	11-Mar-14	3:15:19pm	122875	65026	--	--
St26	41.06832	-73.89621	11-Mar-14	4:42:43pm	122873	65025	--	--
St27	41.07514	-73.91241	11-Mar-14	12:00:21pm	123565	26747	--	--
St28	41.07065	-73.91371	11-Mar-14	10:54:27am	123568	26743	--	--
St29	41.07026	-73.90930	11-Mar-14	02:29:07pm	123566	26746	--	--
St30	41.07033	-73.91382	11-Mar-14	10:32:26am	123567	26741	--	--
St31	41.06994	-73.90966	11-Mar-14	11:12:08am	123569	26739	--	--
St32 ^a	41.07574	-73.89342	14-Oct-13	02:52:00pm	123570	26745	--	--

^aThese stations were not recovered with grappling gear during this download effort. Sync tags at stations 5, 7, 9, 10, and 32 are no longer transmitting and are presumed to be lost. Station 10 was lost previously and Station 5 has been lost twice to date. Station 2 sync tag continues to transmit but the original receiver is no longer attached to the mooring and has been replaced. Station 16 sync tag continues to transmit and the receiver is assumed to be recording. The acoustic release for this station does not respond to the transducer for and it is presumed that the buoy line is fouled. Efforts will be made to grapple for Station 16. Lost stations will be replaced following discussion with DEC and NMFS to determine placement locations to avoid further loss of receivers.

^bThe prefix for sync tag codes is "A69-1601-" and the prefix for temperature tags is "A69-9002-"

^cThe temperature tag at Station 20 was lost on October 20, 2013 and has not yet been replaced.

^dReceiver battery was dead, which prevented data download. Battery will be replaced as soon as practicable.

^eReceiver was lost and will be replaced as soon as practicable.

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Numbers of Fish Detected by Species

Species	Number Detected
Atlantic sturgeon	0
Shortnose sturgeon	4
Species unknown	2
Total	6

Compared to previous monitoring periods in 2013, very few detections of acoustic-tagged sturgeon were made during this deployment period.

Prior to summarizing tag detections, false detections were filtered from the dataset. False detections (i.e., detections of transmitter codes that aren't actually present) are inherent in all telemetry systems. Vemco outlines a methodology to filter the data further for Tag IDs that may not be legitimate fish detections (VEMCO Application Note DOC-004691 2012). This methodology involves filtering data based on intervals between successive detections, the programmed average transmission rate of the tags, and anticipated maximum residency.

Loss of receivers

Several receiver stations were lost during this deployment period (as described in the table on page 2). In particular, Stations 5, 9, 10, and 32 are located in a corridor that is frequented by vessel traffic. Stations 5 and 10 were not recovered during the early December download for Deployment 5. Based on sync tag detections, Stations 5 and 32 were lost on the same day, January 28th, within hours of one another. Two hours of grappling at each of these stations failed to recover the receivers. The mooring for Station 9 was recovered during this download but the mooring line was severed and the receiver was missing. Station 10 was not recovered for a second consecutive download event. The Thruway Authority is recommending that Stations 5 and 9 be moved to the bridge to avoid further loss of receivers and detection data.

The receiver at Station 2 was lost to corrosion of the hardware that fastened the receiver to the mooring frame. This receiver was replaced and metal hose clamps will be replaced with plastic fasteners to avoid further loss.

The mooring line for the receiver at Station 7 was recovered but the station itself could not be lifted from the river bottom. Later attempts grappled a metal cable that may be fouling the station; however, the sync tag is no longer transmitting for this station.

Despite the loss of receivers, the majority of stations were able to be downloaded from the shallow western side of the receiver array and the deep navigation channel on the eastern side of the array. It is unlikely that the low number of detections during this deployment period were a result of the loss of receivers between these two areas of the array.

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Atlantic sturgeon

Vemco Tag ID

None detected

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Shortnose sturgeon

Vemco Tag ID

A69-1303-10475

A69-1303-10802

A69-1303-10807

A69-1303-10810

Each of these shortnose sturgeon was tagged by DEC biologists.

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Unknown species

Vemco Tag ID

A69-1303-58605

A69-1601-28098

Unknown tag IDs do not match any of the sequences of known tag IDs. These tag IDs will be sent to Vemco, who will notify the tag owners. Any additional information provided to the Thruway Authority by the tag owners will be used to determine the species.