

cleanup of the Gowanus Canal

Progress Report: December 23, 2020

On the morning of Monday, November 16, dredging of RTA1 commenced. The Gowanus Canal Superfund Project Team (“Project Team”) began removing debris and sediment from in front of the former First Street Turning Basin. Dredging between the 3rd Street Bridge and Carroll Street Bridge continued throughout the week. The dredged sediments and debris were shuttled in smaller “mini” barges to the staging site at the corner of Huntington Street and Smith Street, where the materials were transferred to larger barges suitable for transport across the New York Harbor to the sediment processing facility in New Jersey. In parallel, the Project Team finalized preparations of the staging site located on the corner of Huntington Street and Smith Street for dredging support activities. These activities included positioning equipment used for dewatering dredged material.

As of December 18, 2020, 7,712 cubic yards of dredged material and debris has been transported by four large barges to the sediment processing facility in New Jersey. Water removed from dredged material at the staging site has been pumped to the onsite dredge water treatment system.

Photos of construction activities are provided on this, and the following, pages.



First dredge bucket from RTA1

An air curtain has been installed just south of the 3rd Street Bridge. The air curtain is a stream of air that produces a recirculation of the water on either side, such that suspended sediments are not transported downstream past the air curtain. This is an example of just one of several environmental controls in place to protect the areas not immediately adjacent the construction work.

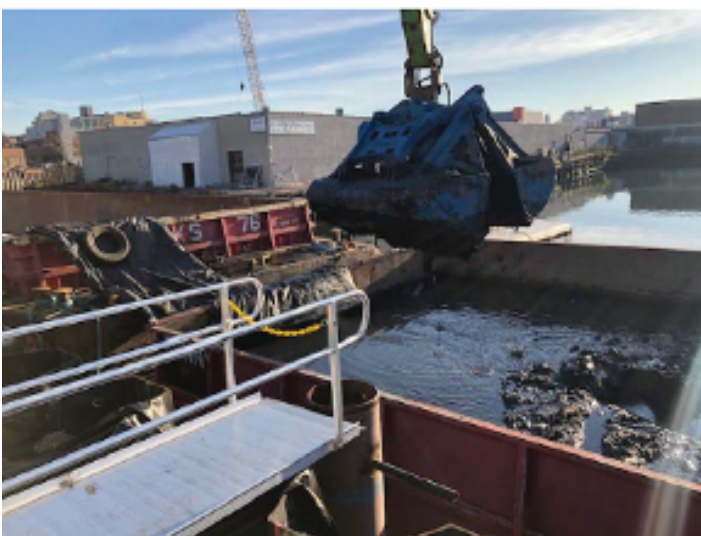




Extracting dolphin piles at the Union Street Bridge. Dolphin piles are being removed to install bridge supports and to dredge and cap the areas thoroughly.



A "mini" hopper shuttles sediment from the dredging area to the staging area, where the sediments are then subject to dewatering. The excess water is removed from the barge and treated on site. Dewatering the sediments is important for transport and to more efficiently process the sediment to render it suitable for beneficial use.



Following dewatering of the "mini" hopper, the sediments are transloaded into a larger hopper suitable for transport to the sediment processing facility in NJ.

Environmental Monitoring

Public and worker safety during construction is the number one priority. The Project Team has established a rigorous environmental monitoring program to ensure the safety of the site workers and the surrounding Gowanus community during remedial construction activities. During construction, we can expect some odors, temporary resuspension of sediment in the waterway, construction noise, and vibrations. Environmental monitoring includes air quality, water quality, noise, and vibration monitoring. Below is a summary of the monitoring data recorded during recent construction activities. Archived monitoring data from previous Periodic Progress Updates will be available in a new format in the coming weeks as we complete the upgrades to the Project Team's website.

Air and Odor Monitoring

To protect public health and the safety of workers onsite and the community where people live, work, and shop, The Project Team, under the supervision and at the direction of the EPA, conducts an extensive air monitoring program designed and implemented by a third party, independent of the construction contractor. Fourteen (14) automated air monitoring stations have been placed along the canal to detect the presence of volatile compounds and particulate matter (dust) 24 hours a day. Urban settings like the areas surrounding the Gowanus Canal contain background levels of volatile compounds and particulate matter in the air regardless of the occurrence of remedial construction activities, and the monitoring takes into account these background levels. Volatile compounds and particulate matter include both man-made and natural occurring sources such as smog, paint, asphalt paving, vehicular emissions (diesel exhaust), and even vegetation (plants). The 14 air monitoring stations measure concentrations of volatile organic compounds and particulate matter, both during cleanup activities and outside of cleanup work. The Project Team will receive an alert in real time of any increases in the compounds and particulate matter, whether they are attributed to remedial construction or non-construction activities.

In the event that these activities result in levels of volatile compounds and particulate matter above pre-set levels, our construction team is alerted immediately so that we can investigate and address the elevated concentrations through a variety of established protocols. This process of investigating and addressing these issues serves to protect workers and surrounding communities. In addition to the automated air monitors, the Project Team actively surveys the canal for odors during construction to identify and address nuisance odors that may be caused by the construction activities. Below are graphs indicating the results of air monitoring for volatile organics during last period's construction activities. Average daily concentrations are shown for each of the 14 stations in the network representing all work days during the calendar period November 16 to December 18, 2020. Station locations are shown in the schematic below. Meteorological data collected in the project staging area are shown in the Table below for the calendar period November 16- December 18, 2020, as well. There were no concentrations of volatile compounds or dust attributable to construction activities above the threshold during the same calendar period.



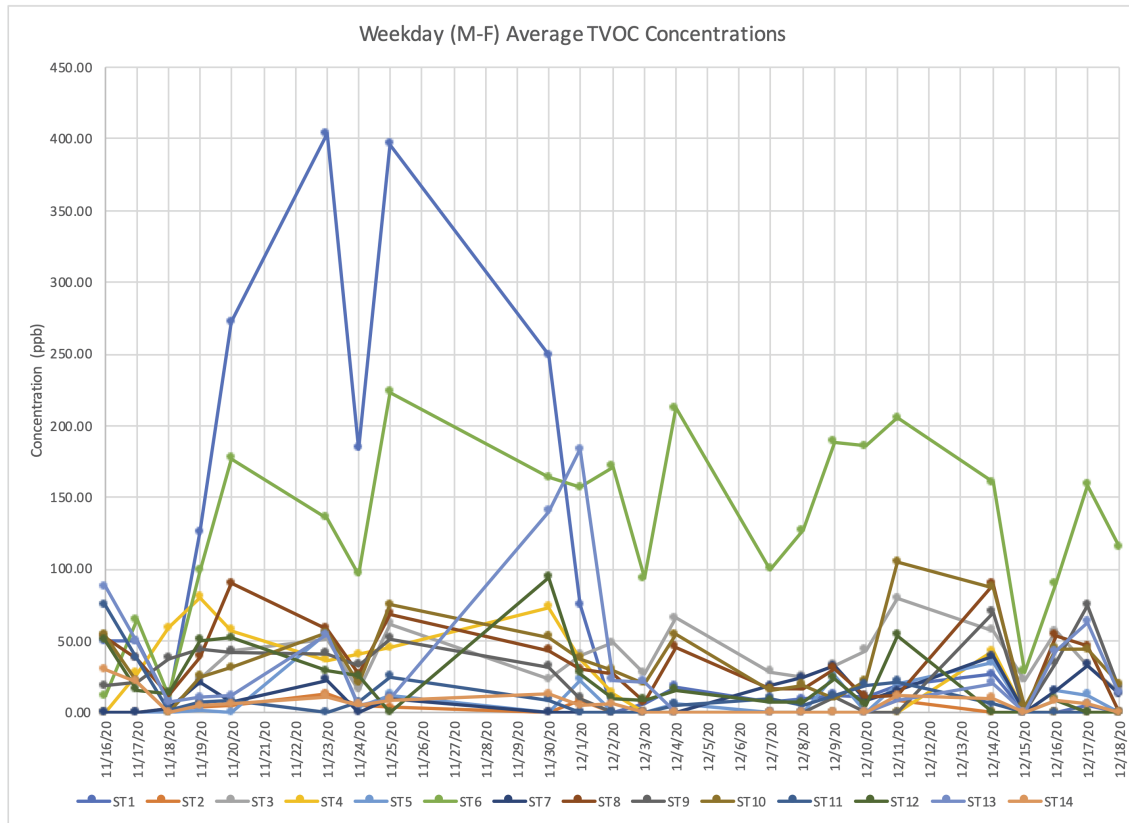
The full transport hopper takes sediment to a commercial processing facility in Jersey City, NJ where the sediment is processed to make it suitable for beneficial use at landfills and other industrial locations where extra soil is needed. Debris is also recovered during processing and screened for cultural resources.

Figure 1: Station Location Map



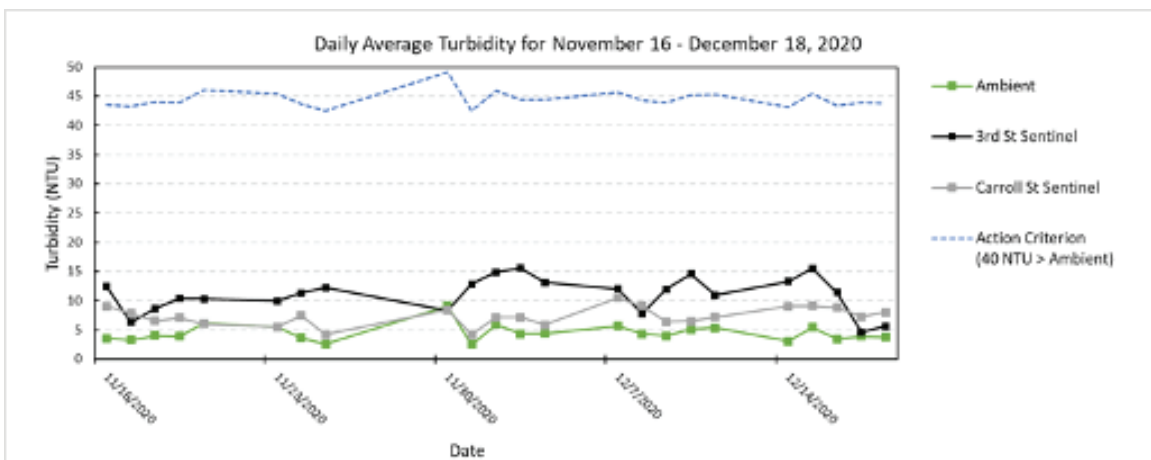
Summary of Daily Average Meteorological Parameters - Work Days Only

Date	Wind Direction (from)	Wind Speed (m/s)	Temperature (°F)	Humidity (%)	Barometric Pressure (inHg)
11/16/2020	W	5.2	50.5	46.0	29.90
11/17/2020	WNW	4.7	44.3	53.5	29.90
11/18/2020	NW	5.3	34.0	47.4	30.30
11/19/2020	SW	4.3	39.3	53.8	30.40
11/20/2020	SSW	3.4	52.2	55.0	30.30
11/23/2020	W	6.7	51.0	74.3	29.89
11/24/2020	W	4.3	44.7	54.8	30.21
11/25/2020	S	3.4	49.8	64.1	30.21
11/30/2020	SE	9.3	57.0	88.6	29.56
12/1/2020	SW	5.5	48.6	75.8	29.50
12/2/2020	WSW	6.8	39.7	64.9	29.85
12/3/2020	WSW	4.6	42.6	54.4	30.09
12/4/2020	SW	3.6	46.5	72.2	29.94
12/7/2020	WNW	4.6	35.0	60.0	29.65
12/8/2020	WNW	6.8	33.0	62.5	29.67
12/9/2020	WSW	4.6	34.6	74.3	29.72
12/10/2020	WNW	3.7	42.6	70.1	29.96
12/11/2020	SSW	2.2	46.9	72.9	30.05
12/14/2020	W	3.3	52.7	74.6	29.86
12/15/2020	NNW	4.9	40.3	76.3	29.83
12/16/2020	NW	5.8	35.0	51.4	30.17
12/17/2020	NE	10.6	28.8	66.5	30.15
12/18/2020	N	10.5	28.5	83.6	29.80



Water Quality Monitoring

The Project Team has placed water quality monitoring buoys in the canal to detect resuspension of sediment related to the construction activities. These buoys measure the turbidity (or cloudiness) of the water and transmit this data in real time to our monitoring personnel. Turbidity is a measure of how well light penetrates the water. If small solid particles are present, the water can appear murky or turbid. Turbidity can occur naturally through algae blooms and by human activities, such as rain storm runoff. The Project Team monitors the turbidity data to adjust construction activities in the canal if levels increase to an unacceptable level as a result of the construction. Below is a graph indicating turbidity monitoring data during last period's construction activities. No turbidity measurements in excess of the allowable threshold was measured, as demonstrated by the graph below.



Noise Monitoring

Significant noise during dredging activities is not anticipated. During bridge and bulkhead support work, noise monitors will be stationed along the canal to ensure that noise levels during construction comply with local noise ordinances. Noise is measured using the decibel scale. For example, normal conversation is typically around 60 decibels, an electric saw is around 100 decibels, and amplified rock music is around 120 decibels. Noise monitoring data was collected at the Staging Site and adjacent to dredging activities along the 365 Bond Street promenade. All noise monitoring data collected to date at these locations was below the 85 dBA allowable equivalent noise level.

Cultural Resources Monitoring

The Project Team monitors for potentially significant cultural resources during construction in accordance with the DRAFT Cultural Resources Monitoring Plan (revised September 2020).

The dredge material is being managed according to the Level 1 Archaeological Monitoring protocol outlined in the DRAFT Cultural Resource Monitoring Plan. This protocol calls for dredged soft sediments to be placed directly into small and large barges, floated to the processing facility, and screened over 4" bars on a vibrating platform. Items removed during the vibratory screening process are then sorted by trained personnel as per the DRAFT Cultural Resource Monitoring Plan. Items of potential interest (possible artifacts or objects of local interest) are placed in a separate stockpile and photographed daily for archaeologists to review. These items are then placed in a holding area for the archaeologist to inspect weekly. To date, the majority of the recovered items consisted of modern debris and timbers.