



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

July 13, 2020

TO: Robert Waddle, WTD Operations Manager

FM: Process Control Staff

RE: West Point Treatment Plant Performance Report – June 2020

All discharge requirements were met for Outfall 001 in June at the West Point Wastewater Treatment Plant. Effluent cBOD averaged < 25 mg/L and TSS averaged < 30 mg/L. Effluent pH was maintained between 6.0 and 9.0.

Total Plant flow at West Point averaged 70.19 MGD, 0.06 MGD above the average June flow for the previous five years (70.13 MGD). North end flows were sent to South Plant and Brightwater via Woodinville and North Creek.

Seattle had above average precipitation in June. West Point recorded a total of 1.40 inches of precipitation for the month. There was measurable precipitation on 12 days of the month, with a high of 0.31 inches on June 13. Seattle-Tacoma Airport (Sea-Tac) recorded 2.28 inches of precipitation, 0.71 inches above the normal June rainfall of 1.57 inches. The National Weather Service Office at Sand Point recorded 3.06 inches of precipitation (a record for June), 1.43 inches above the normal 1.63 inches.

Primary Treatment

Primary treatment began the month with 11 tanks in service until June 8, when tank 2W was isolated for maintenance. On June 16, tank 3W and the NW preaeration tank were taken out of service for annual maintenance and the month ended with 9 tanks in service.

Secondary Treatment

The secondary process operated with four aeration trains in service. All trains operated in plug flow throughout the month. Secondary operated with 11 clarifiers in service to start the month. Clarifier 9 was taken out of service on June 15, and clarifier 10 was taken out of service on June 30. The month ended with 9 clarifiers in service.

Key Measures

Volume Treated 2106 million gallons
 Permit Compliance 0 exceptions
 Biosolids 3741 wet tons hauled
 1038 dry tons hauled
 27.74% cake total solids

Permit Compliance Summary – June 2020

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
70.19	5/25	6/30	97/85	97/85	6/200	108/139

West Point’s NPDES Permit requires 85% removal of cBOD and TSS during the dry season months of June through October. The Permit also sets effluent concentration limits of 25 mg/l for cBOD and 30 mg/l for TSS, or 15% of influent values during the dry season months, whichever is more stringent. For June 2020, 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 2105.68 million gallons. For the month, influent and effluent cBOD concentrations averaged 180 mg/l and 5 mg/l, respectively (97% removal); influent and effluent TSS averaged 237 mg/l and 6 mg/l, respectively (97% removal).

There was one diversion around secondary treatment. On June 30, 2020, the plant was conducting a test of its Emergency Systems. During this test, the Emergency Bypass (EB) is triggered and the EB gate is allowed to open. Prior to the test, a stop log is installed so none of the bypass is discharged into Puget Sound. When the test is completed, the stop log is removed under proper tide conditions to allow the bypass volume in the EB channel to be flushed back into the plant.

During the testing, the secondary diversion gates are also triggered to open. During previous tests, there had been no flow through the plant so even though these gates were opened, the diversion volume, if there was any, was considered negligible. On June 30, there was some flow during the test so the diversion volume was larger than normal.

The gates were open for a total of about 8 minutes (8:16 am to 8:24 am), and the plant flow prior to opening was about 41 million gallons per day (MGD). An estimated 0.12 million gallons (MG) of primary-treated flow was diverted around the plant’s secondary process.

The SOP for this test has already been revised so that a secondary diversion does not occur when testing the diversion gates in the future.

Date	Secondary Diversion Volume (MG)	Reason for Diversion
6/30/20	0.12	Emergency Systems testing