

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

**PERIOD: March 1<sup>st</sup>to March 5<sup>th</sup>, 2021**

**Date of Report: March 10, 2021**

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*Prepared by*

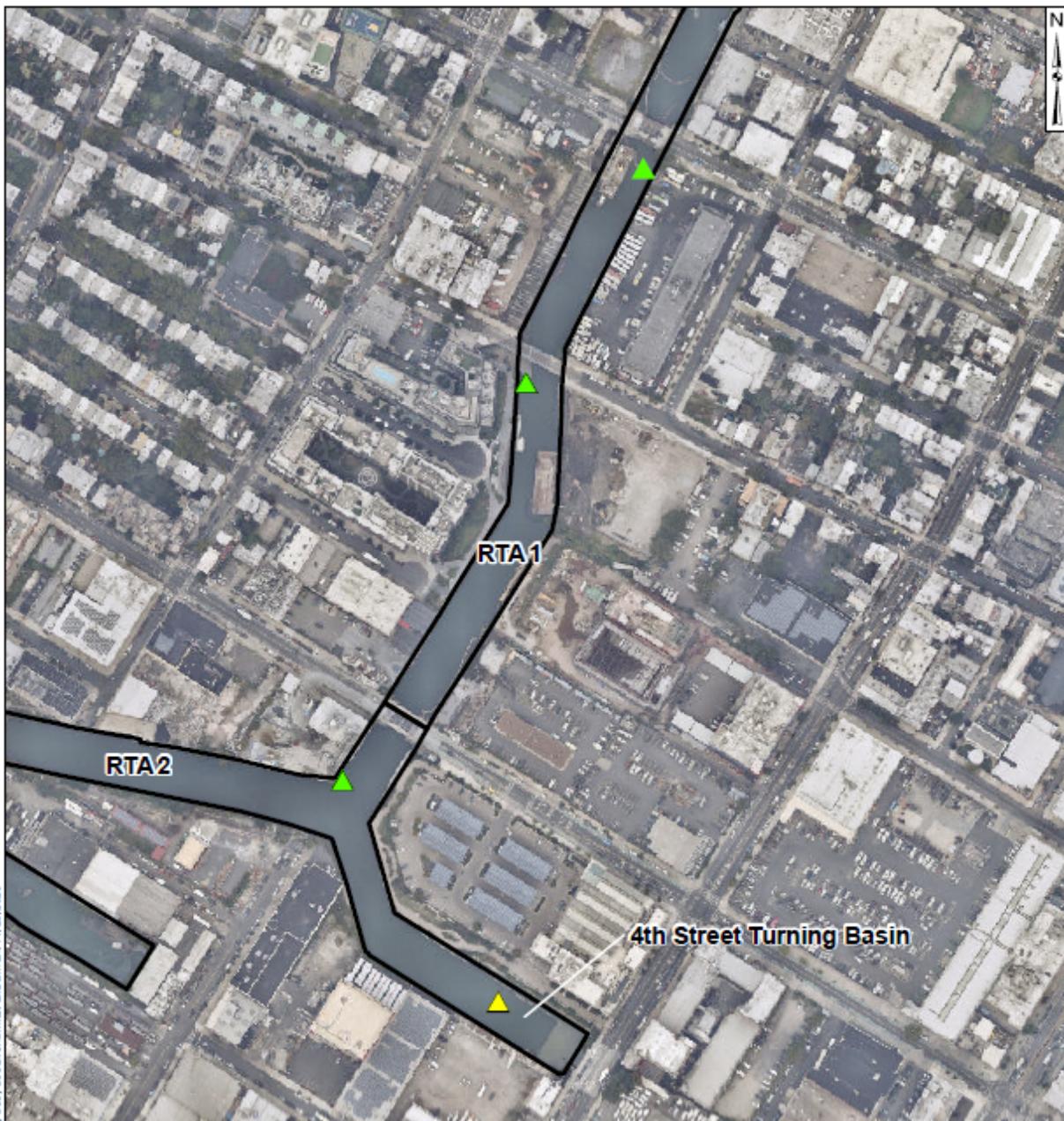
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Project Number JR0289A

## 1. SCOPE OF MONITORING

The following report summarizes water quality monitoring data collected during the week of March 1, 2021. In accordance with the Water Quality Monitoring Plan for In-waterway Construction Activities (WQMP) three turbidity buoys were deployed to monitor turbidity at the start of dredging between Carroll Street Bridge and 3<sup>rd</sup> Street Bridge. One turbidity buoy was deployed just south of the 3<sup>rd</sup> Street Bridge outside of the air curtain and traditional turbidity curtain. This buoy is referred to as the 3<sup>rd</sup> Street Sentinel Buoy. A second turbidity buoy was deployed just south of the 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. This turbidity buoy is referred to as the Ambient Buoy. Prior to dredging north of the Union Street Bridge, on January 22, 2021 a fourth turbidity buoy was deployed just south of the Union Street Bridge and is referred to as the Union Street Sentinel Buoy. A map indicating the approximate locations of the turbidity buoys is provided in **Figure 1**. 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. This report presents a summary of turbidity data collected from the ambient and sentinel buoys between 7 AM and 6 PM each day during the week of March 1. Daily turbidity data tables are provided in **Appendix A**. No handheld measurements were collected during this reporting period. Visual observations of turbidity and sheen are summarized in Section 4.



\Beverly\Gowanus-PRM03\_Geovm\Canal\_wide\Turbidity Buoy Locations.mxd 1/28/2020

**Legend**

- ▲ Ambient Buoy
- ▲ Sentinel Buoy
- RTA Boundary

300 150 0 300  
Feet

**Turbidity Buoy Locations**

Gowanus Canal, Brooklyn, NY

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Kennesaw, GA

February 2021

**Figure**

**1**

## **2. REPORT OF EXCEEDANCES**

An exceedance of the numerical action criterion was observed on March 2, 2021 at the Union Street Sentinel Buoy. Exceedances of the numerical trigger criterion were observed at the Union Street Sentinel Buoy on March 1<sup>st</sup>, 2<sup>nd</sup>, and 4<sup>th</sup>. Exceedances of the numerical trigger criterion were observed at the Carroll Street Sentinel Buoy on March 1<sup>st</sup>. No trigger or action level exceedances were observed at the 3<sup>rd</sup> Street Sentinel Buoy. Further information is provided in Section 2.1. Refer to the WQMP for further information regarding the Trigger and Action Criteria. Threshold criteria are summarized as follows:

- **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.

On March 2<sup>nd</sup> an exceedance to the numerical action criterion was observed at the Union Street Sentinel Buoy from 3:00 PM to 4:00 PM. This exceedance was a result of a hopper changeout attempted at an extreme low tide exacerbated by wind conditions. The hopper changeout was temporarily suspended due to the low tide conditions and was resumed at 6:00 PM after the water level increased adequately to perform the maneuver.

On March 1<sup>st</sup>, exceedances to the numerical trigger criterion were observed at the Union Street Sentinel Buoy from 1:00 PM to 5:15 PM and at the Carroll Street Sentinel Buoy from 3:30 PM to 4:45 PM. On March 4<sup>th</sup>, an exceedance to the numerical trigger criterion was observed at the Union Street Sentinel Buoy from 5:00 PM to 5:15 PM. Exceedances to the trigger criterion were a result of sediment resuspension during mini hopper changeouts in shallow water.

### 3. TURBIDITY BUOY DATA

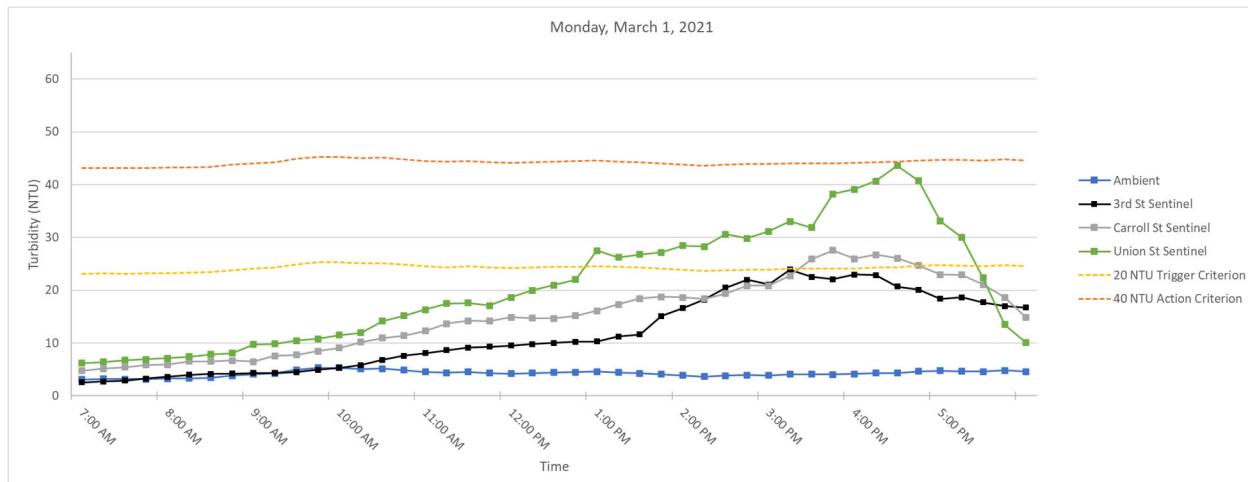
The following section provides turbidity data for the sentinel and ambient turbidity buoys from 7 AM to 6 PM from March 1 to March 4, 2021. An exceedance of the numerical action level criterion was observed on March 2<sup>nd</sup> at the Union Street Sentinel Buoy. Exceedances of the numerical trigger criterion were observed on March 1<sup>st</sup>, 2<sup>nd</sup>, and 4<sup>th</sup> at the Union Street Sentinel Buoy. Exceedances to the numerical trigger criterion were observed at the Carroll Street Sentinel Buoy on March 1<sup>st</sup>. Section 2.1 contains further information on these exceedances. **Table 1** below provides a summary of the turbidity data for the reporting period.

**Table 1.** Daily average and maximum differences between the rolling average turbidity readings from RTA1 sentinel buoys and the ambient buoy between 7 AM and 6 PM

Date	Average Rolling Average Difference (NTU)			Maximum Rolling Average Difference (NTU)		
	3rd St - Ambient	Carroll St - Ambient	Union St - Ambient	3rd St - Ambient	Carroll St - Ambient	Union St - Ambient
Monday March 1, 2021	7.68	10.92	16.52	19.85	23.53	39.32
Tuesday March 2, 2021	4.45	6.96	14.03	12.23	14.08	42.78
Wednesday March 3, 2021	4.53	6.70	8.92	10.84	17.60	17.63
Thursday March 4, 2021	3.05	5.35	8.11	9.57	10.92	21.41
Friday March 5, 2021	2.66	5.01	6.94	7.92	10.64	17.17

#### 3.1 Monday, March 1, 2021

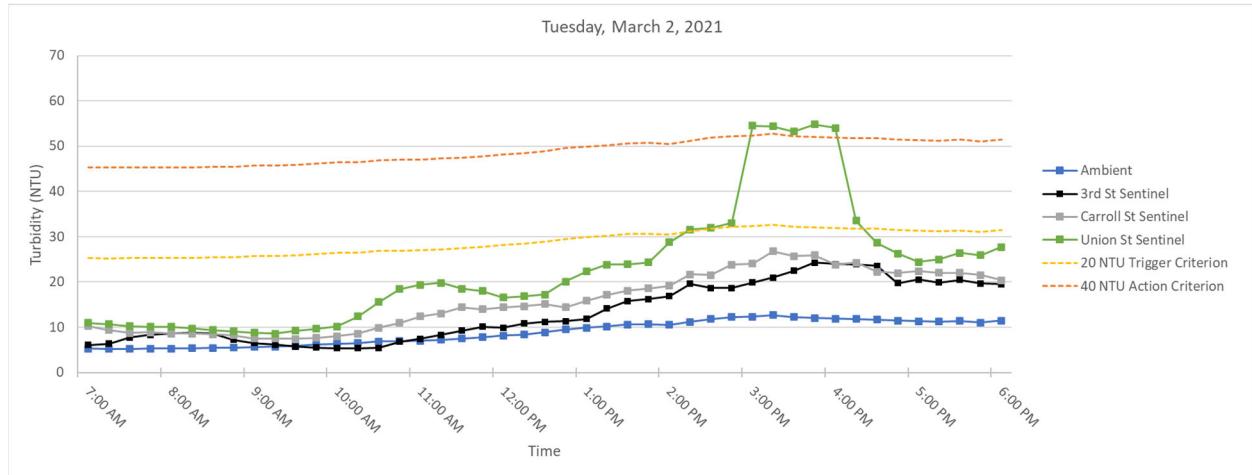
**Figure 2.** Hourly rolling average turbidity readings on Monday, March 1, 2021 from 7 AM to 6 PM.



**Note:** At 3:00 PM, a spike in turbidity at the Union Street Sentinel Buoy of 71.2 NTU was eliminated as an outlier in accordance with the outlier analysis defined in Section 2 and the WQMP.

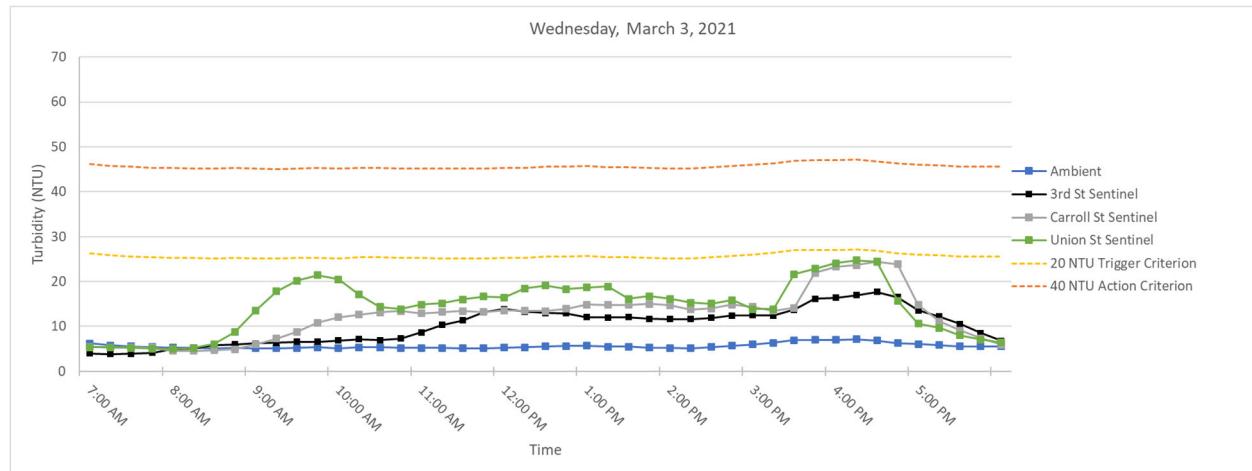
### **3.2 Tuesday, March 2, 2021**

**Figure 3.** Hourly rolling average turbidity readings on Tuesday, March 2, 2021 from 7 AM to 6 PM.



### **3.3 Wednesday, March 3, 2021**

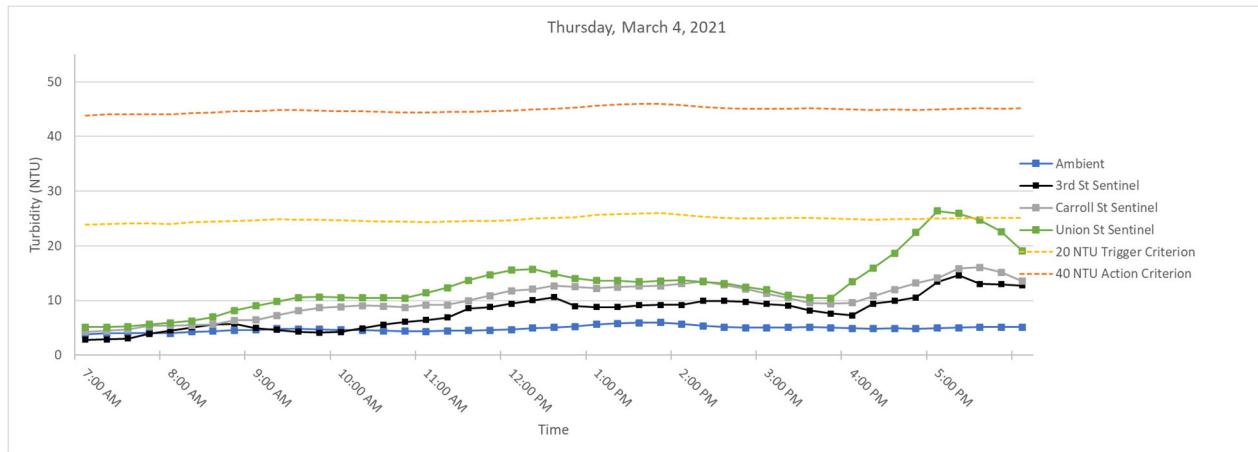
**Figure 4.** Hourly rolling average turbidity readings on Wednesday, March 3, 2021 from 7 AM to 6 PM.



**Note:** At 2:30 PM, a spike in turbidity at the Union Street Sentinel Buoy of 37.98 NTU was eliminated as an outlier in accordance with the outlier analysis defined in Section 2 and the WQMP.

## **1.4 Thursday, March 4, 2021**

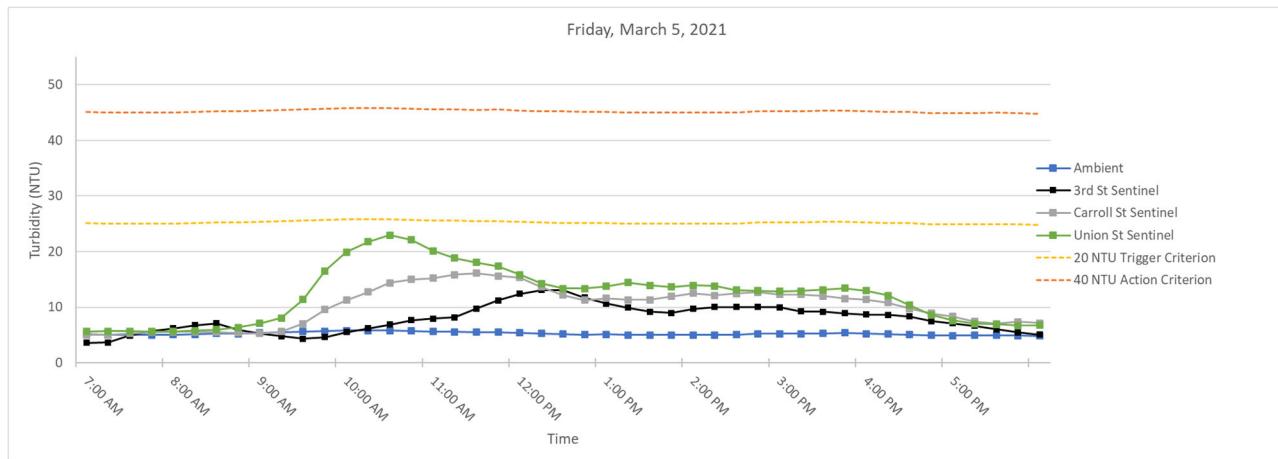
**Figure 5.** Hourly rolling average turbidity readings on Thursday, March 4, 2021 from 7 AM to 6 PM.



**Note:** At 5:00 PM, a spike in turbidity at the Carroll Street Sentinel Buoy of 31.27 NTU was eliminated as an outlier in accordance with the outlier analysis defined in Section 2 and the WQMP.

## **1.5 Friday, March 5, 2021**

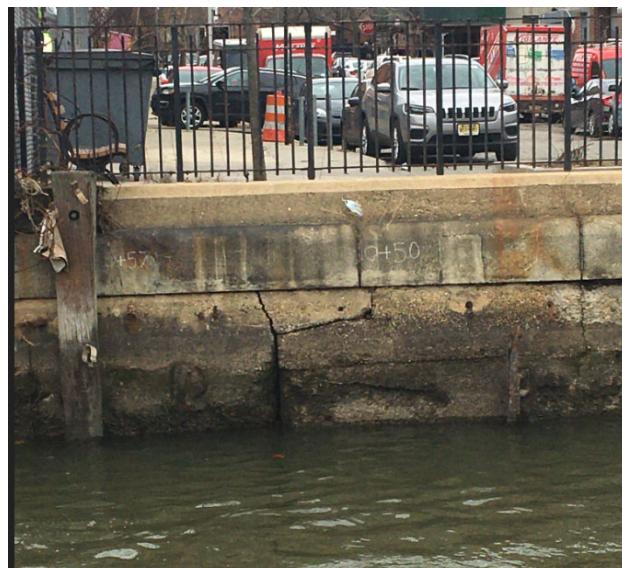
**Figure 6.** Hourly rolling average turbidity readings on Friday, March 5, 2021 from 7 AM to 6 PM.



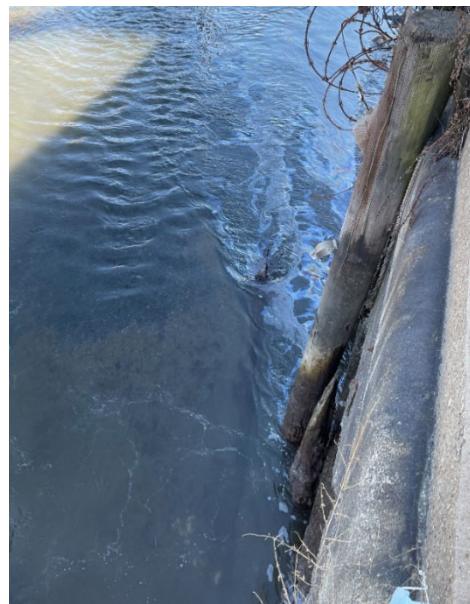
## SUMMARY OF VISUAL OBSERVATIONS

During the Phase I dredging with the environmental clamshell bucket some sheen was observed during dredging. This sheen was localized in the area of dredging and did not migrate outside of RTA1.

Sheen was observed emanating from a crack in the concrete slab above the bulkhead at Douglass Street just south of the Flushing Tunnel during low tide. This sheen was not associated with in-canal construction activities. Photos of the crack in the wall and sheen are provided in **Figure 7** and **Figure 8**.



**Figure 7.** Crack at Douglass Street concrete slab above



**Figure 8.** Sheen from the crack at Douglass Street

## **APPENDIX A**

### **Turbidity Data Tables**

## Monday, March 1, 2021

Time	Turbidity (NTU)				Rolling Average Turbidity (NTU)				Difference (NTU)		
	Ambient	3rd Street	Carroll Street	Union Street	Ambient	3rd Street	Carroll Street	Union Street	3rd St - Ambient	Carroll St - Ambient	Union St - Ambient
7:00:00	3.14	2.84	5.26	6.93	3.10	2.53	4.77	6.21	-0.58	1.67	3.10
7:15:00	3.17	3.63	6	6.64	3.19	2.70	5.15	6.43	-0.50	1.96	3.24
7:30:00	2.88	--	5.94	7.2	3.13	2.84	5.40	6.75	-0.29	2.27	3.62
7:45:00	3.38	3.74	6.82	7.02	3.16	3.25	5.84	6.89	0.09	2.68	3.73
8:00:00	3.66	4.04	5.51	7.86	3.25	3.56	5.91	7.13	0.32	2.66	3.88
8:15:00	3.38	4.36	8.29	8.28	3.29	3.94	6.51	7.40	0.65	3.22	4.11
8:30:00	3.69	4.42	6.06	8.73	3.40	4.14	6.52	7.82	0.74	3.13	4.42
8:45:00	4.88	4.45	6.84	8.45	3.80	4.20	6.70	8.07	0.40	2.91	4.27
9:00:00	4.84	4.21	5.55	15.21	4.09	4.30	6.45	9.71	0.21	2.36	5.62
9:15:00	4.56	4.18	11.09	8.59	4.27	4.32	7.57	9.85	0.05	3.30	5.58
9:30:00	6.49	5.1	9.25	11.38	4.89	4.47	7.76	10.47	-0.42	2.87	5.58
9:45:00	5.61	6.69	9.54	10.35	5.28	4.93	8.45	10.80	-0.35	3.18	5.52
10:00:00	4.95	6.26	9.84	11.84	5.29	5.29	9.05	11.47	0.00	3.76	6.18
10:15:00	3.74	6.64	11.22	17.6	5.07	5.77	10.19	11.95	0.70	5.12	6.88
10:30:00	4.91	9.33	14.98	19.55	5.14	6.80	10.97	14.14	1.66	5.83	9.00
10:45:00	5.09	9.02	11.38	16.38	4.86	7.59	11.39	15.14	2.73	6.53	10.28
11:00:00	3.79	9.06	13.98	16.26	4.50	8.06	12.28	16.33	3.57	7.78	11.83
11:15:00	4.17	8.96	16.72	17.61	4.34	8.60	13.66	17.48	4.26	9.32	13.14
11:30:00	4.58	9.2	14.13	18.15	4.51	9.11	14.24	17.59	4.61	9.73	13.08
11:45:00	3.85	10.1	14.46	17.18	4.30	9.27	14.13	17.12	4.97	9.84	12.82
12:00:00	4.6	10.28	15.19	23.95	4.20	9.52	14.90	18.63	5.32	10.70	14.43
12:15:00	4.17	10.33	13.11	22.88	4.27	9.77	14.72	19.95	5.50	10.45	15.68
12:30:00	4.9	10.19	16.51	22.74	4.42	10.02	14.68	20.98	5.60	10.26	16.56
12:45:00	4.72	10.36	16.42	23.42	4.45	10.25	15.14	22.03	5.80	10.69	17.59
13:00:00	4.45	10.13	19.31	44.44	4.57	10.26	16.11	27.49	5.69	11.54	22.92
13:15:00	3.87	14.99	21.19	17.75	4.42	11.20	17.31	26.25	6.78	12.89	21.82
13:30:00	3.39	12.34	18.6	25.56	4.27	11.60	18.41	26.78	7.34	14.14	22.52
13:45:00	4	27.74	18.15	24.64	4.09	15.11	18.73	27.16	11.03	14.65	23.08
14:00:00	3.47	17.71	15.89	29.71	3.84	16.58	18.63	28.42	12.75	14.79	24.58
14:15:00	3.47	--	18.12	43.82	3.64	18.20	18.39	28.30	14.56	14.75	24.66
14:30:00	4.61	24.02	25.93	29.21	3.79	20.45	19.34	30.59	16.66	15.55	26.80
14:45:00	4.09	18.43	26.18	21.86	3.93	21.98	20.85	29.85	18.05	16.93	25.92
15:00:00	3.76	24.14	18.23	--	3.88	21.08	20.87	31.15	17.20	16.99	27.27
15:15:00	4.39	29.06	25.15	37.37	4.06	23.91	22.72	33.07	19.85	18.66	29.00
15:30:00	3.44	17.06	33.94	39.1	4.06	22.54	25.89	31.89	18.48	21.83	27.83
15:45:00	4.55	21.77	34.36	54.65	4.05	22.09	27.57	38.25	18.05	23.53	34.20
16:00:00	4.61	22.88	18.04	25.38	4.15	22.98	25.94	39.13	18.83	21.79	34.98
16:15:00	4.57	23.61	22.14	46.82	4.31	22.88	26.73	40.66	18.56	22.41	36.35
16:30:00	4.41	18.14	21.76	52.24	4.32	20.69	26.05	43.64	16.38	21.73	39.32
16:45:00	4.98	13.9	27.15	24.53	4.62	20.06	24.69	40.72	15.44	20.07	36.10
17:00:00	5.14	13.19	25.69	16.53	4.74	18.34	22.96	33.10	13.60	18.21	28.36
17:15:00	4.16	24.3	17.8	9.96	4.65	18.63	22.91	30.02	13.98	18.26	25.36
17:30:00	4.2	18.9	13.02	8.57	4.58	17.69	21.08	22.37	13.11	16.51	17.79
17:45:00	5.43	14.6	9.51	7.8	4.78	16.98	18.63	13.48	12.20	13.85	8.70
18:00:00	3.97	12.44	8.17	7.53	4.58	16.69	14.84	10.08	12.11	10.26	5.50

## Tuesday, March 2, 2021

Time	Turbidity (NTU)				Rolling Average Turbidity (NTU)				Difference (NTU)		
	Ambient	3rd Street	Carroll Street	Union Street	Ambient	3rd Street	Carroll Street	Union Street	3rd St - Ambient	Carroll St - Ambient	Union St - Ambient
7:00:00	5.3	6.55	8.22	9.97	5.27	6.10	10.23	10.96	0.82	4.96	5.69
7:15:00	5.11	7.26	7.85	10.4	5.22	6.36	9.35	10.68	1.14	4.13	5.46
7:30:00	5.41	12.79	8.49	9.43	5.25	7.74	8.72	10.28	2.49	3.47	5.04
7:45:00	5.3	9	10.69	10.75	5.26	8.30	8.89	10.14	3.04	3.63	4.88
8:00:00	5.44	7.44	7.9	10.08	5.31	8.61	8.63	10.13	3.30	3.32	4.81
8:15:00	5.41	7.32	8.05	8.24	5.33	8.76	8.60	9.78	3.43	3.26	4.45
8:30:00	5.66	6.51	7.24	8.34	5.44	8.61	8.47	9.37	3.17	3.03	3.92
8:45:00	5.66	5.76	7.26	8.02	5.49	7.21	8.23	9.09	1.71	2.73	3.59
9:00:00	6.24	5.38	7.04	9.26	5.68	6.48	7.50	8.79	0.80	1.82	3.11
9:15:00	5.52	5.63	7.97	9.16	5.70	6.12	7.51	8.60	0.42	1.81	2.91
9:30:00	6.36	5.38	7.8	11.49	5.89	5.73	7.46	9.25	-0.16	1.57	3.37
9:45:00	6.97	5.31	8.29	10.36	6.15	5.49	7.67	9.66	-0.66	1.52	3.51
10:00:00	6.82	5.23	9.14	10.54	6.38	5.39	8.05	10.16	-1.00	1.67	3.78
10:15:00	6.74	5.12	9.84	20.64	6.48	5.33	8.61	12.44	-1.15	2.13	5.96
10:30:00	7.41	6.03	14.23	24.95	6.86	5.41	9.86	15.60	-1.45	3.00	8.74
10:45:00	6.77	12.43	13.49	25.59	6.94	6.82	11.00	18.42	-0.12	4.06	11.47
11:00:00	7.29	8.52	15.49	15.17	7.01	7.47	12.44	19.38	0.46	5.43	12.37
11:15:00	7.91	9.38	12.32	12.53	7.22	8.30	13.07	19.78	1.07	5.85	12.55
11:30:00	8.11	9.97	16.6	14.47	7.50	9.27	14.43	18.54	1.77	6.93	11.04
11:45:00	8.89	10.39	12.03	22.25	7.79	10.14	13.99	18.00	2.34	6.19	10.21
12:00:00	8.63	11.08	15.55	18.38	8.17	9.87	14.40	16.56	1.70	6.23	8.39
12:15:00	8.5	13.19	16.53	16.49	8.41	10.80	14.61	16.82	2.39	6.20	8.42
12:30:00	10.35	11.38	14.86	14.65	8.90	11.20	15.11	17.25	2.31	6.22	8.35
12:45:00	11.34	10.61	13.26	28.66	9.54	11.33	14.45	20.09	1.79	4.90	10.54
13:00:00	10.47	13.04	19.23	33.37	9.86	11.86	15.89	22.31	2.00	6.03	12.45
13:15:00	10.28	22.46	21.87	26.06	10.19	14.14	17.15	23.85	3.95	6.96	13.66
13:30:00	10.47	21.36	21.29	16.8	10.58	15.77	18.10	23.91	5.19	7.52	13.33
13:45:00	10.82	13.61	17.33	16.95	10.68	16.22	18.60	24.37	5.54	7.92	13.69
14:00:00	10.58	13.78	16.08	50.81	10.52	16.85	19.16	28.80	6.33	8.64	18.27
14:15:00	13.82	26.89	31.65	47.46	11.19	19.62	21.64	31.62	8.43	10.45	20.42
14:30:00	13.43	17.69	21.4	27.77	11.82	18.67	21.55	31.96	6.84	9.73	20.13
14:45:00	12.55	21.33	32.83	22.28	12.24	18.66	23.86	33.05	6.42	11.62	20.81
15:00:00	11.19	19.87	18.34	124.34	12.31	19.91	24.06	54.53	7.60	11.75	42.22
15:15:00	12.49	19.05	29.65	50.07	12.70	20.97	26.77	54.38	8.27	14.08	41.69
15:30:00	11.58	34.53	26.28	41.59	12.25	22.49	25.70	53.21	10.25	13.45	40.96
15:45:00	12.34	26.54	22.33	35.76	12.03	24.26	25.89	54.81	12.23	13.86	42.78
16:00:00	11.8	20.06	22.46	18.34	11.88	24.01	23.81	54.02	12.13	11.93	42.14
16:15:00	10.89	19.26	20.58	21.73	11.82	23.89	24.26	33.50	12.07	12.44	21.68
16:30:00	11.91	17.46	19.69	25.68	11.70	23.57	22.27	28.62	11.87	10.56	16.92
16:45:00	10.44	15.32	24.66	29.93	11.48	19.73	21.94	26.29	8.25	10.47	14.81
17:00:00	11.55	30.43	24.75	26.27	11.32	20.51	22.43	24.39	9.19	11.11	13.07
17:15:00	11.36	16.89	20.55	21.37	11.23	19.87	22.05	25.00	8.64	10.82	13.77
17:30:00	11.76	22.12	20.42	28.69	11.40	20.44	22.01	26.39	9.04	10.61	14.98
17:45:00	10.23	13.5	17.42	23.41	11.07	19.65	21.56	25.93	8.58	10.49	14.87
18:00:00	12.46	14.51	18.76	38.97	11.47	19.49	20.38	27.74	8.02	8.91	16.27

## Wednesday, March 3, 2021

Time	Turbidity (NTU)				Rolling Average Turbidity (NTU)				Difference (NTU)		
	Ambient	3rd Street	Carroll Street	Union Street	Ambient	3rd Street	Carroll Street	Union Street	3rd St - Ambient	Carroll St - Ambient	Union St - Ambient
7:00:00	5.58	4.11	4.25	5.07	6.23	3.98	5.48	5.35	-2.25	-0.75	-0.88
7:15:00	4.97	3.52	4.36	5.02	5.81	3.86	5.30	5.33	-1.95	-0.51	-0.48
7:30:00	5.85	4.21	5.35	4.91	5.57	3.93	5.33	5.20	-1.64	-0.24	-0.38
7:45:00	4.83	5.04	4.48	4.97	5.38	4.12	5.26	5.07	-1.27	-0.12	-0.32
8:00:00	5.18	7.7	4.46	4.99	5.28	4.92	4.58	4.99	-0.37	-0.70	-0.29
8:15:00	5.29	5.22	4.15	6.28	5.22	5.14	4.56	5.23	-0.09	-0.66	0.01
8:30:00	4.56	6.56	5.18	9.22	5.14	5.75	4.72	6.07	0.60	-0.42	0.93
8:45:00	6.4	5.58	6.23	18.17	5.25	6.02	4.90	8.73	0.77	-0.35	3.47
9:00:00	4.4	6.03	10.03	28.73	5.17	6.22	6.01	13.48	1.05	0.84	8.31
9:15:00	4.83	8.41	10.83	26.68	5.10	6.36	7.28	17.82	1.26	2.19	12.72
9:30:00	5.88	6.27	11.62	18.23	5.21	6.57	8.78	20.21	1.36	3.56	14.99
9:45:00	5.24	6.62	15.26	15.23	5.35	6.58	10.79	21.41	1.23	5.44	16.06
10:00:00	5.24	6.87	12.42	13.42	5.12	6.84	12.03	20.46	1.72	6.91	15.34
10:15:00	5.61	7.66	12.86	11.75	5.36	7.17	12.60	17.06	1.81	7.24	11.70
10:30:00	4.81	7.36	13.34	13.1	5.36	6.96	13.10	14.35	1.60	7.74	8.99
10:45:00	5.27	8	13.09	15.62	5.23	7.30	13.39	13.82	2.07	8.16	8.59
11:00:00	5.14	13.58	12.83	20.3	5.21	8.69	12.91	14.84	3.48	7.69	9.62
11:15:00	5.02	15.07	13.95	15.09	5.17	10.33	13.21	15.17	5.16	8.04	10.00
11:30:00	5.42	12.63	14.04	--	5.13	11.33	13.45	16.03	6.20	8.32	10.90
11:45:00	4.85	16.86	12.18	15.58	5.14	13.23	13.22	16.65	8.09	8.08	11.51
12:00:00	6.07	11.23	14.78	14.79	5.30	13.87	13.56	16.44	8.57	8.26	11.14
12:15:00	5.38	10.51	12.56	28.36	5.35	13.26	13.50	18.46	7.91	8.15	13.11
12:30:00	6.16	13.62	--	17.87	5.58	12.97	13.39	19.15	7.39	7.81	13.57
12:45:00	5.66	12.39	16.23	14.93	5.62	12.92	13.94	18.31	7.30	8.31	12.68
13:00:00	5.42	12.53	15.74	17.32	5.74	12.06	14.83	18.65	6.32	9.09	12.92
13:15:00	4.8	10.89	14.72	16.09	5.48	11.99	14.81	18.91	6.50	9.33	13.43
13:30:00	5.25	10.81	12.38	14.69	5.46	12.05	14.77	16.18	6.59	9.31	10.72
13:45:00	5.21	11.75	16.02	20.66	5.27	11.67	15.02	16.74	6.41	9.75	11.47
14:00:00	5.28	12.16	14.57	11.92	5.19	11.63	14.69	16.14	6.44	9.49	10.94
14:15:00	5.18	12.41	11.14	12.94	5.14	11.60	13.77	15.26	6.46	8.62	10.12
14:30:00	6.04	12.38	15.74	--	5.39	11.90	13.97	15.05	6.51	8.58	9.66
14:45:00	6.79	13.5	16.95	17.96	5.70	12.44	14.88	15.87	6.74	9.18	10.17
15:00:00	6.63	12.13	13.35	12.54	5.98	12.52	14.35	13.84	6.53	8.37	7.86
15:15:00	7.32	11.49	10.41	11.95	6.39	12.38	13.52	13.85	5.99	7.13	7.46
15:30:00	7.96	18.97	14.1	43.99	6.95	13.69	14.11	21.61	6.75	7.16	14.66
15:45:00	6.49	24.81	54.69	27.8	7.04	16.18	21.90	22.85	9.14	14.86	15.81
16:00:00	6.61	14.59	24.07	--	7.00	16.40	23.32	24.07	9.40	16.32	17.07
16:15:00	7.28	14.81	15.18	15.31	7.13	16.93	23.69	24.76	9.80	16.56	17.63
16:30:00	5.81	15.18	13.72	10.74	6.83	17.67	24.35	24.46	10.84	17.52	17.63
16:45:00	5.3	13.23	11.81	9.19	6.30	16.52	23.89	15.76	10.23	17.60	9.46
17:00:00	5.31	10.18	9.29	7.09	6.06	13.60	14.81	10.58	7.54	8.75	4.52
17:15:00	5.65	7.47	5.63	6.17	5.87	12.17	11.13	9.70	6.30	5.26	3.83
17:30:00	5.68	6.6	5.04	6.85	5.55	10.53	9.10	8.01	4.98	3.55	2.46
17:45:00	5.98	5.21	4.9	5.98	5.58	8.54	7.33	7.06	2.95	1.75	1.47
18:00:00	5.15	4.57	4.83	6.13	5.55	6.81	5.94	6.44	1.25	0.38	0.89

## Thursday, March 4, 2021

Time	Turbidity (NTU)				Rolling Average Turbidity (NTU)				Difference (NTU)		
	Ambient	3rd Street	Carroll Street	Union Street	Ambient	3rd Street	Carroll Street	Union Street	3rd St - Ambient	Carroll St - Ambient	Union St - Ambient
7:00:00	3.44	2.85	4.91	5.08	3.85	2.86	4.30	5.13	-0.99	0.45	1.28
7:15:00	4.33	2.95	5.02	4.91	4.01	2.91	4.49	5.13	-1.10	0.48	1.12
7:30:00	3.72	3.73	5.07	6.35	4.07	3.07	4.71	5.25	-0.99	0.64	1.18
7:45:00	4.12	7.38	7.28	6.71	4.06	3.94	5.35	5.67	-0.12	1.29	1.61
8:00:00	4.53	5.88	4.89	6.56	4.03	4.56	5.43	5.92	0.53	1.41	1.89
8:15:00	4.91	5.48	5.12	6.98	4.32	5.08	5.48	6.30	0.76	1.15	1.98
8:30:00	4.79	5.81	5.95	8.57	4.41	5.66	5.66	7.03	1.24	1.25	2.62
8:45:00	4.59	4.36	8.74	12.1	4.59	5.78	6.40	8.18	1.19	1.81	3.60
9:00:00	4.52	3.41	7.64	11.12	4.67	4.99	6.47	9.07	0.32	1.80	4.40
9:15:00	5.47	4.13	9	10.35	4.86	4.64	7.29	9.82	-0.22	2.43	4.97
9:30:00	4.57	3.96	9.29	10.56	4.79	4.33	8.12	10.54	-0.45	3.34	5.75
9:45:00	4.61	4.8	8.72	9.35	4.75	4.13	8.68	10.70	-0.62	3.93	5.94
10:00:00	4.19	4.97	9.77	11.31	4.67	4.25	8.88	10.54	-0.42	4.21	5.87
10:15:00	4.21	6.69	8.61	11.06	4.61	4.91	9.08	10.53	0.30	4.47	5.92
10:30:00	4.84	7.71	8.55	10.32	4.48	5.63	8.99	10.52	1.14	4.50	6.04
10:45:00	4.38	6.48	8.24	10.19	4.45	6.13	8.78	10.45	1.68	4.33	6.00
11:00:00	4.19	6.25	10.91	14.13	4.36	6.42	9.22	11.40	2.06	4.85	7.04
11:15:00	4.63	7.26	9.7	15.99	4.45	6.88	9.20	12.34	2.43	4.75	7.89
11:30:00	4.75	15.37	12.66	17.96	4.56	8.61	10.01	13.72	4.06	5.45	9.16
11:45:00	4.96--		12.94	15.49	4.58	8.84	10.89	14.75	4.26	6.31	10.17
12:00:00	4.9	8.96	12.92	14.34	4.69	9.46	11.83	15.58	4.77	7.14	10.90
12:15:00	5.55	8.71	12.06	14.98	4.96	10.08	12.06	15.75	5.12	7.10	10.79
12:30:00	5.35	9.46	13.03	11.84	5.10	10.63	12.72	14.92	5.52	7.62	9.82
12:45:00	5.54	8.86	11.83	13.59	5.26	9.00	12.56	14.05	3.74	7.30	8.79
13:00:00	6.92	8.13	11.51	13.43	5.65	8.82	12.27	13.64	3.17	6.62	7.98
13:15:00	5.86--		13.93	14.56	5.84	8.79	12.47	13.68	2.95	6.63	7.84
13:30:00	6.13	10.08	13.03	13.84	5.96	9.13	12.67	13.45	3.17	6.71	7.49
13:45:00	5.45	9.84	13.25	12.62	5.98	9.23	12.71	13.61	3.25	6.73	7.63
14:00:00	4.23	8.74	13.86	14.28	5.72	9.20	13.12	13.75	3.48	7.40	8.03
14:15:00	5.1	11.01	13.7	11.78	5.35	9.92	13.55	13.42	4.56	8.20	8.06
14:30:00	4.96	9.91	10.46--		5.17	9.92	12.86	13.13	4.74	7.69	7.96
14:45:00	5.58	9.49	9.33	11.19	5.06	9.80	12.12	12.47	4.73	7.06	7.40
15:00:00	5.27	7.72	9.18	10.64	5.03	9.37	11.31	11.97	4.35	6.28	6.94
15:15:00	4.67	7.26	9.71	10.25	5.12	9.08	10.48	10.97	3.96	5.36	5.85
15:30:00	5.31	6.66	9.24	9.97	5.16	8.21	9.58	10.51	3.05	4.43	5.35
15:45:00	4.42	6.9	9.71	10.27	5.05	7.61	9.43	10.46	2.56	4.38	5.41
16:00:00	4.93	7.9	10.19	26.05	4.92	7.29	9.61	13.44	2.37	4.69	8.52
16:15:00	4.88	18.31	15.36	23.35	4.84	9.41	10.84	15.98	4.56	6.00	11.14
16:30:00	5.09	10.01	15.63	23.8	4.93	9.96	12.03	18.69	5.03	7.10	13.76
16:45:00	4.96	9.54	15.25	28.9	4.86	10.53	13.23	22.47	5.68	8.37	17.62
17:00:00	5.05	21.5--		29.84	4.98	13.45	14.11	26.39	8.47	9.13	21.41
17:15:00	5.24	13.69	17.26	23.72	5.04	14.61	15.88	25.92	9.57	10.83	20.88
17:30:00	5.38	10.4	16.12	17.12	5.14	13.03	16.07	24.68	7.88	10.92	19.53
17:45:00	4.99	9.89	12.09	13.51	5.12	13.00	15.18	22.62	7.88	10.06	17.49
18:00:00	5.21	8.32	8.79	11.03	5.17	12.76	13.57	19.04	7.59	8.39	13.87

## Friday, March 5, 2021

Time	Turbidity (NTU)				Rolling Average Turbidity (NTU)				Difference (NTU)		
	Ambient	3rd Street	Carroll Street	Union Street	Ambient	3rd Street	Carroll Street	Union Street	3rd St - Ambient	Carroll St - Ambient	Union St - Ambient
7:00:00	4.83	3.46	5.22	5.9	5.17	3.62	4.99	5.64	-1.55	-0.18	0.46
7:15:00	4.86	3.91	5.03	5.6	5.03	3.65	5.04	5.69	-1.38	0.01	0.66
7:30:00	5.19	10	6.2	5.25	5.07	4.88	5.29	5.69	-0.19	0.22	0.62
7:45:00	5.1	7.74	6.08	5.44	5.03	5.71	5.52	5.65	0.68	0.49	0.62
8:00:00	5.27	5.81	5.38	6.1	5.05	6.18	5.58	5.66	1.13	0.53	0.61
8:15:00	5.28	6.28	5.18	6.69	5.14	6.75	5.57	5.82	1.61	0.43	0.68
8:30:00	5.66	5.66	4.87	6.47	5.30	7.10	5.54	5.99	1.80	0.24	0.69
8:45:00	4.93	4.22	5.63	7.07	5.25	5.94	5.43	6.35	0.69	0.18	1.11
9:00:00	5.89	4.21	5.48	9.23	5.41	5.24	5.31	7.11	-0.17	-0.10	1.71
9:15:00	5.45	3.71	7.15	10.87	5.44	4.82	5.66	8.07	-0.63	0.22	2.62
9:30:00	6.15	3.78	11.97	23.3	5.62	4.32	7.02	11.39	-1.30	1.40	5.77
9:45:00	6.1	7.3	17.64	32.17	5.70	4.64	9.57	16.53	-1.06	3.87	10.82
10:00:00	5.58	8.49	14.29	23.95	5.83	5.50	11.31	19.90	-0.34	5.47	14.07
10:15:00	5.88	7.61	12.7	18.72	5.83	6.18	12.75	21.80	0.35	6.92	15.97
10:30:00	5.36	7.32	15.36	16.8	5.81	6.90	14.39	22.99	1.09	8.58	17.17
10:45:00	5.83	7.72	15.1	19.11	5.75	7.69	15.02	22.15	1.94	9.27	16.40
11:00:00	5.49	8.75	18.71	22.14	5.63	7.98	15.23	20.14	2.35	9.60	14.52
11:15:00	5.24	9.53	17.31	17.38	5.56	8.19	15.84	18.83	2.63	10.28	13.27
11:30:00	5.58	15.43	14.21	14.88	5.50	9.75	16.14	18.06	4.25	10.64	12.56
11:45:00		14.74	12.94	13.43	5.54	11.23	15.65	17.39	5.70	10.12	11.85
12:00:00	5.24	13.49	13.44	11.33	5.39	12.39	15.32	15.83	7.00	9.93	10.44
12:15:00	5.11	12.29	10.39	—	5.29	13.10	13.66	14.26	7.80	8.37	8.96
12:30:00	4.84	9.62	9.94	13.88	5.19	13.11	12.18	13.38	7.92	6.99	8.19
12:45:00	5.19	8.56	9.78	14.89	5.10	11.74	11.30	13.38	6.65	6.20	8.29
13:00:00	5.28	9.39	14.57	15.01	5.13	10.67	11.62	13.78	5.54	6.49	8.65
13:15:00	4.78	9.72	11.88	13.9	5.04	9.92	11.31	14.42	4.88	6.27	9.38
13:30:00	4.93	8.69	10.56	11.97	5.00	9.20	11.35	13.93	4.19	6.34	8.93
13:45:00	4.89	8.45	12.97	12.53	5.01	8.96	11.95	13.66	3.95	6.94	8.65
14:00:00	5.15	12.29	12.63	16.32	5.01	9.71	12.52	13.95	4.70	7.51	8.94
14:15:00	5.44	11.12	12.52	14.26	5.04	10.05	12.11	13.80	5.02	7.07	8.76
14:30:00	4.95	9.69	13.59	10.33	5.07	10.05	12.45	13.08	4.98	7.38	8.01
14:45:00	5.69	8.62	11.92	11.57	5.22	10.03	12.72	13.00	4.81	7.50	7.78
15:00:00	4.97	8.13	10.78	11.92	5.24	9.97	12.28	12.88	4.73	7.04	7.64
15:15:00	5.05	8.75	12.82	16.45	5.22	9.26	12.33	12.91	4.04	7.11	7.69
15:30:00	5.92	10.83	10.92	15.36	5.32	9.20	12.01	13.13	3.89	6.69	7.81
15:45:00	5.35	8.25	11.5	11.84	5.40	8.92	11.59	13.43	3.52	6.19	8.03
16:00:00	4.83	7.37	10.82	9.34	5.22	8.67	11.37	12.98	3.44	6.14	7.76
16:15:00	4.67	7.97	8.22	7.65	5.16	8.63	10.86	12.13	3.47	5.69	6.96
16:30:00	4.71	7.39	7.29	7.59	5.10	8.36	9.75	10.36	3.27	4.65	5.26
16:45:00	5.23	6.64	6.81	6.71	4.96	7.52	8.93	8.63	2.57	3.97	3.67
17:00:00	5.16	6.07	8.64	6.69	4.92	7.09	8.36	7.60	2.17	3.44	2.68
17:15:00	5.03	5.26	6.2	6.66	4.96	6.67	7.43	7.06	1.71	2.47	2.10
17:30:00	4.71	4.7	6.4	6.99	4.97	6.01	7.07	6.93	1.04	2.10	1.96
17:45:00	4.37	4.77	8.79	6.6	4.90	5.49	7.37	6.73	0.59	2.47	1.83
18:00:00	4.97	4.51	5.91	6.95	4.85	5.06	7.19	6.78	0.21	2.34	1.93