



King County

Department of Natural Resources and Parks
Wastewater Treatment Division

West Point Treatment Plant, WTP-NR-0100
1400 Discovery Park Blvd
Seattle, WA 98199-1044

May 10, 2022

TO: Robert Waddle, WTD Operations Manager

FM: Process Control Staff

RE: West Point Treatment Plant Performance Report – April 2022

The West Point Treatment Plant (West Point) Outfall 001 met all effluent discharge requirements in April 2022. Effluent cBOD averaged < 25 mg/L and TSS averaged < 30 mg/L. Effluent pH was maintained between 6.0 and 9.0.

West Point's total flow averaged 92.34 million gallons per day (MGD), nearly identical to the average April flow for the previous five years (92.41 MGD).

The Seattle-Tacoma International Airport (SeaTac) reported 2.71 inches of rainfall for the month of April; the historical average for April rainfall at SeaTac is 3.18 inches.

Primary Treatment

Primary sedimentation operated with nine tanks by the end of April. Over the course of the month, three primary sedimentation tanks were taken out of service to facilitate the Z-beam removal project. These tanks – which were taken out of service on April 8th, 22nd, and 30th – are located in the southwest quadrant of the primary sedimentation area. Contractors for the Z-beam removal project completed overhead work in the East primaries and have continued preparations for work in the West Primaries. A project to assess and improve the grit classifier system has been initiated. The primary solids removal for April was calculated to be 55.2%, which is lower than the previous month. The removal is normally calculated using the Secondary Influent values which include solids returned in the recycle streams, so the reduced performance might be attributed to the increased solids in the recycle and/or and the reduced capacity of the primary sedimentation area.

Secondary Treatment

The secondary process operated with 5 aeration trains throughout the month of April. There were 12 clarifiers in service through most of the month except for April 5 when clarifier 12 was taken out of service for a single day to repair a high torque issue, and on April 24 clarifier 10 was taken out of service for the remainder of the month. All aeration trains operated in plug flow in April. There was one secondary diversion at West Point during April totaling 8.9 million

gallons (MG) on April 4 due to high flows, from an intense rainfall event. The secondary sludge age averaged 2.2 days for the month, and final effluent quality was excellent in April.

Key Measures

Volume Treated	2770 Million Gallons
Permit Compliance	0 Exceptions
Biosolids	3432 Wet Tons Hauled
	938 Dry Tons Hauled
	27.33% Cake Total Solids

Permit Compliance Summary – April 2022

Flow (mgd)	cBOD (mg/l)	TSS (mg/l)	cBOD (% Removal)	TSS (% Removal)	Fecal Coliforms (counts/100 ml)	Chlorine Residual (µg/l)
	Plant/Permit	Plant/Permit	Plant/Permit	Plant/Permit	Plant/Permit	Plant/Permit
92.34	8/25	7/30	95/80	97/80	1/200	99/139

West Point’s NPDES permit requires 80% removal of cBOD and TSS during the wet season months of November through April. The Permit also sets effluent concentration limits of 25 mg/l for cBOD and 30 mg/l for TSS, or 20% of influent values during the wet season months, whichever is more stringent. For April 2022, the effluent concentration limits were 25 mg/l for cBOD and 30 mg/l for TSS.

Process Control

Total plant flow for the month was 2770.07 million gallons. Influent and effluent cBOD concentrations averaged 154 mg/l and 8 mg/l, respectively (95% removal); influent and effluent TSS averaged 202 mg/l and 7 mg/l, respectively (97% removal).

There was one Secondary Diversion in April, details are provided in the table below.

Date	Secondary Diversion Volume (MG)	Duration (hr)	Reason for Diversion
04/04/2022	8.86	4.97	Flows > 300 MGD