



## 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

April 9, 2021

TO: Robert Waddle, WTD Operations Manager

FM: Process Control Staff

RE: West Point Treatment Plant Performance Report – March 2021

The West Point Treatment Plant (West Point) Outfall 001 met all discharge requirements in March 2021. 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 97.06 million gallons per day (MGD), 8.15 MGD below the average March flow for the previous five years (105.21 MGD). North end flows were sent to South Plant and Brightwater via Woodinville and North Creek.

Seattle had below average precipitation in March, West Point reported the Seattle-Tacoma International Airport (Sea-Tac) total of 2.61 inches of precipitation for the month. There was measurable precipitation on 13 days of the month with most precipitation falling over March 24 and 25 (0.90 inches). Seattle-Tacoma Airport (Sea-Tac) recorded 2.61 inches of precipitation, 1.11 inches below the normal March rainfall 3.72 inches. The National Weather Service Office at Sand Point recorded 3.22 inches of precipitation, 0.29 inches below the normal 3.51 inches.

### Primary Treatment

Primary treatment started with 10 tanks in service to begin the month, with tank 2E going out-of-service (OOS) for annual maintenance on March 1. Sed tank 6W was returned to service on March 2. Sed tank 2E was returned to service on March 4. Sed tank 3E was taken OOS on March 7 for annual maintenance and returned to service on March 11 as tank 6E was taken OOS the same day. Tanks 6E and 5E were returned to and taken out of service, respectively, on March 18. On March 26 5E was returned to service and 4E taken out. The month ended with 12 tanks in service as 4E was returned to service March 31. Primary performance declined compared to previous months with 39.17% TSS and 31.51% BOD removal averages in March.

### Secondary Treatment

The secondary process began the month with 6 aeration trains and 13 clarifiers in service. All trains operated in plug flow throughout the month. On March 2, clarifier 12 was taken OOS due to a shorted wire in the drive unit. Clarifier 12 remained OOS the rest of the month.

Clarifier 6 was taken OOS on March 30 due to an issue with the scum removal trough. The month ended with 11 clarifiers in service. The secondary sludge age averaged 3.25 days for the month of March. Final effluent quality was excellent in March.

Key Measures

Volume Treated	3009 Million Gallons
Permit Compliance	0 Exceptions
Biosolids	3399 West Tons Hauled
	956 Dry Tons Hauled
	28.11% Cake Total Solids

Permit Compliance Summary – March 2021

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
97.06	7/25	9/30	96/80	95/80	1/200	103/139

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 March 2021, 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 3008.75 million gallons. Influent and effluent cBOD concentrations averaged 158 mg/l and 7 mg/l, respectively (96% removal); influent and effluent TSS averaged 191 mg/l and 9 mg/l, respectively (95% removal).

There were two diversions around secondary treatment, both due to high flows.

Date	Secondary Diversion Volume (MG)	Reason for Diversion
3/25/21	1.29	Flows > 300 MGD
3/28/21	0.02	Flows > 300 MGD