



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

January 11, 2019

TO: Robert Waddle, WTD Operations Manager

FROM: Process Control Staff

SUBJECT: West Point Treatment Plant Performance Report – December 2018

All discharge requirements were met in December at the West Point Wastewater Treatment Plant. There were eight days when flow was diverted around secondary, December 5, 9, 17, 18, 22, 23, 28 and 29. A total of 17.59 million gallons (MG) was diverted. 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 111.47 MGD, 5.24 MGD below the average December flow for the previous five years (116.71 MGD). North end flows were sent to South Plant and Brightwater via Woodinville and North Creek.

Seattle had higher-than-normal precipitation in December. West Point recorded a total of 6.25 inches of precipitation for the month. There was measureable precipitation on twenty three days during the month, with the heaviest rainfall falling on December 16 (0.70 inches total). SeaTac recorded 6.08 inches of precipitation, 0.73 inches above the normal December rainfall of 5.35 inches. Boeing Field recorded 5.67 inches of precipitation, 0.05 inches above the normal 5.62 inches. The National Weather Service Office at Sand Point recorded 5.23 inches of precipitation, 0.20 inches below the normal 5.43 inches.

Primary Treatment

Primary treatment operated with all twelve tanks in service during the month.

Secondary Treatment

The secondary process operated with all six aeration trains in service. All thirteen clarifiers were in service during the month.

Key Measures

Volume Treated	3455	million gallons
Permit Compliance	0	exceptions
Biosolids	4345	wet tons hauled
	1180	dry tons hauled
	27.16%	cake total solids

Permit Compliance Summary – December 2018

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
111.47	6/25	7/30	96/85	97/85	3/200	77/139

West Point's NPDES Permit requires 80% removal of cBOD and TSS during the wet season months of October 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 December 2018, 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 3455.45 million gallons. There were eight days when flow was diverted around secondary treatment. For December, a total of 17.59 MG was diverted around secondary treatment. The diversion on December 5 was caused by an IPS pump failure brought on by a low lube oil flow alarm. This incident is detailed in a letter to Ecology dated December 7, 2018.

Date	Secondary Diversion Volume (MG)	Reason for Diversion
12/5/2018	0.40	IPS pump failure
12/9/2018	1.40	Flows > 300 MGD
12/17/2018	4.78	Flows > 300 MGD
12/18/2018	1.98	Flows > 300 MGD
12/22/2018	2.57	Flows > 300 MGD
12/23/2018	1.91	Flows > 300 MGD
12/28/2018	1.64	Flows > 300 MGD
12/29/2018	2.91	Flows > 300 MGD

For the month, influent and effluent cBOD concentrations averaged 164 mg/l and 6 mg/l, respectively (96% removal); influent and effluent TSS averaged 206 mg/l and 7 mg/l, respectively (97% removal).