Columbia Boulevard Wastewater Treatment Plant Monitoring Report

Population served 592,120

City of Portland, Multnomah County
Permit No. 101505 (File 70725)

November 2014

Receiving Stream: Columbia River
Plant Type: Activated Sludge

Date	Plant Flows					Influent		Avg	Plant			Wastewater Treatment Plant											Notes
	Total	Peak	2°	2° diversion	% diverted	Pump Station		Rain	Influent														
Nov 2014	in MG	in MGD	in MG	in MG	% Total Flow	Total Flow in MG	Wet Well Max Inches	in inches	pH	BOD mg/l	TSS mg/l	OF #1 Cl_2 Residual	BOD mg/l	BOD mg/l Weekly Avg	% BOD Removal	Lbs. BOD Discharged	Lbs. BOD Weekly Avg	TSS mg/l	TSS mg/l Weekly Avg	% TSS Removal	Lbs. TSS Discharged	Lbs. TSS Weekly Avg	See Page 4
1	64	90	64			4.41	169.3	T	7.1	290	228	0.4	9	22	97	4838	16829	12	32	95	6450	24960	
2	73	116	73			5.20	169.8	0.15	7.4	208	202	0.4	9		96	5472		14		93	8512		
3	71	144	71			4.49	167.1	0.25	7.2	264	190	0.5	11		96	6536		16		92	9508		
4	135	279	98	37	27	23.01	225.4	0.30	7.0	202	262	0.6	14		93	11432		18		93	14698		
5	63	83	63			4.14	167.0	0.03	7.2	266	200	0.6	16		94	8393		15		93	7869		
6	78	132	78			6.41	206.7	0.20	7.0	263	340	0.4	12		95	7850		16		95	10467		
7	62	87	62			4.39	167.0	0.01	7.1	304	375	0.6	13		96	6774		19		95	9901		
8	54	79	54			4.32	167.1	0.01	7.1	348	305	0.5	12	12	97	5391	7407	18	17	94	8087	9863	
9	56	89	56			4.76	169.5	0.05	7.3	300	318	0.6	12		96	5578		19		94	8833		
10	54	80	54			4.22	169.1	0.02	6.9	352	329	0.5	11		97	4992		12		96	5446		
11	53	75	53			4.32	167.1	T	7.2	398	318	0.5	14		96	6205		15		95	6648		
12	53	79	53			4.03	169.6	0.00	7.2	320	200	0.6	17		95	7551		20		90	8884		
13	66	139	66			4.81	188.2	0.06	7.2	353	465	0.6	15		96	8213		12		97	6570		
14	57	81	57			1.73	167.4	0.16	6.8	416	338	0.5	11		97	5224		12		96	5699		
15	51	70	51			0.05	149.5	T	6.9	411	450	0.5	9	13	98	3842	5944	15	15	97	6404	6926	
16	51	78	51			0.00	136.6	0.00	6.9	361	302	0.6	9		98	3798		9		97	3798		
17	52	70	52			0.00	140.4	0.00	7.2	356	298	0.5	8		98	3470		11		96	4771		
18	52	80	52			0.00	139.1	0.00	7.0	349	238	0.4	9		97	3917		12		95	5222		
19	53	87	53			0.00	143.7	0.06	7.0	437	306	0.6	15		97	6615		19		94	8379		
20	57	91	57			0.03	137.8	0.03	6.6	489	340	0.5	26		95	12262		23		93	10847		
21	139	370	84	55	40	23.09	182.5	0.71	7.0	237	380	0.6	50		79	34903		76		80	53052		Note 2
22	97	222	92	5	6	2.71	189.1	0.21	7.3	298	303	0.7	65	26	78	49820	16398	120	39	60	91976	25435	Note 3
23	128	299	81	47	37	16.36	246.5	0.52	7.2	173	240	0.6	27		84	18255		43		82	29073		
24	72	122	71	1	2	0.61	177.4	0.03	7.3	245	494	0.7	16		93	9440		33		93	19470		
25	57	72	57			0.00	155.5	0.01	7.2	243	220	0.5	13		95	6154		17		92	8047		
26	55	72	55			0.00	155.8	T	7.0	338	150	0.6	20		94	9116		20		87	9116		
27	53	89	53			0.00	162.3	0.04	7.0	385	362	0.5	19		95	8416		16		96	7087		
28	155	282	102	53	34	21.50	179.8	0.70	6.8	88	94	0.6	9		90	7679		16		83	13652		
29	80	194	77	3	4	0.88	167.8	0.10	7.1	189	218	0.6	10	16	95	6416	9354	17	23	92	10907	13907	
30	56	82	56			0.08	156.5	0.01	7.3	284	282	0.6	8		97	3704		12		96	5556		
Max	155	370	102	55	40	23.09	246.5	0.71	7.4	489	494	0.7	65	26	98	49820	16829	120	39	97	91976	25435	
Min	51		51			0.00	136.6		6.6	88	94	0.4	8		78	3470		9		60	3798		
Sum	2147		1945	202		145.53		3.65								282258					404929		
Avg	72		65			4.85	169.7	0.12	7.1	306	292	0.5	16		95	9409		23		92	13498		

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the persons who manage the system of those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name and Title: Mike Ciolli, Wastewater Treatment Manager for Operations
Certificate # 10286, type: Treatment, grade IV
Signature:

Columbia Boulevard Wastewater Treatment Plant Monitoring Report

City of Portland, Multnomah County
Permit No. 101505 (File 70725)

November 2014

Receiving Stream: Columbia River
Plant Type: Activated Sludge

Date	Wet Weather Treatment Facility											Combined Discharges: 001 + 003 (Combined Total Conc. is calculated using a flow weighted average.)												Notes
												Total Pounds		Weekly Lbs. Avg.		Total Conc.		Weekly Conc. Avg.		Outfall				
Nov 2014	BOD mg/l	BOD mg/l Weekly Avg	% BOD Removal	Lbs. BOD Discharged	Lbs BOD Weekly Avg	TSS mg/l	TSS mg/l Weekly Avg	% TSS Removal	Lbs. TSS Discharged	Lbs TSS Weekly Avg	OF #3 CL2 Residual	Dry + Wet BOD	Dry + Wet TSS	Dry + Wet BOD	Dry + Wet TSS	Dry + Wet BOD	Dry + Wet TSS	Dry + Wet BOD	Dry + Wet TSS	OF # 1 E. Coli	OF # 3 E. Coli	OF # 1 pH	OF # 3 pH	See Page 4
1		42			29372		27			9135		4838	6450	4838	6450	9	12	9	12	1		7.0		
2												5472	8512			9	14			2		7.2		
3												6536	9508			11	16			2		7.0		
4	27		87	8352		27		90	8352		0.0	19784	23050			18	20			5	2	6.9	6.4	Note 1
5												8393	7869			16	15			1		7.1		
6												7850	10467			12	16			2		7.2		
7												6774	9901			13	19			2		6.9		
8		27			8352		27			8352		5391	8087	8600	11056	12	18	13	17	5		7.2		
9												5578	8833			12	19			6		7.2		
10												4992	5446			11	12			7		7.2		
11												6205	6648			14	15			1		7.2		
12												7551	8884			17	20			6		7.2		
13												8213	6570			15	12			14		7.1		
14												5224	5699			11	12			2		7.0		
15												3842	6404	5944	6926	9	15	13	15	2		7.1		
16												3798	3798			9	9			1		7.2		
17												3470	4771			8	11			2		7.2		
18												3917	5222			9	12			<1		7.1		
19												6615	8379			15	19			5		7.2		
20												12262	10847			26	23			>2400		7.1		Note 4
21	66		72	30428		41		89	18902		0.1	65331	71955			56	62			36		7.3		Note 1
22	58	62	81	2654	16541	100	71	67	4576	11739	0.0	52475	96553	21124	28789	65	119	27	37	3		7.0		Notes 1, 5
23	47		73	18513		37		85	14574		0.0	36769	43648			34	41			2		7.1		Note 1
24	71		71	650		43		91	394		0.0	10090	19863			17	33			1		6.9		Note 1
25												6154	8047			13	17			<1		7.2		
26												9116	9116			20	20			<1		7.2		
27												8416	7087			19	16			5		7.2		
28	84		5	36880		64		32	28099		0.1	44560	41751			34	32			2		7.2		Note 1
29	53	64	72	1410	14364	58	51	73	1543	11153	0.0	7826	12450	17561	20280	12	19	20	25	<1		7.0		Note 1
30												3704	5556			8	12			<1		7.2		
Max	84	64	87	36880	29372	100	71	91	28099	11739	0.1	65331	96553	21124	28789	65	119	27	37	>2400	2	7.3	6.4	
Min	27		5	650		27		32	394			3470	3798			8	9			1	2	6.9	6.4	
Sum				98889					76441			381147	481371											
Avg	58		81	14127	17157	53		82	10920	10095	0.0	12705	16046			18	23			3	2	7.1	6.4	Notes 6, 7

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the persons who manage the system of those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name and Title: Mike Ciolli, Wastewater Treatment Manager for Operations
Certificate # 10286, type: Treatment, grade IV
Signature:

Columbia Boulevard Wastewater Treatment Plant Monitoring Report

City of Portland, Multnomah County
Permit No. 101505 (File 70725)

November 2014

Receiving Stream: Columbia River
Plant Type: Activated Sludge

Date	CSO Flows (Swan Island)		Plant Effluent			Temperatures			Notes
	Total Flow	Max							
Nov 2014	in MG	Elev. In Feet	Alkalinity OF 1 Monthly, in mg/L	Alkalinity OF 3 Monthly, in mg/L	Cl2 used in Lbs Cl2	Effluent Daily Max, ^{0}C	Weekly Avg of Daily Max, ^{0}C	Thermal Load Million Kcal/day	See Page 4
1	6.22	3.3			1152	18.8	18.8	-502.3	
2	7.56	5.6			1427	18.1			
3	7.99	8.9			1427	18.4			
4	33.16	11.8		22	2407	18.7			
5	6.95	3.4			1862	18.7			
6	8.19	12.5			1763	19.3			
7	10.96	9.7	126		1276	19.1			
8	4.65	3.5			1347	19.2	18.8	-351.1	
9	5.07	3.4			1319	19.1			
10	5.09	3.4			1262	19.1			
11	4.86	3.6			1554	18.9			
12	5.09	3.3			1490	18.3			
13	6.56	7.4			2007	18.1			
14	5.32	3.3			1525	17.7			
15	4.47	3.4			1632	18.1	18.5	-325.3	
16	4.33	3.3			1383	17.9			
17	4.88	3.4			1004	17.7			
18	4.79	3.9			1110	17.7			
19	5.10	3.6			1386	17.8			
20	5.81	3.4			2433	17.8			
21	41.23	17.0			4144	18.1			
22	22.52	11.6			2197	15.7	17.5	-669.0	
23	47.43	23.9			1845	16.2			
24	17.53	11.9			854	16.7			
25	5.65	3.4			976	17.8			
26	4.94	3.3			1560	18.3			
27	4.86	3.6			1702	18.3			
28	45.16	17.9			1995	18.0			
29	17.30	8.7			1049	15.7	17.3	-882.0	
30	5.07	3.3			881	16.3			
Max	47.43	23.9			4144	19.3	18.8	-325.3	
Min	4.33				854			-882.0	
Sum	358.74				47970				
Avg	12.20		126	22	1599		18.2	-545.9	

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the persons who manage the system of those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name and Title: Mike Ciolli, Wastewater Treatment Manager for Operations
Certificate # 10286, type: Treatment, grade IV

Signature:

Columbia Boulevard Wastewater Treatment Plant Monitoring Report
Nutrients and Notes

City of Portland, Multnomah County
Permit No. 101505 (File 70725)

November 2014

Receiving Stream: Columbia River
Plant Type: Activated Sludge

Dry Weather Effluent Weekly Nutrients (May to October)

Sample Date						Average	Max
NH_3 - N (mg/l)							
NO_2 + NO_3-N (mg/l)							
TKN (mg/l)							
Total PO_4-P (mg/l)							

Wet Weather Effluent Weekly Nutrients (May to October)

Sample Date						Average	Max
NH_3 - N (mg/l)							
NO_2 + NO_3-N (mg/l)							
TKN (mg/l)							
Total PO_4-P (mg/l)							

Notes

Note	This facility conducted additional sampling in 2010 as part of a statewide project pursuant to SB 737. Results are available by contacting the Oregon DEQ Laboratory.
Note 1	Bypass of primary effluent to protect biomass in secondary.
Note 2	Nov. 21 TSS lbs. discharged was 53,052 which exceeds the Daily Maximum of 50,000 lb/day for the Secondary Biological Treatment Performance Requirements
	The Mass Loading for Outfalls 001 and 003 were within permitted levels as they show the true combined mass actually being introduced into the environment.
Note 3	Nov. 22 TSS lbs. discharged was 91,976 which exceeds the Daily Maximum of 50,000 lb/day for the Secondary Biological Treatment Performance Requirements
	The Mass Loading for Outfalls 001 and 003 were within permitted levels as they show the true combined mass actually being introduced into the environment.
Note 4	Nov 20: Outfall #1 had an *E.coli* count of >2400, the five resamples were as follows: 14, 31, 76, 25 and 6, giving a geometric mean of 22.
Note 5	Week ending Nov. 22: Wet Weather TSS average of 71 exceeded the System-based Performance Requirement of 65 mg/L.
	The Mass Loading for Outfalls 001 and 003 were within permitted levels as they show the true combined mass actually being introduced into the environment.
Note 6	Monthly average for Wet Weather BOD of 58 exceeded the System-based Performance Requirement of 45 mg/L.
	The Mass Loading for Outfalls 001 and 003 were within permitted levels as they show the true combined mass actually being introduced into the environment.
Note 7	Monthly average for Wet Weather TSS of 53 exceeded the System-based Performance Requirement of 45 mg/L.
	The Mass Loading for Outfalls 001 and 003 were within permitted levels as they show the true combined mass actually being introduced into the environment.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the persons who manage the system of those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name and Title: Mike Ciolli, Wastewater Treatment Manager for Operations
Certificate # 10286, type: Treatment, grade IV
Signature:

Columbia Boulevard Wastewater Treatment Plant Monitoring Report
Nutrients and Notes

City of Portland, Multnomah County
Permit No. 101505 (File 70725)

November 2014

Receiving Stream: Columbia River
Plant Type: Activated Sludge

Dry Weather Effluent Weekly Nutrients (May to October)

Sample Date						Average	Max
NH_3 - N (mg/l)							
NO_2 + NO_3-N (mg/l)							
TKN (mg/l)							
Total PO_4-P (mg/l)							

Wet Weather Effluent Weekly Nutrients (May to October)

Sample Date						Average	Max
NH_3 - N (mg/l)							
NO_2 + NO_3-N (mg/l)							
TKN (mg/l)							
Total PO_4-P (mg/l)							

During this reporting period did all monitoring data and sampling frequencies meet permit requirements and limits? If "no," explain. ☐ Yes ☐ No

During this reporting period were there unanticipated bypasses or upsets which exceeded any effluent limits? If "yes," explain. ☐ Yes ☐ No

During this reporting period were there any sewer system overflows? If "yes," explain. [See attached report on sewage releases. Please note that responsibilty is not yet assigned pending investigation by Spill Response.] ☐ Yes ☐ No

Notes

Note	This facility conducted additional sampling in 2010 as part of a statewide project pursuant to SB 737. Results are available by contacting the Oregon DEQ Laboratory.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the persons who manage the system of those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name and Title: Mike Ciolli, Wastewater Treatment Manager for Operations
Certificate # 10286, type: Treatment, grade IV
Signature: