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

PERIOD: July 15, 2024 – July 19, 2024

Date of Report: July 22, 2024

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# 1. SCOPE OF MONITORING

# 1.1 <u>Buoy Locations</u>

In accordance with the Water Quality Monitoring Plan for In-waterway Construction Activities (WQMP) two turbidity buoys were deployed to monitor turbidity related to bulkhead probing and large debris removal activities. A turbidity buoy was deployed in the Fourth Street Turning Basin (TB4) to monitor background turbidity unaffected by in-water construction activities and was referred to as the Ambient Buoy. A turbidity buoy was deployed north of 9<sup>th</sup> Street Bridge, along the west bulkhead. These buoys (Figure 1) are in use to monitor the limited RTA2 construction activities. Additional buoys will be added when intrusive dredging begins in the waterway.

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  $\pm$ -0.5 NTU and DO levels with an accuracy of  $\pm$ -0.1 mg/L.



#### 1.2 <u>Current Reporting Period Scope of Monitoring</u>

During the week of July 15, 2024, two turbidity buoys were deployed consisting of a Sentinel Buoy (9SB) approximately 10 meters north of the 9th Street Bridge on the west side, and an Ambient Buoy (Ambient) in the middle of Turning Basin Four.

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 AquaTrol1500 (sonde), equipped with optical sensors capable of reading turbidity levels with an accuracy of  $\pm$ -0.5 NTU and DO levels with an accuracy of  $\pm$ -0.1 mg/L.

Visual observations of ambient buoy, turbidity and sheen are summarized in Section 5. Visual observations of turbidity and sheen are summarized in Section 5.

# 1.3 <u>Meteorological Conditions</u>

A rainfall event which triggered a CSO discharge occurred on Wednesday, July 17 from 21:30PM to Thursday, July 18 at 01:30AM. The weather conditions onsite were as follows:

Meteorological Parameters	07/15/24	07/16/24	07/17/24	07/18/24	07/19/24
Wind Direction (from)	SSW	SW	SW	NW	W
Wind Speed (mph)	6.5	7.6	5.4	5.1	5.7
Temperature (°F)	82.7	85.3	80.0	78.3	75.5
Humidity (%)	73.5	64.8	77.6	68.2	54.5
Barometric Pressure (inHg)	29.76	29.70	29.73	29.80	29.99
Precipitation (Inch)	0.213	0.154	0.851	0	0

Table 1- Summary of Weather Conditions for reporting period.

## 1.4 <u>Tidal Conditions</u>

**Table 2** - Tidal data from the Battery (National Oceanic and Atmospheric Administration [NOAA]Station 8518750) was reviewed and is summarized as follows:

Date	Day	Time	Hgt	Time	Hgt	Time	Hgt	Time	Hgt
2024/07/15	Mon	03:24 AM	3.78 H	09:53 AM	1.13 L	4:07 PM	4.65 H	10:56 PM	1.27 L
2024/07/16	Tue	04:19 AM	3.69 H	10:45 AM	1.11 L	4:58 PM	4.79 H	11:48 PM	1.03 L
2024/07/17	Wed	05:25 AM	3.71 H	11:35 AM	1.02 L	5:51 PM	5.01 H		
2024/07/18	Thu	12:38 AM	0.76 L	06:25 AM	3.85 H	12:26 PM	0.88 L	6:41 PM	5.28 H
2024/07/19	Fri	01:28 AM	0.47 L	07:15 AM	4.07 H	1:16 PM	0.69 L	7:27 <b>PM</b>	5.56 H

Figure 2- Tidal Chart for reporting period.



Note: The interval is High/Low, the solid blue line depicts a curve fit between the high and low values and approximates the segments between. Disclaimer: These data are based upon the latest information available as of the date of your request, and may differ from the published tide tables.

# 2. **REPORT OF EXCEEDANCES**

No exceedances of the trigger or action criteria occurred during the reporting period due to construction activities. 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 onehour 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 inwaterway 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 <u>Response to Criteria Exceedances</u>

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 exceedances of the trigger and action level criteria is provided in Section 4.2 of the WQMP.

#### **3. TURBIDITY BUOY DATA**

Elevated turbidity was measured throughout RTA2 during the reporting period unrelated to construction activities and was detected both before and after active construction. During maintenance activities on Monday July 15, heavy biofilm was noted on both buoys.

#### 3.1 <u>Monday, July 15, 2024</u>

**Figure 3.** Hourly rolling average turbidity readings on Monday, July 15, 2024, from 7 AM to 3:30 PM.



Note: Elevated turbidity was measured throughout RTA2 unrelated to construction activities and was detected both before and after active construction.

#### 3.1 <u>Tuesday, July 16, 2024</u>

**Figure 4.** Hourly rolling average turbidity readings on Tuesday, July 16, 2024, from 7 AM to 3:30 PM.



Note: Elevated turbidity was measured throughout RTA2 unrelated to construction activities and was detected both before and after active construction.

### 3.1 <u>Wednesday July 17, 2024</u>

**Figure 5.** Hourly rolling average turbidity readings on Wednesday, July 17, 2024, from 7 AM to 3:30 PM.



Note: Elevated turbidity was measured throughout RTA2 unrelated to construction activities and was detected both before and after active construction.

#### 3.1 <u>Thursday, July 18, 2024</u>

**Figure 6.** Hourly rolling average turbidity readings on Thursday July 18, 2024, from 7 AM to 3:30 PM.



Note: Elevated turbidity was measured throughout RTA2 unrelated to construction activities and was detected both before and after active construction.

## 3.1 Friday, July 19, 2024

**Figure 7.** Hourly rolling average turbidity readings on Friday July 19, 2024, from 7 AM to 3:30 PM.



Note: Elevated turbidity was measured throughout RTA2 unrelated to construction activities and was detected both before and after active construction.

# 4. DISSOLVED OXYGEN MONITORING DATA

Dissolved oxygen measured at the monitoring buoys throughout the reporting is summarized below:

- Ambient
  - Average = 3.83 (+/-0.1) mg/L
  - Min = 0.0 (+/-0.1) mg/L on multiple days
  - Max = 17.47(+/-0.1) mg/L on Tuesday, July 16, 2024
- 9<sup>th</sup> Street Bridge (N 9SB)
  - Average = 2.94 (+/-0.1) mg/L
  - Min = 0.0 (+/-0.1) mg/L on multiple days
  - Max = 10.7 (+/-0.1) mg/L on Wednesday, July 17, 2024

### 5. SUMMARY OF VISUAL OBSERVATIONS

Visual indications of elevated turbidity unrelated to construction activities were observed throughout the reporting period. Sheens in areas of RTA2 were minimal. Turbid water was noted south of 3<sup>rd</sup> Street Bridge during and after work activities throughout the week. A rainfall event which triggered a CSO discharge occurred Wednesday, July 17 to Thursday, July 18 between 21:30 and 01:30AM.



**Figure 8 – July 15, 2024.** General Conditions in Canal north of 9<sup>th</sup> Street Bridge prior to work activities at 7:07AM.