

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

**PERIOD: February 8<sup>th</sup> to February 12<sup>th</sup>, 2021**

**Date of Report: February 17, 2021**

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*Prepared by*

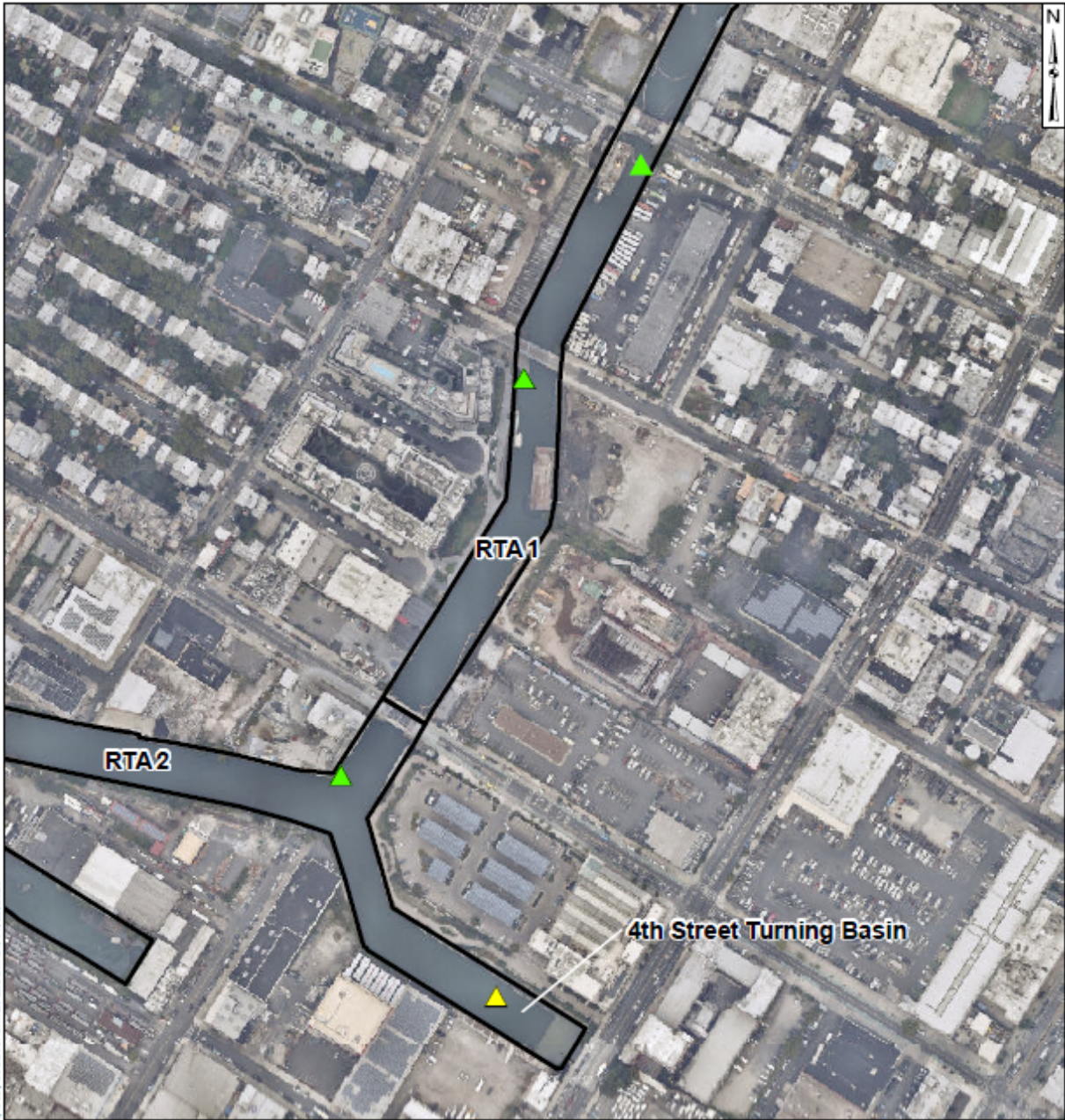
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Project Number JR0289A




## 1. SCOPE OF MONITORING

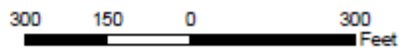
The following report summarizes water quality monitoring data collected during the week of February 8, 2021. In accordance with the Water Quality Monitoring Plan for In-waterway Construction Activities (WQMP) three turbidity buoys were deployed to monitor turbidity at the start of dredging between Carroll 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 February 8<sup>th</sup>. 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.



\\msrserver\Gowanus-PR-A\03\_GIS\mxd\Canal\_Wide\Turbidity Buoy Locations.mxd; aka\mrcs; 11/20/2020

**Legend**

-  Ambient Buoy
-  Sentinel Buoy
-  RTA Boundary



**Turbidity Buoy Locations**

Gowanus Canal, Brooklyn, NY

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Kennesaw, GA

February 2021

Figure

**1**

## 2. REPORT OF EXCEEDANCES

Exceedances of the numerical action criterion were observed at the Union Street Sentinel Buoy on February 8<sup>th</sup>, 9<sup>th</sup>, and 10<sup>th</sup>. Exceedances of the numerical trigger criterion were observed at the Union Street Sentinel Buoy on February 8<sup>th</sup>, 9<sup>th</sup>, 10<sup>th</sup>, and 11<sup>th</sup>, at the Carroll Street Sentinel Buoy on February 8<sup>th</sup>, 9<sup>th</sup>, and 10<sup>th</sup>, and at the 3<sup>rd</sup> Street Sentinel Buoy on February 9<sup>th</sup>. 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 February 8<sup>th</sup>, an exceedance to the numerical action criterion was observed at the Union Street Sentinel Buoy from 11:30 AM to 12:30 PM. Upon inspection of the Union Street Sentinel Buoy, it was observed that the buoy was resting on the sediment bed due to extreme low tide conditions. The turbidity readings at the Union Street Sentinel Buoy were not representative of the turbidity of the Canal water. The buoy was moved approximately twenty feet south to a deeper portion of the canal.

On February 9<sup>th</sup>, an exceedance to the numerical action criterion was observed at the Union Street Sentinel Buoy from 12:30 PM to 1:30 PM and at 2:00 PM. This exceedance was a result of sediment resuspension during a mini hopper changeout during extreme low tide conditions. Northeast winds further exacerbated the low tide condition.

On February 10<sup>th</sup> an exceedance to the numerical action criterion was observed at the Union Street Sentinel Buoy from 1:30 PM to 2:45 PM. This exceedance was again a result of sediment resuspension during a mini hopper changeout during extreme low tide conditions.

Exceedances of the numerical trigger criterion were observed at the Union Street Sentinel Buoy on February 8<sup>th</sup>, 9<sup>th</sup>, 10<sup>th</sup>, and 11<sup>th</sup>, at the Carroll Street Sentinel Buoy on February 8<sup>th</sup>, 9<sup>th</sup>, and 10<sup>th</sup>, and at the 3<sup>rd</sup> Street Sentinel Buoy on February 9<sup>th</sup> due to sediment resuspension from mini hopper changeouts during low tide conditions.

### 3. TURBIDITY BUOY DATA

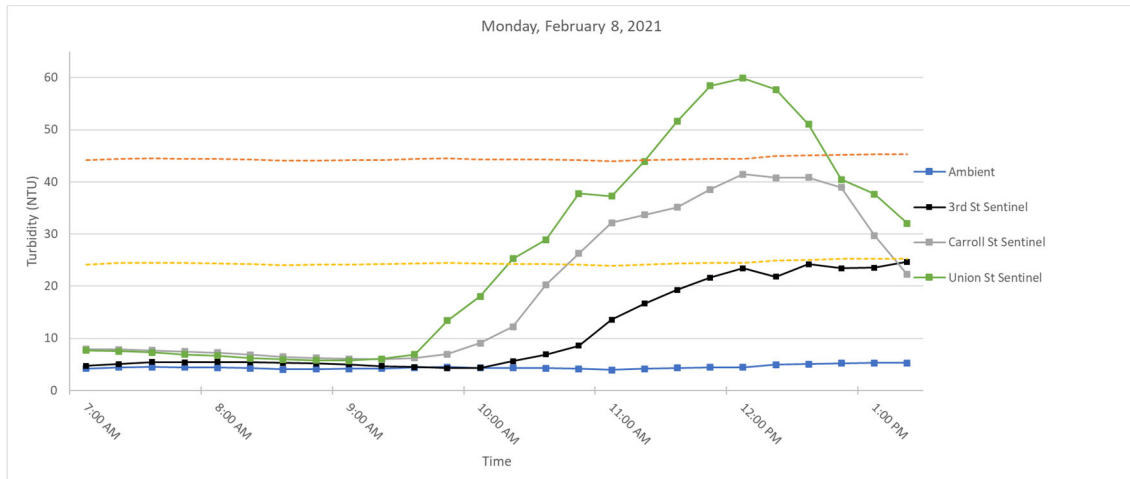
The following section provides turbidity data for the sentinel and ambient turbidity buoys from 7 AM to 6 PM from February 8 to February 12, 2021. Exceedances of the numerical action criterion were observed on February 8<sup>th</sup>, 9<sup>th</sup>, and 10<sup>th</sup> at the Union Street Sentinel Buoy. Exceedances of the numerical trigger criterion were observed on February 8<sup>th</sup>, 9<sup>th</sup>, 10<sup>th</sup>, and 11<sup>th</sup>. Section 2.1 contains further information on the exceedances. No exceedances to the numerical rolling average action criterion were observed during the reporting period. **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 February 8, 2021	6.69	12.51	19.83	19.37	36.99	55.44
Tuesday February 9, 2021	8.18	13.55	20.78	21.28	27.31	55.30
Wednesday February 10, 2021	6.34	12.29	21.80	14.64	22.01	58.18
Thursday February 11, 2021	5.53	11.48	17.00	12.98	20.68	35.32
Friday February 12, 2021	-0.09	2.72	3.03	1.52	4.63	5.54

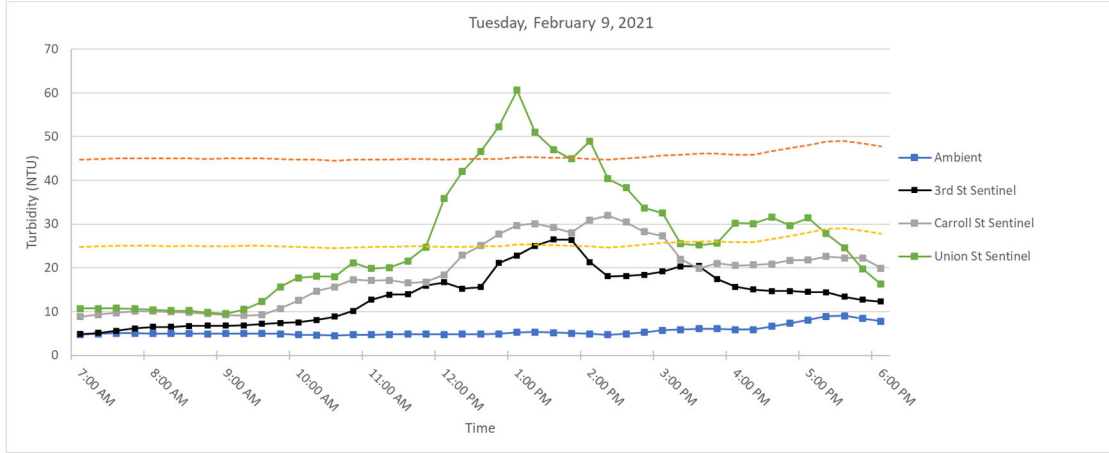
#### 3.1 Monday, February 8, 2021

**Figure 2.** Hourly rolling average turbidity readings on Monday, February 8, 2021 from 7 AM to 6 PM.



### 3.2 Tuesday, February 9, 2021

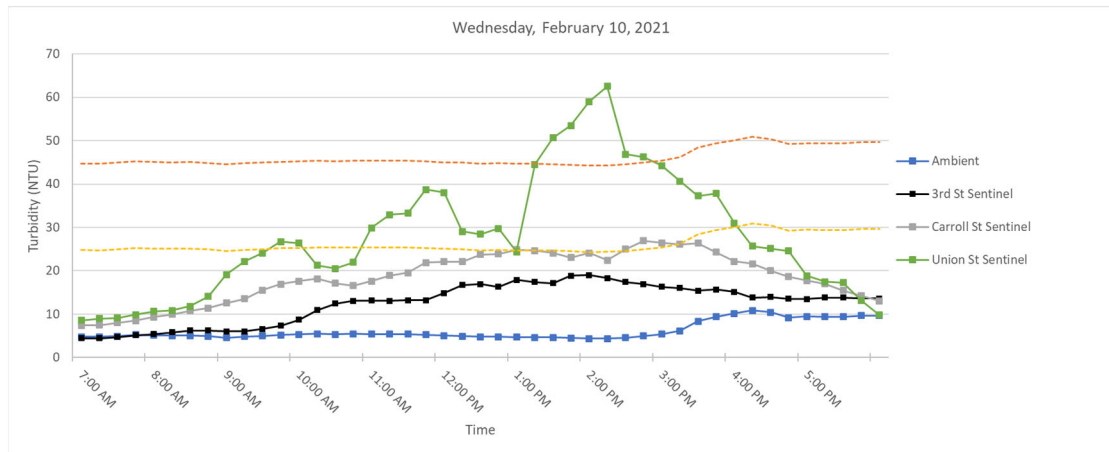
**Figure 3.** Hourly rolling average turbidity readings on Tuesday, February 9, 2021 from 7 AM to 6 PM.



**Note:** On February 09, 2021 three spikes in NTU at the Union Street Buoy were eliminated as outliers in accordance with the outlier analysis defined in Section 2 and the WQMP. At 11:00 AM a spike in turbidity of 46.41 NTU was removed at the Union Street Buoy. At 1:30 PM a spike of 100.8 NTU was removed at the Union Street Buoy. At 3:45 PM a spike of 62.75 NTU was removed from the Union Street Buoy.

### 3.3 Wednesday, February 10, 2021

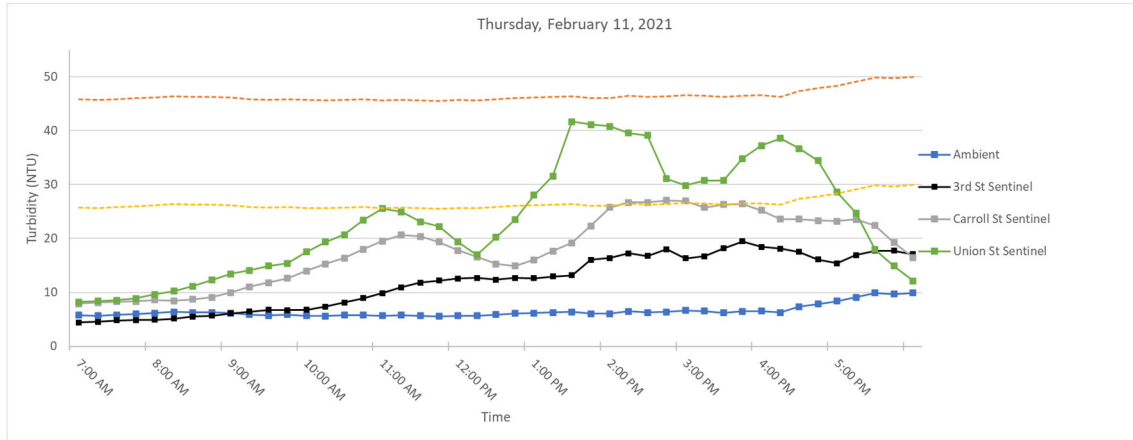
**Figure 4.** Hourly rolling average turbidity readings on Wednesday, February 10, 2021 from 7 AM to 6 PM.



**Note:** On February 10, 2021 at 2:30 PM a spike in turbidity at the Union Street Buoy of 90.37 was eliminated as an outlier in accordance with the outlier analysis defined in Section 2 and the WQMP.

## 1.4 Thursday, February 11, 2021

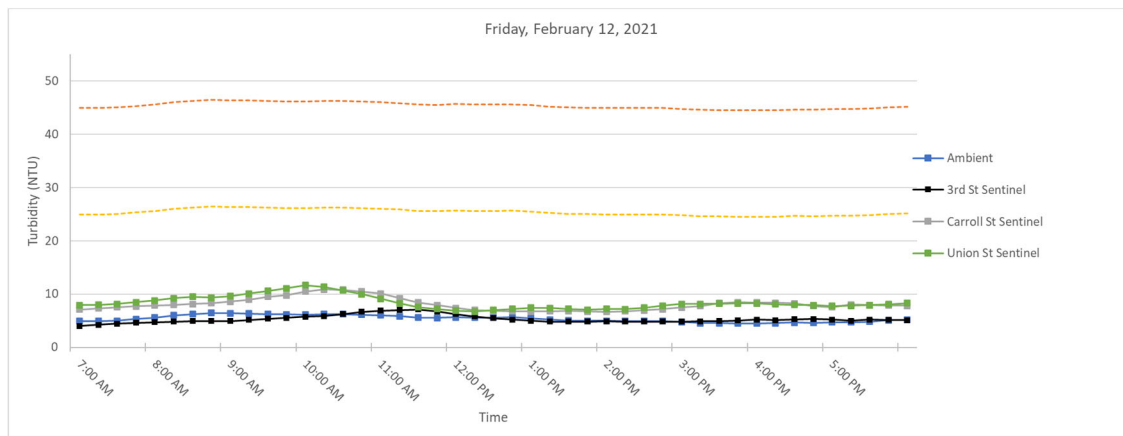
**Figure 5.** Hourly rolling average turbidity readings on Thursday, February 11, 2021 from 7 AM to 6 PM.



**Note:** On February 11, 2021 at 3:00 PM a spike in turbidity at the Union Street Buoy of 79.04 NTU was eliminated as an outlier in accordance with the outlier analysis defined in Section 2 and the WQMP.

## 1.5 Friday, February 12, 2021

**Figure 6.** Hourly rolling average turbidity readings on Friday, February 12, 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.

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

# Monday, February 8, 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	4.26	5.48	7.61	7.88	4.18	4.69	7.93	7.70	0.51	3.74	3.52
7:15:00	5.53	5.42	7.76	6.83	4.45	5.04	7.87	7.49	0.60	3.42	3.04
7:30:00	4.24	5.24	7.31	6.56	4.48	5.44	7.70	7.30	0.97	3.22	2.82
7:45:00	3.82	5.4	6.76	5.97	4.44	5.41	7.45	6.90	0.96	3.01	2.45
8:00:00	4.08	5.61	6.62	6.06	4.39	5.43	7.21	6.66	1.04	2.83	2.27
8:15:00	3.75	5.13	5.69	5.54	4.28	5.36	6.83	6.19	1.08	2.54	1.91
8:30:00	4.44	5	5.91	5.63	4.07	5.28	6.46	5.95	1.21	2.39	1.89
8:45:00	4.49	4.73	6.08	5.72	4.12	5.17	6.21	5.78	1.06	2.10	1.67
9:00:00	4.01	4.43	5.9	5.57	4.15	4.98	6.04	5.70	0.83	1.89	1.55
9:15:00	4.36	3.94	6.17	7.97	4.21	4.65	5.95	6.09	0.44	1.74	1.88
9:30:00	4.61	4.27	7.13	9.59	4.38	4.47	6.24	6.90	0.09	1.86	2.51
9:45:00	4.92	3.95	9.38	38.24	4.48	4.26	6.93	13.42	-0.21	2.45	8.94
10:00:00	3.73	5.01	16.78	28.81	4.33	4.32	9.07	18.04	-0.01	4.75	13.71
10:15:00	3.86	10.9	21.75	41.66	4.30	5.61	12.24	25.25	1.32	7.95	20.96
10:30:00	4.15	10.33	46.38	26.36	4.25	6.89	20.28	28.93	2.64	16.03	24.68
10:45:00	4.21	12.77	37.28	53.71	4.17	8.59	26.31	37.76	4.42	22.14	33.58
11:00:00	3.76	28.92	38.77	35.81	3.94	13.59	32.19	37.27	9.64	28.25	33.33
11:15:00	4.77	20.24	24.32	62.2	4.15	16.63	33.70	43.95	12.48	29.55	39.80
11:30:00	4.78	24.24	29.04	80.04	4.33	19.30	35.16	51.62	14.97	30.82	47.29
11:45:00	4.73	21.96	63.49	60.6	4.45	21.63	38.58	58.47	17.18	34.13	54.02
12:00:00	4.23	21.65	51.62	60.84	4.45	23.40	41.45	59.90	18.95	36.99	55.44
12:15:00	6.11	20.8	35.48	24.88	4.92	21.78	40.79	57.71	16.85	35.87	52.79
12:30:00	5.45	32.52	24.66	28.92	5.06	24.23	40.86	51.06	19.17	35.80	46.00
12:45:00	5.49	20.22	19.51	26.96	5.20	23.43	38.95	40.44	18.23	33.75	35.24
13:00:00	5.1	22.58	17.29	46.7	5.28	23.55	29.71	37.66	18.28	24.44	32.38
13:15:00	4.19	27.09	14.26	32.8	5.27	24.64	22.24	32.05	19.37	16.97	26.78
13:30:00	5.77	19	14.26	17.12	5.20	24.28	18.00	30.50	19.08	12.80	25.30
13:45:00	5.44	18.86	16.73	12.43	5.20	21.55	16.41	27.20	16.35	11.21	22.00
14:00:00	6.54	18.47	17.6	10.34	5.41	21.20	16.03	23.88	15.79	10.62	18.47
14:15:00	5.94	15.22	25.5	24.85	5.58	19.73	17.67	19.51	14.15	12.09	13.93
14:30:00	5.27	14.99	19.37	18.36	5.79	17.31	18.69	16.62	11.52	12.90	10.83
14:45:00	5.1	15.55	14.29	14.12	5.66	16.62	18.70	16.02	10.96	13.04	10.36
15:00:00	5.28	11.07	12.01	18.77	5.63	15.06	17.75	17.29	9.43	12.13	11.66
15:15:00	6.57	13.93	10.34	16.41	5.63	14.15	16.30	18.50	8.52	10.67	12.87
15:30:00	11.52	10.31	12.08	25.8	6.75	13.17	13.62	18.69	6.42	6.87	11.94
15:45:00	13.08	10.67	12.25	21.63	8.31	12.31	12.19	19.35	4.00	3.88	11.04
16:00:00	11.11	7.46	15.76	57.33	9.51	10.69	12.49	27.99	1.18	2.98	18.48
16:15:00	9	6.94	18.9	36.65	10.26	9.86	13.87	31.56	-0.39	3.61	21.31
16:30:00	6.94	13.57	20.38	26.13	10.33	9.79	15.87	33.51	-0.54	5.54	23.18
16:45:00	10.33	11.19	23.77	37.67	10.09	9.97	18.21	35.88	-0.13	8.12	25.79
17:00:00	10.7	9.01	19.91	33.64	9.62	9.63	19.74	38.28	0.02	10.13	28.67
17:15:00	11.11	8.98	19.59	36.45	9.62	9.94	20.51	34.11	0.32	10.89	24.49
17:30:00	8.68	13.67	16.93	17.01	9.55	11.28	20.12	30.18	1.73	10.56	20.63
17:45:00	10.75	12.23	15.97	16.04	10.31	11.02	19.23	28.16	0.70	8.92	17.85
18:00:00	10.6	6.96	15.91	14.98	10.37	10.17	17.66	23.62	-0.20	7.29	13.26

## Tuesday, February 9, 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	4.54	5.2	10.62	11.63	4.78	4.85	8.88	10.75	0.07	4.10	5.97
7:15:00	5.22	5.78	10.25	9.3	4.92	5.15	9.32	10.73	0.23	4.40	5.81
7:30:00	5.39	7.39	10.18	10.93	5.08	5.65	9.78	10.82	0.56	4.70	5.73
7:45:00	4.93	7.49	9.99	10.79	5.07	6.15	10.08	10.65	1.08	5.01	5.58
8:00:00	5.08	6.84	9.62	9.73	5.03	6.54	10.13	10.48	1.51	5.10	5.44
8:15:00	4.33	4.97	9.89	10.38	4.99	6.49	9.99	10.23	1.50	5.00	5.24
8:30:00	5.28	6.8	9.29	9.43	5.00	6.70	9.79	10.25	1.70	4.79	5.25
8:45:00	5.19	7.83	8.88	8.77	4.96	6.79	9.53	9.82	1.82	4.57	4.86
9:00:00	5.02	7.59	8.82	9.26	4.98	6.81	9.30	9.51	1.83	4.32	4.53
9:15:00	5.34	7.2	8.82	14.62	5.03	6.88	9.14	10.49	1.85	4.11	5.46
9:30:00	4.25	6.52	10.45	19.35	5.02	7.19	9.25	12.29	2.17	4.24	7.27
9:45:00	4.73	7.91	16.75	26.46	4.91	7.41	10.74	15.69	2.50	5.84	10.79
10:00:00	4.43	8.53	18.18	19.01	4.75	7.55	12.60	17.74	2.80	7.85	12.99
10:15:00	4.71	10.34	19.27	10.88	4.69	8.10	14.69	18.06	3.41	10.00	13.37
10:30:00	4.59	11.01	13.73	14.28	4.54	8.86	15.68	18.00	4.32	11.13	13.45
10:45:00	5.16	13.07	18.81	35.33	4.72	10.17	17.35	21.19	5.45	12.62	16.47
11:00:00	4.78	20.73	15.74	--	4.73	12.74	17.15	19.88	8.00	12.41	15.14
11:15:00	4.75	14.37	18.29	19.72	4.80	13.90	17.17	20.05	9.11	12.37	15.25
11:30:00	5.09	10.68	16.22	16.98	4.87	13.97	16.56	21.58	9.10	11.68	16.70
11:45:00	4.66	21.02	14.78	26.89	4.89	15.97	16.77	24.73	11.09	11.88	19.84
12:00:00	4.67	16.73	27.09	80.07	4.79	16.71	18.42	35.92	11.92	13.63	31.13
12:15:00	5.11	13.65	38.05	66.67	4.86	15.29	22.89	42.07	10.43	18.03	37.21
12:30:00	4.85	16.01	29.26	42.21	4.88	15.62	25.08	46.56	10.74	20.20	41.69
12:45:00	5.45	38.17	29.43	45.39	4.95	21.12	27.72	52.25	16.17	22.77	47.30
13:00:00	6.41	29.55	24.88	68.67	5.30	22.82	29.74	60.60	17.52	24.44	55.30
13:15:00	4.88	27.92	28.94	32.06	5.34	25.06	30.11	51.00	19.72	24.77	45.66
13:30:00	4.45	20.67	33.56	--	5.21	26.46	29.21	47.08	21.26	24.01	41.87
13:45:00	4.34	15.63	23.41	33.5	5.11	26.39	28.04	44.91	21.28	22.94	39.80
14:00:00	4.72	12.94	43.86	61.76	4.96	21.34	30.93	49.00	16.38	25.97	44.04
14:15:00	5.1	13.13	30.26	34.21	4.70	18.06	32.01	40.38	13.36	27.31	35.68
14:30:00	6.23	28.27	21.39	23.7	4.97	18.13	30.50	38.29	13.16	25.53	33.32
14:45:00	6.06	22.08	22.32	15.54	5.29	18.41	28.25	33.74	13.12	22.96	28.45
15:00:00	6.63	19.47	18.81	27.34	5.75	19.18	27.33	32.51	13.43	21.58	26.76
15:15:00	5.54	18.71	17.19	26.92	5.91	20.33	21.99	25.54	14.42	16.08	19.63
15:30:00	6.05	13.64	19.54	32.76	6.10	20.43	19.85	25.25	14.33	13.75	19.15
15:45:00	6.1	13.39	27.24	--	6.08	17.46	21.02	25.64	11.38	14.94	19.56
16:00:00	5.29	13.26	19.96	33.96	5.92	15.69	20.55	30.25	9.77	14.63	24.32
16:15:00	6.5	16.37	19.53	26.94	5.90	15.07	20.69	30.15	9.18	14.80	24.25
16:30:00	9.27	16.92	18.28	32.71	6.64	14.72	20.91	31.59	8.07	14.27	24.95
16:45:00	9.46	13.44	23.67	25.19	7.32	14.68	21.74	29.70	7.35	14.41	22.38
17:00:00	10.05	12.57	27.53	38.32	8.11	14.51	21.79	31.42	6.40	13.68	23.31
17:15:00	9.33	12.71	24.1	16.24	8.92	14.40	22.62	27.88	5.48	13.70	18.96
17:30:00	7.34	11.4	17.95	10.67	9.09	13.41	22.31	24.63	4.32	13.22	15.54
17:45:00	6.22	13.38	18.07	8.53	8.48	12.70	22.26	19.79	4.22	13.78	11.31
18:00:00	6.13	11.48	11.96	7.62	7.81	12.31	19.92	16.28	4.49	12.11	8.46

## Wednesday, February 10, 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	4.46	4.54	7.96	9.1	4.75	4.39	7.41	8.58	-0.35	2.66	3.83
7:15:00	4.31	4.32	7.36	9.86	4.74	4.41	7.46	8.98	-0.33	2.72	4.24
7:30:00	5.49	5.53	10.24	9.45	4.90	4.66	8.00	9.13	-0.25	3.09	4.22
7:45:00	6.55	6.65	9.25	12.55	5.22	5.09	8.47	9.87	-0.13	3.25	4.66
8:00:00	4.74	5.81	11.89	12.03	5.11	5.37	9.34	10.60	0.26	4.23	5.49
8:15:00	4.02	6.52	11.06	10.32	5.02	5.77	9.96	10.84	0.74	4.94	5.82
8:30:00	4.45	6.4	11.38	14.56	5.05	6.18	10.76	11.78	1.13	5.71	6.73
8:45:00	4.68	5.79	13.31	20.9	4.89	6.23	11.38	14.07	1.35	6.49	9.18
9:00:00	4.85	5.65	15.1	37.68	4.55	6.03	12.55	19.10	1.49	8.00	14.55
9:15:00	6.29	5.8	16.78	27.23	4.86	6.03	13.53	22.14	1.17	8.67	17.28
9:30:00	4.7	8.99	20.95	20.2	4.99	6.53	15.50	24.11	1.53	10.51	19.12
9:45:00	5.28	10.21	18.51	27.61	5.16	7.29	16.93	26.72	2.13	11.77	21.56
10:00:00	5.36	12.87	16.69	18.96	5.30	8.70	17.61	26.34	3.41	12.31	21.04
10:15:00	5.51	16.55	17.74	12.14	5.43	10.88	18.13	21.23	5.46	12.71	15.80
10:30:00	5.7	13.58	11.53	23.65	5.31	12.44	17.08	20.51	7.13	11.77	15.20
10:45:00	5.3	11.96	18.36	27.28	5.43	13.03	16.57	21.93	7.60	11.44	16.50
11:00:00	5.01	10.46	23.74	67.42	5.38	13.08	17.61	29.89	7.71	12.24	24.51
11:15:00	5.52	12.77	23.3	34.3	5.41	13.06	18.93	32.96	7.66	13.53	27.55
11:30:00	5.46	17.27	20.8	13.85	5.40	13.21	19.55	33.30	7.81	14.15	27.90
11:45:00	4.92	13.33	23.3	50.71	5.24	13.16	21.90	38.71	7.92	16.66	33.47
12:00:00	4.28	20.32	19.25	24.06	5.04	14.83	22.08	38.07	9.79	17.04	33.03
12:15:00	4.44	19.76	23.64	22.37	4.92	16.69	22.06	29.06	11.77	17.13	24.13
12:30:00	4.57	13.79	31.8	31.05	4.73	16.89	23.76	28.41	12.16	19.02	23.67
12:45:00	5.64	14.22	21.31	20.51	4.77	16.28	23.86	29.74	11.51	19.09	24.97
13:00:00	4.47	21.33	28.32	23.7	4.68	17.88	24.86	24.34	13.20	20.18	19.66
13:15:00	4.13	17.81	18.04	125.16	4.65	17.38	24.62	44.56	12.73	19.97	39.91
13:30:00	4.25	18.31	21.02	53.09	4.61	17.09	24.10	50.70	12.48	19.49	46.09
13:45:00	3.94	22.53	26.42	44.91	4.49	18.84	23.02	53.47	14.35	18.54	48.99
14:00:00	4.84	14.86	26.53	48.27	4.33	18.97	24.07	59.03	14.64	19.74	54.70
14:15:00	4.5	17.88	20.31	41.12	4.33	18.28	22.46	62.51	13.95	18.13	58.18
14:30:00	5.16	13.31	30.78	--	4.54	17.38	25.01	46.85	12.84	20.47	42.31
14:45:00	6.25	15.88	30.68	50.78	4.94	16.89	26.94	46.27	11.95	22.01	41.33
15:00:00	6.01	19.37	23.95	36.72	5.35	16.26	26.45	44.22	10.91	21.10	38.87
15:15:00	8.87	13.47	24.62	33.94	6.16	15.98	26.07	40.64	9.82	19.91	34.48
15:30:00	15.62	14.77	21.84	27.73	8.38	15.36	26.37	37.29	6.98	17.99	28.91
15:45:00	10.09	14.69	20.23	39.99	9.37	15.64	24.26	37.83	6.27	14.90	28.46
16:00:00	9.96	13.14	20.27	16.46	10.11	15.09	22.18	30.97	4.98	12.07	20.86
16:15:00	9.77	12.99	21.05	10.36	10.86	13.81	21.60	25.70	2.95	10.74	14.83
16:30:00	6.64	14.12	16.73	31.04	10.42	13.94	20.02	25.12	3.53	9.61	14.70
16:45:00	9.56	12.58	14.76	24.89	9.20	13.50	18.61	24.55	4.30	9.40	15.34
17:00:00	11.27	14.3	16.03	11.36	9.44	13.43	17.77	18.82	3.99	8.33	9.38
17:15:00	9.6	15.04	16.2	9.6	9.37	13.81	16.95	17.45	4.44	7.59	8.08
17:30:00	9.98	13.04	13.51	9.52	9.41	13.82	15.45	17.28	4.41	6.04	7.87
17:45:00	7.81	13.52	10.71	10.07	9.64	13.70	14.24	13.09	4.05	4.60	3.44
18:00:00	9.66	11.91	8.82	8.6	9.66	13.56	13.05	9.83	3.90	3.39	0.17

## Thursday, February 11, 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	5.26	4.55	10.01	8.57	5.80	4.45	7.93	8.23	-1.35	2.13	2.43
7:15:00	6.06	4.73	8.27	8.85	5.69	4.54	8.15	8.40	-1.15	2.45	2.71
7:30:00	6.58	5.57	8.08	9.33	5.86	4.82	8.29	8.57	-1.04	2.43	2.71
7:45:00	6.55	4.72	8	9.47	6.02	4.89	8.36	8.89	-1.13	2.34	2.87
8:00:00	6.51	5.16	8.66	11.98	6.19	4.95	8.60	9.64	-1.25	2.41	3.45
8:15:00	6.22	5.51	9.21	11.75	6.38	5.14	8.44	10.28	-1.25	2.06	3.89
8:30:00	5.65	6.6	9.77	13.32	6.30	5.51	8.74	11.17	-0.79	2.44	4.87
8:45:00	6.56	6.4	9.98	15.02	6.30	5.68	9.12	12.31	-0.62	2.83	6.01
9:00:00	6	6.88	12.33	15.29	6.19	6.11	9.99	13.47	-0.08	3.80	7.28
9:15:00	4.99	6.89	13.93	15.08	5.88	6.46	11.04	14.09	0.57	5.16	8.21
9:30:00	5.55	7.01	13.2	15.96	5.75	6.76	11.84	14.93	1.01	6.09	9.18
9:45:00	6.37	6.33	13.9	15.76	5.89	6.70	12.67	15.42	0.81	6.77	9.53
10:00:00	5.58	6.86	16.7	25.5	5.70	6.79	14.01	17.52	1.10	8.31	11.82
10:15:00	5.56	9.67	18.75	24.54	5.61	7.35	15.30	19.37	1.74	9.69	13.76
10:30:00	5.86	10.68	19.31	21.9	5.78	8.11	16.37	20.73	2.33	10.59	14.95
10:45:00	5.74	11.31	21.56	29.67	5.82	8.97	18.04	23.47	3.15	12.22	17.65
11:00:00	5.67	10.84	21.33	26.26	5.68	9.87	19.53	25.57	4.19	13.85	19.89
11:15:00	6.08	12.36	22.45	22.38	5.78	10.97	20.68	24.95	5.19	14.90	19.17
11:30:00	5.08	13.9	17.34	15.4	5.69	11.82	20.40	23.12	6.13	14.71	17.44
11:45:00	5.29	12.66	14.23	17.55	5.57	12.21	19.38	22.25	6.64	13.81	16.68
12:00:00	6.38	13.06	13.6	15.35	5.70	12.56	17.79	19.39	6.86	12.09	13.69
12:15:00	5.53	11.62	15.45	14.14	5.67	12.72	16.61	16.96	7.05	10.94	11.29
12:30:00	7.14	10.52	15.87	38.77	5.88	12.35	15.30	20.24	6.47	9.41	14.36
12:45:00	6.17	15.5	15.45	31.78	6.10	12.67	14.92	23.52	6.57	8.82	17.42
13:00:00	5.64	12.57	19.82	40.35	6.17	12.65	16.04	28.08	6.48	9.87	21.91
13:15:00	6.96	14.53	21.8	32.92	6.29	12.95	17.68	31.59	6.66	11.39	25.30
13:30:00	5.98	12.92	23.19	64.69	6.38	13.21	19.23	41.70	6.83	12.85	35.32
13:45:00	5.58	24.67	31.5	36.11	6.07	16.04	22.35	41.17	9.97	16.29	35.10
14:00:00	6.23	17.38	32.49	30.17	6.08	16.41	25.76	40.85	10.34	19.68	34.77
14:15:00	7.9	16.67	24.47	33.95	6.53	17.23	26.69	39.57	10.70	20.16	33.04
14:30:00	5.82	12.14	21.96	30.81	6.30	16.76	26.72	39.15	10.45	20.42	32.84
14:45:00	6.54	19.15	25.05	24.51	6.41	18.00	27.09	31.11	11.59	20.68	24.70
15:00:00	6.77	16.27	30.81	--	6.65	16.32	26.96	29.86	9.67	20.30	23.21
15:15:00	5.66	19.25	26.62	33.76	6.54	16.70	25.78	30.76	10.16	19.24	24.22
15:30:00	6.46	24.14	27.22	33.97	6.25	18.19	26.33	30.76	11.94	20.08	24.51
15:45:00	7.17	18.71	22.58	47.27	6.52	19.50	26.46	34.88	12.98	19.94	28.36
16:00:00	6.76	13.97	18.99	33.96	6.56	18.47	25.24	37.24	11.90	18.68	30.68
16:15:00	5.48	14.52	22.62	44.13	6.31	18.12	23.61	38.62	11.81	17.30	32.31
16:30:00	10.99	16.27	26.64	24.11	7.37	17.52	23.61	36.69	10.15	16.24	29.32
16:45:00	8.9	16.98	25.75	22.8	7.86	16.09	23.32	34.45	8.23	15.46	26.59
17:00:00	9.79	15.25	22.21	17.94	8.38	15.40	23.24	28.59	7.01	14.86	20.20
17:15:00	10.3	21.6	20.55	14.81	9.09	16.92	23.55	24.76	7.83	14.46	15.67
17:30:00	9.56	18.72	16.92	10.16	9.91	17.76	22.41	17.96	7.86	12.51	8.06
17:45:00	10.03	16.26	10.85	9.03	9.72	17.76	19.26	14.95	8.05	9.54	5.23
18:00:00	10.01	13.73	11.92	8.82	9.94	17.11	16.49	12.15	7.17	6.55	2.21

## Friday, February 12, 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	4.46	4.28	7.61	7.21	4.94	3.98	7.09	7.94	-0.97	2.15	3.00
7:15:00	5.67	4.75	7.73	8.13	4.94	4.21	7.31	7.95	-0.73	2.37	3.01
7:30:00	5.33	4.85	7.8	9.03	5.01	4.41	7.52	8.12	-0.59	2.51	3.11
7:45:00	6.31	4.95	8.18	9.79	5.32	4.59	7.70	8.44	-0.72	2.38	3.13
8:00:00	6.25	4.72	7.89	9.74	5.60	4.71	7.84	8.78	-0.89	2.24	3.18
8:15:00	6.45	4.81	8.25	9.31	6.00	4.82	7.97	9.20	-1.19	1.97	3.20
8:30:00	6.8	5.23	8.54	9.67	6.23	4.91	8.13	9.51	-1.32	1.90	3.28
8:45:00	6.4	4.8	8.67	8.18	6.44	4.90	8.31	9.34	-1.54	1.86	2.90
9:00:00	6.02	5.19	9.41	11.19	6.38	4.95	8.55	9.62	-1.43	2.17	3.23
9:15:00	6.01	5.58	9.87	12.05	6.34	5.12	8.95	10.08	-1.21	2.61	3.74
9:30:00	6.01	5.92	10.9	11.94	6.25	5.34	9.48	10.61	-0.90	3.23	4.36
9:45:00	6.44	6.08	10.1	11.98	6.18	5.51	9.79	11.07	-0.66	3.61	4.89
10:00:00	6.17	6.02	12.23	11.2	6.13	5.76	10.50	11.67	-0.37	4.37	5.54
10:15:00	6.52	5.57	11.21	9.49	6.23	5.83	10.86	11.33	-0.40	4.63	5.10
10:30:00	6.11	7.69	9.71	8.77	6.25	6.26	10.83	10.68	0.01	4.58	4.43
10:45:00	5.46	8.01	9.25	8.4	6.14	6.67	10.50	9.97	0.53	4.36	3.83
11:00:00	5.74	7.17	8.16	7.69	6.00	6.89	10.11	9.11	0.89	4.11	3.11
11:15:00	5.48	6.65	7.72	6.76	5.86	7.02	9.21	8.22	1.16	3.35	2.36
11:30:00	5.06	5.92	7.31	6.03	5.57	7.09	8.43	7.53	1.52	2.86	1.96
11:45:00	6	5.83	7.03	7.05	5.55	6.72	7.89	7.19	1.17	2.35	1.64
12:00:00	6.02	5.56	6.6	6.98	5.66	6.23	7.36	6.90	0.57	1.70	1.24
12:15:00	5.32	5.06	6.36	6.91	5.58	5.80	7.00	6.75	0.23	1.43	1.17
12:30:00	5.56	4.87	6.8	7.9	5.59	5.45	6.82	6.97	-0.14	1.23	1.38
12:45:00	5.34	4.66	7.07	7.21	5.65	5.20	6.77	7.21	-0.45	1.12	1.56
13:00:00	5.1	4.83	6.92	8.08	5.47	5.00	6.75	7.42	-0.47	1.28	1.95
13:15:00	4.7	4.77	6.69	6.71	5.20	4.84	6.77	7.36	-0.37	1.56	2.16
13:30:00	4.47	5.05	6.79	6.29	5.03	4.84	6.85	7.24	-0.20	1.82	2.20
13:45:00	5.32	4.81	6.24	7.04	4.99	4.82	6.74	7.07	-0.16	1.76	2.08
14:00:00	5.28	4.77	6.77	7.88	4.97	4.85	6.68	7.20	-0.13	1.71	2.23
14:15:00	4.79	4.65	7.32	7.78	4.91	4.81	6.76	7.14	-0.10	1.85	2.23
14:30:00	4.66	4.87	7.56	8.27	4.90	4.83	6.94	7.45	-0.07	2.03	2.55
14:45:00	4.5	4.86	7.79	8.16	4.91	4.79	7.14	7.83	-0.12	2.23	2.92
15:00:00	4.61	5.04	7.93	8.56	4.77	4.84	7.47	8.13	0.07	2.71	3.36
15:15:00	4.3	5.04	8.19	7.99	4.57	4.89	7.76	8.15	0.32	3.19	3.58
15:30:00	4.7	4.9	10.05	7.87	4.55	4.94	8.30	8.17	0.39	3.75	3.62
15:45:00	4.26	5.43	8.33	8.57	4.47	5.05	8.46	8.23	0.58	3.98	3.76
16:00:00	4.57	5.54	7.6	8.27	4.49	5.19	8.42	8.25	0.70	3.93	3.76
16:15:00	4.79	4.51	7.73	7.66	4.52	5.08	8.38	8.07	0.56	3.86	3.55
16:30:00	4.98	5.81	7.49	7.45	4.66	5.24	8.24	7.96	0.58	3.58	3.30
16:45:00	4.32	5.33	7.75	7.52	4.58	5.32	7.78	7.89	0.74	3.20	3.31
17:00:00	4.76	4.72	7.01	7.8	4.68	5.18	7.52	7.74	0.50	2.83	3.06
17:15:00	4.62	4.58	10.13	8.59	4.69	4.99	8.02	7.80	0.30	3.33	3.11
17:30:00	5.4	5.46	7.13	8.37	4.82	5.18	7.90	7.95	0.36	3.09	3.13
17:45:00	6.24	5.51	7.2	8.15	5.07	5.12	7.84	8.09	0.05	2.78	3.02
18:00:00	4.83	5.07	7.63	8.56	5.17	5.07	7.82	8.29	-0.10	2.65	3.12