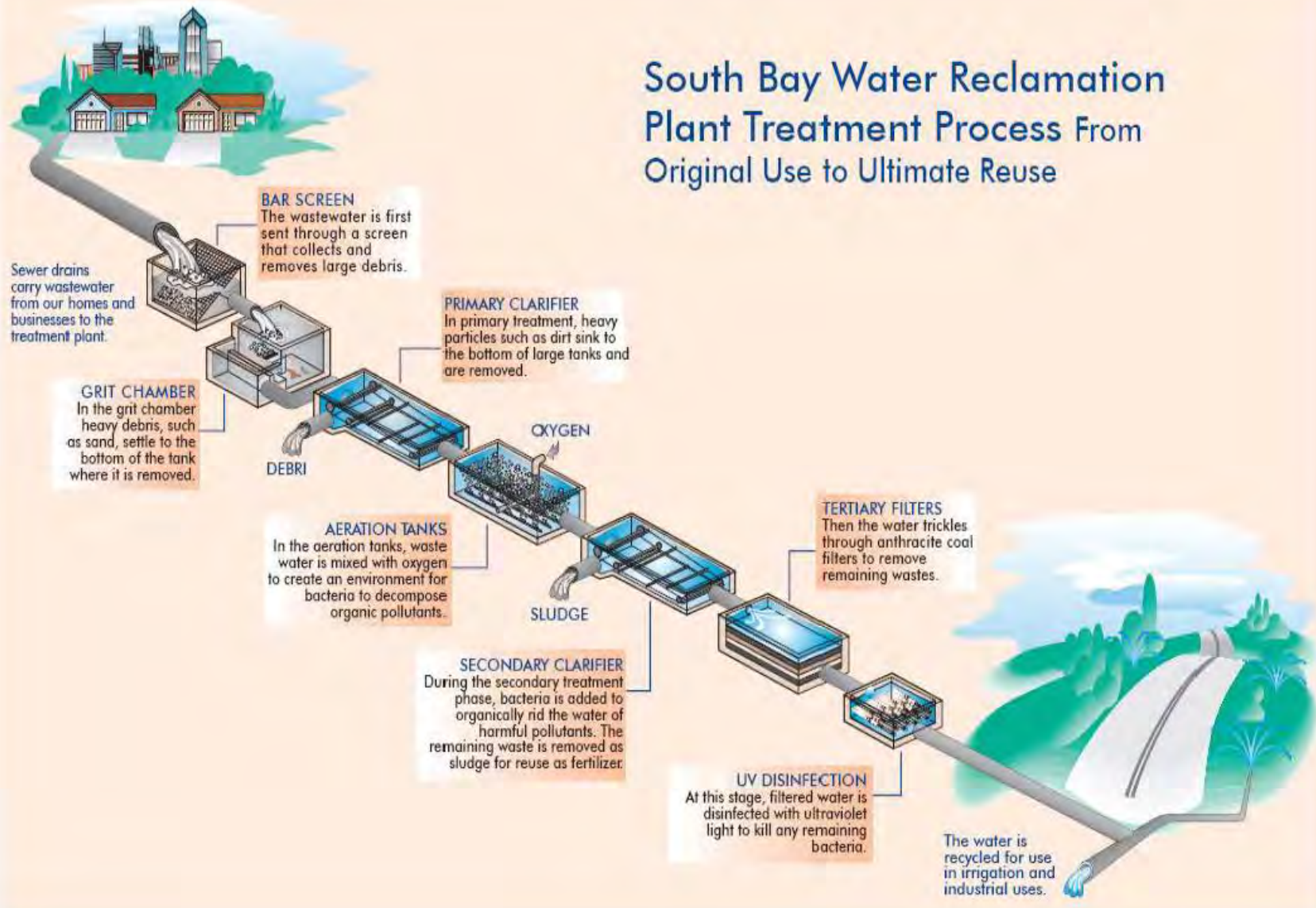


### III. Plant Operations Summary

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

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# 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 reuse<sup>7</sup>.

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.

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<sup>7</sup> The Recycled Water Users Summary Report as described in Permit No. 2000-203 is submitted separately.

SBWRP Annual Monitoring Report

2009 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  | 8.61     | 4.89    | 1.61               | 1.61                           | 6.03                | 2.06                 | .00                           | .68                         |
| 02  | 8.68     | 5.36    | 1.66               | 1.65                           | 6.06                | 1.63                 | .00                           | .73                         |
| 03  | 8.60     | 4.45    | 1.74               | 1.61                           | 5.97                | 2.49                 | .00                           | .78                         |
| 04  | 8.28     | 2.97    | 1.71               | 1.55                           | 5.72                | 3.71                 | .00                           | .75                         |
| 05  | 8.48     | 1.32    | 1.21               | 1.48                           | 6.50                | 5.61                 | .00                           | .77                         |
| 06  | 8.29     | 1.07    | .44                | 1.53                           | 7.15                | 5.66                 | .00                           | .87                         |
| 07  | 8.33     | .25     | .00                | 1.59                           | 7.53                | 6.42                 | .00                           | .86                         |
| 08  | 8.24     | .31     | .12                | 1.51                           | 7.37                | 6.34                 | .00                           | .83                         |
| 09  | 8.18     | .16     | .10                | 1.48                           | 7.30                | 6.49                 | .00                           | .76                         |
| 10  | 8.21     | 2.09    | .61                | 1.49                           | 6.80                | 4.58                 | .00                           | .75                         |
| 11  | 8.03     | 2.94    | 1.20               | 1.48                           | 6.00                | 3.53                 | .00                           | .73                         |
| 12  | 8.09     | 5.79    | 1.55               | 1.58                           | 5.73                | .67                  | .00                           | .82                         |
| avg | 8.34     | 2.63    | 1.00               | 1.55                           | 6.51                | 4.10                 | .00                           | .78                         |
| sum | 100.02   | 31.61   | 11.96              | 18.56                          | 78.15               | 49.20                | .00                           | 9.33                        |

WASTEWATER MONTHLY TOTAL FLOWS

(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  | 266.78   | 151.66  | 49.99              | 49.98                          | 186.92              | 63.99                | .00                           | 21.23                       |
| 02  | 242.95   | 150.06  | 46.60              | 46.19                          | 169.66              | 45.70                | .00                           | 20.53                       |
| 03  | 266.47   | 138.09  | 54.07              | 49.79                          | 185.20              | 77.15                | .01                           | 24.09                       |
| 04  | 248.52   | 88.97   | 51.32              | 46.64                          | 171.45              | 111.23               | .00                           | 22.56                       |
| 05  | 263.01   | 41.07   | 37.41              | 45.81                          | 201.42              | 174.06               | .01                           | 23.72                       |
| 06  | 248.79   | 32.08   | 13.16              | 45.79                          | 214.50              | 169.67               | .02                           | 25.99                       |
| 07  | 258.23   | 7.73    | .01                | 49.29                          | 233.43              | 199.09               | .00                           | 26.61                       |
| 08  | 255.47   | 9.76    | 3.77               | 46.79                          | 228.33              | 196.56               | .01                           | 25.88                       |
| 09  | 245.37   | 4.81    | 3.07               | 44.33                          | 219.02              | 194.64               | .00                           | 22.71                       |
| 10  | 254.61   | 64.84   | 18.93              | 46.20                          | 210.95              | 141.91               | .01                           | 23.15                       |
| 11  | 240.90   | 88.17   | 36.00              | 44.38                          | 180.07              | 106.01               | .00                           | 21.93                       |
| 12  | 250.76   | 179.41  | 48.08              | 49.11                          | 177.48              | 20.76                | .01                           | 25.39                       |
| avg | 253.49   | 79.72   | 30.20              | 47.03                          | 198.20              | 125.06               | .01                           | 23.65                       |
| sum | 3041.86  | 956.65  | 362.41             | 564.30                         | 2378.43             | 1500.77              | .07                           | 283.79                      |

A. Flows

**Effluent to Ocean FLOW (mgd) 2009**

| Day            | Jan    | Feb    | Mar    | Apr   | May   | Jun   | Jul  | Aug  | Sep  | Oct   | Nov   | Dec    |                |
|----------------|--------|--------|--------|-------|-------|-------|------|------|------|-------|-------|--------|----------------|
| 1              | 6.68   | 4.60   | 3.22   | 6.21  | 1.75  | 2.75  | 0.93 | 0.06 | 0.06 | 0.05  | 6.41  | 6.16   |                |
| 2              | 6.47   | 6.93   | 7.17   | 6.56  | 1.62  | 1.29  | 0.09 | 0.04 | 0.08 | 1.20  | 3.02  | 3.90   |                |
| 3              | 3.05   | 4.00   | 6.85   | 1.97  | 1.46  | 1.67  | 0.06 | 0.07 | 0.78 | 0.06  | 1.31  | 6.37   |                |
| 4              | 6.57   | 1.99   | 2.01   | 1.75  | 1.88  | 0.99  | 0.06 | 0.03 | 0.72 | 2.43  | 1.57  | 3.95   |                |
| 5              | 7.32   | 1.79   | 4.84   | 1.54  | 1.95  | 0.87  | 0.04 | 0.07 | 0.08 | 6.36  | 1.19  | 5.94   |                |
| 6              | 6.97   | 1.52   | 3.95   | 6.59  | 1.99  | 0.74  | 0.06 | 0.04 | 0.04 | 0.35  | 1.37  | 6.00   |                |
| 7              | 7.11   | 6.99   | 4.66   | 4.58  | 1.95  | 1.19  | 0.08 | 0.22 | 0.04 | 0.09  | 1.33  | 4.40   |                |
| 8              | 3.41   | 7.10   | 4.66   | 1.01  | 1.90  | 2.15  | 0.07 | 0.04 | 0.07 | 1.75  | 4.63  | 6.82   |                |
| 9              | 7.12   | 7.04   | 7.13   | 2.72  | 1.53  | 0.73  | 0.09 | 0.07 | 0.07 | 2.28  | 2.75  | 6.91   |                |
| 10             | 7.15   | 7.19   | 2.77   | 6.99  | 1.40  | 0.66  | 0.85 | 1.03 | 0.11 | 3.27  | 1.92  | 4.25   |                |
| 11             | 6.92   | 1.85   | 6.49   | 2.16  | 2.72  | 0.67  | 0.08 | 0.06 | 0.04 | 1.63  | 2.08  | 6.30   |                |
| 12             | 4.13   | 1.81   | 2.57   | 6.50  | 3.22  | 3.57  | 0.07 | 1.25 | 0.04 | 3.99  | 3.20  | 6.28   |                |
| 13             | 3.66   | 6.94   | 2.08   | 3.41  | 1.28  | 0.05  | 0.10 | 0.09 | 0.04 | 0.08  | 5.52  | 5.21   |                |
| 14             | 6.52   | 6.96   | 6.93   | 1.56  | 2.08  | 0.63  | 0.97 | 0.07 | 0.06 | 1.63  | 5.96  | 6.90   |                |
| 15             | 2.25   | 6.79   | 6.19   | 2.77  | 0.88  | 0.71  | 0.66 | 0.06 | 0.06 | 1.71  | 3.89  | 6.35   |                |
| 16             | 2.30   | 6.60   | 4.26   | 1.93  | 0.59  | 0.77  | 1.40 | 0.04 | 0.06 | 0.85  | 2.44  | 6.40   |                |
| 17             | 7.29   | 5.79   | 2.02   | 1.28  | 1.01  | 0.49  | 0.47 | 0.02 | 0.05 | 3.55  | 2.78  | 6.45   |                |
| 18             | 4.68   | 1.92   | 6.83   | 1.38  | 1.22  | 0.83  | 0.07 | 0.12 | 0.05 | 4.28  | 3.40  | 6.63   |                |
| 19             | 1.61   | 6.61   | 3.58   | 3.73  | 1.00  | 1.52  | 0.08 | 0.06 | 0.05 | 4.11  | 2.45  | 6.34   |                |
| 20             | 4.36   | 6.75   | 2.30   | 2.58  | 0.92  | 5.89  | 0.07 | 0.06 | 0.06 | 1.59  | 2.48  | 6.38   |                |
| 21             | 3.71   | 7.08   | 6.40   | 2.05  | 1.07  | 1.35  | 0.08 | 0.07 | 0.05 | 2.33  | 3.64  | 2.96   |                |
| 22             | 1.89   | 6.86   | 6.43   | 1.67  | 0.86  | 1.02  | 0.07 | 0.07 | 0.05 | 0.96  | 5.99  | 4.87   |                |
| 23             | 4.69   | 7.09   | 2.78   | 1.41  | 0.83  | 0.36  | 0.05 | 0.08 | 0.05 | 1.16  | 1.92  | 6.57   |                |
| 24             | 5.55   | 7.03   | 5.03   | 1.65  | 0.54  | 0.11  | 0.08 | 2.23 | 1.03 | 1.33  | 2.31  | 6.31   |                |
| 25             | 6.82   | 4.65   | 4.86   | 1.54  | 0.57  | 0.54  | 0.03 | 0.07 | 0.82 | 2.96  | 1.98  | 5.79   |                |
| 26             | 2.85   | 5.28   | 2.75   | 1.58  | 1.07  | 0.26  | 0.10 | 0.10 | 0.04 | 3.99  | 2.48  | 3.44   |                |
| 27             | 3.51   | 7.10   | 3.53   | 3.49  | 0.96  | 0.07  | 0.09 | 1.15 | 0.02 | 1.85  | 0.82  | 6.40   |                |
| 28             | 7.27   | 4.19   | 4.49   | 3.65  | 0.87  | 0.05  | 0.07 | 0.66 | 0.07 | 2.86  | 1.22  | 6.71   |                |
| 29             | 3.45   |        | 2.15   | 2.80  | 0.94  | 0.07  | 0.76 | 0.75 | 0.08 | 1.40  | 6.06  | 5.85   |                |
| 30             | 4.76   |        | 7.02   | 1.91  | 0.62  | 0.08  | 0.08 | 0.05 | 0.04 | 1.46  | 2.05  | 6.30   |                |
| 31             | 2.28   |        | 2.14   |       | 0.39  |       | 0.02 | 1.03 |      | 3.28  |       | 6.27   | Annual Summary |
| <b>Average</b> | 4.91   | 5.37   | 4.45   | 2.97  | 1.32  | 1.07  | 0.25 | 0.31 | 0.16 | 2.09  | 2.94  | 5.79   | 2.62           |
| <b>Minimum</b> | 1.61   | 1.52   | 2.01   | 1.01  | 0.39  | 0.05  | 0.02 | 0.02 | 0.02 | 0.05  | 0.82  | 2.96   | 0.02           |
| <b>Maximum</b> | 7.32   | 7.19   | 7.17   | 6.99  | 3.22  | 5.89  | 1.40 | 2.23 | 1.03 | 6.36  | 6.41  | 6.91   | 7.32           |
| <b>Total</b>   | 152.35 | 150.45 | 138.09 | 88.97 | 41.07 | 32.08 | 7.73 | 9.76 | 4.81 | 64.84 | 88.17 | 179.41 | 958            |

## INFLUENT FLOW (mgd) 2009

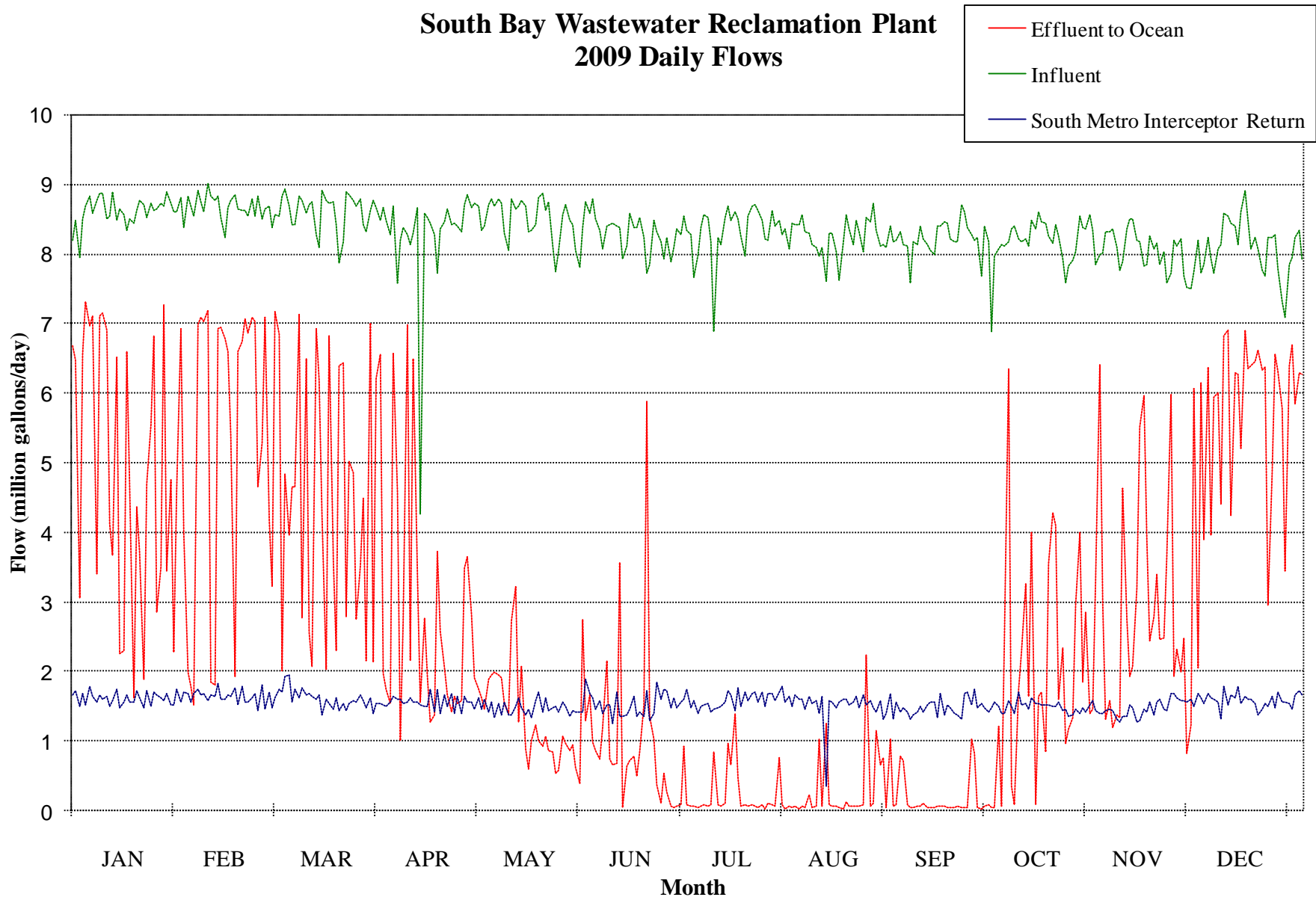
| Day            | Jan    | Feb    | Mar    | Apr    | May    | Jun    | Jul    | Aug    | Sep    | Oct    | Nov    | Dec    |                |
|----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|----------------|
| 1              | 8.20   | 8.60   | 8.38   | 8.67   | 8.69   | 8.38   | 8.55   | 8.07   | 8.17   | 7.97   | 7.98   | 7.73   |                |
| 2              | 8.47   | 8.80   | 8.57   | 8.48   | 8.34   | 8.74   | 8.33   | 8.44   | 8.20   | 8.07   | 8.00   | 7.85   |                |
| 3              | 7.95   | 8.38   | 8.55   | 8.67   | 8.39   | 8.59   | 8.27   | 8.42   | 8.32   | 8.14   | 8.31   | 8.23   |                |
| 4              | 8.50   | 8.83   | 8.83   | 8.47   | 8.71   | 8.79   | 7.67   | 8.41   | 8.14   | 8.12   | 8.31   | 7.92   |                |
| 5              | 8.68   | 8.69   | 8.92   | 8.27   | 8.79   | 8.49   | 7.99   | 8.56   | 8.12   | 8.17   | 8.35   | 7.72   |                |
| 6              | 8.83   | 8.55   | 8.69   | 8.68   | 8.69   | 8.33   | 8.38   | 8.31   | 7.57   | 8.35   | 8.09   | 8.08   |                |
| 7              | 8.58   | 8.91   | 8.42   | 7.59   | 8.78   | 8.07   | 8.56   | 8.29   | 8.18   | 8.39   | 7.76   | 8.13   |                |
| 8              | 8.77   | 8.75   | 8.42   | 8.19   | 8.73   | 8.40   | 8.52   | 8.14   | 8.13   | 8.22   | 7.89   | 8.58   |                |
| 9              | 8.87   | 8.61   | 8.83   | 8.38   | 8.30   | 8.42   | 8.17   | 8.09   | 8.39   | 8.18   | 8.35   | 8.55   |                |
| 10             | 8.86   | 9.01   | 8.77   | 8.28   | 8.04   | 8.43   | 6.89   | 7.97   | 8.22   | 8.22   | 8.50   | 8.44   |                |
| 11             | 8.50   | 8.82   | 8.59   | 8.13   | 8.78   | 8.40   | 8.23   | 8.09   | 8.13   | 8.11   | 8.49   | 8.40   |                |
| 12             | 8.54   | 8.77   | 8.71   | 8.30   | 8.64   | 8.37   | 8.13   | 7.61   | 8.05   | 8.48   | 8.20   | 8.13   |                |
| 13             | 8.88   | 8.83   | 8.74   | 8.67   | 8.69   | 7.92   | 8.51   | 8.30   | 7.99   | 8.35   | 8.17   | 8.60   |                |
| 14             | 8.47   | 8.51   | 8.27   | 4.27   | 8.77   | 8.11   | 8.68   | 8.30   | 8.39   | 8.61   | 7.83   | 8.90   |                |
| 15             | 8.65   | 8.24   | 8.09   | 8.59   | 8.68   | 8.58   | 8.48   | 8.03   | 8.39   | 8.46   | 7.85   | 8.48   |                |
| 16             | 8.57   | 8.66   | 8.90   | 8.51   | 8.31   | 8.37   | 8.61   | 7.63   | 8.45   | 8.43   | 8.26   | 8.08   |                |
| 17             | 8.33   | 8.76   | 8.77   | 8.43   | 8.34   | 8.38   | 8.49   | 8.17   | 8.44   | 8.25   | 8.07   | 8.23   |                |
| 18             | 8.49   | 8.85   | 8.73   | 8.27   | 8.42   | 8.51   | 8.26   | 8.57   | 8.21   | 8.15   | 8.15   | 8.06   |                |
| 19             | 8.43   | 8.64   | 8.75   | 7.72   | 8.80   | 8.23   | 7.96   | 8.36   | 8.17   | 8.41   | 7.85   | 7.77   |                |
| 20             | 8.62   | 8.62   | 8.41   | 8.35   | 8.86   | 7.72   | 8.55   | 8.13   | 8.18   | 8.26   | 8.03   | 7.68   |                |
| 21             | 8.77   | 8.62   | 7.86   | 8.46   | 8.63   | 7.84   | 8.68   | 8.47   | 8.70   | 7.92   | 7.58   | 8.24   |                |
| 22             | 8.71   | 8.54   | 8.18   | 8.65   | 8.74   | 8.47   | 8.70   | 8.31   | 8.61   | 7.59   | 7.73   | 8.23   |                |
| 23             | 8.51   | 8.78   | 8.88   | 8.41   | 8.12   | 8.31   | 8.62   | 8.02   | 8.37   | 7.82   | 8.19   | 8.28   |                |
| 24             | 8.72   | 8.54   | 8.84   | 8.43   | 7.74   | 8.18   | 8.47   | 8.52   | 8.28   | 7.90   | 8.11   | 7.79   |                |
| 25             | 8.62   | 8.82   | 8.76   | 8.39   | 8.02   | 7.92   | 8.22   | 8.46   | 8.20   | 8.03   | 8.22   | 7.31   |                |
| 26             | 8.65   | 8.49   | 8.69   | 8.32   | 8.57   | 8.24   | 8.20   | 8.73   | 8.24   | 8.54   | 7.68   | 7.09   |                |
| 27             | 8.72   | 8.65   | 8.79   | 8.71   | 8.71   | 7.88   | 8.62   | 8.34   | 7.68   | 8.37   | 7.51   | 7.84   |                |
| 28             | 8.68   | 8.68   | 8.41   | 8.85   | 8.47   | 8.09   | 8.39   | 8.12   | 8.40   | 8.35   | 7.50   | 7.95   |                |
| 29             | 8.89   | 8.38   | 8.32   | 8.66   | 8.41   | 8.35   | 8.47   | 8.13   | 8.17   | 8.57   | 7.75   | 8.23   |                |
| 30             | 8.72   |        | 8.63   | 8.72   | 8.05   | 8.28   | 8.28   | 8.09   | 6.88   | 8.33   | 8.19   | 8.33   |                |
| 31             | 8.60   |        | 8.77   |        | 7.80   |        | 8.35   | 8.39   |        | 7.85   |        | 7.91   | Annual Summary |
| <b>Average</b> | 8.61   | 8.68   | 8.60   | 8.28   | 8.48   | 8.29   | 8.33   | 8.24   | 8.18   | 8.21   | 8.03   | 8.09   | 8.33           |
| <b>Minimum</b> | 7.95   | 8.24   | 7.86   | 4.27   | 7.74   | 7.72   | 6.89   | 7.61   | 6.88   | 7.59   | 7.50   | 7.09   | 4.27           |
| <b>Maximum</b> | 8.89   | 9.01   | 8.92   | 8.85   | 8.86   | 8.79   | 8.70   | 8.73   | 8.70   | 8.61   | 8.50   | 8.90   | 9.01           |
| <b>Total</b>   | 266.78 | 251.33 | 266.47 | 248.52 | 263.01 | 248.79 | 258.23 | 255.47 | 245.37 | 254.61 | 240.90 | 250.76 | 3,050          |

## Blended Sludge Discharge to South Metro Interceptor (mgd) 2009

| Day            | Jan   | Feb   | Mar   | Apr   | May   | Jun   | Jul   | Aug   | Sep   | Oct   | Nov   | Dec   |                |
|----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------------|
| 1              | 1.67  | 1.75  | 1.48  | 1.54  | 1.62  | 1.42  | 1.61  | 1.64  | 1.31  | 1.57  | 1.39  | 1.62  |                |
| 2              | 1.72  | 1.57  | 1.62  | 1.54  | 1.46  | 1.88  | 1.74  | 1.49  | 1.56  | 1.49  | 1.40  | 1.53  |                |
| 3              | 1.49  | 1.70  | 1.75  | 1.52  | 1.60  | 1.69  | 1.48  | 1.67  | 1.42  | 1.39  | 1.44  | 1.69  |                |
| 4              | 1.68  | 1.68  | 1.71  | 1.49  | 1.41  | 1.62  | 1.58  | 1.61  | 1.47  | 1.40  | 1.46  | 1.62  |                |
| 5              | 1.51  | 1.56  | 1.92  | 1.57  | 1.57  | 1.45  | 1.40  | 1.60  | 1.42  | 1.58  | 1.44  | 1.61  |                |
| 6              | 1.79  | 1.69  | 1.95  | 1.65  | 1.33  | 1.58  | 1.49  | 1.46  | 1.32  | 1.50  | 1.31  | 1.57  |                |
| 7              | 1.65  | 1.75  | 1.55  | 1.61  | 1.53  | 1.40  | 1.52  | 1.65  | 1.38  | 1.39  | 1.28  | 1.32  |                |
| 8              | 1.57  | 1.66  | 1.74  | 1.60  | 1.37  | 1.52  | 1.54  | 1.53  | 1.42  | 1.70  | 1.36  | 1.79  |                |
| 9              | 1.67  | 1.69  | 1.62  | 1.53  | 1.55  | 1.51  | 1.42  | 1.58  | 1.50  | 1.51  | 1.35  | 1.52  |                |
| 10             | 1.60  | 1.59  | 1.77  | 1.57  | 1.38  | 1.25  | 1.45  | 1.39  | 1.41  | 1.53  | 1.52  | 1.67  |                |
| 11             | 1.64  | 1.66  | 1.66  | 1.62  | 1.38  | 1.71  | 1.48  | 1.64  | 1.52  | 1.45  | 1.47  | 1.63  |                |
| 12             | 1.49  | 1.64  | 1.69  | 1.56  | 1.49  | 1.36  | 1.50  | 0.35  | 1.55  | 1.63  | 1.28  | 1.78  |                |
| 13             | 1.59  | 1.83  | 1.65  | 1.55  | 1.62  | 1.36  | 1.56  | 1.58  | 1.56  | 1.54  | 1.30  | 1.54  |                |
| 14             | 1.74  | 1.61  | 1.61  | 1.51  | 1.48  | 1.37  | 1.72  | 1.56  | 1.33  | 1.54  | 1.46  | 1.65  |                |
| 15             | 1.48  | 1.60  | 1.66  | 1.49  | 1.38  | 1.46  | 1.66  | 1.48  | 1.69  | 1.52  | 1.41  | 1.61  |                |
| 16             | 1.57  | 1.66  | 1.38  | 1.50  | 1.46  | 1.64  | 1.43  | 1.55  | 1.38  | 1.52  | 1.56  | 1.61  |                |
| 17             | 1.66  | 1.65  | 1.61  | 1.75  | 1.34  | 1.35  | 1.76  | 1.60  | 1.51  | 1.51  | 1.37  | 1.53  |                |
| 18             | 1.57  | 1.76  | 1.53  | 1.41  | 1.59  | 1.41  | 1.50  | 1.60  | 1.47  | 1.49  | 1.57  | 1.37  |                |
| 19             | 1.55  | 1.52  | 1.45  | 1.74  | 1.71  | 1.35  | 1.71  | 1.51  | 1.40  | 1.50  | 1.61  | 1.46  |                |
| 20             | 1.72  | 1.78  | 1.63  | 1.40  | 1.41  | 1.72  | 1.58  | 1.55  | 1.38  | 1.57  | 1.46  | 1.53  |                |
| 21             | 1.63  | 1.57  | 1.43  | 1.66  | 1.62  | 1.29  | 1.69  | 1.65  | 1.31  | 1.43  | 1.43  | 1.49  |                |
| 22             | 1.47  | 1.55  | 1.53  | 1.50  | 1.44  | 1.39  | 1.71  | 1.47  | 1.68  | 1.45  | 1.69  | 1.64  |                |
| 23             | 1.73  | 1.62  | 1.44  | 1.68  | 1.48  | 1.85  | 1.56  | 1.66  | 1.71  | 1.36  | 1.69  | 1.48  |                |
| 24             | 1.50  | 1.68  | 1.53  | 1.40  | 1.50  | 1.61  | 1.70  | 1.52  | 1.51  | 1.38  | 1.62  | 1.70  |                |
| 25             | 1.70  | 1.44  | 1.58  | 1.64  | 1.41  | 1.74  | 1.50  | 1.58  | 1.75  | 1.46  | 1.58  | 1.55  |                |
| 26             | 1.67  | 1.81  | 1.56  | 1.40  | 1.57  | 1.73  | 1.68  | 1.48  | 1.48  | 1.39  | 1.59  | 1.55  |                |
| 27             | 1.62  | 1.46  | 1.66  | 1.64  | 1.49  | 1.47  | 1.68  | 1.42  | 1.54  | 1.47  | 1.57  | 1.54  |                |
| 28             | 1.58  | 1.71  | 1.58  | 1.57  | 1.36  | 1.62  | 1.59  | 1.59  | 1.47  | 1.41  | 1.60  | 1.46  |                |
| 29             | 1.69  |       | 1.48  | 1.55  | 1.43  | 1.47  | 1.70  | 1.31  | 1.41  | 1.51  | 1.49  | 1.67  |                |
| 30             | 1.52  |       | 1.62  | 1.45  | 1.42  | 1.57  | 1.78  | 1.39  | 1.47  | 1.58  | 1.68  | 1.72  |                |
| 31             | 1.51  |       | 1.40  |       | 1.41  |       | 1.57  | 1.68  |       | 1.43  |       | 1.66  | Annual Summary |
| <b>Average</b> | 1.62  | 1.65  | 1.61  | 1.55  | 1.48  | 1.53  | 1.59  | 1.51  | 1.48  | 1.49  | 1.48  | 1.58  | 1.55           |
| <b>Minimum</b> | 1.47  | 1.44  | 1.38  | 1.40  | 1.33  | 1.25  | 1.40  | 0.35  | 1.31  | 1.36  | 1.28  | 1.32  | 0.35           |
| <b>Maximum</b> | 1.79  | 1.83  | 1.95  | 1.75  | 1.71  | 1.88  | 1.78  | 1.68  | 1.75  | 1.70  | 1.69  | 1.79  | 1.95           |
| <b>Total</b>   | 49.98 | 46.19 | 49.79 | 46.64 | 45.81 | 45.79 | 49.29 | 46.79 | 44.33 | 46.20 | 44.38 | 49.11 | 564            |



## South Bay Wastewater Reclamation Plant 2009 Daily Flows

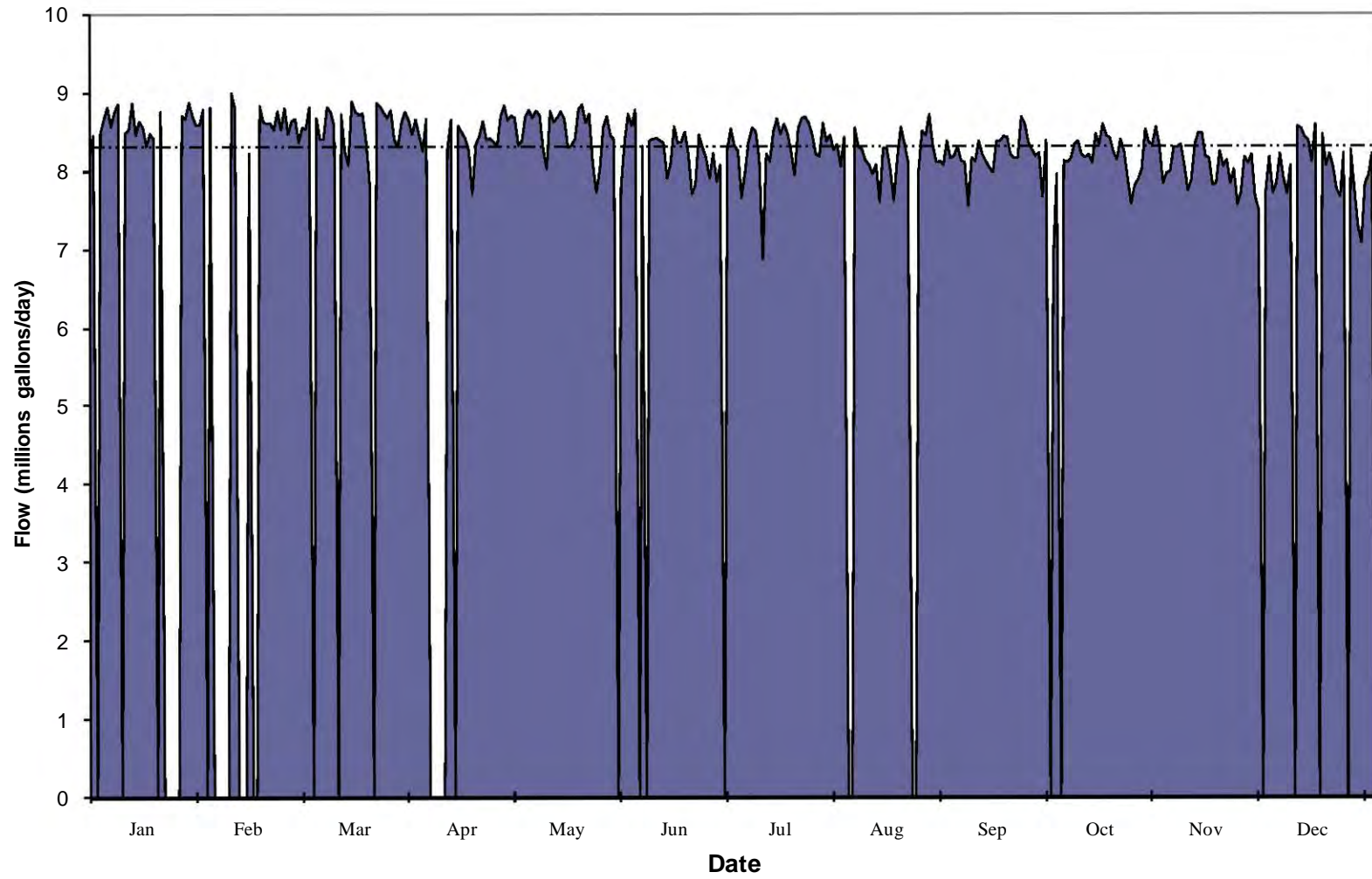


## Dry Weather Flows 2009

### Influent

| Day            | Jan   | Feb   | Mar   | Apr   | May   | Jun   | Jul   | Aug   | Sep   | Oct   | Nov   | Dec   |      |
|----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| 1              | 8.20  | 8.60  | 8.38  | 8.67  | 8.69  | 8.38  | 8.55  | 8.07  | 8.17  | 7.97  | 7.98  | 7.73  |      |
| 2              | 8.47  | 8.80  | 8.57  | 8.48  | 8.34  | 8.74  | 8.33  | 8.44  | 8.20  |       | 8.00  | 7.85  |      |
| 3              |       | 8.38  | 8.55  | 8.67  | 8.39  |       | 8.27  |       | 8.32  | 8.14  | 8.31  | 8.23  |      |
| 4              | 8.50  | 8.83  | 8.83  | 8.47  | 8.71  | 8.79  | 7.67  |       | 8.14  | 8.12  | 8.31  | 7.92  |      |
| 5              | 8.68  |       |       | 8.27  | 8.79  |       | 7.99  | 8.56  | 8.12  | 8.17  | 8.35  | 7.72  |      |
| 6              | 8.83  |       | 8.69  | 8.68  | 8.69  | 8.33  | 8.38  | 8.31  | 7.57  | 8.35  | 8.09  |       |      |
| 7              | 8.58  |       | 8.42  |       | 8.78  |       | 8.56  | 8.29  | 8.18  | 8.39  | 7.76  |       |      |
| 8              | 8.77  |       | 8.42  |       | 8.73  | 8.40  | 8.52  | 8.14  | 8.13  | 8.22  | 7.89  | 8.58  |      |
| 9              | 8.87  |       |       |       | 8.30  | 8.42  | 8.17  | 8.09  | 8.39  | 8.18  | 8.35  | 8.55  |      |
| 10             |       | 9.01  | 8.77  |       | 8.04  | 8.43  | 6.89  | 7.97  | 8.22  | 8.22  | 8.50  | 8.44  |      |
| 11             | 8.50  | 8.82  | 8.59  |       | 8.78  | 8.40  | 8.23  | 8.09  | 8.13  | 8.11  | 8.49  | 8.40  |      |
| 12             | 8.54  |       |       | 8.30  | 8.64  | 8.37  | 8.13  | 7.61  | 8.05  | 8.48  | 8.20  | 8.13  |      |
| 13             | 8.88  |       | 8.74  | 8.67  | 8.69  | 7.92  | 8.51  | 8.30  | 7.99  |       | 8.17  | 8.60  |      |
| 14             | 8.47  |       | 8.27  |       | 8.77  | 8.11  | 8.68  | 8.30  | 8.39  | 8.61  | 7.83  |       |      |
| 15             | 8.65  | 8.24  | 8.09  | 8.59  | 8.68  |       | 8.48  | 8.03  | 8.39  | 8.46  | 7.85  | 8.48  |      |
| 16             | 8.57  |       | 8.90  | 8.51  | 8.31  |       | 8.61  | 7.63  | 8.45  | 8.43  | 8.26  | 8.08  |      |
| 17             | 8.33  |       | 8.77  | 8.43  | 8.34  | 8.38  | 8.49  | 8.17  | 8.44  | 8.25  | 8.07  | 8.23  |      |
| 18             | 8.49  | 8.85  | 8.73  | 8.27  | 8.42  | 8.51  | 8.26  | 8.57  | 8.21  | 8.15  | 8.15  | 8.06  |      |
| 19             | 8.43  | 8.64  | 8.75  | 7.72  | 8.80  | 8.23  | 7.96  | 8.36  | 8.17  | 8.41  | 7.85  | 7.77  |      |
| 20             |       | 8.62  | 8.41  | 8.35  | 8.86  | 7.72  | 8.55  | 8.13  | 8.18  | 8.26  | 8.03  | 7.68  |      |
| 21             | 8.77  | 8.62  | 7.86  | 8.46  | 8.63  | 7.84  | 8.68  |       | 8.70  | 7.92  | 7.58  | 8.24  |      |
| 22             |       | 8.54  |       | 8.65  | 8.74  | 8.47  | 8.70  |       | 8.61  | 7.59  | 7.73  |       |      |
| 23             |       | 8.78  | 8.88  | 8.41  | 8.12  | 8.31  | 8.62  | 8.02  | 8.37  | 7.82  | 8.19  | 8.28  |      |
| 24             |       | 8.54  | 8.84  | 8.43  | 7.74  | 8.18  | 8.47  | 8.52  | 8.28  | 7.90  | 8.11  | 7.79  |      |
| 25             |       | 8.82  | 8.76  | 8.39  | 8.02  | 7.92  | 8.22  | 8.46  | 8.20  | 8.03  | 8.22  | 7.31  |      |
| 26             |       | 8.49  | 8.69  | 8.32  | 8.57  | 8.24  | 8.20  | 8.73  | 8.24  | 8.54  | 7.68  | 7.09  |      |
| 27             | 8.72  | 8.65  | 8.79  | 8.71  | 8.71  | 7.88  | 8.62  | 8.34  | 7.68  | 8.37  | 7.51  | 7.84  |      |
| 28             | 8.68  | 8.68  | 8.41  | 8.85  | 8.47  | 8.09  | 8.39  | 8.12  | 8.40  | 8.35  |       | 7.95  |      |
| 29             | 8.89  |       | 8.32  | 8.66  | 8.41  |       | 8.47  | 8.13  |       | 8.57  | 7.75  | 8.23  |      |
| 30             | 8.72  |       | 8.63  | 8.72  |       | 8.28  | 8.28  | 8.09  | 6.88  | 8.33  | 8.19  |       |      |
| 31             | 8.60  |       | 8.77  |       | 7.80  |       | 8.35  | 8.39  |       | 7.85  |       | 7.91  |      |
| <b>Average</b> | 8.61  | 8.66  | 8.59  | 8.49  | 8.50  | 8.26  | 8.33  | 8.22  | 8.18  | 8.21  | 8.05  | 8.04  | 8.33 |
| <b>Minimum</b> | 8.20  | 8.24  | 7.86  | 7.72  | 7.74  | 7.72  | 6.89  | 7.61  | 6.88  | 7.59  | 7.51  | 7.09  | 6.88 |
| <b>Maximum</b> | 8.89  | 9.01  | 8.90  | 8.85  | 8.86  | 8.79  | 8.70  | 8.73  | 8.70  | 8.61  | 8.50  | 8.60  | 9.01 |
| <b>Total</b>   | 198.1 | 155.9 | 231.8 | 203.7 | 255.0 | 198.3 | 258.2 | 221.9 | 237.2 | 238.2 | 233.4 | 209.1 | 2641 |

## South Bay Wastewater Reclamation Plant 2009 Daily Influent Dry Flows

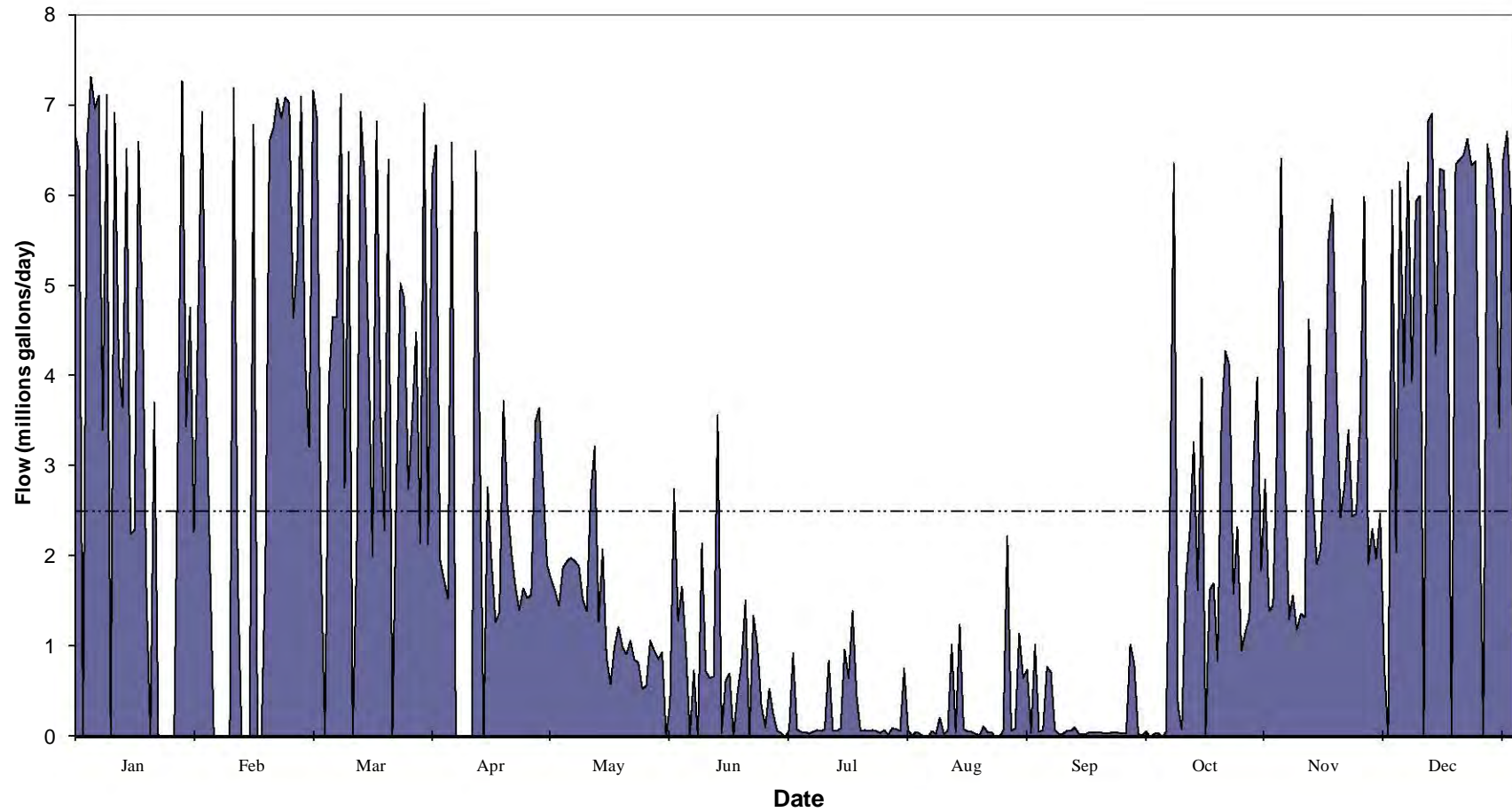


## Dry Weather Flows 2009

### Effluent to Ocean

| Day            | Jan   | Feb  | Mar   | Apr  | May  | Jun  | Jul  | Aug  | Sep  | Oct  | Nov  | Dec   |      |
|----------------|-------|------|-------|------|------|------|------|------|------|------|------|-------|------|
| 1              | 6.68  | 4.60 | 3.22  | 6.21 | 1.75 | 2.75 | 0.93 | 0.06 | 0.06 | 0.05 | 6.41 | 6.16  |      |
| 2              | 6.47  | 6.93 | 7.17  | 6.56 | 1.62 | 1.29 | 0.09 | 0.04 | 0.08 |      | 3.02 | 3.90  |      |
| 3              |       | 4.00 | 6.85  | 1.97 | 1.46 |      | 0.06 |      | 0.78 | 0.06 | 1.31 | 6.37  |      |
| 4              | 6.57  | 1.99 | 2.01  | 1.75 | 1.88 | 0.99 | 0.06 |      | 0.72 | 2.43 | 1.57 | 3.95  |      |
| 5              | 7.32  |      |       | 1.54 | 1.95 |      | 0.04 | 0.07 | 0.08 | 6.36 | 1.19 | 5.94  |      |
| 6              | 6.97  |      | 3.95  | 6.59 | 1.99 | 0.74 | 0.06 | 0.04 | 0.04 | 0.35 | 1.37 |       |      |
| 7              | 7.11  |      | 4.66  |      | 1.95 |      | 0.08 | 0.22 | 0.04 | 0.09 | 1.33 |       |      |
| 8              | 3.41  |      | 4.66  |      | 1.90 | 2.15 | 0.07 | 0.04 | 0.07 | 1.75 | 4.63 | 6.82  |      |
| 9              | 7.12  |      |       |      | 1.53 | 0.73 | 0.09 | 0.07 | 0.07 | 2.28 | 2.75 | 6.91  |      |
| 10             |       | 7.19 | 2.77  |      | 1.40 | 0.66 | 0.85 | 1.03 | 0.11 | 3.27 | 1.92 | 4.25  |      |
| 11             | 6.92  | 1.85 | 6.49  |      | 2.72 | 0.67 | 0.08 | 0.06 | 0.04 | 1.63 | 2.08 | 6.30  |      |
| 12             | 4.13  |      |       | 6.50 | 3.22 | 3.57 | 0.07 | 1.25 | 0.04 | 3.99 | 3.20 | 6.28  |      |
| 13             | 3.66  |      | 2.08  | 3.41 | 1.28 | 0.05 | 0.10 | 0.09 | 0.04 |      | 5.52 | 5.21  |      |
| 14             | 6.52  |      | 6.93  |      | 2.08 | 0.63 | 0.97 | 0.07 | 0.06 | 1.63 | 5.96 |       |      |
| 15             | 2.25  | 6.79 | 6.19  | 2.77 | 0.88 |      | 0.66 | 0.06 | 0.06 | 1.71 | 3.89 | 6.35  |      |
| 16             | 2.30  |      | 4.26  | 1.93 | 0.59 |      | 1.40 | 0.04 | 0.06 | 0.85 | 2.44 | 6.40  |      |
| 17             | 6.60  |      | 2.02  | 1.28 | 1.01 | 0.49 | 0.47 | 0.02 | 0.05 | 3.55 | 2.78 | 6.45  |      |
| 18             | 4.68  | 1.92 | 6.83  | 1.38 | 1.22 | 0.83 | 0.07 | 0.12 | 0.05 | 4.28 | 3.40 | 6.63  |      |
| 19             | 1.61  | 6.61 | 3.58  | 3.73 | 1.00 | 1.52 | 0.08 | 0.06 | 0.05 | 4.11 | 2.45 | 6.34  |      |
| 20             |       | 6.75 | 2.30  | 2.58 | 0.92 |      | 0.07 | 0.06 | 0.06 | 1.59 | 2.48 | 6.38  |      |
| 21             | 3.71  | 7.08 | 6.40  | 2.05 | 1.07 | 1.35 | 0.08 |      | 0.05 | 2.33 | 3.64 | 2.96  |      |
| 22             |       | 6.86 |       | 1.67 | 0.86 | 1.02 | 0.07 |      | 0.05 | 0.96 | 5.99 |       |      |
| 23             |       | 7.09 | 2.78  | 1.41 | 0.83 | 0.36 | 0.05 | 0.08 | 0.05 | 1.16 | 1.92 | 6.57  |      |
| 24             |       | 7.03 | 5.03  | 1.65 | 0.54 | 0.11 | 0.08 | 2.23 | 1.03 | 1.33 | 2.31 | 6.31  |      |
| 25             |       | 4.65 | 4.86  | 1.54 | 0.57 | 0.54 | 0.03 | 0.07 | 0.82 | 2.96 | 1.98 | 5.79  |      |
| 26             |       | 5.28 | 2.75  | 1.58 | 1.07 | 0.26 | 0.10 | 0.10 | 0.04 | 3.99 | 2.48 | 3.44  |      |
| 27             | 3.51  | 7.10 | 3.53  | 3.49 | 0.96 | 0.07 | 0.09 | 1.15 | 0.02 | 1.85 | 0.82 | 6.40  |      |
| 28             | 7.27  | 4.19 | 4.49  | 3.65 | 0.87 | 0.05 | 0.07 | 0.66 | 0.07 | 2.86 |      | 6.71  |      |
| 29             | 3.45  |      | 2.15  | 2.80 | 0.94 |      | 0.76 | 0.75 |      | 1.40 | 6.06 | 5.85  |      |
| 30             | 4.76  |      | 7.02  | 1.91 |      | 0.08 | 0.08 | 0.05 | 0.04 | 1.46 | 2.05 |       |      |
| 31             | 2.28  |      | 2.14  |      | 0.39 |      | 0.02 | 1.03 |      | 3.28 |      | 6.27  |      |
| <b>Average</b> | 5.01  | 5.44 | 4.34  | 2.91 | 1.35 | 0.91 | 0.25 | 0.35 | 0.16 | 2.19 | 3.00 | 5.81  | 2.48 |
| <b>Minimum</b> | 1.61  | 1.85 | 2.01  | 1.28 | 0.39 | 0.05 | 0.02 | 0.02 | 0.02 | 0.05 | 0.82 | 2.96  | 0.02 |
| <b>Maximum</b> | 7.32  | 7.19 | 7.17  | 6.59 | 3.22 | 3.57 | 1.40 | 2.23 | 1.03 | 6.36 | 6.41 | 6.91  | 7.32 |
| <b>Total</b>   | 115.3 | 97.9 | 117.1 | 70.0 | 40.5 | 20.9 | 7.7  | 9.5  | 4.7  | 63.6 | 87.0 | 150.9 | 785  |

### South Bay Wastewater Reclamation Plant 2009 Daily Effluent to Ocean Dry Flows





Annual Precipitation  
2009 Rainfall

| First Quarter |      | Second Quarter |      | Third Quarter |      | Fourth Quarter |                     |
|---------------|------|----------------|------|---------------|------|----------------|---------------------|
| Date          | Rain | Date           | Rain | Date          | Rain | Date           | Rain                |
| 3-Jan-09      | 0.03 | 7-Apr-09       | 0.05 | 3-Aug-09      | T    | 2-Oct-09       | T                   |
| 10-Jan-09     | T    | 8-Apr-09       | T    | 4-Aug-09      | T    | 13-Oct-09      | T                   |
| 20-Jan-09     | T    | 9-Apr-09       | T    | 21-Aug-09     | T    | 28-Nov-09      | 0.12                |
| 22-Jan-09     | T    | 10-Apr-09      | 0.09 | 22-Aug-09     | T    | 6-Dec-09       | T                   |
| 23-Jan-09     | 0.04 | 11-Apr-09      | T    | 29-Sep-09     | T    | 7-Dec-09       | 1.56                |
| 24-Jan-09     | T    | 14-Apr-09      | T    |               |      | 14-Dec-09      | T                   |
| 25-Jan-09     | 0.01 | 30-May-09      | 0.04 |               |      | 22-Dec-09      | 0.02                |
| 26-Jan-09     | T    | 3-Jun-09       | T    |               |      | 30-Dec-09      | 0.03                |
| 5-Feb-09      | 0.17 | 5-Jun-09       | T    |               |      |                |                     |
| 6-Feb-09      | 0.23 | 7-Jun-09       | T    |               |      |                |                     |
| 7-Feb-09      | 1.41 | 15-Jun-09      | T    |               |      |                |                     |
| 8-Feb-09      | 0.03 | 16-Jun-09      | 0.03 |               |      |                |                     |
| 9-Feb-09      | 0.37 | 20-Jun-09      | T    |               |      |                |                     |
| 12-Feb-09     | T    | 29-Jun-09      | T    |               |      |                |                     |
| 13-Feb-09     | 0.05 |                |      |               |      |                |                     |
| 14-Feb-09     | T    |                |      |               |      |                |                     |
| 16-Feb-09     | 0.36 |                |      |               |      |                |                     |
| 17-Feb-09     | 0.01 |                |      |               |      |                |                     |
| 5-Mar-09      | 0.04 |                |      |               |      |                |                     |
| 9-Mar-09      | T    |                |      |               |      |                |                     |
| 12-Mar-09     | T    |                |      |               |      |                |                     |
| 22-Mar-09     | 0.14 |                |      |               |      |                |                     |
| <b>TOTALS</b> |      |                |      |               |      |                | <b>ANNUAL TOTAL</b> |
|               | 2.89 |                | 0.21 |               | 0    |                | 1.73                |
|               |      |                |      |               |      | Maximum        | 1.56                |

### C. Chemical Report

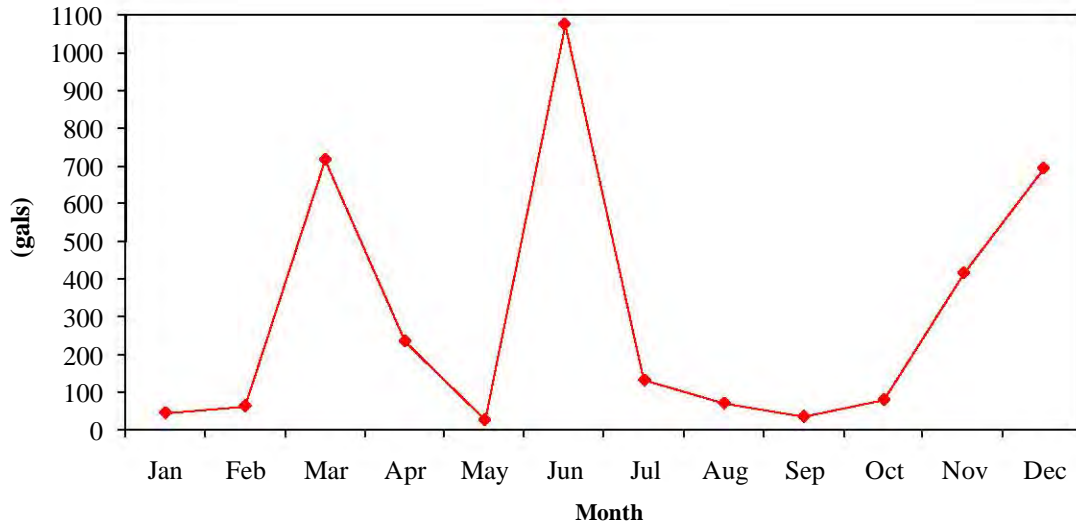
#### South Bay Water Reclamation Plant - Annual Chemical Usage Report

2009

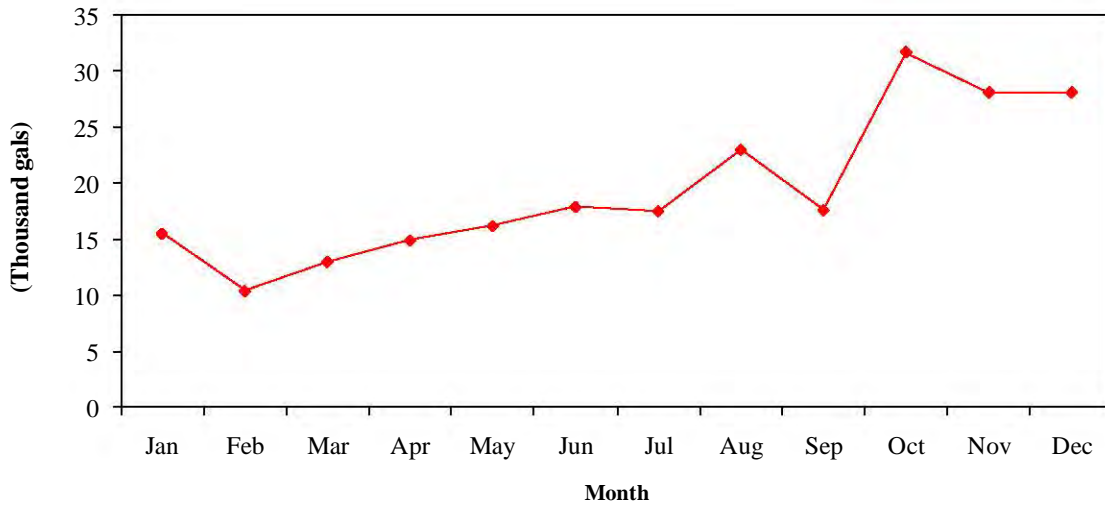
| DATE   | Polymer<br>Catalytic<br>Gallons | Hypochlorite<br>Gallons | Alum<br>Chloride<br>Gallons | Sodium<br>Hydroxide<br>Gallons | Ferric<br>Chloride<br>Gallons |
|--------|---------------------------------|-------------------------|-----------------------------|--------------------------------|-------------------------------|
| Jan-09 | 7                               | 15,528                  | 42                          | 1,710                          | 4                             |
| Feb-09 | 5                               | 10,423                  | 61                          | 958                            | 3                             |
| Mar-09 | 23                              | 13,027                  | 714                         | 989                            | 3                             |
| Apr-09 | 9                               | 14,948                  | 232                         | 1,345                          | 3                             |
| May-09 | 0                               | 16,230                  | 24                          | 1,657                          | 5                             |
| Jun-09 | 22                              | 17,941                  | 1,073                       | 1,242                          | 6                             |
| Jul-09 | 4                               | 17,485                  | 129                         | 1,450                          | 0                             |
| Aug-09 | 5                               | 22,980                  | 68                          | 2,124                          | 0                             |
| Sep-09 | 2                               | 17,638                  | 33                          | 4,751                          | 0                             |
| Oct-09 | 0                               | 31,740                  | 77                          | 2,794                          | 0                             |
| Nov-09 | 0                               | 28,050                  | 413                         | 2,644                          | 0                             |
| Dec-09 | 0                               | 28,143                  | 691                         | 2,593                          | 0                             |
| AVG    | 10                              | 19,511                  | 296                         | 2,021                          | 0                             |
| SUM    | 77                              | 234,132                 | 3557                        | 24,257                         | 0                             |



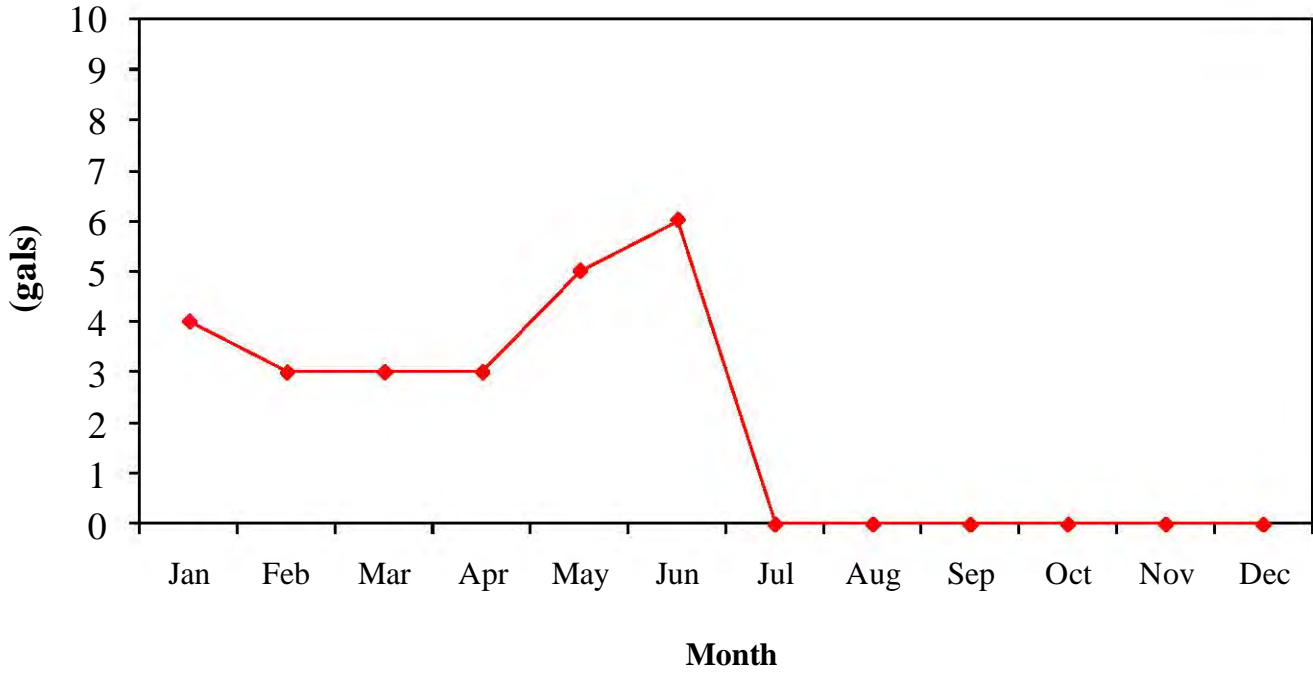
**South Bay Water Reclamation Plant  
Alum  
2009 Monthly Chemical Usage**



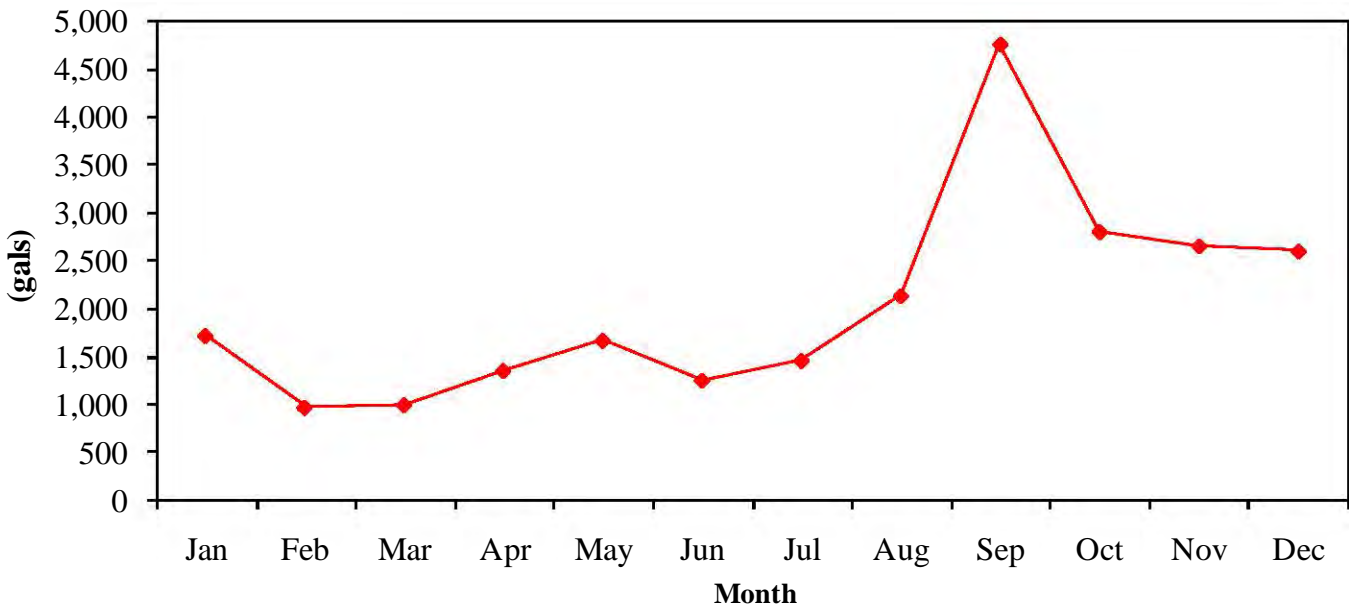
**South Bay Water Reclamation Plant  
Sodium Hypochlorite  
2009 Monthly Chemical Usage**



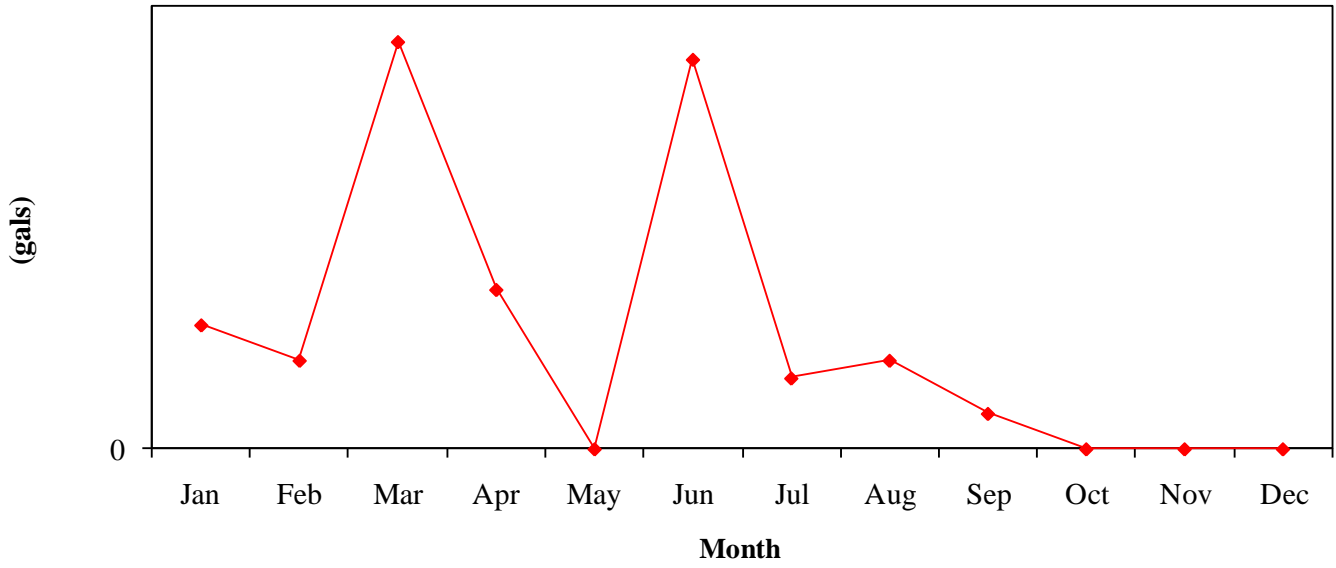
South Bay Water Reclamation Plant  
Ferric Chloride  
2009 Monthly Chemical Usage



South Bay Water Reclamation Plant  
Caustic  
2009 Monthly Chemical Usage



South Bay Water Reclamation Plant  
Polymer Catalytic  
2009 Monthly Chemical Usage



D. Facilities Out of Service Report

**2009 SBWRP FACILITIES OUT OF SERVICE REPORT**

FACILITIES OOS BY DATE

Bar Screens

|              | FROM    | TO      | REASON  |
|--------------|---------|---------|---|
| Bar Screen 1 | 2/25/09 | 3/3/09  | Bar screen channel drain gate inoperable due to rags wrap around valve stem. Drain channel, conduct CSE clean and removed rags and debris off the valve stem.           |
| Bar Screen 1 | 3/10/09 | 3/19/09 | Repair bent drain gate valve  |
| Bar Screen 1 | 4/7/09  | 4/7/09  | Barscreen not raking in Auto or manual. Barscreen faulting on "Not raking", "Not parked", Timer not counting down for rake time. Barscreen rakes only in local.         |
| Bar Screen 1 | 4/7/09  | 4/8/09  | Re-bore sprocket wheel to Bar screen #1   |
| Bar Screen 1 | 5/21/09 | 6/16/09 | Bar screen out of alignment and would not engage to rake. Conduct CSE remove and cleanout rags and debris that are wedge between bars. Align and straighten bar screen. |
| Bar Screen 2 | 2/23/09 | 2/23/09 | Bar Screen #2 (05-ME-120) fails to park, running continuously stops grit strategy from running.   |
| Bar Screen 2 | 5/5/09  | 5/5/09  | No. 2 Influent channel needs cleaning, rags wrap around drain valve, blocking sluice gate and enabling channel to drain. Clean channel and free of rags and debris.     |
| Bar Screen 2 | 8/17/09 | 8/17/09 | Please inspect and repair. Bar Screen #2 rack jammed from excessive rags  |
| Bar Screen 2 | 8/17/09 | 8/18/09 | Troubleshoot screen #2 power loss and repair as necessary   |

Primary Sedimentation

|                | FROM    | TO       | REASON  |
|----------------|---------|----------|---|
| Pri Sed Tank 1 | 6/3/09  | 6/3/09   | Please inspect and repair. Primary Sed tank #1 inlet valve clogged.                                     |
| Pri Sed Tank 1 | 7/16/09 | 11/20/09 | Please inspect and repair/replace hose bib on inlet to Secondary Sed Tank # 1                           |
| Pri Sed Tank 2 | 1/8/09  | 1/9/09   | Enter sed tank #2 and remove the diffusers  |
| Pri Sed Tank 2 | 8/27/09 | 8/27/09  | Troubleshoot and repair Gen fail alarm on SB10MOV7042   |
| Pri Sed Tank 2 | 2/8/10  | 3/16/10  | Repair drive gear foundation in preparation of installing rebuilt gearbox.                              |
| Pri Sed Tank 3 | 5/28/09 | 9/2/09   | Pls order 4-limit switches for the primary clarifiers flight & chain drive. These need to be in hand in |

|                |          |          |  |
|----------------|----------|----------|--|
|                |          |          | case the contractor need to replace one during the upgrading of the corrosive material on the top of the primary area.<br><br>Thanks |
| Pri Sed Tank 3 | 11/9/09  | 11/10/09 | INSPECT & FREE-UP SCUM TROUGH, REPAIR AS NECESSARY.  |
| Pri Sed Tank 3 | 11/10/09 | 1/12/10  | Install cover plates for access holes cored in Sed Tank to R/R Head Shaft. Contact person is Anthony Wujick @(858) 614-4517.         |
| Pri Sed Tank 3 | 12/8/09  | 1/8/10   | Fabricate cover plates for access holes cored in Sed Tank to R/R Head Shaft. Contact person is Anthony Wujick @(858) 614-4517.       |
| Pri Sed Tank 3 | 12/11/09 | 2/4/10   | Prim-sed-tank #3, Scum sprayer valve(10-sv-530) is not operating.<br><br>Please replace this solenoid valve                          |
| Pri Sed Tank 4 | 1/27/09  | 1/28/09  | Remove tank covers remove diffusers and reinstall the covers   |
| Pri Sed Tank 4 | 12/9/09  | 12/9/09  | Please troubleshoot and repair PSL DRAWOFF VALVE TANK 4 that continues to fail on GEN FAIL.  |
| Pri Sed Tank 4 | 12/11/09 | 12/24/09 | #4 Prim-Sed-Tank Scum sprayer valve (10-sv-540) is not operating.<br><br>Please overhaul or replace this solenoid valve.             |
| Pri Sed Tank 4 | 2/17/10  | 4/5/10   | R/R Sed Tank Flight Chain.   |
| Pri Sed Tank 5 | 12/11/09 | 12/23/09 | #5 Prim-Sed-Tank Scum sprayer valves (10-sv-550) is not operating.<br><br>Please replace this solenoid valve                         |

#### Aeration Basins

|             | FROM    | TO       | REASON   |
|-------------|---------|----------|--|
| Aer Basin 2 | 7/6/09  | 7/6/09   | Please inspect and repair Basin 2 (15-FCV-320) in Gen Fail, unable to reset.   |
| Aer Basin 2 | 7/8/09  | 8/11/09  | Continue with troubleshooting and clear Gen Fail Alarm *****15-FCV320*****   |
| Aer Basin 2 | 7/9/09  | 7/10/09  | ZONE 4 and 2 dissolved oxygen has a significant disparity between FIELD and DCS reading causing increase in aeration blower demand. Need I&C technician to clean, troubleshoot and calibrate D.O. probe. |
| Aer Basin 3 | 12/3/09 | 12/11/09 | Air line from aeration blowers leaking at flange over channel to A Basin 3.  |
| Aer Basin 5 | 5/21/09 | 8/3/09   | Air header drain leaking in trench by zone 2 DO meter, please repair.  |

|             |        |         |   |
|-------------|--------|---------|---|
| Aer Basin 5 | 7/9/09 | 7/10/09 | ZONE 2 dissolved oxygen has a significant disparity between FIELD and DCS reading. Request I&C technician to clean, troubleshoot, and calibrate D.O. probe. |
|-------------|--------|---------|---|

### Secondary Clarifiers

|              | FROM    | TO      | REASON   |
|--------------|---------|---------|--|
| Sec. Clar. 5 | 6/30/09 | 6/30/09 | Sludge collector 5 has a sheer pin failure. attempted to reset collector and failed. Repair as necessary |

### Tertiary Filters

|               | FROM     | TO      | REASON  |
|---------------|----------|---------|---|
| Ter. Filter 2 | 5/14/09  | 5/13/09 | *****FLE Valve 25FCV223*****Assist V.A.C. with retrofitting of Filter Effluent Valve Actuator with VFD control actuator for more precise control. |
| Ter. Filter 2 | 5/14/09  | 5/14/09 | duplicate   |
| Ter. Filter 2 | 12/11/09 | 1/8/10  | Please inspect and repair. Filter #2 FLE Valve continually failing in Gen Fail.   |
| Ter. Filter 3 | 4/14/09  | 5/6/09  | FLE valve not controlling, see Doyle or Rich for specifics.   |
| Ter. Filter 3 | 5/14/09  | 5/14/09 | *****FLE Valve 25FCV233*****Assist V.A.C. with retrofitting of Filter Effluent Valve Actuator with VFD control actuator for more precise control. |
| Ter. Filter 4 | 5/14/09  | 5/18/09 | *****FLE Valve 25FCV243*****Assist V.A.C. with retrofitting of Filter Effluent Valve Actuator with VFD control actuator for more precise control. |
| Ter. Filter 5 | 5/14/09  | 5/26/09 | *****FLE Valve 25FCV253*****Assist V.A.C. with retrofitting of Filter Effluent Valve Actuator with VFD control actuator for more precise control. |
| Ter. Filter 5 | 7/9/09   | 8/4/09  | Please inspect and repair, Flow Control valve keeps going into Gen Fail (25-FCV-253)  |
| Ter. Filter 6 | 2/3/09   | 2/3/09  | Calibration failure, repair as necessary.   |
| Ter. Filter 6 | 4/16/09  | 4/16/09 | No power to FLE valve at filter 6.  |
| Ter. Filter 6 | 5/14/09  | 5/27/09 | *****FLE Valve 25FCV263*****Assist V.A.C. with retrofitting of Filter Effluent Valve Actuator with VFD control actuator for more precise control. |
| Ter. Filter 6 | 9/1/09   | 9/2/09  | Waste valve 25 MOV265 going in Gen Fail.  |
| Ter. Filter 7 | 5/14/09  | 5/20/09 | *****FLE Valve 25FCV273*****Assist V.A.C. with retrofitting of Filter Effluent Valve Actuator with VFD control actuator for more precise control. |
| Ter. Filter 7 | 6/23/09  | 6/30/09 | Filter backwash valve MOV275 gen fail alarm, please repair.   |

## FACILITIES OOS BY PROCESS

### Bar Screens

|              | DATES OOS  |
|--------------|--|
| Bar Screen 1 | 2/25/09 - 3/3/09; 3/10/09 - 3/19/09; 4/7/09 - 4/7/09; 4/7/09 - 4/8/09; 5/21/09 - 6/16/09 |
| Bar Screen 2 | 2/23/09 - 2/23/09; 5/5/09 - 5/5/09; 8/17/09 - 8/17/09; 8/17/09 - 8/18/09                 |

### Primary Sedimentation

|                | DATES OOS   |
|----------------|---|
| Pri Sed Tank 1 | 6/3/09 - 6/3/09; 7/16/09 - 11/20/09   |
| Pri Sed Tank 2 | 1/8/09 - 1/9/09; 8/27/09 - 8/27/09; 2/8/10 - 3/16/10  |
| Pri Sed Tank 3 | 5/28/09 - 9/2/09; 11/9/09 - 11/10/09; 11/10/09 - 1/12/10; 12/8/09 - 1/8/10; 2/11/0 - 2/4/10 |
| Pri Sed Tank 4 | 1/27/09 - 1/28/09; 12/9/09 - 12/9/09; 12/11/09 - 12/24/09; 2/17/10 - 4/5/10                 |
| Pri Sed Tank 5 | 12/11/09 - 12/23/09   |

### Aeration Basins

|             | DATES OOS   |
|-------------|---|
| Aer Basin 2 | 7/6/09 - 7/6/09; 7/8/09 - 8/11/09; 7/9/09 - 7/10/09 |
| Aer Basin 3 | 12/3/09 - 12/11/09                                  |
| Aer Basin 5 | 5/21/09 - 8/3/09; 7/9/09 - 7/10/09                  |

### Secondary Clarifiers

|              | DATES OOS         |
|--------------|-------------------|
| Sec. Clar. 5 | 6/30/09 - 6/30/09 |

### Tertiary Filters

|               | DATES OOS  |
|---------------|--|
| Ter. Filter 2 | 5/14/09 - 5/13/09; 5/14/09 - 5/14/09; 12/11/09 - 1/8/10                |
| Ter. Filter 3 | 4/14/09 - 5/6/09; 5/14/09 - 5/14/09                                    |
| Ter. Filter 4 | 5/14/09 - 5/18/09  |
| Ter. Filter 5 | 5/14/09 - 5/26/09; 7/9/09 - 8/4/09                                     |
| Ter. Filter 6 | 2/3/09 - 2/3/09; 4/16/09 - 4/16/09; 5/14/09 - 5/27/09; 9/1/09 - 9/2/09 |
| Ter. Filter 6 | 5/14/09 - 5/20/09; 6/23/09 - 6/30/09                                   |

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