



Water and Waste Department  
Environmental Standards Division

# NEWPCC SCHEDULE A Quarterly Monitoring Reports



**January 2016 – December 2016**

**Licence: 2684 RRR  
File: 1071.10**

**City Of Winnipeg  
Water Waste Department**

**North End Water Pollution Control Centre Quarterly Monitoring Report**

1st Quarter Sampling Parameter	February 11, 2016			NEWPCC	
	Units	MDL-Raw	MDL-Final	Raw Sewage Grab	Final Effluent Grab
<b>Miscellaneous</b>					
Chromium, Hexavalent	ug/L	1.0	1.0	<1.0	<1.0
Mercury (Hg)-Total	ng/L	2.5	0.50	49.6	3.29
Phenols (4AAP)	mg/L	0.010	0.0010	0.099	0.0052
Trihalomethanes (total)	mg/L	0.0010	0.0010	0.0042	0.0052
Oil and Grease (I.R.)	mg/L	5.0	5.0	42.2	6.3
Tetraethyl Lead	ug/L	0.0070	0.00070	<0.0070	<0.00070
Tri-n-butyltin Cation	ug/L	0.050	0.055	<0.050	<0.055
pH unStabilized Trout Bioassay	Pass/Fail				Fail
Hardness	mg/L				nr
Alkalinity	mg/L				nr
Temperature	°C		-30.0		14.9
Dissolved Oxygen	mg/L		0.0		10.7
Conductivity	umhos/cm		0		1029
pH	units		0.00		6.49
pH Stabilized Trout Bioassay	Pass/Fail				Fail
Hardness	mg/L		2		192
Alkalinity	mg/L		1		287
Temperature	°C		-30.0		14.9
Dissolved Oxygen	mg/L		0.0		10.7
Conductivity	umhos/cm		0		1029
pH	units		0.00		6.49
Ammonia, Total (as N)	mg/L		0.00		83.7
Ammonia, Un-ionized (as N)	mg/L				0.071
Chlorine, Total	mg/L		0.00		0.02*
<b>Total Metals by ICP-MS</b>					
Arsenic (As)-Total	mg/L	0.00020	0.00020	0.00125	0.00101
Cadmium (Cd)-Total	mg/L	0.000010	0.000010	0.000196	0.000022
Chromium (Cr)-Total	mg/L	0.0010	0.0010	0.0047	0.0035
Copper (Cu)-Total	mg/L	0.00020	0.00020	0.0560	0.00569
Lead (Pb)-Total	mg/L	0.000090	0.000090	0.0029	0.000239
Molybdenum (Mo)-Total	mg/L	0.00020	0.00020	0.00683	0.00993
Nickel (Ni)-Total	mg/L	0.0020	0.0020	0.0074	0.0457
Selenium (Se)-Total	mg/L	0.0010	0.0010	<0.0010	<0.0010
Zinc (Zn)-Total	mg/L	0.0020	0.0020	0.103	0.0269
<b>Low Level Nonylphenols and Ethoxylates</b>					
Nonylphenols	ug/L	1.0	1.0	1.4	<1.0
Nonylphenol Monoethoxylates	ug/L	2.0	2.0	2.7	<2.0
Nonylphenol Diethoxylates	ug/L	0.10	0.10	1.50	0.35
Octylphenol	ug/L	1.0	1.0	<1.0	<1.0
Octylphenol Monoethoxylate	ug/L	2.0	2.0	<2.0	<2.0
Octylphenol Diethoxylate	ug/L	0.10	0.10	0.14	<0.10
Bisphenol A	ug/L	0.20	0.20	0.30	0.41
Total Nonylphenol Ethoxylates	ug/L	2.0	2.0	4.2	<2.0
Total Octylphenol Ethoxylate	ug/L	2.0	2.0	<2.0	<2.0

**City Of Winnipeg  
Water Waste Department**

**North End Water Pollution Control Centre Quarterly Monitoring Report**

1st Quarter Sampling Parameter	February 11, 2016			NEWPCC	
	Units	MDL-Raw	MDL-Final	Raw Sewage Grab	Final Effluent Grab
<b>Dioxins and Furans</b>					
2378 TCDD	pg/L	1.8	3.6	<1.8	<3.6
12378 PeCDD	pg/L	1.1	2.2	<1.1	<2.2
123478 HxCDD	pg/L	1.1	2.3	<1.1	<2.3
123678 HxCDD	pg/L	0.95	2.0	<0.95	<2.0
123789 HxCDD	pg/L	0.99	2.1	<0.99	<2.1
1234678 HpCDD	pg/L	2.6	2.4	2.8	<2.4
OCDD	pg/L	3.2	3.3	31.7	<3.3
2378 TCDF	pg/L	1.4	2.2	<1.4	<2.2
12378 PeCDF	pg/L	0.93	1.7	<0.93	<1.7
23478 PeCDF	pg/L	0.80	1.5	<0.80	<1.5
123478 HxCDF	pg/L	1.4	1.4	<1.4	<1.4
123678 HxCDF	pg/L	1.4	1.2	<1.4	<1.2
234678 HxCDF	pg/L	1.4	1.3	<1.4	<1.3
123789 HxCDF	pg/L	2.1	2.1	<2.1	<2.1
1234678 HpCDF	pg/L	1.5	1.3	<1.5	<1.3
1234789 HpCDF	pg/L	2.5	1.8	<2.5	<1.8
OCDF	pg/L	2.0	2.8	<2.0	<2.8
Total TCDD	pg/L	1.8	3.6	<1.8	<3.6
Total PeCDD	pg/L	1.1	2.2	<1.1	<2.2
Total HxCDD	pg/L	1.1	2.3	<1.1	<2.3
Total HpCDD	pg/L	2.6	2.4	4.1	<2.4
Total TCDF	pg/L	1.4	2.2	<1.4	<2.2
Total PeCDF	pg/L	0.93	1.7	<0.93	<1.7
Total HxCDF	pg/L	2.1	2.1	<2.1	<2.1
Total HpCDF	pg/L	2.5	1.8	<2.5	<1.8
<b>Phenoxyacid Herbicides by GC/MS</b>					
2,4,5-TP	ug/L	0.50	0.50	<0.50	<0.50
MCPA	ug/L	0.70	0.50	<0.70	<0.50
Mecoprop	ug/L	0.50	0.50	<0.50	<0.50
2,4,5-T	ug/L	0.50	0.50	<0.50	<0.50
2,4-D	ug/L	0.50	0.50	<0.50	<0.50
2,4-DP	ug/L	0.50	0.50	<0.50	<0.50
Bromoxynil	ug/L	0.50	0.50	<0.50	<0.50
Dicamba	ug/L	0.50	0.50	<0.50	9.27
Dinoseb	ug/L	0.50	0.50	<0.50	<0.50
Picloram	ug/L	0.50	0.50	<0.50	<0.50
<b>PCB</b>					
Aroclor 1016	mg/L	0.00010	0.00010	<0.00010	<0.00010
Aroclor 1221	mg/L	0.00010	0.00010	<0.00010	<0.00010
Aroclor 1232	mg/L	0.00010	0.00010	<0.00010	<0.00010
Aroclor 1242	mg/L	0.00010	0.00010	<0.00010	<0.00010
Aroclor 1248	mg/L	0.00010	0.00010	<0.00010	<0.00010
Aroclor 1254	mg/L	0.00010	0.00010	<0.00010	<0.00010
Aroclor 1260	mg/L	0.00010	0.00010	<0.00010	<0.00010
Aroclor 1262	mg/L	0.00010	0.00010	<0.00010	<0.00010
Aroclor 1268	mg/L	0.00010	0.00010	<0.00010	<0.00010
Total PCBs	mg/L	0.00030	0.00030	<0.00030	<0.00030

**City Of Winnipeg  
Water Waste Department**

**North End Water Pollution Control Centre Quarterly Monitoring Report**

1st Quarter Sampling Parameter	February 11, 2016			NEWPCC	
	Units	MDL-Raw	MDL-Final	Raw Sewage Grab	Final Effluent Grab
<b>Pesticides, Organochlorine</b>					
Aldrin	ug/L	5.0	5.0	<5.0	<5.0
a-chlordane	ug/L	5.0	5.0	<5.0	<5.0
g-chlordane	ug/L	5.0	5.0	<5.0	<5.0
alpha-BHC	ug/L	5.0	5.0	<5.0	<5.0
beta-BHC	ug/L	5.0	5.0	<5.0	<5.0
delta-BHC	ug/L	5.0	5.0	<5.0	<5.0
op-DDD	ug/L	5.0	5.0	<5.0	<5.0
pp-DDD	ug/L	5.0	5.0	<5.0	<5.0
op-DDE	ug/L	6.0	5.0	<6.0	<5.0
pp-DDE	ug/L	5.0	5.0	<5.0	<5.0
op-DDT	ug/L	5.0	5.0	<5.0	<5.0
pp-DDT	ug/L	5.0	5.0	<5.0	<5.0
Dieldrin	ug/L	5.0	5.0	<5.0	<5.0
alpha-Endosulfan	ug/L	13.0	5.0	<13.0	<5.0
beta-Endosulfan	ug/L	5.0	5.0	<5.0	<5.0
Endosulfan Sulfate	ug/L	5.0	5.0	<5.0	<5.0
Endrin	ug/L	5.0	5.0	<5.0	<5.0
Endrin Aldehyde	ug/L	5.0	5.0	<5.0	<5.0
Hexachlorobenzene	ug/L	5.0	5.0	<5.0	<5.0
Heptachlor	ug/L	5.0	5.0	<5.0	<5.0
Heptachlor Epoxide	ug/L	5.0	5.0	<5.0	<5.0
Lindane	ug/L	5.0	5.0	<5.0	<5.0
Methoxychlor	ug/L	5.0	5.0	<5.0	<5.0
Mirex	ug/L	5.0	5.0	<5.0	<5.0
Oxychlordane	ug/L	5.0	5.0	<5.0	<5.0
Octachlorostyrene	ug/L	0.25	0.25	<0.25	<0.25
Toxaphene	ug/L	3.5	1.5	<3.5	<1.5
<b>EPA 8270 Extractables</b>					
1-Chloronaphthalene	ug/L	12	0.40	<12	<0.40
1-Methylnaphthalene	ug/L	12	0.40	<12	<0.40
1,2-Dichlorobenzene	ug/L	12	0.40	<12	<0.40
1,2,3-Trichlorobenzene	ug/L	12	0.40	<12	<0.40
1,2,4-Trichlorobenzene	ug/L	12	0.40	<12	<0.40
1,3-Dichlorobenzene	ug/L	12	0.40	<12	<0.40
1,4-Dichlorobenzene	ug/L	12	0.40	<12	<0.40
2-Chloronaphthalene	ug/L	12	0.40	<12	<0.40
2-Chlorophenol	ug/L	9.0	0.30	<9.0	<0.30
2-Methylnaphthalene	ug/L	12	0.40	<12	<0.40
2-Methylphenol	ug/L	15	0.50	<15	<0.50
2-Nitrophenol	ug/L	15	0.50	<15	<0.50
2,3,4-Trichlorophenol	ug/L	15	0.50	<15	<0.50
2,3,4,5-Tetrachlorophenol	ug/L	15	0.50	<15	<0.50
2,3,4,6-Tetrachlorophenol	ug/L	15	0.50	<15	<0.50
2,3,5-Trichlorophenol	ug/L	15	0.50	<15	<0.50
2,3,5,6-Tetrachlorophenol	ug/L	15	0.50	<15	<0.50
2,4-Dichlorophenol	ug/L	9.0	0.30	<9.0	<0.30
2,4-Dimethylphenol	ug/L	15	0.50	<15	<0.50

**City Of Winnipeg  
Water Waste Department**

**North End Water Pollution Control Centre Quarterly Monitoring Report**

1st Quarter Sampling Parameter	February 11, 2016			NEWPCC	
	Units	MDL-Raw	MDL-Final	Raw Sewage Grab	Final Effluent Grab
2,4-Dinitrophenol	ug/L	300	10	<300	<10
2,4-Dinitrotoluene	ug/L	12	0.40	<12	<0.40
2,4,5-Trichlorophenol	ug/L	15	0.50	<15	<0.50
2,4,6-Trichlorophenol	ug/L	15	0.50	<15	<0.50
2,6-Dichlorophenol	ug/L	15	0.50	<15	<0.50
2,6-Dinitrotoluene	ug/L	12	0.40	<12	<0.40
3,3'-Dichlorobenzidine	ug/L	12	0.40	<12	<0.40
3&4-Methylphenol	ug/L	15	0.50	170	<0.50
4-Bromophenyl phenyl ether	ug/L	12	0.40	<12	<0.40
4-Chloro-3-methylphenol	ug/L	15	0.50	<15	<0.50
4-Chloroaniline	ug/L	12	0.40	<12	<0.40
4-Chlorophenyl phenyl ether	ug/L	12	0.40	<12	<0.40
4-Nitrophenol	ug/L	15	0.50	<15	<0.50
4,6-Dinitro-2-methylphenol	ug/L	600	20	<600	<20
5-Nitroacenaphthene	ug/L	12	0.40	<12	<0.40
Acenaphthene	ug/L	6.0	0.20	<6.0	<0.20
Acenaphthylene	ug/L	6.0	0.20	<6.0	<0.20
Anthracene	ug/L	6.0	0.20	<6.0	<0.20
Benzo(a)anthracene	ug/L	6.0	0.20	<6.0	<0.20
Benzo(a)pyrene	ug/L	1.5	0.050	<1.5	<0.050
Benzo(b)fluoranthene	ug/L	6.0	0.20	<6.0	<0.20
Benzo(ghi)perylene	ug/L	6.0	0.20	<6.0	<0.20
Benzo(k)fluoranthene	ug/L	6.0	0.20	<6.0	<0.20
Biphenyl	ug/L	12	0.40	<12	<0.40
Bis(2-chloroethoxy)methane	ug/L	12	0.40	<12	<0.40
Bis(2-chloroethyl)ether	ug/L	12	0.40	<12	<0.40
Bis(2-chloroisopropyl)ether	ug/L	12	0.40	<12	<0.40
Bis(2-ethylhexyl)phthalate	ug/L	60	2.0	<60	<2.0
Butylbenzyl phthalate	ug/L	12	0.40	<12	<0.40
Camphene	ug/L	12	0.40	<12	<0.40
Chrysene	ug/L	6.0	0.20	<6.0	<0.20
Cresols, Total	ug/L	30	1.0	170	<1.0
Di-n-butylphthalate	ug/L	60	2.0	<60	<2.0
Di-n-octylphthalate	ug/L	12	0.40	<12	<0.40
Dibenzo(a,h)anthracene	ug/L	6.0	0.20	<6.0	<0.20
Dibenzofuran	ug/L	6.0	0.20	<6.0	<0.20
Diethylphthalate	ug/L	6.0	0.20	<6.0	<0.20
Dimethylphthalate	ug/L	6.0	0.20	<6.0	<0.20
Diphenyl ether	ug/L	12	0.40	<12	<0.40
Diphenylamine	ug/L	12	0.40	<12	<0.40
Fluoranthene	ug/L	6.0	0.20	<6.0	<0.20
Fluorene	ug/L	6.0	0.20	<6.0	<0.20
Hexachlorobenzene	ug/L	1.2	0.040	<1.2	<0.040
Hexachlorobutadiene	ug/L	6.0	0.20	<6.0	<0.20
Hexachlorocyclopentadiene	ug/L	12	0.40	<12	<0.40
Hexachloroethane	ug/L	12	0.40	<12	<0.40
Indeno(1,2,3-cd)pyrene	ug/L	6.0	0.20	<6.0	<0.20
Indole	ug/L	12	0.40	41	<0.40
Isophorone	ug/L	12	0.40	<12	<0.40
N-Nitroso-di-n-propylamine	ug/L	12	0.40	<12	<0.40

**City Of Winnipeg  
Water Waste Department**

**North End Water Pollution Control Centre Quarterly Monitoring Report**

1st Quarter Sampling Parameter	February 11, 2016			NEWPCC	
	Units	MDL-Raw	MDL-Final	Raw Sewage Grab	Final Effluent Grab
Naphthalene	ug/L	6.0	0.20	<6.0	<0.20
Nitrobenzene	ug/L	12	0.40	<12	<0.40
Pentachlorophenol	ug/L	150	5.0	<150	<5.0
Perylene	ug/L	6.0	0.20	<6.0	<0.20
Phenanthrene	ug/L	6.0	0.20	<6.0	<0.20
Phenol	ug/L	15	0.50	40	<0.50
Pyrene	ug/L	6.0	0.20	<6.0	<0.20
<b>Volatile Organics plus F1</b>					
Acetone	mg/L	0.020	0.020	0.081	<0.020
Benzene	mg/L	0.00050	0.00050	<0.00050	<0.00050
Bromobenzene	mg/L	0.00050	0.00050	<0.00050	<0.00050
Bromochloromethane	mg/L	0.00050	0.00050	<0.00050	<0.00050
Bromodichloromethane	mg/L	0.00050	0.00050	<0.00050	<0.00050
Bromoform	mg/L	0.00050	0.00050	<0.00050	<0.00050
Bromomethane	mg/L	0.0010	0.0010	<0.0010	<0.0010
n-Butylbenzene	mg/L	0.00050	0.00050	<0.00050	<0.00050
sec-Butylbenzene	mg/L	0.00050	0.00050	<0.00050	<0.00050
tert-Butylbenzene	mg/L	0.00050	0.00050	<0.00050	<0.00050
Carbon Disulfide	mg/L	0.00050	0.00050	0.00050	<0.00050
Carbon tetrachloride	mg/L	0.00050	0.00050	<0.00050	<0.00050
Chlorobenzene	mg/L	0.00050	0.00050	<0.00050	<0.00050
Chloroethane	mg/L	0.0010	0.0010	<0.0010	<0.0010
Chloroform	mg/L	0.00050	0.00050	0.00418	0.00516
Chloromethane	mg/L	0.0010	0.0010	<0.0010	<0.0010
2-Chlorotoluene	mg/L	0.020	0.020	<0.020	<0.020
4-Chlorotoluene	mg/L	0.00050	0.00050	<0.00050	<0.00050
Dibromochloromethane	mg/L	0.00050	0.00050	<0.00050	<0.00050
1,2-Dibromo-3-chloropropane	mg/L	0.00050	0.00050	<0.00050	<0.00050
1,2-Dibromoethane	mg/L	0.00050	0.00050	<0.00050	<0.00050
Dibromomethane	mg/L	0.00050	0.00050	<0.00050	<0.00050
1,2-Dichlorobenzene	mg/L	0.00050	0.00050	<0.00050	<0.00050
1,3-Dichlorobenzene	mg/L	0.00050	0.00050	<0.00050	<0.00050
1,4-Dichlorobenzene	mg/L	0.00050	0.00050	<0.00050	<0.00050
Dichlorodifluoromethane	mg/L	0.0010	0.0010	<0.0010	<0.0010
1,1-Dichloroethane	mg/L	0.00050	0.00050	<0.00050	<0.00050
1,2-Dichloroethane	mg/L	0.00050	0.00050	<0.00050	<0.00050
1,1-Dichloroethene	mg/L	0.00050	0.00050	<0.00050	<0.00050
cis-1,2-Dichloroethene	mg/L	0.00050	0.00050	0.00165	<0.00050
trans-1,2-Dichloroethene	mg/L	0.00050	0.00050	<0.00050	<0.00050
Dichloromethane	mg/L	0.0050	0.0050	<0.0050	<0.0050
1,2-Dichloropropane	mg/L	0.00050	0.00050	<0.00050	<0.00050
1,3-Dichloropropane	mg/L	0.00050	0.00050	<0.00050	<0.00050
2,2-Dichloropropane	mg/L	0.00050	0.00050	<0.00050	<0.00050
1,1-Dichloropropene	mg/L	0.00050	0.00050	<0.00050	<0.00050
cis-1,3-Dichloropropene	mg/L	0.00050	0.00050	<0.00050	<0.00050
trans-1,3-Dichloropropene	mg/L	0.00050	0.00050	<0.00050	<0.00050
1,3-Dinitropyrene	ug/L	30	10	<30	<10
1,6-Dinitropyrene	ug/L	30	10	<30	<10
1,8-Dinitropyrene	ug/L	30	10	<30	<10

**City Of Winnipeg  
Water Waste Department**

**North End Water Pollution Control Centre Quarterly Monitoring Report**

1st Quarter Sampling Parameter	February 11, 2016			NEWPCC	
	Units	MDL-Raw	MDL-Final	Raw Sewage Grab	Final Effluent Grab
Ethyl Benzene	mg/L	0.00050	0.00050	<0.00050	<0.00050
F1	mg/L	0.10	0.10	<0.10	<0.10
Hexachlorobutadiene	mg/L	0.00050	0.00050	<0.00050	<0.00050
Hexane	mg/L	0.00050	0.00050	<0.00050	<0.00050
2-Hexanone	mg/L	0.020	0.020	<0.020	<0.020
Isopropylbenzene	mg/L	0.00050	0.00050	<0.00050	<0.00050
4-Isopropyltoluene	mg/L	0.0010	0.0010	<0.0010	<0.0010
MEK	mg/L	0.020	0.020	<0.020	<0.020
MIBK	mg/L	0.020	0.020	<0.020	<0.020
MTBE	mg/L	0.00050	0.00050	<0.00050	<0.00050
4,4'-Methylenebis(2-chloroaniline)	mg/L	0.0050	0.00050	<0.0050	<0.00050
Styrene	mg/L	0.00050	0.00050	<0.00050	<0.00050
1,1,1,2-Tetrachloroethane	mg/L	0.00050	0.00050	<0.00050	<0.00050
1,1,2,2-Tetrachloroethane	mg/L	0.00050	0.00050	<0.00050	<0.00050
Tetrachloroethene	mg/L	0.00050	0.00050	<0.00050	<0.00050
Toluene	mg/L	0.00050	0.00050	0.00312	<0.00050
1,2,3-Trichlorobenzene	mg/L	0.00050	0.00050	<0.00050	<0.00050
1,2,4-Trichlorobenzene	mg/L	0.00050	0.00050	<0.00050	<0.00050
1,1,1-Trichloroethane	mg/L	0.00050	0.00050	<0.00050	<0.00050
1,1,2-Trichloroethane	mg/L	0.00050	0.00050	<0.00050	<0.00050
Trichloroethene	mg/L	0.00050	0.00050	<0.00050	<0.00050
Trichlorofluoromethane	mg/L	0.0010	0.0010	<0.0010	<0.0010
1,2,3-Trichloropropane	mg/L	0.00050	0.00050	<0.00050	<0.00050
1,2,4-Trimethylbenzene	mg/L	0.00050	0.00050	<0.00050	<0.00050
1,3,5-Trimethylbenzene	mg/L	0.00050	0.00050	<0.00050	<0.00050
Vinyl chloride	mg/L	0.00050	0.00050	<0.00050	<0.00050
m+p-Xylenes	mg/L	0.00050	0.00050	0.00076	<0.00050
o-Xylene	mg/L	0.00050	0.00050	<0.00050	<0.00050
Xylenes (Total)	mg/L	0.0015	0.0015	<0.0015	<0.0015

**NOTES:**

MDL- Method detection limit

mg/L- milligrams/Litre

ug/L- micrograms/Litre

ng/L- nanograms/Litre

pg/L- picograms/Litre

°C - degrees Celsius

umhos/cm - microohms<sup>-1</sup>/centimeter

<- less than

nr - no result provided by contract lab

\* suspected interference; the effluent is not chlorinated

*All parameters were analyzed by contract laboratory.*

**City Of Winnipeg  
Water Waste Department**

**North End Water Pollution Control Centre Quarterly Monitoring Report**

2nd Quarter Sampling Parameter	May 26, 2016			NEWPCC	
	Units	MDL-Raw	MDL-Final	Raw Sewage Grab	Final Effluent Grab
<b>Miscellaneous</b>					
Chromium, Hexavalent	ug/L	1.0	1.0	1.6	1.6
Mercury (Hg)-Total	ng/L	0.50	0.50	23.5	6.83
Phenols (4AAP)	mg/L	0.0010	0.0020	0.0121	0.0047
Trihalomethanes (total)	mg/L	0.0010	0.0010	0.0010	<0.0010
Oil and Grease (I.R.)	mg/L	5.0	5.0	8.3	<5.0
Tetraethyl Lead	ug/L	0.00014	0.0014	<0.00014	<0.0014
Tri-n-butyltin Cation	ug/L	0.050	0.055	<0.050	<0.055
pH unStabilized Trout Bioassay	Pass/Fail				Pass
Hardness	mg/L				nr
Alkalinity	mg/L				nr
Temperature	°C		-30.0		15.9
Dissolved Oxygen	mg/L		0.0		6.4
Conductivity	umhos/cm		0		564
pH	units		0.00		7.00
pH Stabilized Trout Bioassay	Pass/Fail				Pass
Hardness	mg/L		2		212
Alkalinity	mg/L		1		160
Temperature	°C		-30.0		15.0
Dissolved Oxygen	mg/L		0.0		6.3
Conductivity	umhos/cm		0		559
pH	units		0.00		6.66
Ammonia, Total (as N)	mg/L		0.00		5.2
Ammonia, Un-ionized (as N)	mg/L				0.01
Chlorine, Total	mg/L		0.00		0.01*
<b>Total Metals by ICP-MS</b>					
Arsenic (As)-Total	mg/L	0.00020	0.00020	0.00239	0.00147
Cadmium (Cd)-Total	mg/L	0.000010	0.000010	0.000128	0.000089
Chromium (Cr)-Total	mg/L	0.0010	0.0010	0.0027	0.0034
Copper (Cu)-Total	mg/L	0.00020	0.00020	0.0217	0.0118
Lead (Pb)-Total	mg/L	0.000090	0.000090	0.00547	0.00242
Molybdenum (Mo)-Total	mg/L	0.00020	0.00020	0.00476	0.00475
Nickel (Ni)-Total	mg/L	0.0020	0.0020	0.0053	0.0032
Selenium (Se)-Total	mg/L	0.0010	0.0010	0.0011	<0.0010
Zinc (Zn)-Total	mg/L	0.0020	0.0020	0.0697	0.0360
<b>Low Level Nonylphenols and Ethoxylates</b>					
Nonylphenols	ug/L	1.0	1.0	<1.0	<1.0
Nonylphenol Monoethoxylates	ug/L	2.0	2.0	<2.0	<2.0
Nonylphenol Diethoxylates	ug/L	0.10	0.10	0.45	0.12
Octylphenol	ug/L	1.0	1.0	<1.0	<1.0
Octylphenol Monoethoxylate	ug/L	2.0	2.0	<2.0	<2.0
Octylphenol Diethoxylate	ug/L	0.10	0.10	<0.10	<0.10
Bisphenol A	ug/L	0.20	0.20	<0.20	<0.20
Total Nonylphenol Ethoxylates	ug/L	2.0	2.0	<2.0	<2.0
Total Octylphenol Ethoxylate	ug/L	2.0	2.0	<2.0	<2.0



**City Of Winnipeg  
Water Waste Department**

**North End Water Pollution Control Centre Quarterly Monitoring Report**

2nd Quarter Sampling Parameter	May 26, 2016			NEWPCC	
	Units	MDL-Raw	MDL-Final	Raw Sewage Grab	Final Effluent Grab
<b>Dioxins and Furans</b>					
2378 TCDD	pg/L	0.63	1.0	<0.63	<1.0
12378 PeCDD	pg/L	0.41	0.51	<0.41	<0.51
123478 HxCDD	pg/L	0.20	0.80	0.85	<0.80
123678 HxCDD	pg/L	0.19	0.76	1.10	<0.76
123789 HxCDD	pg/L	0.19	0.76	1.20	<0.76
1234678 HpCDD	pg/L	1.1	1.5	31.1	7.7
OCDD	pg/L	1.1	0.93	231	50.8
2378 TCDF	pg/L	0.50	0.79	<0.50	<0.79
12378 PeCDF	pg/L	0.38	0.44	0.99	<0.44
23478 PeCDF	pg/L	0.35	0.40	0.71	<0.40
123478 HxCDF	pg/L	0.27	0.52	1.39	<0.52
123678 HxCDF	pg/L	0.25	0.44	1.30	<0.44
234678 HxCDF	pg/L	0.25	0.48	1.10	<0.48
123789 HxCDF	pg/L	0.35	0.69	1.10	<0.69
1234678 HpCDF	pg/L	0.41	0.48	10.3	3.30
1234789 HpCDF	pg/L	0.58	0.76	1.30	<0.76
OCDF	pg/L	0.66	0.94	27.1	4.80
Total TCDD	pg/L	0.63	1.0	<0.63	<1.0
Total PeCDD	pg/L	0.41	0.51	<0.41	<0.51
Total HxCDD	pg/L	0.20	0.80	3.71	<0.80
Total HpCDD	pg/L	1.1	1.5	79.3	19.2
Total TCDF	pg/L	0.50	0.79	<0.50	<0.79
Total PeCDF	pg/L	0.38	0.44	3.33	<0.44
Total HxCDF	pg/L	0.35	0.69	9.69	1.7
Total HpCDF	pg/L	0.58	0.76	21.6	3.07
<b>Phenoxyacid Herbicides by GC/MS</b>					
2,4,5-TP	ug/L	0.50	0.50	<0.50	<0.50
MCPA	ug/L	0.50	0.50	<0.50	<0.50
Mecoprop	ug/L	0.50	0.50	<0.50	<0.50
2,4,5-T	ug/L	0.50	0.50	<0.50	<0.50
2,4-D	ug/L	0.50	0.50	<0.50	0.50
2,4-DP	ug/L	0.50	0.50	<0.50	<0.50
Bromoxynil	ug/L	0.50	0.50	<0.50	<0.50
Dicamba	ug/L	0.50	0.50	<0.50	<0.50
Dinoseb	ug/L	0.50	0.50	<0.50	<0.50
Picloram	ug/L	0.50	0.50	<0.50	<0.50
<b>PCB</b>					
Aroclor 1016	mg/L	0.00050	0.00050	<0.00050	<0.00050
Aroclor 1221	mg/L	0.00050	0.00050	<0.00050	<0.00050
Aroclor 1232	mg/L	0.00050	0.00050	<0.00050	<0.00050
Aroclor 1242	mg/L	0.00050	0.00050	<0.00050	<0.00050
Aroclor 1248	mg/L	0.00050	0.00050	<0.00050	<0.00050
Aroclor 1254	mg/L	0.00050	0.00050	<0.00050	<0.00050
Aroclor 1260	mg/L	0.00050	0.00050	<0.00050	<0.00050
Aroclor 1262	mg/L	0.00050	0.00050	<0.00050	<0.00050
Aroclor 1268	mg/L	0.00050	0.00050	<0.00050	<0.00050
Total PCBs	mg/L	0.0015	0.0015	<0.0015	<0.0015

**City Of Winnipeg  
Water Waste Department**

**North End Water Pollution Control Centre Quarterly Monitoring Report**

2nd Quarter Sampling Parameter	May 26, 2016			NEWPCC	
	Units	MDL-Raw	MDL-Final	Raw Sewage Grab	Final Effluent Grab
<b>Pesticides, Organochlorine</b>					
Aldrin	ug/L	1.0	0.10	<1.0	<0.10
a-chlordane	ug/L	1.0	0.10	<1.0	<0.10
g-chlordane	ug/L	1.0	0.10	<1.0	<0.10
alpha-BHC	ug/L	1.0	0.10	<1.0	<0.10
beta-BHC	ug/L	1.0	0.10	<1.0	<0.10
delta-BHC	ug/L	1.0	0.10	<1.0	<0.10
op-DDD	ug/L	1.0	0.10	<1.0	<0.10
pp-DDD	ug/L	1.0	0.10	<1.0	<0.10
op-DDE	ug/L	1.0	0.10	<1.0	<0.10
pp-DDE	ug/L	1.0	0.10	<1.0	<0.10
op-DDT	ug/L	1.0	0.10	<1.0	<0.10
pp-DDT	ug/L	1.0	0.10	<1.0	<0.10
Dieldrin	ug/L	1.0	0.10	<1.0	<0.10
alpha-Endosulfan	ug/L	1.0	0.20	<1.0	<0.20
beta-Endosulfan	ug/L	1.0	0.10	<1.0	<0.10
Endosulfan Sulfate	ug/L	1.0	0.10	<1.0	<0.10
Endrin	ug/L	1.0	0.10	<1.0	<0.10
Endrin Aldehyde	ug/L	1.0	0.10	<1.0	<0.10
Hexachlorobenzene	ug/L	1.0	0.10	<1.0	<0.10
Heptachlor	ug/L	1.0	0.10	<1.0	<0.10
Heptachlor Epoxide	ug/L	1.0	0.10	<1.0	<0.10
Lindane	ug/L	1.0	0.10	<1.0	<0.10
Methoxychlor	ug/L	1.0	0.10	<1.0	<0.10
Mirex	ug/L	1.0	0.10	<1.0	<0.10
Oxychlordane	ug/L	1.0	0.10	<1.0	<0.10
Octachlorostyrene	ug/L	0.20	0.050	<0.20	<0.050
Toxaphene	ug/L	3.2	1.7	<3.2	<1.7
<b>EPA 8270 Extractables</b>					
1-Chloronaphthalene	ug/L	4.0	0.40	<4.0	<0.40
1-Methylnaphthalene	ug/L	4.0	0.40	<4.0	<0.40
1,2-Dichlorobenzene	ug/L	4.0	0.40	<4.0	<0.40
1,2,3-Trichlorobenzene	ug/L	4.0	0.40	<4.0	<0.40
1,2,4-Trichlorobenzene	ug/L	4.0	0.40	<4.0	<0.40
1,3-Dichlorobenzene	ug/L	4.0	0.40	<4.0	<0.40
1,4-Dichlorobenzene	ug/L	4.0	0.40	<4.0	<0.40
2-Chloronaphthalene	ug/L	4.0	0.40	<4.0	<0.40
2-Chlorophenol	ug/L	3.0	0.30	<3.0	<0.30
2-Methylnaphthalene	ug/L	4.0	0.40	<4.0	<0.40
2-Methylphenol	ug/L	5.0	0.50	<5.0	<0.50
2-Nitrophenol	ug/L	5.0	0.50	<5.0	<0.50
2,3,4-Trichlorophenol	ug/L	5.0	0.50	<5.0	<0.50
2,3,4,5-Tetrachlorophenol	ug/L	5.0	0.50	<5.0	<0.50
2,3,4,6-Tetrachlorophenol	ug/L	5.0	0.50	<5.0	<0.50
2,3,5-Trichlorophenol	ug/L	5.0	0.50	<5.0	<0.50
2,3,5,6-Tetrachlorophenol	ug/L	5.0	0.50	<5.0	<0.50
2,4-Dichlorophenol	ug/L	3.0	0.30	<3.0	<0.30
2,4-Dimethylphenol	ug/L	5.0	0.50	<5.0	<0.50

**City Of Winnipeg  
Water Waste Department**

**North End Water Pollution Control Centre Quarterly Monitoring Report**

2nd Quarter Sampling Parameter	May 26, 2016			NEWPCC	
	Units	MDL-Raw	MDL-Final	Raw Sewage Grab	Final Effluent Grab
2,4-Dinitrophenol	ug/L	10	1.0	<10	<1.0
2,4-Dinitrotoluene	ug/L	4.0	0.40	<4.0	<0.40
2,4,5-Trichlorophenol	ug/L	5.0	0.50	<5.0	<0.50
2,4,6-Trichlorophenol	ug/L	5.0	0.50	<5.0	<0.50
2,6-Dichlorophenol	ug/L	5.0	0.50	<5.0	<0.50
2,6-Dinitrotoluene	ug/L	4.0	0.40	<4.0	<0.40
3,3'-Dichlorobenzidine	ug/L	4.0	0.40	<4.0	<0.40
3&4-Methylphenol	ug/L	5.0	0.50	14.2	<0.50
4-Bromophenyl phenyl ether	ug/L	4.0	0.40	<4.0	<0.40
4-Chloro-3-methylphenol	ug/L	5.0	0.50	<5.0	<0.50
4-Chloroaniline	ug/L	4.0	0.40	<4.0	<0.40
4-Chlorophenyl phenyl ether	ug/L	4.0	0.40	<4.0	<0.40
4-Nitrophenol	ug/L	10	1.0	<10	<1.0
4,6-Dinitro-2-methylphenol	ug/L	20	2.0	<20	<2.0
5-Nitroacenaphthene	ug/L	4.0	0.40	<4.0	<0.40
Acenaphthene	ug/L	2.0	0.20	<2.0	<0.20
Acenaphthylene	ug/L	2.0	0.20	<2.0	<0.20
Anthracene	ug/L	2.0	0.20	<2.0	<0.20
Benzo(a)anthracene	ug/L	2.0	0.20	<2.0	<0.20
Benzo(a)pyrene	ug/L	0.50	0.050	<0.50	<0.050
Benzo(b)fluoranthene	ug/L	2.0	0.20	<2.0	<0.20
Benzo(ghi)perylene	ug/L	2.0	0.20	<2.0	<0.20
Benzo(k)fluoranthene	ug/L	2.0	0.20	<2.0	<0.20
Biphenyl	ug/L	4.0	0.40	<4.0	<0.40
Bis(2-chloroethoxy)methane	ug/L	4.0	0.40	<4.0	<0.40
Bis(2-chloroethyl)ether	ug/L	4.0	0.40	<4.0	<0.40
Bis(2-chloroisopropyl)ether	ug/L	4.0	0.40	<4.0	<0.40
Bis(2-ethylhexyl)phthalate	ug/L	20	2.0	<20	<2.0
Butylbenzyl phthalate	ug/L	4.0	0.40	<4.0	<0.40
Camphene	ug/L	4.0	0.40	<4.0	<0.40
Chrysene	ug/L	2.0	0.20	<2.0	<0.20
Cresols, Total	ug/L	10	1.0	14	<1.0
Di-n-butylphthalate	ug/L	20	2.0	<20	<2.0
Di-n-octylphthalate	ug/L	4.0	0.40	<4.0	<0.40
Dibenzo(a,h)anthracene	ug/L	2.0	0.20	<2.0	<0.20
Dibenzofuran	ug/L	2.0	0.20	<2.0	<0.20
Diethylphthalate	ug/L	2.0	0.20	<2.0	<0.20
Dimethylphthalate	ug/L	2.0	0.20	<2.0	<0.20
Diphenyl ether	ug/L	4.0	0.40	<4.0	<0.40
Diphenylamine	ug/L	4.0	0.40	<4.0	<0.40
Fluoranthene	ug/L	2.0	0.20	<2.0	<0.20
Fluorene	ug/L	2.0	0.20	<2.0	<0.20
Hexachlorobenzene	ug/L	0.40	0.040	<0.40	<0.040
Hexachlorobutadiene	ug/L	2.0	0.20	<2.0	<0.20
Hexachlorocyclopentadiene	ug/L	4.0	0.40	<4.0	<0.40
Hexachloroethane	ug/L	4.0	0.40	<4.0	<0.40
Indeno(1,2,3-cd)pyrene	ug/L	2.0	0.20	<2.0	<0.20
Indole	ug/L	4.0	0.40	4.8	<0.40
Isophorone	ug/L	4.0	0.40	<4.0	<0.40
N-Nitroso-di-n-propylamine	ug/L	4.0	0.40	<4.0	<0.40

**City Of Winnipeg  
Water Waste Department**

**North End Water Pollution Control Centre Quarterly Monitoring Report**

2nd Quarter Sampling Parameter	May 26, 2016			NEWPCC	
	Units	MDL-Raw	MDL-Final	Raw Sewage Grab	Final Effluent Grab
Naphthalene	ug/L	2.0	0.20	<2.0	<0.20
Nitrobenzene	ug/L	4.0	0.40	<4.0	<0.40
Pentachlorophenol	ug/L	5.0	0.50	<5.0	<0.50
Perylene	ug/L	2.0	0.20	<2.0	<0.20
Phenanthrene	ug/L	2.0	0.20	<2.0	<0.20
Phenol	ug/L	5.0	0.50	<5.0	<0.50
Pyrene	ug/L	2.0	0.20	<2.0	<0.20
<b>Volatile Organics plus F1</b>					
Acetone	mg/L	0.020	0.020	0.022	<0.020
Benzene	mg/L	0.00050	0.00050	<0.00050	<0.00050
Bromobenzene	mg/L	0.00050	0.00050	<0.00050	<0.00050
Bromochloromethane	mg/L	0.00050	0.00050	<0.00050	<0.00050
Bromodichloromethane	mg/L	0.00050	0.00050	<0.00050	<0.00050
Bromoform	mg/L	0.00050	0.00050	<0.00050	<0.00050
Bromomethane	mg/L	0.0010	0.0010	<0.0010	<0.0010
n-Butylbenzene	mg/L	0.00050	0.00050	<0.00050	<0.00050
sec-Butylbenzene	mg/L	0.00050	0.00050	<0.00050	<0.00050
tert-Butylbenzene	mg/L	0.00050	0.00050	<0.00050	<0.00050
Carbon Disulfide	mg/L	0.00050	0.00050	<0.00050	<0.00050
Carbon tetrachloride	mg/L	0.00050	0.00050	<0.00050	<0.00050
Chlorobenzene	mg/L	0.00050	0.00050	<0.00050	<0.00050
Chloroethane	mg/L	0.0010	0.0010	<0.0010	<0.0010
Chloroform	mg/L	0.00050	0.00050	0.00101	0.00074
Chloromethane	mg/L	0.0010	0.0010	<0.0010	<0.0010
2-Chlorotoluene	mg/L	0.020	0.020	<0.020	<0.020
4-Chlorotoluene	mg/L	0.00050	0.00050	<0.00050	<0.00050
Dibromochloromethane	mg/L	0.00050	0.00050	<0.00050	<0.00050
1,2-Dibromo-3-chloropropane	mg/L	0.00050	0.00050	<0.00050	<0.00050
1,2-Dibromoethane	mg/L	0.00050	0.00050	<0.00050	<0.00050
Dibromomethane	mg/L	0.00050	0.00050	<0.00050	<0.00050
1,2-Dichlorobenzene	mg/L	0.00050	0.00050	<0.00050	<0.00050
1,3-Dichlorobenzene	mg/L	0.00050	0.00050	<0.00050	<0.00050
1,4-Dichlorobenzene	mg/L	0.00050	0.00050	<0.00050	<0.00050
Dichlorodifluoromethane	mg/L	0.0010	0.0010	<0.0010	<0.0010
1,1-Dichloroethane	mg/L	0.00050	0.00050	<0.00050	<0.00050
1,2-Dichloroethane	mg/L	0.00050	0.00050	<0.00050	<0.00050
1,1-Dichloroethene	mg/L	0.00050	0.00050	<0.00050	<0.00050
cis-1,2-Dichloroethene	mg/L	0.00050	0.00050	0.00094	<0.00050
trans-1,2-Dichloroethene	mg/L	0.00050	0.00050	<0.00050	<0.00050
Dichloromethane	mg/L	0.00500	0.00050	<0.00050	<0.00050
1,2-Dichloropropane	mg/L	0.00050	0.00050	<0.00050	<0.00050
1,3-Dichloropropane	mg/L	0.00050	0.00050	<0.00050	<0.00050
2,2-Dichloropropane	mg/L	0.0010	0.0010	<0.0010	<0.0010
1,1-Dichloropropene	mg/L	0.00050	0.00050	<0.00050	<0.00050
cis-1,3-Dichloropropene	mg/L	0.00050	0.00050	<0.00050	<0.00050
trans-1,3-Dichloropropene	mg/L	0.00050	0.00050	<0.00050	<0.00050
1,3-Dinitropyrene	ug/L	10	1.0	<10	<1.0
1,6-Dinitropyrene	ug/L	10	1.0	<10	<1.0
1,8-Dinitropyrene	ug/L	10	1.0	<10	<1.0

**City Of Winnipeg  
Water Waste Department**

**North End Water Pollution Control Centre Quarterly Monitoring Report**

2nd Quarter Sampling Parameter	May 26, 2016			NEWPCC	
	Units	MDL-Raw	MDL-Final	Raw Sewage Grab	Final Effluent Grab
Ethyl Benzene	mg/L	0.00050	0.00050	<0.00050	<0.00050
F1	mg/L	0.10	0.10	<0.10	<0.10
Hexachlorobutadiene	mg/L	0.0010	0.0010	<0.0010	<0.0010
Hexane	mg/L	0.00050	0.00050	<0.00050	<0.00050
2-Hexanone	mg/L	0.020	0.020	<0.020	<0.020
Isopropylbenzene	mg/L	0.00050	0.00050	<0.00050	<0.00050
4-Isopropyltoluene	mg/L	0.0010	0.0010	<0.0010	<0.0010
MEK	mg/L	0.020	0.020	<0.020	<0.020
MIBK	mg/L	0.020	0.020	<0.020	<0.020
MTBE	mg/L	0.00050	0.00050	<0.00050	<0.00050
4,4'-Methylenebis(2-chloroaniline)	mg/L	0.0050	0.00050	<0.0050	<0.00050
Styrene	mg/L	0.00050	0.00050	<0.00050	<0.00050
1,1,1,2-Tetrachloroethane	mg/L	0.00050	0.00050	<0.00050	<0.00050
1,1,2,2-Tetrachloroethane	mg/L	0.00050	0.00050	<0.00050	<0.00050
Tetrachloroethene	mg/L	0.00050	0.00050	<0.00050	<0.00050
Toluene	mg/L	0.00050	0.00050	0.00193	0.00140
1,2,3-Trichlorobenzene	mg/L	0.0010	0.0010	<0.0010	<0.0010
1,2,4-Trichlorobenzene	mg/L	0.00050	0.00050	<0.00050	<0.00050
1,1,1-Trichloroethane	mg/L	0.00050	0.00050	<0.00050	<0.00050
1,1,2-Trichloroethane	mg/L	0.00050	0.00050	<0.00050	<0.00050
Trichloroethene	mg/L	0.00050	0.00050	<0.00050	<0.00050
Trichlorofluoromethane	mg/L	0.0010	0.0010	<0.0010	<0.0010
1,2,3-Trichloropropane	mg/L	0.00050	0.00050	<0.00050	<0.00050
1,2,4-Trimethylbenzene	mg/L	0.00050	0.00050	0.00059	<0.00050
1,3,5-Trimethylbenzene	mg/L	0.00050	0.00050	<0.00050	<0.00050
Vinyl chloride	mg/L	0.00050	0.00050	<0.00050	<0.00050
m+p-Xylenes	mg/L	0.00050	0.00050	0.00069	<0.00050
o-Xylene	mg/L	0.00050	0.00050	<0.00050	<0.00050
Xylenes (Total)	mg/L	0.0015	0.0015	<0.0015	<0.0015

**NOTES:**

- MDL- Method detection limit
- mg/L- milligrams/Litre
- ug/L- micrograms/Litre
- ng/L- nanograms/Litre
- pg/L- picograms/Litre
- °C - degrees Celsius
- umhos/cm - microohms<sup>-1</sup>/centimeter
- <- less than
- nr - no result provided by contract lab
- \* suspected interference; the effluent is not chlorinated

*All parameters were analyzed by contract laboratory.*

**City Of Winnipeg  
Water Waste Department**

**North End Water Pollution Control Centre Quarterly Monitoring Report**

3rd Quarter Sampling Parameter	August 16, 2016			NEWPCC	
	Units	MDL-Raw	MDL-Final	Raw Sewage Grab	Final Effluent Grab
<b>Miscellaneous</b>					
Chromium, Hexavalent	ug/L	1.0	1.0	<1.0	<1.0
Mercury (Hg)-Total	ng/L	0.50	0.50	13.2	3.50
Phenols (4AAP)	mg/L	0.0010	0.0010	0.0298	0.0044
Trihalomethanes (total)	mg/L	0.0010	0.0010	0.0035	0.0014
Oil and Grease (I.R.)	mg/L	5.0	5.0	12.1	<5.0
Tetraethyl Lead	ug/L	0.0140	0.0014	<0.0140	<0.0014
Tri-n-butyltin Cation	ug/L	0.053	0.052	<0.053	<0.052
pH unStabilized Trout Bioassay	Pass/Fail				Pass
Hardness	mg/L				nr
Alkalinity	mg/L				nr
Temperature	°C				16.0
Dissolved Oxygen	mg/L				8.3
Conductivity	umhos/cm				700
pH	units				6.50
pH Stabilized Trout Bioassay	Pass/Fail				Pass
Hardness	mg/L				180
Alkalinity	mg/L				nr
Temperature	°C				16.0
Dissolved Oxygen	mg/L				8.1
Conductivity	umhos/cm				710
pH	units				6.50
Ammonia, Total (as N)	mg/L				3.19
Ammonia, Un-ionized (as N)	mg/L				0.00
Chlorine, Total	mg/L				nr
<b>Total Metals by ICP-MS</b>					
Arsenic (As)-Total	mg/L	0.00020	0.00020	0.00189	0.00129
Cadmium (Cd)-Total	mg/L	0.000010	0.000010	0.000068	<0.000010
Chromium (Cr)-Total	mg/L	0.0010	0.0010	0.0025	0.0028
Copper (Cu)-Total	mg/L	0.00020	0.00020	0.0268	0.0051
Lead (Pb)-Total	mg/L	0.000090	0.000090	0.00219	0.00042
Molybdenum (Mo)-Total	mg/L	0.00020	0.00020	0.00521	0.00519
Nickel (Ni)-Total	mg/L	0.0020	0.0020	0.0042	0.0035
Selenium (Se)-Total	mg/L	0.0010	0.0010	<0.0010	<0.0010
Zinc (Zn)-Total	mg/L	0.0020	0.0020	0.0458	0.0355
<b>Low Level Nonylphenols and Ethoxylates</b>					
Nonylphenols	ug/L	1.0	1.0	<1.0	<1.0
Nonylphenol Monoethoxylates	ug/L	2.0	2.0	<2.0	<2.0
Nonylphenol Diethoxylates	ug/L	0.10	0.10	1.11	0.21
Octylphenol	ug/L	1.0	1.0	<1.0	<1.0
Octylphenol Monoethoxylate	ug/L	2.0	2.0	<2.0	<2.0
Octylphenol Diethoxylate	ug/L	0.10	0.10	<0.10	0.29
Bisphenol A	ug/L	0.20	0.20	0.25	0.39
Total Nonylphenol Ethoxylates	ug/L	2.0	2.0	2.8	<2.0
Total Octylphenol Ethoxylate	ug/L	2.0	2.0	<2.0	<2.0

**City Of Winnipeg  
Water Waste Department**

**North End Water Pollution Control Centre Quarterly Monitoring Report**

3rd Quarter Sampling Parameter	August 16, 2016			NEWPCC	
	Units	MDL-Raw	MDL-Final	Raw Sewage Grab	Final Effluent Grab
<b>Dioxins and Furans</b>					
2378 TCDD	pg/L	0.53	0.59	<0.53	<0.59
12378 PeCDD	pg/L	0.28	0.33	0.40	<0.33
123478 HxCDD	pg/L	0.36	0.56	<0.36	<0.56
123678 HxCDD	pg/L	0.35	0.56	0.46	<0.56
123789 HxCDD	pg/L	0.37	0.59	0.45	<0.59
1234678 HpCDD	pg/L	0.72	0.41	10.7	1.10
OCDD	pg/L	0.85	0.87	62.0	5.75
2378 TCDF	pg/L	0.42	0.48	<0.42	<0.48
12378 PeCDF	pg/L	0.22	0.31	0.37	0.61
23478 PeCDF	pg/L	0.21	0.28	0.22	0.36
123478 HxCDF	pg/L	0.27	0.25	<0.27	0.32
123678 HxCDF	pg/L	0.26	0.25	0.35	0.28
234678 HxCDF	pg/L	0.26	0.25	0.34	<0.25
123789 HxCDF	pg/L	0.34	0.33	0.45	0.69
1234678 HpCDF	pg/L	0.24	0.23	2.47	0.71
1234789 HpCDF	pg/L	0.31	0.32	0.45	0.48
OCDF	pg/L	0.67	0.71	5.56	1.44
Total TCDD	pg/L	0.53	0.59	<0.53	<0.59
Total PeCDD	pg/L	0.28	0.33	2.59	<0.33
Total HxCDD	pg/L	0.37	0.59	3.09	<0.59
Total HpCDD	pg/L	0.72	0.41	21.4	1.69
Total TCDF	pg/L	0.42	0.48	<0.42	<0.48
Total PeCDF	pg/L	0.22	0.31	0.25	<0.31
Total HxCDF	pg/L	0.34	0.33	2.86	0.51
Total HpCDF	pg/L	0.31	0.32	2.47	<0.32
<b>Phenoxyacid Herbicides by GC/MS</b>					
2,4,5-TP	ug/L	2.5	0.50	<2.5	<0.50
MCPA	ug/L	2.5	0.50	<2.5	<0.50
Mecoprop	ug/L	2.5	0.50	<2.5	<0.50
2,4,5-T	ug/L	2.5	0.50	<2.5	<0.50
2,4-D	ug/L	2.5	0.50	<2.5	<0.50
2,4-DP	ug/L	2.5	0.50	<2.5	<0.50
Bromoxynil	ug/L	2.5	0.50	<2.5	<0.50
Dicamba	ug/L	2.5	0.50	<2.5	<0.50
Dinoseb	ug/L	2.5	0.50	<2.5	<0.50
Picloram	ug/L	2.5	0.50	<2.5	<0.50
<b>PCB</b>					
Aroclor 1016	mg/L	0.00050	0.00050	<0.00050	<0.00050
Aroclor 1221	mg/L	0.00050	0.00050	<0.00050	<0.00050
Aroclor 1232	mg/L	0.00050	0.00050	<0.00050	<0.00050
Aroclor 1242	mg/L	0.00050	0.00050	<0.00050	<0.00050
Aroclor 1248	mg/L	0.00050	0.00050	<0.00050	<0.00050
Aroclor 1254	mg/L	0.00050	0.00050	<0.00050	<0.00050
Aroclor 1260	mg/L	0.00050	0.00050	<0.00050	<0.00050
Aroclor 1262	mg/L	0.00050	0.00050	<0.00050	<0.00050
Aroclor 1268	mg/L	0.00050	0.00050	<0.00050	<0.00050
Total PCBs	mg/L	0.0015	0.0015	<0.0015	<0.0015

**City Of Winnipeg  
Water Waste Department**

**North End Water Pollution Control Centre Quarterly Monitoring Report**

3rd Quarter Sampling Parameter	August 16, 2016			NEWPCC	
	Units	MDL-Raw	MDL-Final	Raw Sewage Grab	Final Effluent Grab
<b>Pesticides, Organochlorine</b>					
Aldrin	ug/L	3.1	0.10	<3.1	<0.10
a-chlordane	ug/L	0.20	0.10	<0.20	<0.10
g-chlordane	ug/L	0.20	0.10	<0.20	<0.10
alpha-BHC	ug/L	0.20	0.10	<0.20	<0.10
beta-BHC	ug/L	0.20	0.10	<0.20	<0.10
delta-BHC	ug/L	0.20	0.10	<0.20	<0.10
op-DDD	ug/L	0.20	0.10	<0.20	<0.10
pp-DDD	ug/L	0.20	0.10	<0.20	<0.10
op-DDE	ug/L	0.40	0.10	<0.40	<0.10
pp-DDE	ug/L	0.20	0.10	<0.20	<0.10
op-DDT	ug/L	0.20	0.10	<0.20	<0.10
pp-DDT	ug/L	0.20	0.10	<0.20	<0.10
Dieldrin	ug/L	0.20	0.10	<0.20	<0.10
alpha-Endosulfan	ug/L	0.90	0.10	<0.90	<0.10
beta-Endosulfan	ug/L	0.20	0.10	<0.20	<0.10
Endosulfan Sulfate	ug/L	0.20	0.10	<0.20	<0.10
Endrin	ug/L	0.20	0.10	<0.20	<0.10
Endrin Aldehyde	ug/L	0.20	0.10	<0.20	<0.10
Hexachlorobenzene	ug/L	0.20	0.10	<0.20	<0.10
Heptachlor	ug/L	0.20	0.10	<0.20	<0.10
Heptachlor Epoxide	ug/L	0.20	0.10	<0.20	<0.10
Lindane	ug/L	0.20	0.10	<0.20	<0.10
Methoxychlor	ug/L	0.20	0.10	<0.20	<0.10
Mirex	ug/L	0.20	0.10	<0.20	<0.10
Oxychlordane	ug/L	0.30	0.10	<0.30	<0.10
Octachlorostyrene	ug/L	0.10	0.050	<0.10	<0.050
Toxaphene	ug/L	3.1	1.4	<3.1	<1.4
<b>EPA 8270 Extractables</b>					
1-Chloronaphthalene	ug/L	4.0	2.0	<4.0	<2.0
1-Methylnaphthalene	ug/L	4.0	2.0	<4.0	<2.0
1,2-Dichlorobenzene	ug/L	4.0	2.0	<4.0	<2.0
1,2,3-Trichlorobenzene	ug/L	4.0	2.0	<4.0	<2.0
1,2,4-Trichlorobenzene	ug/L	4.0	2.0	<4.0	<2.0
1,3-Dichlorobenzene	ug/L	4.0	2.0	<4.0	<2.0
1,4-Dichlorobenzene	ug/L	4.0	2.0	<4.0	<2.0
2-Chloronaphthalene	ug/L	4.0	2.0	<4.0	<2.0
2-Chlorophenol	ug/L	3.0	1.5	<3.0	<1.5
2-Methylnaphthalene	ug/L	4.0	2.0	<4.0	<2.0
2-Methylphenol	ug/L	5.0	2.5	<5.0	<2.5
2-Nitrophenol	ug/L	5.0	2.5	<5.0	<2.5
2,3,4-Trichlorophenol	ug/L	5.0	2.5	<5.0	<2.5
2,3,4,5-Tetrachlorophenol	ug/L	5.0	2.5	<5.0	<2.5
2,3,4,6-Tetrachlorophenol	ug/L	5.0	2.5	<5.0	<2.5
2,3,5-Trichlorophenol	ug/L	5.0	2.5	<5.0	<2.5
2,3,5,6-Tetrachlorophenol	ug/L	5.0	2.5	<5.0	<2.5
2,4-Dichlorophenol	ug/L	3.0	1.5	<3.0	<1.5
2,4-Dimethylphenol	ug/L	5.0	2.5	<5.0	<2.5



**City Of Winnipeg  
Water Waste Department**

**North End Water Pollution Control Centre Quarterly Monitoring Report**

3rd Quarter Sampling Parameter	August 16, 2016			NEWPCC	
	Units	MDL-Raw	MDL-Final	Raw Sewage Grab	Final Effluent Grab
2,4-Dinitrophenol	ug/L	10	5.0	<10	<5.0
2,4-Dinitrotoluene	ug/L	4.0	2.0	<4.0	<2.0
2,4,5-Trichlorophenol	ug/L	5.0	2.5	<5.0	<2.5
2,4,6-Trichlorophenol	ug/L	5.0	2.5	<5.0	<2.5
2,6-Dichlorophenol	ug/L	5.0	2.5	<5.0	<2.5
2,6-Dinitrotoluene	ug/L	4.0	2.0	<4.0	<2.0
3,3'-Dichlorobenzidine	ug/L	4.0	2.0	<4.0	<2.0
3&4-Methylphenol	ug/L	5.0	2.5	51.2	<2.5
4-Bromophenyl phenyl ether	ug/L	4.0	2.0	<4.0	<2.0
4-Chloro-3-methylphenol	ug/L	5.0	2.5	<5.0	<2.5
4-Chloroaniline	ug/L	4.0	2.0	<4.0	<2.0
4-Chlorophenyl phenyl ether	ug/L	4.0	2.0	<4.0	<2.0
4-Nitrophenol	ug/L	15	7.5	<15	<7.5
4,6-Dinitro-2-methylphenol	ug/L	20	10	<20	<10
5-Nitroacenaphthene	ug/L	4.0	2.0	<4.0	<2.0
Acenaphthene	ug/L	2.0	1.0	<2.0	<1.0
Acenaphthylene	ug/L	2.0	1.0	<2.0	<1.0
Anthracene	ug/L	2.0	1.0	<2.0	<1.0
Benzo(a)anthracene	ug/L	2.0	1.0	<2.0	<1.0
Benzo(a)pyrene	ug/L	0.50	0.25	<0.50	<0.25
Benzo(b)fluoranthene	ug/L	2.0	1.0	<2.0	<1.0
Benzo(ghi)perylene	ug/L	2.0	1.0	<2.0	<1.0
Benzo(k)fluoranthene	ug/L	2.0	1.0	<2.0	<1.0
Biphenyl	ug/L	4.0	2.0	<4.0	<2.0
Bis(2-chloroethoxy)methane	ug/L	4.0	2.0	<4.0	<2.0
Bis(2-chloroethyl)ether	ug/L	4.0	2.0	<4.0	<2.0
Bis(2-chloroisopropyl)ether	ug/L	4.0	2.0	<4.0	<2.0
Bis(2-ethylhexyl)phthalate	ug/L	20	10	<20	<10
Butylbenzyl phthalate	ug/L	4.0	2.0	<4.0	<2.0
Camphene	ug/L	4.0	2.0	<4.0	<2.0
Chrysene	ug/L	2.0	1.0	<2.0	<1.0
Cresols, Total	ug/L	10	5.0	51	<5.0
Di-n-butylphthalate	ug/L	20	10	<20	<10
Di-n-octylphthalate	ug/L	4.0	2.0	<4.0	<2.0
Dibenzo(a,h)anthracene	ug/L	2.0	1.0	<2.0	<1.0
Dibenzofuran	ug/L	2.0	1.0	<2.0	<1.0
Diethylphthalate	ug/L	2.0	1.0	<2.0	<1.0
Dimethylphthalate	ug/L	2.0	1.0	<2.0	<1.0
Diphenyl ether	ug/L	4.0	2.0	<4.0	<2.0
Diphenylamine	ug/L	4.0	2.0	<4.0	<2.0
Fluoranthene	ug/L	2.0	1.0	<2.0	<1.0
Fluorene	ug/L	2.0	1.0	<2.0	<1.0
Hexachlorobenzene	ug/L	0.40	0.20	<0.40	<0.20
Hexachlorobutadiene	ug/L	2.0	1.0	<2.0	<1.0
Hexachlorocyclopentadiene	ug/L	8.0	4.0	<8.0	<4.0
Hexachloroethane	ug/L	4.0	2.0	<4.0	<2.0
Indeno(1,2,3-cd)pyrene	ug/L	2.0	1.0	<2.0	<1.0
Indole	ug/L	4.0	2.0	5.6	<2.0
Isophorone	ug/L	4.0	2.0	<4.0	<2.0
N-Nitroso-di-n-propylamine	ug/L	4.0	2.0	<4.0	<2.0

**City Of Winnipeg  
Water Waste Department**

**North End Water Pollution Control Centre Quarterly Monitoring Report**

3rd Quarter Sampling Parameter	August 16, 2016			NEWPCC	
	Units	MDL-Raw	MDL-Final	Raw Sewage Grab	Final Effluent Grab
Naphthalene	ug/L	2.0	1.0	<2.0	<1.0
Nitrobenzene	ug/L	4.0	2.0	<4.0	<2.0
Pentachlorophenol	ug/L	5.0	2.5	<5.0	<2.5
Perylene	ug/L	2.0	1.0	<2.0	<1.0
Phenanthrene	ug/L	2.0	1.0	<2.0	<1.0
Phenol	ug/L	5.0	2.5	12.1	<2.5
Pyrene	ug/L	2.0	1.0	<2.0	<1.0
<b>Volatile Organics plus F1</b>					
Acetone	mg/L	0.020	0.020	0.037	<0.020
Benzene	mg/L	0.00050	0.00050	<0.00050	<0.00050
Bromobenzene	mg/L	0.00050	0.00050	<0.00050	<0.00050
Bromochloromethane	mg/L	0.00050	0.00050	<0.00050	<0.00050
Bromodichloromethane	mg/L	0.00050	0.00050	<0.00050	<0.00050
Bromoform	mg/L	0.00050	0.00050	<0.00050	<0.00050
Bromomethane	mg/L	0.0010	0.0010	<0.0010	<0.0010
n-Butylbenzene	mg/L	0.00050	0.00050	<0.00050	<0.00050
sec-Butylbenzene	mg/L	0.00050	0.00050	<0.00050	<0.00050
tert-Butylbenzene	mg/L	0.00050	0.00050	<0.00050	<0.00050
Carbon Disulfide	mg/L	0.0015	0.0015	<0.0015	<0.0015
Carbon tetrachloride	mg/L	0.00050	0.00050	<0.00050	<0.00050
Chlorobenzene	mg/L	0.00050	0.00050	<0.00050	<0.00050
Chloroethane	mg/L	0.0010	0.0010	<0.0010	<0.0010
Chloroform	mg/L	0.00050	0.00050	0.00348	0.00139
Chloromethane	mg/L	0.0010	0.0010	<0.0010	<0.0010
2-Chlorotoluene	mg/L	0.020	0.020	<0.020	<0.020
4-Chlorotoluene	mg/L	0.00050	0.00050	<0.00050	<0.00050
Dibromochloromethane	mg/L	0.00050	0.00050	<0.00050	<0.00050
1,2-Dibromo-3-chloropropane	mg/L	0.00050	0.00050	<0.00050	<0.00050
1,2-Dibromoethane	mg/L	0.00050	0.00050	<0.00050	<0.00050
Dibromomethane	mg/L	0.00050	0.00050	<0.00050	<0.00050
1,2-Dichlorobenzene	mg/L	0.00050	0.00050	<0.00050	<0.00050
1,3-Dichlorobenzene	mg/L	0.00050	0.00050	<0.00050	<0.00050
1,4-Dichlorobenzene	mg/L	0.00050	0.00050	<0.00050	<0.00050
Dichlorodifluoromethane	mg/L	0.0010	0.0010	<0.0010	<0.0010
1,1-Dichloroethane	mg/L	0.00050	0.00050	<0.00050	<0.00050
1,2-Dichloroethane	mg/L	0.00050	0.00050	<0.00050	<0.00050
1,1-Dichloroethene	mg/L	0.00050	0.00050	<0.00050	<0.00050
cis-1,2-Dichloroethene	mg/L	0.00050	0.00050	0.00118	<0.00050
trans-1,2-Dichloroethene	mg/L	0.00050	0.00050	<0.00050	<0.00050
Dichloromethane	mg/L	0.00050	0.00050	<0.00050	<0.00050
1,2-Dichloropropane	mg/L	0.00050	0.00050	<0.00050	<0.00050
1,3-Dichloropropane	mg/L	0.00050	0.00050	<0.00050	<0.00050
2,2-Dichloropropane	mg/L	0.0010	0.0010	<0.0010	<0.0010
1,1-Dichloropropene	mg/L	0.00050	0.00050	<0.00050	<0.00050
cis-1,3-Dichloropropene	mg/L	0.00050	0.00050	<0.00050	<0.00050
trans-1,3-Dichloropropene	mg/L	0.00050	0.00050	<0.00050	<0.00050
1,3-Dinitropyrene	ug/L	10	1.0	<10	<1.0
1,6-Dinitropyrene	ug/L	10	1.0	<10	<1.0
1,8-Dinitropyrene	ug/L	10	1.0	<10	<1.0

**City Of Winnipeg  
Water Waste Department**

**North End Water Pollution Control Centre Quarterly Monitoring Report**

3rd Quarter Sampling Parameter	August 16, 2016			NEWPCC	
	Units	MDL-Raw	MDL-Final	Raw Sewage Grab	Final Effluent Grab
Ethyl Benzene	mg/L	0.00050	0.00050	<0.00050	<0.00050
F1	mg/L	0.10	0.10	<0.10	<0.10
Hexachlorobutadiene	mg/L	0.00050	0.00050	<0.00050	<0.00050
Hexane	mg/L	0.00050	0.00050	<0.00050	<0.00050
2-Hexanone	mg/L	0.020	0.020	<0.020	<0.020
Isopropylbenzene	mg/L	0.00050	0.00050	<0.00050	<0.00050
4-Isopropyltoluene	mg/L	0.0010	0.0010	<0.0010	<0.0010
MEK	mg/L	0.020	0.020	<0.020	<0.020
MIBK	mg/L	0.020	0.020	<0.020	<0.020
MTBE	mg/L	0.00050	0.00050	<0.00050	<0.00050
4,4'-Methylenebis(2-chloroaniline)	mg/L	5.0	0.50	<5.0	<0.50
Styrene	mg/L	0.00050	0.00050	0.00245	<0.00050
1,1,1,2-Tetrachloroethane	mg/L	0.00050	0.00050	<0.00050	<0.00050
1,1,2,2-Tetrachloroethane	mg/L	0.00050	0.00050	<0.00050	<0.00050
Tetrachloroethene	mg/L	0.00050	0.00050	<0.00050	<0.00050
Toluene	mg/L	0.00050	0.00050	0.00091	<0.00050
1,2,3-Trichlorobenzene	mg/L	0.00050	0.00050	<0.00050	<0.00050
1,2,4-Trichlorobenzene	mg/L	0.00050	0.00050	<0.00050	<0.00050
1,1,1-Trichloroethane	mg/L	0.00050	0.00050	<0.00050	<0.00050
1,1,2-Trichloroethane	mg/L	0.00050	0.00050	<0.00050	<0.00050
Trichloroethene	mg/L	0.00050	0.00050	<0.00050	<0.00050
Trichlorofluoromethane	mg/L	0.0010	0.0010	<0.0010	<0.0010
1,2,3-Trichloropropane	mg/L	0.00050	0.00050	<0.00050	<0.00050
1,2,4-Trimethylbenzene	mg/L	0.00050	0.00050	<0.00050	<0.00050
1,3,5-Trimethylbenzene	mg/L	0.00050	0.00050	<0.00050	<0.00050
Vinyl chloride	mg/L	0.00050	0.00050	<0.00050	<0.00050
m+p-Xylenes	mg/L	0.00050	0.00050	<0.00050	<0.00050
o-Xylene	mg/L	0.00050	0.00050	<0.00050	<0.00050
Xylenes (Total)	mg/L	0.0015	0.0015	<0.0015	<0.0015

**NOTES:**

MDL- Method detection limit

mg/L- milligrams/Litre

ug/L- micrograms/Litre

ng/L- nanograms/Litre

pg/L- picograms/Litre

°C - degrees Celsius

umhos/cm - microohms<sup>-1</sup>/centimeter

<- less than

nr - no result provided by contract lab

*All parameters were analyzed by contract laboratory.*

**City Of Winnipeg  
Water Waste Department**

**North End Water Pollution Control Centre Quarterly Monitoring Report**

4th Quarter Sampling Parameter	November 17, 2016			NEWPCC	
	Units	MDL-Raw	MDL-Final	Raw Sewage Grab	Final Effluent Grab
<b>Miscellaneous</b>					
Chromium, Hexavalent	ug/L	1.0	1.0	1.4	1.3
Mercury (Hg)-Total	ng/L	1.0	0.50	90.4	9.10
Phenols (4AAP)	mg/L	0.0010	0.0010	0.0529	0.0030
Trihalomethanes (total)	mg/L	0.0010	0.0010	0.0034	0.0021
Oil and Grease (I.R.)	mg/L	5.0	5.0	39.7	<5.0
Tetraethyl Lead	ug/L	0.0070	0.0070	<0.0070	<0.0070
Tri-n-butyltin Cation	ug/L	0.063	0.050	<0.063	<0.050
pH unStabilized Trout Bioassay	Pass/Fail				Fail
Hardness	mg/L				280
Alkalinity	mg/L				250
Temperature	°C		-50		14.3
Dissolved Oxygen	mg/L				9.03
Conductivity	umhos/cm				1273
pH	units		0.10		6.83
pH Stabilized Trout Bioassay	Pass/Fail				Pass
Hardness	mg/L				270
Alkalinity	mg/L				230
Temperature	°C		-50		14.6
Dissolved Oxygen	mg/L				8.66
Conductivity	umhos/cm				1289
pH	units		0.10		6.85
Ammonia, Total (as N)	mg/L		1.0		24.5
Ammonia, Un-ionized (as N)	mg/L		0.010		0.046
Chlorine, Total	mg/L		0.10		<0.10
<b>Total Metals by ICP-MS</b>					
Arsenic (As)-Total	mg/L	0.00020	0.00020	0.00363	0.00123
Cadmium (Cd)-Total	mg/L	0.000010	0.000010	0.000402	0.000020
Chromium (Cr)-Total	mg/L	0.0010	0.0010	0.0252	0.0159
Copper (Cu)-Total	mg/L	0.00020	0.00020	0.1520	0.0070
Lead (Pb)-Total	mg/L	0.000090	0.000090	0.01650	0.00065
Molybdenum (Mo)-Total	mg/L	0.00020	0.00020	0.00799	0.00985
Nickel (Ni)-Total	mg/L	0.0020	0.0020	0.0218	0.0052
Selenium (Se)-Total	mg/L	0.0010	0.0010	0.0010	<0.0010
Zinc (Zn)-Total	mg/L	0.0020	0.0020	0.3610	0.0332
<b>Low Level Nonylphenols and Ethoxylates</b>					
Nonylphenols	ug/L	1.0	1.0	1.4	1.0
Nonylphenol Monoethoxylates	ug/L	2.0	2.0	5.0	<2.0
Nonylphenol Diethoxylates	ug/L	0.10	0.10	1.32	0.47
Octylphenol	ug/L	1.0	1.0	<1.0	<1.0
Octylphenol Monoethoxylate	ug/L	2.0	2.0	<2.0	<2.0
Octylphenol Diethoxylate	ug/L	0.10	0.10	0.39	<0.10
Bisphenol A	ug/L	0.20	0.20	0.39	0.68
Total Nonylphenol Ethoxylates	ug/L	2.0	2.0	6.3	2.1
Total Octylphenol Ethoxylate	ug/L	2.0	2.0	<2.0	<2.0

**City Of Winnipeg  
Water Waste Department**

**North End Water Pollution Control Centre Quarterly Monitoring Report**

4th Quarter Sampling Parameter	November 17, 2016			NEWPCC	
	Units	MDL-Raw	MDL-Final	Raw Sewage Grab	Final Effluent Grab
<b>Dioxins and Furans</b>					
2378 TCDD	pg/L	1.40	1.20	<1.40	<1.20
12378 PeCDD	pg/L	0.66	0.67	<0.66	<0.67
123478 HxCDD	pg/L	0.72	0.50	<0.72	<0.50
123678 HxCDD	pg/L	0.75	0.55	0.83	<0.55
123789 HxCDD	pg/L	0.78	0.56	<0.78	<0.56
1234678 HpCDD	pg/L	1.20	0.58	26.4	1.05
OCDD	pg/L	0.94	0.46	216	4.53
2378 TCDF	pg/L	0.77	0.77	<0.77	<0.77
12378 PeCDF	pg/L	0.57	0.35	0.59	0.42
23478 PeCDF	pg/L	0.50	0.32	0.71	<0.32
123478 HxCDF	pg/L	0.69	0.43	<0.69	<0.43
123678 HxCDF	pg/L	0.67	0.43	<0.67	<0.43
234678 HxCDF	pg/L	0.65	0.41	1.28	<0.41
123789 HxCDF	pg/L	0.81	0.51	<0.81	<0.51
1234678 HpCDF	pg/L	0.43	0.43	8.33	<0.43
1234789 HpCDF	pg/L	0.56	0.57	0.67	<0.57
OCDF	pg/L	0.93	0.60	15.9	<0.60
Total TCDD	pg/L	1.40	1.20	<1.40	<1.20
Total PeCDD	pg/L	0.66	0.67	<0.66	<0.67
Total HxCDD	pg/L	0.78	0.56	4.76	<0.56
Total HpCDD	pg/L	1.20	0.58	62.3	1.05
Total TCDF	pg/L	0.77	0.77	<0.77	<0.77
Total PeCDF	pg/L	0.57	0.35	1.30	<0.35
Total HxCDF	pg/L	0.81	0.51	9.59	<0.51
Total HpCDF	pg/L	0.56	0.57	16.1	<0.57
<b>Phenoxyacid Herbicides by GC/MS</b>					
2,4,5-TP	ug/L	5.0	0.50	<5.0	<0.50
MCPA	ug/L	5.0	0.50	<5.0	<0.50
Mecoprop	ug/L	5.0	0.50	<5.0	<0.50
2,4,5-T	ug/L	5.0	0.50	<5.0	<0.50
2,4-D	ug/L	5.0	0.50	<5.0	<0.50
2,4-DP	ug/L	5.0	0.50	<5.0	<0.50
Bromoxynil	ug/L	5.0	0.50	<5.0	<0.50
Dicamba	ug/L	5.0	0.50	<5.0	<0.50
Dinoseb	ug/L	5.0	0.50	<5.0	<0.50
Picloram	ug/L	5.0	0.50	<5.0	<0.50
<b>PCB</b>					
Aroclor 1016	mg/L	0.00050	0.00050	<0.00050	<0.00050
Aroclor 1221	mg/L	0.00050	0.00050	<0.00050	<0.00050
Aroclor 1232	mg/L	0.00050	0.00050	<0.00050	<0.00050
Aroclor 1242	mg/L	0.00050	0.00050	<0.00050	<0.00050
Aroclor 1248	mg/L	0.00050	0.00050	<0.00050	<0.00050
Aroclor 1254	mg/L	0.00050	0.00050	<0.00050	<0.00050
Aroclor 1260	mg/L	0.00050	0.00050	<0.00050	<0.00050
Aroclor 1262	mg/L	0.00050	0.00050	<0.00050	<0.00050
Aroclor 1268	mg/L	0.00050	0.00050	<0.00050	<0.00050
Total PCBs	mg/L	0.0015	0.0015	<0.0015	<0.0015

**City Of Winnipeg  
Water Waste Department**

**North End Water Pollution Control Centre Quarterly Monitoring Report**

4th Quarter Sampling Parameter	November 17, 2016			NEWPCC	
	Units	MDL-Raw	MDL-Final	Raw Sewage Grab	Final Effluent Grab
<b>Pesticides, Organochlorine</b>					
Aldrin	ug/L	2.5	0.10	<2.5	<0.10
a-chlordane	ug/L	2.5	0.10	<2.5	<0.10
g-chlordane	ug/L	2.5	0.10	<2.5	<0.10
alpha-BHC	ug/L	2.5	0.10	<2.5	<0.10
beta-BHC	ug/L	2.5	0.10	<2.5	<0.10
delta-BHC	ug/L	2.5	0.10	<2.5	<0.10
op-DDD	ug/L	2.5	0.10	<2.5	<0.10
pp-DDD	ug/L	2.5	0.10	<2.5	<0.10
op-DDE	ug/L	15	0.10	<15	<0.10
pp-DDE	ug/L	2.5	0.10	<2.5	<0.10
op-DDT	ug/L	2.5	0.10	<2.5	<0.10
pp-DDT	ug/L	2.5	0.10	<2.5	<0.10
Dieldrin	ug/L	3.2	0.10	<3.2	<0.10
alpha-Endosulfan	ug/L	13	0.10	<13	<0.10
beta-Endosulfan	ug/L	6.5	0.10	<6.5	<0.10
Endosulfan Sulfate	ug/L	2.5	0.10	<2.5	<0.10
Endrin	ug/L	2.5	0.10	<2.5	<0.10
Endrin Aldehyde	ug/L	2.5	0.10	<2.5	<0.10
Hexachlorobenzene	ug/L	2.5	0.10	<2.5	<0.10
Heptachlor	ug/L	2.5	0.10	<2.5	<0.10
Heptachlor Epoxide	ug/L	2.5	0.10	<2.5	<0.10
Lindane	ug/L	2.5	0.10	<2.5	<0.10
Methoxychlor	ug/L	2.5	0.10	<2.5	<0.10
Mirex	ug/L	2.5	0.10	<2.5	<0.10
Oxychlordane	ug/L	2.5	0.10	<2.5	<0.10
Octachlorostyrene	ug/L	2.4	0.050	<2.4	<0.050
Toxaphene	ug/L	3.5	2.4	<3.5	<2.4
<b>EPA 8270 Extractables</b>					
1-Chloronaphthalene	ug/L	40	40	<40	<40
1-Methylnaphthalene	ug/L	40	40	<40	<40
1,2-Dichlorobenzene	ug/L	40	40	<40	<40
1,2,3-Trichlorobenzene	ug/L	40	40	<40	<40
1,2,4-Trichlorobenzene	ug/L	40	40	<40	<40
1,3-Dichlorobenzene	ug/L	40	40	<40	<40
1,4-Dichlorobenzene	ug/L	40	40	<40	<40
2-Chloronaphthalene	ug/L	40	40	<40	<40
2-Chlorophenol	ug/L	30	30	<30	<30
2-Methylnaphthalene	ug/L	40	40	<40	<40
2-Methylphenol	ug/L	50	50	<50	<50
2-Nitrophenol	ug/L	50	50	<50	<50
2,3,4-Trichlorophenol	ug/L	50	50	<50	<50
2,3,4,5-Tetrachlorophenol	ug/L	50	50	<50	<50
2,3,4,6-Tetrachlorophenol	ug/L	50	50	<50	<50
2,3,5-Trichlorophenol	ug/L	50	50	<50	<50
2,3,5,6-Tetrachlorophenol	ug/L	50	50	<50	<50
2,4-Dichlorophenol	ug/L	30	30	<30	<30
2,4-Dimethylphenol	ug/L	50	50	<50	<50

**City Of Winnipeg  
Water Waste Department**

**North End Water Pollution Control Centre Quarterly Monitoring Report**

4th Quarter Sampling Parameter	November 17, 2016			NEWPCC	
	Units	MDL-Raw	MDL-Final	Raw Sewage Grab	Final Effluent Grab
2,4-Dinitrophenol	ug/L	100	100	<100	<100
2,4-Dinitrotoluene	ug/L	40	40	<40	<40
2,4,5-Trichlorophenol	ug/L	50	50	<50	<50
2,4,6-Trichlorophenol	ug/L	50	50	<50	<50
2,6-Dichlorophenol	ug/L	50	50	<50	<50
2,6-Dinitrotoluene	ug/L	40	40	<40	<40
3,3'-Dichlorobenzidine	ug/L	40	40	<40	<40
3&4-Methylphenol	ug/L	50	50	70	<50
4-Bromophenyl phenyl ether	ug/L	40	40	<40	<40
4-Chloro-3-methylphenol	ug/L	50	50	<50	<50
4-Chloroaniline	ug/L	40	40	<40	<40
4-Chlorophenyl phenyl ether	ug/L	40	40	<40	<40
4-Nitrophenol	ug/L	50	50	<50	<50
4,6-Dinitro-2-methylphenol	ug/L	200	200	<200	<200
5-Nitroacenaphthene	ug/L	40	40	<40	<40
Acenaphthene	ug/L	20	20	<20	<20
Acenaphthylene	ug/L	20	20	<20	<20
Anthracene	ug/L	20	20	<20	<20
Benzo(a)anthracene	ug/L	20	20	<20	<20
Benzo(a)pyrene	ug/L	5.0	5.0	<5.0	<5.0
Benzo(b)fluoranthene	ug/L	20	20	<20	<20
Benzo(ghi)perylene	ug/L	20	20	<20	<20
Benzo(k)fluoranthene	ug/L	20	20	<20	<20
Biphenyl	ug/L	40	40	<40	<40
Bis(2-chloroethoxy)methane	ug/L	40	40	<40	<40
Bis(2-chloroethyl)ether	ug/L	40	40	<40	<40
Bis(2-chloroisopropyl)ether	ug/L	40	40	<40	<40
Bis(2-ethylhexyl)phthalate	ug/L	200	200	<200	<200
Butylbenzyl phthalate	ug/L	40	40	<40	<40
Camphene	ug/L	40	40	<40	<40
Chrysene	ug/L	20	20	<20	<20
Cresols, Total	ug/L	100	100	<100	<100
Di-n-butylphthalate	ug/L	200	200	<200	<200
Di-n-octylphthalate	ug/L	40	40	<40	<40
Dibenzo(a,h)anthracene	ug/L	20	20	<20	<20
Dibenzofuran	ug/L	20	20	<20	<20
Diethylphthalate	ug/L	20	20	<20	<20
Dimethylphthalate	ug/L	20	20	<20	<20
Diphenyl ether	ug/L	40	40	<40	<40
Diphenylamine	ug/L	40	40	<40	<40
Fluoranthene	ug/L	20	20	<20	<20
Fluorene	ug/L	20	20	<20	<20
Hexachlorobenzene	ug/L	4.0	4.0	<4.0	<4.0
Hexachlorobutadiene	ug/L	20	20	<20	<20
Hexachlorocyclopentadiene	ug/L	40	40	<40	<40
Hexachloroethane	ug/L	40	40	<40	<40
Indeno(1,2,3-cd)pyrene	ug/L	20	20	<20	<20
Indole	ug/L	40	40	<40	<40
Isophorone	ug/L	40	40	<40	<40
N-Nitroso-di-n-propylamine	ug/L	40	40	<40	<40

**City Of Winnipeg  
Water Waste Department**

**North End Water Pollution Control Centre Quarterly Monitoring Report**

4th Quarter Sampling Parameter	November 17, 2016			NEWPCC	
	Units	MDL-Raw	MDL-Final	Raw Sewage Grab	Final Effluent Grab
Naphthalene	ug/L	20	20	<20	<20
Nitrobenzene	ug/L	40	40	<40	<40
Pentachlorophenol	ug/L	50	50	<50	<50
Perylene	ug/L	20	20	<20	<20
Phenanthrene	ug/L	20	20	<20	<20
Phenol	ug/L	50	50	<50	<50
Pyrene	ug/L	20	20	<20	<20
<b>Volatile Organics plus F1</b>					
Acetone	mg/L	0.020	0.020	0.077	<0.020
Benzene	mg/L	0.00050	0.00050	<0.00050	<0.00050
Bromobenzene	mg/L	0.00050	0.00050	<0.00050	<0.00050
Bromochloromethane	mg/L	0.00050	0.00050	<0.00050	<0.00050
Bromodichloromethane	mg/L	0.00050	0.00050	<0.00050	<0.00050
Bromoform	mg/L	0.00050	0.00050	<0.00050	<0.00050
Bromomethane	mg/L	0.0010	0.0010	<0.0010	<0.0010
n-Butylbenzene	mg/L	0.00050	0.00050	<0.00050	<0.00050
sec-Butylbenzene	mg/L	0.00050	0.00050	<0.00050	<0.00050
tert-Butylbenzene	mg/L	0.00050	0.00050	<0.00050	<0.00050
Carbon Disulfide	mg/L	0.0010	0.00050	<0.0010	<0.00050
Carbon tetrachloride	mg/L	0.00050	0.00050	<0.00050	<0.00050
Chlorobenzene	mg/L	0.00050	0.00050	<0.00050	<0.00050
Chloroethane	mg/L	0.0010	0.0010	<0.0010	<0.0010
Chloroform	mg/L	0.00050	0.00050	0.00338	0.00208
Chloromethane	mg/L	0.0010	0.0010	<0.0010	<0.0010
2-Chlorotoluene	mg/L	0.020	0.020	<0.020	<0.020
4-Chlorotoluene	mg/L	0.00050	0.00050	<0.00050	<0.00050
Dibromochloromethane	mg/L	0.00050	0.00050	<0.00050	<0.00050
1,2-Dibromo-3-chloropropane	mg/L	0.00050	0.00050	<0.00050	<0.00050
1,2-Dibromoethane	mg/L	0.00050	0.00050	<0.00050	<0.00050
Dibromomethane	mg/L	0.00050	0.00050	<0.00050	<0.00050
1,2-Dichlorobenzene	mg/L	0.00050	0.00050	<0.00050	<0.00050
1,3-Dichlorobenzene	mg/L	0.00050	0.00050	<0.00050	<0.00050
1,4-Dichlorobenzene	mg/L	0.00050	0.00050	<0.00050	<0.00050
Dichlorodifluoromethane	mg/L	0.0020	0.0020	<0.0020	<0.0020
1,1-Dichloroethane	mg/L	0.00050	0.00050	<0.00050	<0.00050
1,2-Dichloroethane	mg/L	0.00050	0.00050	<0.00050	<0.00050
1,1-Dichloroethene	mg/L	0.00050	0.00050	<0.00050	<0.00050
cis-1,2-Dichloroethene	mg/L	0.00050	0.00050	0.00204	<0.00050
trans-1,2-Dichloroethene	mg/L	0.00050	0.00050	<0.00050	<0.00050
Dichloromethane	mg/L	0.00050	0.00050	<0.00050	<0.00050
1,2-Dichloropropane	mg/L	0.00050	0.00050	<0.00050	<0.00050
1,3-Dichloropropane	mg/L	0.00050	0.00050	<0.00050	<0.00050
2,2-Dichloropropane	mg/L	0.0010	0.0010	<0.0010	<0.0010
1,1-Dichloropropene	mg/L	0.00050	0.00050	<0.00050	<0.00050
cis-1,3-Dichloropropene	mg/L	0.00050	0.00050	<0.00050	<0.00050
trans-1,3-Dichloropropene	mg/L	0.00100	0.0010	<0.0010	<0.0010
1,3-Dinitropyrene	ug/L	10	1.0	<10	<1.0
1,6-Dinitropyrene	ug/L	10	1.0	<10	<1.0
1,8-Dinitropyrene	ug/L	10	1.0	<10	<1.0



**City Of Winnipeg  
Water Waste Department**

**North End Water Pollution Control Centre Quarterly Monitoring Report**

4th Quarter Sampling Parameter	November 17, 2016			NEWPCC	
	Units	MDL-Raw	MDL-Final	Raw Sewage Grab	Final Effluent Grab
Ethyl Benzene	mg/L	0.00050	0.00050	0.00198	<0.00050
F1	mg/L	0.10	0.10	<0.10	<0.10
Hexachlorobutadiene	mg/L	0.00050	0.00050	<0.00050	<0.00050
Hexane	mg/L	0.0010	0.0010	<0.0010	<0.0010
2-Hexanone	mg/L	0.020	0.020	<0.020	<0.020
Isopropylbenzene	mg/L	0.00050	0.00050	<0.00050	<0.00050
4-Isopropyltoluene	mg/L	0.0010	0.0010	0.01640	<0.0010
MEK	mg/L	0.020	0.020	<0.020	<0.020
MIBK	mg/L	0.020	0.020	<0.020	<0.020
MTBE	mg/L	0.00050	0.00050	<0.00050	<0.00050
4,4'-Methylenebis(2-chloroaniline)	mg/L	5.0	0.50	<5.0	<0.50
Styrene	mg/L	0.00050	0.00050	<0.00050	<0.00050
1,1,1,2-Tetrachloroethane	mg/L	0.00050	0.00050	<0.00050	<0.00050
1,1,2,2-Tetrachloroethane	mg/L	0.00050	0.00050	<0.00050	<0.00050
Tetrachloroethene	mg/L	0.00050	0.00050	0.00085	<0.00050
Toluene	mg/L	0.00050	0.00050	0.00226	<0.00050
1,2,3-Trichlorobenzene	mg/L	0.00050	0.00050	<0.00050	<0.00050
1,2,4-Trichlorobenzene	mg/L	0.00050	0.00050	<0.00050	<0.00050
1,1,1-Trichloroethane	mg/L	0.00050	0.00050	<0.00050	<0.00050
1,1,2-Trichloroethane	mg/L	0.00050	0.00050	<0.00050	<0.00050
Trichloroethene	mg/L	0.00050	0.00050	<0.00050	<0.00050
Trichlorofluoromethane	mg/L	0.0010	0.0010	<0.0010	<0.0010
1,2,3-Trichloropropane	mg/L	0.00050	0.00050	<0.00050	<0.00050
1,2,4-Trimethylbenzene	mg/L	0.00050	0.00050	<0.00050	<0.00050
1,3,5-Trimethylbenzene	mg/L	0.00050	0.00050	<0.00050	<0.00050
Vinyl chloride	mg/L	0.0010	0.0010	<0.0010	<0.0010
m+p-Xylenes	mg/L	0.00050	0.00050	0.00773	<0.00050
o-Xylene	mg/L	0.00050	0.00050	0.00278	<0.00050
Xylenes (Total)	mg/L	0.0015	0.0015	0.0105	<0.0015

**NOTES:**

MDL- Method detection limit

mg/L- milligrams/Litre

ug/L- micrograms/Litre

ng/L- nanograms/Litre

pg/L- picograms/Litre

°C - degrees Celsius

umhos/cm - microohms<sup>-1</sup>/centimeter

<- less than

nr - no result provided by contract lab

*All parameters were analyzed by contract laboratory.*