



Kale Black, Sr. Drinking Water Officer
Office of Drinking Water, Manitoba Conservation and Climate
309 – 25 Tupper Street North
Portage La Prairie, MB R1N 3K1

April 7, 2022

RE: MARCH 2022 WATER QUALITY COMPLIANCE SUBMISSION FOR THE CITY OF WINNIPEG WATER SUPPLY SYSTEM

Please find attached on-line and grab turbidity summary reports, on-line and grab chlorine summary reports and the UV summary report for the Water Treatment Plant for March 2022.

The March on-line and grab sampling turbidity reports include results obtained for the Water Treatment Plant raw water and the eight filters. The turbidity results for the filter effluent met the licence requirements.

The March on-line and grab sampling chlorine reports include results obtained for the Deacon Booster Pumping Station at the Water Treatment Plant. As previously approved, the Branch 1 chlorine analyzer readings and grab samples were taken at the nearest location to the entry point to Branch 1 during the gravity flow trial, which occurred from March 17 at 9:28 am until March 29 at 12:50 pm. The free chlorine results at the Water Treatment Plant met the licence requirements.

The March UV summary report includes results obtained for the six UV reactors at the Water Treatment Plant. Please note that the UV system was offline during the gravity flow trial. The UV disinfection results met the licence requirements.

Please let me know of any concerns or questions respecting this submission. I can be reached by telephone at 204-986-8359 or by e-mail at rgrosselle@winnipeg.ca.

Yours sincerely,

*Original signed by,
(Signed original available upon request)*

R. Grosselle
Manager of Environmental Standards

Enclosures

cc: Dr. L. Richards, Winnipeg Regional Health Authority (email)
Dr. H. Chang, Winnipeg Regional Health Authority (email)
Dr. S. Roberecki, Manitoba Health and Seniors Care (email)
T. Shanks, M. Eng., P. Eng. (e-mail)
C. Wiebe, P. Eng., CAMP (e-mail)
C. Diduck (email)



CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT
WATER SERVICES

Water System Code: 252.00
 Licence Number: PWS-09-412-02

WATER TREATMENT PLANT TURBIDITY ON-LINE MONITORING REPORT

March 2022 Turbidity (NTU)

Date	Raw	Filter #1		Filter #2		Filter #3		Filter #4		Filter #5		Filter #6		Filter #7		Filter #8	
	Avg	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max
1/03/2022	0.54	0.05	0.10	0.03	0.07	0.01	0.02	0.03	0.05	0.05	0.06	0.05	0.10	0.03	0.06	0.04	0.07
2/03/2022	0.54	0.06	0.08	0.02	0.07	0.00	0.01	0.02	0.05	0.03	0.08	0.09	0.11	0.03	0.06	0.05	0.08
3/03/2022	0.53	0.06	0.09	0.03	0.05	0.00	0.05	0.02	0.05	0.04	0.08	0.07	0.12	0.03	0.05	0.04	0.09
4/03/2022	0.53	0.04	0.09	0.03	0.07	0.00	0.02	0.02	0.04	0.04	0.06	0.06	0.13	0.03	0.06	0.04	0.09
5/03/2022	0.52	0.04	0.10	0.02	0.06	0.00	0.02	0.02	0.04	0.04	0.07	0.09	0.12	0.03	0.06	0.06	0.07
6/03/2022	0.51	0.06	0.08	0.02	0.06	0.00	0.01	0.02	0.05	0.03	0.07	0.11	0.15	0.02	0.04	0.05	0.09
7/03/2022	0.51	0.05	0.09	0.03	0.05	0.01	0.02	0.02	0.03	0.03	0.09	0.10	0.19	0.04	0.05	0.05	0.11
8/03/2022	0.50	0.06	0.11	0.04	0.11	0.01	0.05	0.04	0.07	0.05	0.08	0.11	0.17	0.03	0.09	0.06	0.09
9/03/2022	0.53	0.05	0.13	0.01	0.04	0.00	0.03	0.02	0.06	0.03	0.10	0.13	0.22	0.02	0.05	0.04	0.13
10/03/2022	0.57	0.05	0.09	0.02	0.15	0.03	0.06	0.02	0.10	0.04	0.11	0.08	0.14	0.02	0.06	0.03	0.08
11/03/2022	0.57	0.05	0.11	0.08	0.13	0.04	0.09	0.04	0.07	0.03	0.12	0.07	0.18	0.06	0.10	0.03	0.09
12/03/2022	0.57	0.04	0.11	0.07	0.15	0.04	0.11	0.05	0.10	0.07	0.12	0.04	0.07	0.05	0.13	0.05	0.07
13/03/2022	0.56	0.06	0.08	0.08	0.16	0.03	0.06	0.06	0.11	0.05	0.11	0.07	0.11	0.04	0.12	0.05	0.11
14/03/2022	0.55	0.06	0.16	0.06	0.13	0.07	0.14	0.05	0.11	0.05	0.11	0.05	0.13	0.05	0.10	0.04	0.10
15/03/2022	0.85	0.01	0.08	0.04	0.15	0.01	0.25	0.03	0.09	0.02	0.09	0.02	0.11	0.02	0.15	0.02	0.08
16/03/2022	0.56	0.05	0.11	0.05	0.11	0.05	0.08	0.03	0.10	0.03	0.13	0.05	0.13	0.04	0.10	0.03	0.09
17/03/2022	0.58	0.05	0.12	0.10	0.15	0.05	0.09	0.06	0.08	0.04	0.15	0.05	0.13	0.06	0.19	0.04	0.13
18/03/2022	0.55	0.07	0.17	0.11	0.21	0.07	0.16	0.08	0.15	0.07	0.11	0.06	0.10	0.06	0.15	0.06	0.12
19/03/2022	0.55	0.09	0.13	0.10	0.23	0.06	0.11	0.07	0.16	0.06	0.13	0.10	0.16	0.05	0.15	0.06	0.13
20/03/2022	0.54	0.07	0.18	0.07	0.14	0.07	0.18	0.05	0.13	0.06	0.13	0.08	0.16	0.06	0.12	0.05	0.13
21/03/2022	0.53	0.06	0.15	0.11	0.19	0.06	0.13	0.06	0.09	0.04	0.13	0.09	0.19	0.06	0.12	0.04	0.06
22/03/2022	0.53	0.05	0.11	0.07	0.19	0.04	0.10	0.05	0.12	0.05	0.11	0.08	0.17	0.05	0.13	0.05	0.12
23/03/2022	0.53	0.04	0.07	0.06	0.15	0.03	0.09	0.04	0.09	0.05	0.11	0.11	0.15	0.04	0.11	0.04	0.11
24/03/2022	0.53	0.05	0.11	0.07	0.09	0.04	0.07	0.03	0.09	0.04	0.10	0.10	0.17	0.04	0.07	0.04	0.10
25/03/2022	0.53	0.04	0.10	0.07	0.15	0.03	0.10	0.04	0.06	0.03	0.05	0.09	0.19	0.04	0.10	0.04	0.11
26/03/2022	0.52	0.05	0.10	0.07	0.14	0.04	0.14	0.05	0.10	OL	OL	0.13	0.22	0.04	0.13	0.04	0.07
27/03/2022	0.52	0.05	0.11	0.07	0.13	0.04	0.11	0.05	0.09	OL	OL	0.14	0.24	0.05	0.12	0.05	0.11
28/03/2022	0.53	0.05	0.10	0.07	0.14	0.04	0.10	0.05	0.10	OL	OL	0.08	0.21	0.05	0.12	0.05	0.11
29/03/2022	0.54	0.04	0.06	0.05	0.11	0.03	0.08	0.04	0.09	OL	OL	0.01	0.06	0.04	0.09	0.04	0.11
30/03/2022	0.55	0.04	0.07	0.06	0.11	0.03	0.05	0.03	0.07	OL	OL	0.01	0.05	0.04	0.08	0.04	0.07
31/03/2022	0.56	0.04	0.07	0.06	0.10	0.04	0.07	0.04	0.07	OL	OL	0.01	0.04	0.04	0.06	0.04	0.08

Total Number of Measurements Taken, A:	11220	10739	9586	12098	10336	13212	12839	14620
Turbidity Standard for Monitoring Location (NTU):	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Number of Measurements Meeting Standard, B:	11220	10739	9586	12098	10336	13212	12839	14620
Compliance with Turbidity Standard, C = B/A X 100%:	100.000%	100.000%	100.000%	100.000%	100.000%	100.000%	100.000%	100.000%

OL= Offline

File Path: N:\Water Treatment Branch\Administration\Reports\Regulatory Submissions\Turbidity\2022\03-March

Submitted By (Print): M.Szmon

Signature: Original signed by M.Szmon

WATER TREATMENT PLANT TURBIDITY GRAB MONITORING REPORT

Water System Code: 252.00		Turbidity (NTU)																	
Licence No. PWS-09-412-02																			
Date	Raw Water		Filter 1		Filter 2		Filter 3		Filter 4		Filter 5		Filter 6		Filter 7		Filter 8		
	Grab	Analyser	Grab	Analyser	Grab	Analyser	Grab	Analyser	Grab	Analyser	Grab	Analyser	Grab	Analyser	Grab	Analyser	Grab	Analyser	
01-Mar-2022	0.49	0.53	0.07	0.07	0.11	0.06	0.12	0.03	0.08	0.04	0.07	0.06	0.07	0.08	0.08	0.04	0.07	0.04	
02-Mar-2022	0.49	0.53	0.08	0.08	0.08	0.03	0.09	<0.02	0.10	0.05	0.08	0.06	0.08	0.09	0.07	0.03	0.09	0.06	
03-Mar-2022	0.49	0.52	0.09	0.09	0.08	0.04	0.09	<0.02	0.07	0.02	0.07	0.07	0.08	0.11	0.07	0.03	0.09	0.07	
04-Mar-2022	0.49	0.52	0.11	0.09	0.10	0.05	0.09	0.02	0.08	0.03	0.08	0.06	0.07	0.10	0.08	0.03	0.07	0.05	
05-Mar-2022	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	
06-Mar-2022	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	
07-Mar-2022	0.50	0.50	0.09	0.08	0.08	0.04	0.10	<0.02	0.08	0.03	0.07	0.05	0.13	0.19	0.08	0.03	0.07	0.05	
08-Mar-2022	0.50	0.49	0.10	0.08	0.15	0.08	0.15	0.05	0.11	0.05	0.10	0.06	0.10	0.17	0.11	0.06	0.09	0.08	
09-Mar-2022	0.48	0.49	0.09	0.08	0.14	<0.02	0.09	<0.02	0.09	0.02	0.13	0.10	0.10	0.20	0.08	0.03	0.10	0.09	
10-Mar-2022	0.46	0.53	0.11	0.06	0.10	<0.02	0.11	<0.02	0.07	<0.02	0.11	0.10	0.13	0.10	0.09	<0.02	0.09	0.05	
11-Mar-2022	0.43	0.55	0.10	0.07	0.10	0.09	0.12	0.07	0.09	0.06	0.08	0.06	0.13	0.08	0.09	0.06	0.08	0.04	
12-Mar-2022	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	
13-Mar-2022	0.45	0.54	0.10	0.06	0.10	0.09	0.10	0.06	0.13	0.10	0.14	0.11	0.11	0.08	0.09	0.07	0.12	0.08	
14-Mar-2022	0.42	0.53	0.12	0.09	0.11	0.09	0.12	0.07	0.08	0.06	0.08	0.05	0.11	0.07	0.09	0.05	0.09	0.05	
15-Mar-2022	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	
16-Mar-2022	0.50	0.68	0.10	0.07	0.08	0.08	0.09	0.05	0.12	0.10	0.10	0.07	0.09	0.07	0.07	0.04	0.10	0.06	
17-Mar-2022	0.51	0.54	0.16	0.11	0.12	0.10	0.14	0.09	0.09	0.06	0.09	0.06	0.08	0.06	0.10	0.06	0.08	0.04	
18-Mar-2022	0.46	0.52	0.14	0.10	0.18	0.16	0.14	0.08	0.17	0.08	0.13	0.13	0.12	0.10	0.18	0.12	0.12	0.08	
19-Mar-2022	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	
20-Mar-2022	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	
21-Mar-2022	0.44	0.52	0.15	0.12	0.14	0.11	0.14	0.09	0.11	0.08	0.10	0.07	0.10	0.10	0.13	0.08	0.10	0.05	
22-Mar-2022	0.45	0.51	0.10	0.07	0.11	0.10	0.15	0.10	0.13	0.09	0.10	0.07	0.10	0.11	0.11	0.07	0.10	0.05	
23-Mar-2022	0.45	0.53	0.10	0.06	0.15	0.13	0.09	0.05	0.11	0.08	0.11	0.09	0.10	0.12	0.08	0.04	0.11	0.07	
24-Mar-2022	0.44	0.51	0.10	0.07	0.09	0.08	0.09	0.05	0.07	0.04	0.09	0.07	0.12	0.16	0.08	0.04	0.12	0.08	
25-Mar-2022	0.44	0.52	0.13	0.10	0.10	0.10	0.10	0.06	0.09	0.06	0.09	0.06	0.08	0.13	0.11	0.07	0.08	0.04	
26-Mar-2022	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	
27-Mar-2022	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	
28-Mar-2022	0.44	0.50	0.09	0.06	0.10	0.09	0.10	0.05	0.10	0.07	o/l	o/l	0.10	0.18	0.09	0.04	0.08	0.05	
29-Mar-2022	0.44	0.52	0.09	0.05	0.09	0.08	0.08	0.05	0.12	0.08	o/l	o/l	0.09	0.02	0.08	0.04	0.09	0.05	
30-Mar-2022	0.44	0.52	0.08	0.05	0.07	0.07	0.08	0.04	0.10	0.07	o/l	o/l	0.09	0.02	0.07	0.04	0.10	0.06	
31-Mar-2022	0.45	0.54	0.08	0.06	0.08	0.07	0.08	0.04	0.06	0.04	o/l	o/l	0.08	0.02	0.08	0.04	0.07	0.03	
Total number of measurements taken, A:			23		23		23		23		19		23		23		23		
Turbidity Standard for Monitoring Location (NTU):			0.30		0.30		0.30		0.30		0.30		0.30		0.30		0.30		
Number of measurements meeting standard, B:			23		23		23		23		19		23		23		23		
Compliance with Turbidity Standard, C= B/A X 100%:			100%		100%		100%		100%		100%		100%		100%		100%		

na: not analyzed nr: no result ns: no sample o/l: offline im: instrument maintenance

Comments:

Report Date: 4-Apr-2022

Filter 5 was taken offline for maintenance on March 25 at 6:36 pm



WATER TREATMENT PLANT FREE CHLORINE ON-LINE MONITORING REPORT
Deacon Booster Pumping Station

Water System Code: **252.00**
Licence Number: **PWS-09-412-02**
Report Created: 01 April 2022

Report Period: March 2022

Date	BRANCH 1 [mg/L]		BRANCH 2 [mg/L]	
	Average	Minimum	Average	Minimum
01/03/2022	1.02	0.98	1.11	1.06
02/03/2022	1.01	0.95	1.11	1.04
03/03/2022	0.97	0.94	1.07	1.03
04/03/2022	0.96	0.92	1.08	1.00
05/03/2022	0.97	0.95	1.08	1.04
06/03/2022	1.04	0.96	1.13	1.05
07/03/2022	1.10	1.00	1.16	1.12
08/03/2022	1.30	1.14	1.05	0.95
09/03/2022	1.21	1.15	1.00	0.93
10/03/2022	1.26	1.19	1.07	1.02
11/03/2022	1.27	1.16	1.03	0.91
12/03/2022	1.33	1.24	1.20	0.96
13/03/2022	1.31	1.22	1.39	1.22
14/03/2022	1.26	1.17	1.27	1.19
15/03/2022	1.39	1.21	1.36	1.14
16/03/2022	1.20	1.02	1.22	0.98
17/03/2022	1.29 *	1.07 *	1.34	0.92
18/03/2022	1.34 *	1.28 *	1.31	1.25
19/03/2022	1.35 *	1.26 *	1.34	1.26
20/03/2022	1.39 *	1.28 *	1.41	1.30
21/03/2022	1.49 *	1.36 *	1.50	1.41
22/03/2022	1.49 *	1.33 *	1.53	1.43
23/03/2022	1.39 *	1.31 *	1.40	1.31
24/03/2022	1.38 *	1.07 *	1.33	1.12
25/03/2022	1.13 *	0.96 *	1.15	1.03
26/03/2022	1.21 *	1.13 *	1.20	1.13
27/03/2022	1.16 *	1.08 *	1.15	1.10
28/03/2022	1.15 *	1.07 *	1.15	1.11
29/03/2022	1.19 *	0.72 *	1.22	0.72
30/03/2022	1.31	1.24	1.31	1.24
31/03/2022	1.28	1.21	1.29	1.25

Total Number of Measurements, A:	21572	21570
Minimum Free Chlorine Standard:	0.5	0.5
Number of Measurements Meeting Standard, B:	21572	21570
COMPLIANCE, C = B/A X 100%:	100.00	100.00

File Path: N:\Water Treatment Branch\Administration\Reports\Regulatory Submissions\Chlorine\2022\03-March

* Branch 1 samples are taken at the nearest location to the entry point to Branch 1 while Deacon Booster Pumping Station and UV System were offline for the Gravity Flow Trial testing

Submitted By (Print): M.Szmon

Signature: Original signed by M.Szmon



WATER TREATMENT PLANT CHLORINE GRAB MONITORING REPORT						
Water System Code: 252.00	Deacon Booster Pumping Station Branch 1			Deacon Booster Pumping Station Branch 2		
Licence No. PWS-09-412-02						
Date	Free Chlorine (mg/L)		Total Chlorine (mg/L)	Free Chlorine (mg/L)		Total Chlorine (mg/L)
	Analyser	Grab	Grab	Analyser	Grab	Grab
01-Mar-2022	1.01	0.98	1.17	1.11	1.12	1.35
02-Mar-2022	1.02	1.02	1.25	1.13	1.15	1.37
03-Mar-2022	0.97	0.98	1.17	1.07	1.10	1.31
04-Mar-2022	0.98	0.96	1.17	1.09	1.12	1.34
05-Mar-2022	ns	ns	ns	ns	ns	ns
06-Mar-2022	ns	ns	ns	ns	ns	ns
07-Mar-2022	1.04	0.98	1.22	1.18	1.16	1.39
08-Mar-2022	1.28	1.29	1.54	1.17	1.20	1.41
09-Mar-2022	1.19	1.21	1.44	1.04	1.07	1.27
10-Mar-2022	1.25	1.27	1.50	1.05	1.07	1.25
11-Mar-2022	1.27	1.26	1.55	1.02	1.07	1.28
12-Mar-2022	ns	ns	ns	ns	ns	ns
13-Mar-2022	1.33	1.37	1.61	1.56	1.46	1.67
14-Mar-2022	1.22	1.24	1.48	1.23	1.29	1.53
15-Mar-2022	ns	ns	ns	ns	ns	ns
16-Mar-2022	1.12	1.12	1.39	1.32	1.21	1.43
17-Mar-2022	1.28	1.28	1.51	1.37	1.38	1.59
18-Mar-2022	1.31	1.31	1.58	1.29	1.32	1.57
19-Mar-2022	ns	ns	ns	ns	ns	ns
20-Mar-2022	ns	ns	ns	ns	ns	ns
21-Mar-2022	1.39	1.52	1.77	1.43	1.59	1.79
22-Mar-2022	1.54	1.50	1.77	1.53	1.53	1.75
23-Mar-2022	1.40	1.38	1.66	1.48	1.41	1.66
24-Mar-2022	1.44	1.39	1.63	1.38	1.43	1.69
25-Mar-2022	1.08	1.09	1.34	1.10	1.14	1.36
26-Mar-2022	ns	ns	ns	ns	ns	ns
27-Mar-2022	ns	ns	ns	ns	ns	ns
28-Mar-2022	1.09	1.10	1.38	1.12	1.18	1.47
29-Mar-2022	1.08	1.13	1.40	1.11	1.18	1.45
30-Mar-2022	1.34	1.26	1.52	1.34	1.35	1.53
31-Mar-2022	1.30	1.32	1.56	1.32	1.33	1.57
Total number of measurements taken, A:	23			23		
Chlorine Standard for Monitoring Location (mg/L):	0.50			0.50		
Number of measurements meeting standard, B:	23			23		
Compliance with Chlorine Standard, C= B/A X 100%:	100%			100%		

na: not analyzed nr: no result ns: no sample o/l: offline im: instrument maintenance

Comments:

Report Date: 4-Apr-2022

* Branch 1 samples were taken at the nearest location to the entry point to Branch 1 March 17-29 during the gravity flow trial



CITY OF WINNIPEG
 WATER AND WASTE DEPARTMENT
 WATER SERVICES

Water System Code: **252.00**
 Licence Number: **PWS-09-412-02**

WATER TREATMENT PLANT UV REPORT

Report Period: **March 2022**

Report Created: **Friday, April 01, 2022**

Date	UVR-D100A				UVR-D200A				UVR-D300A				UVR-D400A				UVR-D500A				UVR-D600A				Total				% Volume Treated To Dose		
	Water Volume [ML]				Water Volume [ML]				Water Volume [ML]				Water Volume [ML]				Water Volume [ML]				Water Volume [ML]				Water Volume [ML]						
	Untreated	Below	To	Total	Untreated	Below	To	Total	Untreated	Below	To	Total	Untreated	Below	To	Total	Untreated	Below	To	Total	Untreated	Below	To	Total	Untreated	Below	To	Total		Untreated	Below
01/03/2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.90	66.53	68.43	0.00	0.00	0.00	0.00	0.00	0.00	41.91	41.91	0.00	1.89	67.42	69.30	0.00	3.79	175.85	179.64	97.89		
02/03/2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.77	65.04	66.80	0.00	0.00	0.00	0.00	0.00	0.00	41.07	41.07	0.00	1.98	65.93	67.90	0.00	3.74	172.03	175.78	97.87		
03/03/2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.27	67.23	69.50	0.00	0.00	0.00	0.00	0.00	0.00	41.75	41.75	0.00	1.86	68.66	70.51	0.00	4.13	177.64	181.77	97.73		
04/03/2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.28	67.35	69.63	0.00	0.00	0.00	0.00	0.00	0.00	41.98	41.98	0.00	2.10	68.14	70.24	0.00	4.38	177.47	181.85	97.59		
05/03/2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.08	67.42	69.50	0.00	0.00	0.00	0.00	0.00	0.00	42.68	42.68	0.00	1.94	67.84	69.78	0.00	4.01	177.94	181.95	97.79		
06/03/2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.49	66.07	68.56	0.00	0.00	0.00	0.00	0.00	0.00	43.04	43.04	0.00	1.95	68.51	70.46	0.00	4.44	177.61	182.05	97.56		
07/03/2022	0.00	0.00	0.00	0.01	0.00	0.06	0.47	0.53	0.15	1.96	48.62	50.74	0.00	0.00	15.74	15.74	0.00	0.00	43.48	43.48	0.00	2.14	69.29	71.42	0.16	4.16	177.61	181.93	97.62		
08/03/2022	0.00	0.00	40.92	40.92	0.00	0.00	12.68	12.68	0.00	0.97	28.78	29.74	0.00	0.00	27.94	27.94	0.00	0.00	11.60	11.60	0.00	2.01	60.57	62.57	0.00	2.97	182.48	185.46	98.40		
09/03/2022	0.00	0.05	74.91	74.96	0.00	0.00	0.00	0.00	0.00	1.50	51.09	52.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.89	61.45	63.34	0.00	3.45	187.45	190.89	98.20		
10/03/2022	0.00	0.21	75.03	75.24	0.00	0.00	0.00	0.00	0.00	2.24	50.63	52.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.82	62.07	63.89	0.00	4.27	187.72	191.99	97.78		
11/03/2022	0.00	0.56	73.59	74.15	0.00	0.00	0.00	0.00	0.00	2.33	49.80	52.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.06	60.86	62.92	0.00	4.95	184.25	189.20	97.38		
12/03/2022	0.00	0.21	71.95	72.15	0.00	0.00	6.63	6.63	0.00	15.57	4.82	20.39	0.00	0.00	35.16	35.16	0.00	0.00	0.00	0.00	0.00	1.94	53.83	55.77	0.00	17.72	172.38	190.10	90.68		
13/03/2022	0.00	0.03	48.50	48.53	0.00	0.00	68.65	68.65	0.00	0.00	0.00	0.00	0.00	0.00	76.49	76.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	193.64	193.67	99.98		
14/03/2022	0.00	0.30	48.28	48.59	0.00	0.00	68.80	68.80	0.00	0.00	0.00	0.00	0.00	0.00	76.60	76.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	193.68	193.99	99.84		
15/03/2022	0.00	0.00	22.39	22.39	0.00	0.04	26.98	27.02	0.00	0.00	0.00	0.00	0.14	0.14	8.43	8.71	0.00	0.00	0.00	0.00	0.00	0.72	21.29	22.01	0.14	0.90	79.09	80.13	98.70		
16/03/2022	0.00	0.61	54.43	55.04	0.00	0.05	30.08	30.13	0.00	0.08	22.63	22.71	0.00	0.00	0.00	0.00	0.00	0.00	33.23	33.23	0.00	0.95	24.75	25.70	0.00	1.68	165.12	166.80	98.99		
17/03/2022	0.00	0.39	30.91	31.29	0.00	0.00	0.00	0.00	0.00	0.04	22.69	22.73	0.00	0.00	0.00	0.00	0.00	0.00	27.45	27.45	0.00	0.00	0.00	0.00	0.00	0.43	81.05	81.48	99.48		
18/03/2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	OL	
19/03/2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	OL	
20/03/2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	OL	
21/03/2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	OL	
22/03/2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	OL	
23/03/2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	OL	
24/03/2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	OL	
25/03/2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	OL	
26/03/2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	OL	
27/03/2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	OL	
28/03/2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	OL	
29/03/2022	0.00	0.56	2.41	2.97	0.00	0.00	6.32	6.32	0.00	0.00	26.99	26.99	0.00	0.00	24.72	24.72	0.00	0.00	37.84	37.84	0.00	0.00	0.00	0.00	0.00	0.56	98.29	98.85	99.43		
30/03/2022	0.01	0.01	0.15	0.16	0.00	0.00	56.36	56.36	0.00	0.00	54.41	54.41	0.00	0.00	23.62	23.62	0.00	0.00	80.45	80.45	0.00	0.00	0.00	0.00	0.01	0.01	214.99	215.00	99.99		
31/03/2022	0.00	0.00	0.00	0.00	0.00	0.00	84.99	84.99	0.00	0.00	51.41	51.41	0.00	0.00	0.00	0.00	0.00	0.00	78.62	78.62	0.00	0.00	0.00	0.00	0.00	0.00	215.01	215.01	100.00		
Total [ML]:	0.01	2.94	543.46	546.40	0.00	0.15	361.94	362.09	0.15	37.48	811.49	849.12	0.14	0.14	288.71	288.99	0.00	0.00	565.12	565.12	0.00	25.23	820.59	845.83	0.30	65.94	3391.30	3457.54			

Water Volume [%]:

Untreated: 0.01 %
 Below Dose: 1.91 %
 To Dose: 98.08 %

- Notes:**
- UV Comparative Dose: 18.1 mJ/cm²
 - OL - Offline

Submitted By (Print): M.Szmon

Signature: Original signed by M.Szmon



CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT
WATER SERVICES

Water System Code: **252.00**
 Licence Number: **PWS-09-412-02**

WATER TREATMENT PLANT UV REPORT

Report Period: **March 2022**

Report Created: **Friday, April 01, 2022**

Date	Transmittance (%)				UVR_D100A			UVR_D200A			UVR_D300A			UVR_D400A			UVR_D500A			UVR_D600A		
	Branch 1		Branch 2		UV Dose [mJ/cm]²			UV Dose [mJ/cm]²			UV Dose [mJ/cm]²			UV Dose [mJ/cm]²			UV Dose [mJ/cm]²			UV Dose [mJ/cm]²		
	Avg.	Min.	Avg.	Min.	Min.	Max.	Avg.	Min.	Max.	Avg.	Min.	Max.	Avg.	Min.	Max.	Avg.	Min.	Max.	Avg.	Min.	Max.	Avg.
01/03/2022	93.4	92.7	92.1	91.6	OL	OL	OL	OL	OL	OL	16.5	32.0	21.3	OL	OL	OL	18.0	30.0	21.4	15.8	29.1	21.3
02/03/2022	93.5	91.5	92.2	91.8	OL	OL	OL	OL	OL	OL	16.6	22.3	21.3	OL	OL	OL	18.2	23.0	21.4	15.7	22.3	21.3
03/03/2022	93.4	91.6	92.1	91.4	OL	OL	OL	OL	OL	OL	16.7	22.2	21.3	OL	OL	OL	18.0	24.1	21.4	15.7	22.3	21.2
04/03/2022	93.3	92.6	92.1	91.5	OL	OL	OL	OL	OL	OL	15.2	41.1	21.3	OL	OL	OL	18.0	29.6	21.4	15.7	33.2	21.3
05/03/2022	93.5	3.3	92.1	91.5	OL	OL	OL	OL	OL	OL	15.8	22.3	20.9	OL	OL	OL	18.1	22.9	21.4	15.5	22.4	21.3
06/03/2022	93.7	92.8	92.3	91.6	OL	OL	OL	OL	OL	OL	15.5	21.6	20.3	OL	OL	OL	18.2	22.9	21.4	15.7	22.3	21.3
07/03/2022	94.0	3.4	92.7	91.8	0.0	0.0	0.0	0.0	72.7	23.1	0.0	22.2	19.7	14.3	63.7	21.4	18.2	26.5	21.5	15.7	22.6	21.2
08/03/2022	95.0	92.7	94.0	93.4	0.0	63.6	22.8	0.0	88.4	24.5	15.1	45.4	21.5	0.0	35.9	21.3	0.0	32.8	21.7	15.8	23.3	21.3
09/03/2022	95.2	93.8	94.3	93.4	17.6	29.3	21.9	OL	OL	OL	16.3	22.4	21.3	OL	OL	OL	OL	OL	OL	15.8	22.5	21.3
10/03/2022	95.2	93.9	94.4	93.8	17.5	28.4	21.2	OL	OL	OL	14.9	21.9	20.2	OL	OL	OL	OL	OL	OL	15.7	22.5	21.3
11/03/2022	95.4	93.8	94.6	94.0	17.5	28.0	21.2	OL	OL	OL	14.1	20.1	18.8	OL	OL	OL	OL	OL	OL	15.7	22.5	21.3
12/03/2022	95.2	2.9	94.3	93.7	17.5	25.1	21.4	22.6	93.1	27.3	0.0	27.5	17.7	16.0	87.0	21.3	OL	OL	OL	0.0	33.0	21.3
13/03/2022	95.1	88.6	93.9	93.4	17.3	31.2	21.8	21.1	28.6	25.8	OL	OL	OL	18.6	21.6	21.1	OL	OL	OL	OL	OL	OL
14/03/2022	93.9	92.4	92.7	91.8	17.4	27.5	21.4	18.6	25.3	21.8	OL	OL	OL	18.4	21.6	21.1	OL	OL	OL	OL	OL	OL
15/03/2022	93.4	89.9	92.4	91.7	0.0	93.5	22.1	0.0	56.4	21.5	OL	OL	OL	0.0	87.5	21.9	OL	OL	OL	0.0	50.4	21.2
16/03/2022	93.1	90.2	91.9	88.6	0.0	92.2	21.5	0.0	56.8	21.6	16.1	90.9	21.4	OL	OL	OL	19.4	105.2	23.4	0.0	48.4	21.1
17/03/2022	93.4	90.2	92.1	90.5	0.0	32.4	21.4	OL	OL	OL	0.0	34.4	21.4	OL	OL	OL	0.0	47.4	23.2	OL	OL	OL
18/03/2022	94.3	93.8	93.1	92.6	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL
19/03/2022	94.2	92.7	93.0	92.6	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL
20/03/2022	94.4	92.8	93.4	92.7	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL
21/03/2022	94.6	93.9	93.6	92.9	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL
22/03/2022	94.9	94.3	93.9	93.2	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL
23/03/2022	95.2	94.1	94.3	93.9	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL
24/03/2022	95.3	94.7	94.3	93.9	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL
25/03/2022	95.4	94.9	94.5	94.1	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL
26/03/2022	95.4	2.5	94.5	94.1	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL
27/03/2022	95.4	94.6	95.0	0.0	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL
28/03/2022	95.3	92.9	95.6	95.4	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL
29/03/2022	95.0	92.1	95.2	92.0	0.0	83.9	25.3	0.0	98.5	23.0	22.4	94.0	30.2	16.3	98.8	21.4	18.2	95.7	23.3	OL	OL	OL
30/03/2022	93.9	92.0	94.0	93.4	0.0	88.4	43.8	18.8	93.4	21.3	21.6	39.8	27.7	0.0	37.1	21.2	17.9	24.2	21.1	OL	OL	OL
31/03/2022	93.7	91.5	93.9	93.4	OL	OL	OL	18.5	23.5	21.1	21.9	29.3	27.3	OL	OL	OL	17.7	23.2	21.1	OL	OL	OL

- Notes:**
1. UV Comparative Dose: 18.1 mJ/cm²
 2. OL - Off Line

Submitted By (Print): M.Szmon

Signature: Original signed by M.Szmon