



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

October 8, 2020

TO: Robert Waddle, WTD Operations Manager

FM: Process Control Staff

RE: West Point Treatment Plant Performance Report – September 2020

All discharge requirements were met for Outfall 001 in September 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 70.21 MGD, 3.89 MGD above the average September flow for the previous five years (66.32 MGD). North end flows were sent to South Plant and Brightwater via Woodinville and North Creek.

Seattle had below average precipitation in September. West Point recorded a total of 2.34 inches of precipitation for the month. There was measurable precipitation on 6 days of the month, with a high of 1.08 inches on September 23. Seattle-Tacoma Airport (Sea-Tac) recorded 2.48 inches of precipitation, 0.98 inches above the normal September rainfall of 1.50 inches. The National Weather Service Office at Sand Point recorded 4.16 inches of precipitation, 2.64 inches above the normal 1.52 inches.

Primary Treatment

Primary treatment began the month with nine tanks in service. On September 17, tank 5W was returned to service. Tank 6W was put in service on September 19, bringing the total number of tanks in service to 11. The month ended with 11 tanks in service. Primary performance was good with 58.1% TSS and 30.8% BOD removal average in September.

Secondary Treatment

The secondary process began the month with four aeration trains and nine clarifiers in service. On September 23, 2 additional clarifiers were put in service, and 2 more were put in service the following day due to high flows. The month ended with all 13 clarifiers in service. One aeration train was taken out of service on September 2 to mitigate nocardia. Secondary operated with 3 trains in service until all trains were returned to service over September 19 through 22 in response to high flows. All trains operated in plug flow throughout the month. The secondary

sludge age averaged 2.02 days for the month of September. Final effluent quality was excellent in September.

Key Measures

Volume Treated	2106 million gallons
Permit Compliance	0 exceptions
Biosolids	3103 wet tons hauled
	829 dry tons hauled
	26.70% cake total solids

Permit Compliance Summary – September 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
70.21	6/25	8/30	97/85	97/85	5/200	124/139

West Point's NPDES Permit requires 85% removal of cBOD and TSS during the dry season months of May 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 September 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 2106.42 million gallons. For the month, influent and effluent cBOD concentrations averaged 195 mg/l and 6 mg/l, respectively (97% removal); influent and effluent TSS averaged 257 mg/l and 8 mg/l, respectively (97% removal).

There were three diversions around secondary treatment due high flows.

Date	Secondary Diversion Volume (MG)	Reason for Diversion
9/23/20	2.28	Flows > 300 MGD
9/24/20	3.87	Flows > 300 MGD
9/25/20	0.62	Flows > 300 MGD