

**GOWANUS CANAL SUPERFUND SITE  
RTA2 REMEDIAL CONSTRUCTION  
Water Quality Monitoring Weekly Data Summary**

**PERIOD: February 18, 2025 – February 21, 2025**

**Date of Report: February 25, 2025**

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## 1. SCOPE OF MONITORING

### 1.1 Buoy Locations

In accordance with the Water Quality Monitoring Plan for In-waterway Construction Activities (WQMP) issued March 27, 2024, buoys equipped with multi-parameter water quality sondes, were deployed to monitor turbidity related to RTA2 construction activities. Buoys were deployed in the Fourth Street Turning Basin (TB4) to monitor background turbidity unaffected by in-water construction activities and at the North Carroll Street Bridge, which is referred to as the ambient buoy. A sentinel buoy was deployed north of 3<sup>rd</sup> Street Bridge (3SB), along the west bulkhead. These buoys (Figure 1) are in use to monitor the RTA2 pre-construction activities.

All readings from buoys were transmitted via telemetry at 15-minute intervals. The instrument used to collect turbidity from the buoys is an In-Situ VuLink (telemetry) and AquaTroll500 (sonde), equipped with optical sensors capable of reading turbidity levels with an accuracy of +/- 0.5 NTU.

### 1.2 Summary of Monitoring Adjustments during Construction

- August 9, 2024, after the conclusion of RTA1 WQMP, two additional buoys were added to the RTA2 WQMP, for a total of three sentinel buoys. The ambient buoy was moved to approximately ten meters north of Carroll Street Bridge, on the west side of the canal (ambient). A sentinel buoy was placed approximately twenty meters north of 3<sup>rd</sup> Street Bridge on the west side (3SB). A sentinel buoy was placed in Fourth Street Turning Basin (TB4). The 9<sup>th</sup> Street Bridge sentinel buoy (9SB) was not moved.
- To reduce instrument downtime, the 9th Street Bridge sentinel buoy (9SB) was relocated to the northeast side of the 9th Street Bridge on August 19, 2024. After two days of data collection, elevated turbidity readings were observed both during and outside of work hours. Consequently, on August 21, 2024, the buoy was moved again, this time to the northeast corner of the Hamilton Street Bridge.
- Turbidity readings at the Hamilton Street Bridge location exceeded 100 NTU both during and outside working hours. However, these readings were not representative of the actual turbidity within the RTA2 work area. Due to commercial traffic, a safe location for the sonde and buoy could not be found south of the 9th Street Bridge. Consequently, the sonde and buoy were relocated to the west side, 5 meters north of the 9th Street Bridge on Tuesday, August 27, 2024, at 08:15.
- Turbidity readings at 9SB were noted to be erratic and exceed 100 NTU both during and outside working hours. The buoy was moved approximately 20 meters north of 9<sup>th</sup> Street Bridge on Monday, September 9, 2024.
- On September 16, 2024, the 9SB was deselected from construction monitoring, as there are no construction activities in the main canal or in the vicinity of 9<sup>th</sup> Street Bridge. The

buoy will remain in the water to collect background data as it is believed this area has naturally high NTU readings. A spot check zero calibration was performed on the buoy on Wednesday, September 18, 2024 to confirm the sensors were reading properly during this background monitoring period.

- On November 7, 2024, the ambient sonde and buoy was moved to the center of Carroll Street Bridge in an effort to reduce instrument downtime due to poor cell signal. This area was found to have a 100% cellular signal.
- On November 18, 2024, the sentinel buoy in TB4 was deselected from construction monitoring due to instrument errors. The buoy will remain out of service until maintenance and field observations can be made.
- On November 25, 2024, the 9SB sonde and buoy were placed back into the water quality monitoring program.
- On December 18, 2024, the 9SB sonde and buoy were relocated south of 9<sup>th</sup> Street Bridge along the eastern bulkhead, to avoid construction vessel traffic and shallow waters which had been resulting in false elevated readings, particularly during low tide events.
- On February 12, 2025, after observing a pause in data transmission, the ambient sonde and buoy were moved in an attempt to get a better signal in the area. It was moved to approximately 150 feet north of Carroll Street Bridge, to the center of the canal. On February 14, 2025, with data transmission issues not resolving, the ambient sonde and buoy were moved to approximately 200 feet south of Union Street Bridge, in the center of the canal where stronger signal strength has been observed. A test upload was performed; however data did not upload. Further troubleshooting will be required.
- On February 18, 2025, the ambient sonde buoy was removed from service due to consistent instrumentation and telemetry issues. The buoy will remain out of service until repairs are made.



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<p><b>Legend</b></p> <ul style="list-style-type: none"> <li><span style="color: yellow;">●</span> Ambient Buoy</li> <li><span style="color: green;">●</span> Sentinel Buoy</li> <li><span style="color: orange;">▮</span> RTA1</li> <li><span style="color: blue;">▮</span> RTA2</li> <li><span style="color: green;">▮</span> RTA3</li> </ul>	<p>500 250 0 500 Feet</p>	
	<p><b>RTA2 Buoy Locations</b></p> <p>Gowanus Canal, Brooklyn, NY</p>	
	<p>B&amp;B Engineers &amp; Geologists of new york, p.c. <i>an affiliate of Geosyntec Consultants</i></p>	
	<p>Brooklyn, NY</p>	<p>February 18, 2025</p>
		<p>Figure <b>1</b></p>

### 1.3 Current Reporting Period Scope of Monitoring

During the week of February 18<sup>th</sup>, 2025, two buoys equipped with multi-parameter water quality sondes were deployed as described in Section 1.2.

All readings from buoys were transmitted via telemetry at 15-minute intervals. The instrument used to collect turbidity and DO from the buoys is an In-Situ VuLink (telemetry) and AquaTroll500 (sonde), equipped with optical sensors capable of reading turbidity levels with an accuracy of +/-0.5 NTU and DO levels with an accuracy of +/-0.1 mg/L.

Visual observations of turbidity and sheen are summarized in Section 4.

### 1.4 Meteorological Conditions

The weather conditions onsite were as follows:

Meteorological Parameters	2/18/2025	2/19/2025	2/20/2025	2/21//2025
<i>Wind Direction (from)</i>	WNW	WNW	NW	NW
<i>Wind Speed (mph)</i>	10.8	8.2	7.5	9.4
<i>Temperature (°F)</i>	23.4	23.4	23.3	26.9
<i>Humidity (%)</i>	38.6	48.9	64.0	53.3
<i>Barometric Pressure (inHg)</i>	30.05	30.16	29.89	30.09
<i>Precipitation (Inch)</i>	0	0	0	0

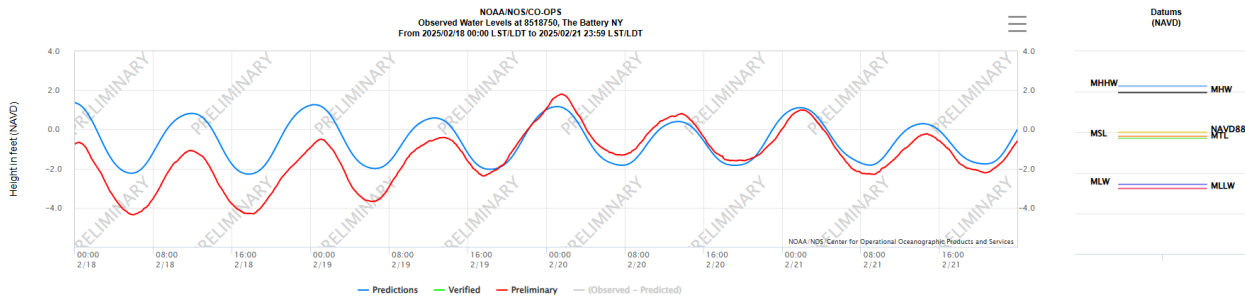
Table 1 - Summary of Weather Conditions for reporting period.

### 1.5 Tidal Conditions

Tidal data from the Battery (National Oceanic and Atmospheric Administration [NOAA] Station 8518750) was reviewed and is summarized as follows:

Date	Time (LST/LDT)	Predicted (ft)	Preliminary (ft)	High/Low
Tuesday, February 18, 2025	5:45 AM	-2.24	-4.35	L
Tuesday, February 18, 2025	11:54 AM	0.82	-1.08	H
Tuesday, February 18, 2025	5:41 PM	-2.28	-4.29	L
Wednesday, February 19, 2025	12:23 AM	1.27	-0.7	H
Wednesday, February 19, 2025	6:33 AM	-1.99	-3.66	L
Wednesday, February 19, 2025	12:37 PM	0.59	-0.5	H
Wednesday, February 19, 2025	6:14 PM	-2.04	-2.21	L
Thursday, February 20, 2025	1:03 AM	1.17	1.72	H
Thursday, February 20, 2025	7:40 AM	-1.83	-1.31	L
Thursday, February 20, 2025	1:23 PM	0.4	0.76	H
Thursday, February 20, 2025	7:09 PM	-1.83	-1.6	L
Friday, February 21, 2025	1:48 AM	1.11	0.99	H
Friday, February 21, 2025	8:53 AM	-1.82	-2.27	L
Friday, February 21, 2025	2:18 PM	0.29	-0.27	H
Friday, February 21, 2025	8:37 PM	-1.76	-2.21	L

**Table 2 - NOAA Preliminary observations and predictions.**



**Figure 2 - Tidal Chart for reporting period.**

## 2. REPORT OF EXCEEDANCES

No exceedances of the quantitative or action criterion occurred during this reporting period. Elevated readings by the 9SB buoy were determined to be unrelated to in-water construction activities and were a result of commercial vessel activities and sonde interference with the mudline during low tide events. Turbidity and floatables were observed throughout the reporting period unrelated to construction activities.

- **Trigger criterion** – Any of the following:
  - The rolling average of the relevant sentinel buoy turbidity measurements over a one-hour period exceeds the rolling average of the ambient buoy turbidity measurements by 20 NTU excluding any eliminated outlier measurements and in-waterway construction activities cannot be immediately excluded as the source following consultation with EPA; or

- Either an oil sheen or a turbidity plume is visually observed at the relevant sentinel buoy and in-waterway construction activities are readily identified as the source.
- **Action criterion** – Any of the following:
  - The rolling average of the turbidity measurements of the sentinel buoy outside of RTA2 over a one-hour period exceeds the rolling average of the ambient buoy turbidity measurements by 40 NTU excluding any eliminated outlier measurements and in-waterway construction activities cannot be immediately excluded as the source following consultation with EPA; or
  - Either an oil sheen or a turbidity plume is visually observed outside of RTA2, and any deployed engineering controls and in-waterway construction activities are readily identified as the source.

An outlier is defined as a reading that is outside the range of 50 to 200 percent of the average of the three previous readings. In addition, to be considered an outlier, the subsequent reading must return to a range of 75 to 133 percent of the average of the three readings preceding the outlier.

## **2.1 Response to Criteria Exceedances**

The trigger level criterion serves to provide early notification to the contractor of construction activities that may lead to an exceedance of the action level criterion. In the event of an exceedance to the trigger criterion, the contractor will not be stopped, and the contractor will be directed to investigate the source of the exceedance and evaluate Best Management Practices (BMPs). In the event of an exceedance to the action level criterion, in-waterway construction activities may be slowed or temporarily suspended as necessary while the contractor investigates the source of the exceedance and appropriate mitigation, and corrective measures are determined. A more detailed description of responses to exceedances of the trigger and action level criteria is provided in Section 4.2 of the WQMP.

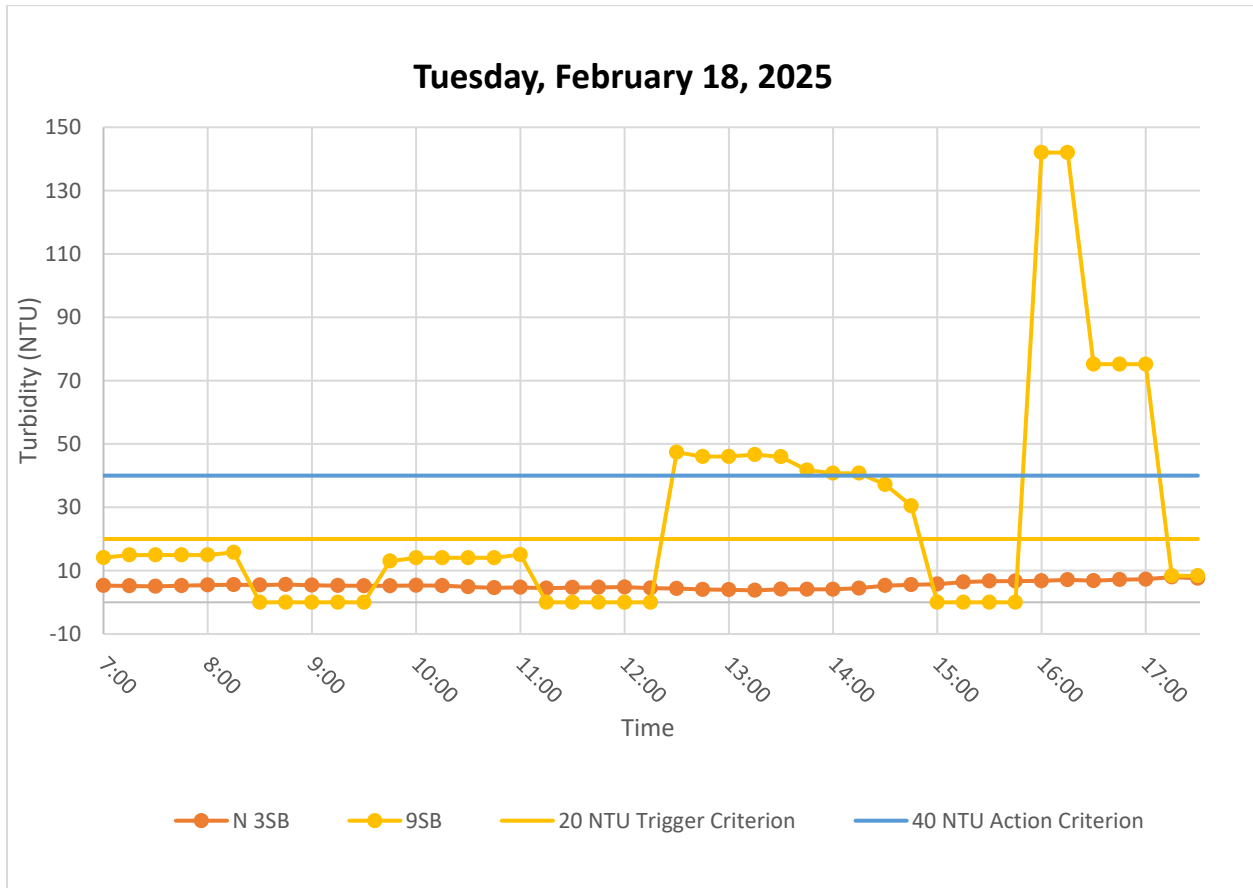
## **3. TURBIDITY BUOY DATA**

On February 18<sup>th</sup> the Ambient buoy was removed from service to have repairs made to the telemetry devices. As a result, the trigger and action criterion limits for the reporting period were set to 20 and 40 NTU, respectively, to allow for conservative monitoring of the sentinel buoy stations.

Throughout the reporting period, readings at the 3SB sonde remained relatively stable. No in-water construction related work was performed on Monday, February 17<sup>th</sup>, 2025, due to a holiday schedule. Therefore no data is being reported for that day. Elevated readings by the 9SB sonde were recorded between the times of 12:30 to 14:30 and 15:30 to 17:30 on Tuesday, February 18<sup>th</sup>, 2025, 08:00 to 10:30 on Wednesday, February 19<sup>th</sup>, 2025, and 16:30 to 17:30 February 20<sup>th</sup>, 2025. The elevated readings recorded on February 18<sup>th</sup> and February 19<sup>th</sup> occurred during low tide conditions, resulting in interference with the mudline, and periods of commercial vessel movement, resulting in increased prop wash and resuspension of sediment in the vicinity of the

9SB. The elevated readings recorded on February 20<sup>th</sup> occurred during a period of commercial vessel movement, resulting in increased prop wash and resuspension of sediment in the vicinity of the 9SB.

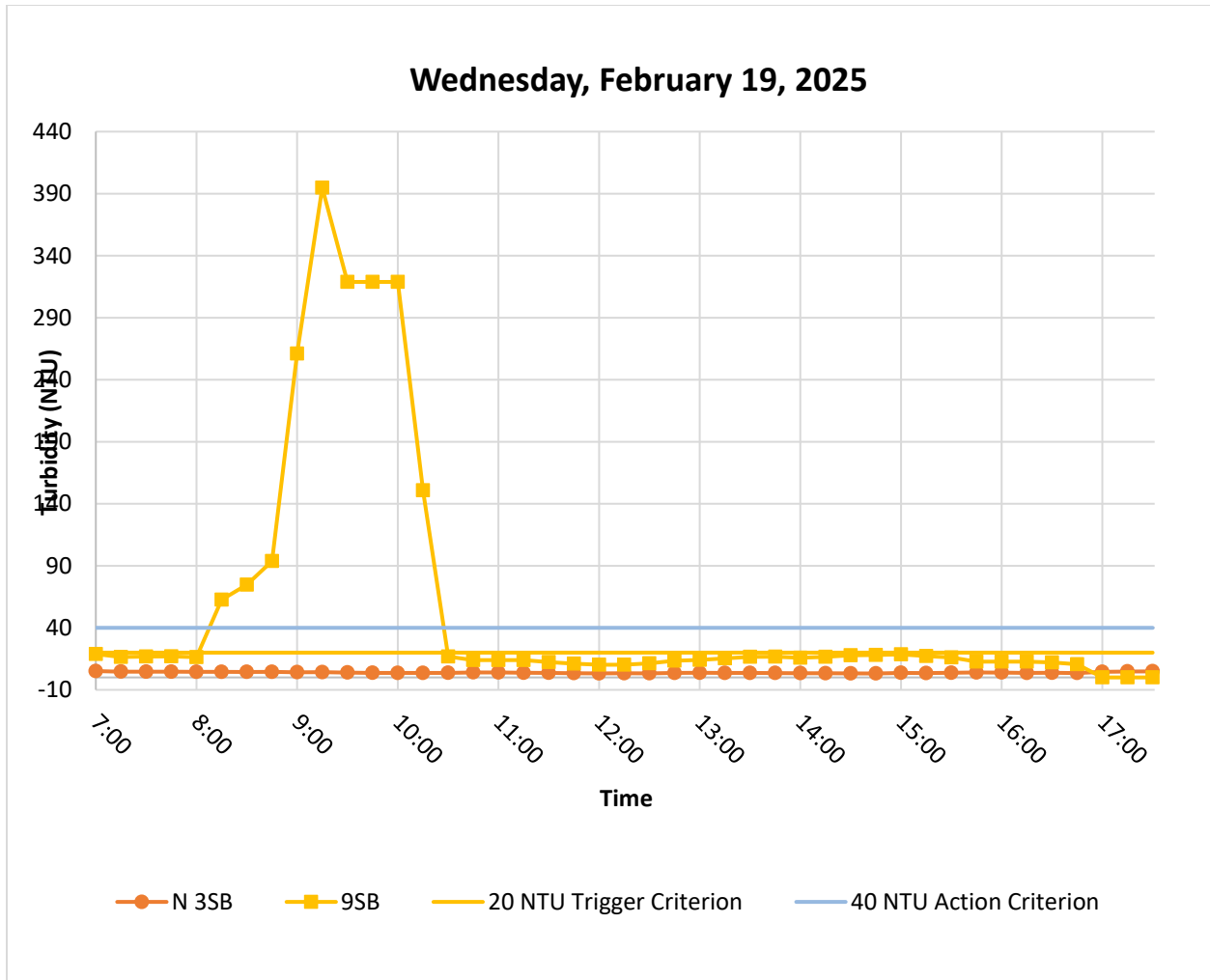
### 3.1 Tuesday, February 18, 2025



**Figure 3.** Hourly rolling average turbidity readings from 07:00 to 17:30. Elevated readings recorded by the 9SB sonde are related to commercial vessel traffic and low tide interference.

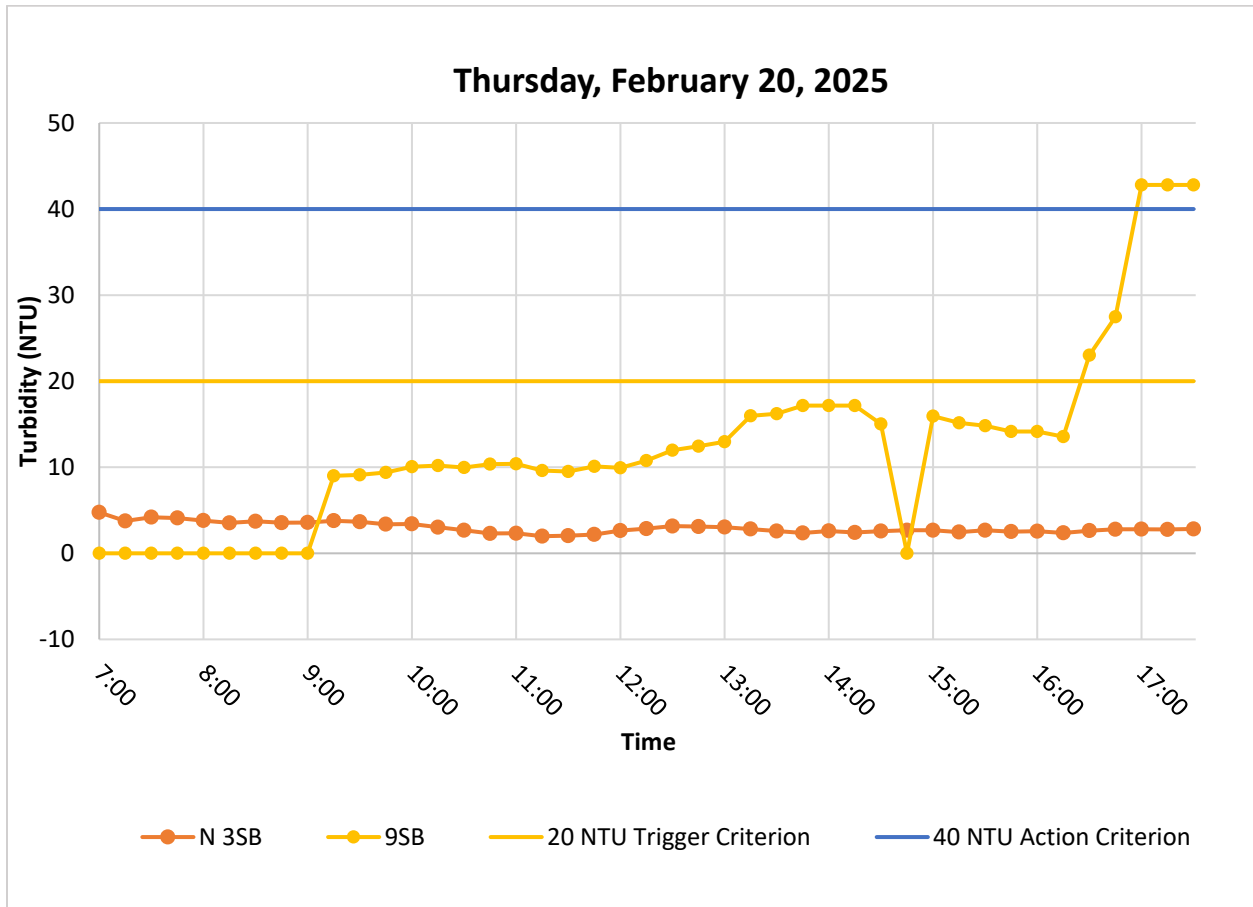


3.2 Wednesday, February 19, 2025



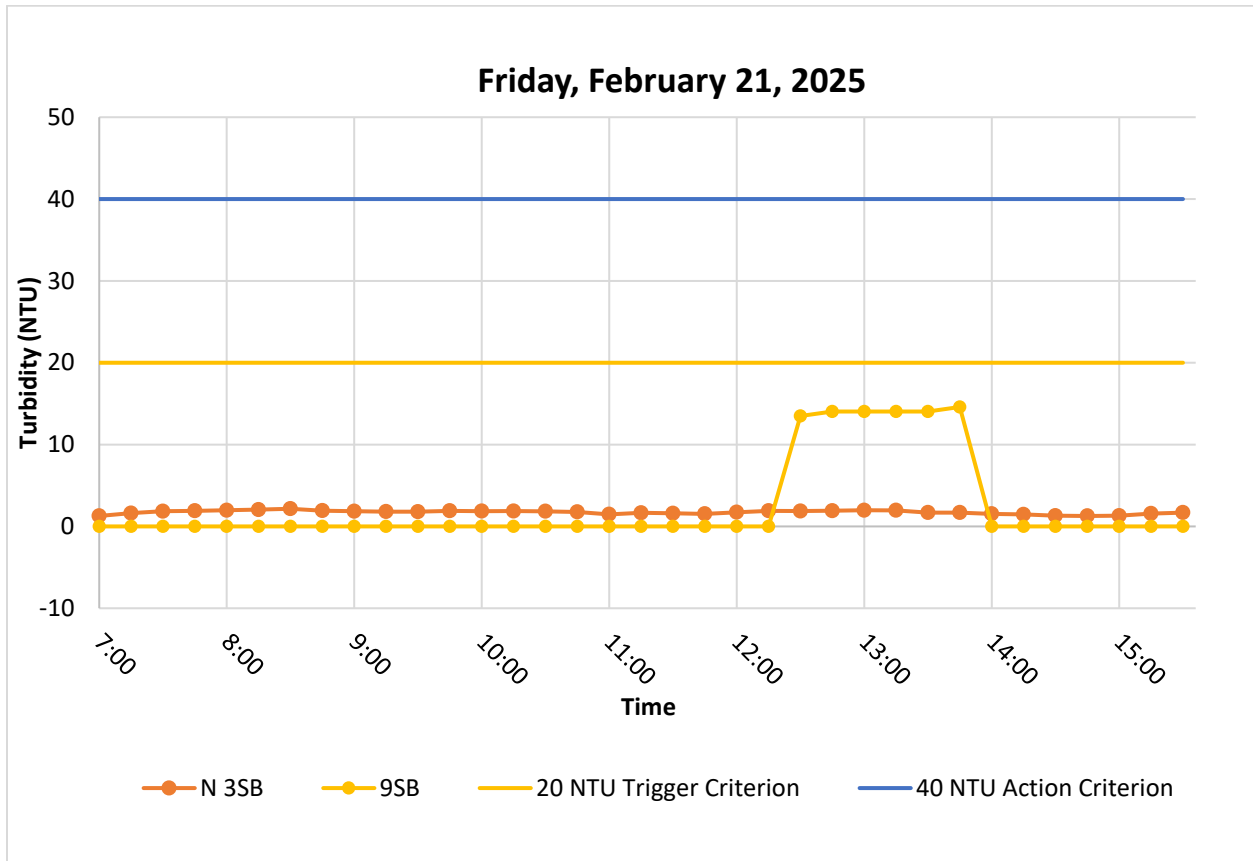
**Figure 4 .** Hourly rolling average turbidity readings from 07:00 to 17:30. Elevated reading recorded by the 9SB sonde are related to commercial vessel traffic and low tide interference.

3.3 Thursday, February 20, 2025



**Figure 5.** Hourly rolling average turbidity readings from 07:00 to 17:30. Elevated reading recorded by the 9SB sonde are related to commercial vessel traffic.

3.4 Friday, February 21, 2025



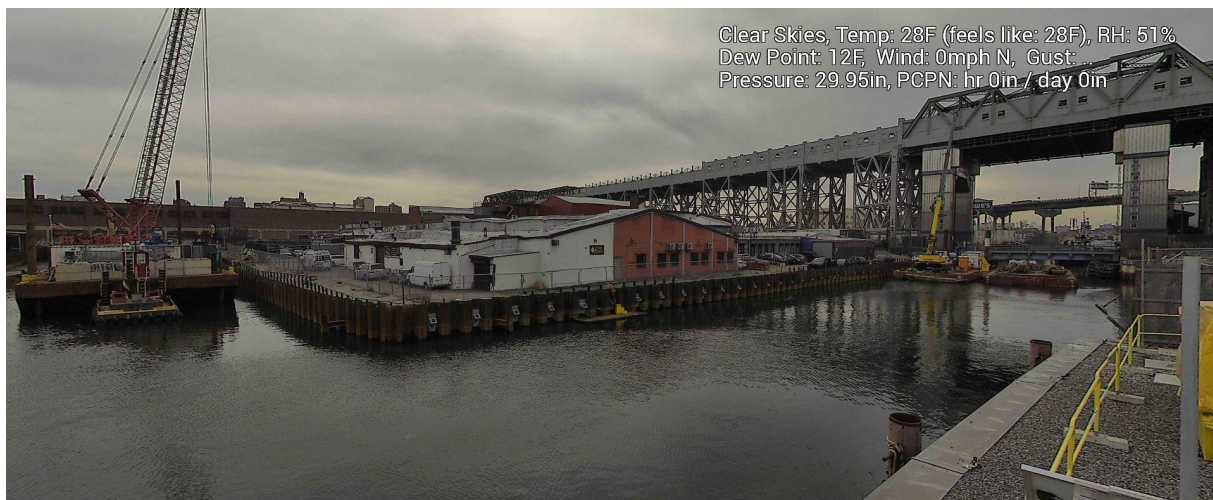
**Figure 6.** Hourly rolling average turbidity readings from 07:00 to 15:30.

#### 4. SUMMARY OF VISUAL OBSERVATIONS

Throughout the majority of the reporting period, sheens in the RTA2 areas ranged from minimal to moderate.



**Figure 7 – February 17, 2025.** General Conditions in Canal north of 9<sup>th</sup> Street Bridge near TB6 during in-waterway construction activities.



**Figure 8 – February 20, 2025.** General Conditions in Canal north of 9<sup>th</sup> Street Bridge near TB7 during in-waterway construction activities.



**Figure 9 – February 19, 2025.** General Conditions in Canal south of 3<sup>rd</sup> Street Bridge near TB4 during in-waterway construction activities.