



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

February 7, 2024

**RE: JANUARY 2024 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 January 2024.

The 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 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 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. (email)  
M. Szmon, P. Eng. (email)  
H. Buhler, P. Eng. (email)  
L. McCusker, P. Eng. (email)  
C. Diduck (email)



**CITY OF WINNIPEG**  
**WATER AND WASTE DEPARTMENT**  
**WATER SERVICES**

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

**WATER TREATMENT PLANT TURBIDITY ON-LINE MONITORING REPORT**

January 2024 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
1/01/2024	0.65	0.08	0.13	0.08	0.11	0.02	0.04	0.03	0.06	0.14	0.20	0.07	0.11	0.01	0.04	0.05	0.08
2/01/2024	0.67	0.08	0.11	0.08	0.12	0.02	0.05	0.04	0.05	0.16	0.22	0.11	0.13	0.01	0.04	0.05	0.10
3/01/2024	0.64	0.05	0.13	0.05	0.11	0.01	0.03	0.04	0.07	0.09	0.23	0.03	0.15	0.01	0.02	0.03	0.07
4/01/2024	0.66	0.01	0.04	0.02	0.03	0.00	0.00	0.03	0.06	0.02	0.06	0.01	0.04	0.01	0.03	0.00	0.02
5/01/2024	0.65	0.01	0.04	0.02	0.05	0.00	0.00	0.03	0.08	0.02	0.06	0.01	0.03	0.01	0.03	0.01	0.02
6/01/2024	0.64	0.01	0.03	0.02	0.06	0.00	0.02	0.05	0.07	0.02	0.05	0.01	0.04	0.01	0.03	0.01	0.03
7/01/2024	0.63	0.01	0.04	0.02	0.05	0.00	0.00	0.04	0.07	0.03	0.05	0.02	0.04	0.01	0.02	0.00	0.03
8/01/2024	0.60	0.01	0.03	0.02	0.04	0.00	0.05	0.03	0.06	0.02	0.05	0.02	0.04	0.01	0.03	0.00	0.01
9/01/2024	0.55	0.01	0.04	0.02	0.05	0.00	0.00	0.03	0.06	0.02	0.05	0.02	0.04	0.01	0.03	0.01	0.03
10/01/2024	0.54	0.01	0.02	0.02	0.04	0.00	0.00	0.04	0.05	0.02	0.05	0.03	0.05	0.01	0.03	0.00	0.02
11/01/2024	0.49	0.01	0.03	0.01	0.04	0.00	0.05	0.04	0.06	0.03	0.04	0.04	0.07	0.01	0.02	0.01	0.03
12/01/2024	0.50	0.01	0.03	0.01	0.03	0.00	0.04	0.03	0.07	0.02	0.05	0.04	0.07	0.01	0.03	0.00	0.02
13/01/2024	0.50	0.01	0.04	0.02	0.04	0.00	0.00	0.03	0.07	0.02	0.05	0.05	0.06	0.01	0.02	0.01	0.03
14/01/2024	0.48	0.01	0.02	0.01	0.04	0.00	0.00	0.04	0.06	0.02	0.05	0.06	0.09	0.01	0.04	0.01	0.03
15/01/2024	0.49	0.01	0.03	0.02	0.03	0.00	0.01	0.04	0.07	0.03	0.05	0.06	0.11	0.01	0.02	0.00	0.03
16/01/2024	0.48	0.01	0.04	0.02	0.05	0.00	0.00	0.03	0.07	0.02	0.05	0.07	0.12	0.01	0.04	0.01	0.05
17/01/2024	0.47	0.01	0.04	0.01	0.05	0.00	0.00	0.04	0.05	0.03	0.06	0.09	0.11	0.02	0.05	0.01	0.04
18/01/2024	0.48	0.02	0.03	0.02	0.05	0.00	0.00	0.04	0.07	0.03	0.05	0.08	0.13	0.02	0.05	0.01	0.04
19/01/2024	0.48	0.02	0.04	0.02	0.03	0.00	0.01	0.03	0.07	0.03	0.06	0.08	0.13	0.03	0.04	0.00	0.02
20/01/2024	0.46	0.02	0.04	0.02	0.04	0.00	0.00	0.03	0.07	0.03	0.07	0.08	0.11	0.03	0.05	0.01	0.03
21/01/2024	0.47	0.02	0.03	0.02	0.05	0.00	0.00	0.04	0.06	0.03	0.06	0.09	0.12	0.03	0.05	0.01	0.04
22/01/2024	0.48	0.02	0.04	0.02	0.05	0.00	0.02	0.04	0.08	0.04	0.05	0.05	0.12	0.03	0.04	0.01	0.04
23/01/2024	0.47	0.02	0.04	0.03	0.05	0.00	0.01	0.04	0.09	0.04	0.07	0.03	0.06	0.04	0.07	0.01	0.03
24/01/2024	0.45	0.02	0.05	0.03	0.06	0.00	0.00	0.04	0.09	0.04	0.07	0.03	0.05	0.04	0.06	0.01	0.04
25/01/2024	0.47	0.02	0.04	0.04	0.06	0.00	0.01	0.06	0.09	0.04	0.07	0.04	0.06	0.04	0.07	0.01	0.04
26/01/2024	0.46	0.03	0.05	0.04	0.09	0.00	0.02	0.06	0.10	0.05	0.08	0.03	0.06	0.04	0.06	0.01	0.05
27/01/2024	0.45	0.03	0.05	0.05	0.07	0.00	0.02	0.07	0.12	0.05	0.08	0.03	0.05	0.05	0.08	0.01	0.05
28/01/2024	0.46	0.03	0.05	0.07	0.10	0.00	0.00	0.08	0.14	0.06	0.09	0.03	0.06	0.04	0.07	0.02	0.04
29/01/2024	0.45	0.03	0.06	0.08	0.12	0.00	0.03	0.09	0.12	0.06	0.10	0.04	0.05	0.05	0.08	0.02	0.05
30/01/2024	0.48	0.03	0.04	0.09	0.15	0.01	0.04	0.12	0.15	0.07	0.13	0.04	0.06	0.05	0.09	0.02	0.06
31/01/2024	0.53	0.04	0.08	0.10	0.14	0.02	0.08	0.12	0.19	0.10	0.14	0.04	0.08	0.07	0.08	0.03	0.08

Total Number of Measurements Taken, A:	13725	14713	3172	16023	16956	17023	15390	17145
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:	13725	14713	3172	16023	16956	17023	15390	17145
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%

File Path: N:\Water Treatment Branch\Administration\Reports\Regulatory Submissions\Turbidity\2024\01-January

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 A																				
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-Jan-2024	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	
02-Jan-2024	0.55	0.62	0.09	0.10	0.10	0.12	0.12	0.03	0.09	0.04	0.09	0.18	0.11	0.11	0.10	<0.02	0.12	0.07		
03-Jan-2024	0.53	0.63	0.09	0.11	0.08	0.10	0.09	0.02	0.09	0.05	0.08	0.21	0.09	<0.02	0.08	0.02	0.08	0.06		
04-Jan-2024	0.55	0.66	0.09	0.02	0.09	0.03	0.10	<0.02	0.08	0.04	0.10	0.04	0.09	<0.02	0.10	<0.02	0.10	<0.02		
05-Jan-2024	0.53	0.62	0.08	<0.02	0.10	0.02	0.09	<0.02	0.08	0.04	0.08	0.03	0.09	<0.02	0.10	<0.02	0.09	<0.02		
06-Jan-2024	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	
07-Jan-2024	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	
08-Jan-2024	0.58	0.62	0.09	0.03	0.08	0.02	0.08	<0.02	0.09	0.03	0.08	0.04	0.07	0.02	0.08	<0.02	0.08	<0.02		
09-Jan-2024	0.54	0.53	0.08	0.02	0.09	0.03	0.09	<0.02	0.08	0.05	0.08	0.03	0.08	0.03	0.10	<0.02	0.09	<0.02		
10-Jan-2024	0.53	0.56	0.08	<0.02	0.07	0.02	0.10	<0.02	0.09	0.04	0.08	0.03	0.09	0.03	0.08	<0.02	0.10	<0.02		
11-Jan-2024	0.50	0.46	0.08	0.02	0.07	0.02	0.09	<0.02	0.09	0.04	0.08	0.03	0.10	0.06	0.08	0.03	0.08	<0.02		
12-Jan-2024	0.47	0.48	0.08	0.03	0.08	0.02	0.10	<0.02	0.07	0.04	0.09	0.04	0.08	0.05	0.09	<0.02	0.08	<0.02		
13-Jan-2024	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	
14-Jan-2024	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	
15-Jan-2024	0.50	0.47	0.10	0.03	0.09	0.02	0.09	<0.02	0.09	0.06	0.09	0.04	0.09	0.07	0.09	<0.02	0.09	<0.02		
16-Jan-2024	0.49	0.48	0.08	0.02	0.09	0.02	0.09	<0.02	0.09	0.04	0.10	0.05	0.09	0.07	0.11	0.02	0.09	<0.02		
17-Jan-2024	0.46	0.48	0.09	<0.02	0.10	0.03	0.10	<0.02	0.09	0.04	0.09	0.03	0.10	0.09	0.08	<0.02	0.10	<0.02		
18-Jan-2024	0.46	0.46	0.09	0.02	0.08	0.02	0.09	<0.02	0.10	0.04	0.08	0.03	0.10	0.11	0.09	<0.02	0.09	<0.02		
19-Jan-2024	0.45	0.48	0.10	0.04	0.10	0.03	0.10	<0.02	0.10	0.06	0.10	0.05	0.09	0.10	0.09	0.02	0.09	<0.02		
20-Jan-2024	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	
21-Jan-2024	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	
22-Jan-2024	0.49	0.45	0.09	0.03	0.08	0.03	0.09	<0.02	0.10	0.06	0.08	0.05	0.09	0.07	0.09	0.03	0.09	<0.02		
23-Jan-2024	0.46	0.52	0.10	0.04	0.09	0.03	0.09	<0.02	0.11	0.06	0.09	0.06	0.08	0.04	0.11	0.03	0.09	<0.02		
24-Jan-2024	0.44	0.40	0.09	0.02	0.11	0.05	0.10	<0.02	0.10	0.06	0.09	0.05	0.10	0.04	0.10	0.04	0.10	<0.02		
25-Jan-2024	0.47	0.44	0.09	0.03	0.09	0.04	0.10	<0.02	0.11	0.07	0.10	0.05	0.11	0.04	0.11	0.03	0.12	0.03		
26-Jan-2024	0.46	0.45	0.09	0.03	0.09	0.05	0.10	<0.02	0.10	0.06	0.08	0.06	0.11	0.06	0.09	0.04	0.09	<0.02		
27-Jan-2024	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	
28-Jan-2024	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	
29-Jan-2024	0.47	0.46	0.08	0.04	0.10	0.11	0.09	<0.02	0.09	0.11	0.08	0.08	0.09	0.05	0.08	0.04	0.10	0.02		
30-Jan-2024	0.46	0.43	0.09	0.04	0.08	0.10	0.13	0.04	0.09	0.12	0.08	0.09	0.09	0.05	0.08	0.05	0.10	0.03		
31-Jan-2024	0.51	0.62	0.10	0.06	0.09	0.12	0.10	<0.02	0.12	0.16	0.10	0.10	0.09	0.04	0.09	0.06	0.09	0.02		
<b>Total number of measurements taken, A:</b>			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			
<b>Number of measurements meeting standard, B:</b>			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%			

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

Comments:

Report Date: February 7, 2024



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

Water System Code: **252.00**  
 Licence Number: **PWS-09-412-02-A**  
 Report Created: 01 February 2024

Report Period: January 2024

Date	BRANCH 1 [mg/L]		BRANCH 2 [mg/L]	
	Average	Minimum	Average	Minimum
01/01/2024	1.30	1.26	1.17	1.12
02/01/2024	1.35	1.32	1.24	1.16
03/01/2024	1.36	1.24	1.28	1.21
04/01/2024	1.32	1.28	1.28	1.21
05/01/2024	1.32	1.24	1.21	1.05
06/01/2024	1.25	1.21	1.14	1.04
07/01/2024	1.21	1.17	1.19	1.12
08/01/2024	1.27	1.19	1.26	1.17
09/01/2024	1.26	1.11	1.25	1.17
10/01/2024	1.31	1.14	1.27	1.01
11/01/2024	1.30	1.08	1.25	1.16
12/01/2024	1.32	1.27	1.23	1.12
13/01/2024	1.27	1.20	1.19	1.12
14/01/2024	1.27	1.21	1.16	1.11
15/01/2024	1.26	1.20	1.22	1.15
16/01/2024	1.26	1.21	1.28	1.21
17/01/2024	1.28	1.21	1.25	1.15
18/01/2024	1.23	1.16	1.20	1.15
19/01/2024	1.16	1.09	1.16	1.09
20/01/2024	1.19	1.14	1.20	1.15
21/01/2024	1.15	1.08	1.17	1.12
22/01/2024	1.20	1.05	1.18	1.11
23/01/2024	1.31	1.11	1.19	1.12
24/01/2024	1.35	1.27	1.21	1.12
25/01/2024	1.30	1.25	1.13	1.04
26/01/2024	1.28	1.11	1.18	1.01
27/01/2024	1.34	1.23	1.30	1.22
28/01/2024	1.34	1.23	1.28	1.23
29/01/2024	1.36	1.31	1.29	1.18
30/01/2024	1.35	1.30	1.33	1.29
31/01/2024	1.33	1.29	1.31	1.26

Total Number of Measurements, A:	21607	21607
Minimum Free Chlorine Standard:	0.5	0.5
Number of Measurements Meeting Standard, B:	21607	21607
COMPLIANCE, C = B/A X 100%:	100.00	100.00

File Path: N:\Water Treatment Branch\Administration\Reports\Regulatory Submissions\Chlorine\2024\01-January

Submitted By (Print): D. Merredew

Signature: original signed by D. Merredew



WATER TREATMENT PLANT CHLORINE GRAB MONITORING REPORT						
Water System Code: 252.00 Licence No. PWS-09-412-02 A	Deacon Booster Pumping Station Branch 1			Deacon Booster Pumping Station Branch 2		
Date	Free Chlorine (mg/L)		Total Chlorine (mg/L)	Free Chlorine (mg/L)		Total Chlorine (mg/L)
	Analyser	Grab	Grab	Analyser	Grab	Grab
01-Jan-2024	ns	ns	ns	ns	ns	ns
02-Jan-2024	1.35	1.36	1.70	1.26	1.28	1.55
03-Jan-2024	1.37	1.45	1.74	1.30	1.32	1.59
04-Jan-2024	1.34	1.41	1.73	1.29	1.32	1.59
05-Jan-2024	1.29	1.36	1.68	1.27	1.32	1.55
06-Jan-2024	ns	ns	ns	ns	ns	ns
07-Jan-2024	ns	ns	ns	ns	ns	ns
08-Jan-2024	1.27	1.33	1.62	1.28	1.29	1.59
09-Jan-2024	1.26	1.34	1.63	1.26	1.27	1.54
10-Jan-2024	1.31	1.30	1.61	1.27	1.28	1.57
11-Jan-2024	1.31	1.37	1.66	1.27	1.25	1.56
12-Jan-2024	1.31	1.31	1.62	1.25	1.32	1.56
13-Jan-2024	ns	ns	ns	ns	ns	ns
14-Jan-2024	ns	ns	ns	ns	ns	ns
15-Jan-2024	1.24	1.26	1.51	1.18	1.27	1.56
16-Jan-2024	1.27	1.36	1.58	1.27	1.37	1.58
17-Jan-2024	1.22	1.32	1.60	1.27	1.30	1.59
18-Jan-2024	1.26	1.34	1.63	1.20	1.25	1.52
19-Jan-2024	1.11	1.20	1.45	1.12	1.21	1.43
20-Jan-2024	ns	ns	ns	ns	ns	ns
21-Jan-2024	ns	ns	ns	ns	ns	ns
22-Jan-2024	1.22	1.15	1.48	1.18	1.19	1.50
23-Jan-2024	1.27	1.27	1.55	1.17	1.20	1.43
24-Jan-2024	1.33	1.36	1.64	1.22	1.29	1.56
25-Jan-2024	1.30	1.35	1.62	1.15	1.19	1.43
26-Jan-2024	1.28	1.28	1.56	1.12	1.18	1.43
27-Jan-2024	ns	ns	ns	ns	ns	ns
28-Jan-2024	ns	ns	ns	ns	ns	ns
29-Jan-2024	1.33	1.35	1.64	1.27	1.32	1.59
30-Jan-2024	1.35	1.32	1.65	1.33	1.35	1.66
31-Jan-2024	1.33	1.36	1.67	1.33	1.38	1.67
<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: February 7, 2024



**CITY OF WINNIPEG**  
 WATER AND WASTE DEPARTMENT  
 WATER SERVICES

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

**WATER TREATMENT PLANT UV REPORT**

Report Period: **January 2024**

Report Created: **Thursday, February 01, 2024**

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		
01/01/2024	0.00	0.00	47.66	47.66	0.00	0.00	67.33	67.33	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	1.02	69.00	70.03	0.00	1.02	183.99	185.02	0.00	1.02	183.99	185.02	99.45	
02/01/2024	0.00	0.00	48.83	48.83	0.00	0.00	66.16	66.16	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	1.17	68.88	70.05	0.00	1.17	183.87	185.04	0.00	1.17	183.87	185.04	99.37	
03/01/2024	0.00	0.00	49.68	49.68	0.00	0.00	65.77	65.77	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	1.17	68.83	69.99	0.00	1.17	184.28	185.45	0.00	1.17	184.28	185.45	99.37	
04/01/2024	0.00	0.00	51.40	51.40	0.00	0.00	68.25	68.25	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	0.88	69.48	70.36	0.00	0.88	189.13	190.01	0.00	0.88	189.13	190.01	99.54	
05/01/2024	0.00	0.05	52.24	52.29	0.00	0.06	69.47	69.54	0.00	0.00	0.00	0.00	0.00	0.00	0.56	0.56	0.00	0.00	0.00	0.00	0.00	0.96	65.68	66.64	0.00	1.07	187.96	189.03	0.00	1.07	187.96	189.03	99.43	
06/01/2024	0.00	0.00	51.45	51.45	0.00	0.00	68.56	68.56	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	1.07	68.94	70.01	0.00	1.07	188.95	190.02	0.00	1.07	188.95	190.02	99.44	
07/01/2024	0.00	0.00	46.01	46.01	0.00	0.00	62.69	62.69	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	2.10	79.21	81.31	0.00	2.10	187.92	190.01	0.00	2.10	187.92	190.01	98.90	
08/01/2024	0.00	0.00	46.02	46.02	0.00	0.00	62.91	62.91	0.00	0.22	8.12	8.35	0.00	0.00	0.00	0.00	0.00	0.04	45.41	45.46	0.00	0.85	26.39	27.24	0.00	1.12	188.85	189.97	0.00	1.12	188.85	189.97	99.41	
09/01/2024	0.10	0.14	45.84	46.07	0.00	0.09	58.67	58.76	0.00	0.00	0.00	0.00	0.14	0.14	4.05	4.34	0.00	0.21	50.57	50.78	0.00	0.79	29.35	30.14	0.24	1.37	188.48	190.09	0.24	1.37	188.48	190.09	99.15	
10/01/2024	0.00	0.12	61.21	61.33	0.00	0.20	76.10	76.30	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.80	49.79	50.59	0.00	1.11	187.13	188.24	0.00	1.11	187.13	188.24	99.41	
11/01/2024	0.00	0.05	64.34	64.39	0.00	0.26	79.96	80.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.37	40.46	40.82	0.00	0.67	184.76	185.43	0.00	0.67	184.76	185.43	99.64		
12/01/2024	0.00	0.00	60.99	60.99	0.00	0.00	83.08	83.08	0.00	0.00	0.00	0.00	0.00	0.00	0.89	0.89	0.00	0.00	0.00	0.00	0.00	0.31	39.68	39.99	0.00	0.31	184.63	184.94	0.00	0.31	184.63	184.94	99.83	
13/01/2024	0.00	0.00	61.79	61.79	0.00	0.00	83.22	83.22	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	0.34	39.65	39.98	0.00	0.34	184.65	184.99	0.00	0.34	184.65	184.99	99.82	
14/01/2024	0.00	0.00	61.81	61.81	0.00	0.00	83.17	83.17	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	0.33	39.67	40.01	0.00	0.33	184.65	184.99	0.00	0.33	184.65	184.99	99.82	
15/01/2024	0.00	0.00	48.88	48.88	0.00	0.00	67.32	67.32	0.00	0.00	0.00	0.00	0.00	0.06	57.09	57.15	0.00	0.00	0.00	0.00	0.00	0.08	12.79	12.88	0.00	0.15	186.08	186.22	0.00	0.15	186.08	186.22	99.92	
16/01/2024	0.00	0.00	43.73	43.73	0.00	0.00	60.81	60.81	0.00	0.00	0.00	0.00	0.00	0.00	84.90	84.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	189.44	189.44	0.00	0.00	189.44	189.44	100.00
17/01/2024	0.00	0.00	41.80	41.80	0.00	0.00	58.38	58.38	0.00	0.00	0.00	0.00	0.00	0.00	82.24	82.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	182.41	182.41	0.00	0.00	182.41	182.41	100.00
18/01/2024	0.02	0.02	41.94	41.98	0.05	0.68	56.89	57.61	0.00	0.00	0.00	0.00	0.00	0.07	82.56	82.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	181.38	182.21	0.07	0.76	181.38	182.21	99.55	
19/01/2024	0.00	0.00	42.86	42.86	0.00	0.33	59.83	60.16	0.00	0.00	0.00	0.00	0.00	0.00	84.96	84.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33	187.65	187.98	0.00	0.33	187.65	187.98	99.82
20/01/2024	0.00	0.00	42.85	42.85	0.00	0.63	59.54	60.16	0.00	0.00	0.00	0.00	0.00	0.00	84.96	84.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.63	187.35	187.97	0.00	0.63	187.35	187.97	99.67	
21/01/2024	0.00	0.00	42.91	42.91	0.00	0.33	59.86	60.19	0.00	0.00	0.00	0.00	0.00	0.00	84.94	84.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33	187.71	188.04	0.00	0.33	187.71	188.04	99.82	
22/01/2024	0.00	0.00	43.79	43.79	0.00	0.77	60.45	61.22	0.00	0.00	0.00	0.00	0.00	0.00	84.97	84.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.77	189.21	189.98	0.00	0.77	189.21	189.98	99.59	
23/01/2024	0.00	1.38	55.78	57.16	0.00	0.13	25.07	25.20	0.00	0.18	38.10	38.28	0.00	0.71	77.17	77.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.40	196.12	198.51	0.00	2.40	196.12	198.51	98.79	
24/01/2024	0.00	0.05	47.05	47.10	0.00	0.07	64.95	65.02	0.00	0.00	0.00	0.00	0.00	0.00	78.90	78.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	190.90	191.01	0.00	0.11	190.90	191.01	99.95	
25/01/2024	0.00	0.00	50.02	50.02	0.00	0.00	68.63	68.63	0.00	0.00	0.00	0.00	0.00	0.00	74.66	74.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	193.32	193.32	0.00	0.00	193.32	193.32	100.00
26/01/2024	0.00	0.15	37.98	38.14	0.00	0.00	64.61	64.61	0.00	0.00	0.00	0.00	0.00	0.00	33.21	33.21	0.00	0.00	20.47	20.47	0.00	0.00	31.45	31.45	0.00	0.15	187.72	187.88	0.00	0.15	187.72	187.88	99.92	
27/01/2024	0.00	0.00	0.00	0.00	0.00	0.00	85.00	85.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	40.39	40.39	0.00	0.00	68.85	68.85	0.00	0.00	194.24	194.24	0.00	0.00	194.24	194.24	100.00	
28/01/2024	0.00	0.00	0.00	0.00	0.00	0.00	82.76	82.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	38.76	38.76	0.00	0.00	64.39	64.39	0.00	0.00	185.92	185.92	0.00	0.00	185.92	185.92	100.00	
29/01/2024	0.00	0.00	0.00	0.00	0.00	0.00	84.61	84.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	40.08	40.08	0.00	0.00	67.49	67.49	0.00	0.00	192.18	192.18	0.00	0.00	192.18	192.18	100.00	
30/01/2024	0.00	0.00	0.00	0.00	0.00	0.00	84.30	84.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	39.42	39.42	0.00	0.00	65.94	65.94	0.00	0.00	189.65	189.65	0.00	0.00	189.65	189.65	100.00	
31/01/2024	0.00	0.00	0.00	0.00	0.00	0.00	84.16	84.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	39.39	39.39	0.00	0.00	65.47	65.47	0.00	0.00	189.02	189.02	0.00	0.00	189.02	189.02	100.00	
<b>Total [ML]:</b>	0.12	1.96	1288.85	1290.92	0.05	3.55	2122.50	2126.09	0.00	0.40	46.23	46.63	0.14	0.98	916.07	917.20	0.00	0.25	314.50	314.75	0.00	12.24	1131.39	1143.62	0.30	19.38	5819.54	5839.22						

**Water Volume [%]:**

Untreated: 0.01 %  
 Below Dose: 0.33 %  
 To Dose: 99.66 %

**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-A**

**WATER TREATMENT PLANT UV REPORT**

Report Period: **January 2024**

Report Created: **Thursday, February 01, 2024**

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.				
01/01/2024	93.6	93.1	96.3	95.1	19.8	25.3	22.0	19.7	23.2	21.9	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	16.1	23.4	21.4	
02/01/2024	93.5	92.4	97.3	95.9	19.5	24.6	22.0	19.4	23.2	21.7	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	15.9	22.6	21.4	
03/01/2024	93.5	93.0	98.4	96.7	20.3	24.4	22.0	19.2	44.1	21.7	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	16.2	23.9	21.4	
04/01/2024	93.5	92.9	98.0	93.8	20.0	24.0	21.9	18.9	23.2	21.9	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	16.0	22.9	21.3	
05/01/2024	93.4	92.5	98.3	95.0	0.0	105.6	55.0	16.3	35.2	23.7	OL	OL	OL	0.0	92.8	29.6	OL	OL	OL	OL	OL	OL	0.0	68.2	21.4	
06/01/2024	93.2	92.5	98.5	85.0	64.0	81.5	72.3	19.1	24.7	22.5	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	15.8	22.2	21.4	
07/01/2024	93.4	92.7	89.5	85.0	62.8	80.7	72.0	18.7	23.9	22.1	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	15.2	22.1	21.2	
08/01/2024	93.5	92.8	92.0	91.7	19.7	100.2	42.0	10.8	42.3	21.9	0.0	86.2	21.4	OL	OL	OL	6.2	21.9	21.2	0.0	34.8	21.2	0.0	34.8	21.2	
09/01/2024	93.5	92.9	91.9	91.7	0.0	103.9	24.7	0.0	82.1	22.7	OL	OL	OL	0.0	89.5	21.5	0.0	30.0	21.2	15.5	79.4	21.2	15.5	79.4	21.2	
10/01/2024	93.4	92.7	91.9	91.7	0.0	105.7	28.3	15.8	60.7	22.2	OL	OL	OL	0.0	91.0	39.1	OL	OL	OL	0.0	84.6	21.4	0.0	84.6	21.4	
11/01/2024	93.4	92.7	91.9	91.6	14.1	99.1	26.6	10.5	69.2	23.0	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	0.0	77.1	21.5	
12/01/2024	93.4	92.9	91.8	91.6	0.0	65.7	25.7	18.5	37.9	21.9	OL	OL	OL	0.0	88.2	22.7	OL	OL	OL	OL	OL	OL	17.0	24.8	21.5	
13/01/2024	93.4	92.9	91.8	91.6	19.6	23.3	21.9	19.7	23.2	21.9	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	16.7	23.6	21.5	
14/01/2024	93.4	92.8	91.8	91.6	19.3	23.4	21.7	19.1	23.1	21.9	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	16.4	29.8	21.8	
15/01/2024	93.4	92.8	91.8	91.6	19.2	28.1	21.9	18.3	25.1	21.9	OL	OL	OL	16.1	90.8	21.3	OL	OL	OL	OL	OL	OL	0.0	31.4	21.9	
16/01/2024	93.3	92.7	91.8	91.5	19.7	23.9	22.0	18.5	23.2	21.9	OL	OL	OL	18.2	22.0	21.2	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL
17/01/2024	93.3	92.7	91.9	91.7	19.3	23.6	21.9	18.8	23.2	21.9	OL	OL	OL	18.1	22.0	21.2	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL
18/01/2024	93.2	92.6	92.3	91.8	0.0	82.8	23.9	0.0	22.9	21.7	OL	OL	OL	17.9	33.9	21.3	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL
19/01/2024	93.1	92.6	93.5	92.1	20.6	22.7	22.0	17.2	22.9	21.8	OL	OL	OL	18.3	22.0	21.2	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL
20/01/2024	93.0	92.2	96.0	93.8	19.6	22.8	22.0	17.2	22.9	21.8	OL	OL	OL	18.3	22.0	21.2	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL
21/01/2024	92.5	91.6	97.1	37.3	19.3	22.6	21.9	17.5	22.9	21.7	OL	OL	OL	18.2	22.1	21.2	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL
22/01/2024	91.7	90.3	96.2	93.5	19.7	22.6	21.9	16.3	22.7	20.4	OL	OL	OL	18.2	21.9	21.2	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL
23/01/2024	92.3	89.6	97.5	93.4	0.0	82.2	24.8	0.0	84.2	46.7	0.0	41.7	22.4	16.8	28.5	21.6	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL
24/01/2024	93.4	92.8	94.4	35.2	17.0	25.1	21.9	17.9	45.7	23.3	OL	OL	OL	18.2	29.4	21.3	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL
25/01/2024	93.4	92.5	92.6	80.0	19.4	28.6	21.9	0.0	25.6	21.9	OL	OL	OL	18.1	22.0	21.3	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL
26/01/2024	93.3	89.9	92.4	90.8	0.0	105.6	22.9	0.0	82.4	25.2	OL	OL	OL	0.0	59.1	21.3	0.0	106.0	63.6	0.0	106.0	38.2	0.0	106.0	38.2	
27/01/2024	93.3	92.6	92.4	92.1	OL	OL	OL	19.8	23.2	21.8	OL	OL	OL	OL	OL	OL	61.1	75.6	68.0	20.3	24.2	22.5	20.3	24.2	22.5	
28/01/2024	93.6	93.0	92.4	92.2	OL	OL	OL	20.0	28.2	21.8	OL	OL	OL	OL	OL	OL	54.8	73.4	63.7	20.2	23.8	22.0	20.2	23.8	22.0	
29/01/2024	93.6	92.9	92.3	92.1	OL	OL	OL	20.0	28.1	21.8	OL	OL	OL	OL	OL	OL	27.0	91.6	45.5	20.5	22.6	21.9	20.5	22.6	21.9	
30/01/2024	93.6	92.9	92.3	92.1	OL	OL	OL	19.9	23.0	21.8	OL	OL	OL	OL	OL	OL	25.3	33.7	29.0	20.2	23.2	21.9	20.2	23.2	21.9	
31/01/2024	93.5	92.9	92.1	91.8	0.0	0.0	0.0	19.5	23.0	21.8	OL	OL	OL	OL	OL	OL	23.7	29.5	26.6	20.4	22.6	21.9	20.4	22.6	21.9	

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

Submitted By (Print):    D. Merredew   

Signature:    original signed by D. Merredew