



CITY OF PORTLAND ENVIRONMENTAL SERVICES



Columbia Boulevard Wastewater Treatment Plant

5001 N Columbia Boulevard, Portland, Oregon 97203 ■ Nick Fish, Commissioner ■ Michael Jordan, Director

August 13, 2015

State of Oregon
DEQ Northwest Region Office
700 NE Multnomah St.
Suite 600
Portland, OR 97232

COLUMBIA BOULEVARD WASTEWATER TREATMENT PLANT MONITORING REPORT July 2015

Attached is the July 2015 Monitoring Report for the City of Portland Columbia Boulevard Treatment Plant.

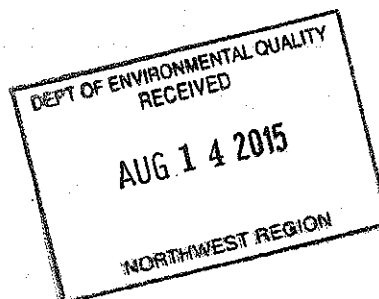
All parameters were within permit limitations during the month.

Please note that some peak flow information as well as some Swan Island CSO Pump Station flow data could not be retrieved due to an ongoing server upgrade within the automation network. It is expected that this information can be retrieved at a later date after the completion of the upgrade, which will take several more weeks. At that time, this month's DMR can be revised/updated if the agency so desires.

If you have any questions regarding these reports, please call me at 823-2438.

Sincerely yours,

Mike Ciolli
Wastewater Treatment Manager for Operations



Columbia Boulevard Wastewater Treatment Plant Monitoring Report

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

Population served 601,510
July 2015

Receiving Stream: Columbia River
Plant Type: Activated Sludge

Date	Plant Flows					Influent Pump Station	Avg Rain	Plant Influent			Wastewater Treatment Plant												Notes
	Total	Peak	2°	Wet Weather	% Wet Weather			Total Flow	Wet Well	pH	BOD	TSS	OF #1 Cl ₂	BOD	BOD mg/l	% BOD	Lbs. BOD	Lbs. BOD	TSS	TSS mg/l	% TSS	Lbs. TSS	
Jul 2015	in MG	in MGD	in MG	in MG	% Total Flow	Total Flow in MG	Wet Well Max Inches	in inches		BOD mg/l	TSS mg/l	Residual	mg/l	Weekly Avg	Removal	Discharged	Weekly Avg	mg/l	Weekly Avg	Removal	Discharged	Weekly Avg	See Page 4
1	46	71	46			0.01	141.2	0.00	6.9	374	258	0.6	7		98	2676		8		97	3058		
2	56	100	56			0.00	149.5	0.00	7.2	355	348	0.6	10		97	4695		11		97	5164		
3	48	71	48			0.00	149.3	0.00	7.1	270	262	0.5	5		98	2015		6		98	2418		
4	46	est.71	46			0.00	145.6	0.00	7.1	296	302	0.6	5	7	98	1925	2827	5	8	98	1925	3141	Note 1
5	46	70	46			0.00	150.6	0.00	7.2	354	322	0.5	<6		98	2285		7		98	2666		
6	52	?	52			0.07	147.0	0.00	7.1	362	360	0.5	8		98	3459		10		97	4324		
7	52	?	52			0.00	122.6	0.00	6.8	329	352	0.5	10		97	4308		8		98	3446		
8	52	?	52			0.00	137.5	0.00	7.2	est.346	367	0.6	est.7					8		98	3496		Note 2
9	53	73	53			0.00	142.4	0.00	6.7	328	355	0.6	7		98	3067		8		98	3505		
10	54	78	54			0.00	143.2	0.00	7.2	463	348	0.5	6		99	2679		8		98	3572		
11	51	76	51			0.00	147.1	0.00	7.2	380	340	0.5	6	7	98	2542	3057	8	8	98	3389	3485	
12	50	70	50			0.00	148.4	0.04	7.0	291	309	0.4	4		99	1669		4		99	1669		
13	59	est.72	59			0.00	151.3	0.09	6.4	214	130	0.4	5		98	2464		8		94	3943		
14	53	est.69	53			0.05	145.8	0.00	6.9	411	340	0.5	5		99	2223		4		99	1779		
15	53	83	53			0.00	143.0	0.00	6.8	395	386	0.5	8		98	3546		10		97	4433		
16	52	104	52			0.00	140.1	T	7.0	392	434	0.6	8		98	3471		10		98	4338		
17	52	82	52			0.03	141.1	0.00	7.0	317	258	0.5	5		98	2153		8		97	3444		
18	49	72	49			0.00	130.8	0.00	6.9	371	300	0.5	5	6	99	2025	2507	8	7	97	3240	3264	
19	48	71	48			0.00	141.8	0.00	7.2	310	308	0.5	4		99	1585		4		99	1585		
20	52	69	52			0.02	140.1	0.00	7.0	393	324	0.4	9		98	3918		6		98	2612		
21	53	77	53			0.00	105.9	0.00	7.0	369	322	0.5	6		98	2643		7		98	3084		
22	52	101	52			0.01	111.8	0.00	6.8	388	360	0.6	9		98	3922		9		98	3922		
23	52	74	52			0.00	83.0	0.00	7.0	382	380	0.6	5		99	2167		6		98	2600		
24	50	72	50			0.00	101.5	0.00	7.0	350	325	0.5	6		98	2508		6		98	2508		
25	71	185	71			3.44	195.0	0.24	7.0	220	260	0.5	12	7	95	7100	3406	12	7	95	7100	3344	
26	66	213	66			6.90	199.5	0.24	7.0	286	440	0.6	8		97	4420		9		98	4973		
27	71	113	71			1.64	192.4	0.01	7.0	216	190	0.6	8		96	4730		10		95	5912		
28	55	122	55			0.00	151.5	0.00	7.1	350	340	0.5	7		98	3185		9		97	4095		
29	54	est.76	54			0.00	155.6	0.00	7.0	336	340	0.6	6		98	2722		8		98	3630		
30	44	83	44			0.00	153.0	0.00	7.1	423	360	0.5	5		99	1824		6		98	2188		
31	58	84	58			0.00	148.7	0.00	7.0	503*	366	0.6	9*					30		92	14599	Note 3	
Max	71	213	71			6.90	199.5	0.24	7.2	463	440	0.6	12	7	99	7100	3406	30	8	99	14599	3485	
Min	44		44			0.00	83.0		6.4	214	130	0.4	4		95	1585		4		92	1585		
Sum	1649		1649			12.16		0.62								87923					118615		
Avg	53		53			0.39	143.8	0.02	7.0	342	325	0.5	7		98	3032		8		97	3826		

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: 

*Values followed by an asterisk are not used in calculations.

Columbia Boulevard Wastewater Treatment Plant Monitoring Report

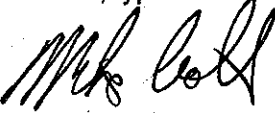
City of Portland, Multnomah County
Permit No. 101505 (File 70725)

July 2015

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					
	Jul 2015	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
1													2676	3058			7	8			<1		7.2		
2													4695	5164			10	11			10		7.4		
3													2015	2418			5	6			3		7.2		
4													1925	1925	2827	3141	5	5	7	8	2		7.2		
5													2285	2666			6	7			3		7.3		
6													3459	4324			8	10			3		7.3		
7													4308	3446			10	8			3		7.2		
8														3496				8			1		7.3		Note 2
9													3067	3505			7	8			5		7.2		
10													2679	3572			6	8			<1		7.2		
11													2542	3389	3057	3485	6	8	7	8	1		7.2		
12													1669	1669			4	4			1		7.2		
13													2464	3943			5	8			1		7.2		
14													2223	1779			5	4			<1		7.1		
15													3546	4433			8	10			<1		7.2		
16													3471	4338			8	10			1		7.3		
17													2153	3444			5	8			<1		7.2		
18													2025	3240	2507	3264	5	8	6	7	<1		7.2		
19													1585	1585			4	4			1		7.2		
20													3918	2612			9	6			<1		7.4		
21													2643	3084			6	7			1		7.2		
22													3922	3922			9	9			1		7.3		
23													2167	2600			5	6			93		7.3		
24													2508	2508			6	6			1		7.4		
25													7100	7100	3406	3344	12	12	7	7	4		7.2		
26													4420	4973			8	9			1		7.2		
27													4730	5912			8	10			1		7.1		
28													3185	4095			7	9			<1		7.2		
29													2722	3630			6	8			1		7.2		
30													1824	2188			5	6			12		7.5		
31														14599				30			5		7.4		Note 3
Max													7100	14599	3406	3485	12	30	7	8	93		7.5		
Min													1585	1585			4	4			<1		7.1		
Sum													87923	118615											
Avg													3032	3826			7	8			2		7.2		

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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)

July 2015

Receiving Stream: Columbia River
Plant Type: Activated Sludge

Date	CSO Flows (Swan Island)		Plant			Temperatures			Notes
	Total Flow	Max	Effluent						
Jul 2015	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, °C	Weekly Avg of Daily Max, °C	Thermal Load Million Kcal/day	See Page 4
1	9.47	8.9			1618	21.6			
2	14.96	6.5			2132	21.7			
3	1.46	2.8			1618	21.8			
4	?	2.8			1304	21.5	21.6	304.9	Note 1
5	?	2.8			1104	21.2			
6	?	?			1348	21.3			
7	?	?			1836	21.4			
8	1.72	?			2102	21.6			
9	1.57	2.9			1637	22.1			
10	1.49	2.9			1587	21.6			
11	1.48	2.9			1447	21.4	21.5	295.3	
12	1.48	2.9			1331	21.4			
13	2.73	3.1			1601	21.3			
14	1.47	2.8	206		1721	21.7			
15	1.49	2.9			1619	21.8			
16	1.47	2.8			1722	21.9			
17	1.48	2.8			1475	21.7			
18	1.46	2.8			1560	21.7	21.6	326.7	
19	1.17	2.9			1136	21.8			
20	1.48	2.9			1396	21.8			
21	1.47	2.8			1542	21.8			
22	1.50	4.6			1507	21.7			
23	1.47	2.8			1224	21.7			
24	1.25	2.8			1136	21.8			
25	7.79	10.4			1428	21.7	21.8	358.3	
26	7.75	16.1			1164	21.2			
27	15.75	14.9			1252	21.1			
28	1.43	2.9			1357	21.6			
29	1.52	3.6			1195	21.8			
30	6.54	10.1			1021	22.2			
31	14.44	9.9			2009	22.1			
Max	15.75	16.1			2132	22.2	21.8	358.3	
Min	1.17				1021			295.3	
Sum	107.29				46126				
Avg	3.97		206		1488		21.6	321.3	

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Name and Title: Mike Ciolli, Wastewater Treatment Manager for Operations
Certificate # 10286, type: Treatment, grade IV
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Columbia Boulevard Wastewater Treatment Plant Monitoring Report
Nutrients and Notes

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

July 2015

Receiving Stream: Columbia River
Plant Type: Activated Sludge

Dry Weather Effluent Weekly Nutrients (May to October)

Table with 9 columns: Sample Date, 7-Jul-15, 14-Jul-15, 21-Jul-15, 28-Jul-15, Average, Max, MRL. Rows include NH3 - N (mg/l), NO2 + NO3-N (mg/l), TKN (mg/l), and Total PO4-P (mg/l).

exc. 7/7, MRL=0.375

Wet Weather Effluent Weekly Nutrients (May to October)

Table with 8 columns: Sample Date, Average, Max. Rows include NH3 - N (mg/l), NO2 + NO3-N (mg/l), TKN (mg/l), and Total PO4-P (mg/l).

Notes

Table with 2 columns: Note, Text. Contains notes about sampling in 2010, data loss in August, BOD results, and QC results.

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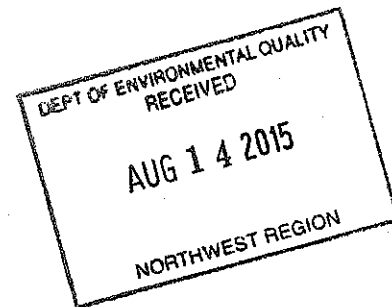
Handwritten signature of Mike Ciolli.

City of Portland
Sewage Release Report to DEQ
7/1/2015 to 7/31/2015

City System					
Incident Date	Location	Service Request #	Discharge (gal)	Cause	Destination:
7/3/2015	955 N RUSSELL ST	163437	200	Debris	Inside Building - Finished Basement
7/5/2015	2713 SE YAMHILL ST	163399	2	Roots	Inside Building - Unfinished Basement
7/6/2015	9509 SW 46TH AVE	163425	20	Roots	Outside Building - excavation
7/6/2015	3137 NE SANDY BLVD	163404	10	Debris	Inside Building - Finished Basement
7/7/2015	3225 SE CESAR E CHAVEZ BLVD	163424	30	Structural Defect	Inside Building - Unfinished Basement
7/10/2015	710 SW 2ND AVE	163442	10	Roots	Inside Building - Unfinished Basement, parking
7/10/2015	4565 SE 104TH AVE	163443	5	Maintenance Work	Inside Building - Unfinished Basement, First Floor, leaked from first floor
7/16/2015	8415 SE 134TH DR	163482	600	Debris	Outside Building - Street
7/22/2015	2304 E BURNSIDE ST	163511	5	Structural Defect	Inside Building - Finished Basement
7/24/2015	7881 SW CAPITOL HWY	163523	50	Debris	Inside Building - Finished Basement, First Floor Outside Building - Ground, BETWEEN
7/27/2015	7518 SE 29TH AVE	163533	5	Roots	Inside Building - Finished Basement
7/28/2015	3265 N WILLAMETTE BLVD	163554	100	Structural Defect	Inside Building - Finished Basement
7/29/2015	7643 SW 25TH AVE	163557	Unknown	Structural Defect	Outside Building - underground

Private Responsibility or No Release

Incident Date	Location	Service Request #
7/6/2015	5803 SW LURADEL CT	163419
7/6/2015	1515 SE WATER AVE	163420
7/6/2015	9855 SW CAPITOL HWY	163409
7/7/2015	7134 SE 34TH AVE	163427
7/9/2015	6507 NE GOING ST	163439
7/15/2015	7837 SW CAPITOL HWY	163475
7/16/2015	2525 SW MONTGOMERY DR	163484
7/17/2015	832 N KILLINGSWORTH ST	163488
7/22/2015	7822 SE 16TH AVE	163508
7/22/2015	7605 SE 22ND AVE	163509
7/23/2015	4424 SE EVERGREEN ST	163512
7/23/2015	15762 SE DIVISION ST	163517
7/24/2015	6277 SW 63rd WAY	163522
7/25/2015	838 N KILLINGSWORTH ST	163525
7/25/2015	1415 SE 8TH AVE	163526
7/26/2015	2314 N WILLAMETTE BLVD	163558
7/28/2015	5606 N DEPAUW ST	163548
7/28/2015	121 NE 143RD AVE	163551
7/29/2015	1815 NW FLANDERS ST	163559
7/31/2015	2115 N BLANDENA ST	163579



Private Responsibility or No Release - Previously unreported incidences that occurred prior to 7/1/2015

5/22/2015	13606 NE FREMONT CT	163428
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BOD Suspended Solids

Columbia Blvd. Wastewater Treatment Plant

Supplementary Data for Internal Use Only

DATE	FLOW					BOD				BOD POUNDS				TSS				TSS POUNDS				% REDUCTION			
	INF		EFF		Rain Fall Inches	BY-PASS MGD	2" MGD	HW INF	PRIMARY EFF	C12 EFF	HEADWORKS INF	BY-PASS	PLANT EFF	HW INF	PRI EFF	C12 EFF	LBS. INF	BY-PASS	LBS. EFF	PRI EFF	PLANT EFF	PRI EFF	PLANT EFF	PRI EFF	PLANT EFF
	MGD	MGD	MGD	MGD																					
July 2015																									
1	46	46	46	46	0.00			374	257	7	142951		2676	258	73	8	98613		3058	31	98	31	98	72	97
2	56	56	56	56	0.00			355	248	10	166658		4695	348	120	11	163372		5164	30	97	30	97	66	97
3	48	48	48	48	0.00			270	214	5	108807		2015	262	65	6	105583		2418	21	98	21	98	75	98
4	46	46	46	46	0.00			296	174	5	113952		1925	302	73	5	116262		1925	41	98	41	98	76	98
5	46	46	46	46	0.00			354	152	6	134834		2285	322	57	7	122646		2666	57	98	57	98	82	98
6	52	52	52	52	0.00			362	213	8	156539		3459	360	63	10	155674		4324	41	98	41	98	83	97
7	52	52	52	52	0.00			329	221	10	141720		4308	352	82	8	151628		3446	33	97	33	97	77	98
8	52	52	52	52	0.00			346	228	7	151208		3059	367	61	8	160385		3496					83	98
9	53	53	53	53	0.00			328	205	7	143897		3067	355	94	8	155526		3505	38	98	38	98	74	98
10	54	54	54	54	0.00			483	272	6	206702		2679	348	99	8	155361		3572	41	99	41	99	72	98
11	51	51	51	51	0.00			380	211	6	160995		2542	340	87	8	144048		3389	44	98	44	98	74	98
12	50	50	50	50	0.04			291	194	4	121396		1669	309	81	4	128905		1669	33	99	33	99	74	99
13	59	59	59	59	0.09			214	205	5	105479		2464	130	76	8	64076		3943	4	98	4	98	42	94
14	53	53	53	53	0.00			411	230	5	182767		2223	340	85	4	151194		1779	44	99	44	99	75	99
15	53	53	53	53	0.00			395	246	8	175092		3546	386	100	10	171103		4433	38	98	38	98	74	97
16	52	52	52	52	T			392	230	8	170068		3471	434	100	10	188290		4338	41	98	41	98	77	98
17	52	52	52	52	0.00			317	215	5	136472		2153	258	60	8	111072		3444	32	98	32	98	77	97
18	49	49	49	49	0.00			371	184	5	150251		2025	300	120	8	121497		3240	50	99	50	99	60	97
19	48	48	48	48	0.00			310	186	4	122858		1585	308	51	4	122066		1585	40	99	40	99	83	99
20	52	52	52	52	0.00			393	204	9	171092		3918	324	97	6	141053		2612	48	98	48	98	70	98
21	53	53	53	53	0.00			369	241	6	162551		2643	322	77	7	141847		3084	35	98	35	98	76	98
22	52	52	52	52	0.00			388	257	9	169077		3922	360	120	9	156875		3922	34	98	34	98	67	98
23	52	52	52	52	0.00			382	252	5	165538		2167	380	90	6	164672		2600	34	99	34	99	76	98
24	50	50	50	50	0.00			350	216	6	146271		2508	325	90	6	135823		2508	38	98	38	98	72	98
25	71	71	71	71	0.24			220	202	12	130161		7100	260	110	12	153626		3550	8	95	8	95	58	95
26	66	66	66	66	0.24			286	133	8	158022		4420	440	81	9	243111		6630	53	97	53	97	82	98
27	71	71	71	71	0.01			216	234	8	127704		4730	190	97	10	112332		5321	-8	96	-8	96	49	95
28	55	55	55	55	0.00			350	262	7	159231		3185	340	110	9	154682		4549	25	98	25	98	68	97
29	54	54	54	54	0.00			336	243	6	152442		2722	340	130	8	154257		4083	28	98	28	98	62	98
30	44	44	44	44	0.00			423	299	5	154272		1824	360	130	6	131295		2918	29	99	29	99	64	98
31	58	58	58	58	0.00			503	393	9	244779		4380	366	224	30	178110		2920					39	92
MAX	71	71	71	71	0.24			503	393	12	244779		7100	440	224	30	243111		6630	57	99	57	99	83	99
MIN	44	44	44	44	0.00			214	133	4	105479		1585	130	51	4	64076		1585	-8	95	-8	95	39	92
SUM	1649	1649	1649	1649	0.62						4733588		95362				4455183		106091						
AVG	53	53	53	53	0.02			342	221	7	152696		3076	325	94	8	143716		3422	34	98	34	98	70	97

July 8: BOD results should be considered estimates due to failed check standard results.

July 31: BOD results are not reportable for regulatory purposes due to failed QC results (high blanks).

Secondary

Columbia Blvd. Wastewater Treatment Plant

Supplementary Data for Internal Use Only

DATE	Total Flow MGD	2° Flow MGD	SRT Days (7 days avg)	EFFL Turb	2° Cl ₂ TSS	2° Cl ₂ BOD	Effluent 12.5% Hypo Gals	Effluent Cl ₂ used In lbs	Process 12.5% Hypo Gals	SVI	MLSS	CTSS	Aers. online	Finals online	Aerator LBS.	Final Clarifier LBS	Total LBS.
July 2015																	
1	46	46	1.9	6	8	7	2609	1618		328	1351	476	7	7	143,546	40,572	184,118
2	56	56	1.9	7	11	10	3438	2132		328	1222	726	7	7	129,839	61,880	191,720
3	48	48	1.9	5	6	5	2610	1618		321	1289	573	7	7	136,958	48,840	185,798
4	46	46	1.9	4	5	5	2104	1304		309	1311	289	7	7	139,296	24,633	163,929
5	46	46	1.9	3	7	6	1780	1104		253	1196	370	7	7	127,077	31,537	158,614
6	52	52	1.9	5	10	8	2174	1348		241	1048	408	7	7	111,352	34,776	146,127
7	52	52	2.1	6	8	10	2961	1836		237	1278	519	7	7	135,790	44,237	180,026
8	52	52	2.1	6	8	est.7	3390	2102		256	1209	620	7	7	128,458	52,846	181,304
9	53	53	2.2	6	8	7	2641	1637		294	1203	516	7	7	133,907	46,055	179,962
10	54	54	2.1	6	8	6	2560	1587		317	1368	534	6	8	124,588	52,018	176,605
11	51	51	2.1	6	8	6	2334	1447		357	1552	391	6	8	141,345	38,068	179,433
12	50	50	2.2	4	4	4	2146	1331		293	1455	536	6	8	132,511	52,212	184,723
13	59	59	2.2	5	8	5	2582	1601		308	1459	438	6	8	132,875	42,666	175,541
14	53	53	2.0	5	4	5	2776	1721		304	1374	462	6	8	125,134	45,004	170,138
15	53	53	2.0	7	10	8	2612	1619		326	1248	853	6	6	113,659	62,319	175,978
16	52	52	1.9	7	10	8	2777	1722		353	1387	606	6	8	126,318	44,273	170,591
17	52	52	1.9	5	8	5	2379	1475		332	1478	548	6	6	134,606	40,036	174,642
18	49	49	1.8	5	8	5	2516	1560		298	1352	426	6	6	123,130	31,123	154,253
19	48	48	1.8	4	4	4	1832	1136		303	1338	454	6	6	121,855	33,169	155,024
20	52	52	1.8	5	6	9	2252	1396		245	1311	424	6	6	119,396	30,977	150,373
21	53	53	1.8	5	7	6	2487	1542		246	1458	727	6	6	132,784	53,113	185,898
22	52	52	1.8	6	9	9	2430	1507		229	1493	594	6	6	135,972	43,397	179,368
23	52	52	1.8	5	6	5	1974	1224		298	1552	556	6	6	141,345	40,620	181,965
24	50	50	1.7	4	6	6	1832	1136		278	1446	401	6	6	131,691	29,296	160,988
25	71	71	1.7	6	12	12	2303	1428		288	1213	472	6	6	110,471	34,484	144,955
26	66	66	1.7	5	9	8	1877	1164		252	1252	362	6	6	114,023	26,447	140,470
27	71	71	1.7	7	10	8	2020	1252		262	1098	734	6	6	99,998	53,625	153,623
28	55	55	1.7	6	9	7	2188	1357		246	1393	672	6	6	126,864	49,095	175,960
29	54	54	1.6	5	8	6	1927	1195		270	1338	594	6	6	121,855	43,397	165,252
30	44	44	1.6	5	6	5	1646	1021		308	1312	595	6	6	119,488	43,470	162,957
31	58	58	1.6	6	30	9*	3240	2009		269	1297	490	6	6	118,121	35,799	153,920
MAX	71	71	2.2	7.4	30.0	12.0	3438	2132		357	1552	853	7	8	143,546	62,319	191,720
MIN	44	44	1.6	3.4	4.0	4.0	1646	1021		229	1048	289	6	6	99,998	24,633	140,470
SUM	1649	1649					74,397	46,126									
AVG	53	53	1.9	5.4	8	7	2400	1488		299	1332	528	6	7	126,911	42,258	169,170

July 8: BOD results should be considered estimates due to failed check standard results.
 July 31: BOD results are not reportable for regulatory purposes due to failed QC results (high blanks).

Supplementary Data for Internal Use Only

DATE	Columbia Wasting				Total TWAS To D5, D6, D7, D8, D9 & D10						Digester TWAS Feed Distribution						
July 2015	Volume MGD	WAS Dry lbs	WAS Dry tons	WAS mg/L	Volume MGD	TWAS Dry lbs	TWAS Dry tons	Tot Solids %	Vol Solids %	% Volatile Solids	Dig5 gal x100	Dig 6 gal x100	Dig 7 gal x100	Dig 8 gal x100	Dig 9 gal x100	Dig 10 gal x100	
1	2.076	90,032	45.02	5200	0.294	72,298	36.15	2.95	2.42	82	292	306	1817	293	292	292	
2	2.135	89,030	44.51	5000	0.277	78,421	39.21	3.39	2.78	82	280	268	1672	285	280	266	
3	2.166	90,322	45.16	5000	0.277	79,363	39.68	3.43	2.78	81	299	280	1670	286	283	287	
4	2.078	90,119	45.06	5200	0.256	71,871	35.94	3.37	2.70	80	245	267	1847	274	266	249	
5	2.077	84,879	42.44	4900	0.306	85,453	42.73	3.35	2.64	79	213	219	1616	208	202	210	
6	1.843	69,168	34.58	4500	0.185	53,719	26.86	3.48	2.68	77	181	187	1172	183	183	183	
7	1.544	60,522	30.26	4700	0.166	58,450	29.22	4.23	3.37	80	168	182	584	175	170	167	
8	2.111	84,493	42.25	4800	0.239	78,841	39.42	3.96	3.16	80	243	258	1853	260	251	245	
9	1.643	64,402	32.20	4700	0.189	52,244	26.12	3.32	2.67	80	287	173	1185	192	185	184	
10	2.198	97,156	48.58	5300	0.187	54,192	27.10	3.48	2.76	79	289	289	1656	284	301	292	
11	2.191	89,537	44.77	4900	0.283	82,482	41.24	3.50	2.82	81	288	287	1774	287	298	291	
12	2.064	84,347	42.17	4900	0.255	67,198	33.60	3.16	2.54	80	244	249	1660	257	258	246	
13	2.224	92,741	46.37	5000	0.257	70,661	35.33	3.30	2.57	78	288	296	1710	282	300	307	
14	2.145	89,447	44.72	5000	0.285	74,798	37.40	3.15	2.52	80	290	293	1684	283	274	276	
15	2.251	99,499	49.75	5300	0.264	67,755	33.88	3.08	2.46	80	272	243	1643	268	263	276	
16	2.102	91,154	45.58	5200	0.216	67,984	33.99	3.78	3.05	81	213	228	1181	210	211	214	
17	2.226	89,111	44.56	4800	0.256	73,550	36.77	3.45	2.80	81	260	255	1652	247	258	261	
18	2.267	96,425	48.21	5100	0.293	79,169	39.58	3.24	2.58	80	294	285	1760	301	291	292	
19	1.926	83,527	41.76	5200	0.224	66,983	33.49	3.58	2.84	79	228	222	1648	229	232	229	
20	1.777	76,547	39.27	5300	0.287	94,007	47.00	3.93	3.03	77	183	164	1615	171	183	183	
21	1.835	88,763	44.38	5800	0.200	62,652	31.33	3.76	2.99	80	197	197	1672	208	192	199	
22	1.971	90,410	45.20	5500	0.233	84,068	42.03	4.32	3.42	79	244	264	1775	247	245	244	
23	2.199	108,204	54.10	5900	0.278	86,096	43.05	3.71	2.95	80	276	289	1674	274	286	276	
24	2.314	111,933	55.97	5800	0.269	79,982	39.98	3.56	2.79	78	291	288	1758	288	300	292	
25	2.087	92,254	46.13	5300	0.265	77,760	38.88	3.52	2.78	79	260	251	1741	275	278	266	
26	1.937	84,004	42.00	5200	0.283	87,518	43.76	3.71	2.93	79	305	294	1627	297	311	301	
27	1.782	77,282	38.64	5200	0.189	63,738	31.87	4.05	3.16	78	376	382	0	358	369	381	
28	2.004	95,266	47.63	5700	0.206	73,895	36.95	4.31	3.35	78	213	227	1587	222	212	214	
29	2.071	105,360	52.68	6100	0.252	87,753	43.88	4.18	3.31	79	245	253	1846	282	254	245	
30	2.050	106,001	53.00	6200	0.239	81,895	40.95	4.11	3.26	79	242	247	1670	245	231	245	
31	1.958	109,409	54.70	6700	0.346	110,077	55.04	3.81	2.96	78	228	240	1706	239	230	229	
MAX	2.314	111,933	55.97	6700	0.346	110,077	55.04	4.32	3.42	82	376	382	1853	358	369	381	
MIN	1.544	60522	30.26	4500	0.166	52,244	26.12	2.95	2.42	77	168	164	0	171	170	167	
SUM	63,252	2,783,342	1391.67		7,753	2,324,852	1,162.43				7904	7883	48455	7910	7889	7842	
AVG	2.040	89785	44.89	5271	0.250	74,995	37.50	3.62	2.87	79	255	254	1563	255	254	253	

Beginning October 2013, Digester #7 is TWAS only digester

Primary Sludge

Columbia Blvd. Wastewater Treatment Plant

Supplementary Data for Internal Use Only

DATE	1° Sludge Volume MG	1° Sludge Mass Dry Tons	Primary Sludge Density			Dig. 5 Pri Feed gal X100	Dig. 6 Pri Feed gal X100	Dig. 8 Pri Feed gal X100	Dig. 9 Pri Feed gal X100	Dig. 10 Pri Feed gal X100	Loading lb/dayVS/1000 cu.ft. (DIG 5,6,8,9,10 COMBINED)
			Tot Sol %	Vol Sol %	% Vol Sol						
1	0.459	70.58	3.69	2.95	80	919	1051	954	949	1005	353
2	0.492	57.81	2.82	2.27	80	966	1109	1006	1006	1111	291
3	0.431	46.05	2.56	2.04	80	850	958	887	887	948	229
4	0.430	43.08	2.40	1.99	83	852	1025	882	881	1027	223
5	0.342	33.61	2.36	2.00	85	672	665	798	696	645	178
6	0.453	46.90	2.48	1.94	78	896	957	929	929	942	229
7	0.500	60.00	2.88	2.37	82	987	890	1034	1025	912	309
8	0.559	66.86	2.87	2.32	81	1084	957	1138	1121	943	338
9	0.424	53.72	3.04	2.52	83	846	711	867	846	693	278
10	0.382	51.45	3.23	2.52	78	894	763	946	935	760	251
11	0.502	50.91	2.43	2.02	83	820	631	870	838	633	265
12	0.385	50.35	3.14	2.54	81	763	614	781	759	617	255
13	0.475	58.62	2.96	2.46	83	911	712	988	908	716	304
14	0.469	63.52	3.25	2.56	79	928	784	969	934	766	313
15	0.500	58.64	2.81	2.26	80	955	758	1012	971	797	295
16	0.400	46.86	2.81	2.27	81	782	629	849	768	645	237
17	0.444	41.65	2.25	1.85	82	870	704	924	797	721	214
18	0.439	37.01	2.02	1.63	81	799	630	911	821	624	187
19	0.397	57.71	3.49	2.92	84	722	539	804	745	558	302
20	0.382	47.26	2.97	2.42	81	702	530	778	741	546	241
21	0.436	39.26	2.16	1.75	81	824	704	895	857	706	199
22	0.465	53.34	2.75	2.25	82	868	721	910	891	744	273
23	0.444	53.37	2.88	2.32	81	849	799	909	890	769	269
24	0.482	62.37	3.10	2.44	79	909	769	997	967	789	307
25	0.418	37.26	2.14	1.75	82	806	677	837	828	663	190
26	0.476	57.53	2.90	1.99	69	853	661	969	902	673	247
27	0.408	101.43	5.96	3.89	65	751	590	792	770	593	414
28	0.432	100.25	5.57	3.76	68	816	705	833	809	691	423
29	0.493	54.73	2.66	2.02	76	922	806	944	1152	821	260
30	0.391	41.24	2.53	1.93	76	714	541	702	715	546	197
	0.4026	97.03	5.78	3.35	58	738	577	755	565	585	351
MAX	0.5587	101.43	5.96	3.89	85	1084	1109	1138	1152	1111	423
MIN	0.3416	33.61	2.02	1.63	58	672	530	702	565	546	178
SUM	13.7113	1,740.41				26268	23,167	27870	26903	23189	
AVG	0.4423	56.14	3.06	2.36	79	847	747	899	868	748	272

Beginning October 2013, Digester #7 is TWAS only digester

Digester Sludge Densities

Columbia Blvd. Wastewater Treatment Plant

Supplementary Data for Internal Use Only

DATE	Dig #1			Dig #2			Dig #5			Dig #6			Dig #7			Dig #8			Dig #9			Dig #10		
	% Total Solids	% Volatile Solids		% Total Solids	% Volatile Solids		% Total Solids	% Volatile Solids		% Total Solids	% Volatile Solids		% Total Solids	% Volatile Solids		% Total Solids	% Volatile Solids		% Total Solids	% Volatile Solids		% Total Solids	% Volatile Solids	
July 2015																								
1																								
2																								
3																								
4																								
5																								
6																								
7	1.19	0.72					1.46	0.91		1.43	0.87		1.88	1.29		1.53	0.95		1.40	0.85		1.43	0.86	
8																								
9																								
10																								
11																								
12																								
13																								
14	1.23	0.75					1.54	0.94		1.52	0.92		1.92	1.28		1.55	0.96		1.59	0.96		1.49	0.90	
15																								
16																								
17																								
18																								
19																								
20																								
21	1.29	0.77					1.67	1.01		1.51	0.91		2.07	1.37		1.66	1.01		1.47	0.90		1.49	0.91	
22																								
23																								
24																								
25																								
26																								
27																								
28	1.51	0.87					1.94	1.15		2.11	1.27		2.03	1.34		1.89	1.13		1.77	1.05		1.82	1.07	
29																								
30																								
31																								
MAX	1.51	0.87					1.94	1.15		2.11	1.27		2.07	1.37		1.89	1.13		1.77	1.05		1.82	1.07	
MIN	1.19	0.72					1.46	0.91		1.43	0.87		1.88	1.28		1.53	0.95		1.40	0.85		1.43	0.86	
AVG	1.31	0.78					1.65	1.00		1.64	0.99		1.98	1.32		1.66	1.01		1.56	0.94		1.56	0.94	

Beginning October 2013, Digester #7 is TWAS only digester

D1 offline March 3 - June 28 D2 offline June 29, 2015

Digesters

Columbia Blvd. Wastewater Treatment Plant

Supplementary Data for Internal Use Only

DATE	Digester Temperature										Digester pH						Alkalinity						Volatile Acids						Where To	
	D-1	D-2	D-5	D-6	D-7	D-8	D-9	D-10	D-10	D-10	D-5	D-6	D-7	D-8	D-9	D-10	D-5	D-6	D-7	D-8	D-9	D-10	D-5	D-6	D-7	D-8	D-9	D-10	Diger Distribution	
	temp.	temp.	temp.	temp.	temp.	temp.	temp.	temp.	temp.	pH	pH	pH	pH	pH	pH	pH	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	To D3	To T. Lake
July 2015																														
1	99		99	99	99	99	99	99	99	7.1	7.2	7.6	7.2	7.2	7.2	7.2	3300	3060	6210	3200	3130	3250	40	35	58	42	38	38	54.105	22.899
2	100		99	99	99	99	99	99	99	7.2	7.2	7.5	7.3	7.2	7.2	7.2	3230	3200	5950	3400	3030	3440	65	48	80	42	42	35	43.571	23.970
3	100		99	99	99	99	99	99	99	7.2	7.2	7.5	7.3	7.2	7.2	7.2	3490	3290	6460	3200	3000	3670	45	38	58	42	35	35	47.277	11.223
4	100		99	99	99	99	99	99	99	7.2	7.2	7.5	7.2	7.2	7.1	7.1	3330	3300	5760	3120	3200	3470	38	30	42	40	40	42	40.970	11.239
5	100		99	99	99	99	99	99	99	7.2	7.2	7.5	7.2	7.2	7.2	7.2	3440	3150	6390	3150	3250	3360	42	40	48	42	40	40	35.813	6.442
6	100		99	99	99	99	99	99	99	7.2	7.2	7.5	7.2	7.2	7.2	7.2	3270	3040	6160	3250	3540	3400	45	38	52	35	38	32	45.358	8.833
7	100		99	99	99	99	99	99	99	7.3	7.2	7.5	7.2	7.1	7.2	7.2	3320	2990	6290	3230	3120	3460	48	38	52	32	30	28	39.769	29.078
8	100		99	99	99	99	99	99	99	7.2	7.2	7.6	7.2	7.1	7.2	7.2	3350	3070	6200	3190	3100	3250	45	42	65	48	48	45	57.621	27.868
9	100		99	99	99	99	99	99	99	7.2	7.2	7.5	7.2	7.2	7.2	7.2	3180	3110	6730	3190	3080	3200	45	40	60	40	38	35	38.304	3.138
10	100		99	99	99	99	99	99	99	7.2	7.2	7.5	7.2	7.1	7.2	7.2	3360	3100	6500	3140	3280	3430	40	40	50	38	35	35	45.768	33.771
11	100		99	99	99	99	99	99	99	7.2	7.2	7.6	7.2	7.1	7.2	7.2	3340	2960	6500	3180	3060	3370	42	42	72	45	40	50	47.746	11.356
12	100		99	99	99	99	99	99	99	7.2	7.2	7.7	7.2	7.1	7.1	7.1	3650	3170	6260	3520	3310	3340	55	48	70	32	50	52	35.967	7.534
13	100		99	99	99	99	99	99	99	7.2	7.2	7.6	7.2	7.2	7.2	7.2	3220	3000	6120	3190	3030	3230	50	50	72	45	42	45	56.039	25.345
14	100		99	99	99	99	99	99	99	7.1	7.2	7.4	7.2	7.1	7.2	7.2	3350	3120	6070	3170	3370	3360	40	32	55	42	45	40	43.241	7.202
15	100		99	99	99	99	99	99	99	7.2	7.2	7.6	7.2	7.1	7.1	7.1	3420	3110	7090	3280	3160	3480	42	42	62	40	40	40	50.442	13.153
16	100		99	99	99	99	99	99	99	7.2	7.2	7.5	7.2	7.1	7.2	7.2	3330	2930	6410	3400	3150	3280	52	38	70	42	42	35	40.648	8.439
17	100		99	99	99	99	99	99	99	7.2	7.1	7.6	7.2	7.2	7.2	7.2	3540	3240	7510	3280	3250	3250	52	52	62	48	40	48	44.809	7.734
18	100		99	99	99	99	99	99	99	7.2	7.2	7.6	7.3	7.1	7.2	7.2	3080	3040	6350	2990	3180	3110	50	48	78	58	65	55	45.812	7.631
19	100		99	99	99	99	99	99	99	7.1	7.1	7.6	7.1	7.1	7.2	7.2	3200	2940	6380	3010	2980	3140	50	45	75	45	40	42	40.692	14.321
20	100		99	99	99	99	99	99	99	7.2	7.1	7.5	7.2	7.1	7.2	7.2	3370	2970	5700	3040	2910	3230	40	35	48	38	38	40	35.308	6.345
21	100		99	99	99	99	99	99	99	7.1	7.2	7.5	7.2	7.2	7.2	7.2	3290	2880	6430	3180	3030	3230	48	40	52	42	40	40	44.604	30.474
22	100		99	99	99	99	99	99	99	7.3	7.2	7.4	7.2	7.2	7.2	7.2	3540	2960	5750	2900	3160	3180	45	42	38	40	52	50	40.626	39.273
23	100		99	99	99	99	99	99	99	7.1	7.1	7.5	7.1	7.1	7.2	7.2	3320	2960	6170	3000	3060	3090	48	48	65	45	45	40	50.845	19.436
24	100		99	99	99	99	99	99	99	7.2	7.1	7.7	7.2	7.2	7.1	7.1	3490	3300	7140	3420	3500	3550	45	40	62	32	40	38	50.112	35.879
25	100		99	99	99	99	99	99	99	7.2	7.2	7.6	7.2	7.1	7.1	7.1	3510	3200	7120	3260	3250	3370	45	45	58	45	45	38	46.948	11.501
26	100		99	99	99	99	99	99	99	7.2	7.2	7.6	7.1	7.1	7.1	7.1	3340	3210	6570	3010	3080	3340	45	45	60	62	68	52	52.859	6.476
27	99		99	99	99	99	99	99	99	7.2	7.2	7.5	7.4	7.2	7.3	7.3	3310	3020	6480	3500	3000	3340	45	50	65	48	42	52	34.378	14.439
28	100		99	99	99	99	99	99	99	7.2	7.2	7.6	7.2	7.2	7.2	7.2	3270	2880	6210	3190	2980	3320	65	48	78	40	45	40	49.739	35.015
29	99		99	99	99	99	99	99	99	7.1	7.2	7.6	7.1	7.1	7.2	7.2	3360	3090	6460	3220	3030	3280	50	55	60	48	48	45	54.215	13.920
30	100		99	99	99	99	99	99	99	7.1	7.2	7.6	7.3	7.1	7.1	7.1	3310	3010	6360	3420	3380	3440	48	38	42	38	45	42	40.406	8.640
31	100		99	99	99	99	99	99	99	7.2	7.2	7.5	7.2	7.1	7.2	7.2	3340	2960	7330	3110	3060	3230	50	50	62	50	48	48	48.244	7.568
MAX	100		99	99	99	99	99	99	99	7.3	7.2	7.7	7.4	7.2	7.3	7.3	3650	3300	7510	3520	3540	3670	65	55	80	62	68	55	57.621	39.273
MIN	99		99	99	99	99	99	99	99	7.1	7.1	7.4	7.1	7.1	7.1	7.1	3080	2880	5700	2900	2910	3090	38	30	38	32	30	28	6.309	10.674
SUM																														
AVG	100		99	99	99	99	99	99	99	7.2	7.2	7.5	7.2	7.1	7.2	7.2	3350	3073	6421	3205	3150	3325	47	43	60	43	43	42	45.233	16.424

Dr offline March 3 - June 28 D2 offline June 28, 2015

Beginning October 2013, Digester #7 is TWAS only digester

Gas Production

Columbia Blvd. Wastewater Treatment Plant

Supplementary Data for Internal Use Only

Digester 5-10 Daily Gas Production

DATE	Dig #5 scf	Dig #6 scf	Dig #7 scf	Dig #8 scf	Dig #9 scf	Dig #10 scf
July 2015						
1	355	349	309	342	237	207
2	317	307	288	287	206	185
3	336	336	302	328	225	209
4	321	311	355	298	213	191
5	195	246	269	199	172	160
6	236	278	230	234	189	178
7	309	331	203	302	198	180
8	372	379	323	367	243	214
9	286	322	231	283	199	182
10	327	335	294	317	210	185
11	360	365	356	359	237	214
12	296	336	286	275	213	182
13	344	347	278	344	211	207
14	329	332	272	325	207	191
15	341	368	323	357	229	214
16	316	337	330	313	205	193
17	342	344	336	337	186	202
18	344	346	335	335	173	194
19	295	344	324	279	170	175
20	249	314	291	253	173	168
21	302	337	283	295	175	176
22	354	366	325	352	214	204
23	332	334	309	329	192	192
24	338	348	313	335	207	210
25	332	351	333	319	193	200
26	372	374	339	368	228	224
27	328	331	164	328	195	200
28	322	330	167	322	213	218
29	361	370	285	361	265	259
30	334	341	297	333	219	222
	313	337	299	310	209	214
MAX	372	379	356	368	265	259
MIN	195	246	164	199	170	160
SUM	9,958,000	10,446,000	9,049,000	9,786,000	6,406,000	6,150,000
AVG	321	337	292	316	207	198

July-2015	scf	% of total
Dig 1-10 Production	44,002,669	100.0
Dig 5-10 Production	51,795,000	117.7

Gas Report

Columbia Blvd. Wastewater Treatment Plant

Supplementary Data for Internal Use Only

Natural Gas and Sewer Gas; daily usage and monthly totals (in scf)

DATE	TUYE south meter #1	DCB east (boiler #2) meter #2	DCB west (boiler #1) meter #3	SLPR boiler #1	SLPR boiler #2	Malarkey	Waste Gas Burner	Co-gen	microturbine (x100)	Natural Gas (x1000)
July 2015										
1	962088	1232	228431	12208	121197	446100	834020	339000		17
2	781336	0	156565	0	70000	439200	597253	522000		14
3	689686	0	0	0	54784	337800	679848	506000		15
4	985988	0	0	0	56137	180700	748173	676000		10
5	654774	0	0	0	38524	187900	523040	602000		20
6	721946	0	0	0	63489	166400	502939	654000		16
7	593292	0	28450	0	60638	363600	414159	619000		17
8	993238	11704	0	0	0	379800	529425	705000		19
9	727459	0	0	0	129731	428700	450250	606000		16
10	631246	0	0	32427	39872	274700	674233	631000		19
11	1016779	0	0	66809	0	360200	727881	672000		25
12	818215	9808	0	55780	0	321800	535031	501000		15
13	878998	5296	0	0	0	445800	751722	325000		12
14	700505	55632	0	134163	0	364100	764650	313000		6
15	1079098	5064	0	6152	46702	366700	810233	425000		6
16	791399	19704	0	7496	58831	449600	511919	627000		5
17	661492	0	0	0	66284	446200	591018	645000		6
18	988049	0	0	0	63212	330400	596198	636000		11
19	745149	0	0	0	54611	382400	474564	596000		0
20	798430	12784	0	0	75644	806000	484632	455000		6
21	657003	0	0	12	66297	0	452688	633000		6
22	1045178	6304	0	40723	33516	329100	834881	578000		6
23	813188	11416	0	72141	0	418900	645307	517000		6
24	809696	0	0	69542	0	437000	667949	599000		5
25	928839	0	0	73269	0	179500	883447	655000		11
26	923549	0	0	60553	0	357500	765918	698000		4
27	773146	0	0	0	0	430000	484207	608000		5
28	627441	12344	0	171786	0	410400	606589	601000		7
29	1089741	0	0	67409	0	296700	923382	662000		6
30	863372	7312	0	67605	0	334500	696422	597000		5
31	840303	0	0	53193	0	412600	579032	639000		6
MAX	1,089,741	55632	228,431	171,786	129731	806,000	923,382	705,000	0	25
MIN	593,292	0	0	0	0	0	414,159	313,000	0	0
SUM	25,590,623	158,600	411,446	991,268	1,099,469	11,084,300	19,741,010	17,842,000	0	322
AVG	825,504	5116	13,272	31,976	35467	357,558	636,807	575,548	0	10

July-2015	scf	% of total
Dig 1-10 Production	44,002,669	100.0
Used in Co-gen	17,842,000	40.5
Used in DCB	570,046	1.3
Used in SLPR	2,090,737	4.8
Malarkey	11,084,300	25.2
Waste Gas Burner	19,741,010	44.9

one cogen unit uses 232 cuft/min
or 13,934 cuft/hour for 1 unit
as per manufacturer

one micro turbine uses 750 cuft / hour
4 units total

Supplementary Data for Internal Use Only

DATE	FEED				FILTRATE				CAKE				POLYMER			
# OF PRESSES	TOTAL PUMP HRS.	GALLONS X 1000	% SOLIDS	DRY TONS	% COMPOSITE	DRY TONS	% CAPTURE	WET TONS TO TRUCK	% SOLIDS	DRY TONS TO TRUCK	LBS. USED	LBS POLY / FEED DRY TONS	LBS POLY / CAKE DRY TONS			
July 2015	4	71.1	681	2.31	65.6			209.21	20.79	43.49	865	13	20			
1	3	75.9	830	1.64	56.8			209.20	18.82	39.37	1090	19	28			
2	4	66.7	754	1.62	51.0			209.40	19.29	40.39	963	19	24			
3	3	75.0	849	1.68	59.5			209.55	20.49	42.94	1079	18	25			
4	3	68.9	761	1.59	50.5			209.61	19.46	40.79	987	20	24			
5	4	55.7	821	1.59	54.4			209.15	19.58	40.95	1227	23	30			
6	3	65.2	762	1.90	60.4	93		173.23	20.34	35.23	1096	18	31			
7	4	82.7	978	1.57	64.0			208.83	19.83	41.41	1318	21	32			
8	4	73.0	870	1.72	62.4			209.14	21.73	45.45	1210	19	27			
9	3	66.3	802	1.65	55.2			209.26	21.05	44.05	1128	20	26			
10	3	70.2	861	1.70	61.0			209.10	20.28	42.41	1232	20	29			
11	4	71.8	850	1.60	56.7			209.42	19.83	41.53	1146	20	28			
12	4	59.1	591	1.83	45.1			209.45	22.55	47.23	835	19	18			
13	3	67.4	778	1.46	47.3	91		209.45	19.85	41.58	1154	24	28			
14	4	77.6	937	1.77	69.2			209.37	19.97	41.81	1361	20	33			
15	3	68.7	841	1.45	50.8			208.34	19.07	39.73	1130	22	28			
16	4	60.5	743	1.61	49.9			174.19	19.30	33.62	952	19	28			
17	3	70.2	874	1.40	51.0			209.22	18.70	39.12	1090	21	28			
18	3	70.8	878	1.37	50.1			174.28	18.18	31.68	1148	23	36			
19	3	72.2	861	1.65	59.3			209.31	21.29	44.56	1190	20	27			
20	3	69.8	822	1.60	54.8	90		209.59	20.66	43.30	1114	20	26			
21	3	73.8	858	1.48	53.0			209.46	20.32	42.56	1148	22	27			
22	4	69.5	779	1.80	58.5			174.59	20.21	35.28	993	17	28			
23	4	62.1	754	1.71	53.8			209.29	21.13	44.22	971	18	22			
24	4	71.0	821	1.70	58.2			208.89	21.06	43.99	1023	18	23			
25	4	72.7	850	1.84	65.2			209.13	20.67	43.23	1131	17	26			
26	4	62.8	701	2.39	69.9			209.09	22.27	46.56	992	14	21			
27	4	74.6	802	1.73	57.8	91		209.30	20.17	42.22	1123	19	27			
28	4	70.3	806	1.66	55.8			209.96	20.83	43.73	1077	19	25			
29	4	71.5	767	1.70	54.4			209.56	19.68	41.24	1018	19	25			
30	4	69.2	801	1.51	50.4			209.58	18.79	39.38	1147	23	29			
31	4	82.7	978	2.39	69.9	93		209.96	22.55	47.23	1361	24	36			
MAX	3	55.7	591	1.37	45.1	90		173.23	18.18	31.68	835	13	18			
MIN	2156.3				25083	1751.9	18.8	6347.15		1283.08	33937	605				
SUM	4	69.6	809	1.68	56.5	91		204.75	20.20	41.39	1095	20	27			
AVG																

Supplementary Data for Internal Use Only

		Supplementary Data for Internal Use Only												
		Plant Flow Temperatures							Dry Weather Primaries			Volatile Acids		
DATE	Plant Flow MGD	Influent Temperature °F			Average Influent Temp	Effluent Temperature °F			Average Effluent Temp	Tanks in service	Detention Time hours	Headworks	Primary Effluent	Chlorinated Effluent
		A-shift	B-shift	C-shift		A-shift	B-shift	C-shift						
1	46	68	70	69	69	70	71	67	69	3	2.2			
2	56		70	69	69		71	70	71	3	1.8	78	78	12
3	48	69	69	68	69		71	70	71	3	2.1			
4	46	68		68	68		70		70	3	2.2			
5	46	66	69	68	68		70	69	70	3	2.2	40	38	10
6	52	68	69	68	68		69	70	70	3	1.9			
7	52	70	70	70	70		70	71	70	3	2.0			
8	52	69	69	69	69		71	71	71	3	1.9			
9	53	69	69	69	69		71	71	71	3	1.9	75	60	10
10	54	69	70	70	70		70	71	71	3	1.9			
11	51	68	69	68	68		70	70	71	3	2.0			
12	50	68	68	70	69		70	70	70	3	2.0	62	50	15
13	59	70	70	69	70		70	70	70	3	1.5			
14	53	69	70	70	70		70	71	70	2	1.3			
15	53		70	70	70			71	70	2	1.3			
16	52	69	70	69	69		71	71	70	2	1.3	75	60	20
17	52	70	70	70	70		71	71	70	2	1.3			
18	49	69	70	70	69		70	71	71	2	1.4			
19	48	69	69	69	69		70	71	70	2	1.4	48	48	15
20	52	70	70	69	70		71	71	71	2	1.3			
21	53	71	70	70	70		71	71	71	2	1.3			
22	52	70	71	69	70		71	71	70	2	1.3			
23	52	68	70	70	69		71	71	70	2	1.3	78	70	12
24	50	70	71	70	70		71	71	71	2	1.3			
25	71	69	69	70	69		71	70	71	2	1.2			
26	66	69	70	70	69		70	70	69	3	1.6	48	28	12
27	71	69	70	68	69		68	70	69	3	1.6			
28	55	68	71	70	70		70	71	70	3	1.8			
29	54	69	71	69	70		71	71	71	2	1.4			
30	44		70	71	70			72	72	2	1.5	80	60	12
31	58	70	71	70	70		71	72	72	2	1.2			
MAX	71	71	71	71	70		71	72	72	3	2.2	80	78	20
MIN	44	66	68	68	68		68	70	67	2	1.2	40	28	10
SUM	1649													
AVG	53	69	70	69	69		70	71	70	2.5	1.6	65	55	13

Supplementary Data for Internal Use Only

		FEED				FILTRATE			TWAS		POLYMER			
DATE	#	TOTAL BELT HOURS	GALLONS IN MGD	% SOLIDS (WAS)	DRY TONS	% Total Solids (composite)	Dry Tons	Estimated Capture Rate %	GALLONS X 100	% SOLIDS	TOTAL DRY TONS	LBS. USED	LBS POLY / FEED DRY TONS	LBS POLY / TWAS DRY TONS
July 2015														
1	3	72.0	2.08	0.52	45.0				293858	3.20	3921.2	439	10	0
2	3	75.2	2.14	0.49	43.6				277373	3.93	4545.6	498	11	0
3	3	62.8	2.17	0.58	52.4				277432	3.76	4349.9	443	8	0
4	3	75.9	2.08	0.49	42.5				255717	3.90	4158.7	475	11	0
5	3	68.5	2.08	0.39	33.8				305856	3.62	4617.0	470	14	0
6	3	74.6	1.84	0.39	30.0				185089	3.76	2902.0	448	15	0
7	3	69.5	1.54	0.54	34.8	0.04	2.58	93	165682	4.55	3143.6	379	11	0
8	3	77.0	2.11	0.57	50.2				238721	4.49	4469.6	503	10	0
9	3	59.4	1.64	0.46	31.5				188683	3.99	3139.4	396	13	0
10	3	66.3	2.20	0.54	49.5				186721	3.90	3036.6	477	10	0
11	3	70.1	2.19	0.46	42.0				282569	3.89	4583.6	490	12	0
12	3	72.2	2.06	0.50	43.0				254979	3.79	4029.8	472	11	0
13	3	75.9	2.22	0.52	48.2				256744	3.52	3768.6	560	12	0
14	3	67.5	2.15	0.51	45.6	0.04	3.58	92	284718	4.19	4974.7	523	11	0
15	3	75.0	2.25	0.54	50.7				263768	3.32	3651.7	573	11	0
16	3	64.5	2.10	0.47	41.2				215650	4.18	3758.9	469	11	0
17	3	65.8	2.23	0.43	39.9				255621	4.42	4711.5	459	12	0
18	3	70.7	2.27	0.58	54.8				292985	3.68	4496.0	476	9	0
19	3	71.4	1.93	0.58	46.6				224346	4.04	3779.5	418	9	0
20	3	77.6	1.78	0.55	40.8				286816	4.45	5322.3	392	10	0
21	3	67.0	1.84	0.56	42.9	0.04	3.06	93	199793	4.42	3682.5	372	9	0
22	3	81.5	1.97	0.53	43.6				233335	4.75	4621.8	424	10	0
23	3	65.8	2.20	0.63	57.8				278256	4.16	4827.0	470	8	0
24	3	69.2	2.31	0.52	50.2				269318	3.79	4256.4	482	10	0
25	3	71.9	2.09	0.45	39.2				264878	3.82	4219.3	444	11	0
26	3	72.9	1.94	0.61	49.3				282852	4.16	4906.7	420	9	0
27	3	74.9	1.78	0.60	44.6				188702	4.47	3517.4	359	8	0
28	3	68.8	2.00	0.62	51.8	0.06	5.01	90	205575	4.96	4251.9	413	8	0
29	3	69.2	2.07	0.68	58.7				251720	4.21	4419.1	422	7	0
30	3	76.3	2.05	0.53	45.3				238918	4.28	4264.1	433	10	0
31	3	68.4	1.96	0.73	59.6				346421	4.16	6009.4	407	7	0
MAX	3	81.5	2.31	0.73	59.6	0.06	5.01	93	346421	4.96	6009.4	573	15	0
MIN	3	59.4	1.54	0.39	30.0	0.04	2.58	90	165682	3.20	2902.0	359	7	0
SUM		2197.8	63.25		1408.9				7753096		130336.0	14010		3
AVG	3	70.9	2.04	0.53	45.4	0.05	3.56	92	250100	4.06	4204.4	452	10	0

Biosolids

Columbia Blvd. Wastewater Treatment Plant

Supplementary Data for Internal Use Only

Date	BP % Total Solids	Cake to Trucks (wet tons)	Cake to Trucks (Dry Tons)	Lagoon to Press Feed (Dry Tons)	Belt Press Feed (Dry Tons)	Estimated Capture Rate	Digesters to Press Feed (Dry Tons)	Digesters to Lagoon (Dry Tons)	Solids to Madison Ranch (Dry Tons)
July 2015									
1	20.79	209.21	43.5	0.0	65.6	66	65.6	22.9	43.5
2	18.82	209.20	39.4	11.9	56.8	69	44.9	24.0	39.4
3	19.29	209.40	40.4	6.2	51.0	79	44.7	10.2	40.4
4	20.49	209.55	42.9	17.5	59.5	72	41.9	11.2	42.9
5	19.46	209.61	40.8	5.1	50.5	81	45.3	6.4	40.8
6	19.58	209.15	41.0	6.1	54.4	75	48.3	8.8	41.0
7	20.34	173.23	35.2	43.7	60.4	58	16.6	29.1	35.2
8	19.83	208.83	41.4	0.0	64.0	65	64.0	27.9	41.4
9	21.73	209.14	45.4	39.0	62.4	73	23.4	3.1	45.4
10	21.05	209.26	44.0	26.4	55.2	80	28.8	33.8	44.0
11	20.28	209.10	42.4	17.5	61.0	69	43.6	11.4	42.4
12	19.83	209.42	41.5	7.4	56.7	73	49.4	7.5	41.5
13	22.55	209.45	47.2	42.2	45.1		2.8	25.3	47.2
14	19.85	209.45	41.6	22.1	47.3	88	25.3	7.2	41.6
15	19.97	209.37	41.8	15.4	69.2	60	53.7	13.2	41.8
16	19.07	208.34	39.7	9.1	50.8	78	41.7	8.4	39.7
17	19.30	174.19	33.6	19.8	49.9	67	30.0	7.7	33.6
18	18.70	209.22	39.1	8.1	51.0	77	42.9	7.6	39.1
19	18.18	174.28	31.7	15.5	50.1	63	34.6	14.3	31.7
20	21.29	209.31	44.6	26.1	59.3	75	33.1	6.3	44.6
21	20.66	209.59	43.3	24.3	54.8	79	30.5	30.5	43.3
22	20.32	209.46	42.6	20.5	53.0	80	32.5	39.3	42.6
23	20.21	174.59	35.3	44.5	58.5	60	14.0	19.4	35.3
24	21.13	209.29	44.2	30.8	53.8	82	23.0	35.9	44.2
25	21.06	208.89	44.0	10.2	58.2	76	48.0	11.5	44.0
26	20.67	209.13	43.2	8.2	65.2	66	57.0	6.5	43.2
27	22.27	209.09	46.6	35.8	69.9	67	34.1	14.4	46.6
28	20.17	209.30	42.2	27.6	57.8	73	30.3	35.0	42.2
29	20.83	209.96	43.7	15.5	55.8	78	40.3	13.9	43.7
30	19.68	209.56	41.2	23.0	54.4	76	31.4	8.6	41.2
31	18.79	209.58	39.4	13.5	50.4	78	36.9	7.6	39.4
Max	22.55	210.0	47.2	44.5	69.9	88	65.6	39.3	47.2
Min	18.18	173.2	31.7	0.0	45.1	58	2.8	3.1	31.7
Std	1.03	12.0	3.6	12.6	6.2	7	14.0	10.7	3.6
Sum	626.19	6347.2	1283.1	593.3	1751.9		1158.6	509.1	1283.1
Avg	20.20	204.7	41.4	19.1	56.5	73	37.4	16.4	41.4

Supplementary Data for Internal Use Only

Date	Primary Sludge				TWAS			D5			D6			D7			D8			D9			D10																																																																					
	TS	VS	%		TS	VS	%	PS	TWAS	Vol Sol	Loading	PS	TWAS	Vol Sol	Loading	PS	TWAS	Vol Sol	Loading	PS	TWAS	Vol Sol	Loading	PS	TWAS	Vol Sol	Loading																																																																	
July 2015	%	%	%	%	%	%	%	Feed	Feed	(lb/day)	(lbs VS/m ² /day)	Feed	Feed	(lb/day)	(lbs VS/m ² /day)	Feed	Feed	(lb/day)	(lbs VS/m ² /day)	Feed	Feed	(lb/day)	(lbs VS/m ² /day)	Feed	Feed	(lb/day)	(lbs VS/m ² /day)																																																																	
1	3.69	2.95	80	2.95	2.42	82		9190	2920	285035	0.91	10510	3060	320337	1.02	18170	366721	1.17	9540	2930	293848	0.93	9490	2920	292416	0.86	10050	2920	306194	0.97																																																														
2	2.82	2.27	80	3.39	2.78	82		9860	2800	243163	0.77	11090	2680	272090	0.87	16720	387657	1.23	10060	2850	266532	0.82	10060	2800	256372	0.75	11110	2860	272005	0.87																																																														
3	2.56	2.04	80	3.43	2.78	81		8500	2890	241621	0.67	9580	2800	227009	0.72	16700	387193	1.23	8870	2860	217220	0.69	8870	2830	216525	0.69	9480	2870	227830	0.72																																																														
4	2.40	1.99	83	3.37	2.70	80		8520	2450	196572	0.63	10250	2670	230238	0.73	18470	415907	1.32	8820	2740	206081	0.66	8810	2660	206114	0.66	10270	2490	226517	0.72																																																														
5	2.36	2.00	85	3.35	2.64	79		6720	2130	158987	0.51	6650	2190	159141	0.51	16160	358804	1.13	7980	2080	178903	0.57	6960	2020	160568	0.51	6450	2100	153823	0.49																																																														
6	2.48	1.94	78	3.48	2.68	77		8960	1810	185425	0.59	9570	1870	196836	0.63	11720	261955	0.83	9290	1830	191211	0.61	9290	1830	191211	0.61	9420	1830	193315	0.61																																																														
7	2.88	2.37	82	4.23	3.37	80		9870	1880	242006	0.77	8900	1820	227068	0.72	5840	164138	0.52	10340	1750	253564	0.81	10250	1700	250379	0.80	9120	1670	227201	0.72																																																														
8	2.87	2.32	81	3.96	3.16	80		10840	2430	273782	0.87	9570	2580	263162	0.81	18530	488347	1.55	11380	2600	288711	0.92	11210	2510	263050	0.90	9430	2480	247027	0.79																																																														
9	3.04	2.52	83	3.32	2.67	80		8460	2870	241711	0.77	7110	1730	187953	0.60	11850	263873	0.84	8670	1920	224970	0.72	8460	1890	218988	0.70	6930	1840	186619	0.59																																																														
10	3.23	2.52	78	3.48	2.76	79		8940	2890	254413	0.81	7630	2890	226881	0.72	16560	381185	1.21	9460	2840	264191	0.84	9350	3010	265792	0.85	7600	2920	226941	0.72																																																														
11	2.43	2.02	83	3.5	2.82	81		8200	2880	205878	0.65	6310	2870	173802	0.55	17740	417224	1.33	8700	2870	214066	0.68	8380	2980	211262	0.67	6330	2910	175080	0.56																																																														
12	3.14	2.54	81	3.16	2.54	80		7630	2440	213319	0.68	6140	2490	182814	0.58	16800	351648	1.12	7810	2570	219886	0.70	7590	2580	215437	0.69	6170	2460	182814	0.58																																																														
13	2.96	2.46	83	3.3	2.57	78		9110	2880	248634	0.79	7120	2960	209621	0.67	17100	366518	1.17	9880	2820	263145	0.84	9080	3000	250590	0.80	7160	3070	212699	0.68																																																														
14	3.25	2.56	79	3.15	2.52	80		9280	2900	259080	0.82	7840	2930	228966	0.73	16840	353923	1.13	9690	2830	266363	0.85	9340	2740	256999	0.82	7660	2760	221550	0.70																																																														
15	2.81	2.26	80	3.08	2.46	80		9550	2720	235807	0.75	7580	2430	192726	0.61	16430	337084	1.07	10120	2680	245730	0.78	9710	2630	236976	0.75	7970	2760	206847	0.66																																																														
16	2.81	2.27	81	3.78	3.05	81		7820	2130	202227	0.64	6290	2280	177077	0.56	11810	300411	0.96	8490	2100	214149	0.68	7680	2110	199068	0.63	6450	2140	178545	0.56																																																														
17	2.25	1.85	82	3.45	2.80	81		8700	2600	194948	0.62	7040	2550	188168	0.53	16520	385775	1.23	9240	2470	200243	0.64	7970	2580	183217	0.58	7210	2610	172192	0.55																																																														
18	2.02	1.63	81	3.24	2.58	80		7960	2940	171878	0.55	6300	2850	146967	0.47	17600	378703	1.20	9110	2470	188610	0.60	8210	2910	174223	0.55	6240	2920	147658	0.47																																																														
19	3.49	2.92	84	3.58	2.84	79		7220	2280	229830	0.73	5390	2220	183844	0.58	16480	390339	1.24	8040	2290	250037	0.80	7450	2320	236379	0.75	5580	2290	190129	0.60																																																														
20	2.97	2.42	81	3.93	3.03	77		7020	1830	187928	0.60	5300	1640	148412	0.47	16150	408114	1.30	7780	1710	200234	0.64	7410	1830	195799	0.62	5460	1830	156443	0.50																																																														
21	2.16	1.75	81	3.78	2.99	80		8240	1970	169388	0.54	7040	1970	151874	0.48	16720	416940	1.33	8950	2080	182493	0.58	8570	1920	172957	0.55	7060	1990	152865	0.49																																																														
22	2.75	2.25	82	4.32	3.42	79		8880	2440	232476	0.74	7210	2640	210586	0.67	17750	506280	1.61	9100	2470	241213	0.77	8910	2450	237077	0.75	7440	2440	209207	0.67																																																														
23	2.68	2.32	81	3.71	2.95	80		8490	2760	232176	0.74	7990	2890	225700	0.72	16740	411854	1.31	9090	2740	243293	0.77	8900	2860	242569	0.77	7690	2760	216697	0.69																																																														
24	3.10	2.44	78	3.56	2.79	78		9090	2910	252889	0.80	7690	2880	223502	0.71	17580	409062	1.30	9970	2880	268999	0.86	9670	3000	266586	0.85	7890	2920	228503	0.73																																																														
25	2.14	1.75	82	3.52	2.78	79		8060	2800	177917	0.57	6770	2510	157003	0.50	17410	403854	1.28	8370	2750	188919	0.59	8280	2780	185301	0.59	8630	2660	158437	0.50																																																														
26	2.90	1.99	69	3.71	2.93	79		8530	3050	216099	0.69	6610	2940	181546	0.58	16270	397577	1.26	9690	2970	233397	0.74	9020	3110	225988	0.72	6730	3010	185248	0.59																																																														
27	5.96	3.89	65	4.05	3.16	78		7510	3760	342736	1.09	5900	3820	292085	0.93	16700	454046	1.44	7020	3680	351294	1.12	7700	3690	347056	1.10	5930	3810	292795	0.93																																																														
28	5.57	3.76	68	4.31	3.35	78		8160	2130	315595	1.00	7050	2270	284498	0.90	15870	443392	1.41	8330	2220	323240	1.03	8090	2120	312920	1.00	6910	2140	276476	0.88																																																														
29	2.66	2.02	76	4.18	3.31	79		9220	2460	222861	0.71	8060	2530	205627	0.65	18460	508596	1.62	9440	2820	236881	0.75	11520	2540	264193	0.84	8210	2450	205945	0.65																																																														
30	2.53	1.93	76	4.11	3.26	79		7140	2420	180723	0.57	5410	2470	154236	0.49	16700	454046	1.44	7020	2450	179607	0.57	7150	2310	177893	0.57	5460	2450	154487	0.49																																																														
31	5.78	3.35	58	3.81	2.96	78		7390	2280	262475	0.83	5770	2400	220455	0.70	17060	421160	1.34	7550	2390	269940	0.86	5650	2300	214634	0.88	5850	2290	216975	0.70																																																														
Max	5.96	3.89	85	4.32	3.42	82		10840	3760	342736	1.09	11090	3820	320337	1.02	18530	508596	1.62	11380	3580	351294	1.12	11520	3690	347056	1.10	11110	3810	306194	0.97																																																														
Min	2.02	1.63	58	2.95	2.42	77		6720	1680	158987	0.51	5300	1640	146967	0.47	0	0	0	7020	1710	178903	0.57	5650	1700	160568	0.51	5460	1670	147658	0.47																																																														
Sum								262680	79040			231670	78830			484550			278700	79100			269030	76890			231890	78420																																																																
Avg	3.06	2.36	79	3.62	2.87	79		8474	2550	227341	0.72	7473	2543	207124	0.66	15631	372131	1.18	8990	2552	237318	0.75	8678	2545	230557	0.73	7480	2530	206770	0.66																																																														
Volume D1, D2 = 1,216,784 gal = 182,660 ft ³																															Volume D5, D6, D7, D8 = 2,352,097 gal = 314,430 ft ³																															Volume D9, D10 = 2,543,200 gal = 340,080 ft ³																														

Volume D1, D2 = 1,216,784 gal = 182,680 ft³Volume D5, D6, D7, D8 = 2,352,097 gal = 314,430 ft³Volume D9, D10 = 2,543,200 gal = 340,000 ft³

Beginning October 2013, Digester #7 is TWAS only digester

Columbia Blvd. Wastewater Treatment Plant
Supplementary Data for Internal Use Only

	D1 offline March 3 - June 28	D2 offline June 29, 2015
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