



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

September 7, 2022

**RE: AUGUST 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 August 2022.

The August on-line and grab sampling turbidity reports include results obtained for the Water Treatment Plant raw water and the eight filters. The maximum turbidity was greater than 0.30 NTU on several occasions; the elevated turbidities occurred for less than 12 consecutive hours. On August 22 the turbidity on Filter 5 exceeded 1.00 NTU, additional information for the exceedance is provided separately in a Corrective Action Report. With the exception of this event, the turbidity results for the filter effluent met the licence requirements.

The August on-line and grab sampling chlorine reports include results obtained for the Deacon Booster Pumping Station at the Water Treatment Plant. The free chlorine results at the Water Treatment Plant met the licence requirements.

The August UV summary report includes results obtained for the six UV reactors at the Water Treatment Plant. 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](mailto:rgrosselle@winnipeg.ca).

Yours sincerely,

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. T. Hilderman, Manitoba Health and Seniors Care (email)  
T. Shanks, M. Eng., P. Eng. (e-mail)  
M.Szmon, M. Eng. (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**

August 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
1/08/2022	2.26	0.06	0.15	0.09	0.13	0.08	0.15	0.13	0.20	0.10	0.16	0.07	0.15	0.10	0.20	0.11	0.19
2/08/2022	2.48	0.06	0.13	0.08	0.15	0.07	0.13	0.12	0.16	0.07	0.14	0.08	0.11	0.10	0.19	0.14	0.18
3/08/2022	3.01	0.07	0.14	0.07	0.14	0.06	0.34	0.14	0.16	0.07	0.15	0.08	0.16	0.10	0.13	0.11	0.20
4/08/2022	3.39	0.11	0.15	0.09	0.16	0.07	0.13	0.13	0.21	0.08	0.12	0.07	0.17	0.11	0.18	0.11	0.19
5/08/2022	3.32	0.12	0.16	0.09	0.11	0.09	0.12	0.13	0.22	0.06	0.11	0.06	0.16	0.10	0.18	0.10	0.18
6/08/2022	2.46	0.13	0.19	0.09	0.15	0.07	0.13	0.12	0.19	0.08	0.10	0.06	0.15	0.09	0.17	0.11	0.18
7/08/2022	2.77	0.14	0.20	0.08	0.15	0.07	0.28	0.11	0.17	0.08	0.16	0.07	0.12	0.09	0.18	0.13	0.20
8/08/2022	2.43	0.15	0.19	0.08	0.15	0.07	0.14	0.14	0.17	0.07	0.14	0.08	0.16	0.11	0.13	0.12	0.31
9/08/2022	2.35	0.12	0.23	0.09	0.14	0.11	0.14	0.12	0.31	0.09	0.20	0.10	0.23	0.15	0.21	0.14	0.29
10/08/2022	3.21	0.04	0.08	0.07	0.12	0.07	0.11	0.09	0.15	0.07	0.11	0.07	0.14	0.10	0.19	0.12	0.20
11/08/2022	3.25	0.04	0.09	0.07	0.14	0.07	0.14	0.09	0.14	0.08	0.13	0.07	0.16	0.10	0.19	0.14	0.20
12/08/2022	2.73	0.04	0.08	0.06	0.14	0.07	0.13	0.08	0.12	0.06	0.12	0.07	0.12	0.09	0.17	0.13	0.21
13/08/2022	2.55	0.04	0.09	0.06	0.11	0.08	0.14	0.09	0.13	0.05	0.11	0.07	0.16	0.10	0.13	0.12	0.20
14/08/2022	2.30	0.05	0.07	0.05	0.11	0.11	0.14	0.08	0.12	0.05	0.09	0.06	0.16	0.08	0.16	0.11	0.19
15/08/2022	2.38	0.05	0.09	0.07	0.11	0.11	0.17	0.08	0.12	0.05	0.07	0.05	0.11	0.08	0.14	0.11	0.18
16/08/2022	2.60	0.05	0.09	0.07	0.12	0.13	0.23	0.07	0.12	0.04	0.10	0.05	0.10	0.07	0.12	0.14	0.25
17/08/2022	2.52	0.04	0.09	0.07	0.11	0.15	0.35	0.09	0.11	0.03	0.07	0.04	0.10	0.07	0.09	0.11	0.48
18/08/2022	2.75	0.07	0.08	0.07	0.14	0.14	0.21	0.09	0.17	0.04	0.10	0.05	0.11	0.07	0.12	0.11	0.17
19/08/2022	2.14	0.07	0.12	0.10	0.33	0.08	0.13	0.10	0.15	0.05	0.09	0.05	0.14	0.07	0.17	0.12	0.24
20/08/2022	2.36	0.08	0.14	0.10	0.15	0.08	0.14	0.10	0.17	0.06	0.11	0.06	0.08	0.07	0.13	0.14	0.16
21/08/2022	1.98	0.08	0.14	0.09	0.16	0.07	0.20	0.12	0.14	0.05	0.10	0.06	0.11	0.07	0.09	0.11	0.18
22/08/2022	2.07	0.10	0.13	0.09	0.13	0.07	0.15	0.09	0.24	0.11	5.00	0.06	0.13	0.07	0.14	0.12	0.19
23/08/2022	2.00	0.07	0.13	0.10	0.14	0.05	0.10	0.09	0.16	0.08	0.12	0.05	0.14	0.07	0.13	0.13	0.18
24/08/2022	2.01	0.07	0.14	0.08	0.17	0.05	0.11	0.12	0.13	0.08	0.15	0.08	0.10	0.07	0.11	0.13	0.20
25/08/2022	2.32	0.11	0.13	0.10	0.13	0.06	0.08	0.12	0.18	0.09	0.15	0.09	0.19	0.10	0.16	0.13	0.21
26/08/2022	2.43	0.10	0.17	0.13	0.18	0.07	0.11	0.13	0.21	0.12	0.19	0.11	0.21	0.10	0.17	0.14	0.18
27/08/2022	2.50	0.11	0.17	0.12	0.19	0.06	0.12	0.14	0.23	0.08	0.19	0.13	0.24	0.09	0.15	0.16	0.23
28/08/2022	2.40	0.11	0.18	0.12	0.19	0.05	0.11	0.19	0.21	0.06	0.12	0.11	0.18	0.09	0.12	0.12	0.19
29/08/2022	2.29	0.15	0.17	0.13	0.21	0.05	0.08	0.19	0.25	0.08	0.12	0.11	0.19	0.10	0.16	0.12	0.19
30/08/2022	2.24	0.08	0.21	0.09	0.19	0.03	0.11	0.13	0.23	0.07	0.11	0.08	0.13	0.07	0.17	0.08	0.14
31/08/2022	2.09	0.04	0.08	0.04	0.08	0.02	0.05	0.07	0.13	0.06	0.11	0.05	0.07	0.05	0.10	0.05	0.07

  

Total Number of Measurements Taken, A:	14681	15161	14540	15801	16267	16458	15958	16855
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:	14681	15160	14538	15800	16262	16458	15958	16853
Compliance with Turbidity Standard, C = B/A X 100%:	100.000%	99.993%	99.986%	99.994%	99.969%	100.000%	100.000%	99.988%

File Path: N:\Water Treatment Branch\Administration\Reports\Regulatory Submissions\Turbidity\2022\08-August

Submitted By (Print): D.Merredew

Signature: Original signed by D.Merredew

**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-Aug-2022	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	
02-Aug-2022	1.59	2.23	0.12	0.06	0.16	0.11	0.17	0.11	0.12	0.14	0.15	0.10	0.17	0.09	0.15	0.09	0.17	0.13		
03-Aug-2022	1.81	2.99	0.13	0.08	0.12	0.08	0.12	0.07	0.13	0.14	0.15	0.09	0.18	0.08	0.17	0.10	0.18	0.12		
04-Aug-2022	1.71	3.46	0.15	0.12	0.14	0.10	0.14	0.09	0.16	0.13	0.14	0.09	0.24	0.12	0.20	0.12	0.17	0.11		
05-Aug-2022	1.88	3.84	0.16	0.14	0.14	0.10	0.15	0.09	0.16	0.17	0.14	0.08	0.16	0.07	0.21	0.12	0.16	0.11		
06-Aug-2022	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	
07-Aug-2022	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	
08-Aug-2022	1.70	2.24	0.14	0.18	0.12	0.10	0.12	0.08	0.13	0.14	0.15	0.10	0.20	0.10	0.18	0.11	0.23	0.18		
09-Aug-2022	1.68	1.56	0.15	0.24	0.15	0.14	0.14	0.13	0.17	0.17	0.15	0.11	0.17	0.11	0.22	0.17	0.17	0.17		
10-Aug-2022	1.86	3.31	0.15	0.07	0.13	0.08	0.14	0.09	0.11	0.09	0.14	0.09	0.16	0.07	0.19	0.13	0.16	0.13		
11-Aug-2022	2.09	3.43	0.11	0.05	0.14	0.09	0.14	0.10	0.11	0.09	0.14	0.11	0.17	0.09	0.15	0.10	0.17	0.13		
12-Aug-2022	2.05	2.88	0.10	0.05	0.15	0.10	0.10	0.08	0.10	0.09	0.13	0.09	0.16	0.08	0.14	0.09	0.16	0.13		
13-Aug-2022	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	
14-Aug-2022	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	
15-Aug-2022	2.10	2.31	0.13	0.08	0.11	0.08	0.11	0.13	0.10	0.09	0.11	0.07	0.12	0.06	0.17	0.10	0.12	0.12		
16-Aug-2022	1.98	2.62	0.09	0.05	0.13	0.10	0.13	0.17	0.09	0.09	0.12	0.09	0.14	0.08	0.12	0.08	0.14	0.15		
17-Aug-2022	1.63	2.36	0.10	0.05	0.09	0.07	0.10	0.17	0.10	0.09	0.11	0.04	0.13	0.06	0.11	0.06	0.13	0.15		
18-Aug-2022	1.81	3.36	0.10	0.07	0.09	0.08	0.10	0.20	0.12	0.11	0.10	0.06	0.17	0.09	0.13	0.09	0.11	0.13		
19-Aug-2022	1.88	2.12	0.14	0.10	0.12	0.10	0.12	0.09	0.10	0.10	0.11	0.07	0.10	0.05	0.15	0.09	0.10	0.12		
20-Aug-2022	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	
21-Aug-2022	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	
22-Aug-2022	1.73	2.12	0.12	0.12	0.11	0.12	0.12	0.09	0.17	0.18	0.10	0.08	0.10	0.07	0.13	0.08	0.10	0.12		
23-Aug-2022	1.71	2.01	0.13	0.10	0.12	0.10	0.13	0.07	0.10	0.11	0.11	0.09	0.12	0.06	0.11	0.06	0.12	0.13		
24-Aug-2022	1.99	2.13	0.11	0.10	0.11	0.10	0.11	0.05	0.12	0.12	0.15	0.13	0.15	0.09	0.13	0.07	0.16	0.15		
25-Aug-2022	1.54	2.42	0.15	0.13	0.13	0.12	0.14	0.08	0.16	0.17	0.12	0.12	0.13	0.16	0.17	0.10	0.14	0.14		
26-Aug-2022	1.80	2.32	0.17	0.16	0.14	0.14	0.15	0.09	0.12	0.14	0.15	0.14	0.16	0.13	0.17	0.13	0.16	0.16		
27-Aug-2022	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	
28-Aug-2022	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	
29-Aug-2022	1.81	2.26	0.12	0.17	0.11	0.15	0.11	0.06	0.13	0.23	0.10	0.09	0.15	0.14	0.14	0.10	0.12	0.12		
30-Aug-2022	1.61	2.25	0.13	0.19	0.11	0.17	0.12	0.07	0.09	0.22	0.09	0.10	0.11	0.12	0.14	0.12	0.11	0.13		
31-Aug-2022	1.91	2.02	0.10	0.04	0.13	0.05	0.13	0.03	0.10	0.08	0.10	0.09	0.11	0.06	0.10	0.04	0.11	0.04		
<b>Total number of measurements taken, A:</b>			22		22		22		22		22		22		22		22		22	
<b>Turbidity Standard for Monitoring Location (NTU):</b>			0.30		0.30		0.30		0.30		0.30		0.30		0.30		0.30		0.30	
<b>Number of measurements meeting standard, B:</b>			22		22		22		22		22		22		22		22		22	
<b>Compliance with Turbidity Standard, C= B/A X 100%:</b>			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:**

The raw water analyzer is cleaned daily during warm water months because it is susceptible to frequent fouling

**Report Date:** 1-Sep-2022



**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 September 2022

Report Period: August 2022

Date	BRANCH 1 [mg/L]		BRANCH 2 [mg/L]	
	Average	Minimum	Average	Minimum
01/08/2022	1.59	1.37	1.65	1.54
02/08/2022	1.42	1.26	1.73	1.50
03/08/2022	1.46	1.29	1.87	1.31
04/08/2022	1.24	0.90	1.40	0.95
05/08/2022	1.45	1.16	1.60	1.41
06/08/2022	1.69	1.38	1.77	1.55
07/08/2022	1.56	1.40	1.63	1.51
08/08/2022	1.47	1.27	1.58	1.42
09/08/2022	1.50	0.97	1.63	1.30
10/08/2022	1.42	1.15	1.51	1.27
11/08/2022	1.37	1.23	1.42	1.24
12/08/2022	1.40	1.24	1.41	1.22
13/08/2022	1.53	1.17	1.54	1.26
14/08/2022	1.52	1.38	1.47	1.32
15/08/2022	1.48	1.30	1.42	1.26
16/08/2022	1.44	1.08	1.43	1.07
17/08/2022	1.61	1.44	1.62	1.48
18/08/2022	1.68	1.45	1.68	1.46
19/08/2022	1.70	1.52	1.66	1.50
20/08/2022	1.90	1.69	1.83	1.71
21/08/2022	1.86	1.67	1.79	1.64
22/08/2022	1.74	1.49	1.67	1.56
23/08/2022	1.66	1.47	1.59	1.46
24/08/2022	1.61	1.46	1.54	1.41
25/08/2022	1.72	1.55	1.65	1.53
26/08/2022	1.72	1.51	1.73	1.45
27/08/2022	1.61	1.40	1.73	1.52
28/08/2022	1.66	1.52	1.69	1.48
29/08/2022	1.66	1.46	1.71	1.36
30/08/2022	1.67	1.52	1.69	1.56
31/08/2022	1.83	1.51	1.73	1.58

Total Number of Measurements, A:	21594	21594
Minimum Free Chlorine Standard:	0.5	0.5
Number of Measurements Meeting Standard, B:	21594	21594
COMPLIANCE, C = B/A X 100%:	100.00	100.00

File Path: N:\Water Treatment Branch\Administration\Reports\Regulatory Submissions\Chlorine\2022\08-August

Submitted By (Print): D.Merredew

Signature: Original signed by D.Merredew



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-Aug-2022	ns	ns	ns	ns	ns	ns
02-Aug-2022	1.43	1.36	1.60	1.56	1.54	1.81
03-Aug-2022	1.47	1.48	1.71	2.28	1.70	1.91
04-Aug-2022	1.23	1.27	1.47	1.34	1.44	1.63
05-Aug-2022	1.45	1.52	1.73	1.57	1.62	1.83
06-Aug-2022	ns	ns	ns	ns	ns	ns
07-Aug-2022	ns	ns	ns	ns	ns	ns
08-Aug-2022	1.43	1.39	1.64	1.54	1.53	1.74
09-Aug-2022	1.58	1.63	1.88	1.73	1.76	2.00
10-Aug-2022	1.46	1.45	1.67	1.57	1.55	1.80
11-Aug-2022	1.40	1.44	1.65	1.43	1.50	1.71
12-Aug-2022	1.36	1.38	1.58	1.39	1.40	1.61
13-Aug-2022	ns	ns	ns	ns	ns	ns
14-Aug-2022	ns	ns	ns	ns	ns	ns
15-Aug-2022	1.44	1.46	1.72	1.37	1.44	1.64
16-Aug-2022	1.32	1.32	1.53	1.24	1.32	1.55
17-Aug-2022	1.61	1.63	1.84	1.58	1.65	1.85
18-Aug-2022	1.56	1.54	1.79	1.56	1.52	1.80
19-Aug-2022	1.74	1.71	1.94	1.71	1.73	1.97
20-Aug-2022	ns	ns	ns	ns	ns	ns
21-Aug-2022	ns	ns	ns	ns	ns	ns
22-Aug-2022	1.75	1.74	1.94	1.68	1.76	1.95
23-Aug-2022	1.61	1.63	1.85	1.57	1.59	1.84
24-Aug-2022	1.56	1.53	1.75	1.52	1.51	1.76
25-Aug-2022	1.76	1.75	2.02	1.65	1.73	1.99
26-Aug-2022	1.79	1.81	2.04	1.78	1.76	2.01
27-Aug-2022	ns	ns	ns	ns	ns	ns
28-Aug-2022	ns	ns	ns	ns	ns	ns
29-Aug-2022	1.68	1.66	1.86	1.65	1.69	1.93
30-Aug-2022	1.62	1.59	1.81	1.71	1.69	1.93
31-Aug-2022	1.78	1.76	2.01	1.69	1.77	1.99
<b>Total number of measurements taken, A:</b>			22			22
<b>Chlorine Standard for Monitoring Location (mg/L):</b>			0.50			0.50
<b>Number of measurements meeting standard, B:</b>			22			22
<b>Compliance with Chlorine Standard, C= B/A X 100%:</b>			100%			100%

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

Comments:

Report Date: 1-Sep-2022



**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: **August 2022**

Report Created: **Thursday, September 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	To	Total	
01/08/2022	0.00	0.90	70.31	71.21	0.00	0.00	0.00	0.00	0.00	0.00	46.27	46.27	0.00	0.00	0.00	0.00	0.00	0.00	72.40	72.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90	188.98	189.87	99.53
02/08/2022	0.00	1.26	68.92	70.18	0.00	0.00	0.00	0.00	0.00	0.05	49.63	49.68	0.00	0.00	0.00	0.00	0.00	0.00	71.16	71.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.31	189.71	191.01	99.32		
03/08/2022	0.00	1.09	62.93	64.02	0.00	0.60	8.92	9.51	0.05	0.23	38.25	38.54	0.00	0.00	20.29	20.29	0.19	0.23	38.68	39.11	0.00	0.57	24.52	25.08	0.25	2.72	193.59	196.56	98.49				
04/08/2022	0.00	2.95	50.21	53.16	0.00	0.00	0.00	0.00	0.00	0.17	14.68	14.85	0.00	0.00	67.06	67.06	0.00	0.00	0.00	0.00	0.00	1.51	75.46	76.97	0.00	4.63	207.41	212.04	97.82				
05/08/2022	0.00	0.09	0.69	0.78	0.00	0.00	0.00	0.00	0.00	0.63	59.99	60.63	0.00	0.00	68.80	68.80	0.00	0.00	0.00	0.00	0.00	1.18	83.60	84.78	0.00	1.91	213.08	214.99	99.11				
06/08/2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51	60.66	61.17	0.00	0.00	68.80	68.80	0.00	0.00	0.00	0.00	0.00	1.84	83.17	85.00	0.00	2.35	212.62	214.97	98.91				
07/08/2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.64	60.27	60.91	0.00	0.00	68.82	68.82	0.00	0.00	0.00	0.00	0.00	2.06	82.92	84.98	0.00	2.70	212.02	214.72	98.74				
08/08/2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51	55.86	56.37	0.00	0.00	63.67	63.67	0.00	0.00	0.00	0.00	0.00	2.54	82.47	85.01	0.00	3.05	202.00	205.05	98.51				
09/08/2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47	55.40	55.87	0.00	0.00	68.32	68.32	0.00	0.00	0.00	0.00	0.00	1.66	80.76	82.42	0.00	2.12	204.48	206.60	98.97				
10/08/2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39	56.06	56.46	0.00	0.00	74.05	74.05	0.00	0.00	0.00	0.00	0.00	2.15	79.02	81.18	0.00	2.55	209.14	211.69	98.80				
11/08/2022	0.00	0.18	6.77	6.94	0.00	0.00	0.00	0.00	0.00	0.69	67.13	67.82	0.00	0.00	45.61	45.61	0.00	0.00	15.13	15.13	0.00	2.07	80.86	82.93	0.00	2.94	215.50	218.44	98.65				
12/08/2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.07	83.89	84.95	0.00	0.00	0.00	0.00	0.00	0.00	49.69	49.69	0.00	1.95	83.03	84.98	0.00	3.01	216.61	219.62	98.63				
13/08/2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.36	83.63	84.99	0.00	0.00	0.00	0.00	0.00	0.00	46.06	46.06	0.00	2.48	82.48	84.95	0.00	3.84	212.16	216.00	98.22				
14/08/2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.66	84.34	85.00	0.00	0.00	0.00	0.00	0.00	0.00	46.03	46.03	0.00	2.84	82.12	84.96	0.00	3.49	212.49	215.99	98.38				
15/08/2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	84.67	84.97	0.00	0.00	0.00	0.00	0.00	0.00	45.97	45.97	0.00	1.95	83.05	84.99	0.00	2.24	213.68	215.93	98.96				
16/08/2022	0.00	0.00	0.00	0.00	0.00	0.28	43.90	44.17	0.00	0.18	31.37	31.55	0.00	0.00	39.87	39.87	0.00	0.00	22.16	22.16	0.00	1.24	77.01	78.25	0.00	1.69	214.31	216.00	99.22				
17/08/2022	0.00	0.00	0.00	0.00	0.00	0.16	72.84	73.00	0.00	0.00	0.00	0.00	0.00	0.00	68.44	68.44	0.00	0.00	0.00	0.00	0.00	0.75	65.93	66.67	0.00	0.90	207.21	208.12	99.57				
18/08/2022	0.00	0.00	0.00	0.00	0.00	0.00	72.36	72.36	0.00	0.00	0.00	0.00	0.00	0.00	67.68	67.68	0.00	0.00	0.00	0.00	0.00	0.51	65.44	65.95	0.00	0.51	205.48	205.99	99.75				
19/08/2022	0.00	0.00	0.00	0.00	0.00	0.00	70.07	70.07	0.00	0.00	0.00	0.00	0.00	0.00	65.52	65.52	0.00	0.00	0.00	0.00	0.00	0.80	63.66	64.46	0.00	0.80	199.25	200.04	99.60				
20/08/2022	0.00	0.00	0.00	0.00	0.00	0.00	69.34	69.34	0.00	0.00	0.00	0.00	0.00	0.00	64.75	64.75	0.00	0.00	0.00	0.00	0.00	0.71	63.23	63.94	0.00	0.71	197.33	198.04	99.64				
21/08/2022	0.00	0.00	0.00	0.00	0.00	0.00	68.90	68.90	0.00	0.00	0.00	0.00	0.00	0.00	64.27	64.27	0.00	0.00	0.00	0.00	0.00	0.66	62.30	62.96	0.00	0.66	195.46	196.12	99.66				
22/08/2022	0.00	0.00	0.00	0.00	0.00	0.00	68.42	68.42	0.00	0.00	0.00	0.00	0.00	0.00	62.37	62.37	0.00	0.00	0.00	0.00	0.00	1.29	59.36	60.65	0.00	1.29	190.15	191.44	99.32				
23/08/2022	0.00	0.00	0.00	0.00	0.00	0.00	67.71	67.71	0.00	0.00	0.00	0.00	0.00	0.00	62.15	62.15	0.00	0.00	0.00	0.00	0.00	1.17	59.00	60.17	0.00	1.17	188.86	190.03	99.38				
24/08/2022	0.00	0.00	0.00	0.00	0.00	0.00	67.33	67.33	0.00	0.00	0.00	0.00	0.00	0.00	62.36	62.36	0.00	0.00	0.00	0.00	0.00	0.00	60.28	60.28	0.00	0.00	189.97	189.97	100.00				
25/08/2022	0.00	0.00	0.00	0.00	0.00	0.00	67.31	67.31	0.00	0.00	0.00	0.00	0.00	0.00	62.42	62.42	0.00	0.00	0.00	0.00	0.00	1.04	59.22	60.27	0.00	1.04	188.95	190.00	99.45				
26/08/2022	0.00	0.00	3.50	3.50	0.00	0.00	69.49	69.49	0.00	0.00	0.00	0.00	0.14	0.14	60.49	60.77	0.00	0.05	28.89	28.93	0.00	0.89	34.78	35.67	0.14	1.08	197.14	198.37	99.38				
27/08/2022	0.00	0.00	0.00	0.00	0.00	0.00	73.49	73.49	0.00	0.00	0.00	0.00	0.00	0.00	68.46	68.46	0.00	0.05	66.32	66.37	0.00	0.00	0.00	0.00	0.00	0.05	208.28	208.32	99.98				
28/08/2022	0.00	0.00	0.00	0.00	0.00	0.00	71.99	71.99	0.00	0.00	0.00	0.00	0.00	0.00	66.78	66.78	0.00	0.00	65.15	65.15	0.00	0.00	0.00	0.00	0.00	0.00	203.92	203.92	100.00				
29/08/2022	0.00	0.00	0.00	0.00	0.00	0.00	70.58	70.58	0.00	0.00	0.00	0.00	0.00	0.00	65.59	65.59	0.00	0.00	64.23	64.23	0.00	0.00	0.47	0.47	0.00	0.00	200.87	200.87	100.00				
30/08/2022	0.00	0.00	0.00	0.00	0.17	0.17	60.31	60.64	0.00	0.00	6.45	6.45	0.00	0.00	64.87	64.87	0.00	0.00	64.25	64.25	0.00	0.00	0.00	0.00	0.17	0.17	195.87	196.20	99.83				
31/08/2022	0.00	0.00	40.40	40.40	0.00	0.00	0.00	0.00	0.00	0.00	18.83	18.83	0.00	0.00	68.02	68.02	0.00	0.00	67.73	67.73	0.00	0.00	0.00	0.00	0.00	0.00	194.97	194.97	100.00				
<b>Total [ML]:</b>	0.00	6.47	303.72	310.20	0.17	1.20	1022.96	1024.32	0.05	7.85	957.38	965.28	0.14	0.14	1559.47	1559.76	0.19	0.32	763.83	764.35	0.00	33.84	1674.12	1707.96	0.55	49.83	6281.49	6331.87					

**Water Volume [%]:**

Untreated: 0.01 %  
 Below Dose 0.79 %  
 To Dose 99.20 %

**Notes:** 1. UV Comparative Dose: 18.1 mJ/cm<sup>2</sup>

Submitted By (Print):  D.Merredew

Signature:  Original signed by D.Merredew



**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: **August 2022**

Report Created: **Thursday, September 01, 2022**

Date	Transmittance (%)				UVR_D100A UV Dose [mJ/cm]²			UVR_D200A UV Dose [mJ/cm]²			UVR_D300A UV Dose [mJ/cm]²			UVR_D400A UV Dose [mJ/cm]²			UVR_D500A UV Dose [mJ/cm]²			UVR_D600A UV Dose [mJ/cm]²		
	Branch 1		Branch 2		Min.	Max.	Avg.	Min.	Max.	Avg.	Min.	Max.	Avg.	Min.	Max.	Avg.	Min.	Max.	Avg.	Min.	Max.	Avg.
	Avg.	Min.	Avg.	Min.																		
01/08/2022	95.4	88.7	95.7	94.7	15.1	23.5	21.0	OL	OL	OL	19.0	25.4	23.2	OL	OL	OL	18.1	23.5	21.2	OL	OL	OL
02/08/2022	95.3	2.9	95.4	92.1	15.3	22.4	20.9	OL	OL	OL	17.7	24.6	22.4	OL	OL	OL	18.1	23.3	21.2	OL	OL	OL
03/08/2022	95.5	88.7	95.8	93.8	14.4	30.4	21.4	0.0	61.1	21.0	0.0	33.6	21.3	0.0	96.9	24.0	0.0	40.6	21.3	16.5	79.8	21.4
04/08/2022	95.1	87.3	95.4	93.8	0.0	39.9	19.6	OL	OL	OL	15.9	52.9	21.5	18.5	47.9	22.9	OL	OL	OL	16.1	39.9	21.1
05/08/2022	95.4	84.5	95.7	94.0	0.0	46.4	19.4	OL	OL	OL	13.8	29.5	21.6	18.8	29.9	21.5	OL	OL	OL	15.9	29.6	21.1
06/08/2022	95.5	83.7	96.0	93.4	OL	OL	OL	OL	OL	OL	16.4	27.1	21.6	18.8	21.9	21.2	OL	OL	OL	15.5	22.1	21.2
07/08/2022	95.6	87.6	96.2	94.1	OL	OL	OL	OL	OL	OL	16.0	25.5	21.6	18.7	22.4	21.2	OL	OL	OL	15.4	22.0	21.2
08/08/2022	95.6	81.6	96.2	94.7	OL	OL	OL	OL	OL	OL	16.5	28.2	21.7	19.0	23.1	21.6	OL	OL	OL	15.5	22.0	21.2
09/08/2022	94.4	84.7	94.8	92.9	OL	OL	OL	OL	OL	OL	15.3	28.6	21.7	18.6	34.9	21.3	OL	OL	OL	15.3	24.1	21.2
10/08/2022	95.6	86.5	96.2	94.1	OL	OL	OL	OL	OL	OL	15.9	29.8	21.6	18.5	22.1	21.2	OL	OL	OL	15.7	22.6	21.2
11/08/2022	95.7	82.0	96.3	95.0	0.0	46.1	19.8	OL	OL	OL	15.7	30.2	21.4	0.0	42.2	21.2	18.6	95.7	22.0	14.9	22.9	21.2
12/08/2022	95.9	92.5	96.6	95.2	OL	OL	OL	OL	OL	OL	16.3	22.3	21.2	OL	OL	OL	18.2	30.6	21.7	14.9	22.3	21.2
13/08/2022	95.8	89.8	96.6	95.7	OL	OL	OL	OL	OL	OL	16.9	22.3	21.3	OL	OL	OL	18.2	31.7	22.1	15.1	22.3	21.2
14/08/2022	95.9	75.4	96.6	95.8	OL	OL	OL	OL	OL	OL	16.1	22.2	21.1	OL	OL	OL	18.1	31.7	21.7	15.1	22.3	21.2
15/08/2022	95.9	89.0	96.6	95.2	OL	OL	OL	OL	OL	OL	17.0	22.1	21.1	OL	OL	OL	18.4	32.3	22.5	15.2	22.4	21.2
16/08/2022	96.1	92.4	96.8	95.5	OL	OL	OL	14.6	86.9	21.4	0.0	96.1	21.1	19.2	105.7	22.6	0.0	37.9	23.5	15.4	22.8	21.2
17/08/2022	96.1	89.9	96.8	96.1	OL	OL	OL	14.7	30.5	21.2	OL	OL	OL	19.9	24.4	22.7	OL	OL	OL	16.4	22.2	21.1
18/08/2022	96.0	84.1	96.7	95.7	OL	OL	OL	18.6	23.6	21.2	OL	OL	OL	19.1	23.5	21.9	OL	OL	OL	16.2	22.2	21.1
19/08/2022	95.9	90.2	96.6	95.3	OL	OL	OL	18.6	23.2	21.2	OL	OL	OL	18.8	23.4	21.6	OL	OL	OL	16.0	22.2	21.2
20/08/2022	95.9	89.3	96.5	95.5	OL	OL	OL	18.7	22.9	21.2	OL	OL	OL	18.8	22.7	21.3	OL	OL	OL	16.5	22.2	21.2
21/08/2022	96.0	86.9	96.7	95.4	OL	OL	OL	18.7	22.6	21.2	OL	OL	OL	18.7	22.8	21.2	OL	OL	OL	16.1	22.2	21.2
22/08/2022	96.0	70.2	96.7	94.5	OL	OL	OL	18.8	22.2	21.2	OL	OL	OL	18.8	22.4	21.3	OL	OL	OL	16.8	22.2	21.2
23/08/2022	96.0	71.4	96.7	95.3	OL	OL	OL	18.8	22.5	21.2	OL	OL	OL	18.8	22.9	21.3	OL	OL	OL	16.4	22.1	21.2
24/08/2022	95.9	80.0	96.6	95.8	OL	OL	OL	18.7	22.4	21.2	OL	OL	OL	18.7	23.4	21.3	OL	OL	OL	16.4	22.1	21.2
25/08/2022	95.8	80.3	96.5	95.5	OL	OL	OL	18.6	21.8	21.2	OL	OL	OL	18.7	22.9	21.3	OL	OL	OL	16.4	21.9	21.2
26/08/2022	95.6	3.2	96.3	95.1	0.0	101.1	33.1	18.6	21.9	21.2	OL	OL	OL	0.0	80.8	21.2	15.8	85.0	21.3	0.0	33.8	21.1
27/08/2022	95.6	2.5	96.0	94.4	OL	OL	OL	18.5	21.5	21.2	OL	OL	OL	18.8	21.8	21.2	18.0	23.0	21.2	OL	OL	OL
28/08/2022	96.0	85.6	96.4	95.5	OL	OL	OL	18.6	21.6	21.2	OL	OL	OL	18.8	22.4	21.2	18.0	23.4	21.2	OL	OL	OL
29/08/2022	96.2	87.1	96.5	95.4	OL	OL	OL	18.5	21.8	21.2	OL	OL	OL	18.7	22.7	21.2	18.1	35.2	21.4	0.0	84.6	34.7
30/08/2022	96.3	88.2	96.7	96.1	OL	OL	OL	0.0	29.2	21.4	26.4	100.5	33.3	18.5	23.7	21.3	18.2	23.5	21.2	OL	OL	OL
31/08/2022	96.3	85.7	96.7	96.3	18.3	96.9	25.7	OL	OL	OL	0.0	53.6	32.0	18.5	23.2	21.2	17.9	22.5	21.2	OL	OL	OL

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

Submitted By (Print):     D.Merredew    

Signature:     Original signed by D.Merredew