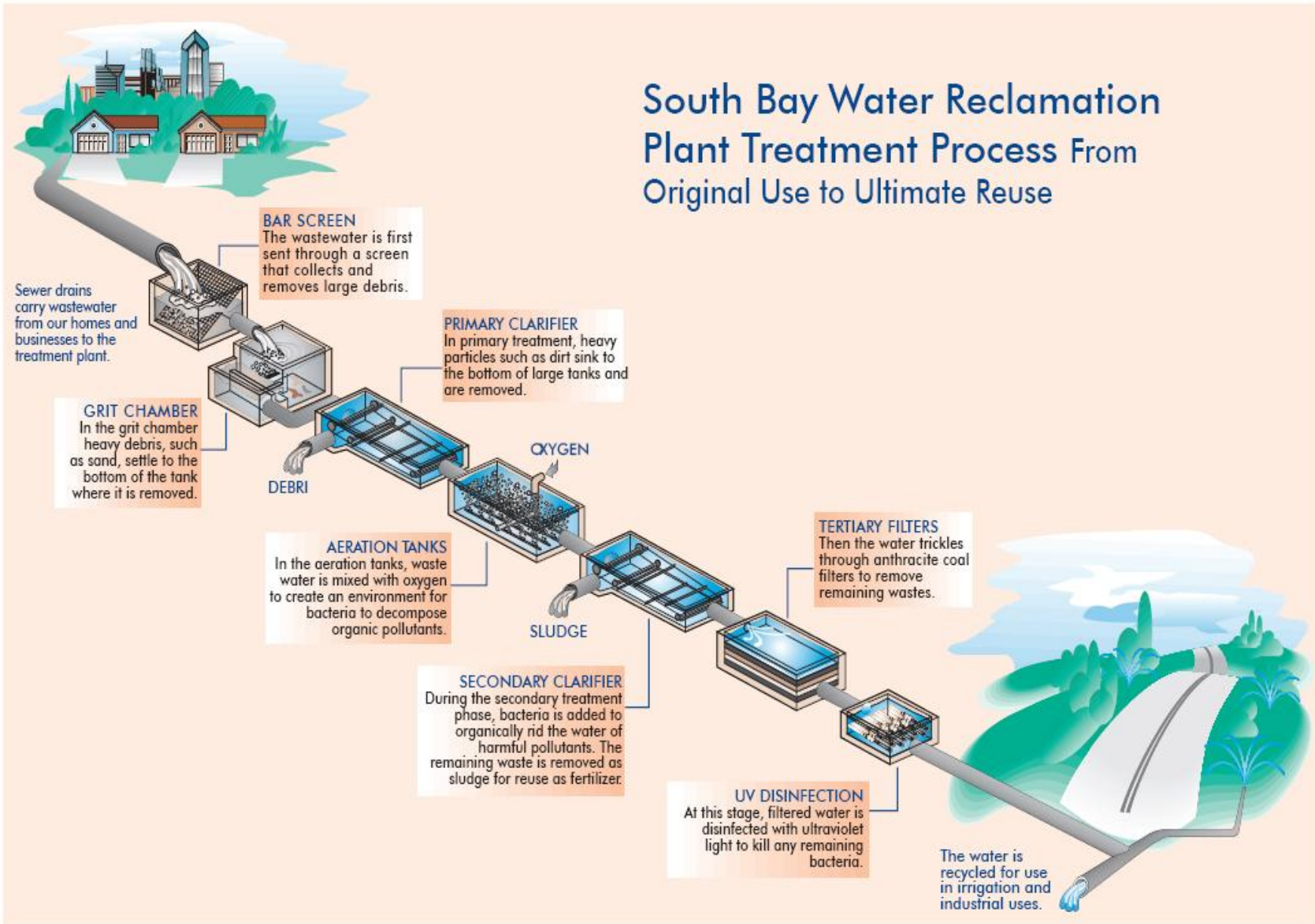


III. Plant Operations Summary

- A. Flows
- B. Rain Days
- C. Chemical Report
- D. Facilities Out of Service Report

This page is left blank intentionally

South Bay Water Reclamation Plant Treatment Process From Original Use to Ultimate Reuse



Overview of the Wastewater Treatment Process

Please see the treatment process flow diagram on the preceding page.

Debris, large particulates, and sand are removed in the headworks by mechanical bar-screens and aerated grit removal systems. The process then consists of classical primary sedimentation and secondary treatment by activated sludge. While secondary effluent may be discharged directly to the ocean outfall the usual process directs the treated secondary effluent to reclamation and beneficial reuse by tertiary treatment and disinfection. Even if not beneficially reused, most of the flow goes through tertiary treatment. Tertiary treatment consists of filtration through Anthracite Coal Beds followed by disinfection with high intensity UV (ultraviolet) light. At this stage the "reclaimed" water meets State Title 22 full body contact requirements.

Untreated wastewater (Influent) enters the plant's Headworks from the South Bay region. In the Headworks, the wastewater passes through large, rake-like Bar Screens to remove solid debris and floating material (called "Rags") such as cloth, wood, and plastic material. These "rags" are dewatered and trucked to a landfill.

Following the headworks, the screened wastewater then passes through aerated Grit Chambers where heavier solids such as sand, gravel, coffee grounds and eggshells settle out and are removed. The grit is then dewatered and taken to landfills.

Wastewater then flows into the Primary Sedimentation Basins where the sedimentation process starts. Solids sink to the bottom of the tanks and "scum" (grease and cooking oils) float to the surface. "Raw Sludge" which has settled to the bottom of the basins is returned to the sewer system and sent to the Point Loma Wastewater Treatment Plant. Similarly, the scum is skimmed from the surface and returned to the sewer system.

The wastewater then enters Anoxic Zone Chambers that are oxygen depleted. The wastewater mixes with bacteria ("Bugs") that eat soluble organic material. The wastewater then flows into Aeration Basins where diffused air is pumped into the water. Here, the bugs begin to ingest and digest the organic solids while increasing in number and density.

Wastewater flows from the Aeration Basin into the Secondary Clarifiers where the bacteria and digested solids settle to the bottom as "Secondary Sludge." Some of this Sludge and any remaining scum are removed and returned to the sewer system for treatment at the Point Loma Wastewater Treatment Plant. The remaining sludge is returned to the Anoxic Basins and again mixed with the wastewater.

The water, now treated to a Secondary Treatment level, can either be discharged into the ocean through the South Bay Ocean Outfall or moved on to Tertiary Treatment for reclaimed water applications and beneficial reuse⁵.

In Tertiary Treatment, the treated wastewater (effluent) flows into Anthracite Coal Beds where it is filtered of remaining solids as it passes through the coal medium. The filtered water then passes through chambers where it is disinfected through exposure to high-intensity UV (ultraviolet) light.

⁵ The Recycled Water Users Summary Report as described in Permit No. 2000-203 is submitted separately.

SBWRP Annual Monitoring Report
2011 Flow Report

WASTEWATER MONTHLY AVERAGE FLOWS

(Million Gallons / Day)

Mon	Influent	Outfall	Secondary Effluent	South Metro Interceptor Return	Recycled Production	Distributed Recycled	Dilution Water Added Recycled	Recycled Plant Internal use
01	8.34	5.89	3.14	1.36	4.57	1.01	.00	.81
02	8.39	5.50	2.70	1.36	5.18	1.47	.00	.91
03	8.41	6.23	3.67	1.27	4.17	.84	.00	.78
04	8.37	4.02	2.98	1.33	4.83	2.94	.00	.85
05	8.45	2.52	1.30	1.57	6.55	4.27	.00	1.07
06	8.38	1.50	.20	1.51	7.68	5.32	.00	1.06
07	8.40	1.17	.40	1.48	7.52	5.67	.00	1.07
08	8.29	.46	.07	1.51	7.75	6.24	.00	1.12
09	7.82	.83	.21	1.39	7.10	5.44	.00	1.04
10	7.80	2.06	.31	1.40	7.07	4.27	.00	1.05
11	7.98	5.95	3.81	1.13	3.81	.78	.00	.88
12	8.02	6.35	3.13	1.30	4.52	.33	.00	.97
avg	8.22	3.54	1.83	1.38	5.89	3.22	.00	.97

(Million Gallons / Month)

Mon	Influent	Outfall	Secondary Effluent	South Metro Interceptor Return	Recycled Production	Distributed Recycled	Dilution Water Added Recycled	Recycled Plant Internal use
01	258.43	182.56	97.32	42.01	141.58	31.34	.00	25.05
02	234.85	154.04	75.66	37.97	145.07	41.07	.00	25.61
03	260.57	192.98	113.92	39.42	129.15	26.01	.02	24.08
04	251.14	120.66	89.42	39.83	144.85	88.12	.00	25.53
05	262.05	77.99	40.27	48.75	203.13	132.38	.00	33.12
06	251.33	44.89	6.05	45.34	230.29	159.68	.01	31.74
07	260.43	36.39	12.31	46.03	233.03	175.76	.01	33.23
08	256.98	14.26	2.02	46.80	240.33	193.56	.01	34.63
09	234.60	25.00	6.40	41.56	213.02	163.25	.00	31.21
10	241.91	63.80	9.68	43.42	219.05	132.51	.00	32.49
11	239.47	178.58	114.19	33.87	114.32	23.44	.00	26.43
12	248.74	196.90	97.06	40.16	140.09	10.23	.00	29.94
avg	250.04	107.34	55.36	42.10	179.49	98.11	.00	29.42
sum	3000.50	1288.05	664.30	505.16	2153.91	1177.35	.05	353.06

A. Flows

Effluent flows (mgd) 2011

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	6.69	4.63	6.59	3.72	6.68	0.10	0.10	0.07	0.10	0.02	1.26	7.18	
2	6.49	6.88	6.76	5.07	2.46	1.57	0.25	0.06	1.39	0.05	0.04	6.94	
3	7.24	6.92	7.05	6.30	2.25	1.74	1.66	0.08	0.58	2.90	4.37	6.85	
4	7.03	7.06	6.28	5.71	2.24	0.08	3.92	0.06	0.02	0.27	4.30	6.70	
5	7.14	5.99	6.43	5.20	1.85	1.67	2.94	0.08	0.05	0.06	6.68	6.92	
6	7.14	6.76	7.13	5.18	1.39	2.85	0.90	0.09	0.04	3.22	1.69	6.96	
7	7.34	3.46	6.57	3.54	2.43	5.73	0.71	1.70	0.04	6.41	3.64	7.08	
8	6.60	1.88	7.33	3.11	6.43	1.49	0.06	0.20	0.09	1.85	6.63	7.32	
9	7.01	1.47	7.07	5.12	3.56	0.36	0.09	0.28	1.16	3.73	6.81	7.17	
10	7.15	1.23	4.29	4.70	3.30	0.56	0.12	1.29	0.05	2.20	6.61	6.61	
11	7.19	4.27	6.08	3.69	1.91	0.11	0.13	0.37	1.74	4.55	6.91	6.72	
12	7.18	6.83	7.09	7.31	1.30	2.80	3.03	0.13	2.11	5.20	6.81	3.52	
13	7.36	6.41	7.09	5.73	0.98	1.77	1.87	1.37	1.26	1.39	6.57	4.77	
14	7.15	3.28	6.52	7.04	0.98	3.54	0.94	0.87	0.02	0.06	6.98	3.06	
15	6.53	2.50	5.87	4.53	0.97	1.61	0.07	3.12	0.09	0.06	6.83	5.19	
16	6.78	5.94	6.77	3.18	1.60	0.10	0.07	0.07	0.07	2.67	6.79	6.51	
17	6.74	7.09	6.82	2.27	2.03	0.08	0.40	0.36	0.07	5.69	6.92	6.15	
18	7.26	4.97	5.37	3.28	1.13	0.12	0.10	0.25	0.84	0.79	6.61	6.29	
19	7.07	6.83	3.26	2.35	3.59	2.39	0.20	0.93	4.19	0.08	6.90	6.50	
20	3.92	6.97	6.84	2.98	6.49	2.27	3.39	0.09	1.19	4.86	6.73	6.69	
21	2.08	6.81	7.48	3.50	1.53	0.17	5.84	1.07	1.04	0.69	6.82	6.66	
22	4.66	3.92	7.28	3.81	5.53	2.38	3.50	0.06	1.04	0.03	6.96	6.90	
23	4.80	6.77	7.13	2.99	1.88	1.11	2.23	0.77	1.06	0.09	6.79	6.71	
24	6.91	7.23	4.68	4.62	2.42	0.10	1.51	0.07	0.35	3.16	6.73	6.85	
25	2.86	6.98	3.24	2.82	4.06	0.10	1.18	0.09	0.06	3.13	6.65	5.97	
26	6.27	6.67	4.64	3.48	2.37	2.48	0.05	0.05	2.15	2.72	6.73	5.78	
27	6.64	7.14	6.91	2.20	3.87	3.46	0.11	0.07	2.69	1.27	6.88	6.34	
28	2.47	7.15	6.50	2.22	1.30	2.75	0.06	0.07	1.45	0.47	6.99	6.79	
29	1.26	6.59	6.27	2.06	0.99	1.29	0.04	0.05	0.02	0.04	7.04	6.62	
30	1.11		6.75	2.95	0.38	0.11	0.09	0.45	0.04	1.88	6.91	6.74	
31	6.49		4.89		0.09		0.83	0.04		4.26		6.41	Annual Summary
Average	5.87	5.50	6.23	4.02	2.52	1.50	1.17	0.46	0.83	2.06	5.95	6.35	3.54
Minimum	1.11	1.23	3.24	2.06	0.09	0.08	0.04	0.04	0.02	0.02	0.04	3.06	0.02
Maximum	7.36	7.23	7.48	7.31	6.68	5.73	5.84	3.12	4.19	6.41	7.04	7.32	7.48
Total	182.56	160.63	192.98	120.66	77.99	44.89	36.39	14.26	25.00	63.80	178.58	196.90	1,295

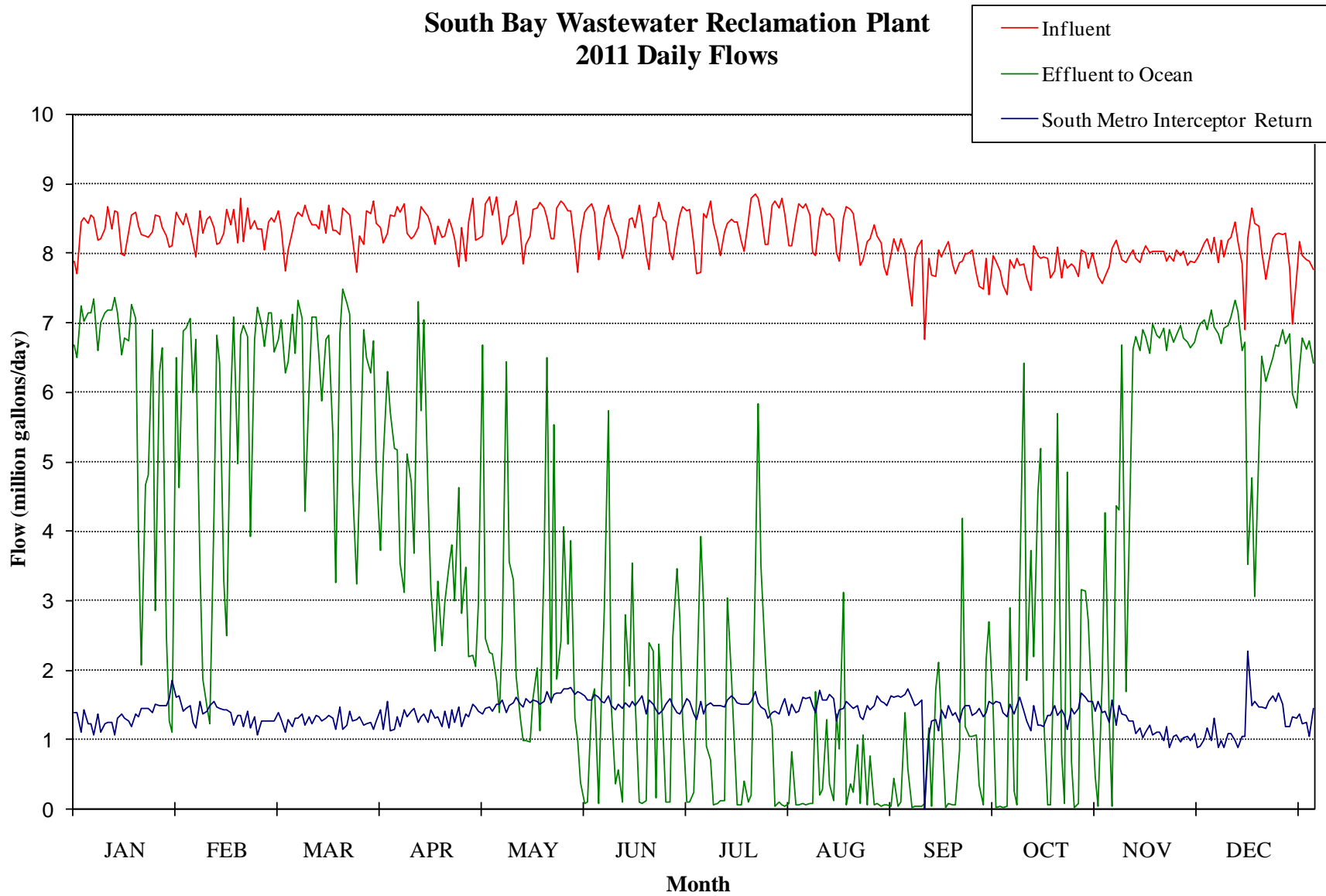
Influent Flows (mgd) 2011

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	7.88	8.51	8.45	8.38	8.25	8.65	8.63	8.50	8.22	7.54	7.81	8.00	
2	7.70	8.41	8.61	8.15	8.71	8.71	8.13	8.71	8.02	7.40	8.06	8.23	
3	8.45	8.58	8.38	8.29	8.82	8.60	7.70	8.65	7.71	7.90	8.18	7.87	
4	8.51	8.36	7.75	8.56	8.56	7.91	7.73	8.71	7.25	7.79	8.04	8.18	
5	8.44	8.15	8.04	8.54	8.82	8.14	8.58	8.55	7.92	7.93	7.90	7.95	
6	8.55	7.95	8.32	8.68	8.49	8.49	8.52	8.00	8.08	7.83	7.87	8.19	
7	8.51	8.61	8.52	8.60	8.13	8.70	8.75	7.97	8.19	7.85	7.94	8.24	
8	8.18	8.30	8.60	8.72	8.25	8.50	8.44	8.52	6.77	7.64	8.04	8.46	
9	8.21	8.49	8.53	8.30	8.54	8.33	8.18	8.66	7.92	7.46	7.93	8.17	
10	8.36	8.53	8.69	8.21	8.57	8.23	7.97	8.56	7.69	8.10	7.87	7.85	
11	8.67	8.38	8.50	8.26	8.76	7.93	8.32	8.58	7.66	7.96	8.00	6.90	
12	8.35	8.13	8.41	8.38	8.31	8.06	8.43	8.50	8.04	7.93	8.11	8.22	
13	8.62	8.15	8.41	8.68	7.84	8.49	8.50	8.01	7.94	7.95	8.00	8.65	
14	8.60	8.30	8.36	8.62	8.12	8.52	8.46	7.89	8.08	7.93	8.03	8.43	
15	7.99	8.64	8.62	8.54	8.25	8.37	8.46	8.51	8.16	7.64	8.03	8.40	
16	7.96	8.41	8.29	8.42	8.63	8.70	8.17	8.67	7.84	7.74	8.02	8.03	
17	7.29	5.79	8.69	8.13	8.65	8.45	8.03	8.63	7.70	8.08	8.02	7.62	
18	8.56	8.15	8.33	8.39	8.74	7.97	8.48	8.58	7.87	7.64	7.89	7.87	
19	8.60	8.79	8.34	8.23	8.65	7.77	8.79	8.14	7.88	7.91	7.97	8.20	
20	8.40	8.16	8.27	8.26	8.51	8.51	8.86	7.83	7.98	7.79	7.89	8.28	
21	8.27	8.65	8.65	8.50	8.21	8.53	8.79	7.90	8.00	7.85	8.04	8.30	
22	8.25	8.36	8.59	8.37	8.20	8.74	8.59	8.17	8.05	7.80	7.96	8.28	
23	8.24	8.48	8.56	8.22	8.65	8.50	8.12	8.22	7.70	7.66	8.03	8.29	
24	8.32	8.36	8.20	7.81	8.76	8.45	8.12	8.41	7.53	8.04	7.82	7.79	
25	8.55	8.36	7.72	8.37	8.72	8.00	8.69	8.25	7.48	8.01	7.88	6.98	
26	8.54	8.05	8.25	7.88	8.61	7.91	8.76	8.15	7.92	7.79	7.86	7.67	
27	8.38	8.45	8.12	8.46	8.61	8.34	8.66	7.81	7.41	8.01	7.92	8.17	
28	8.25	8.51	8.61	8.79	8.11	8.55	8.79	7.68	7.97	7.84	8.01	7.96	
29	8.08		8.57	8.19	7.73	8.67	8.58	7.98	7.88	7.66	8.14	7.91	
30	8.10		8.76	8.21	8.25	8.61	8.10	8.21	7.74	7.57	8.21	7.88	
31	8.59		8.43		8.60		8.10	8.03		7.67		7.77	Annual Summary
Average	8.30	8.29	8.41	8.37	8.45	8.38	8.40	8.29	7.82	7.80	7.98	8.02	8.21
Minimum	7.29	5.79	7.72	7.81	7.73	7.77	7.70	7.68	6.77	7.40	7.81	6.90	5.79
Maximum	8.67	8.79	8.76	8.79	8.82	8.74	8.86	8.71	8.22	8.10	8.21	8.65	8.86
Total	257.40	232.01	260.57	251.14	262.05	251.33	260.43	256.98	234.60	241.91	239.47	248.74	2,997

Blended Sludge Discharge to South Metro Interceptor (mgd) 2011

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	1.39	1.63	1.27	1.43	1.36	1.58	1.56	1.39	1.61	1.39	1.24	0.99	
2	1.38	1.40	1.39	1.14	1.44	1.57	1.36	1.40	1.65	1.32	1.58	1.31	
3	1.11	1.44	1.28	1.55	1.47	1.65	1.29	1.62	1.74	1.52	1.21	0.89	
4	1.43	1.49	1.11	1.12	1.41	1.61	1.56	1.59	1.60	1.36	1.49	0.99	
5	1.23	1.25	1.28	1.15	1.51	1.56	1.36	1.62	1.50	1.49	1.36	0.88	
6	1.23	1.16	1.19	1.32	1.52	1.54	1.49	1.49	1.52	1.62	1.35	1.09	
7	1.06	1.55	1.30	1.18	1.57	1.64	1.53	1.39	1.57	1.41	1.26	1.09	
8	1.37	1.37	1.31	1.42	1.39	1.49	1.48	1.71	0.00	1.26	1.27	0.99	
9	1.10	1.41	1.36	1.33	1.49	1.43	1.50	1.57	1.05	1.12	1.09	0.88	
10	1.23	1.48	1.21	1.40	1.53	1.51	1.48	1.58	1.26	1.50	1.17	1.05	
11	1.24	1.55	1.33	1.44	1.62	1.44	1.46	1.65	1.29	1.20	1.02	1.05	
12	1.24	1.46	1.22	1.24	1.52	1.53	1.58	1.59	1.13	1.20	1.10	2.27	
13	1.06	1.44	1.34	1.33	1.47	1.47	1.63	1.27	1.43	1.18	1.21	1.48	
14	1.31	1.43	1.32	1.36	1.59	1.55	1.59	1.42	1.31	1.35	1.07	1.56	
15	1.36	1.42	1.26	1.24	1.53	1.50	1.54	1.45	1.49	1.35	1.10	1.46	
16	1.30	1.38	1.31	1.43	1.58	1.58	1.52	1.56	1.35	1.49	1.10	1.46	
17	1.27	1.20	1.34	1.30	1.55	1.63	1.51	1.49	1.39	1.34	0.99	1.45	
18	1.19	1.34	1.30	1.33	1.51	1.37	1.52	1.44	1.25	1.43	1.19	1.56	
19	1.36	1.34	1.14	1.19	1.56	1.58	1.55	1.48	1.42	1.34	0.88	1.64	
20	1.33	1.18	1.46	1.41	1.69	1.52	1.69	1.33	1.49	1.15	1.04	1.55	
21	1.45	1.41	1.14	1.16	1.55	1.42	1.53	1.28	1.48	1.44	1.06	1.68	
22	1.45	1.17	1.20	1.42	1.65	1.37	1.46	1.48	1.35	1.36	0.96	1.52	
23	1.45	1.32	1.41	1.24	1.68	1.43	1.43	1.43	1.38	1.45	1.03	1.18	
24	1.39	1.07	1.27	1.46	1.68	1.51	1.31	1.48	1.44	1.67	1.05	1.18	
25	1.51	1.27	1.28	1.18	1.73	1.59	1.39	1.64	1.33	1.61	0.99	1.32	
26	1.50	1.27	1.33	1.37	1.73	1.48	1.40	1.55	1.38	1.56	1.09	1.31	
27	1.50	1.27	1.20	1.32	1.76	1.38	1.37	1.53	1.55	1.55	0.89	1.37	
28	1.49	1.27	1.23	1.51	1.65	1.36	1.49	1.48	1.52	1.40	0.90	1.23	
29	1.60		1.24	1.46	1.70	1.45	1.60	1.63	1.55	1.56	1.01	1.25	
30	1.86		1.14	1.40	1.67	1.60	1.34	1.62	1.53	1.39	1.17	1.04	
31	1.62		1.26		1.64		1.51	1.64		1.41		1.44	Annual Summary
Average	1.35	1.36	1.27	1.33	1.57	1.51	1.48	1.51	1.39	1.40	1.13	1.30	1.38
Minimum	1.06	1.07	1.11	1.12	1.36	1.36	1.29	1.27	0.00	1.12	0.88	0.88	0.00
Maximum	1.86	1.63	1.46	1.55	1.76	1.65	1.69	1.71	1.74	1.67	1.58	2.27	2.27
Total	42.01	37.97	39.42	39.83	48.75	45.34	46.03	46.80	41.56	43.42	33.87	40.16	505

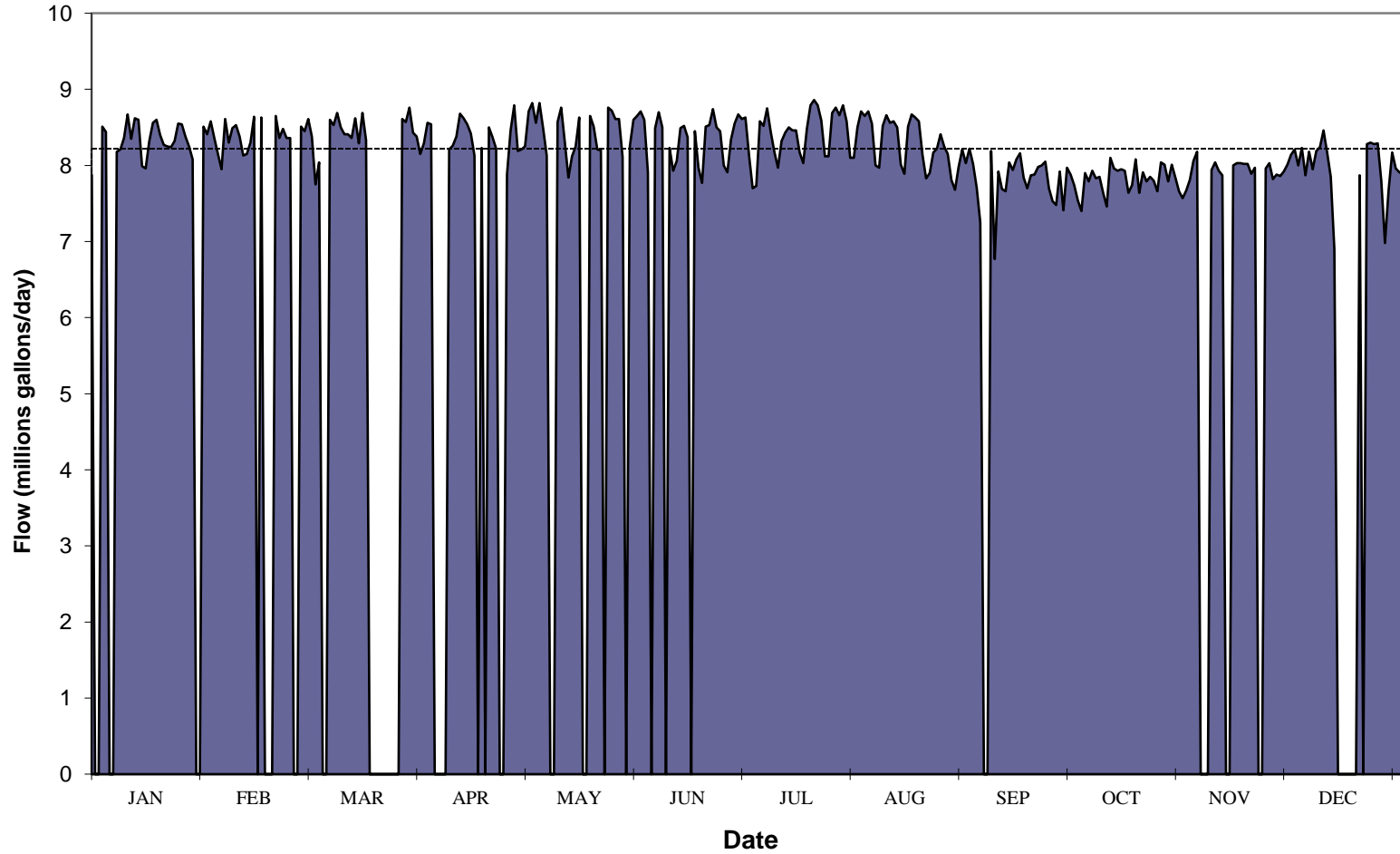
South Bay Wastewater Reclamation Plant 2011 Daily Flows



Dry Weather Flows 2011 Influent (mgd)

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	7.88	8.51	8.45	8.38	8.25	8.65	8.63	8.50	8.22	7.54	7.81	8.00	
2		8.41	8.61	8.15	8.71	8.71	8.13	8.71	8.02	7.40	8.06	8.23	
3		8.58	8.38	8.29	8.82	8.60	7.70	8.65	7.71	7.90	8.18	7.87	
4	8.51	8.36	7.75	8.56	8.56	7.91	7.73	8.71	7.25	7.79		8.18	
5	8.44	8.15	8.04	8.54	8.82		8.58	8.55		7.93		7.95	
6		7.95			8.49	8.49	8.52	8.00		7.83		8.19	
7		8.61			8.13	8.70	8.75	7.97	8.19	7.85	7.94	8.24	
8	8.18	8.30	8.60			8.50	8.44	8.52	6.77	7.64	8.04	8.46	
9	8.21	8.49	8.53				8.18	8.66	7.92	7.46	7.93	8.17	
10	8.36	8.53	8.69	8.21	8.57	8.23	7.97	8.56	7.69	8.10	7.87	7.85	
11	8.67	8.38	8.50	8.26	8.76	7.93	8.32	8.58	7.66	7.96		6.90	
12	8.35	8.13	8.41	8.38	8.31	8.06	8.43	8.50	8.04	7.93			
13	8.62	8.15	8.41	8.68	7.84	8.49	8.50	8.01	7.94	7.95	8.00		
14	8.60	8.30	8.36	8.62	8.12	8.52	8.46	7.89	8.08	7.93	8.03		
15	7.99	8.64	8.62	8.54	8.25	8.37	8.46	8.51	8.16	7.64	8.03		
16	7.96		8.29	8.42	8.63		8.17	8.67	7.84	7.74	8.02		
17	8.32	8.63	8.69	8.13		8.45	8.03	8.63	7.70	8.08	8.02		
18	8.56		8.33			7.97	8.48	8.58	7.87	7.64	7.89	7.87	
19	8.60			8.23	8.65	7.77	8.79	8.14	7.88	7.91	7.97		
20	8.40				8.51	8.51	8.86	7.83	7.98	7.79		8.28	
21	8.27	8.65		8.50	8.21	8.53	8.79	7.90	8.00	7.85		8.30	
22	8.25	8.36		8.37	8.20	8.74	8.59	8.17	8.05	7.80	7.96	8.28	
23	8.24	8.48		8.22		8.50	8.12	8.22	7.70	7.66	8.03	8.29	
24	8.32	8.36			8.76	8.45	8.12	8.41	7.53	8.04	7.82	7.79	
25	8.55	8.36			8.72	8.00	8.69	8.25	7.48	8.01	7.88	6.98	
26	8.54			7.88	8.61	7.91	8.76	8.15	7.92	7.79	7.86	7.67	
27	8.38			8.46	8.61	8.34	8.66	7.81	7.41	8.01	7.92	8.17	
28	8.25	8.51	8.61	8.79	8.11	8.55	8.79	7.68	7.97	7.84	8.01	7.96	
29	8.08		8.57	8.19		8.67	8.58	7.98	7.88	7.66	8.14	7.91	
30			8.76	8.21	8.25	8.61	8.10	8.21	7.74	7.57	8.21	7.88	
31			8.43		8.60		8.10	8.03		7.67		7.77	Annual Summary
Average	8.34	8.40	8.45	8.36	8.46	8.38	8.40	8.29	7.81	7.80	7.98	7.97	8.21
Minimum	7.88	7.95	7.75	7.88	7.84	7.77	7.70	7.68	6.77	7.40	7.81	6.90	6.77
Maximum	8.67	8.65	8.76	8.79	8.82	8.74	8.86	8.71	8.22	8.10	8.21	8.46	8.86
Total	209	185	169	184	211	226	260	257	219	242	184	191	2537

South Bay Wastewater Reclamation Plant 2011 Daily Influent Dry Weather Flows



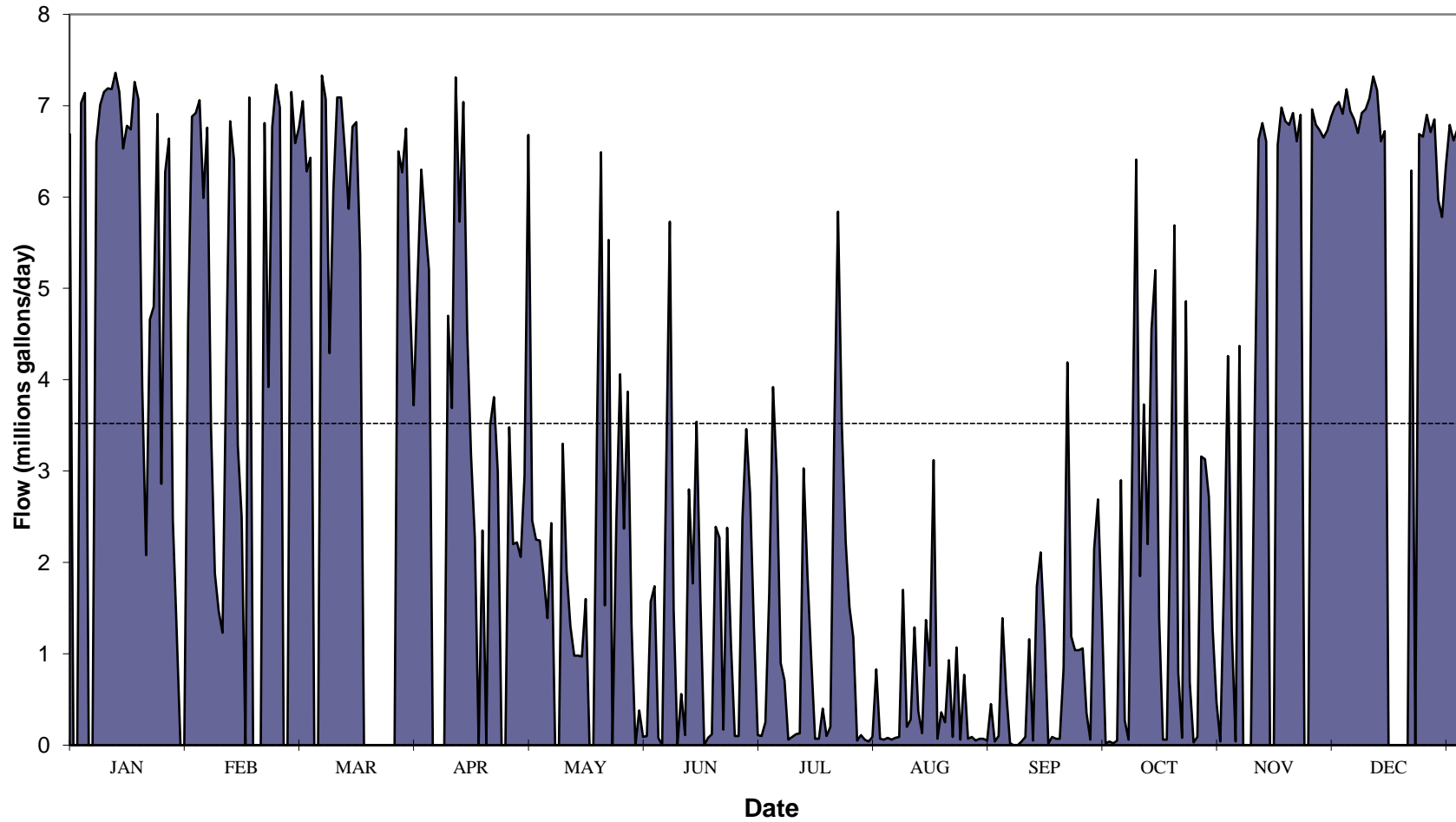
..... Flow average

Dry Weather Flows 2011

Effluent to Ocean

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	6.69	4.63	6.59	3.72	6.68	0.10	0.10	0.07	0.10	0.02	1.26	7.18	
2		6.88	6.76	5.07	2.46	1.57	0.25	0.06	1.39	0.05	0.04	6.94	
3		6.92	7.05	6.30	2.25	1.74	1.66	0.08	0.58	2.90	4.37	6.85	
4	7.03	7.06	6.28	5.71	2.24	0.08	3.92	0.06	0.02	0.27		6.70	
5	7.14	5.99	6.43	5.20	1.85		2.94	0.08		0.06		6.92	
6		6.76			1.39	2.85	0.90	0.09		3.22		6.96	
7		3.46			2.43	5.73	0.71	1.70	0.04	6.41	3.64	7.08	
8	6.60	1.88	7.33			1.49	0.06	0.20	0.09	1.85	6.63	7.32	
9	7.01	1.47	7.07				0.09	0.28	1.16	3.73	6.81	7.17	
10	7.15	1.23	4.29	4.70	3.30	0.56	0.12	1.29	0.05	2.20	6.61	6.61	
11	7.19	4.27	6.08	3.69	1.91	0.11	0.13	0.37	1.74	4.55		6.72	
12	7.18	6.83	7.09	7.31	1.30	2.80	3.03	0.13	2.11	5.20			
13	7.36	6.41	7.09	5.73	0.98	1.77	1.87	1.37	1.26	1.39	6.57		
14	7.15	3.28	6.52	7.04	0.98	3.54	0.94	0.87	0.02	0.06	6.98		
15	6.53	2.50	5.87	4.53	0.97	1.61	0.07	3.12	0.09	0.06	6.83		
16	6.78		6.77	3.18	1.60		0.07	0.07	0.07	2.67	6.79		
17	6.74	7.09	6.82	2.27		0.08	0.40	0.36	0.07	5.69	6.92		
18	7.26		5.37				0.12	0.10	0.25	0.84	0.79	6.61	6.29
19	7.07			2.35	3.59	2.39	0.20	0.93	4.19	0.08	6.90		
20	3.92				6.49	2.27	3.39	0.09	1.19	4.86			6.69
21	2.08	6.81		3.50	1.53	0.17	5.84	1.07	1.04	0.69			6.66
22	4.66	3.92		3.81	5.53	2.38	3.50	0.06	1.04	0.03	6.96	6.90	
23	4.80	6.77		2.99			1.11	2.23	0.77	1.06	0.09	6.79	6.71
24	6.91	7.23			2.42	0.10	1.51	0.07	0.35	3.16	6.73	6.85	
25	2.86	6.98			4.06	0.10	1.18	0.09	0.06	3.13	6.65	5.97	
26	6.27			3.48	2.37	2.48	0.05	0.05	2.15	2.72	6.73	5.78	
27	6.64			2.20	3.87	3.46	0.11	0.07	2.69	1.27	6.88	6.34	
28	2.47	7.15	6.50	2.22	1.30	2.75	0.06	0.07	1.45	0.47	6.99	6.79	
29	1.26		6.27	2.06		1.29	0.04	0.05	0.02	0.04	7.04	6.62	
30			6.75	2.95	0.38	0.11	0.09	0.45	0.04	1.88	6.91	6.74	
31			4.89		0.09		0.83	0.04		4.26		6.41	Annual Summary
Average	5.87	5.25	6.39	4.09	2.48	1.58	1.17	0.46	0.89	2.06	6.03	6.72	3.31
Minimum	1.26	1.23	4.29	2.06	0.09	0.08	0.04	0.04	0.02	0.02	0.04	5.78	0.02
Maximum	7.36	7.23	7.33	7.31	6.68	5.73	5.84	3.12	4.19	6.41	7.04	7.32	7.36
Total	146.8	115.5	128	90	62.0	42.8	36.4	14.3	24.9	63.8	138.6	161.2	1024

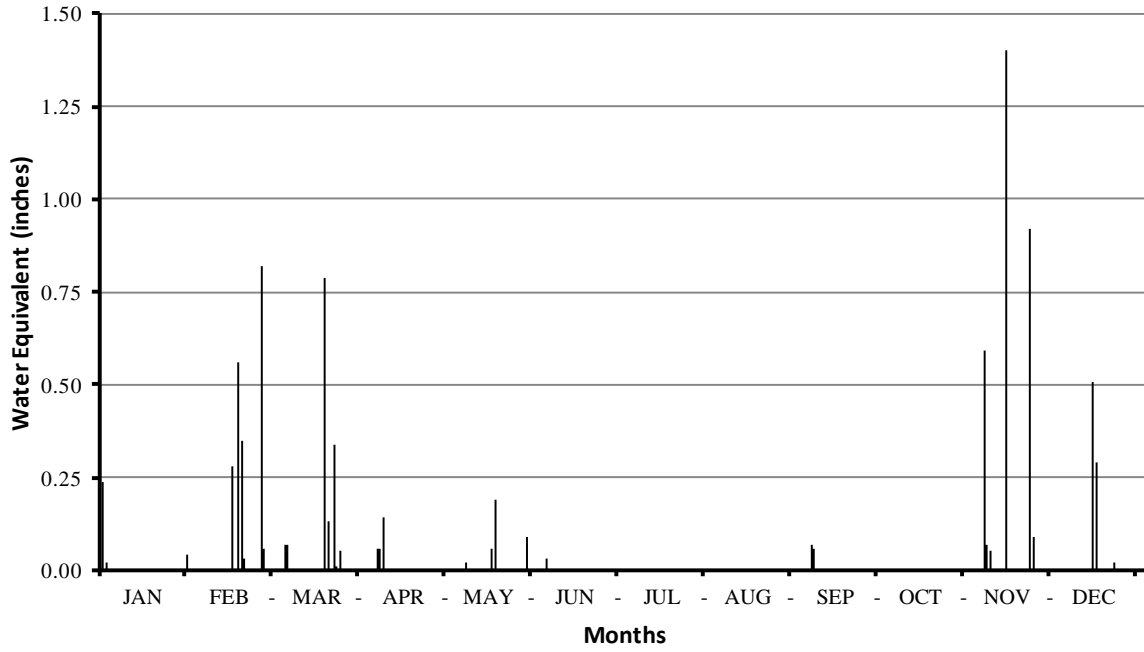
South Bay Wastewater Reclamation Plant 2011 Daily Effluent to Ocean Dry Weather Flows



..... Flow average

B. Rain Days

**San Diego Precipitation -2011
Daily Rainfall - Lindbergh Field**



San Diego Precipitation – 2011 Daily Rainfall – Lindbergh Field

Total Annual Precipitation=8.62

Maximum=1.4

Trace=0

First Quarter		Second Quarter		Third Quarter		Fourth Quarter	
Date	Rain	Date	Rain	Date	Rain	Date	Rain
2-Jan-11	0.24	6-Apr-11	T	5-Sep-11	0.07	4-Nov-11	0.59
3-Jan-11	0.02	7-Apr-11	0.06	6-Sep-11	0.06	5-Nov-11	0.07
6-Jan-11	T	8-Apr-11	0.06			6-Nov-11	0.05
7-Jan-11	T	9-Apr-11	0.14			11-Nov-11	T
30-Jan-11	T	18-Apr-11	T			12-Nov-11	1.4
31-Jan-11	0.04	20-Apr-11	T			20-Nov-11	0.92
16-Feb-11	0.28	24-Apr-11	T			21-Nov-11	0.09
18-Feb-11	0.56	25-Apr-11	T			12-Dec-11	0.51
19-Feb-11	0.35	8-May-11	0.02			13-Dec-11	0.29
20-Feb-11	0.03	9-May-11	0			14-Dec-11	T
26-Feb-11	0.82	17-May-11	0.06			15-Dec-11	0.04
27-Feb-11	0.06	18-May-11	0.19			16-Dec-11	T
6-Mar-11	0.07	23-May-11	T			17-Dec-11	T
7-Mar-11	0.07	29-May-11	0.09			19-Dec-11	0.02
19-Mar-11	T	5-Jun-11	0.03				
20-Mar-11	0.79	9-Jun-11	T				
21-Mar-11	0.13	16-Jun-11	T				
22-Mar-11	T						
23-Mar-11	0.34						
24-Mar-11	0.01						
25-Mar-11	0.05						
26-Mar-11	T						
27-Mar-11	T						
TOTALS	3.86		0.65		0.13		3.98

C. Chemical Report

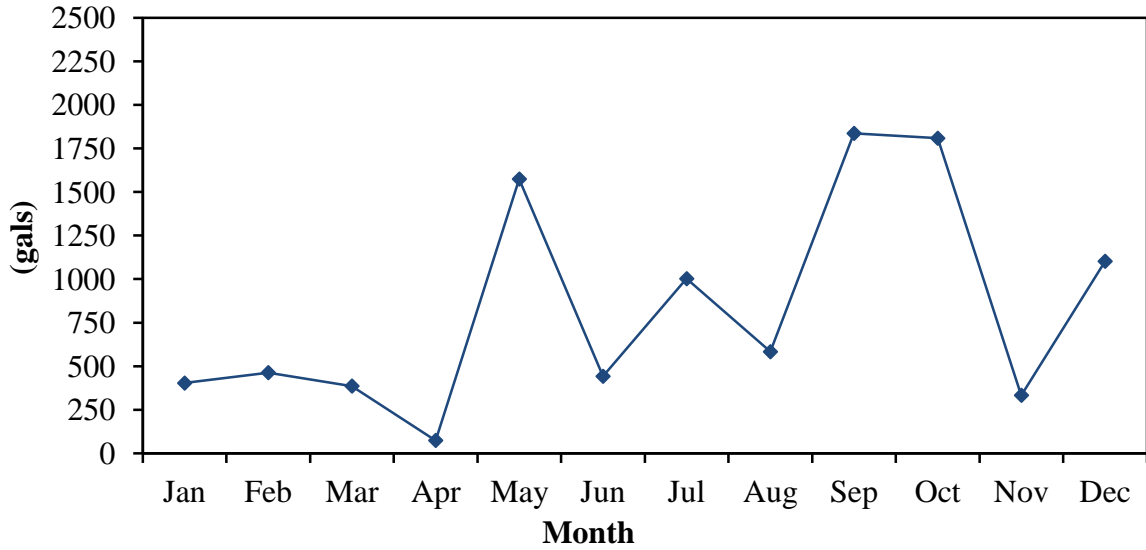
South Bay Water Reclamation Plant - Annual Chemical Usage Report

2011

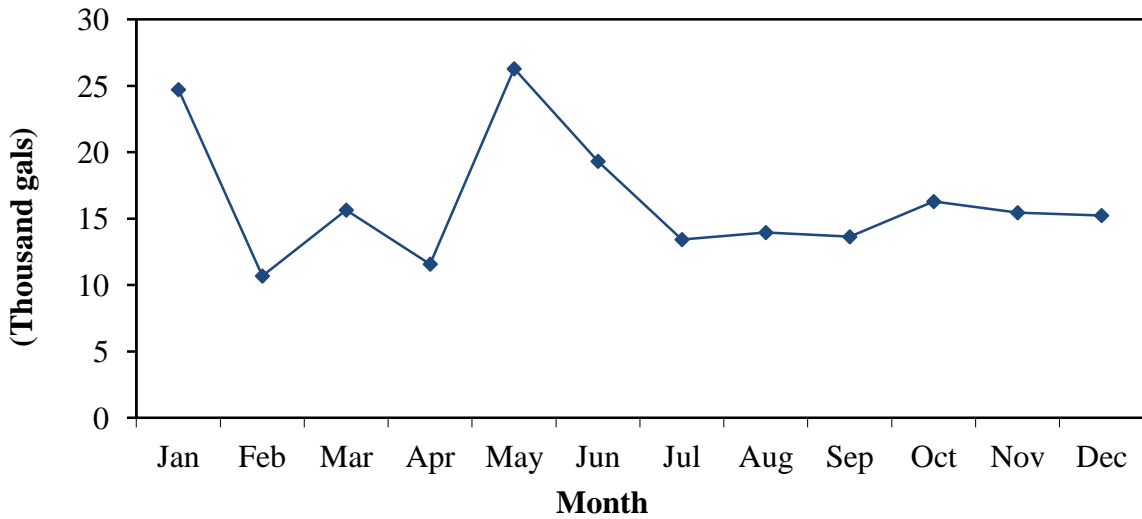
DATE	Polymer Catalytic Gallons	Hypochlorite Gallons	Alum Chloride Gallons	Sodium Hydroxide Gallons
Jan-11	14	24,721	403	2,564
Feb-11	16	10,682	463	940
Mar-11	29	15,647	386	1,489
Apr-11	17	11,580	74	850
May-11	159	26,288	1,574	1,430
Jun-11	215	19,318	442	1,328
Jul-11	122	13,428	1,002	1,262
Aug-11	0	13,956	583	930
Sep-11	74	13,638	1,836	988
Oct-11	3	16,293	1,808	1,485
Nov-11	39	15,454	333	1,618
Dec-11	185	15,240	1,102	1,730
AVG	79	16354	834	1385
SUM	873	196245	10006	16614

**South Bay Water Reclamation Plant
2011 Monthly Chemical Usage**

Alum

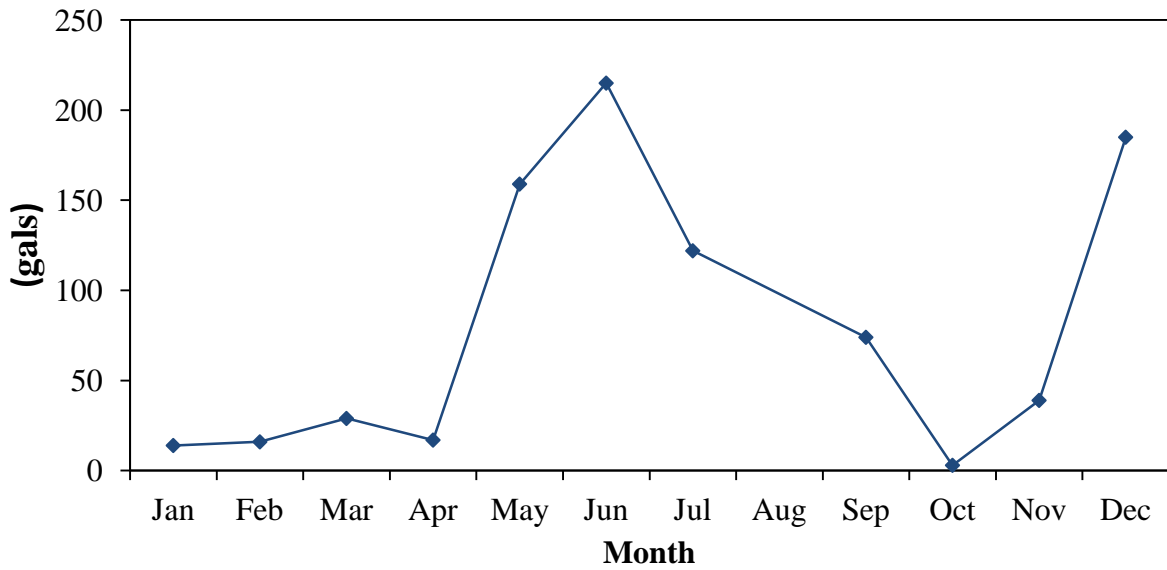


Sodium Hypochlorite

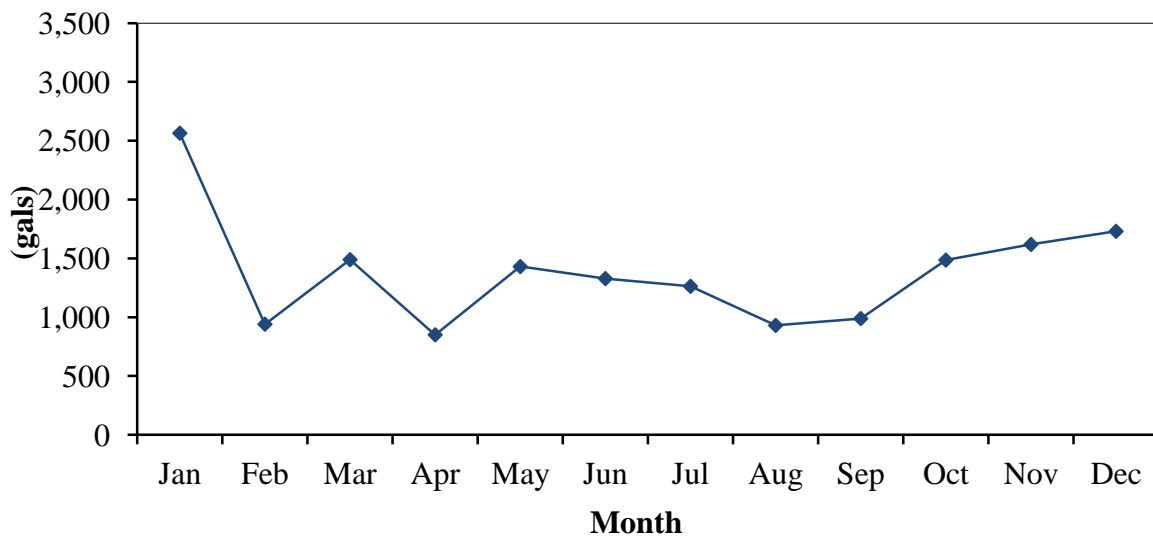


**South Bay Water Reclamation Plant
2011 Monthly Chemical Usage**

Polymer Emulsion Catalytic



Caustic



D. Facilities Out of Service Report

2011 SBWRP FACILITIES OUT OF SERVICE REPORT

FACILITIES OOS BY DATE

Bar Screens

	FROM	TO	REASON
Bar Screen 1	4/6/2011	4/13/2011	Please clean channel and screen, flow is restricted through screen.
Bar Screen 1	9/12/2011	9/12/2011	Troubleshoot and repair.
Bar Screen 1	10/4/2011	10/6/2011	Influent Screen #1 keeps alarming for differential pressure. It is not in service at this time.
Bar Screen 1	12/9/2011	12/15/2011	Bar screen is offline and repeatedly indicated fail to park on DCS. Request to investigate and repair as necessary.
Bar Screen 2	7/25/2011	7/26/2011	Head works influent channel #2 has high accumulation of rags and debris, Uncover channel remove debris and rags wrap around drain gate.
Bar Screen 2	9/20/2011	2/15/2012	Bar screen climber set of sprocket has uneven wear. Remove and replace sprocket.

Primary Sedimentation

	FROM	TO	REASON
Pri Sed Tank 1	3/7/2011	3/10/2011	PSL header valve 1-2, 10MOV7033 is plugged. Please clear the header valve.
Pri Sed Tank 1	3/8/2011	3/10/2011	Please make adjustments to the valves at Grit tank 1. SB10mov7033, SB10mov7031 and possibly SB10MOV7032. See Vic Diaz for more information
Pri Sed Tank 1	9/20/2011	9/21/2011	Assist operations in cleaning tank hopper.
Pri Sed Tank 1	12/19/2011	1/19/2012	Sprayers for Scum do not work. Troubleshoot and repair.
Pri Sed Tank 2	7/18/2011	7/19/2011	Trench between primary sedimentation tank # 2 and #3 drain clogged up with debris. Clean trench and unclog drain.
Pri Sed Tank 2	8/8/2011	8/9/2011	Primary Tank #2 draw-off valve 10-MOV-7041 keeps alarming on fail to close.
Pri Sed Tank 2	8/11/2011	8/15/2011	Troubleshoot and repair cause of failure on 10-MOV-7041.
Pri Sed Tank 2	8/17/2011	8/24/2011	Primary Tank Draw Off Valve (10-MOV-7041) - fail to close and gen fail. Please troubleshoot. Fails primary pumping strategy.
Pri Sed Tank 2	9/15/2011	9/15/2011	Troubleshoot and repair 10-MOV-7041 control circuit.

Pri Sed Tank 2	9/26/2011	10/18/2011	Clean primary sedimentation tank 2.
Pri Sed Tank 2	10/31/2011	12/8/2011	Tank #2 draw off valve fail to close and fail to open numerous times. Request to investigate and repair as necessary.
Pri Sed Tank 2	10/31/2011	11/2/2011	Uncouple 10MOV7041 to facilitate electrical troubleshooting - coordinate with electrical staff.
Pri Sed Tank 3	4/12/2011	4/12/2011	For Tank Crew: Please clean the hoppers of Primary Sedimentation tank #3.
Pri Sed Tank 3	12/19/2011	1/19/2012	Sprayers for Scum do not work. Troubleshoot and repair.
Pri Sed Tank 4	4/12/2011	4/12/2011	For Tank Crew: Please clean the hoppers of primary sedimentation #4
Pri Sed Tank 4	6/9/2011	6/15/2011	Troubleshoot and repair 10MOV7061.
Pri Sed Tank 5	11/21/2011	11/29/2011	Repair grit pump hopper suction piping and remove and repair damaged basin concrete.

Aeration Basins

	FROM	TO	REASON
Aer Basin 1	6/20/2011	7/6/2011	Check position indicator for valve.
Aer Basin 1	8/19/2011	8/19/2011	Remove Pressure Monitoring system for Diffuser at Aeration Basin #1. There are 4 to be removed. System includes Magnehelic gauge, rotameter, and 3 ball valves. See Susan Clopton for details.
Aer Basin 1	9/29/2011	9/29/2011	Remove DO probes from zone 2 and 4 in SB15AB001.
Aer Basin 1	9/29/2011	9/29/2011	Set-up trash pump to pump fluids from aeration basin tank 1 to tank 2.
Aer Basin 2	8/10/2011	8/17/2011	Remove Pressure Monitoring system for Diffuser at Aeration Basin #2. There are 4 to be removed. System includes Magnehelic gauge, rotameter, and 3 ball valves. See Susan Clopton for details.
Aer Basin 2	9/29/2011	9/29/2011	Install DO probes to SB15AB002 zones 2 and 4.
Aer Basin 3	4/4/2011	8/10/2011	A.B. 3 Zone 1 diffuser wet pressure diff. gauge has no indicator. Zone 3 diff. gauge reads zero. Inspect and replace as needed.
Aer Basin 3	8/11/2011	8/17/2011	Troubleshoot and Repair Gen Fail on 15-FCV-330.
Aer Basin 3	8/19/2011	8/19/2011	Remove Pressure Monitoring system for Diffuser at Aeration Basin #3. There are 4 to be removed. System includes Magnehelic gauge, rotameter, and 3 ball valves. See Susan Clopton for details.
Aer Basin 3	10/4/2011	10/6/2011	Air flow control valve not reacting as it should.
Aer Basin 4	8/10/2011	8/17/2011	Remove Pressure Monitoring system for Diffuser at Aeration Basin #4. There are 4 to be removed. System includes Magnehelic gauge, rotameter, and 3 ball valves. See Susan Clopton for details.
Aer Basin 5	4/4/2011	8/10/2011	A. Basin 5 Zone 1 has a broken indicator on the diffuser pressure differential gauge. Gauge reads 0. Zone 3

			diffuser pressure differential gauge reads zero. Please replace inspect and replace.
Aer Basin 5	8/22/2011	8/23/2011	Remove Pressure Monitoring system for Diffuser at Aeration Basin #5. There are 4 to be removed. System includes Magnehelic gauge, rotameter, and 3 ball valves. See Susan Clopton for details.
Aer Basin 6	4/4/2011	8/10/2011	A.B.6 Zone 1 diffuser gauge reads zero and there is moisture in the face. Zone 2 pressure monitoring panel is not working. Diffuser gauge is OOS and rusted. SCFM flow meter reads zero. Please inspect and replace.
Aer Basin 6	8/22/2011	8/22/2011	Troubleshoot and repair.
Aer Basin 6	8/22/2011	8/23/2011	Remove Pressure Monitoring system for Diffuser at Aeration Basin #6. There are 4 to be removed. System includes Magnehelic gauge, rotameter, and 3 ball valves. See Susan Clopton for details.
Aer Basin 6	8/25/2011	9/29/2011	Air valve keeps going to gen fail, please repair.
Aer Basin 7	4/4/2011	8/10/2011	A.B. 7 Zone 1 diffuser gauge not working. Zone 3 diffuser gauge has no indicator and there is moisture inside the gauge. Zone 4 gauge reads 0 and the indicator is broken. Please inspect and replace.
Aer Basin 7	8/18/2011	8/18/2011	Remove Pressure Monitoring system for Diffuser at Aeration Basin #7. There are 4 to be removed. System includes Magnehelic gauge, rotameter, and 3 ball valves. See Susan Clopton for details.
Aer Basin 8	8/18/2011	8/18/2011	Remove Pressure Monitoring system for Diffuser at Aeration Basin #8. There are 4 to be removed. System includes Magnehelic gauge, rotameter, and 3 ball valves. See Susan Clopton for details.

Secondary Clarifiers

	FROM	TO	REASON
Sec. Clar. 7	12/5/2011	12/5/2011	Remove and replace Slip Drive Sprockets as needed

Tertiary Filters

	FROM	TO	REASON
Ter. Filter 3	6/1/2011	6/7/2011	Valve 25 mov234 goes into gen fail and then to travel upon reset.

FACILITIES OOS BY PROCESS

Bar Screens

	DATES OOS
Bar Screen 1	4/6/2011 - 4/13/2011, 9/12/2011 - 9/12/2011, 10/4/2011 - 10/6/2011, 12/9/2011 - 12/15/2011
Bar Screen 2	7/25/2011 - 7/26/2011, 9/20/2011 - 2/15/2012

Primary Sedimentation

	DATES OOS
Pri Sed Tank 1	3/7/2011 - 3/10/2011, 3/8/2011 - 3/10/2011, 9/20/2011 - 9/21/2011, 12/19/2011 - 1/19/2012
Pri Sed Tank 2	7/18/2011 - 7/19/2011, 8/8/2011 - 8/9/2011, 8/11/2011 - 8/15/2011, 8/17/2011 - 8/24/2011, 9/15/2011 - 9/15/2011, 9/26/2011 - 10/18/2011, 10/31/2011 - 12/8/2011, 10/31/2011 - 11/2/2011
Pri Sed Tank 3	4/12/2011 - 4/12/2011, 12/19/2011 - 1/19/2012
Pri Sed Tank 4	4/12/2011 - 4/12/2011, 6/9/2011 - 6/15/2011
Pri Sed Tank 5	11/21/2011 - 11/29/2011

Aeration Basins

	DATES OOS
Aer Basin 1	6/20/2011 - 7/6/2011, 8/19/2011 - 8/19/2011, 9/29/2011 - 9/29/2011, 9/29/2011 - 9/29/2011
Aer Basin 2	8/10/2011 - 8/17/2011, 9/29/2011 - 9/29/2011
Aer Basin 3	4/4/2011 - 8/10/2011, 8/11/2011 - 8/17/2011, 8/19/2011 - 8/19/2011, 10/4/2011 - 10/6/2011
Aer Basin 4	8/10/2011 - 8/17/2011
Aer Basin 5	4/4/2011 - 8/10/2011, 8/22/2011 - 8/23/2011
Aer Basin 6	4/4/2011 - 8/10/2011, 8/22/2011 - 8/22/2011, 8/22/2011 - 8/23/2011, 8/25/2011 - 9/29/2011
Aer Basin 7	4/4/2011 - 8/10/2011, 8/18/2011 - 8/18/2011
Aer Basin 8	8/18/2011 - 8/18/2011

Secondary Clarifiers

	DATES OOS
Sec. Clar. 7	12/5/2011 - 12/5/2011.

Tertiary Filters

	DATES OOS
Ter. Filter 3	6/1/2011 - 6/7/2011