

**GOWANUS CANAL SUPERFUND SITE  
RTA1 REMEDIAL CONSTRUCTION  
Water Quality Monitoring Weekly Data Summary**

**PERIOD: March 27 – March 31, 2023**

**Date of Report: April 4, 2023**

## **Report Contents**

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## **1. SCOPE OF MONITORING**

### **1.1 Current Buoy Locations**

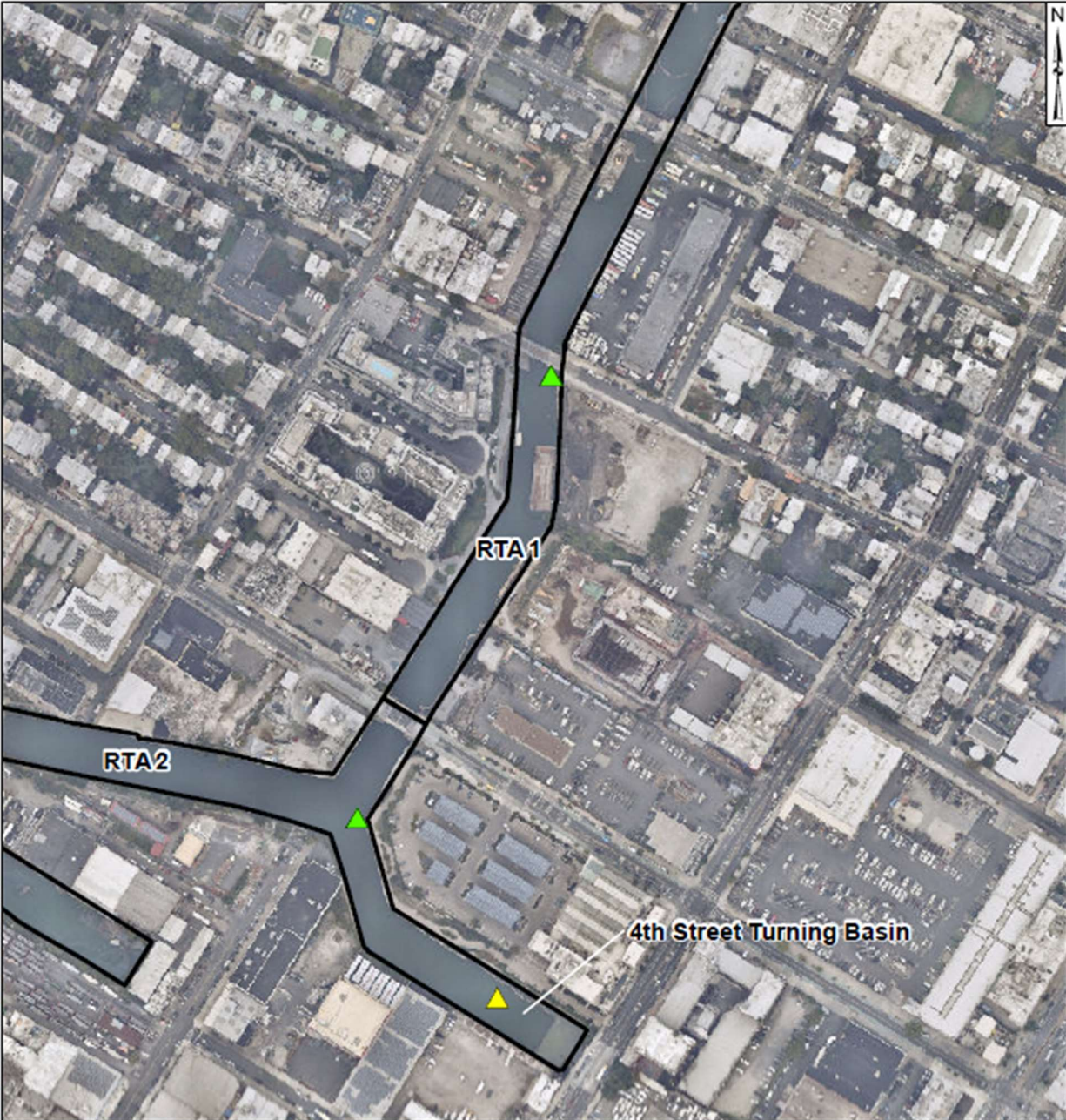
The following report summarizes water quality monitoring data collected during the week of March 27, 2023. accordance with the Water Quality Monitoring Plan for In-waterway Construction Activities (WQMP) three turbidity buoys were deployed to monitor turbidity related to dredging activities. One turbidity buoy was deployed just south of the 3<sup>rd</sup> Street Bridge outside of the air curtain and traditional turbidity curtain and is referred to as the 3<sup>rd</sup> Street Sentinel Buoy. A second turbidity buoy was deployed just south of Carroll St Bridge to monitor dredging activities north of Carroll Street Bridge and is referred to as the Carroll Street Sentinel Buoy. The third turbidity buoy was deployed in the Fourth Street Turning Basin in order to monitor background turbidity unaffected by in-water construction activities and is referred to as the Ambient Buoy.

Each turbidity buoy was equipped with a YSI EXO3 water quality meter with optical turbidity sensor. The buoys were field calibrated and programmed such that readings were collected every 15 minutes. After each measurement, the turbidity data were transmitted to a File Transfer Portal (FTP) site via telemetry. No handheld measurements were collected during this reporting period. Visual observations of turbidity and sheen are summarized in Section 4.

### **1.2 Previous Buoy Locations**

- On January 22, 2021, prior to dredging north of the Union Street Bridge, a fourth turbidity buoy was deployed just south of the Union Street Bridge and was referred to as the Union Street Sentinel Buoy. This fourth turbidity buoy was removed prior to the start of pipe pile installation.
- On Wednesday, September 22, 2021, the Carroll Street Sentinel Buoy was relocated to the west side of the canal where Degraw Street intersects the canal to monitor cofferdam removal activities conducted in the vicinity of the Flushing Tunnel. This buoy was renamed the Degraw Street Sentinel Buoy during cofferdam removal activities.
- On October 14, 2021, the Degraw Street Sentinel Buoy was removed from the canal for servicing. On October 20, 2021, the Degraw Street Sentinel Buoy was redeployed to its position south of the Carroll Street Bridge and was renamed to the Carroll Street Sentinel Buoy.
- On November 15, 2021, the Carroll Street Sentinel Buoy was moved to the Union Street Bridge and renamed the Union Street Sentinel Buoy. On December 3, 2021, the Union Street Buoy was removed from the canal for servicing and re-deployed at 3<sup>rd</sup> Street Bridge in preparation for the resumption of ISS operations. On December 8, 2021, a sentinel buoy was re-deployed just south of the Carroll Street Bridge.
- Since December 8, 2021, the sentinel buoy deployed at the northern-most portion of the canal has alternated positioning between the Union Street Bridge and Carroll Street Bridge locations based on the in-canal construction activities being conducted at any given time.

- On January 9, 2023, the Carroll Street Sentinel Buoy was moved to the Third Street Bridge location and renamed the Third Street Sentinel Buoy. Additionally, the former Third Street Sentinel Buoy was removed from the canal for servicing.
- On February 6, 2023, the newly serviced Third Street Sentinel Buoy was reinstalled at Third Street Bridge, and the former Carroll Street Sentinel Buoy was reinstalled at Carroll Street Bridge.
- The Ambient Buoy was removed from service on Friday, February 17, 2023, due to a faulty communications system. Investigation into the cause of this fault remains ongoing.



T:\Engineering\GowanusFR\10B\_GIS\mxd\Turbidity Buoy Locations.mxd, okoutlines, 1/23/2020

**Legend**

- ▲ Ambient Buoy
- ▲ Sentinel Buoy
- RTA Boundary



**Turbidity Buoy Locations**

Gowanus Canal, Brooklyn, NY

B&B Engineers & Geologists  
of new york, p.c.

*an affiliate of Geosyntec Consultants*

Brooklyn, NY

February 2023

Figure

**1**

## 2. REPORT OF EXCEEDANCES

No exceedances due to remedial construction-related activities to the quantitative trigger or action criteria were observed during the reporting period.

- **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 RTA1 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 RTA1 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.

No exceedances due to remedial construction-related activities to the quantitative trigger or action criteria were observed during the reporting period.

### 3. TURBIDITY BUOY DATA

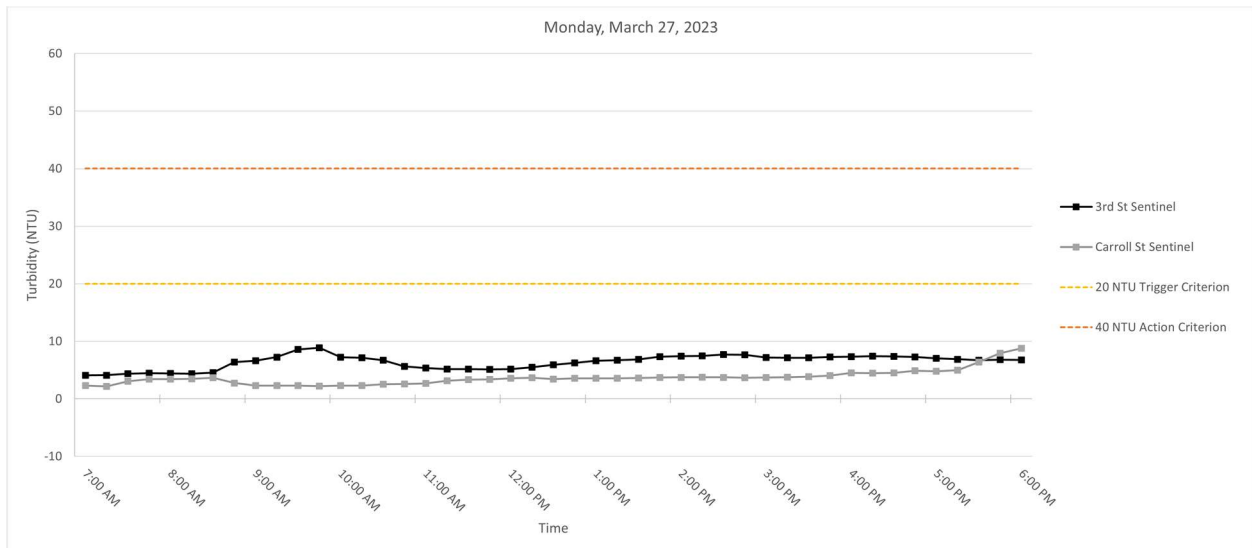
The following section provides turbidity data for the sentinel and ambient turbidity buoys from 7 AM to 6 PM from March 27 – March 31, 2023.

No exceedances due to remedial construction-related activities to the quantitative trigger or action criteria were observed during the reporting period.

Data from the Ambient Buoy was not reported during the reporting period due to a faulty communications system preventing transmission of readings. Procurement of replacement equipment is forthcoming.

#### 3.1 Monday, March 27, 2023

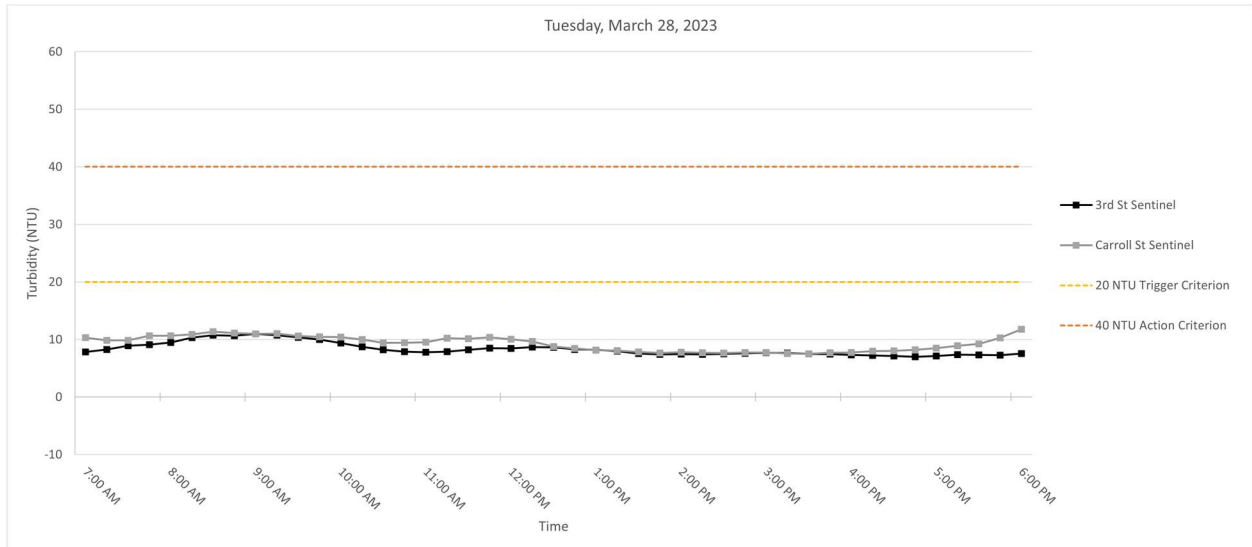
**Figure 3.** Hourly rolling average turbidity readings on Monday, March 27, 2023, from 7 AM to 6 PM.



**Note:** No outlier turbidity readings above 20 NTU were detected.

### 3.2 Tuesday, March 28, 2023

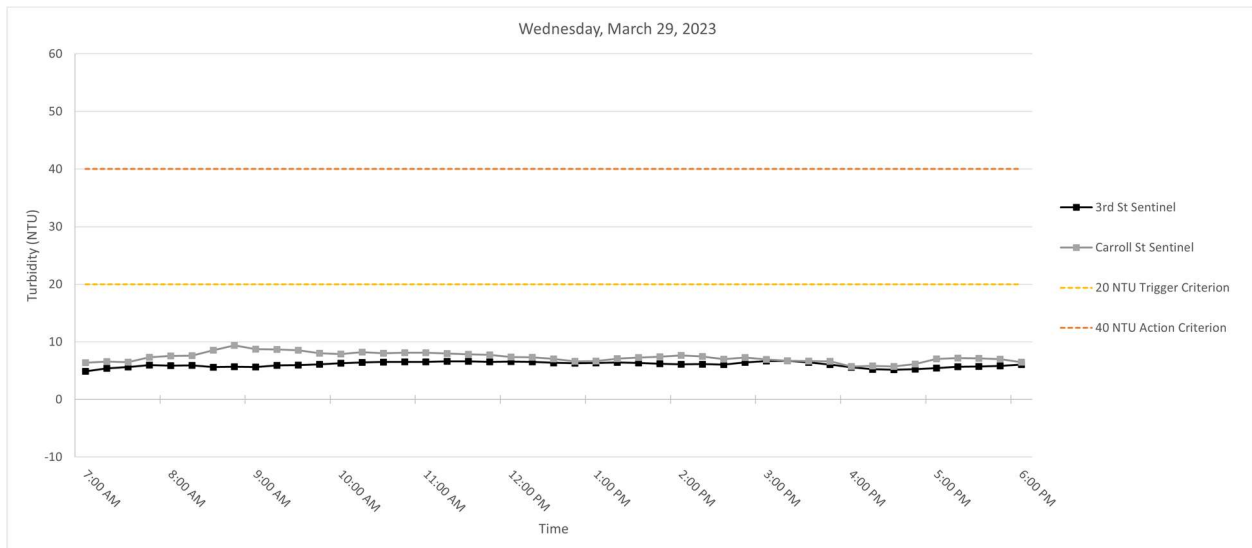
**Figure 3.** Hourly rolling average turbidity readings on Tuesday, March 28, 2023, from 7 AM to 6 PM.



**Note:** A turbidity reading from the Carroll Street Sentinel Buoy of 23.01 NTU at 7:30 AM was removed as an outlier in accordance with the water quality monitoring plan.

### 3.3 Wednesday, March 29, 2023

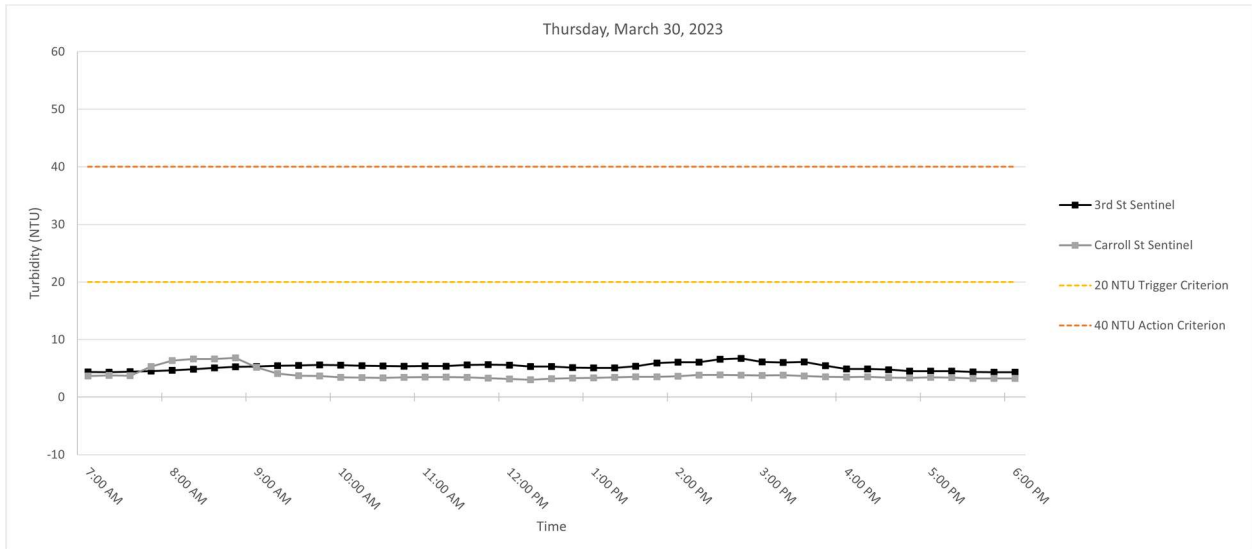
**Figure 4.** Hourly rolling average turbidity readings on Wednesday, March 29, 2023, from 7 AM to 6 PM.



**Note:** No outlier turbidity readings above 20 NTU were detected.

### 3.4 Thursday, March 30, 2023

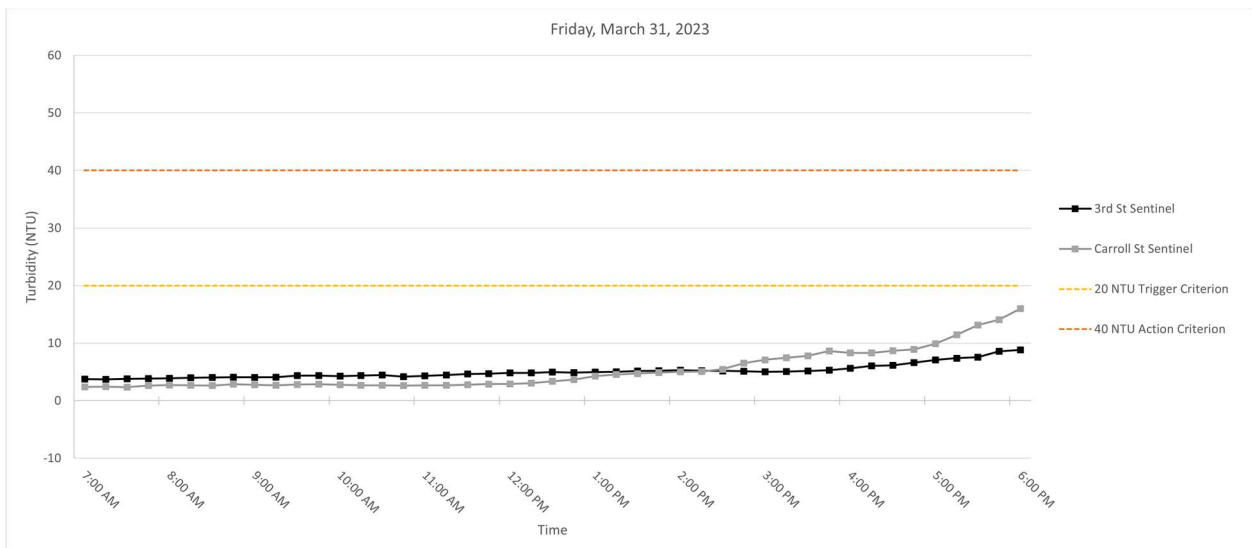
**Figure 5.** Hourly rolling average turbidity readings on Thursday, March 30, 2023, from 7 AM to 6 PM.



**Note:** No outlier turbidity readings above 20 NTU were detected.

### 3.5 Friday, March 31, 2023

**Figure 6.** Hourly rolling average turbidity readings on Friday, March 31, 2023, from 7 AM to 6 PM.



**Note:** No outlier turbidity readings above 20 NTU were detected.



## SUMMARY OF VISUAL OBSERVATIONS

Visual indications of elevated turbidity were periodically observed during the reporting period attributable to capping activities. Discharges were observed during the reporting period from storm water outfalls, including from the OH-005 CSO and adjacent storm drain, and the storm water outfall at the Bayside North construction site located between Union Street and Degraw Street. Additionally, turbid discharge was observed attributable to dewatering activities at the Salt Lot during the reporting period.

On March 27, 2023 at 7:15 AM, a minor oil spill occurred while starting a boat engine, resulting in approximately 8 ounces of motor oil being released into the canal. The contractor responded by using absorbent booms to contain and clean up the spill.

Photographs depicting conditions relevant to these events are shown below.



**Figure 7.** Turbid discharge from the storm water outfall at the Bayside North construction site located between Union Street and Degraw Street on March 27, 2023 at 7:45 AM.



**Figure 8.** Discharge from concrete plant on March 29, 2023 at 7:30 AM.

**APPENDIX A**  
**Turbidity Data Tables**

## Monday, March 27, 2023

Time	Turbidity (NTU)			Rolling Average Turbidity (NTU)			Difference (NTU)	
	Ambient	3rd Street	Carroll Street	Ambient	3rd Street	Carroll Street	3rd St - Ambient	Carroll St - Ambient
7:00:00	--	4.35	2.03	--	4.08	2.32	--	--
7:15:00	--	3.84	1.82	--	4.11	2.14	--	--
7:30:00	--	4.93	6.6	--	4.35	3.03	--	--
7:45:00	--	4.83	4.28	--	4.47	3.43	--	--
8:00:00	--	4.17	2.32	--	4.42	3.41	--	--
8:15:00	--	4.13	2.29	--	4.38	3.46	--	--
8:30:00	--	4.63	2.77	--	4.54	3.65	--	--
8:45:00	--	14.09	2.09	--	6.37	2.75	--	--
9:00:00	--	5.97	2.14	--	6.60	2.32	--	--
9:15:00	--	7.45	2.2	--	7.25	2.30	--	--
9:30:00	--	10.92	--	--	8.61	2.30	--	--
9:45:00	--	6.01	2.37	--	8.89	2.20	--	--
10:00:00	--	5.89	2.43	--	7.25	2.29	--	--
10:15:00	--	5.35	2.29	--	7.12	2.32	--	--
10:30:00	--	5.35	3.05	--	6.70	2.54	--	--
10:45:00	--	5.53	2.76	--	5.63	2.58	--	--
11:00:00	--	4.7	2.89	--	5.36	2.68	--	--
11:15:00	--	4.85	4.73	--	5.16	3.14	--	--
11:30:00	--	5.29	3.25	--	5.14	3.34	--	--
11:45:00	--	5.14	3.21	--	5.10	3.37	--	--
12:00:00	--	5.92	3.7	--	5.18	3.56	--	--
12:15:00	--	6.34	3.51	--	5.51	3.68	--	--
12:30:00	--	6.82	--	--	5.90	3.42	--	--
12:45:00	--	7.08	3.84	--	6.26	3.57	--	--
13:00:00	--	6.98	3.29	--	6.63	3.59	--	--
13:15:00	--	6.26	3.64	--	6.70	3.57	--	--
13:30:00	--	7.18	3.71	--	6.86	3.62	--	--
13:45:00	--	9.04	4.05	--	7.31	3.71	--	--
14:00:00	--	7.66	3.98	--	7.42	3.73	--	--
14:15:00	--	7.18	3.33	--	7.46	3.74	--	--
14:30:00	--	7.34	3.6	--	7.68	3.73	--	--
14:45:00	--	7.04	3.32	--	7.65	3.66	--	--
15:00:00	--	6.62	4.34	--	7.17	3.71	--	--
15:15:00	--	7.43	4.28	--	7.12	3.77	--	--
15:30:00	--	7.23	3.73	--	7.13	3.85	--	--
15:45:00	--	8	4.56	--	7.26	4.05	--	--
16:00:00	--	7.45	5.57	--	7.35	4.50	--	--
16:15:00	--	6.98	4.12	--	7.42	4.45	--	--
16:30:00	--	7.17	4.66	--	7.37	4.53	--	--
16:45:00	--	6.84	5.48	--	7.29	4.88	--	--
17:00:00	--	6.69	4.12	--	7.03	4.79	--	--
17:15:00	--	6.71	6.41	--	6.88	4.96	--	--
17:30:00	--	6.11	11.25	--	6.70	6.38	--	--
17:45:00	--	7.68	12.33	--	6.81	7.92	--	--
18:00:00	--	6.52	9.85	--	6.74	8.79	--	--

## Tuesday, March 28, 2023

Time	Turbidity (NTU)			Rolling Average Turbidity (NTU)			Difference (NTU)	
	Ambient	3rd Street	Carroll Street	Ambient	3rd Street	Carroll Street	3rd St - Ambient	Carroll St - Ambient
7:00:00	--	7.95	10.58	--	7.85	10.30	--	--
7:15:00	--	8.33	8.8	--	8.25	9.86	--	--
7:30:00	--	11.37	--	--	8.92	9.85	--	--
7:45:00	--	9.13	12.14	--	9.09	10.65	--	--
8:00:00	--	10.72	11.05	--	9.50	10.64	--	--
8:15:00	--	12.06	11.47	--	10.32	10.87	--	--
8:30:00	--	10.45	10.76	--	10.75	11.36	--	--
8:45:00	--	10.8	10.22	--	10.63	11.13	--	--
9:00:00	--	10.89	11.44	--	10.98	10.99	--	--
9:15:00	--	9.59	11.24	--	10.76	11.03	--	--
9:30:00	--	10.1	9.39	--	10.37	10.61	--	--
9:45:00	--	8.52	10.02	--	9.98	10.46	--	--
10:00:00	--	7.87	10	--	9.39	10.42	--	--
10:15:00	--	7.52	9.38	--	8.72	10.01	--	--
10:30:00	--	7.08	8.42	--	8.22	9.44	--	--
10:45:00	--	8.44	9.32	--	7.89	9.43	--	--
11:00:00	--	8.1	10.53	--	7.80	9.53	--	--
11:15:00	--	8.34	13.39	--	7.90	10.21	--	--
11:30:00	--	9.08	9.01	--	8.21	10.13	--	--
11:45:00	--	8.55	9.66	--	8.50	10.38	--	--
12:00:00	--	8.18	7.7	--	8.45	10.06	--	--
12:15:00	--	9.25	8.54	--	8.68	9.66	--	--
12:30:00	--	8.04	8.89	--	8.62	8.76	--	--
12:45:00	--	7.39	7.47	--	8.28	8.45	--	--
13:00:00	--	8.08	8.24	--	8.19	8.17	--	--
13:15:00	--	7.19	7.3	--	7.99	8.09	--	--
13:30:00	--	7.08	7.26	--	7.56	7.83	--	--
13:45:00	--	7.31	8.05	--	7.41	7.66	--	--
14:00:00	--	7.61	8.06	--	7.45	7.78	--	--
14:15:00	--	7.95	7.88	--	7.43	7.71	--	--
14:30:00	--	7.53	7.08	--	7.50	7.67	--	--
14:45:00	--	7.57	7.57	--	7.59	7.73	--	--
15:00:00	--	7.8	8.03	--	7.69	7.72	--	--
15:15:00	--	7.44	7.25	--	7.66	7.56	--	--
15:30:00	--	7.21	7.52	--	7.51	7.49	--	--
15:45:00	--	7.29	8.14	--	7.46	7.70	--	--
16:00:00	--	6.92	7.69	--	7.33	7.73	--	--
16:15:00	--	7.17	9.23	--	7.21	7.97	--	--
16:30:00	--	7.13	7.61	--	7.14	8.04	--	--
16:45:00	--	6.36	8.34	--	6.97	8.20	--	--
17:00:00	--	8.17	9.68	--	7.15	8.51	--	--
17:15:00	--	8.07	9.74	--	7.38	8.92	--	--
17:30:00	--	6.89	10.86	--	7.32	9.25	--	--
17:45:00	--	6.85	12.84	--	7.27	10.29	--	--
18:00:00	--	7.7	15.81	--	7.54	11.79	--	--

### Wednesday, March 29, 2023

Time	Turbidity (NTU)			Rolling Average Turbidity (NTU)			Difference (NTU)	
	Ambient	3rd Street	Carroll Street	Ambient	3rd Street	Carroll Street	3rd St - Ambient	Carroll St - Ambient
7:00:00	--	5.69	7.25	--	4.89	6.37	--	--
7:15:00	--	6.96	6.09	--	5.41	6.55	--	--
7:30:00	--	5.47	5.71	--	5.62	6.49	--	--
7:45:00	--	6.07	10.07	--	5.96	7.30	--	--
8:00:00	--	5.15	8.55	--	5.87	7.53	--	--
8:15:00	--	--	--	--	5.91	7.61	--	--
8:30:00	--	5.74	9.9	--	5.61	8.56	--	--
8:45:00	--	5.74	9	--	5.68	9.38	--	--
9:00:00	--	5.98	7.41	--	5.65	8.72	--	--
9:15:00	--	6.11	8.38	--	5.89	8.67	--	--
9:30:00	--	6.13	7.9	--	5.94	8.52	--	--
9:45:00	--	6.45	7.42	--	6.08	8.02	--	--
10:00:00	--	6.86	8.36	--	6.31	7.89	--	--
10:15:00	--	6.64	8.99	--	6.44	8.21	--	--
10:30:00	--	6.41	7.54	--	6.50	8.04	--	--
10:45:00	--	6.29	8.38	--	6.53	8.14	--	--
11:00:00	--	6.48	7.36	--	6.54	8.13	--	--
11:15:00	--	7.28	7.7	--	6.62	7.99	--	--
11:30:00	--	6.73	8.29	--	6.64	7.85	--	--
11:45:00	--	5.9	7	--	6.54	7.75	--	--
12:00:00	--	6.5	6.48	--	6.58	7.37	--	--
12:15:00	--	6.09	7.14	--	6.50	7.32	--	--
12:30:00	--	6.57	6.22	--	6.36	7.03	--	--
12:45:00	--	6.33	6.19	--	6.28	6.61	--	--
13:00:00	--	6.16	7.23	--	6.33	6.65	--	--
13:15:00	--	6.88	8.72	--	6.41	7.10	--	--
13:30:00	--	5.65	7.94	--	6.32	7.26	--	--
13:45:00	--	6.03	7.08	--	6.21	7.43	--	--
14:00:00	--	5.7	7.3	--	6.08	7.65	--	--
14:15:00	--	6.35	6.24	--	6.12	7.46	--	--
14:30:00	--	6.63	6.39	--	6.07	6.99	--	--
14:45:00	--	7.42	9.42	--	6.43	7.29	--	--
15:00:00	--	7.29	5.32	--	6.68	6.93	--	--
15:15:00	--	5.89	6.25	--	6.72	6.72	--	--
15:30:00	--	4.88	5.87	--	6.42	6.65	--	--
15:45:00	--	4.72	6.17	--	6.04	6.61	--	--
16:00:00	--	5.18	5.05	--	5.59	5.73	--	--
16:15:00	--	5.49	5.64	--	5.23	5.80	--	--
16:30:00	--	5.63	5.89	--	5.18	5.72	--	--
16:45:00	--	5.15	7.91	--	5.23	6.13	--	--
17:00:00	--	5.8	10.59	--	5.45	7.02	--	--
17:15:00	--	6.23	5.84	--	5.66	7.17	--	--
17:30:00	--	5.88	5.36	--	5.74	7.12	--	--
17:45:00	--	6.01	5.22	--	5.81	6.98	--	--
18:00:00	--	6.27	5.31	--	6.04	6.46	--	--

## Thursday, March 30, 2023

Time	Turbidity (NTU)			Rolling Average Turbidity (NTU)			Difference (NTU)	
	Ambient	3rd Street	Carroll Street	Ambient	3rd Street	Carroll Street	3rd St - Ambient	Carroll St - Ambient
7:00:00	--	4.39	4.11	--	4.38	3.67	--	--
7:15:00	--	4.2	3.59	--	4.34	3.75	--	--
7:30:00	--	4.74	2.97	--	4.42	3.73	--	--
7:45:00	--	5.08	11.86	--	4.54	5.32	--	--
8:00:00	--	4.88	9.24	--	4.66	6.35	--	--
8:15:00	--	5.32	5.47	--	4.84	6.63	--	--
8:30:00	--	5.31	3.7	--	5.07	6.65	--	--
8:45:00	--	5.64	3.86	--	5.25	6.83	--	--
9:00:00	--	5.38	3.58	--	5.31	5.17	--	--
9:15:00	--	5.58	3.81	--	5.45	4.08	--	--
9:30:00	--	5.65	3.66	--	5.51	3.72	--	--
9:45:00	--	5.63	3.36	--	5.58	3.65	--	--
10:00:00	--	5.46	2.86	--	5.54	3.45	--	--
10:15:00	--	4.96	3.34	--	5.46	3.41	--	--
10:30:00	--	5.34	3.55	--	5.41	3.35	--	--
10:45:00	--	5.46	3.99	--	5.37	3.42	--	--
11:00:00	--	5.78	3.79	--	5.40	3.51	--	--
11:15:00	--	--	2.74	--	5.39	3.48	--	--
11:30:00	--	5.85	3.02	--	5.61	3.42	--	--
11:45:00	--	5.52	2.99	--	5.65	3.31	--	--
12:00:00	--	5.14	3.23	--	5.57	3.15	--	--
12:15:00	--	4.82	3.18	--	5.33	3.03	--	--
12:30:00	--	5.16	3.56	--	5.30	3.20	--	--
12:45:00	--	5.07	3.46	--	5.14	3.28	--	--
13:00:00	--	5.2	3.25	--	5.08	3.34	--	--
13:15:00	--	5.16	3.71	--	5.08	3.43	--	--
13:30:00	--	6.26	3.65	--	5.37	3.53	--	--
13:45:00	--	8.02	--	--	5.94	3.52	--	--
14:00:00	--	5.67	3.89	--	6.06	3.63	--	--
14:15:00	--	5.13	4.1	--	6.05	3.84	--	--
14:30:00	--	7.75	3.72	--	6.57	3.84	--	--
14:45:00	--	7.12	3.61	--	6.74	3.83	--	--
15:00:00	--	4.98	3.47	--	6.13	3.76	--	--
15:15:00	--	5.02	4.06	--	6.00	3.79	--	--
15:30:00	--	5.7	3.5	--	6.11	3.67	--	--
15:45:00	--	4.43	3.08	--	5.45	3.54	--	--
16:00:00	--	4.34	3.3	--	4.89	3.48	--	--
16:15:00	--	4.97	3.67	--	4.89	3.52	--	--
16:30:00	--	4.43	3.42	--	4.77	3.39	--	--
16:45:00	--	4.41	3.27	--	4.52	3.35	--	--
17:00:00	--	4.47	3.45	--	4.52	3.42	--	--
17:15:00	--	4.25	3.18	--	4.51	3.40	--	--
17:30:00	--	4.34	3	--	4.38	3.26	--	--
17:45:00	--	4.25	3.3	--	4.34	3.24	--	--
18:00:00	--	4.3	3.29	--	4.32	3.24	--	--

## Friday, March 31, 2023

Time	Turbidity (NTU)			Rolling Average Turbidity (NTU)			Difference (NTU)	
	Ambient	3rd Street	Carroll Street	Ambient	3rd Street	Carroll Street	3rd St - Ambient	Carroll St - Ambient
7:00:00	--	3.74	2.63	--	3.76	2.38	--	--
7:15:00	--	3.67	2.79	--	3.73	2.45	--	--
7:30:00	--	3.99	1.96	--	3.79	2.34	--	--
7:45:00	--	4.1	3.54	--	3.85	2.61	--	--
8:00:00	--	3.94	2.59	--	3.89	2.70	--	--
8:15:00	--	4.2	2.45	--	3.98	2.67	--	--
8:30:00	--	4	2.68	--	4.05	2.64	--	--
8:45:00	--	4.16	3.1	--	4.08	2.87	--	--
9:00:00	--	3.99	2.92	--	4.06	2.75	--	--
9:15:00	--	4.08	2.31	--	4.09	2.69	--	--
9:30:00	--	5.61	3.08	--	4.37	2.82	--	--
9:45:00	--	3.94	2.86	--	4.36	2.85	--	--
10:00:00	--	3.81	2.65	--	4.29	2.76	--	--
10:15:00	--	4.4	2.45	--	4.37	2.67	--	--
10:30:00	--	4.45	2.32	--	4.44	2.67	--	--
10:45:00	--	4.28	2.91	--	4.18	2.64	--	--
11:00:00	--	4.74	2.97	--	4.34	2.66	--	--
11:15:00	--	4.47	2.76	--	4.47	2.68	--	--
11:30:00	--	5.24	2.93	--	4.64	2.78	--	--
11:45:00	--	4.69	2.86	--	4.68	2.89	--	--
12:00:00	--	4.96	3.11	--	4.82	2.93	--	--
12:15:00	--	4.73	3.65	--	4.82	3.06	--	--
12:30:00	--	5.15	4.36	--	4.95	3.38	--	--
12:45:00	--	4.95	4.38	--	4.90	3.67	--	--
13:00:00	--	5.17	5.91	--	4.99	4.28	--	--
13:15:00	--	5.13	4.44	--	5.03	4.55	--	--
13:30:00	--	5.33	4.49	--	5.15	4.72	--	--
13:45:00	--	5.36	5.28	--	5.19	4.90	--	--
14:00:00	--	5.45	5.07	--	5.29	5.04	--	--
14:15:00	--	4.84	6.15	--	5.22	5.09	--	--
14:30:00	--	4.94	6.34	--	5.18	5.47	--	--
14:45:00	--	5.03	9.69	--	5.12	6.51	--	--
15:00:00	--	4.91	8.29	--	5.03	7.11	--	--
15:15:00	--	5.66	6.81	--	5.08	7.46	--	--
15:30:00	--	5.28	7.71	--	5.16	7.77	--	--
15:45:00	--	5.67	10.62	--	5.31	8.62	--	--
16:00:00	--	6.71	8.18	--	5.65	8.32	--	--
16:15:00	--	6.98	8.27	--	6.06	8.32	--	--
16:30:00	--	6.09	8.72	--	6.15	8.70	--	--
16:45:00	--	7.72	8.72	--	6.63	8.90	--	--
17:00:00	--	8.02	15.54	--	7.10	9.89	--	--
17:15:00	--	8.14	16.06	--	7.39	11.46	--	--
17:30:00	--	7.69	16.57	--	7.53	13.12	--	--
17:45:00	--	11.38	13.42	--	8.59	14.06	--	--
18:00:00	--	8.77	18.41	--	8.80	16.00	--	--