



ANNUAL MONITORING REPORT

NORTH CITY WATER RECLAMATION PLANT

SDRWQCB Order No. R9-2015-0091

2018

Environmental Monitoring and Technical Services
2392 Kincaid Road • Mail Station 45A • San Diego, CA 92101
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February 28, 2019

Mr. David W. Gibson, Executive Officer
California Regional Water Quality Control Board
2375 Northside Drive, Suite 100
San Diego, CA 92108

Attention: Groundwater Basins Branch

Subject: North City Water Reclamation Plant Annual Report Regional Board
Code No. POTW: 01-0730.01:hansd

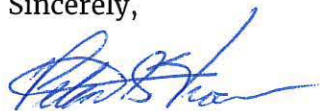
Dear Mr. Gibson:

Enclosed is the Annual Monitoring Report for 2018 for the City of San Diego North City Water Reclamation Plant, as specified in Monitoring and Reporting Program No. R9-2015-0091 for the production and purveyance of reclaimed water.

In addition, results of analyses performed on North City samples, as part of the Metropolitan Waste water system-wide Quarterly Sludge Project, a portion of the City's Pretreatment Program, have also been included.

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Sincerely,



Peter S. Vroom, Ph.D.
Public Utilities Deputy Director

DC:alm

Enclosure

cc: EPA Region 9
San Diego County Department of Environmental Health, Land Use Division
Distribution
File

INTRODUCTION:

The purpose of this document is to both meet the requirements of Monitoring and Reporting Program and to provide a reference source and resource tools for both regulatory agencies and City staff and their consultants. To this end, the past year's data is presented in tabular and graphical form. To make this document more useful we have included operational data and background analyses.

Notes on data conventions and analyses:

It should be noted that for averaging purposes "less than" and "not detected" (ND) values were treated as zeros. In many parts of the report zero values are found. Our computer system reads "less than" values as zero for summaries, as well as in computing averages. In those areas where zeros are found, the reader can find the appropriate Method Detection Limit (MDL) in the table of data. Because "less than" values are averaged as zero, a number in the summary table values may be lower than the detection limits.

The data tables may also contain values expressed as a <X (less than) with some number X. For example, the Diazinon value for PLE on March 10, 1998 (in the table below) is reported as <2.4 ug/L (see the below table); this indicates that one or more, of two or more, determinations was above the MDL, while the average was below the MDL. This value is still treated as a zero for averaging and other summary calculations. Note also, that sub-totals and totals consisting of multiple analytes (see below) are also reported as "<X", where the "X" value is the highest MDL for the particular group of analytes. This has the same significance as a "ND" or not detected.

Organophosphorus Pesticides

		PLE	PLE	PLE	PLR	PLR	PLR
		10-MAR-1998	27-APR-1998	10-SEP-1998	10-MAR-1998	27-APR-1998	10-SEP-1998
		0311980006	0428980006	9809107494	0311980007	0428980007	9809107515
	MDL Units						
Demeton O	1.69 UG/L	ND	ND	ND	ND	ND	ND
Demeton S	1.82 UG/L	ND	ND	ND	ND	ND	ND
Diazinon	2.41 UG/L	<2.4	ND	ND	<2.4	ND	ND
Guthion	7.1 UG/L	ND	ND	ND	ND	ND	ND
Malathion	2.98 UG/L	ND	ND	ND	ND	ND	ND
Parathion	2.83 UG/L	ND	ND	ND	ND	ND	ND
Thiophosphorus Pesticides		<7.1	<7.1	<7.1	<7.1	<7.1	<7.1
Demeton -O, -S		<1.8	<0.2	<0.2	<1.8	<0.2	<0.2
Total Organophosphorus Pesticides		<7.1	<7.1	<7.1	<7.1	<7.1	<7.1

A further limitation, that the user of this data should note, is that confidence in the results of an analysis is heavily dependent upon the concentration relative to the Method Detection Limit (MDL). For the most part our detection limits have been established using the procedure in 40 CFR, part 136. This statistical basis for the MDL results in a defined statistical confidence (at the 99% Confidence Interval) of essentially $\pm 100\%$ of the result at or near the MDL. Only at concentrations approximately 5 times the MDL is the confidence interval at $\pm 20\%$ relative. While the precision of our methods generally ranges from 2-3 significant figures, the above limitations of confidence should always be considered.

Laboratories Contributing Results used in this report.

Alvarado Wastewater Chemistry Laboratory
EPA Lab Code: CA00380
ELAP Certificate: 1609
5530 Kiowa Drive
La Mesa, CA 91942
(619)668-3212

All results except those listed below.

Point Loma Wastewater Chemistry Laboratory
EPA Lab Code: CA01435
ELAP Certificate: 2474
1902 Gatchell Road
San Diego, CA 92106
(619)221-8765

Process control analyses and wet methods for the plant.

North City Wastewater Chemistry Laboratory
EPA Lab Code: CA01436
ELAP Certificate: 2477
4949 Eastgate Mall
San Diego, CA 92121
(858)824-6009

Process control analyses and wet methods for the plant.

Metro Biosolids Center Wastewater
Chemistry
EPA Lab Code: CA01437
ELAP Certificate: 2478
5240 Convoy Street
San Diego, CA 92111
(858)614-5834

Process control analyses and wet methods for the plant.

South Bay Water Reclamation Plant
EPA Lab Code: CA01460
ELAP Certificate: 2539
2411 Dairy Mart Road
San Diego, CA 92173
(619)428-7349

Process control analyses and wet methods for the plant.

City of San Diego - Water Quality Laboratory
EPA Lab Code: CA00080
ELAP Certificate: 1058
5530 Kiowa Drive
La Mesa, CA 91942
(619)668-3237

Totals of Organic Carbon, Nitrogen and Phosphorus in Wastewater

City of San Diego - Marine Microbiology and Vector Management
EPA Lab Code: CA01393
ELAP Certificate: 2185
2392 Kincaid Road
San Diego, CA 92101
(619)758-2312

Microbiology

Test America Richland
EPA Lab Code: WA00023
ELAP Certificate: 2425
2800 George Washington Way
Richland, WA 99354
(509)375-3131

Gross Alpha/Beta Radioactivity

Test America Irvine
ELAP Certificate: 2706
17461 Derian Avenue
Irvine, CA, 92614
(509)375-3131

Perchlorate

Test America Sacramento
ELAP Certificate: 2897
880 Riverside Parkway
West Sacramento, CA 95605
(916)373-5600

Tetra Chlorinated Dioxin (2,3,7,8-TCDD)

LA Testing
ELAP Certificate: 2283
520 Mission Street
South Pasadena, CA 91030
(323)254-9960

Asbestos Analysis

Graphs:

Graphs of monthly averages show the arithmetic mean of the determinations made in the calendar month without weighing for variation in frequency or number of determinations. If the mean is less than the MDL (i.e. 'nd' or '<X'), the expressed graphical value is zero (0).

Terms:North City Water Reclamation Plant Source Codes

N01-PEN	Penasquitos Influent Pump Station
N01 PS_INF	Pump Station 64 Influent
N30-DFE	Disinfected Final Effluent
N15 AE	Aeration Effluent
N34 REC WATER	Compliance point. Reclaimed water distributed to customers, downstream of EDR unit.
N25 FES	Filter Effluent Structure
N10 EFF	Primary Effluent
N10-PSP COMB	Combined Primary Sludge Pump
N15-WAS HCP	Waste Activated Sludge (High Capacity Pump)
N15-WAS LCP	Waste Activated Sludge (Low Capacity Pump)

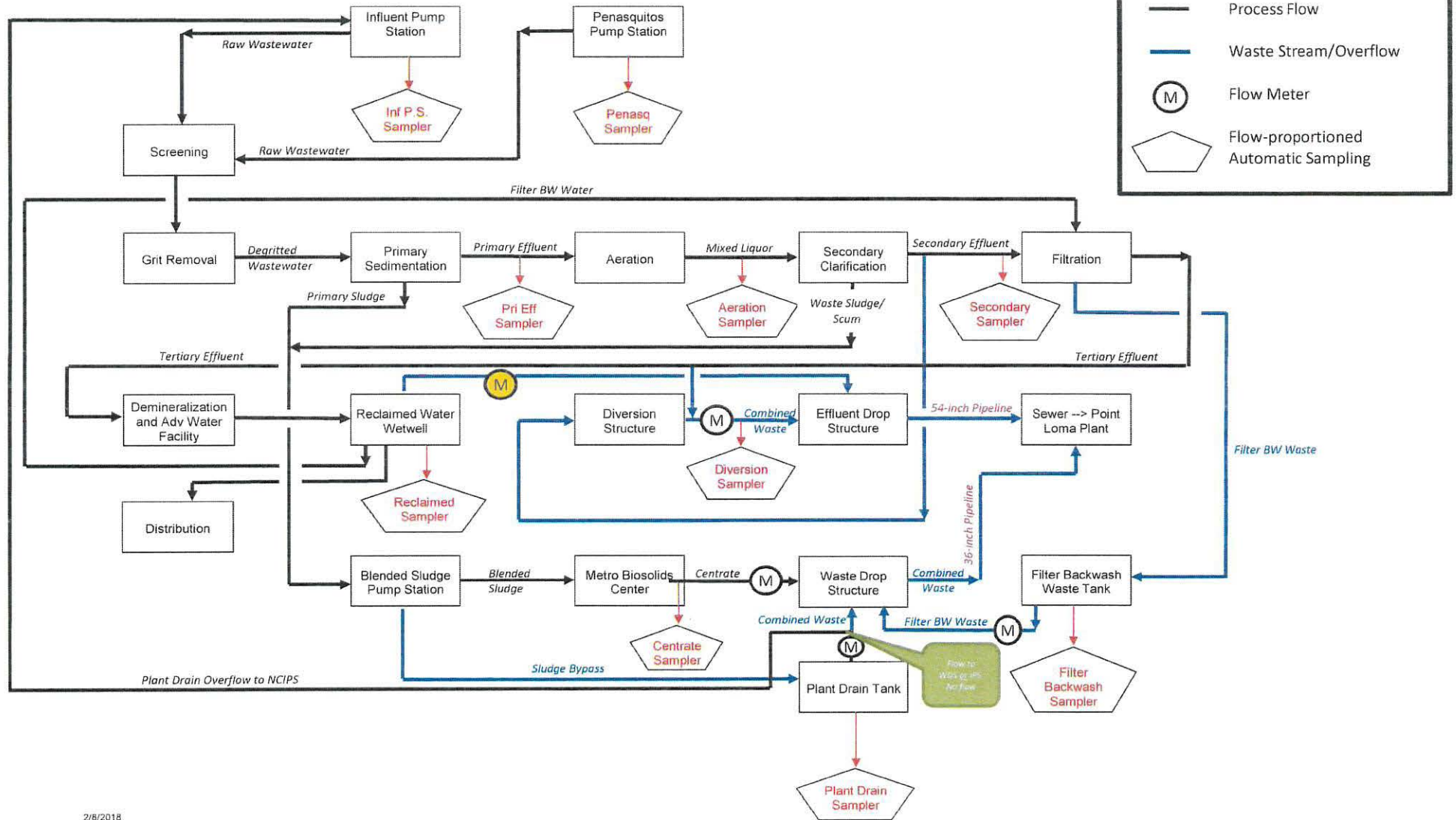
North City Water Reclamation Plant

Operator Certification 2018

<u>Name</u>	<u>Grade</u>	<u>Cert. No.</u>	<u>Expiration Date</u>
<u>Chief Plant Operator</u>			
Guerreiro, Juan	V	27670	12/31/2020
Rosales, Thomas	V	7529	12/14/2021
<u>North City Plant Superintendent</u>			
Pitchford, Richard	V	9851	06/30/2020
Rosales, Thomas	V	7529	12/14/2021
<u>North City Sr. Operations Supervisor</u>			
Pinto, Elisabete	V	10265	06/30/2020
Bates, Steve C.	V	42759	12/20/2012
<u>North City Operations Supervisors</u>			
Jacques, Richie	III	27921	06/30/2021
Carroll, John C.	V	28867	06/09/2020
Cozad, John L.	III	7138	12/31/2020
Relph, Robert W.	III	6742	12/31/2021
<u>North City Operators</u>			
Squyres, Traci L.	III	35602	10/31/2021
Gutierrez, Marlene E.	II	9636	06/30/2020
Saulog, Noel S.	II	10299	12/31/2021
Wendorf, George P.	II	9774	12/31/2020
Gonzalez, Adolfo	III	40774	03/13/2021
Hullin, Marshall D.	III	42679	04/11/2020
Birchett, Mathew S.	III	42338	04/10/2021
<u>North City Operator In Training</u>			
Costa, Carlos	OIT-II	N/A	02/21/2021
Mohammed, Nahdia Z.	OIT-I	N/A	04/04/2020
Woodson, Kira J.	OIT- I	N/A	06/15/2021
Vitko, Giacomo T.	OIT-II	N/A	08/15/2021
<u>Trussell Technologies</u>			
Pisarenko, Aleksey N.	V	41526	01/25/2021
Chen, Elise C.	V	42568	01/08/2021
Kolakovsky, Aviv	III	43071	02/01/2020
Tackaert, Rodrigo A.	III	43566	01/18/2021

Existing NCWRP Sampling Schematic

(Prepared by Rob Relph, Version 2)



North City Water Reclamation Plant
2018 Monthly Totals - Millions of Gallons

Month	Penas- quitos Influent (MG)	Headworks Flow 36" (MG)	Plant Drain Influent (MG)	Disinfect Final Effluent (MG)	Reclaim Water (MG)	N Return (MG)	FES Filter Effluent (MG)	Primary Effluent (MG)	Primary Sludge (MG)	WAS Hi Cap sludge (MG)	WAS Lo Cap sludge (MG)	Filter Backwash (MG)	Total Sludge Flow to MBC (MG)
01	157.9	332.2	48.0	24.2	108.2	338.56	193.90	518.26	15.00	13.66	.00	12.78	20.66
02	132.0	315.6	28.0	17.3	128.5	315.91	217.14	476.08	17.89	12.18	.00	13.28	25.67
03	153.7	343.5	19.8	16.0	93.7	415.60	206.30	524.64	14.72	9.64	.00	12.63	29.85
04	154.9	337.5	14.7	16.1	219.1	285.06	332.20	510.23	19.08	7.98	.00	21.01	26.70
05	162.8	347.6	18.0	17.8	235.1	271.64	343.00	525.50	15.36	8.79	.00	24.14	28.27
06	76.2	406.5	18.1	18.3	281.4	166.75	330.73	479.58	19.92	9.23	.00	18.19	28.50
07	150.1	355.3	18.9	18.3	339.6	143.59	381.39	517.53	16.54	10.20	.00	17.95	29.76
08	138.7	361.3	18.0	15.8	360.1	139.66	394.19	522.81	20.71	9.88	.00	15.65	29.72
09	135.3	327.4	21.1	18.1	290.0	174.11	327.79	490.72	16.62	9.52	.00	13.34	28.21
10	143.4	329.2	23.0	17.2	212.1	257.51	252.46	495.89	20.92	10.11	.00	8.41	29.41
11	141.5	325.4	21.6	17.1	187.0	281.30	258.18	496.06	14.66	9.41	.00	15.59	25.36
12	174.5	336.3	11.5	16.5	74.5	441.27	178.64	527.04	21.06	9.48	.00	9.14	29.84
Average	143.4	343.1	21.7	17.7	210.8	269.25	284.66	507.03	17.71	10.01	.00	15.18	27.66
Total	1720.9	4117.7	260.6	212.7	2529.1	3230.96	3415.92	6084.34	212.48	120.08	.00	182.11	331.95

Reclaim Water = Distribution Water

North City Water Reclamation Plant
2018 Monthly Averages - Millions of Gallons

Month	Penas- quitos Influent (MG)	Headworks Flow 36" (MG)	Plant Drain Influent (MG)	Disinfect Final Effluent (MG)	Reclaim Water (MG)	N Return (MG)	FES Filter Effluent (MG)	Primary Effluent (MG)	Primary Sludge (MG)	WAS Hi Cap sludge (MG)	WAS Lo Cap sludge (MG)	Filter Backwash (MG)	Total Sludge Flow to MBC (MG)
01	5.1	10.7	1.5	.8	3.5	10.92	6.25	16.72	.48	.44	.00	.41	.67
02	4.7	11.3	1.0	.6	4.6	11.28	7.76	17.00	.64	.44	.00	.47	.92
03	5.0	11.1	.6	.5	3.0	13.41	6.65	16.92	.47	.31	.00	.41	.96
04	5.2	11.3	.5	.5	7.3	9.50	11.07	17.01	.64	.27	.00	.70	.89
05	5.3	11.2	.6	.6	7.6	8.76	11.06	16.95	.50	.28	.00	.78	.91
06	2.5	13.5	.6	.6	9.4	5.56	11.02	15.99	.66	.31	.00	.61	.95
07	4.8	11.5	.6	.6	11.0	4.63	12.30	16.69	.53	.33	.00	.58	.96
08	4.5	11.7	.6	.5	11.6	4.51	12.72	16.86	.67	.32	.00	.50	.96
09	4.5	10.9	.7	.6	9.7	5.80	10.93	16.36	.55	.32	.00	.44	.94
10	4.6	10.6	.7	.6	6.8	8.31	8.14	16.00	.67	.33	.00	.27	.95
11	4.7	10.8	.7	.6	6.2	9.38	8.61	16.54	.49	.31	.00	.52	.85
12	5.6	10.8	.4	.5	2.4	14.23	5.76	17.00	.68	.31	.00	.29	.96
Average	4.7	11.3	.7	.6	6.9	8.86	9.36	16.67	.58	.33	.00	.50	.91

Reclaim Water = Distribution Water

North City Water Reclamation Plant			
(N34-REC WATER) Recycled Water Chlorine Report			
N34-REC WATER is compliance point for reclaimed water			
	Minimum Daily ¹	Maximum Daily ²	Time ³
Operations 2018	Chlorine Residual	Chlorine Residual	CT less than
Date	(mg/L)	(mg/L)	450 mg-min/l (min)
Jan	3.31	5.48	0
Feb	3.35	6.00	0
Mar	2.83	5.46	0
Apr	3.54	5.21	0
May	3.23	6.03	0
Jun	3.36	5.51	0
Jul	3.27	5.24	0
Aug	3.06	5.12	0
Sep	2.78	5.11	0
Oct	3.44	5.11	0
Nov	3.67	5.96	0
Dec	3.61	4.84	0
Average:	3.29	5.42	Total: 0
1 Minimum Daily value is the average recorded for the month.			
2 Maximum Daily value is the average recorded value for the month.			
3 Total time for the month.			

North City Water Reclamation Plant
Recycled Water Coliform Report

Operations 2018 Date	Tot. Coliform (7-day median Avg) (MPN)
Jan	<1.8
Feb	<1.8
Mar	<1.8
Apr	<1.8
May	<1.8
Jun	<1.8
Jul	<1.8
Aug	<1.8
Sep	<1.8
Oct	<1.8
Nov	<1.8
Dec	<1.8

North City Water Reclamation Plant				
Recycled Water Turbidity Report				
Data from in-plant meter ⁴				
	Average Daily	Minimum Daily ¹	Maximum Daily ²	Time Over ³
Operations 2018	Turbidity	Turbidity	Turbidity	5 NTU's
Date	(NTU)	(NTU)	(NTU)	(MINUTES)
Jan	0.19	0.16	0.29	0.00
Feb	0.30	0.25	0.50	0.00
Mar	0.31	0.26	0.72	0.00
Apr	0.37	0.33	0.65	0.00
May	0.42	0.34	0.81	0.00
Jun	0.35	0.28	0.50	0.00
Jul	0.26	0.23	0.49	0.00
Aug	0.39	0.34	0.62	0.00
Sep	0.44	0.37	0.76	0.00
Oct	0.33	0.28	0.78	0.00
Nov	0.47	0.41	0.68	0.00
Dec	0.26	0.23	0.44	0.00
Average:	0.34	0.29	0.60	Total: 0.00
1 Minimum Daily value is the average recorded for the month.				
2 Maximum Daily value is the average recorded value for the month.				
3 Total time for the month.				
4 Compliance monitoring point, values taken from the combined filter effluent turbidity meter (N25A1T673) or (N25A1T674), located at meter room of Area 25 (Tertiary Filter Structures)				

NORTH CITY WATER RECLAMATION PLANT

Monthly/Annual Averages - Daily Parameters

From: 01-Jan-2018 — 31-Dec-2018

(N01-PEN) Penasquitos Pump Station Influent

	Biochemical Oxygen Demand (mg/L)	Total Dissolved Solids (mg/L)	Total Suspended Solids (mg/L)	Volatile Suspended Solids (mg/L)	Turbidity (NTU)	pH COMPOSITE (pH)
January-2018	297	703	318	272	113	7.41
February-2018	293	693	329	284	107	7.43
March-2018	296	721	312	270	113	7.47
April-2018	303	806	348	NR	122	7.57
May-2018	284	860	385	331	116	7.52
June-2018	275	900	334	282	125	7.47
July-2018	291	858	349	295	133	7.52
August-2018	287	769	387	318	143	7.56
September-2018	277	799	386	326	154	7.56
October-2018	291	786	355	301	139	7.57
November-2018	339	829	356	310	148	7.57
December-2018	325	810	439	378	143	7.51
Average:	297	795	358	306	130	7.51
Maximum:	339	900	439	378	154	7.57
Minimum:	275	693	312	270	107	7.41

(N01-PS_INF) Pump Station 64

	Biochemical Oxygen Demand (mg/L)	Total Dissolved Solids (mg/L)	Total Suspended Solids (mg/L)	Volatile Suspended Solids (mg/L)	Turbidity (NTU)	pH COMPOSITE (pH)
January-2018	342	932	298	260	134	7.27
February-2018	364	946	344	298	135	7.29
March-2018	321	899	292	261	126	7.30
April-2018	341	1020	289	NR	131	7.36
May-2018	348	1080	340	315	141	7.35
June-2018	320	1080	300	272	133	7.41
July-2018	294	1060	283	253	147	7.41
August-2018	319	971	319	286	147	7.42
September-2018	321	1050	299	271	162	7.46
October-2018	344	1060	331	298	135	7.46
November-2018	376	1080	329	298	145	7.50
December-2018	328	1020	294	265	135	7.44
Average:	335	1017	310	280	139	7.39
Maximum:	376	1080	344	315	162	7.50
Minimum:	294	899	283	253	126	7.27

All samples are 24-hour composite

NR= Not Required

NORTH CITY WATER RECLAMATION PLANT

(N34-REC) Reclaimed Water - Monthly/Annual Averages - Daily Parameters

From: 01-Jan-2018 — 31-Dec-2018

MDL/Units	Biochemical Oxygen Demand 2 MG/L	Total Dissolved Solids 100 MG/L	Total Suspended Solids 2.5 MG/L	Volatile Suspended Solids 2.5 MG/L	pH Grab (pH)
January-2018	<2	825	ND	ND	6.68
February-2018	<2	848	ND	ND	6.70
March-2018	ND	867	ND	ND	6.70
April-2018	ND	885	ND	NR	6.77
May-2018	<2	921	ND	ND	6.84
June-2018	<2	958	ND	ND	7.04
July-2018	<2	940	ND	ND	7.01
August-2018	<2	919	ND	ND	6.98
September-2018	<2	977	ND	ND	6.96
October-2018	ND	925	ND	ND	6.91
November-2018	ND	918	ND	ND	6.86
December-2018	ND	816	ND	ND	6.80
Average:	0	900	ND	ND	6.85
Maximum:	0	977	ND	ND	7.04
Minimum:	0	816	ND	ND	6.68

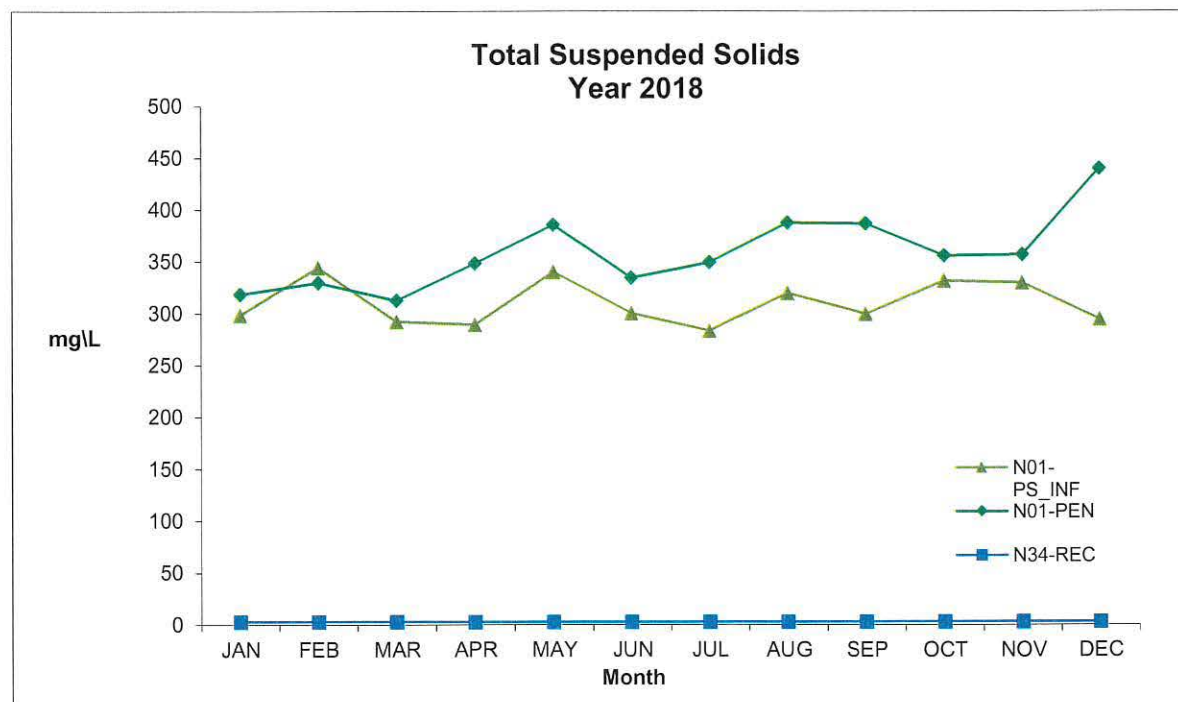
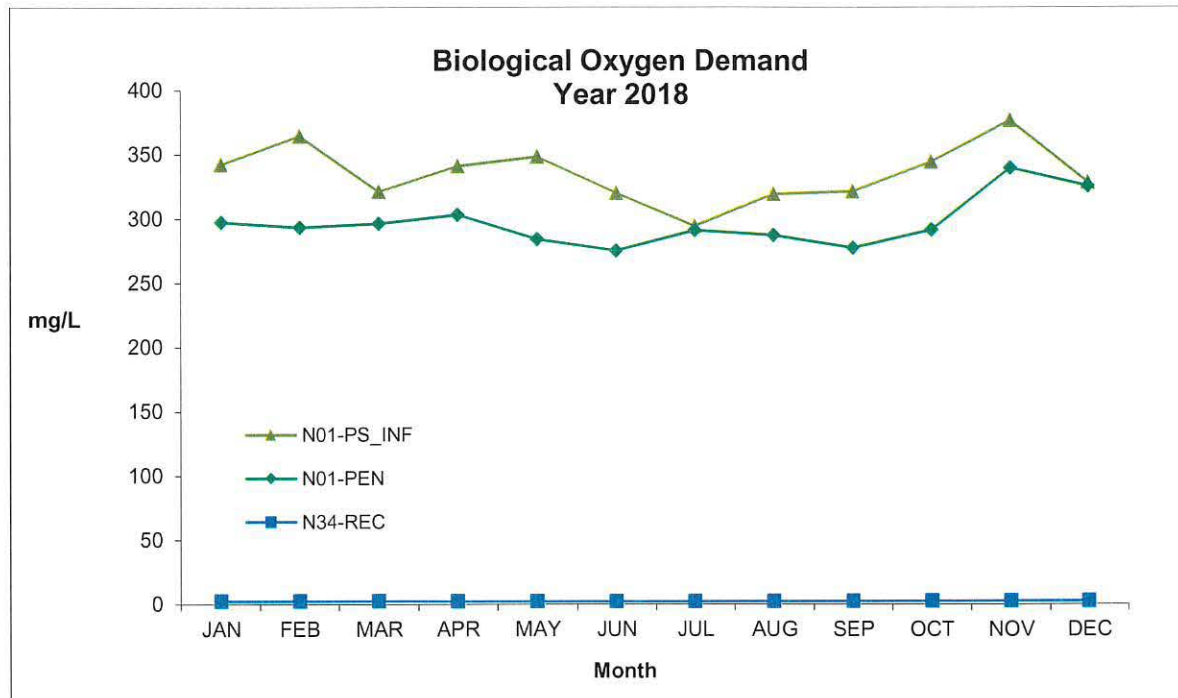
All samples are 24-hour composite, except for pH

ND= Not Detected

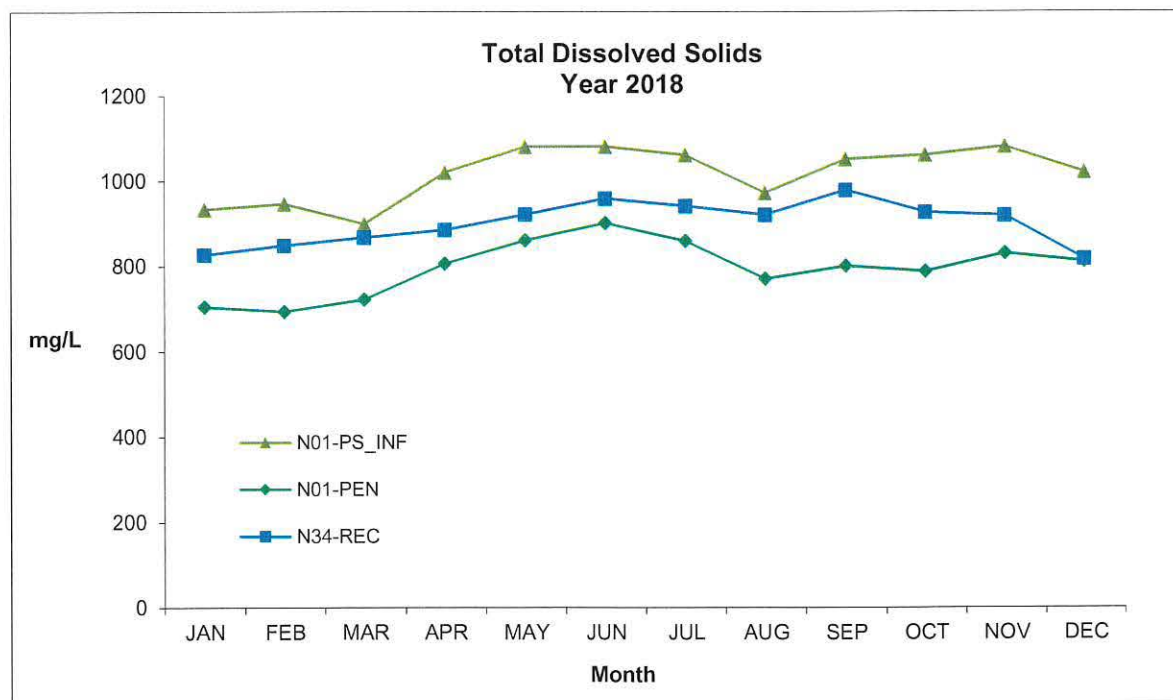
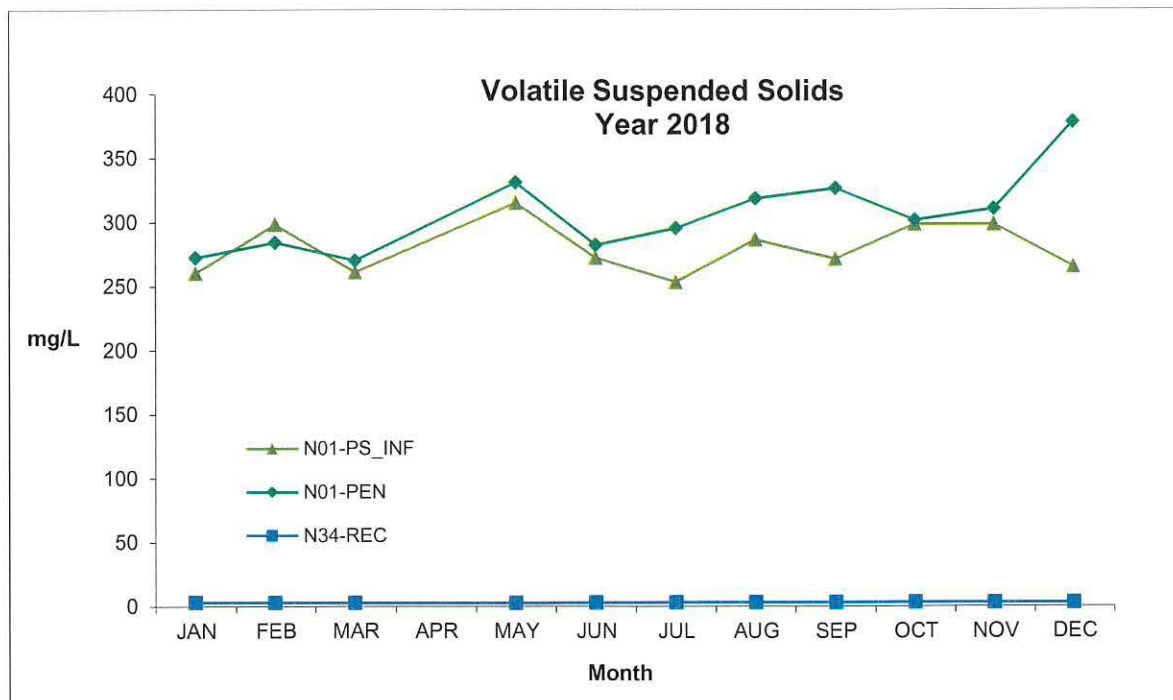
NR= Not Required

MDLs listed are the maximum MDL for the past 12 months

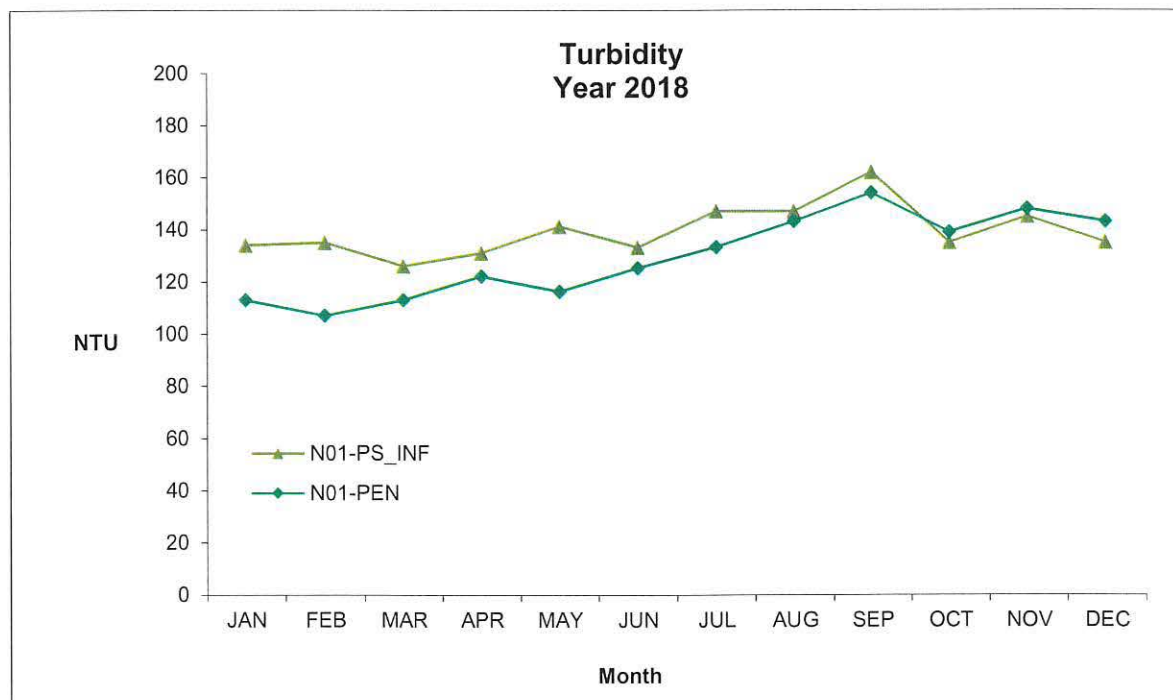
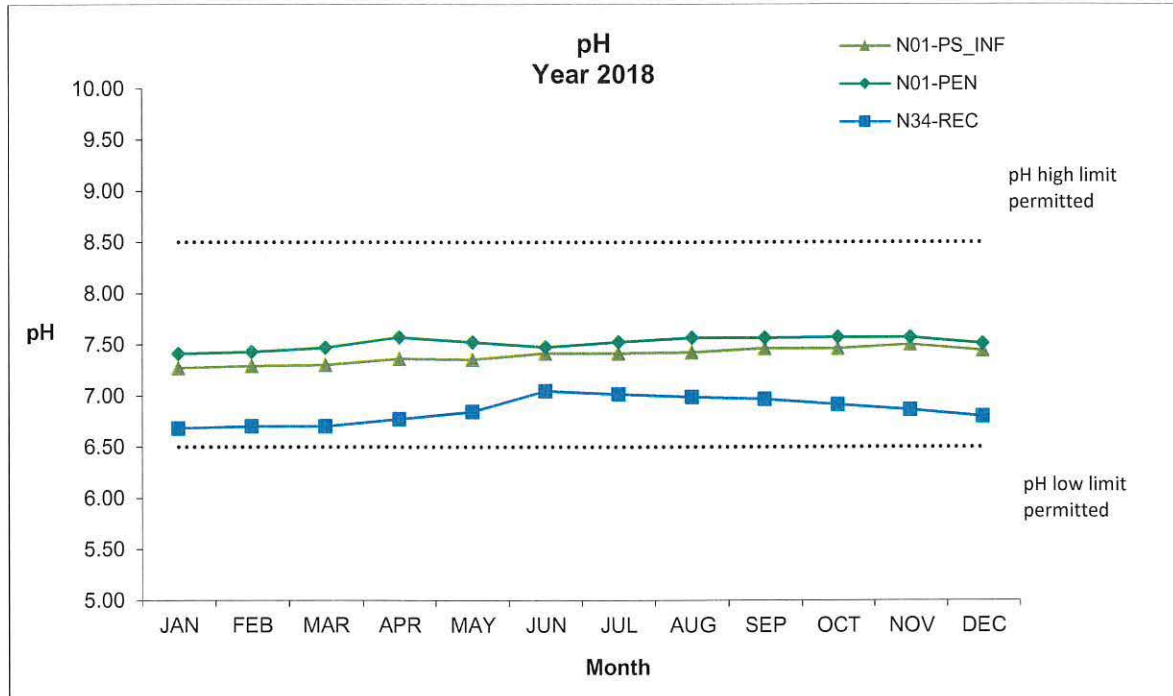
**NORTH CITY WATER RECLAMATION PLANT
ANNUAL MONITORING REPORT
2018 Daily Parameters**



**NORTH CITY WATER RECLAMATION PLANT
ANNUAL MONITORING REPORT
2018 Daily Parameters**



**NORTH CITY WATER RECLAMATION PLANT
ANNUAL MONITORING REPORT
2018 Daily Parameters**



* Turbidity for N34-REC is taken from an in-plant meter and thus does not appear in this turbidity graph.

NORTH CITY WATER RECLAMATION PLANT
(N34-REC) Reclaim Water - Monthly/Annual Averages

From: 01-Jan-2018 — 31-Dec-2018

Analyte:	Aluminum	Antimony	Arsenic	Barium	Beryllium	Boron
MDL:	5.97	0.071	0.316	0.166	0.122	0.367
Units:	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Limit:	1000	6	50	1000	4	750
January-2018	ND	0.4	0.6	10.6	ND	306
February-2018	<6	0.4	0.6	11.5	ND	294
March-2018	7	0.4	0.7	9.70	ND	289
April-2018	8	0.5	0.8	19.2	ND	296
May-2018	9	0.4	0.8	20.4	ND	248
June-2018	ND	0.5	0.9	31.4	ND	288
July-2018	ND	0.6	0.8	27.2	ND	320
August-2018	13	0.6	1.0	18.9	ND	339
September-2018	<6	0.5	1.1	17.6	ND	343
October-2018	6	0.5	1.0	15.7	ND	311
November-2018	<6	0.5	0.8	15.2	ND	346
December-2018	ND	0.5	0.7	14.9	ND	328
Annual Average:	4	0.5	0.8	17.7	ND	309
Analyte:	Cadmium	Chromium	Cobalt	Copper	Iron	Lead
MDL:	0.044	0.332	0.023	0.345	20.6	0.078
Units:	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Limit:	5				300	
January-2018	ND	0.4	0.30	3.82	61	0.1
February-2018	ND	0.4	0.30	4.22	71	ND
March-2018	ND	0.4	0.39	1.77	75	ND
April-2018	ND	0.5	0.35	3.34	71	ND
May-2018	ND	0.5	0.34	2.65	76	0.1
June-2018	ND	<0.3	0.29	2.58	102	<0.1
July-2018	ND	0.4	0.34	2.10	122	0.1
August-2018	0.06	0.8	0.32	3.34	83	2.8
September-2018	ND	1.0	0.31	10.4	68	ND
October-2018	ND	0.5	0.29	2.58	64	0.8
November-2018	ND	0.6	0.34	2.06	80	0.1
December-2018	ND	ND	0.31	1.32	69	ND
Annual Average:	0.01	0.5	0.32	3.35	79	0.3
Analyte:	Manganese	Mercury	Molybdenum	Nickel	Selenium	Silver
MDL:	0.076	0.0011	0.112	0.088	0.851	0.104
Units:	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Limit:	100	2		100	50	
January-2018	83.4	ND	3.45	3.51	ND	ND
February-2018	74.2	ND	3.31	3.47	ND	ND
March-2018	112	ND	3.50	3.48	ND	ND
April-2018	98.3	0.002	3.89	4.10	<0.85	ND
May-2018	97.1	ND	3.84	3.67	1.17	ND
June-2018	71.9	0.001	4.98	3.70	1.50	ND
July-2018	84.0	ND	5.44	4.31	1.31	ND
August-2018	71.1	ND	5.44	4.45	1.08	ND
September-2018	87.7	ND	5.14	3.41	<0.85	ND
October-2018	65.8	0.003	4.55	3.05	0.92	ND
November-2018	118	0.002	5.30	3.28	ND	ND
December-2018	106	ND	3.51	2.30	<0.85	ND
Annual Average:	89.1	0.001	4.36	3.56	0.5	ND

MDLs listed are the maximum for the past 12 months

ND= Not Detected

NR= Not Required

NORTH CITY WATER RECLAMATION PLANT
(N34-REC) Reclaim Water - Monthly/Annual Averages

From: 01-Jan-2018 — 31-Dec-2018

Analyte:	Thallium	Vanadium	Zinc	Calcium	Lithium	Magnesium
MDL:	0.1	0.599	1.05	0.059	0.012	0.08
Units:	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L
Limit:	2					
January-2018	ND	1.16	21.4	53.9	0.023	26.0
February-2018	ND	1.17	22.1	60.1	0.020	27.9
March-2018	<0.1	1.06	22.4	58.8	0.022	27.3
April-2018	<0.1	0.99	22.3	68.7	0.033	29.1
May-2018	0.1	0.74	22.4	73.8	0.044	30.2
June-2018	ND	1.04	24.4	75.0	0.040	29.6
July-2018	0.1	1.18	23.4	71.3	0.042	28.5
August-2018	ND	1.18	27.1	66.4	0.035	27.5
September-2018	ND	1.13	24.0	64.7	0.037	27.6
October-2018	ND	0.93	22.9	64.7	0.036	27.6
November-2018	ND	1.06	21.3	68.6	0.038	29.9
December-2018	ND	1.16	19.2	69.7	0.034	29.6
Annual Average:	0	1.07	22.7	66.3	0.034	28.4

Analyte:	Potassium	Sodium	Calcium Hardness	Magnesium Hardness	Total Hardness	Total Alkalinity
MDL:	0.2	1.4	0.147	0.33	0.47	20
Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Limit:						
January-2018	18.3	162	135	107	242	80
February-2018	19.6	170	150	115	265	91
March-2018	18.8	168	147	113	259	90
April-2018	19.0	171	172	120	291	100
May-2018	19.4	180	184	124	309	113
June-2018	18.8	177	187	122	309	110
July-2018	19.8	180	178	118	296	105
August-2018	20.1	178	166	113	279	88
September-2018	19.5	172	162	114	275	91
October-2018	18.8	172	161	114	275	83
November-2018	20.2	190	171	123	294	87
December-2018	17.1	170	174	122	296	89
Annual Average:	19.1	174	166	117	283	94

Analyte:	Chloride	Fluoride	Nitrate	Nitrate as N	Sulfate	Ortho Phosphate
MDL:	7	0.05	1		9	0.2
Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Limit:	300	1			300	
January-2018	215	0.49	62.3	14.1	109	3.2
February-2018	242	0.44	60.1	13.6	135	4.5
March-2018	235	0.49	62.6	14.1	125	4.7
April-2018	218	0.52	59.2	13.4	151	6.2
May-2018	227	0.56	58.1	13.1	194	4.5
June-2018	225	0.57	57.0	12.9	217	4.3
July-2018	247	0.58	62.0	14.0	230	2.7
August-2018	238	0.54	72.9	16.5	178	6.3
September-2018	232	0.56	66.3	15.0	178	6.3
October-2018	232	0.48	73.5	16.6	173	7.0
November-2018	237	0.19	72.4	16.4	182	5.0
December-2018	232	0.35	58.7	13.3	189	3.0
Annual Average:	232	0.48	63.8	14.4	172	4.8

MDLs listed are the maximum for the past 12 months

ND= Not Detected

NR= Not Required

NORTH CITY WATER RECLAMATION PLANT
(N34-REC) Reclaim Water - Monthly/Annual Averages

From: 01-Jan-2018 — 31-Dec-2018

Analyte:	Total Organic Carbon	Percent Sodium	Adjusted Sodium Ratio	Total Cyanides	Total Dissolved Solids	Total Nitrogen
MDL:	0.3			0.005	100	0.78
Units:	mg/L	PERCENT	Ratio	mg/L	mg/L	mg/L
Limit:		60		0.2	1200	
January-2018	6.4	58	3.9	<0.005	825	15.8
February-2018	6.7	56	4.3	<0.005	848	14.1
March-2018	7.4	57	4.4	<0.005	867	14.5
April-2018	7.4	55	4.2	<0.005	885	14.6
May-2018	7.2	54	4.5	ND	921	14.9
June-2018	6.7	54	4.5	<0.005	958	15.5
July-2018	6.7	54	4.7	ND	940	17.4
August-2018	7.6	56	4.5	ND	919	18.1
September-2018	6.5	55	4.3	ND	977	18.4
October-2018	6.8	56	4.2	ND	925	19.1
November-2018	6.3	56	4.5	ND	918	18.6
December-2018	5.8	55	4.2	ND	816	14.1
Annual Average:	6.8	56	4.4	0	900	16.3

Analyte:	MBAS (Surfactants)
MDL:	0.07
Units:	mg/L
Limit:	0.5
January-2018	ND
February-2018	0.05
March-2018	ND
April-2018	ND
May-2018	ND
June-2018	ND
July-2018	0.06
August-2018	ND
September-2018	ND
October-2018	ND
November-2018	ND
December-2018	ND
Annual Average:	0.01

MDLs listed are the maximum for the past 12 months

ND= Not Detected

NR= Not Required

NORTH CITY WATER RECLAMATION PLANT
(N01-PS-INF) Pump Station 64 Influent - Daily Parameters

From: 01-Jan-2018 — 31-Dec-2018

Analyte:	Aluminum	Antimony	Arsenic	Barium	Beryllium	Boron
MDL:	5.97	0.071	0.316	0.166	0.122	0.367
Units:	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
January-2018	612	0.7	1.40	73	ND	281
February-2018	419	0.6	1.20	71	ND	280
March-2018	632	0.6	1.40	74	ND	288
April-2018	397	0.7	1.40	90	ND	343
May-2018	400	0.6	1.50	101	ND	339
June-2018	656	0.8	1.80	117	ND	278
July-2018	210	0.7	1.60	89	ND	292
August-2018	402	0.8	1.70	98	ND	334
September-2018	389	0.7	1.70	93	ND	318
October-2018	368	0.8	1.90	100	ND	306
November-2018	368	0.8	1.40	94	ND	331
December-2018	392	0.8	1.60	90	ND	319
Annual Average:	437	0.7	1.60	91	ND	309

Analyte:	Cadmium	Chromium	Cobalt	Copper	Iron	Lead
MDL:	0.044	0.332	0.023	0.345	20.6	0.078
Units:	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
January-2018	0.13	7.20	1.01	135	8730	1.3
February-2018	0.12	4.40	0.79	100	7010	1.0
March-2018	0.14	6.70	0.93	114	8340	1.6
April-2018	2.34	4.30	0.77	106	4550	1.1
May-2018	0.15	5.00	1.02	124	5080	1.1
June-2018	0.10	3.80	0.73	112	4580	1.1
July-2018	0.10	3.10	0.70	106	3420	1.1
August-2018	0.17	5.60	0.81	162	6260	1.4
September-2018	0.19	4.00	0.74	138	5350	1.1
October-2018	0.11	4.70	0.86	127	7380	1.3
November-2018	0.12	5.40	0.49	117	11100	1.0
December-2018	0.13	4.60	0.81	114	6540	0.9
Annual Average:	0.32	4.90	0.84	121	6528	1.2

Analyte:	Lithium	Manganese	Mercury	Molybdenum	Nickel	Selenium
MDL:	0.012	0.076	0.005	0.112	0.088	0.851
Units:	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L
January-2018	0.022	193	0.100	6.21	6.30	1.79
February-2018	0.027	169	0.050	5.05	5.10	1.51
March-2018	0.014	164	0.060	5.77	5.50	1.15
April-2018	NR	165	0.050	6.75	5.00	1.30
May-2018	0.047	177	0.050	7.07	5.00	2.10
June-2018	0.050	147	0.070	8.06	5.30	2.68
July-2018	0.050	135	0.040	7.55	5.00	2.08
August-2018	0.039	142	0.100	9.20	5.80	2.69
September-2018	0.037	204	0.130	7.77	5.90	2.17
October-2018	0.036	171	0.070	10.2	6.10	2.59
November-2018	0.046	196	0.060	9.45	6.30	1.78
December-2018	0.053	206	0.320	6.44	4.60	2.51
Annual Average:	0.038	172	0.090	7.46	5.50	2.03

MDLs listed are the maximum for the past 12 months

ND= Not Detected

NR= Not Required

NORTH CITY WATER RECLAMATION PLANT
(N01-PS-INF) Pump Station 64 Influent - Daily Parameters

From: 01-Jan-2018 — 31-Dec-2018

Analyte:	Silver	Thallium	Vanadium	Zinc	Calcium	Magnesium
MDL:	0.104	0.1	0.599	1.05	0.03	0.08
Units:	µg/L	µg/L	µg/L	µg/L	mg/L	mg/L
January-2018	0.5	ND	2.13	146	59.1	28.1
February-2018	0.5	ND	1.56	136	71.6	31.6
March-2018	1.1	ND	2.10	157	58.5	28.6
April-2018	0.4	ND	1.95	131	NR	NR
May-2018	0.4	0.1	1.90	170	91.4	36.6
June-2018	0.2	ND	1.99	162	89.6	36.5
July-2018	0.3	ND	1.47	100	89.1	35.4
August-2018	0.5	ND	1.93	191	86.0	33.7
September-2018	0.3	ND	1.90	167	75.8	33.6
October-2018	0.6	ND	1.71	166	85.4	35.6
November-2018	0.4	ND	1.92	156	84.6	36.6
December-2018	0.5	ND	2.35	157	93.0	42.2
Annual Average:	0.5	0	1.91	153	80.4	34.4

Analyte:	Potassium	Sodium	Chloride	Fluoride	Sulfate	Total Dissolved Solids
MDL:	0.20	1	7	0.05	300	100
Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
January-2018	19.5	169	NR	NR	NR	932
February-2018	22.4	196	NR	NR	NR	946
March-2018	20.9	167	246	0.44	124	899
April-2018	NR	NR	NR	NR	NR	1020
May-2018	22.0	189	NR	NR	NR	1080
June-2018	21.5	190	266	0.58	246	1080
July-2018	24.5	184	NR	NR	NR	1060
August-2018	22.7	189	NR	NR	NR	971
September-2018	22.3	190	259	0.53	195	1050
October-2018	23.5	203	NR	NR	NR	1060
November-2018	23.7	208	271	0.08	203	1080
December-2018	23.1	212	NR	NR	NR	1020
Annual Average:	22.4	191	261	0.41	192	1017

Analyte:	Total Cyanides
MDL:	0.005
Units:	mg/L
January-2018	<0.005
February-2018	<0.005
March-2018	<0.005
April-2018	<0.005
May-2018	ND
June-2018	<0.005
July-2018	ND
August-2018	ND
September-2018	ND
October-2018	ND
November-2018	ND
December-2018	ND
Annual Average:	0

MDLs listed are the maximum for the past 12 months

ND= Not Detected

NR= Not Required

NORTH CITY WATER RECLAMATION PLANT
(N01-PEN) Penasquitos Influent - Annual Averages

From: 01-Jan-2018 — 31-Dec-2018

Analyte:	Aluminum	Antimony	Arsenic	Barium	Beryllium	Boron
MDL:	5.97	0.071	0.316	0.166	0.122	0.367
Units:	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
January-2018	2110	1.0	2.42	57	ND	276
February-2018	2330	0.8	2.29	57	ND	277
March-2018	1110	0.5	1.47	48	ND	269
April-2018	2770	1.1	2.99	78	ND	311
May-2018	1100	1.1	2.11	87	ND	266
June-2018	1060	1.0	1.92	86	ND	246
July-2018	1830	1.3	2.82	93	ND	298
August-2018	1900	1.1	2.79	77	ND	326
September-2018	1550	2.5	2.62	81	ND	320
October-2018	1470	0.8	2.84	59	ND	300
November-2018	1120	1.0	2.17	69	ND	350
December-2018	1970	0.8	2.63	74	ND	329
Annual Average:	1693	1.1	2.42	72	ND	297

Analyte:	Cadmium	Chromium	Cobalt	Copper	Iron	Lead
MDL:	0.044	0.332	0.023	0.345	20.6	0.078
Units:	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
January-2018	0.12	10.2	1.80	92	11000	1.3
February-2018	0.11	7.70	1.09	91	10300	1.2
March-2018	<0.04	6.00	0.79	69	7330	1.0
April-2018	0.13	12.0	0.88	111	10600	1.1
May-2018	0.12	12.9	1.33	105	15700	2.0
June-2018	ND	11.2	0.88	87	14200	0.9
July-2018	0.12	13.8	1.18	103	15900	1.3
August-2018	0.11	16.1	1.22	101	16800	1.6
September-2018	0.07	12.0	1.04	92	17200	1.3
October-2018	0.05	8.20	1.00	69	11000	1.0
November-2018	0.11	10.7	0.49	98	15600	1.1
December-2018	0.11	9.70	0.80	74	14600	1.0
Annual Average:	0.09	10.9	1.08	91	13353	1.2

Analyte:	Lithium	Manganese	Mercury	Molybdenum	Nickel	Selenium
MDL:	0.012	0.076	0.006	0.112	0.088	0.851
Units:	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L
January-2018	0.015	265	0.061	7.04	9.27	1.13
February-2018	0.017	124	0.133	5.90	10.3	1.24
March-2018	0.012	151	0.199	5.57	7.50	<0.85
April-2018	NR	141	0.056	8.27	9.22	1.85
May-2018	0.037	167	0.071	8.62	13.9	2.23
June-2018	0.048	145	0.031	9.63	17.7	1.90
July-2018	0.040	190	0.087	9.81	9.56	2.39
August-2018	0.037	215	0.096	9.29	12.6	1.80
September-2018	0.030	180	0.104	9.76	10.2	1.73
October-2018	0.031	149	0.099	6.40	6.24	1.37
November-2018	0.036	205	0.072	7.79	11.5	1.63
December-2018	0.034	189	0.095	6.95	8.29	2.12
Annual Average:	0.031	177	0.090	7.92	10.5	1.62

MDLs listed are the maximum for the past 12 months

ND= Not Detected

NR= Not Required

NORTH CITY WATER RECLAMATION PLANT (N01-PEN) Penasquitos Influent - Annual Averages

From: 01-Jan-2018 — 31-Dec-2018

Analyte:	Silver	Thallium	Vanadium	Zinc	Calcium	Magnesium
MDL:	0.104	0.1	0.599	1.05	0.03	0.08
Units:	µg/L	µg/L	µg/L	µg/L	mg/L	mg/L
January-2018	0.8	ND	3.93	123	43.8	19.8
February-2018	7.4	ND	3.86	138	54.0	24.3
March-2018	6.1	ND	2.46	91	46.2	23.3
April-2018	1.0	ND	4.46	129	NR	NR
May-2018	6.3	ND	4.01	138	76.2	30.7
June-2018	1.5	ND	3.30	114	76.0	31.3
July-2018	2.3	ND	4.50	147	82.6	30.5
August-2018	3.1	ND	4.16	163	68.9	26.8
September-2018	1.1	ND	4.15	177	59.7	24.9
October-2018	1.3	ND	2.96	102	68.9	26.6
November-2018	0.8	ND	3.87	143	63.0	27.4
December-2018	3.9	ND	3.77	198	74.5	30.5
Annual Average:	3.0	ND	3.79	139	64.9	26.9

Analyte:	Potassium	Sodium	Chloride	Fluoride	Sulfate	Total Dissolved Solids
MDL:	0.20	1	7	0.05	9	100
Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
January-2018	17.7	124	NR	NR	NR	703
February-2018	19.5	141	NR	NR	NR	693
March-2018	21.6	139	193	0.35	82	721
April-2018	NR	NR	NR	NR	NR	806
May-2018	21.9	161	NR	NR	NR	860
June-2018	21.1	166	227	0.50	211	900
July-2018	21.3	158	NR	NR	NR	858
August-2018	20.8	155	NR	NR	NR	769
September-2018	20.8	153	206	0.41	134	799
October-2018	21.6	163	NR	NR	NR	786
November-2018	22.3	171	216	0.18	155	829
December-2018	21.9	167	NR	NR	NR	810
Annual Average:	21.0	154	211	0.36	146	795

Analyte:	Total Cyanides
MDL:	0.005
Units:	mg/L
January-2018	<0.0050
February-2018	0.010
March-2018	<0.0050
April-2018	<0.0050
May-2018	ND
June-2018	0.006
July-2018	ND
August-2018	ND
September-2018	ND
October-2018	ND
November-2018	ND
December-2018	ND
Annual Average:	0.001

MDLs listed are the maximum for the past 12 months

ND= Not Detected

NR= Not Required

NORTH CITY WATER RECLAMATION PLANT
North City Reclaimed Water
Annual Monitoring of Perchlorate, Asbestos and 2,3,7,8-TCDD

Report: Annual Perchlorate Monitoring
Laboratory: Water Quality Chemistry Services
Source: N34-REC WATER - Reclaimed Water

<u>Sample Date</u>	<u>Sample ID</u>	<u>Analysis</u>	<u>Analyte</u>	<u>MDL</u>	<u>Units</u>	<u>Results</u>
23-MAY-2018	W1241298	EPA314.0	Perchlorate	4	µg/L	11.4

Report: Annual Perchlorate Monitoring
Laboratory: TestAmerica Laboratories, Inc.
Source: N34-REC WATER - Reclaimed Water

<u>Sample Date</u>	<u>Sample ID</u>	<u>Analysis</u>	<u>Analyte</u>	<u>MDL</u>	<u>Units</u>	<u>Results</u>
23-MAY-2018	W1241297	EPA314.0	Perchlorate	0.95	µg/L	9.8

Report: Annual Asbestos Monitoring
Laboratory: LA Testing (subcontracted by TestAmerica)
Source: N34-REC WATER - Reclaimed Water

<u>Sample Date</u>	<u>Sample ID</u>	<u>Analysis</u>	<u>Analyte</u>	<u>MDL</u>	<u>Units</u>	<u>Results</u>
23-MAY-2018	W1241297	EPA100.2	Asbestos	0.2	MFL	ND

Report: Annual Tetra Chlorinated Dioxin Monitoring
Laboratory: TestAmerica Laboratories, Inc.
Source: N34-REC WATER - Reclaimed Water

<u>Sample Date</u>	<u>Sample ID</u>	<u>Analysis</u>	<u>Analyte</u>	<u>EDL</u>	<u>Units</u>	<u>Results</u>
23-MAY-2018	W1241296	EPA1613B	2,3,7,8-TCDD	2.0	pg/L	ND

NORTH CITY WATER RECLAMATION PLANT
2018 ANNUAL MONITORING

QUARTERLY SLUDGE PROJECT
Physical Parameters

Source:			N01-PS_INF	N01-PS_INF	N01-PS_INF	N01-PS_INF
Date:	MDL	Units	07-MAR-2018	06-JUN-2018	04-SEP-2018	06-NOV-2018
=====	=====	=====	=====	=====	=====	=====
Ammonia-N	.3	MG/L	32.7	38.9	36.8	37.8
BOD (Biochemical Oxygen Demand)	2	MG/L	472	NR	325	240
Hexane Extractable Material	1.13	MG/L	42.1	69.6	36.0	25.3
Chemical Oxygen Demand	18	MG/L	550	736	801	744
Conductivity	10	UMHOS/CM	1630	1970	1790	1920
MBAS (Surfactants)	.7	MG/L	4.83	4.70	5.79	4.74
pH (grab)		PH	6.6	7.0	NR	NR
Total Alkalinity (bicarbonate)	20	MG/L	263	330	298	311
Total Dissolved Solids	100	MG/L	872	1120	948	1080
Total Suspended Solids	100	MG/L	448	312	328	360
Volatile Suspended Solids	100	MG/L	404	288	296	324
Total Kjeldahl Nitrogen	1.2	MG/L	NR	NR	61.6	66.4
Turbidity	.13	NTU	202	NR	162	158
Sulfides-Total	.35	MG/L	3.7	2.4	2.4	7.0
Total Nitrogen	.78	MG/L	NR	NR	NR	NR
Total Organic Carbon	.3	MG/L	NR	NR	NR	NR
=====	=====	=====	=====	=====	=====	=====

Source:			N01-PEN	N01-PEN	N01-PEN	N01-PEN
Date:	MDL	Units	07-MAR-2018	06-JUN-2018	04-SEP-2018	06-NOV-2018
=====	=====	=====	=====	=====	=====	=====
Ammonia-N	.3	MG/L	39.0	40.0	37.0	39.6
BOD (Biochemical Oxygen Demand)	2	MG/L	352	NR	272	119
Hexane Extractable Material	1.13	MG/L	54.9	66.4	34.8	49.5
Chemical Oxygen Demand	18	MG/L	779	583	831	491
Conductivity	10	UMHOS/CM	1470	1680	1500	1650
MBAS (Surfactants)	.7	MG/L	4.30	4.10	6.70	4.58
pH (grab)		PH	7.2	7.2	NR	NR
Total Alkalinity (bicarbonate)	20	MG/L	305	342	294	295
Total Dissolved Solids	100	MG/L	712	820	728	868
Total Suspended Solids	100	MG/L	412	304	360	232
Volatile Suspended Solids	100	MG/L	356	260	300	208
Total Kjeldahl Nitrogen	1.2	MG/L	NR	NR	61.0	64.0
Turbidity	.13	NTU	150	NR	127	111
Sulfides-Total	.35	MG/L	4.8	4.2	4.4	4.2
Total Nitrogen	.78	MG/L	NR	NR	NR	NR
Total Organic Carbon	.3	MG/L	NR	NR	NR	NR
=====	=====	=====	=====	=====	=====	=====

NR= Not Required
ND= Not Detected

NORTH CITY WATER RECLAMATION PLANT
2018 ANNUAL MONITORING

QUARTERLY SLUDGE PROJECT
Physical Parameters

Source:			N10-EFF	N10-EFF	N10-EFF	N10-EFF
Date:	MDL	Units	07-MAR-2018	06-JUN-2018	04-SEP-2018	06-NOV-2018
Ammonia-N	.3	MG/L	33.8	40.3	37.2	39.5
BOD (Biochemical Oxygen Demand)	2	MG/L	170	NR	162	162
Hexane Extractable Material	1.13	MG/L	29.8	35.1	22.8	26.3
Chemical Oxygen Demand	18	MG/L	408	400	360	374
Conductivity	10	UMHOS/CM	1590	1880	1680	1820
MBAS (Surfactants)	.7	MG/L	4.27	4.47	7.10	4.36
pH (grab)		PH	7.1	7.2	NR	NR
Total Alkalinity (bicarbonate)	20	MG/L	263	324	295	305
Total Dissolved Solids	100	MG/L	NR	1060	876	996
Total Suspended Solids	100	MG/L	94.0	90.0	96.0	72.0
Volatile Suspended Solids	100	MG/L	80.0	78.0	76.0	72.0
Total Kjeldahl Nitrogen	1.2	MG/L	NR	NR	50.2	55.8
Turbidity	.13	NTU	84.4	NR	86.0	89.5
Sulfides-Total	.35	MG/L	0.8	1.1	0.9	1.4
Total Nitrogen	.78	MG/L	NR	NR	NR	NR
Total Organic Carbon	.3	MG/L	NR	NR	NR	NR

Source:			N34-REC WATER	N34-REC WATER	N34-REC WATER	N34-REC WATER
Date:	MDL	Units	07-MAR-2018	06-JUN-2018	04-SEP-2018	06-NOV-2018
Ammonia-N	.3	MG/L	ND	0.7	<0.3	ND
BOD (Biochemical Oxygen Demand)	2	MG/L	ND	NR	ND	ND
Hexane Extractable Material	1.13	MG/L	2.1	2.8	2.9	ND
Chemical Oxygen Demand	18	MG/L	ND	ND	36	36
Conductivity	10	UMHOS/CM	1340	1390	1390	1450
MBAS (Surfactants)	.7	MG/L	ND	ND	ND	ND
pH (grab)		PH	6.76	7.15	6.95	6.93
Total Alkalinity (bicarbonate)	20	MG/L	87	102	91	89
Total Dissolved Solids	100	MG/L	860	944	804	912
Total Suspended Solids	100	MG/L	ND	ND	ND	ND
Volatile Suspended Solids	100	MG/L	ND	ND	ND	ND
Total Kjeldahl Nitrogen	1.2	MG/L	NR	NR	ND	<1.2
Turbidity	.13	NTU	0.97	NR	1.66	0.90
Sulfides-Total	.35	MG/L	0.6	<0.4	ND	ND
Total Nitrogen	.78	MG/L	14.5	NR	18.4	18.6
Total Organic Carbon	.3	MG/L	7.4	6.7	6.5	6.3

NR= Not Required
ND= Not Detected

NORTH CITY WATER RECLAMATION PLANT
2018 ANNUAL MONITORING
Radioactivity

From: 01-JAN-2018 To: 31-DEC-2018

Source	Sample Date	Sample	Units	Gross Alpha Radiation	Gross Beta Radiation
=====	=====	=====	=====	=====	=====
N10-EFF	07-MAR-2018	P1005521	pCi/L	4.0±1.5	11.8±1.7
N10-EFF	06-JUN-2018	P1021358	pCi/L	2.7±1.7	14.4±2.5
N10-EFF	04-SEP-2018	P1042158	pCi/L	6.5±2.3	16.9±2.9
N10-EFF	06-NOV-2018	P1053491	pCi/L	2.8±2.5	18.8±3.0
=====	=====	=====	=====	=====	=====
N01-PS_INF	07-MAR-2018	P1005511	pCi/L	2.8±1.7	20.2±2.4
N01-PS_INF	06-JUN-2018	P1021348	pCi/L	2.7±1.8	12.5±3.3
N01-PS_INF	04-SEP-2018	P1042148	pCi/L	2.7±2.3	7.9±2.0
N01-PS_INF	06-NOV-2018	P1053481	pCi/L	2.3±1.8	13.1±2.1
=====	=====	=====	=====	=====	=====
N01-PEN	07-MAR-2018	P1005516	pCi/L	1.6±1.3	10.4±1.5
N01-PEN	06-JUN-2018	P1021353	pCi/L	4.5±2.4	10.7±2.3
N01-PEN	04-SEP-2018	P1042153	pCi/L	4.7±2.0	16.4±2.0
N01-PEN	06-NOV-2018	P1053486	pCi/L	2.6±1.7	15.7±2.2
=====	=====	=====	=====	=====	=====
N34-REC WATER	07-MAR-2018	P1005526	pCi/L	2.0±1.2	16.3±2.2
N34-REC WATER	06-JUN-2018	P1021363	pCi/L	5.9±3.5	9.7±3.2
N34-REC WATER	04-SEP-2018	P1042163	pCi/L	±1.1	7.1±1.3
N34-REC WATER	06-NOV-2018	P1053496	pCi/L	0.0±1.2	10.6±2.0
=====	=====	=====	=====	=====	=====

ND= Not Detected

NR= Not Required

Units in picocuries per Liter (pCi/L)

N10-EFF = Primary Effluent

N01-PS_INF = North City Pump Station Influent (PS #64)

N01-PEN = Penasquitos Pump Station Influent

N34-REC WATER = NCWRP Reclaimed Water After Mixing

NORTH CITY WATER RECLAMATION PLANT
2018 ANNUAL MONITORING
Organo - Tins

Source:			N01-PS_INF	N01-PS_INF	N01-PS_INF	N01-PEN
Date:			06-JUN-2018	04-SEP-2018	06-NOV-2018	06-JUN-2018
Sample ID:	MDL	Units	P1021348	P1042148	P1053481	P1021353
=====	=====	=====	=====	=====	=====	=====
Tributyltin	.0049	UG/L	ND	ND	ND	ND
Dibutyltin	.01	UG/L	ND	ND	ND	ND
Monobutyltin	.0141	UG/L	ND	ND	ND	ND
=====	=====	=====	=====	=====	=====	=====

Source:			N01-PEN	N01-PEN	N10-EFF	N10-EFF
Date:			04-SEP-2018	06-NOV-2018	06-JUN-2018	04-SEP-2018
Sample ID:	MDL	Units	P1042153	P1053486	P1021358	P1042158
=====	=====	=====	=====	=====	=====	=====
Tributyltin	.0049	UG/L	ND	ND	ND	ND
Dibutyltin	.01	UG/L	ND	ND	ND	ND
Monobutyltin	.0141	UG/L	ND	ND	ND	ND
=====	=====	=====	=====	=====	=====	=====

Source:			N10-EFF	N34-REC WATER	N34-REC WATER	N34-REC WATER
Date:			06-NOV-2018	06-JUN-2018	04-SEP-2018	06-NOV-2018
Sample ID:	MDL	Units	P1053491	P1021363	P1042163	P1053496
=====	=====	=====	=====	=====	=====	=====
Tributyltin	.0049	UG/L	ND	ND	ND	ND
Dibutyltin	.01	UG/L	ND	ND	ND	ND
Monobutyltin	.0141	UG/L	ND	ND	ND	ND
=====	=====	=====	=====	=====	=====	=====

ND= Not Detected

NORTH CITY WATER RECLAMATION PLANT
2018 ANNUAL MONITORING

Phenolic Compounds

Analyte	MDL	Units	N01-PS_INF 07-MAR-2018 P1005511	N01-PS_INF 06-JUN-2018 P1021348	N01-PS_INF 04-SEP-2018 P1042148	N01-PS_INF 06-NOV-2018 P1053481
2,4,6-Trichlorophenol	1.72	UG/L	ND	ND	ND	ND
2,4-Dichlorophenol	1.05	UG/L	ND	ND	ND	ND
2,4-Dimethylphenol	2.1	UG/L	ND	ND	ND	ND
2,4-Dinitrophenol	2.25	UG/L	ND	ND	ND	ND
4,6-dinitro-2-methylphenol	1.58	UG/L	ND	ND	ND	ND
2-Chlorophenol	1.38	UG/L	ND	ND	ND	ND
2-Nitrophenol	1.62	UG/L	ND	ND	ND	ND
4-Chloro-3-methylphenol	1.74	UG/L	ND	ND	ND	ND
4-Nitrophenol	1.19	UG/L	ND	ND	ND	ND
Pentachlorophenol	1.17	UG/L	ND	ND	ND	ND
Phenol	1.84	UG/L	ND	7.05	27.0	30.4
Total Non-Chlorinated Phenols	2.25	UG/L	0.00	7.05	27.0	30.4
Total Chlorinated Phenols	1.74	UG/L	0.00	0.00	0.00	0.00
Phenols	2.25	UG/L	0.00	7.05	27.0	30.4
2-Methylphenol	2.24	UG/L	ND	ND	ND	ND
3-Methylphenol(4-MP is unresolved)		UG/L	NA	NA	NA	NA
4-Methylphenol(3-MP is unresolved)	2.2	UG/L	ND	63.2	43.0	62.2
2,4,5-Trichlorophenol	1.73	UG/L	ND	ND	ND	ND

Analyte	MDL	Units	N01-PEN 07-MAR-2018 P1005516	N01-PEN 06-JUN-2018 P1021353	N01-PEN 04-SEP-2018 P1042153	N01-PEN 06-NOV-2018 P1053486
2,4,6-Trichlorophenol	1.72	UG/L	ND	ND	ND	ND
2,4-Dichlorophenol	1.05	UG/L	ND	ND	ND	ND
2,4-Dimethylphenol	2.1	UG/L	ND	ND	ND	ND
2,4-Dinitrophenol	2.25	UG/L	ND	ND	ND	ND
4,6-dinitro-2-methylphenol	1.58	UG/L	ND	ND	ND	ND
2-Chlorophenol	1.38	UG/L	ND	ND	ND	ND
2-Nitrophenol	1.62	UG/L	ND	ND	ND	ND
4-Chloro-3-methylphenol	1.74	UG/L	ND	ND	ND	ND
4-Nitrophenol	1.19	UG/L	ND	ND	ND	ND
Pentachlorophenol	1.17	UG/L	ND	ND	ND	ND
Phenol	1.84	UG/L	29.1	13.0	ND	17.9
Total Non-Chlorinated Phenols	2.25	UG/L	29.1	13.0	0.00	17.9
Total Chlorinated Phenols	1.74	UG/L	0.00	0.00	0.00	0.00
Phenols	2.25	UG/L	29.1	13.0	0.00	17.9
2-Methylphenol	2.24	UG/L	ND	ND	ND	ND
3-Methylphenol(4-MP is unresolved)		UG/L	NA	NA	NA	NA
4-Methylphenol(3-MP is unresolved)	2.2	UG/L	46.5	13.3	ND	23.7
2,4,5-Trichlorophenol	1.73	UG/L	ND	ND	ND	ND

ND= Not Detected
NA= Not Analyzed

NORTH CITY WATER RECLAMATION PLANT
2018 ANNUAL MONITORING

Phenolic Compounds

Analyte	MDL	Units	N10-EFF 07-MAR-2018 P1005521	N10-EFF 06-JUN-2018 P1021358	N10-EFF 04-SEP-2018 P1042158	N10-EFF 06-NOV-2018 P1053491
2,4,6-Trichlorophenol	1.72	UG/L	ND	ND	ND	ND
2,4-Dichlorophenol	1.05	UG/L	ND	ND	ND	ND
2,4-Dimethylphenol	2.1	UG/L	ND	ND	ND	ND
2,4-Dinitrophenol	2.25	UG/L	ND	ND	ND	ND
4,6-dinitro-2-methylphenol	1.58	UG/L	ND	ND	ND	ND
2-Chlorophenol	1.38	UG/L	ND	ND	ND	ND
2-Nitrophenol	1.62	UG/L	ND	ND	ND	ND
4-Chloro-3-methylphenol	1.74	UG/L	ND	ND	ND	ND
4-Nitrophenol	1.19	UG/L	ND	ND	ND	ND
Pentachlorophenol	1.17	UG/L	ND	ND	ND	ND
Phenol	1.84	UG/L	28.8	5.70	12.7	26.9
Total Non-Chlorinated Phenols	2.25	UG/L	28.8	5.70	12.7	26.9
Total Chlorinated Phenols	1.74	UG/L	0.00	0.00	0.00	0.00
Phenols	2.25	UG/L	28.8	5.70	12.7	26.9
2-Methylphenol	2.24	UG/L	ND	ND	ND	ND
3-Methylphenol(4-MP is unresolved)		UG/L	NA	NA	NA	NA
4-Methylphenol(3-MP is unresolved)	2.2	UG/L	61.1	43.0	25.3	51.6
2,4,5-Trichlorophenol	1.73	UG/L	ND	ND	ND	ND

Analyte	MDL	Units	N34-REC WATER 06-JUN-2018 P1021363	N34-REC WATER 04-SEP-2018 P1042163	N34-REC WATER 06-NOV-2018 P1053496
2,4,6-Trichlorophenol	1.72	UG/L	ND	ND	ND
2,4-Dichlorophenol	1.05	UG/L	ND	ND	ND
2,4-Dimethylphenol	2.1	UG/L	ND	ND	ND
2,4-Dinitrophenol	2.25	UG/L	ND	ND	ND
4,6-dinitro-2-methylphenol	1.58	UG/L	ND	ND	ND
2-Chlorophenol	1.38	UG/L	ND	ND	ND
2-Nitrophenol	1.62	UG/L	ND	ND	ND
4-Chloro-3-methylphenol	1.74	UG/L	ND	ND	ND
4-Nitrophenol	1.19	UG/L	ND	ND	ND
Pentachlorophenol	1.17	UG/L	ND	ND	ND
Phenol	1.84	UG/L	ND	ND	ND
Total Non-Chlorinated Phenols	2.25	UG/L	0.00	0.00	0.00
Total Chlorinated Phenols	1.74	UG/L	0.00	0.00	0.00
Phenols	2.25	UG/L	0.00	0.00	0.00
2-Methylphenol	2.24	UG/L	ND	ND	ND
3-Methylphenol(4-MP is unresolved)		UG/L	NA	NA	NA
4-Methylphenol(3-MP is unresolved)	2.2	UG/L	ND	ND	ND
2,4,5-Trichlorophenol	1.73	UG/L	ND	ND	ND

ND= Not Detected

NA= Not Analyzed

NORTH CITY WATER RECLAMATION PLANT
2018 ANNUAL MONITORING

Chlorinated Pesticides

Analyte	MDL	Units	N01-PS_INF 07-MAR-2018 P1005511	N01-PS_INF 06-JUN-2018 P1021348	N01-PS_INF 04-SEP-2018 P1042148	N01-PS_INF 06-NOV-2018 P1053481
=====	=====	=====	=====	=====	=====	=====
Aldrin	1.22	NG/L	ND	ND	ND	ND
BHC, Alpha isomer	2.31	NG/L	ND	ND	ND	ND
BHC, Beta isomer	1.46	NG/L	ND	ND	ND	ND
BHC, Delta isomer	.89	NG/L	ND	ND	ND	ND
BHC, Gamma isomer	1.84	NG/L	ND	ND	ND	ND
Alpha (cis) Chlordane	.92	NG/L	ND	ND	ND	ND
Gamma (trans) Chlordane	1.97	NG/L	ND	ND	ND	ND
Alpha Chlordene	0	NG/L	NA	NA	NA	NA
Gamma Chlordene	0	NG/L	NA	NA	NA	NA
Cis Nonachlor	.41	NG/L	ND	ND	ND	ND
Dieldrin	.76	NG/L	ND	ND	ND	ND
Endosulfan Sulfate	1.19	NG/L	ND	ND	ND	ND
Alpha Endosulfan	.86	NG/L	ND	ND	ND	ND
Beta Endosulfan	2.89	NG/L	ND	ND	ND	ND
Endrin	.88	NG/L	ND	ND	ND	ND
Endrin aldehyde	1.9	NG/L	ND	ND	ND	ND
Heptachlor	.96	NG/L	ND	ND	ND	ND
Heptachlor epoxide	3.49	NG/L	ND	ND	ND	ND
Methoxychlor	2.68	NG/L	ND	ND	ND	ND
Mirex	1.73	NG/L	ND	ND	ND	ND
o,p-DDD	1.11	NG/L	ND	ND	ND	ND
o,p-DDE	1.89	NG/L	ND	ND	ND	ND
o,p-DDT	.72	NG/L	ND	ND	ND	ND
Oxychlordane	1.3	NG/L	ND	ND	ND	ND
PCB 1016	269	NG/L	ND	ND	ND	ND
PCB 1221	2150	NG/L	ND	ND	ND	ND
PCB 1232	806	NG/L	ND	ND	ND	ND
PCB 1242	269	NG/L	ND	ND	ND	ND
PCB 1248	269	NG/L	ND	ND	ND	ND
PCB 1254	538	NG/L	ND	ND	ND	ND
PCB 1260	538	NG/L	ND	ND	ND	ND
PCB 1262	538	NG/L	ND	ND	ND	ND
p,p-DDD	.74	NG/L	ND	ND	ND	ND
p,p-DDE	1.04	NG/L	ND	ND	ND	ND
p,p-DDT	1.18	NG/L	ND	ND	ND	ND
Toxaphene	269	NG/L	ND	ND	ND	ND
Trans Nonachlor	.62	NG/L	ND	ND	ND	ND
=====	=====	=====	=====	=====	=====	=====
Heptachlors	3.49	NG/L	0	0	0	0
Endosulfans	2.89	NG/L	0	0	0	0
Polychlorinated biphenyls	2150	NG/L	0	0	0	0
Chlordane + related cmpds.	1.97	NG/L	0	0	0	0
DDT and derivatives	1.89	NG/L	0	0	0	0
Hexachlorocyclohexanes	2.31	NG/L	0	0	0	0
Aldrin + Dieldrin	1.22	NG/L	0	0	0	0
=====	=====	=====	=====	=====	=====	=====
Chlorinated Hydrocarbons	2150	NG/L	0	0	0	0
=====	=====	=====	=====	=====	=====	=====

NA= Not Analyzed

ND= Not Detected

NORTH CITY WATER RECLAMATION PLANT
2018 ANNUAL MONITORING

Chlorinated Pesticides

Analyte	MDL	Units	N01-PEN 07-MAR-2018 P1005516	N01-PEN 06-JUN-2018 P1021353	N01-PEN 04-SEP-2018 P1042153	N01-PEN 06-NOV-2018 P1053486
=====	=====	=====	=====	=====	=====	=====
Aldrin	1.22	NG/L	ND	ND	ND	ND
BHC, Alpha isomer	2.31	NG/L	ND	ND	ND	ND
BHC, Beta isomer	1.46	NG/L	ND	ND	ND	ND
BHC, Delta isomer	.89	NG/L	ND	ND	ND	ND
BHC, Gamma isomer	1.84	NG/L	ND	ND	ND	ND
Alpha (cis) Chlordane	.92	NG/L	ND	ND	ND	ND
Gamma (trans) Chlordane	1.97	NG/L	ND	ND	ND	ND
Alpha Chlordene	0	NG/L	NA	NA	NA	NA
Gamma Chlordene	0	NG/L	NA	NA	NA	NA
Cis Nonachlor	.41	NG/L	ND	ND	ND	ND
Dieldrin	.76	NG/L	ND	ND	ND	ND
Endosulfan Sulfate	1.19	NG/L	ND	ND	ND	ND
Alpha Endosulfan	.86	NG/L	ND	ND	ND	ND
Beta Endosulfan	2.89	NG/L	ND	ND	ND	ND
Endrin	.88	NG/L	ND	ND	ND	ND
Endrin aldehyde	1.9	NG/L	ND	ND	ND	ND
Heptachlor	.96	NG/L	ND	ND	ND	ND
Heptachlor epoxide	3.49	NG/L	ND	ND	ND	ND
Methoxychlor	2.68	NG/L	ND	ND	ND	ND
Mirex	1.73	NG/L	ND	ND	ND	ND
o,p-DDD	1.11	NG/L	ND	ND	ND	ND
o,p-DDE	1.89	NG/L	ND	ND	ND	ND
o,p-DDT	.72	NG/L	ND	ND	ND	ND
Oxychlordane	1.3	NG/L	ND	ND	ND	ND
PCB 1016	269	NG/L	ND	ND	ND	ND
PCB 1221	2150	NG/L	ND	ND	ND	ND
PCB 1232	806	NG/L	ND	ND	ND	ND
PCB 1242	269	NG/L	ND	ND	ND	ND
PCB 1248	269	NG/L	ND	ND	ND	ND
PCB 1254	538	NG/L	ND	ND	ND	ND
PCB 1260	538	NG/L	ND	ND	ND	ND
PCB 1262	538	NG/L	ND	ND	ND	ND
p,p-DDD	.74	NG/L	ND	ND	ND	ND
p,p-DDE	1.04	NG/L	ND	ND	ND	ND
p,p-DDT	1.18	NG/L	ND	ND	ND	ND
Toxaphene	269	NG/L	ND	ND	ND	ND
Trans Nonachlor	.62	NG/L	ND	ND	ND	ND
=====	=====	=====	=====	=====	=====	=====
Heptachlors	3.49	NG/L	0	0	0	0
Endosulfans	2.89	NG/L	0	0	0	0
Polychlorinated biphenyls	2150	NG/L	0	0	0	0
Chlordane + related cmpds.	1.97	NG/L	0	0	0	0
DDT and derivatives	1.89	NG/L	0	0	0	0
Hexachlorocyclohexanes	2.31	NG/L	0	0	0	0
Aldrin + Dieldrin	1.22	NG/L	0	0	0	0
=====	=====	=====	=====	=====	=====	=====
Chlorinated Hydrocarbons	2150	NG/L	0	0	0	0
=====	=====	=====	=====	=====	=====	=====

NA= Not Analyzed
ND= Not Detected

**NORTH CITY WATER RECLAMATION PLANT
2018 ANNUAL MONITORING**

Chlorinated Pesticides

Analyte	MDL	Units	N10-EFF 07-MAR-2018 P1005521	N10-EFF 06-JUN-2018 P1021358	N10-EFF 04-SEP-2018 P1042158	N10-EFF 06-NOV-2018 P1053491
=====	=====	=====	=====	=====	=====	=====
Aldrin	1.22	NG/L	ND	ND	ND	ND
BHC, Alpha isomer	2.31	NG/L	ND	ND	ND	ND
BHC, Beta isomer	1.46	NG/L	ND	ND	ND	ND
BHC, Delta isomer	.89	NG/L	ND	ND	ND	ND
BHC, Gamma isomer	1.84	NG/L	ND	ND	ND	ND
Alpha (cis) Chlordane	.92	NG/L	ND	ND	ND	ND
Gamma (trans) Chlordane	1.97	NG/L	ND	ND	ND	ND
Alpha Chlordene	0	NG/L	NA	NA	NA	NA
Gamma Chlordene	0	NG/L	NA	NA	NA	NA
Cis Nonachlor	.41	NG/L	ND	ND	ND	ND
Dieldrin	.76	NG/L	ND	ND	ND	ND
Endosulfan Sulfate	1.19	NG/L	ND	ND	ND	ND
Alpha Endosulfan	.86	NG/L	ND	ND	ND	ND
Beta Endosulfan	2.89	NG/L	ND	ND	ND	ND
Endrin	.88	NG/L	ND	ND	ND	ND
Endrin aldehyde	1.9	NG/L	ND	ND	ND	ND
Heptachlor	.96	NG/L	ND	ND	ND	ND
Heptachlor epoxide	3.49	NG/L	ND	ND	ND	ND
Methoxychlor	2.68	NG/L	ND	ND	ND	ND
Mirex	1.73	NG/L	ND	ND	ND	ND
o,p-DDD	1.11	NG/L	ND	ND	ND	ND
o,p-DDE	1.89	NG/L	ND	ND	ND	ND
o,p-DDT	.72	NG/L	ND	ND	ND	ND
Oxychlordane	1.3	NG/L	ND	ND	ND	ND
PCB 1016	269	NG/L	ND	ND	ND	ND
PCB 1221	2150	NG/L	ND	ND	ND	ND
PCB 1232	806	NG/L	ND	ND	ND	ND
PCB 1242	269	NG/L	ND	ND	ND	ND
PCB 1248	269	NG/L	ND	ND	ND	ND
PCB 1254	538	NG/L	ND	ND	ND	ND
PCB 1260	538	NG/L	ND	ND	ND	ND
PCB 1262	538	NG/L	ND	ND	ND	ND
p,p-DDD	.74	NG/L	ND	ND	ND	ND
p,p-DDE	1.04	NG/L	ND	ND	ND	ND
p,p-DDT	1.18	NG/L	ND	ND	ND	ND
Toxaphene	269	NG/L	ND	ND	ND	ND
Trans Nonachlor	.62	NG/L	ND	ND	ND	ND
=====	=====	=====	=====	=====	=====	=====
Heptachlors	3.49	NG/L	0	0	0	0
Endosulfans	2.89	NG/L	0	0	0	0
Polychlorinated biphenyls	2150	NG/L	0	0	0	0
Chlordane + related cmpds.	1.97	NG/L	0	0	0	0
DDT and derivatives	1.89	NG/L	0	0	0	0
Hexachlorocyclohexanes	2.31	NG/L	0	0	0	0
Aldrin + Dieldrin	1.22	NG/L	0	0	0	0
=====	=====	=====	=====	=====	=====	=====
Chlorinated Hydrocarbons	2150	NG/L	0	0	0	0
=====	=====	=====	=====	=====	=====	=====

NA= Not Analyzed

ND= Not Detected

**NORTH CITY WATER RECLAMATION PLANT
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Chlorinated Pesticides

Analyte	MDL	Units	N34-REC WATER 07-MAR-2018 P1005526	N34-REC WATER 06-JUN-2018 P1021363	N34-REC WATER 04-SEP-2018 P1042163	N34-REC WATER 06-NOV-2018 P1053496
=====	=====	=====	=====	=====	=====	=====
Aldrin	1.22	NG/L	ND	ND	ND	ND
BHC, Alpha isomer	2.31	NG/L	ND	ND	ND	ND
BHC, Beta isomer	1.46	NG/L	ND	ND	ND	ND
BHC, Delta isomer	.89	NG/L	ND	ND	ND	ND
BHC, Gamma isomer	1.84	NG/L	ND	ND	ND	ND
Alpha (cis) Chlordane	.92	NG/L	ND	ND	ND	ND
Gamma (trans) Chlordane	1.97	NG/L	ND	ND	ND	ND
Alpha Chlordene	0	NG/L	NA	NA	NA	NA
Gamma Chlordene	0	NG/L	NA	NA	NA	NA
Cis Nonachlor	.41	NG/L	ND	ND	ND	ND
Dieldrin	.76	NG/L	ND	ND	ND	ND
Endosulfan Sulfate	1.19	NG/L	ND	ND	ND	ND
Alpha Endosulfan	.86	NG/L	ND	ND	ND	ND
Beta Endosulfan	2.89	NG/L	ND	ND	ND	ND
Endrin	.88	NG/L	ND	ND	ND	ND
Endrin aldehyde	1.9	NG/L	ND	ND	ND	ND
Heptachlor	.96	NG/L	ND	ND	ND	ND
Heptachlor epoxide	3.49	NG/L	ND	ND	ND	ND
Methoxychlor	2.68	NG/L	ND	ND	ND	ND
Mirex	1.73	NG/L	ND	ND	ND	ND
o,p-DDD	1.11	NG/L	ND	ND	ND	ND
o,p-DDE	1.89	NG/L	ND	ND	ND	ND
o,p-DDT	.72	NG/L	ND	ND	ND	ND
Oxychlordane	1.3	NG/L	ND	ND	ND	ND
PCB 1016	269	NG/L	ND	ND	ND	ND
PCB 1221	2150	NG/L	ND	ND	ND	ND
PCB 1232	806	NG/L	ND	ND	ND	ND
PCB 1242	269	NG/L	ND	ND	ND	ND
PCB 1248	269	NG/L	ND	ND	ND	ND
PCB 1254	538	NG/L	ND	ND	ND	ND
PCB 1260	538	NG/L	ND	ND	ND	ND
PCB 1262	538	NG/L	ND	ND	ND	ND
p,p-DDD	.74	NG/L	ND	ND	ND	ND
p,p-DDE	1.04	NG/L	ND	ND	ND	ND
p,p-DDT	1.18	NG/L	ND	ND	ND	ND
Toxaphene	269	NG/L	ND	ND	ND	ND
Trans Nonachlor	.62	NG/L	ND	ND	ND	ND
=====	=====	=====	=====	=====	=====	=====
Heptachlors	3.49	NG/L	0	0	0	0
Endosulfans	2.89	NG/L	0	0	0	0
Polychlorinated biphenyls	2150	NG/L	0	0	0	0
Chlordane + related cmpds.	1.97	NG/L	0	0	0	0
DDT and derivatives	1.89	NG/L	0	0	0	0
Hexachlorocyclohexanes	2.31	NG/L	0	0	0	0
Aldrin + Dieldrin	1.22	NG/L	0	0	0	0
=====	=====	=====	=====	=====	=====	=====
Chlorinated Hydrocarbons	2150	NG/L	0	0	0	0
=====	=====	=====	=====	=====	=====	=====

NA= Not Analyzed
ND= Not Detected

NORTH CITY WATER RECLAMATION PLANT
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Organophosphorous Pesticides

Analyte	MDL Units	N01-PS_INF 06-JUN-2018 P1021348	N01-PS_INF 06-NOV-2018 P1053481	N01-PEN 06-JUN-2018 P1021353	N01-PEN 06-NOV-2018 P1053486
Demeton O	.01 UG/L	ND	ND	ND	ND
Demeton S	.04 UG/L	ND	ND	ND	ND
Diazinon	.02 UG/L	ND	ND	ND	ND
Guthion	.03 UG/L	ND	ND	ND	ND
Malathion	.02 UG/L	ND	ND	ND	DNQ0.070
Parathion	.01 UG/L	ND	ND	ND	ND
Thiophosphorus Pesticides	.03 UG/L	0.000	0.000	0.000	0.070
Demeton -O, -S	.04 UG/L	0.000	0.000	0.000	0.000
Total Organophosphorus Pesticides	.05 UG/L	0.000	0.000	0.000	0.070
Dichlorvos	.01 UG/L	ND	ND	ND	ND
Disulfoton	.01 UG/L	ND	ND	ND	ND
Stirophos	.01 UG/L	ND	ND	ND	ND
Coumaphos	.05 UG/L	ND	ND	ND	ND
Chlorpyrifos	.02 UG/L	ND	ND	ND	ND

Analyte	MDL Units	N10-EFF 06-JUN-2018 P1021358	N10-EFF 06-NOV-2018 P1053491	N34-REC WATER 06-JUN-2018 P1021363	N34-REC WATER 06-NOV-2018 P1053496
Demeton O	.01 UG/L	ND	ND	ND	ND
Demeton S	.04 UG/L	ND	ND	ND	ND
Diazinon	.02 UG/L	ND	ND	ND	ND
Guthion	.03 UG/L	ND	ND	ND	ND
Malathion	.02 UG/L	ND	DNQ0.045	ND	ND
Parathion	.01 UG/L	ND	ND	ND	ND
Thiophosphorus Pesticides	.03 UG/L	0.000	0.045	0.000	0.000
Demeton -O, -S	.04 UG/L	0.000	0.000	0.000	0.000
Total Organophosphorus Pesticides	.05 UG/L	0.000	0.045	0.000	0.000
Dichlorvos	.01 UG/L	ND	ND	ND	ND
Disulfoton	.01 UG/L	ND	ND	ND	ND
Stirophos	.01 UG/L	ND	ND	ND	ND
Coumaphos	.05 UG/L	ND	ND	ND	ND
Chlorpyrifos	.02 UG/L	ND	ND	ND	ND

ND= Not Detected

DNQ= Detected but not quantified. Result is less than minimum Level but greater than or equal to the MDL.

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Base/Neutral Compounds

Analyte	MDL	Units	N01-PS_INF 07-MAR-2018 P1005511	N01-PS_INF 06-JUN-2018 P1021348	N01-PS_INF 04-SEP-2018 P1042148	N01-PS_INF 06-NOV-2018 P1053481
1,2,4-Trichlorobenzene	1.58	UG/L	ND	ND	ND	ND
1,2-Diphenylhydrazine	1.43	UG/L	ND	ND	ND	ND
2,4-Dinitrotoluene	1.42	UG/L	ND	ND	ND	ND
2,6-Dinitrotoluene	1.6	UG/L	ND	ND	ND	ND
Dibenzo(a,h)anthracene	1.05	UG/L	ND	ND	ND	ND
Diethyl phthalate	3.18	UG/L	8.8	ND	ND	5.2
Dimethyl phthalate	1.5	UG/L	ND	ND	ND	ND
Di-n-butyl phthalate	4.13	UG/L	ND	ND	ND	ND
Di-n-octyl phthalate	1.04	UG/L	ND	3.2	ND	ND
2-Chloronaphthalene	1.95	UG/L	ND	ND	ND	ND
3,3-Dichlorobenzidine	2.54	UG/L	ND	ND	ND	ND
3,4-Benzo(b)fluoranthene	1.41	UG/L	ND	ND	ND	ND
4-Bromophenyl phenyl ether	1.46	UG/L	ND	ND	ND	ND
4-Chlorophenyl phenyl ether	1.64	UG/L	ND	ND	ND	ND
Hexachloroethane	1.38	UG/L	ND	ND	ND	ND
Hexachlorobenzene	1.54	UG/L	ND	ND	ND	ND
Hexachlorobutadiene	1.71	UG/L	ND	ND	ND	ND
Hexachlorocyclopentadiene	1.3	UG/L	ND	ND	ND	ND
Acenaphthene	1.88	UG/L	ND	ND	ND	ND
Acenaphthylene	1.85	UG/L	ND	ND	ND	ND
Anthracene	1.35	UG/L	ND	ND	ND	ND
Bis-(2-chloroisopropyl) ether	1.21	UG/L	ND	ND	ND	ND
Bis-(2-ethylhexyl) phthalate	9.26	UG/L	ND	ND	ND	20.9
Benzidine	1.58	UG/L	ND	ND	ND	ND
Benzo[a]anthracene	1.15	UG/L	ND	ND	ND	ND
Benzo[a]pyrene	1.3	UG/L	ND	ND	ND	ND
Benzo[g,h,i]perylene	1.14	UG/L	ND	ND	ND	ND
Benzo[k]fluoranthene	1.55	UG/L	ND	ND	ND	ND
Bis-(2-chloroethoxy) methane	1.05	UG/L	ND	ND	ND	ND
Bis-(2-chloroethyl) ether	1.44	UG/L	ND	ND	ND	ND
Butyl benzyl phthalate	2.96	UG/L	ND	ND	ND	ND
Chrysene	1.21	UG/L	ND	ND	ND	ND
Fluoranthene	1.39	UG/L	ND	ND	ND	ND
Fluorene	1.68	UG/L	ND	ND	ND	ND
Indeno(1,2,3-CD)pyrene	1.19	UG/L	ND	ND	ND	ND
Isophorone	1.6	UG/L	ND	ND	ND	ND
Naphthalene	1.72	UG/L	ND	ND	ND	ND
Nitrobenzene	1.67	UG/L	ND	ND	ND	ND
N-nitrosodimethylamine	1.32	UG/L	ND	ND	ND	ND
N-nitrosodiphenylamine	3.63	UG/L	ND	ND	ND	ND
N-nitrosodi-n-propylamine	1.21	UG/L	ND	ND	ND	ND
Phenanthrene	1.4	UG/L	ND	ND	ND	ND
Pyrene	1.49	UG/L	ND	ND	ND	ND
Polynuc. Aromatic Hydrocarbons	1.85	UG/L	0.0	0.0	0.0	0.0
Base/Neutral Compounds	9.26	UG/L	8.80	3.20	0.00	26.1
1-Methylnaphthalene	2.27	UG/L	ND	ND	ND	ND
2-Methylnaphthalene	2.23	UG/L	ND	ND	ND	ND
2,6-Dimethylnaphthalene	2.25	UG/L	ND	ND	ND	ND
2,3,5-Trimethylnaphthalene	2.27	UG/L	ND	ND	ND	ND
1-Methylphenanthrene	1.52	UG/L	ND	ND	ND	ND
Benzo[e]pyrene	1.5	UG/L	ND	ND	ND	ND
Perylene	1.47	UG/L	ND	ND	ND	ND
Biphenyl	2.39	UG/L	ND	ND	ND	ND
Pyridine	3.47	UG/L	ND	ND	ND	ND

ND= Not Detected

NORTH CITY WATER RECLAMATION PLANT
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Base/Neutral Compounds

Analyte	MDL	Units	N01-PEN 07-MAR-2018 P1005516	N01-PEN 06-JUN-2018 P1021353	N01-PEN 04-SEP-2018 P1042153	N01-PEN 06-NOV-2018 P1053486
1,2,4-Trichlorobenzene	1.58	UG/L	ND	ND	ND	ND
1,2-Diphenylhydrazine	1.43	UG/L	ND	ND	ND	ND
2,4-Dinitrotoluene	1.42	UG/L	ND	ND	ND	ND
2,6-Dinitrotoluene	1.6	UG/L	ND	ND	ND	ND
Dibenzo(a,h)anthracene	1.05	UG/L	ND	ND	ND	ND
Diethyl phthalate	3.18	UG/L	8.5	ND	3.4	ND
Dimethyl phthalate	1.5	UG/L	ND	ND	ND	ND
Di-n-butyl phthalate	4.13	UG/L	ND	ND	ND	ND
Di-n-octyl phthalate	1.04	UG/L	ND	ND	ND	ND
2-Chloronaphthalene	1.95	UG/L	ND	ND	ND	ND
3,3-Dichlorobenzidine	2.54	UG/L	ND	ND	ND	ND
3,4-Benzo(b)fluoranthene	1.41	UG/L	ND	ND	ND	ND
4-Bromophenyl phenyl ether	1.46	UG/L	ND	ND	ND	ND
4-Chlorophenyl phenyl ether	1.64	UG/L	ND	ND	ND	ND
Hexachloroethane	1.38	UG/L	ND	ND	ND	ND
Hexachlorobenzene	1.54	UG/L	ND	ND	ND	ND
Hexachlorobutadiene	1.71	UG/L	ND	ND	ND	ND
Hexachlorocyclopentadiene	1.3	UG/L	ND	ND	ND	ND
Acenaphthene	1.88	UG/L	ND	ND	ND	ND
Acenaphthylene	1.85	UG/L	ND	ND	ND	ND
Anthracene	1.35	UG/L	ND	ND	ND	ND
Bis-(2-chloroisopropyl) ether	1.21	UG/L	ND	ND	ND	ND
Bis-(2-ethylhexyl) phthalate	9.26	UG/L	ND	9.0	ND	ND
Benzidine	1.58	UG/L	ND	ND	ND	ND
Benzo[a]anthracene	1.15	UG/L	ND	ND	ND	ND
Benzo[a]pyrene	1.3	UG/L	ND	ND	ND	ND
Benzo[g,h,i]perylene	1.14	UG/L	ND	ND	ND	ND
Benzo[k]fluoranthene	1.55	UG/L	ND	ND	ND	ND
Bis-(2-chloroethoxy) methane	1.05	UG/L	ND	ND	ND	ND
Bis-(2-chloroethyl) ether	1.44	UG/L	ND	ND	ND	ND
Butyl benzyl phthalate	2.96	UG/L	ND	ND	ND	ND
Chrysene	1.21	UG/L	ND	ND	ND	ND
Fluoranthene	1.39	UG/L	ND	ND	ND	ND
Fluorene	1.68	UG/L	ND	ND	ND	ND
Indeno(1,2,3-CD)pyrene	1.19	UG/L	ND	ND	ND	ND
Isophorone	1.6	UG/L	ND	ND	ND	ND
Naphthalene	1.72	UG/L	ND	ND	ND	ND
Nitrobenzene	1.67	UG/L	ND	ND	ND	ND
N-nitrosodimethylamine	1.32	UG/L	ND	ND	ND	ND
N-nitrosodiphenylamine	3.63	UG/L	ND	ND	ND	ND
N-nitrosodi-n-propylamine	1.21	UG/L	ND	ND	ND	ND
Phenanthrene	1.4	UG/L	ND	ND	ND	ND
Pyrene	1.49	UG/L	ND	ND	ND	ND
Polynuc. Aromatic Hydrocarbons	1.85	UG/L	0.0	0.0	0.0	0.0
Base/Neutral Compounds	9.26	UG/L	8.50	9.00	3.40	0.00
1-Methylnaphthalene	2.27	UG/L	ND	ND	ND	ND
2-Methylnaphthalene	2.23	UG/L	ND	ND	ND	ND
2,6-Dimethylnaphthalene	2.25	UG/L	ND	ND	ND	ND
2,3,5-Trimethylnaphthalene	2.27	UG/L	ND	ND	ND	ND
1-Methylphenanthrene	1.52	UG/L	ND	ND	ND	ND
Benzo[e]pyrene	1.5	UG/L	ND	ND	ND	ND
Perylene	1.47	UG/L	ND	ND	ND	ND
Biphenyl	2.39	UG/L	ND	ND	ND	ND
Pyridine	3.47	UG/L	7.4	7.8	ND	5.9

ND= Not Detected

NORTH CITY WATER RECLAMATION PLANT
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Base/Neutral Compounds

Analyte	MDL	Units	N10-EFF 07-MAR-2018 P1005521	N10-EFF 06-JUN-2018 P1021358	N10-EFF 04-SEP-2018 P1042158	N10-EFF 06-NOV-2018 P1053491
1,2,4-Trichlorobenzene	1.58	UG/L	ND	ND	ND	ND
1,2-Diphenylhydrazine	1.43	UG/L	ND	ND	ND	ND
2,4-Dinitrotoluene	1.42	UG/L	ND	ND	ND	ND
2,6-Dinitrotoluene	1.6	UG/L	ND	ND	ND	ND
Dibenzo(a,h)anthracene	1.05	UG/L	ND	ND	ND	ND
Diethyl phthalate	3.18	UG/L	ND	ND	ND	3.3
Dimethyl phthalate	1.5	UG/L	ND	ND	ND	ND
Di-n-butyl phthalate	4.13	UG/L	ND	ND	ND	ND
Di-n-octyl phthalate	1.04	UG/L	ND	ND	ND	ND
2-Chloronaphthalene	1.95	UG/L	ND	ND	ND	ND
3,3-Dichlorobenzidine	2.54	UG/L	ND	ND	ND	ND
3,4-Benzo(b)fluoranthene	1.41	UG/L	ND	ND	ND	ND
4-Bromophenyl phenyl ether	1.46	UG/L	ND	ND	ND	ND
4-Chlorophenyl phenyl ether	1.64	UG/L	ND	ND	ND	ND
Hexachloroethane	1.38	UG/L	ND	ND	ND	ND
Hexachlorobenzene	1.54	UG/L	ND	ND	ND	ND
Hexachlorobutadiene	1.71	UG/L	ND	ND	ND	ND
Hexachlorocyclopentadiene	1.3	UG/L	ND	ND	ND	ND
Acenaphthene	1.88	UG/L	ND	ND	ND	ND
Acenaphthylene	1.85	UG/L	ND	ND	ND	ND
Anthracene	1.35	UG/L	ND	ND	ND	ND
Bis-(2-chloroisopropyl) ether	1.21	UG/L	ND	ND	ND	ND
Bis-(2-ethylhexyl) phthalate	9.26	UG/L	ND	11.7	ND	11.9
Benzidine	1.58	UG/L	ND	ND	ND	ND
Benzo[a]anthracene	1.15	UG/L	ND	ND	ND	ND
Benzo[a]pyrene	1.3	UG/L	ND	ND	ND	ND
Benzo[g,h,i]perylene	1.14	UG/L	ND	ND	ND	ND
Benzo[k]fluoranthene	1.55	UG/L	ND	ND	ND	ND
Bis-(2-chloroethoxy) methane	1.05	UG/L	ND	ND	ND	ND
Bis-(2-chloroethyl) ether	1.44	UG/L	ND	ND	ND	ND
Butyl benzyl phthalate	2.96	UG/L	ND	ND	ND	ND
Chrysene	1.21	UG/L	ND	ND	ND	ND
Fluoranthene	1.39	UG/L	ND	ND	ND	ND
Fluorene	1.68	UG/L	ND	ND	ND	ND
Indeno(1,2,3-CD)pyrene	1.19	UG/L	ND	ND	ND	ND
Isophorone	1.6	UG/L	ND	ND	ND	ND
Naphthalene	1.72	UG/L	ND	ND	ND	ND
Nitrobenzene	1.67	UG/L	ND	ND	ND	ND
N-nitrosodimethylamine	1.32	UG/L	ND	ND	ND	ND
N-nitrosodiphenylamine	3.63	UG/L	ND	ND	ND	ND
N-nitrosodi-n-propylamine	1.21	UG/L	ND	ND	ND	ND
Phenanthrene	1.4	UG/L	ND	ND	ND	ND
Pyrene	1.49	UG/L	ND	ND	ND	ND
Polynuc. Aromatic Hydrocarbons	1.85	UG/L	0.0	0.0	0.0	0.0
Base/Neutral Compounds	9.26	UG/L	0.00	11.7	0.00	15.2
1-Methylnaphthalene	2.27	UG/L	ND	ND	ND	ND
2-Methylnaphthalene	2.23	UG/L	ND	ND	ND	ND
2,6-Dimethylnaphthalene	2.25	UG/L	ND	ND	ND	ND
2,3,5-Trimethylnaphthalene	2.27	UG/L	ND	ND	ND	ND
1-Methylphenanthrene	1.52	UG/L	ND	ND	ND	ND
Benzo[e]pyrene	1.5	UG/L	ND	ND	ND	ND
Perylene	1.47	UG/L	ND	ND	ND	ND
Biphenyl	2.39	UG/L	ND	ND	ND	ND
Pyridine	3.47	UG/L	3.9	ND	ND	ND

ND= Not Detected

NORTH CITY WATER RECLAMATION PLANT
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Base/Neutral Compounds

Analyte	MDL	Units	N34-REC WATER	N34-REC WATER	N34-REC WATER	N34-REC WATER
			07-MAR-2018 P1005526	06-JUN-2018 P1021363	04-SEP-2018 P1042163	06-NOV-2018 P1053496
1,2,4-Trichlorobenzene	1.58	UG/L	ND	ND	ND	ND
1,2-Diphenylhydrazine	1.43	UG/L	ND	ND	ND	ND
2,4-Dinitrotoluene	1.42	UG/L	ND	ND	ND	ND
2,6-Dinitrotoluene	1.6	UG/L	ND	ND	ND	ND
Dibenzo(a,h)anthracene	1.05	UG/L	ND	ND	ND	ND
Diethyl phthalate	3.18	UG/L	12.7	ND	ND	ND
Dimethyl phthalate	1.5	UG/L	ND	ND	ND	ND
Di-n-butyl phthalate	4.13	UG/L	ND	ND	ND	ND
Di-n-octyl phthalate	1.04	UG/L	ND	ND	ND	ND
2-Chloronaphthalene	1.95	UG/L	ND	ND	ND	ND
3,3-Dichlorobenzidine	2.54	UG/L	ND	ND	ND	ND
3,4-Benzo(b)fluoranthene	1.41	UG/L	ND	ND	ND	ND
4-Bromophenyl phenyl ether	1.46	UG/L	ND	ND	ND	ND
4-Chlorophenyl phenyl ether	1.64	UG/L	ND	ND	ND	ND
Hexachloroethane	1.38	UG/L	ND	ND	ND	ND
Hexachlorobenzene	1.54	UG/L	ND	ND	ND	ND
Hexachlorobutadiene	1.71	UG/L	ND	ND	ND	ND
Hexachlorocyclopentadiene	1.3	UG/L	ND	ND	ND	ND
Acenaphthene	1.88	UG/L	ND	ND	ND	ND
Acenaphthylene	1.85	UG/L	ND	ND	ND	ND
Anthracene	1.35	UG/L	ND	ND	ND	ND
Bis-(2-chloroisopropyl) ether	1.21	UG/L	ND	ND	ND	ND
Bis-(2-ethylhexyl) phthalate	9.26	UG/L	ND	30.7	*	19.4
Benzidine	1.58	UG/L	ND	ND	ND	ND
Benzo[a]anthracene	1.15	UG/L	ND	ND	ND	ND
Benzo[a]pyrene	1.3	UG/L	ND	ND	ND	ND
Benzo[g,h,i]perylene	1.14	UG/L	ND	ND	ND	ND
Benzo[k]fluoranthene	1.55	UG/L	ND	ND	ND	ND
Bis-(2-chloroethoxy) methane	1.05	UG/L	ND	ND	ND	ND
Bis-(2-chloroethyl) ether	1.44	UG/L	ND	ND	ND	ND
Butyl benzyl phthalate	2.96	UG/L	ND	ND	ND	ND
Chrysene	1.21	UG/L	ND	ND	ND	ND
Fluoranthene	1.39	UG/L	ND	ND	ND	ND
Fluorene	1.68	UG/L	ND	ND	ND	ND
Indeno(1,2,3-CD)pyrene	1.19	UG/L	ND	ND	ND	ND
Isophorone	1.6	UG/L	ND	ND	ND	ND
Naphthalene	1.72	UG/L	ND	ND	ND	ND
Nitrobenzene	1.67	UG/L	ND	ND	ND	ND
N-nitrosodimethylamine	1.32	UG/L	ND	ND	ND	ND
N-nitrosodiphenylamine	3.63	UG/L	ND	ND	ND	ND
N-nitrosodi-n-propylamine	1.21	UG/L	ND	ND	ND	ND
Phenanthrene	1.4	UG/L	ND	ND	ND	ND
Pyrene	1.49	UG/L	ND	ND	ND	ND
Polynuc. Aromatic Hydrocarbons	1.85	UG/L	0.0	0.0	0.0	0.0
Base/Neutral Compounds	9.26	UG/L	12.7	30.7	0.00	19.4
1-Methylnaphthalene	2.27	UG/L	ND	ND	ND	ND
2-Methylnaphthalene	2.23	UG/L	ND	ND	ND	ND
2,6-Dimethylnaphthalene	2.25	UG/L	ND	ND	ND	ND
2,3,5-Trimethylnaphthalene	2.27	UG/L	ND	ND	ND	ND
1-Methylphenanthrene	1.52	UG/L	ND	ND	ND	ND
Benzo[e]pyrene	1.5	UG/L	ND	ND	ND	ND
Perylene	1.47	UG/L	ND	ND	ND	ND
Biphenyl	2.39	UG/L	ND	ND	ND	ND
Pyridine	3.47	UG/L	ND	ND	ND	ND

ND= Not Detected

* = Data not reportable due to recovery being over the calibration curve.

NORTH CITY WATER RECLAMATION PLANT
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Benzidines

Source:			N01-PS_INF	N01-PS_INF	N01-PS_INF	N01-PS_INF
Date:			07-MAR-2018	06-JUN-2018	04-SEP-2018	06-NOV-2018
	MDL	Units	P1005511	P1021348	P1042148	P1053481
=====	=====	=====	=====	=====	=====	=====
3,3-Dichlorobenzidine	2.54	UG/L	ND	ND	ND	ND
Benzidine	1.58	UG/L	ND	ND	ND	ND
=====	=====	=====	=====	=====	=====	=====

Source:			N01-PEN	N01-PEN	N01-PEN	N01-PEN
Date:			07-MAR-2018	06-JUN-2018	04-SEP-2018	06-NOV-2018
	MDL	Units	P1005516	P1021353	P1042153	P1053486
=====	=====	=====	=====	=====	=====	=====
3,3-Dichlorobenzidine	2.54	UG/L	ND	ND	ND	ND
Benzidine	1.58	UG/L	ND	ND	ND	ND
=====	=====	=====	=====	=====	=====	=====

Source:			N10-EFF	N10-EFF	N10-EFF	N10-EFF
Date:			07-MAR-2018	06-JUN-2018	04-SEP-2018	06-NOV-2018
	MDL	Units	P1005521	P1021358	P1042158	P1053491
=====	=====	=====	=====	=====	=====	=====
3,3-Dichlorobenzidine	2.54	UG/L	ND	ND	ND	ND
Benzidine	1.58	UG/L	ND	ND	ND	ND
=====	=====	=====	=====	=====	=====	=====

Source:			N34-REC WATER	N34-REC WATER	N34-REC WATER	N34-REC WATER
Date:			07-MAR-2018	06-JUN-2018	04-SEP-2018	06-NOV-2018
	MDL	Units	P1005526	P1021363	P1042163	P1053496
=====	=====	=====	=====	=====	=====	=====
3,3-Dichlorobenzidine	2.54	UG/L	ND	ND	ND	ND
Benzidine	1.58	UG/L	ND	ND	ND	ND
=====	=====	=====	=====	=====	=====	=====

ND= Not Detected

NORTH CITY WATER RECLAMATION PLANT
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Priority Pollutants Purgeable Compounds
EPA Methods 624 and 8260B

Analyte	MDL	Units	N01-PS_INF 21-MAR-2018 P1010808	N01-PS_INF 06-JUN-2018 P1021351	N01-PS_INF 11-SEP-2018 P1042151	N01-PS_INF 06-NOV-2018 P1053484
			=====	=====	=====	=====
Chloromethane	.19	UG/L	*	ND	ND	ND
Bromomethane	.22	UG/L	*	ND	ND	ND
Vinyl chloride	.24	UG/L	ND	ND	ND	ND
Chloroethane	.24	UG/L	ND	ND	ND	ND
1,1-Dichloroethane	.28	UG/L	ND	ND	ND	ND
Trichlorofluoromethane	.26	UG/L	ND	ND	ND	ND
Methylene chloride	.37	UG/L	5.1	*	1.1	*
1,1-Dichloroethene	.37	UG/L	ND	ND	ND	ND
trans-1,2-dichloroethene	.34	UG/L	ND	ND	ND	ND
Chloroform	.3	UG/L	DNQ1.4	2.2	1.6	1.1
1,2-Dichloroethane	.32	UG/L	ND	ND	ND	ND
1,1,1-Trichloroethane	.4	UG/L	ND	ND	ND	ND
Carbon tetrachloride	.4	UG/L	ND	ND	ND	ND
Bromodichloromethane	.37	UG/L	ND	ND	ND	ND
1,2-Dichloropropane	.43	UG/L	ND	ND	ND	ND
trans-1,3-dichloropropene	.35	UG/L	ND	ND	ND	ND
Trichloroethene	.43	UG/L	ND	ND	ND	ND
Benzene	.37	UG/L	ND	ND	ND	ND
Dibromochloromethane	.34	UG/L	ND	ND	ND	ND
1,1,2-Trichloroethane	.32	UG/L	ND	ND	ND	ND
cis-1,3-dichloropropene	.38	UG/L	ND	ND	ND	ND
2-Chloroethylvinyl ether	.25	UG/L	ND	ND	ND	ND
Bromoform	.36	UG/L	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	.33	UG/L	ND	ND	ND	ND
Tetrachloroethene	.4	UG/L	ND	ND	ND	ND
Chlorobenzene	.4	UG/L	ND	ND	ND	ND
Toluene	.37	UG/L	DNQ1.6	4.2	1.5	DNQ0.7
Ethylbenzene	.41	UG/L	DNQ0.5	ND	ND	ND
Acrylonitrile	.48	UG/L	ND	ND	ND	ND
Acrolein	.94	UG/L	ND	ND	ND	ND
1,2-Dichlorobenzene	.36	UG/L	ND	ND	ND	ND
1,4-Dichlorobenzene	.46	UG/L	ND	ND	ND	ND
1,3-Dichlorobenzene	.47	UG/L	ND	ND	ND	ND
Dichlorodifluoromethane	2.39	UG/L	ND	ND	NR	NR
=====						
Halomethane Purgeable Cmpnds	.37	UG/L	0.0	0.0	0.0	0.0
Total Dichlorobenzenes	.47	UG/L	0.0	0.0	0.0	0.0
Purgeable Compounds	.94	UG/L	8.6	6.4	4.2	1.8
=====						
Allyl chloride	.44	UG/L	ND	ND	NR	NR
4-Methyl-2-pentanone	.39	UG/L	ND	ND	NR	NR
meta,para xylenes	.85	UG/L	DNQ1.8	ND	NR	NR
Styrene	.38	UG/L	ND	ND	NR	NR
1,2,4-Trichlorobenzene	.51	UG/L	ND	ND	NR	NR
Methyl Iodide	.32	UG/L	ND	ND	NR	NR
Chloroprene	.09	UG/L	ND	ND	NR	NR
Methyl methacrylate	.32	UG/L	ND	ND	NR	NR
2-Nitropropane	.49	UG/L	ND	ND	NR	NR
1,2-Dibromoethane	.41	UG/L	ND	ND	NR	NR
Isopropylbenzene	.41	UG/L	ND	ND	NR	NR
Benzyl chloride	.65	UG/L	ND	ND	NR	NR
ortho-xylene	.34	UG/L	DNQ0.8	ND	NR	NR
Acetone	6.74	UG/L	275	427	NR	NR
Carbon disulfide	.37	UG/L	2.5	3.3	NR	NR
2-Butanone	5.56	UG/L	DNQ6.7	DNQ6.4	NR	NR
Methyl tert-butyl ether	.36	UG/L	ND	ND	NR	NR
=====						

ND= Not Detected

NR= Not Required

DNQ= Detected but not quantified. Result is less than minimum level but greater than or equal to the MDL.

* = Data not reportable due to detection of this analyte in the method blank.

NORTH CITY WATER RECLAMATION PLANT
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Priority Pollutants Purgeable Compounds
EPA Methods 624 and 8260B

Analyte	MDL	Units	N01-PEN 21-MAR-2018 P1010810	N01-PEN 06-JUN-2018 P1021356	N01-PEN 11-SEP-2018 P1042156	N01-PEN 06-NOV-2018 P1053489
			=====	=====	=====	=====
Chloromethane	.19	UG/L	*	ND	ND	ND
Bromomethane	.22	UG/L	*	ND	ND	ND
Vinyl chloride	.24	UG/L	ND	ND	ND	ND
Chloroethane	.24	UG/L	ND	ND	ND	ND
1,1-Dichloroethane	.28	UG/L	ND	ND	ND	ND
Trichlorofluoromethane	.26	UG/L	ND	ND	ND	ND
Methylene chloride	.37	UG/L	DNQ1.4	*	DNQ0.7	*
1,1-Dichloroethene	.37	UG/L	ND	ND	ND	ND
trans-1,2-dichloroethene	.34	UG/L	ND	ND	ND	ND
Chloroform	.3	UG/L	DNQ1.9	1.6	1.9	1.5
1,2-Dichloroethane	.32	UG/L	ND	ND	ND	ND
1,1,1-Trichloroethane	.4	UG/L	ND	ND	ND	ND
Carbon tetrachloride	.4	UG/L	ND	ND	ND	ND
Bromodichloromethane	.37	UG/L	ND	ND	ND	ND
1,2-Dichloropropane	.43	UG/L	ND	ND	ND	ND
trans-1,3-dichloropropene	.35	UG/L	ND	ND	ND	ND
Trichloroethene	.43	UG/L	ND	ND	ND	ND
Benzene	.37	UG/L	ND	ND	ND	ND
Dibromochloromethane	.34	UG/L	ND	ND	ND	ND
1,1,2-Trichloroethane	.32	UG/L	ND	ND	ND	ND
cis-1,3-dichloropropene	.38	UG/L	ND	ND	ND	ND
2-Chloroethylvinyl ether	.25	UG/L	ND	ND	ND	ND
Bromoform	.36	UG/L	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	.33	UG/L	ND	ND	ND	ND
Tetrachloroethene	.4	UG/L	ND	ND	ND	ND
Chlorobenzene	.4	UG/L	ND	ND	ND	ND
Toluene	.37	UG/L	DNQ0.7	DNQ0.4	ND	DNQ0.5
Ethylbenzene	.41	UG/L	ND	ND	ND	ND
Acrylonitrile	.48	UG/L	ND	ND	ND	ND
Acrolein	.94	UG/L	ND	ND	ND	ND
1,2-Dichlorobenzene	.36	UG/L	ND	ND	ND	ND
1,4-Dichlorobenzene	.46	UG/L	ND	ND	ND	ND
1,3-Dichlorobenzene	.47	UG/L	ND	ND	ND	ND
Dichlorodifluoromethane	2.39	UG/L	ND	ND	NR	NR
Halomethane Purgeable Cmpnds	.37	UG/L	0.0	0.0	0.0	0.0
Total Dichlorobenzenes	.47	UG/L	0.0	0.0	0.0	0.0
Purgeable Compounds	.94	UG/L	4.0	2.0	2.6	2.0
Allyl chloride	.44	UG/L	ND	ND	NR	NR
4-Methyl-2-pentanone	.39	UG/L	ND	ND	NR	NR
meta,para xylenes	.85	UG/L	ND	ND	NR	NR
Styrene	.38	UG/L	ND	ND	NR	NR
1,2,4-Trichlorobenzene	.51	UG/L	ND	ND	NR	NR
Methyl Iodide	.32	UG/L	ND	ND	NR	NR
Chloroprene	.09	UG/L	ND	ND	NR	NR
Methyl methacrylate	.32	UG/L	ND	ND	NR	NR
2-Nitropropane	.49	UG/L	ND	ND	NR	NR
1,2-Dibromoethane	.41	UG/L	ND	ND	NR	NR
Isopropylbenzene	.41	UG/L	ND	ND	NR	NR
Benzyl chloride	.65	UG/L	ND	ND	NR	NR
ortho-xylene	.34	UG/L	ND	ND	NR	NR
Acetone	6.74	UG/L	339	138	NR	NR
Carbon disulfide	.37	UG/L	4.7	3.2	NR	NR
2-Butanone	5.56	UG/L	DNQ8.0	DNQ6.0	NR	NR
Methyl tert-butyl ether	.36	UG/L	ND	ND	NR	NR

ND= Not Detected

NR= Not Required

DNQ= Detected but not quantified. Result is less than minimum level but greater than or equal to the MDL.

* = Data not reportable due to detection of this analyte in the method blank.

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Priority Pollutants Purgeable Compounds
EPA Methods 624 and 8260B

Analyte	MDL	Units	N10-EFF 21-MAR-2018 P1010812	N10-EFF 06-JUN-2018 P1021361	N10-EFF 11-SEP-2018 P1042161	N10-EFF 06-NOV-2018 P1053494
			=====	=====	=====	=====
Chloromethane	.19	UG/L	ND	ND	ND	ND
Bromomethane	.22	UG/L	*	ND	ND	ND
Vinyl chloride	.24	UG/L	ND	ND	ND	ND
Chloroethane	.24	UG/L	ND	ND	ND	ND
1,1-Dichloroethane	.28	UG/L	ND	ND	ND	ND
Trichlorofluoromethane	.26	UG/L	ND	ND	ND	ND
Methylene chloride	.37	UG/L	DNQ1.9	NR	DNQ1.0	NR
1,1-Dichloroethene	.37	UG/L	ND	ND	ND	ND
trans-1,2-dichloroethene	.34	UG/L	ND	ND	ND	ND
Chloroform	.3	UG/L	DNQ1.5	4.3	1.9	1.5
1,2-Dichloroethane	.32	UG/L	ND	ND	ND	ND
1,1,1-Trichloroethane	.4	UG/L	ND	ND	ND	ND
Carbon tetrachloride	.4	UG/L	ND	ND	ND	ND
Bromodichloromethane	.37	UG/L	ND	DNQ0.5	ND	ND
1,2-Dichloropropane	.43	UG/L	ND	ND	ND	ND
trans-1,3-dichloropropene	.35	UG/L	ND	ND	ND	ND
Trichloroethene	.43	UG/L	ND	ND	ND	ND
Benzene	.37	UG/L	ND	ND	ND	ND
Dibromochloromethane	.34	UG/L	ND	ND	ND	ND
1,1,2-Trichloroethane	.32	UG/L	ND	ND	ND	ND
cis-1,3-dichloropropene	.38	UG/L	ND	ND	ND	ND
2-Chloroethylvinyl ether	.25	UG/L	ND	ND	ND	ND
Bromoform	.36	UG/L	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	.33	UG/L	ND	ND	ND	ND
Tetrachloroethene	.4	UG/L	ND	ND	ND	ND
Chlorobenzene	.4	UG/L	ND	ND	ND	ND
Toluene	.37	UG/L	DNQ1.2	4.1	1.3	DNQ0.8
Ethylbenzene	.41	UG/L	ND	ND	ND	ND
Acrylonitrile	.48	UG/L	ND	ND	ND	ND
Acrolein	.94	UG/L	ND	ND	ND	ND
1,2-Dichlorobenzene	.36	UG/L	ND	ND	ND	ND
1,4-Dichlorobenzene	.46	UG/L	ND	ND	ND	ND
1,3-Dichlorobenzene	.47	UG/L	ND	ND	ND	ND
Dichlorodifluoromethane	2.39	UG/L	ND	ND	NR	NR
Halomethane Purgeable Cmpnds	.37	UG/L	0.0	0.5	0.0	0.0
Total Dichlorobenzenes	.47	UG/L	0.0	0.0	0.0	0.0
Purgeable Compounds	.94	UG/L	4.6	8.9	4.2	2.3
Allyl chloride	.44	UG/L	ND	ND	NR	NR
4-Methyl-2-pentanone	.39	UG/L	ND	ND	NR	NR
meta,para xylenes	.85	UG/L	DNQ1.1	ND	NR	NR
Styrene	.38	UG/L	ND	ND	NR	NR
1,2,4-Trichlorobenzene	.51	UG/L	ND	ND	NR	NR
Methyl Iodide	.32	UG/L	*	ND	NR	NR
Chloroprene	.09	UG/L	ND	ND	NR	NR
Methyl methacrylate	.32	UG/L	ND	ND	NR	NR
2-Nitropropane	.49	UG/L	ND	ND	NR	NR
1,2-Dibromoethane	.41	UG/L	ND	ND	NR	NR
Isopropylbenzene	.41	UG/L	ND	ND	NR	NR
Benzyl chloride	.65	UG/L	ND	ND	NR	NR
ortho-xylene	.34	UG/L	DNQ0.6	ND	NR	NR
Acetone	6.74	UG/L	393	302	NR	NR
Carbon disulfide	.37	UG/L	4.0	2.9	NR	NR
2-Butanone	5.56	UG/L	DNQ6.7	DNQ9.8	NR	NR
Methyl tert-butyl ether	.36	UG/L	ND	ND	NR	NR

ND= Not Detected

NR= Not Required

DNQ= Detected but not quantified. Result is less than minimum level but greater than or equal to the MDL.

* = Data not reportable due to detection of this analyte in the method blank.

NORTH CITY WATER RECLAMATION PLANT
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Priority Pollutants Purgeable Compounds
EPA Methods 624 and 8260B

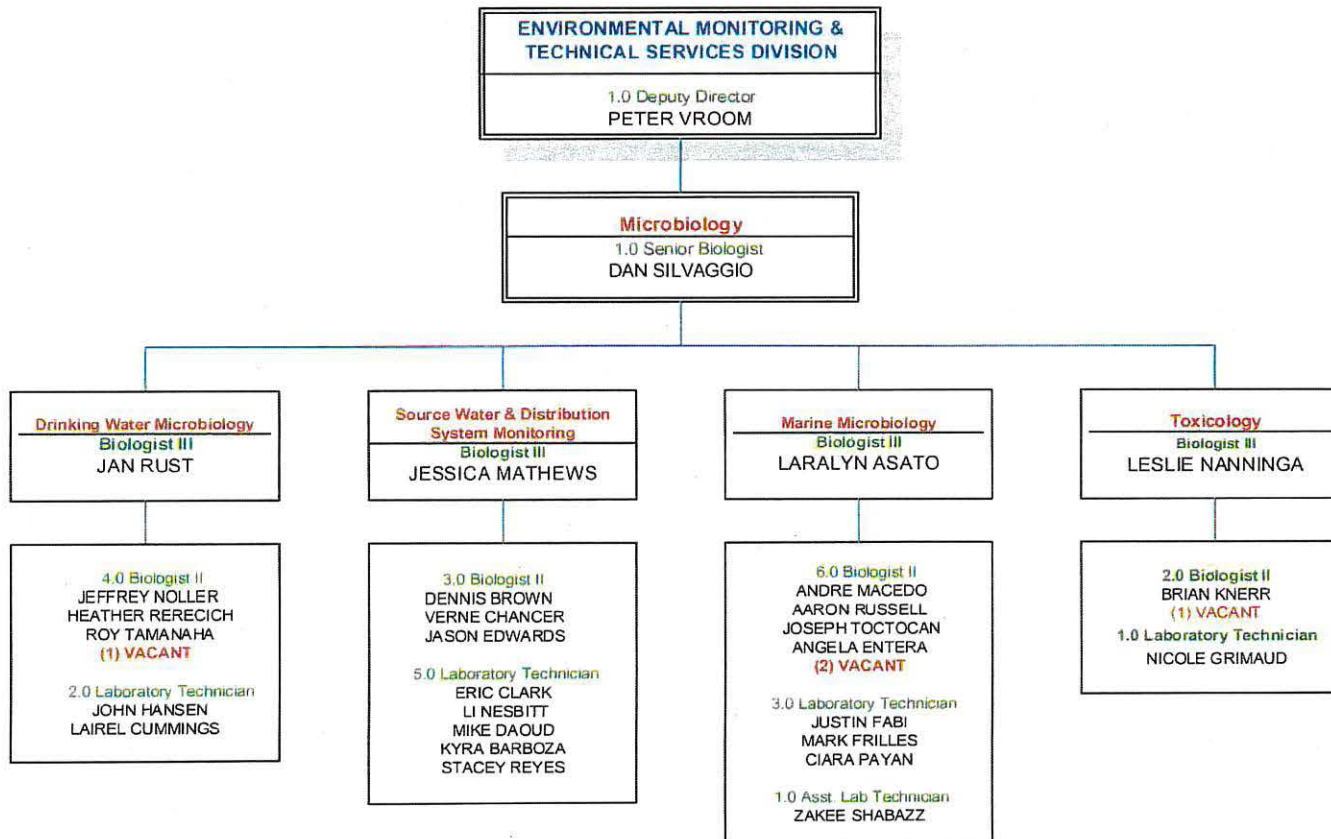
Analyte	MDL	Units	N34-REC WATER	N34-REC WATER	N34-REC WATER	N34-REC WATER
			21-MAR-2018	06-JUN-2018	11-SEP-2018	06-NOV-2018
			P1010814	P1021366	P1042166	P1053499
Chloromethane	.19	UG/L	*	DNQ0.6	ND	ND
Bromomethane	.22	UG/L	*	ND	ND	ND
Vinyl chloride	.24	UG/L	ND	ND	ND	ND
Chloroethane	.24	UG/L	ND	ND	ND	ND
1,1-Dichloroethane	.28	UG/L	ND	ND	ND	ND
Trichlorofluoromethane	.26	UG/L	ND	ND	ND	ND
Methylene chloride	.37	UG/L	DNQ0.6	ND	ND	NR
1,1-Dichloroethene	.37	UG/L	ND	ND	ND	ND
trans-1,2-dichloroethene	.34	UG/L	ND	ND	ND	ND
Chloroform	.3	UG/L	52.0	59.2	61.8	50.1
1,2-Dichloroethane	.32	UG/L	ND	ND	ND	ND
1,1,1-Trichloroethane	.4	UG/L	ND	ND	ND	ND
Carbon tetrachloride	.4	UG/L	ND	ND	ND	ND
Bromodichloromethane	.37	UG/L	58.8	39.1	51.7	40.4
1,2-Dichloropropane	.43	UG/L	ND	ND	ND	ND
trans-1,3-dichloropropene	.35	UG/L	ND	ND	ND	ND
Trichloroethene	.43	UG/L	ND	ND	ND	ND
Benzene	.37	UG/L	ND	ND	ND	ND
Dibromochloromethane	.34	UG/L	31.7	14.4	26.0	19.0
1,1,2-Trichloroethane	.32	UG/L	ND	ND	ND	ND
cis-1,3-dichloropropene	.38	UG/L	ND	ND	ND	ND
2-Chloroethylvinyl ether	.25	UG/L	ND	ND	ND	ND
Bromoform	.36	UG/L	3.0	DNQ1.0	2.1	1.5
1,1,2,2-Tetrachloroethane	.33	UG/L	ND	ND	ND	ND
Tetrachloroethene	.4	UG/L	ND	ND	ND	ND
Chlorobenzene	.4	UG/L	ND	ND	ND	ND
Toluene	.37	UG/L	ND	ND	ND	ND
Ethylbenzene	.41	UG/L	ND	ND	ND	ND
Acrylonitrile	.48	UG/L	ND	ND	ND	ND
Acrolein	.94	UG/L	ND	ND	ND	ND
1,2-Dichlorobenzene	.36	UG/L	ND	ND	ND	ND
1,4-Dichlorobenzene	.46	UG/L	ND	ND	ND	ND
1,3-Dichlorobenzene	.47	UG/L	ND	ND	ND	ND
Dichlorodifluoromethane	2.39	UG/L	ND	ND	NR	NR
Halomethane Purgeable Cmpnds	.37	UG/L	93.5	55.1	79.8	60.9
Total Dichlorobenzenes	.47	UG/L	0.0	0.0	0.0	0.0
Purgeable Compounds	.94	UG/L	146.1	114.3	141.6	111.0
Allyl chloride	.44	UG/L	ND	ND	NR	NR
4-Methyl-2-pentanone	.39	UG/L	ND	ND	NR	NR
meta,para xylenes	.85	UG/L	ND	ND	NR	NR
Styrene	.38	UG/L	ND	ND	NR	NR
1,2,4-Trichlorobenzene	.51	UG/L	ND	ND	NR	NR
Methyl Iodide	.32	UG/L	ND	ND	NR	NR
Chloroprene	.09	UG/L	ND	ND	NR	NR
Methyl methacrylate	.32	UG/L	ND	ND	NR	NR
2-Nitropropane	.49	UG/L	ND	ND	NR	NR
1,2-Dibromoethane	.41	UG/L	ND	ND	NR	NR
Isopropylbenzene	.41	UG/L	ND	ND	NR	NR
Benzyl chloride	.65	UG/L	ND	ND	NR	NR
ortho-xylene	.34	UG/L	ND	ND	NR	NR
Acetone	6.74	UG/L	ND	ND	NR	NR
Carbon disulfide	.37	UG/L	ND	ND	NR	NR
2-Butanone	5.56	UG/L	ND	ND	NR	NR
Methyl tert-butyl ether	.36	UG/L	ND	ND	NR	NR

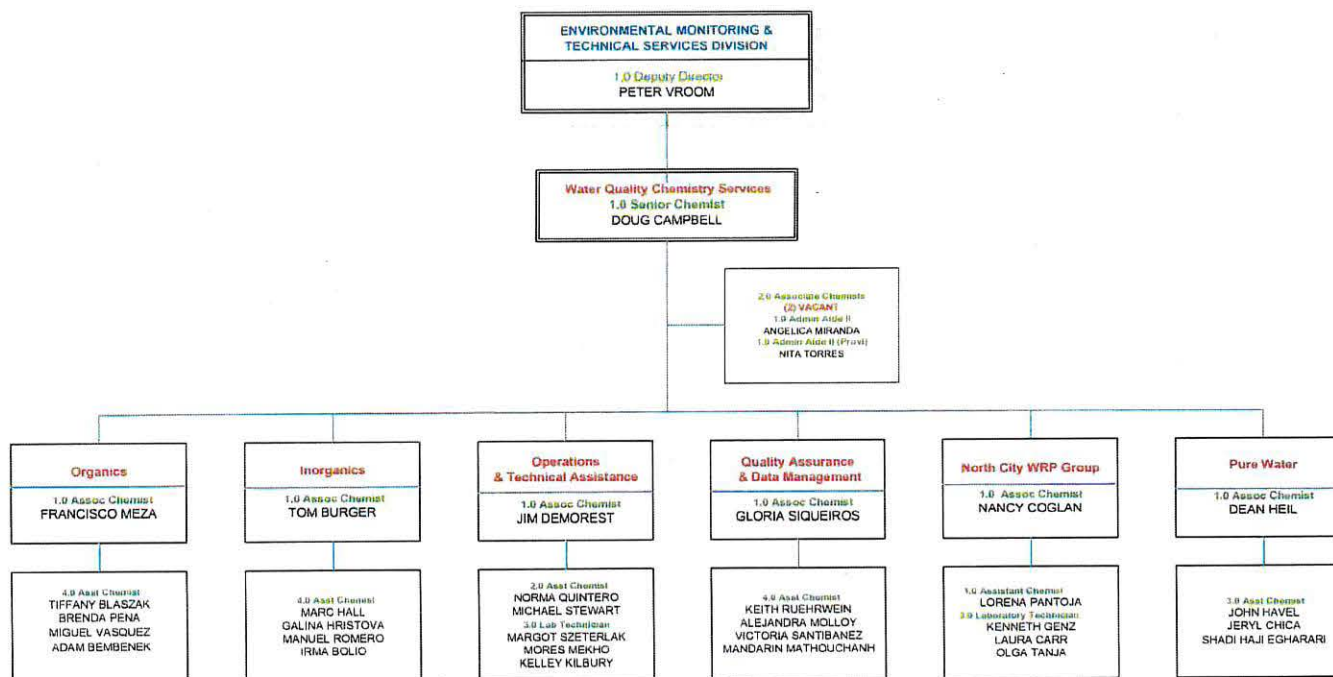
ND= Not Detected

NR= Not Required

DNQ= Detected but not quantified. Result is less than minimum level but greater than or equal to the MDL.

* = Data not reportable due to detection of this analyte in the method blank.





Laboratory Org. Chart
Records of sampling and analyses:

Sampling performed at all City of San Diego Facilities and received by the Environmental Chemistry Services (ECS) and reported in any laboratory generated reports, including NPDES and other permit reports, are documented in writing using a Chain-of-Custody and Sampling Record form and electronically in our laboratory database (LIMS). Each specific sample, sampling event, and analyses is fully documented using procedures and processes audited and approved by the California State Water Resources Control Board, Environmental Laboratory Accreditation Program (ELAP).

The following table lists our staff involved in the sampling and analyses of samples for permit compliance at Public Utilities Department facilities. This is intended as a general disclosure of the individuals who perform the permit required work. If any question arises concerning specific events, samples, or analyses, our records contain detailed information. These may be inspected at our facilities during normal business hours, or copies may be requested. Please note that the sampling at the North City, Metro Biosolids Center, and South Bay facilities is performed exclusively by Operations & Maintenance staff at those facilities. Copies of reports of analysis by contracted laboratories are included in the monthly reports in their entirety.

Deputy Director Peter S. Vroom, Ph.D.						
Senior Chemist 1.00 Elvira R. Mercado						
South Bay WRP Group Associate Chemist 1.00 SONJI ROMERO	Pt. Loma WWTP / MBC Group Associate Chemist 1.00 VESELKA KOZAREV	Inorganic/Wet Chemistry Group Associate Chemist 1.00 MARIA NOLLER	Metals Group Associate Chemist 1.00 SANDRA VALENZUELA	Pesticides Group Associate Chemist 1.00 RONALD JARDINE	GC/MS Group Associate Chemist 1.00 ESTELA LANEZ	QA/QM Group Associate Chemist 1.00 LEE KING
Analyses: BOD, COD, TS/VS, TSS, pH, MBAS, other wet chemistry analyses and process control tests, including microscopic examination and SVI determination for the South Bay WRP.	Analyses: BOD, TS/VS, TSS, pH, other wet chemistry analyses and process control tests for the PLWTP and MBC facilities, including sampling for PLWTP.	Analyses: TKN, ammonia, cyanide, sulfides, anions by ion chromatography, and other inorganics.	Analyses: Trace metals by ICP-AES and ICP/MS, TOC/TN, cations, radiation, and other inorganics.	Analyses: Chlorinated & organophosphorus pesticides, PCBs, herbicides, organotin, lipids and methods 8081A/8082 in fish and marine sediments.	Analyses: GC/MS analyses including methods 624, 625, 8260B, 8270c, PAHs, TPH-G, TPH-D, dioxins, and sediment grain size.	Analyses: Sampling, field determinations (e.g. pH, temperature, salinity, etc.), calculation for percent sodium and adjusted sodium adsorption ratio, Quality Assurance, data management, and reports generation.
Assistant Chemists: 1.00 GREG SCHLIMME	Assistant Chemists: 3.00 JERRY CZAJKOWSKI TATSIANA GARCIA JOSHUA RAMBO	Assistant Chemists: 5.00 JACQUELINE CAZARES-MEDINA KEN DANG CONNIE MATA YOLANDA REYNOSO-MARTIN MICHAEL YOUNAN	Assistant Chemists: 5.00 SUSAN DAUGHTERS ALMA FULLER OSCAR MIRANDA JESUS NIETO ZAIRA VALDEZ	Assistant Chemists: 4.00 BRENDA DOWELL MATTHEW FERRY ERIC HUNT PAOLA PARRA	Assistant Chemists: 5.00 ENRIQUE BLANCO BRETT CHING CHRISTINE CORRAO GABRIEL FLORES ERICA WESTCOTT	Assistant Chemists: 4.00 ANN GENZ-SANDOVAL ARMANDO MARTINEZ FERNANDO MARTINEZ JULIE WEBB
Laboratory Technician: 2.00 JOSE CASTRO ANGELICA DURAN	Laboratory Technician: 4.00 ALEXANDER ESCOBAR BRENDA GARCIA* FELIPE VEGA* WADDAM ZAID	Laboratory Technician: 2.00 DANIEL HUANTE ROWENA RONSAIRO*	Laboratory Technician: 1.00 TIM CANNON	Laboratory Technician: 2.00 MARICELA CORONEL* TAYLOR-GRACE PRIEST	Laboratory Technician: 2.00 VICTOR GOMEZ Vacant	Laboratory Technician: 2.00 JEANETTE KIRBY Vacant
			Intern:	Intern:		Word Processing Operator: 1.00 CORINNA QUINATA

*Primarily assigned to this group but performs additional assignment in support of another ECS work group.