



King County

Department of Natural Resources and Parks
Wastewater Treatment Division

West Point Treatment Plant

1400 Discovery Park Blvd
Seattle, WA 98199-1004

December 7, 2018

Rob Grandinetti
Compliance Officer
EPA Region 10
Office of Compliance and Enforcement
NPDES Compliance Unit
825 Jadwin Ave, Suite 210
Richland WA 99352

Shawn McKone
Permit Manager
Washington Department of Ecology
Northwest Regional Office
3190 160th Avenue SE
Bellevue, WA 98008-5452

Dear Mr. Grandinetti and Mr. McKone:

King County is providing this report, as required by its Consent Decree (Civil Action No. 2:13-cv-677).

According to the National Weather Service, a total of 3.26 inches of rain fell at Seattle-Tacoma International Airport over two days (November 26-27). This storm resulted in CSOs throughout the King County collection system and triggered discharge events at three out of four CSO facilities – Alki, Carkeek, and Elliott West.

During the storm, Alki's discharge (CSO outfall 051) exceeded the pH limit of ≥ 6 S.U. and Elliott West's discharge (CSO outfall 027b) exceeded its total residual chlorine (TRC) daily limit and the pH limit of ≥ 6 S.U. Carkeek (CSO outfall 46) had no violations during the event.

Alki (CSO outfall 051)

The Alki facility located at 3380 Beach Drive S.W., Seattle, WA, discharged from 1:52 a.m. to 4:04 a.m. on November 27. The estimated total discharge volume was 1.59 million gallons (MG) over 1.3 hours. The daily reporting period covering this discharge is from 7 a.m. to 7 a.m.

During this storm event, the online monitor indicated that Alki had exceeded its daily limit for its pH limit.

The minimum pH limit for the discharge is 6.0. During the short event, the discharge reached a minimum pH of 5.6. The total estimated volume below a pH of 6.0 was 0.12 million gallons (MG) discharged. All other permit conditions were met.

The low pH for this event and the prior event are still under investigation. As part of the investigation, staff are evaluating the pH meter. The final effluent sampling system starts prior to discharge and the pH probe could initially be exposed to low pH water. If the probe is slow to respond from its exposure, the probe may not provide accurate measurements at the start of discharge. During this event, the online pH meter was below 6.0 for the initial 5 minutes of discharge.

Elliott West (CSO outfall 027b)

The Elliott West facility (EWCSO) is located at 545 Elliott Avenue West in Seattle, WA. Elliott West discharged from November 26 at 7:04 p.m. to November 27 at 9:47 p.m. with a total discharge volume of 23.90 million gallons (MG) and a total duration of 12.6 hours. The daily reporting period goes from 7 a.m. to 7 a.m.

During this storm event, EWCSO exceeded the daily permit limit of 109 µg/L for total residual chlorine (TRC), averaging 208 µg/L on day 1 (November 26) and 733 µg/L on day 2 (November 27). The duration and volume of discharge exceeding 109 µg/L was 0.73 hours (out of the 10.82 hours discharged on 11/26) and 1.84 MG (out of 21.42 MG). On November 27, the duration and volume of discharge exceeding 109 µg/L was 0.52 hours (out of the 1.82 hours discharged on 11/27) and 0.77 MG (out of 2.48 MG).

During the event, EWCSO also dropped below the minimum pH permit limit of 6.0 reaching a pH of 5.6 on day one and 5.4 on day two. The total estimated volume below pH 6.0 was 0.46 million gallons (MG) out of the 23.90 million gallons (MG) discharged.

During the storm, there were wide swings in discharge flow. Flows initially ramped up quickly to a max flow of 75.1 mgd on day one and, during the middle of the event, there was a period of time when the facility was either not discharging or barely discharging. Then heavy rains returned ramping up flows again to a max flow of 74.7 mgd on day two. The nature of this storm was particularly challenging for optimizing treatment with the rapidly changing flows.

As with these rain events, low alkalinity flow continued to be a factor. The FE alkalinity was 31 and 27 mg/L as CaCO₃ from the grab samples taken on day one and two respectively. With low influent alkalinity the available buffering capacity dropped, so the application of sodium bisulfite greatly impacted pH.

Also continuing to be a potential influence was the internal recycling of some of the flow. A drain gate remains stuck in the partially open position. This gate allows the facility to drain the treated flow that was not yet discharged, back into the facility where it can be transferred to

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West Point for treatment. The drain gate will be repaired as soon as the weather conditions allow for this work to occur.

If you have additional questions concerning this event, please contact me at 206-263-9481 or Eugene Sugita at 206-477-9782.

Sincerely,



Robert Waddle
Operations & Maintenance Manager

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision, in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

cc: Amy Jankowiak, Department of Ecology
Mark Isaacson, Division Director, Wastewater Treatment Division (WTD),
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Jeff Lafer, Project/Program Manager IV, WTD, DNRP
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