

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



TA_FHWA_03072_RPT_ENV

Deployment 11 Summary

Period: October 29, 2014 through December 15, 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.” Data files will be transmitted to the NYSDEC by the Thruway Authority when this summary report is submitted.

The Endangered Species Act Section 7 Consultation Biological Opinion dated April 2, 2014, Term and Condition #11 to implement Reasonable and Prudent Measure #6, requires that “Information collected from any stationary receivers must be downloaded at least every 60 days, unless there are weather or safety concerns in which case downloads must be made as soon as practicable after the relief of the weather or safety concern. 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 October 29, 2014 through December 15, 2014.

New Stations

To improve monitoring coverage in the northern area of the array and west of the navigation channel, two new stations (Stations 33 and 34) were deployed in December as discussed with DEC staff in New Paltz on November 6, 2014 (see Figure 1). The possible placement locations for the two new stations were constrained to the south by the presence of steel piles along the alignment of the new bridge and to the north by the swing radius of the moorings for construction barges. Despite those limitations, the current placement of the new stations is expected to increase the number of detections of acoustic-tagged fish in this part of the array. Based on estimates from the Thruway Authority’s range testing analysis (see Attachment C of the Sturgeon Acoustic Telemetry Monitoring Plan), the detection range of the new stations should be approximately 600-1,000 m. Following the next data download and Vemco’s positioning analysis, detection data and positions will be analyzed to confirm that acoustic-tagged sturgeon “in the vicinity of the bridge and construction zone north of the existing bridge, can be detected by at least three receivers” as required by Condition 40A of the DEC permit.

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Equipment and Location

Station	Deployment Location		Deployment Date and Time		Equipment Information			
	Latitude	Longitude	Date	Time	Vemco Receiver	Sync Tag ^e	Temp Tag	Lotek Receiver
St01	41.0745510	-73.9098880	29-Oct-14	11:27:09 AM	122371	65006	--	--
St02 ^a	41.0751381	-73.8988418	3-Jul-14	5:44:52 PM	123574	65011	--	--
St03	41.0664060	-73.9110461	29-Oct-14	1:19:32 PM	122373	65008	--	--
St04	41.0668128	-73.8997080	29-Oct-14	2:42:36 PM	122888	65010	--	--
St05	41.0665212	-73.8995928	28-Oct-14	2:58:36 PM	123573	26740	--	--
St06	Decommissioned				122892	65014	--	265126
St07 ^d	Decommissioned				122887	65012	--	265127
St08 ^a	41.0724296	-73.8733492	22-Aug-14	3:01:12 PM	122890	65013	--	--
St09	41.0698298	-73.8923686	28-Oct-14	2:58:55 PM	123571	26742	--	--
St10 ^d	Decommissioned				122894	65003	--	265121
St11	41.0667688	-73.8731350	30-Oct-14	12:24:21 PM	122889	65015	--	265119
St12 ^g	41.0764522	-73.8847001	10-Mar-14	4:18:37 PM	122884 ^g	65016	--	--
St13 ^a	41.0759160	-73.8807816	22-Aug-14	10:36:55 AM	122885	65017	--	--
St14	Decommissioned				122886	65019	13339	--
St15	41.0735294	-73.8823494	28-Oct-14	11:36:10 AM	122883	65018	--	--
St16	41.0730813	-73.8789994	4-Nov-14	1:36:08 PM	122879	65020	--	--
St17	41.0689435	-73.8874908	4-Nov-14	2:54:59 PM	122881	65021	--	--
St18 ^a	41.0690659	-73.8837919	22-Aug-14	12:26:45 PM	122880	65022	--	--
St19	41.0686852	-73.8784345	28-Oct-14	3:24:34 PM	122735	65023	--	--
St20 ^a	41.0661133	-73.8802760	25-Aug-14	12:01:25 PM	123572	65009	13338 ^f	--
St21	41.0668134	-73.8850517	22-Aug-14	12:26:45 PM	122877	65004	--	--
St22 ^a	41.0655986	-73.8771129	4-Nov-14	11:25:32 AM	122878	65007	--	--
St23 ^{a,b}	41.0745703	-73.9131982	21-Aug-14	12:38:57 PM	122871	65024	--	--
St24	41.0736221	-73.9051729	29-Oct-14	1:00:28 PM	124817	26744	--	--
St25	41.0689678	-73.9054488	29-Oct-14	1:52:47 PM	122875	65026	--	--
St26	41.0683299	-73.8961401	5-Nov-14	11:29:09 AM	122718	65025	--	--
St27 ^a	41.0756624	-73.9123129	29-Oct-14	11:27:10 AM	123565	26747	--	--
St28	41.0706298	-73.9136809	29-Oct-14	2:56:56 PM	123568	26738	--	--
St29	41.0702580	-73.9092860	29-Oct-14	2:57:49 PM	123566	26746	--	--
St30	41.0703343	-73.9138134	29-Oct-14	2:57:17 PM	123567	26741	--	--
St31	41.0699375	-73.9096412	29-Oct-14	2:58:11 PM	123569	26739	--	--
St32 ^d	Decommissioned				123570	26745	--	--
St33 ^c	41.0723708	-73.890814	15-Dec-14	11:52:00 AM	122731	65037	--	--
St34 ^c	41.0728583	-73.898142	15-Dec-14	11:36:00 AM	122732	65039	--	--

^aStations were not retrieved during the December data download.

^bStation was obstructed by a construction barge during the December data download.

^cStations were deployed to improve coverage in the vicinity of Stations 02, 05, and 06.

^dStations 7, 10, and 32 were determined to be unnecessary for sturgeon positioning based on stationary range testing using sync-tag detections and were decommissioned as discussed with DEC.

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

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

^gOriginal Station 12 (presumed to have been lost) was retrieved during this download; the replacement Station 12 was not downloaded in December.

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Numbers of Fish Detected by Species

Species	Number Detected
Atlantic sturgeon	15
Shortnose sturgeon	6
	3
Total	24

Fish tagged with Lotek dual-mode tags that were detected on both Vemco and Lotek receivers are counted once.

False detections (i.e., detections of transmitter codes for tag IDs not currently in use) are inherent in all telemetry systems. The False Detection Analysis (FDA) tool available in Vemco's Vue software was used to filter false detections from the dataset prior to summarizing detection data for this deployment period. The FDA tool uses a methodology that involves filtering data based on intervals between successive detections, the programmed average transmission rate of the tags, and anticipated maximum residency.

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Atlantic sturgeon

Vemco Tag ID

A69-1303-11133
A69-1303-11135
A69-1303-11146
A69-1303-11153
A69-1303-11154
A69-1303-11155
A69-1303-11157
A69-1303-11158
A69-1303-11159
A69-1303-11160
A69-1303-11161
A69-1303-11162
A69-1303-11185



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Shortnose sturgeon

Vemco Tag ID

A69-1303-10774

A69-1303-11134

A69-1303-11164

A69-1303-11188

A69-1303-11192

A69-1303-11198



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Vemco Tag ID



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