



Department of Natural Resources and Parks Wastewater Treatment Division

June 23, 2017

West Point Treatment Plant Restoration Routine Effluent Quality Monitoring Data Update (as of 6/16/17 data)

This file contains a compilation of King County's influent and effluent water quality monitoring data that is being collected at the West Point wastewater treatment plant. This file contains data for parameters that are routinely collected on a frequent basis (i.e., daily, weekly, monthly) in the West Point influent and effluent, as required by the National Pollutant Discharge Elimination System (NPDES) permit for West Point. These frequently measured parameters include flows, rainfall, total suspended solids, biochemical oxygen demand, pH, residual chlorine, fecal coliform bacteria, and nutrients. The attached files contain final data collected under the NPDES permit for the May 2017 monthly reporting period, and updated partial data through June 16, 2017.

While repairs have been underway to repair the treatment facilities that were damaged in the flooding on February 9, 2017, a reduced level of treatment through early May resulted in changes in the concentrations of certain parameters that were not being removed at the same level of performance that occurs under normal West Point operations. The following notes provide information on the current status of treatment-affected parameters:

- Ongoing repairs at West Point were completed by May 10, 2017, to ensure that the secondary treated effluent quality (which was restored on April 27) will consistently meet all permit requirements for discharge to Puget Sound contained in the NPDES permit.
- The secondary treatment system performed normally in May, and along with other improvements completed for the treatment processes, the concentrations of parameters in the wastewater effluent discharged to Puget Sound were below all of the applicable effluent limitations of the NPDES permit.
- Production and treatment of solids in the sludge digesters increased through May and early June such that supplemental trucking of excess solids to King County's South Plant has ceased.

The "Preliminary Draft Data" watermark refers to analyses completed and validated by King County; however, submittal of the final data to Ecology is pending completion of all sampling and analysis within these monthly reporting periods.

If you have questions about this document please contact Jeff Lafer at 206-477-6315 or email him at jeff.lafer@kingcounty.gov.

Alternative Formats Available
206-477-5371, TTY Relay: 711

Day of the Month	Influent							Effluent						
	Weekly	Weekly	Daily	Daily	Daily	Daily	CONT	Daily	Daily	Monthly	Daily	Daily	Monthly	
	COMP	CALC	COMP	CALC	COMP	CALC	MEASURE	COMP	CALC	CALC	COMP	CALC	CALC	
	MG/L	LBS/DAY	MG/L	LBS/DAY	MG/L	LBS/DAY	MGD	MG/L	LBS/DAY	%	MG/L	LBS/DAY	%	
Units							REMOVAL							
Day of the Month	BOD 5-DAY	BOD 5-DAY	CBOD5	CBOD5	TSS	TSS	FLOW	CBOD 5-DAY	CBOD 5-DAY	CBOD 5-DAY	TSS	TSS	TSS	
06/01/17	359	242938	230	155643	350	236848	81.14	6	4,060	97.4	9	6,090	97.4	
06/02/17	388	246189	213	135150	280	177662	76.08	7	4,442	96.7	10	6,345	96.4	
06/03/17	305	190778	235	146993	348	217674	75.00	6	3,753	97.4	9	5,630	97.4	
06/04/17	342	210356	231	142082	276	169761	73.75	8	4,921	96.5	12	7,381	95.7	
06/05/17	279	177935	236	150511	230	146685	76.47	8	5,102	96.6	10	6,378	95.7	
06/06/17	206	130004	177	111703	204	128742	75.67	8	5,049	95.5	11	6,942	94.6	
06/07/17	319	198923	290	180839	272	169614	74.77	8	4,989	97.2	10	6,236	96.3	
06/08/17	257	224733	211	184509	264	230855	104.85	8	6,996	96.2	12	10,493	95.5	
06/09/17	266	169156	210	133544	244	155166	76.25	7	4,451	96.7	9	5,723	96.3	
06/10/17	281	170399	233	141292	226	137047	72.71			100.0	8	4,851	96.5	
06/11/17	265	163570	237	146287	228	140731	74.01	5	3,086	97.9	8	4,938	96.5	
06/12/17					232	144168	74.51				7	4,350	97.0	
06/13/17					252	157500	74.94				10	6,250	96.0	
06/14/17					250	154478	74.09				8	4,943	96.8	
06/15/17							140.05				19	22,192		
06/16/17					226	211177	112.04				17	15,885	92.5	
06/17/17														
06/18/17														
06/19/17														
06/20/17														
06/21/17														
06/22/17														
06/23/17														
06/24/17														
06/25/17														
06/26/17														
06/27/17														
06/28/17														
06/29/17														
06/30/17														

Permit No. WA-002918-1
 Facility Name West Point WWTP
 Receiving Water Puget Sound
 Plant Type Secondary

Discharge No. 001

Month

June

Year

2017

Frequency	Effluent											Emerg. Bypass Hours	Emerg. Bypass MG
	CONT	CONT	CONT	Daily	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly		
	MEASURE	MEASURE	MEASURE	Grab	COMP	CALC	COMP	MEASURE	COMP	MEASURE			
	STANDARD UNITS	STANDARD UNITS	µg/L	#/100 ML	MG/L-N	LBS/DAY	MG/L-N	MG/L-N	MG/L-P	MG/L-P			
Day of the Month	pH, Daily Minimum	pH, Daily Maximum	CHLORINE RESIDUAL (after dechlor.)	FECAL COLIFORM	TOTAL AMMONIA	TOTAL AMMONIA	NITRATE- NITRITE	TOTAL KJELDAHL NITROGEN	TOTAL PHOSPHOROU S	ORTHO- PHOSPHATE	Duration (Hours)	Total Volume (MG)	Rainfall (Inch)
06/01/17	6.4	6.6	90	20									0.02
06/02/17	6.4	6.5	70	0									0.00
06/03/17	6.3	6.5	130	0									0.00
06/04/17	6.3	6.4	60	0				16.1		2.76			0.00
06/05/17	6.3	6.5	90	0	13.9	8,865							0.00
06/06/17	6.5	6.6	90	0									0.00
06/07/17	6.5	6.9	80	0									0.00
06/08/17	6.5	6.6	120	40									0.30
06/09/17	6.4	6.6	70	0									0.02
06/10/17	6.5	6.6	50	0									0.00
06/11/17	6.4	6.6	70	0	13.2	8,148		20.7		2.96			0.00
06/12/17	6.4	6.6	80	0						2.83			0.00
06/13/17	6.5	6.6	70										0.01
06/14/17	6.5	6.7	70	0									0.00
06/15/17	6.4	6.7	220	0									0.51
06/16/17	6.2	7.3	120	20									0.00
06/17/17													
06/18/17													
06/19/17													
06/20/17													
06/21/17													
06/22/17													
06/23/17													
06/24/17													
06/25/17													
06/26/17													
06/27/17													
06/28/17													
06/29/17													
06/30/17													

Frequency Type Units Day of the Month	Influent						Effluent							
	Weekly	Weekly	Daily	Daily	Daily	Daily	CONT	Daily	Daily	Monthly	Daily	Daily	Monthly	
	COMP	CALC	COMP	CALC	COMP	CALC	MEASURE	COMP	CALC	CALC	COMP	CALC	CALC	
	MG/L	LBS/DAY	MG/L	LBS/DAY	MG/L	LBS/DAY	MGD	MG/L	LBS/DAY	%	MG/L	LBS/DAY	%	
	BOD 5-DAY	BOD 5-DAY	CBOD5	CBOD5	TSS	TSS	FLOW	CBOD 5-DAY	CBOD 5-DAY	CBOD 5-DAY	TSS	TSS	TSS	
										REMOVAL			REMOVAL	
05/01/17	204	141383	184	127522	189	130987	83.10	23	15,940	87.5	48	33,267	74.6	
05/02/17	233	158372	200	135942	196	133223	81.50	21	14,274	89.5	43	29,228	78.1	
05/03/17	188	214225	166	189156	182	207388	136.63	24	27,348	85.5	42	47,859	76.9	
05/04/17	223	219980	187	184467	224	220966	118.28	22	21,702	88.2	41	40,445	81.7	
05/05/17	149	177626	130	154976	241	287301	142.94	11	13,113	91.5	21	25,035	91.3	
05/06/17	200	197741	164	162148	215	212572	118.55	10	9,887	93.9	21	20,763	90.2	
05/07/17	223	156969	180	126701	200	140779	84.40	10	7,039	94.4	18	12,670	91.0	
05/08/17	266	185639	202	140974	250	174473	83.68	10	6,979	95.0	19	13,260	92.4	
05/09/17	323	215506	257	171470	400	266880	80.00	11	7,339	95.7	23	15,346	94.3	
05/10/17	264	175436	233	154836	296	196701	79.68	8	5,316	96.6	15	9,968	94.9	
05/11/17	354	319357	303	273348	332	299510	108.17	12	10,826	96.0	14	12,630	95.8	
05/12/17	313	243578	217	168871	308	239687	93.31	8	6,226	96.3	11	8,560	96.4	
05/13/17	245	205944	204	171480	222	186611	100.79	7	5,884	96.6	10	8,406	95.5	
05/14/17	262	193030	226	166507	248	182715	88.34	8	5,894	96.5	11	8,104	95.6	
05/15/17	243	213646	196	172324	256	225076	105.42	9	7,913	95.4	14	12,309	94.5	
05/16/17	169	234703	133	184707	178	247202	166.52	8	11,110	94.0	12	16,665	93.3	
05/17/17	213	168831	205	162490	186	147430	95.04	7	5,548	96.6	9	7,134	95.2	
05/18/17	201	147769	164	120568	224	164678	88.15	4	2,941	97.6	8	5,881	96.4	
05/19/17	184	132371	143	102875	174	125177	86.26	5	3,597	96.5	8	5,755	95.4	
05/20/17	208	145682	184	128872	192	134475	83.98	7	4,903	96.2	9	6,304	95.3	
05/21/17	224	154198	177	121844	195	134235	82.54	6	4,130	96.6	9	6,195	95.4	
05/22/17	243	168230	206	142615	246	170307	83.01	7	4,846	96.6	11	7,615	95.5	
05/23/17	241	164855	215	147070	224	153226	82.02	9	6,156	95.8	12	8,209	94.6	
05/24/17	282	191467	223	151408	278	188751	81.41	8	5,432	96.4	11	7,469	96.0	
05/25/17	303	200443	246	162736	300	198459	79.32	6	3,969	97.6	9	5,954	97.0	
05/26/17	273	188202	185	127536	280	193028	82.66	6	4,136	96.8	7	4,826	97.5	
05/27/17	358	226974	245	155332	318	201614	76.02	5	3,170	98.0	7	4,438	97.8	
05/28/17	342	210612	194	119470	300	184748	73.84	6	3,695	96.9	8	4,927	97.3	
05/29/17	307	196253	225	143834	340	217349	76.65	5	3,196	97.8	9	5,753	97.4	
05/30/17	334	222399	225	149820	356	237048	79.84	7	4,661	96.9	11	7,325	96.9	
05/31/17	322	212153	235	154832	298	196340	79.00	8	5,271	96.6	10	6,589	96.6	
	AVG	AVG	AVG	AVG	AVG	AVG	AVG	AVG	AVG	AVG	AVG	AVG	AVG	
Monthly	255	193,019	202	154,088	253	193,514	93.58	10	7,821	95	16	13,190	94	
Limit	report	201,000	report	report	report	218,000	215	25	44,800	85%(a)	30	53,800	85%(a)	
	MAX	MAX	MAX	MAX	MAX	MAX	MAX	AvgWeek	AvgWeek		AvgWeek	AvgWeek		
Monthly	358	319,357	303	273,348	400	299,510	166.52	19	16,434		35	30,966		
Limit	report	report	report	report	report	report	report	40	71,700		45	80,700		

Frequency Type Units Day of the Month	Effluent										Emerg. Bypass Hours	Emerg. Bypass MG	Emerg. Bypass MGD
	CONT MEASURE STANDARDS UNITS	CONT MEASURE STANDARDS UNITS	CONT MEASURE µg/L	Daily Grab #/100 ML	Monthly COMP MG/L-N	Monthly CALC LBS/DAY	Monthly COMP MG/L-N	Monthly MEASURE MG/L-N	Monthly COMP MG/L-P	Monthly MEASURE MG/L-P			
	pH, Daily Minimum	pH, Daily Maximum	CHLORINE RESIDUAL (after dechlor.)	FECAL COLIFORM	TOTAL AMMONIA	TOTAL AMMONIA	NITRATE-NITRITE	TOTAL KJELDAHL NITROGEN	TOTAL PHOSPHOROUS	ORTHO-PHOSPHATE			
	Duration (Hours)	Total Volume (MG)	Rainfall (Inch)	Flow (MGD)									
05/01/17	6.4	6.5	60	0	12.9	8,940			1.37			0.03	
05/02/17	6.4	6.5	60	0	12.5	8,496						0.13	
05/03/17	6.3	6.5	110	40								0.25	
05/04/17	6.3	6.5	80	0								0.29	
05/05/17	6.3	6.6	280	0								0.01	
05/06/17	6.3	6.7	70	20								0.09	
05/07/17	6.4	6.5	150	0	12.8	9,010		16.5	2.13	1.66		0.00	
05/08/17	6.4	6.6	110	0								0.00	
05/09/17	6.3	6.6	110	0								0.00	
05/10/17	6.4	6.6	40	0								0.00	
05/11/17	6.3	6.6	120	0								0.19	
05/12/17	6.4	6.6	40	0								0.07	
05/13/17	6.4	6.5	110	0								0.57	
05/14/17	6.4	6.8	50	0	13.9	10,241		20.5	2.28	2.00		0.05	
05/15/17	6.5	6.6	120	0								0.34	
05/16/17	6.3	6.6	80	70								0.23	
05/17/17	6.5	6.6	20	0								0.00	
05/18/17	6.3	6.7	30	0								0.00	
05/19/17	6.5	6.7	40	20								0.00	
05/20/17	6.5	6.6	110	0								0.00	
05/21/17	6.5	6.6	220	0				20.3	2.72	2.44		0.00	
05/22/17	6.5	6.6	50	0	13.7	9,485						0.00	
05/23/17	6.5	6.6	80	20								0.00	
05/24/17	6.5	6.7	80	0								0.00	
05/25/17	6.5	6.7	40	0								0.00	
05/26/17	6.5	6.6	50	0								0.00	
05/27/17	6.4	6.5	50	0								0.00	
05/28/17	6.3	6.5	70	0								0.00	
05/29/17	6.3	6.4	80	0	10.8	6,904		14.7	3.10	2.82		0.00	
05/30/17	6.3	6.7	110	0								0.00	
05/31/17	6.4	6.6	120	0								0.03	
	MIN		AVG	Geomean	AVG	AVG	AVG	AVG	AVG	AVG			
Monthly	6.3		88	2	12.8	8,846		18.0	2.56	2.06			
Limit	6.0		139	200	report	report	report	report	report	report			
		MAX	MaxDay	Geo-Week	MAX	MAX	MAX	MAX	MAX	MAX			
Monthly		6.8	280	3	13.9	10,241		20.5	3.10	2.82			
Limit		9.0	364	400	report	report	report	report	report	report			