



CITY OF PORTLAND ENVIRONMENTAL SERVICES



Tryon Creek Wastewater Treatment Plant

195 SW Foothills Road, Bldg 310, Lake Oswego, Oregon 97034 ■ Sam Adams, Commissioner ■ Dean Marriott, Director

July 14, 2009

Mr. Lyle Christensen
2020 SW Fourth Avenue, Suite 400
Portland OR 97201-4987



Dear Mr. Christensen:

I am enclosing the June 2009, DMR for the City of Portland's Tryon Creek Wastewater Treatment Plant (TCWTP).

All measured parameters were within permit limitations during the month.

Please call me at 823-2318 if you have any questions.



Sincerely,

Greg A. Hettman
Operations Manager,
Tryon Creek WTP

STATE OF OREGON DISCHARGE MONITORING REPORT

CITY OF PORTLAND TRYON CREEK POTW
195 FOOTHILLS ROAD
LAKE OSWEGO OR 97034-3163

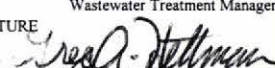
PLANT TYPE ACTIVATED SLUDGE
TREATMENT SYSTEM CLASS IV
COLLECTION SYSTEM CLASS IV

MAJOR BASIN
RECEIVING STREAM
COUNTY

WILLAMETTE
WILLAMETTE
CLACKAMAS

POPULATION EQUIVALENT 51,199
PERMIT NUMBER 101614
FILE NUMBER 70735
EXPIRATION 9/30/2009

DATE	FLOW			PLANT INFLUENT			PLANT EFFLUENT																	
Jun-09	INF	INF PEAK	EFF	pH	BOD mg/l	TSS mg/l	pH	BOD mg/l	BOD Wkly Avg mg/l	BOD Rem %	BOD Dis lbs	BOD Wkly Avg Dis lbs	TSS mg/l	TSS Wkly Avg mg/l	TSS Rem %	TSS Dis lbs	TSS Wkly Avg Dis lbs	EFF TEMP 0 °C	CL2 Res mg/l	E.COLI / 100ml	Total P mg/l	TKN mg/l	NH3 N mg/l	NO3+ NO2-N mg/l
1	4.34	9.00	4.31	6.9			6.9											16	0.4	<1				
2	4.33	8.80	4.31	7.0	295	274	6.9	6		98	215		4		99	144		18	0.5		1.43	26.50	26.30	0.29
3	4.31	9.90	4.28	7.0			7.0											18	0.3	16				
4	4.65	9.00	4.63	6.9	277	320	7.0	<6		98	232		2		99	77		18	0.5	<1				
5	4.13	7.00	4.11	6.7			6.8											18	0.6					
6	4.39	9.50	4.39						6			217		3			128	17	0.5					
7	4.77	9.30	4.77		314	338		4		99	159		5		99	199		17	0.5					
8	4.36	9.00	4.34	7.0			7.0											17	0.4	<1				
9	4.37	8.00	4.35	6.9	296	282	7.0	6		98	218		3		99	109		18	0.5		1.45	28.70	27.40	0.30
10	4.26	8.20	4.23	6.8			7.0											18	0.6	1				
11	4.22	8.00	4.20	6.9	310	304	7.0	4		99	140		5		98	175		18	0.4	1				
12	4.03	7.00	4.01	6.9			7.0											18	0.5					
13	4.20	9.20	4.20						5			172		4			161	18	0.4					
14	4.68	9.80	4.66															18	0.6					
15	4.31	7.00	4.29	7.0	285	286	7.1	6		98	215		4		99	143		18	0.4	1				
16	4.31	6.80	4.29	7.0	147	140	7.0	5		97	179		4		97	143		18	0.5		1.49	27.10	24.80	0.32
17	4.19	6.30	4.17	7.0			7.0											18	0.5	<1				
18	4.09	7.00	4.07	6.9	314	358	7.0	<6		98	204		<2		99	68		18	0.5	<1				
19	4.33	7.50	4.30	6.8			7.0											18	0.6					
20	4.15	9.40	4.14						6			199		3			118	18	0.5					
21	4.23	9.00	4.23															18	0.5					
22	4.12	9.20	4.10	7.1	296	326	7.2	5		98	171		3		99	103		18	0.4	<1				
23	4.15	7.50	4.12	7.0	291	268	7.2	4		99	138		<2		99	69		18	0.4		1.32	27.80	25.80	0.35
24	4.20	7.00	4.18	6.8			7.0											18	0.4	1				
25	3.90	8.00	3.88	7.0	407	504	7.1	5		99	162		6		99	194		18	0.5	<1				
26	3.90	7.00	3.89	6.9			7.2											18	0.3					
27	4.01	8.50	4.01						5			157		4			122	18	0.4					
28	4.26	8.40	4.26		262	270		7		97	248		4		99	142		18	0.3					
29	4.15	7.50	4.12	7.0			7.0											18	0.4	4				
30	3.98	8.00	3.97	7.0	257	308	7.1	6		98	199		3		99	99		18	0.4		1.68	33.30	27.50	0.37
									6			203		4			145							
Max	4.77	9.90	4.77	7.1	407	504	7.2	7	6	99	248	217	6	4	99	199	161	18	0.6	16				
Min	3.90		3.88	6.7	147	140	6.8	4		97	138		<2		97	68		16	0.3	<1				
Avg	4.24		4.23		289	306		5		98	191		4		99	128		18	0.45	3				
Sum	127.27		126.81																					

PLANT EFFLUENT PERMIT		May 1 -> October 31		November 1 -> April 30		January 1 -> December 31		REMARKS		Nutrients are sampled May 1 -> October 31	
MONTHLY STANDARDS		BOD 20 mg/l / 1400 lbs BOD		30 mg/l / 3100 lbs		CL2 max 0.7 mg/l		Digested and TWAS sludges are hauled to Columbia Blvd Treatment Plant.			
		TSS 20 mg/l / 1400 lbs TSS		30 mg/l / 3100 lbs		daily pH range 6.0 -> 9.0					
		E. COLI 126 cts/100 ml E.COLI		126 cts/100 ml							
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 or 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 Daniel Clark		CLASS Oregon T/IV #4260		TITLE Wastewater Treatment Manager	
						SIGNATURE 					

Page 1									
Date Jun-09	Plant Effluent Nutrients				Flow		Weather		
	Total P	NH3-N	NO3+	TKN	Portland	Lake	Temperature		Precip
	mg/l	mg/l	mg/l	mg/l	mgd	Oswego	Max o F	Min o F	"
06/01/09					1.36	2.98	91	62	0.00
06/02/09	1.43	26.30	0.29	26.50	1.34	2.99	80	57	0.00
06/03/09					1.35	2.96	88	60	0.00
06/04/09					1.47	3.18	87	57	0.30
06/05/09					1.28	2.85	68	55	0.10
06/06/09					1.40	2.99	74	55	0.00
06/07/09					1.55	3.22	74	55	0.00
06/08/09					1.35	3.01	78	51	0.00
06/09/09	1.45	27.40	0.30	28.70	1.36	3.01	83	57	0.00
06/10/09					1.37	2.89	79	57	0.20
06/11/09					1.35	2.87	80	55	0.00
06/12/09					1.26	2.77	81	58	0.10
06/13/09					1.31	2.89	79	56	0.00
06/14/09					1.49	3.18	81	55	0.00
06/15/09					1.33	2.98	87	54	0.00
06/16/09	1.49	24.80	0.32	27.10	1.34	2.97	82	60	0.00
06/17/09					1.31	2.88	84	60	0.00
06/18/09					1.28	2.81	85	57	0.00
06/19/09					1.42	2.91	80	54	0.05
06/20/09					1.32	2.83	70	49	0.00
06/21/09					1.37	2.86	75	49	0.00
06/22/09					1.30	2.82	79	48	0.00
06/23/09	1.32	25.80	0.35	27.80	1.30	2.85	82	52	0.00
06/24/09					1.32	2.88	82	54	0.00
06/25/09					1.19	2.71	75	50	0.00
06/26/09					1.19	2.72	81	48	0.00
06/27/09					1.24	2.77	89	54	0.00
06/28/09					1.35	2.90	83	47	0.00
06/29/09					1.29	2.86	82	46	0.00
06/30/09	1.68	27.50	0.37	33.30	1.24	2.74	82	51	0.00
Max	1.68	27.50	0.37	33.30	1.55	3.22	91	62	0.30
Min	1.32	24.80	0.29	26.50	1.19	2.71	68	46	0.00
Avg					1.33	2.91	81	54	0.03
Sum					40.0	87.3			0.75

Page 3		SECONDARY EFFLUENT										
Date	Flow	Susp Sol.		BOD5		FCSS		SBD	RSSS	Ovr-flow	pH	No.
Jun-09	mgd	mg/l	lbs	mg/l	lbs	mg/l	lbs	ft	mg/l	gpd / ft2		Basins
												On
06/01/09	4.31					1057	16045	1.3		286		2
06/02/09	4.31					1153	17503	1.4		286		2
06/03/09	4.28					889	13495	1.2		284		2
06/04/09	4.63					1042	15818	1.4		307		2
06/05/09	4.11					1075	16319	1.1		272		2
06/06/09	4.39					823	12493	0.9		291		2
06/07/09	4.77					1027	15590	1.2		316		2
06/08/09	4.34					1348	20463	1.6		288		2
06/09/09	4.35					1164	17670	1.3		288		2
06/10/09	4.23					1063	16136	1.3		281		2
06/11/09	4.20					914	13875	1.5		279		2
06/12/09	4.01					1193	18110	1.3		266		2
06/13/09	4.20					1544	23438	1.6		278		2
06/14/09	4.66					807	12250	1.0		309		2
06/15/09	4.29					1050	15939	1.6		285		2
06/16/09	4.29					981	14892	1.7		285		2
06/17/09	4.17					1062	16121	1.7		277		2
06/18/09	4.07					1168	17730	1.8		270		2
06/19/09	4.30					1558	23650	1.5		285		2
06/20/09	4.14					1101	16713	1.5		274		2
06/21/09	4.23					1197	18170	1.5		280		2
06/22/09	4.10					1348	20463	1.9		272		2
06/23/09	4.12					1412	21434	1.9		273		2
06/24/09	4.18					1052	15969	1.2		277		2
06/25/09	3.88					776	11780	1.0		258		2
06/26/09	3.89					1082	16425	1.3		258		2
06/27/09	4.01					1488	22588	1.5		266		2
06/28/09	4.26					1677	25457	1.8		282		2
06/29/09	4.12					831	12615	1.2		274		2
06/30/09	3.97					1106	16789	1.3		263		2
Max	4.77					1677	25457	1.9		316		2
Min	3.88					776	11780	0.9		258		2
Avg	4.23					1133	17198	1.4		280		2
Sum	126.8											

[illegible]

Page 7		SLUDGE PROCESSING												
		Thickened Primary Sludge				WAS		Gravity Belt			TWAS			TPS + Twas
		Dig	Tot	Fixed	Vol	Flow mgd	Susp. Sols mg/l lbs	Capture %	Filtrate mg/l	Poly lbs	Total Sols. %	lbs	Gal Hauled	Sludge Disp
Feed	Sol	Content	Content	Off Site										
Date	Jun-09	gal	%	%	%									MGD
06/01/09	12430										6.01	11278	22500	0.0288
06/02/09	12460	7.97	16.80	83.2							5.94	8868	17900	0.0242
06/03/09	11800												18000	0.0243
06/04/09	11880												11912	0.0182
06/05/09	13830												12000	0.0183
06/06/09	11890												0	0.0000
06/07/09	11720												0	0.0000
06/08/09	11980												11150	0.0175
06/09/09	12800	9.49	16.30	83.7							5.58	8353	17950	0.0243
06/10/09	12650												17950	0.0243
06/11/09	12250												12000	0.0183
06/12/09	12060												12000	0.0183
06/13/09	12260												0	0.0000
06/14/09	12390												11400	0.0114
06/15/09	12270												11700	0.0177
06/16/09	12430	10.90	17.80	82.2									11000	0.0173
06/17/09	12430												6000	0.0123
06/18/09	11890										5.44	2722	6000	0.0123
06/19/09	12430										4.46	6509	17500	0.0238
06/20/09	12530										5.58	5584	12000	0.0120
06/21/09	11620												0	0.0000
06/22/09	11920												11400	0.0177
06/23/09	12260	10.40	18.90	81.1							5.81	8577	17700	0.0240
06/24/09	12630										6.01	8772	17500	0.0238
06/25/09	11970												11500	0.0178
06/26/09	12430										5.52	4512	9800	0.0176
06/27/09	12430												0	0.0000
06/28/09	12190												0	0.0000
06/29/09	12280												16100	0.0224
06/30/09	12250	12.40	17.00	83.0									5800	0.0121
Max	13830	12.40	18.90	83.70							6.01	11278	22500	0.029
Min	11620	7.97	16.30	81.10							4.46	2722	0	0.000
Avg	12279	10.23	17.36	82.64							5.59	7242	10625	0.015
Sum	368360												318762	0.459

Page 8	NPDES Peak Mass Limits										
Date	Total			Instantaneous		DML=9382 lbs			DML=4153 lbs		
Jun-09	Portland mgd	Lake Oswego mgd	Combined mgd	Peak mgd	Minimum mgd	"O" Limit mgd	BOD lbs	TSS lbs	"P" Limit mgd	BOD lbs	TSS lbs
06/01/09	1.4	3.0	4.3	9.0					9.0		
06/02/09	1.3	3.0	4.3	8.8					8.8	215	144
06/03/09	1.3	3.0	4.3	9.9					9.9		
06/04/09	1.5	3.2	4.6	9.0					9.0	232	77
06/05/09	1.3	2.8	4.1	7.0					7.0		
06/06/09	1.4	3.0	4.4	9.5					9.5		
06/07/09	1.6	3.2	4.8	9.3					9.3	159	199
06/08/09	1.3	3.0	4.4	9.0					9.0		
06/09/09	1.4	3.0	4.4	8.0					8.0	218	109
06/10/09	1.4	2.9	4.3	8.2					8.2		
06/11/09	1.4	2.9	4.2	8.0					8.0	140	175
06/12/09	1.3	2.8	4.0	7.0					7.0		
06/13/09	1.3	2.9	4.2	9.2					9.2		
06/14/09	1.5	3.2	4.7	9.8					9.8		
06/15/09	1.3	3.0	4.3	7.0					7.0	215	143
06/16/09	1.3	3.0	4.3	6.8					6.8	179	143
06/17/09	1.3	2.9	4.2	6.3					6.3		
06/18/09	1.3	2.8	4.1	7.0					7.0	204	68
06/19/09	1.4	2.9	4.3	7.5					7.5		
06/20/09	1.3	2.8	4.1	9.4					9.4		
06/21/09	1.4	2.9	4.2	9.0					9.0		
06/22/09	1.3	2.8	4.1	9.2					9.2	171	103
06/23/09	1.3	2.8	4.1	7.5					7.5	138	69
06/24/09	1.3	2.9	4.2	7.0					7.0		
06/25/09	1.2	2.7	3.9	8.0					8.0	162	194
06/26/09	1.2	2.7	3.9	7.0					7.0		
06/27/09	1.2	2.8	4.0	8.5					8.5		
06/28/09	1.4	2.9	4.3	8.4					8.4	248	142
06/29/09	1.3	2.9	4.1	7.5					7.5		
06/30/09	1.2	2.7	4.0	8.0					8.0	199	99
Max	1.6	3.2	4.8	9.9		N/A	N/A	N/A	9.9	248	199
Min	1.2	2.7	3.9								
Avg	1.3	2.9	4.2								
Sum	40	87	127			N/A	N/A	N/A			

City of Portland

Tryon Creek Treatment Plant

Tryon Creek Wastewater Treatment Plant, 195 SW. Foothills Rd., Lake Oswego, OR 97034
(503) 823-2320, FAX (503) 823-2322

DATE: 7/14/2009
TO: Pat McDougal, City of Lake Oswego
FAX (503) 635-0269
FROM: City of Portland
SUBJECT: Rainfall and Flow Data

DATE	Flow		Temperature		Rain
	Portland	Lake Oswego	Maximum	Minimum	
6/1/2009	1.36	2.98	91	62	0.00
6/2/2009	1.34	2.99	80	57	0.00
6/3/2009	1.35	2.96	88	60	0.00
6/4/2009	1.47	3.18	87	57	0.30
6/5/2009	1.28	2.85	68	55	0.10
6/6/2009	1.40	2.99	74	55	0.00
6/7/2009	1.55	3.22	74	55	0.00
6/8/2009	1.35	3.01	78	51	0.00
6/9/2009	1.36	3.01	83	57	0.00
6/10/2009	1.37	2.89	79	57	0.20
6/11/2009	1.35	2.87	80	55	0.00
6/12/2009	1.26	2.77	81	58	0.10
6/13/2009	1.31	2.89	79	56	0.00
6/14/2009	1.49	3.18	81	55	0.00
6/15/2009	1.33	2.98	87	54	0.00
6/16/2009	1.34	2.97	82	60	0.00
6/17/2009	1.31	2.88	84	60	0.00
6/18/2009	1.28	2.81	85	57	0.00
6/19/2009	1.42	2.91	80	54	0.05
6/20/2009	1.32	2.83	70	49	0.00
6/21/2009	1.37	2.86	75	49	0.00
6/22/2009	1.30	2.82	79	48	0.00
6/23/2009	1.30	2.85	82	52	0.00
6/24/2009	1.32	2.88	82	54	0.00
6/25/2009	1.19	2.71	75	50	0.00
6/26/2009	1.19	2.72	81	48	0.00
6/27/2009	1.24	2.77	89	54	0.00
6/28/2009	1.35	2.90	83	47	0.00
6/29/2009	1.29	2.86	82	46	0.00
6/30/2009	1.24	2.74	82	51	0.00
Max	1.55	3.22	91	62	0.30
Min	1.19	2.71	68	46	0.00
Avg	1.33	2.91	81	54	0.03
SUM	39.99	87.28			0.75

PRIMARY TREATMENT						MONTHLY REPORT SUMMARY					
Influent			Effluent			Rem %	Primary				
	mg/l	lbs/day		mg/l	lbs/day		Feed Sludge				
S S	306	10839	SS	129	4631		Flow gal/day	Total Solids %	Volatile Content %		
BOD5	289	10240	BOD5	170	6065	41	12279	10.23	82.6		
Detent Time hrs			Population Equivalent		Flow mgd	Precip "	Detention Time days		Loading lbs VS / ft3 /day		
4.0			51199		4.24	0.75	29				
SECONDARY TREATMENT											
Influent			Effluent			Rem %					
	mg/l	lbs/day		mg/l	lbs/day		Total Solids %	Volatile Content %		Vol Sol Reduct %	
S S	306	10839	SS	4	128		99	2.41		63.1	
BOD5	289	10240	BOD5	5	191	98					
F/M		SVI		SRT days	MLSS mg/l						
0.00		216		0.0	1273						
RAS Flow mgd			CL2 Res mg/l		CL2 Feed lbs/day	Total Solids (TWS) %		Capture %		Filtrate Solids mg/l	
0.53			0.4		69	5.59					
WAS Flow mgd			Aerator Detention Time hrs		Aerator DO mg/l	Sludge Hauled					
.000			8.6		0.0	gal/day lbs /day lbs/mo					
						Digst 4660 937					
						TWS 10625 4958					
						Total 15285 5894					