

King County West Point Permit (WA0029181) - Effluent Limit Violations at CSO Treatment Facilities
2024 (January through September)

Chronological cal Number	Facility	ERTS # (if applicable)	Date	Monitor Point	Deslmit	Freq	Parameter	Unit	Value	Min. Value	Max. Value	Violation	Violation Type	Violation Description	Cause	Resolution	Ecology/EPA Notes	Statutory Penalty Recommendation 5/1/24	Additional Information from King County	FINAL DECISION	STP VALUE
1	King County West Point WWTP		1/27/2024	46 (Carkwek)	Maximum Daily Average	1/Day	Chlorine, Total residual	Micrograms/L (ug/L)	763	N/A	490	Permit Violation	Numeric effluent violation	During a storm event on 1/27/2024- 1/28/2024 (1.4 in rainfall), a 2-day discharge event resulted in an exceedance of the TRC limit on the first day for 0.63 hrs (of 0.77 hrs on the first day and 7.4 total hours) and 0.03 MG (out of 0.24 MG)	Day one of the discharge was only 46 minutes prior to start of the new reporting day (Day 2). The hypochlorination and dechlorination system stabilized before the start of the second reporting day. This resulted in a calculated daily average TRC greater than permit. The event average TRC was 209 ug/L, well below the permit limit.	A project to improve the dechlorination system started construction during Summer 2024. The project will replace the sodium bisulfite (SBS) feed pumps, the SBS storage system, and improve the feed control program. The anticipated project completion is dry season 2025.					
2	King County West Point WWTP		1/28/2024	27 (EWCSD)	Minimum Instantaneous	1/Day	minimum pH	standard pH unit	5.1	6.0	9.0	Permit Violation	Numeric effluent violation	During the 1/28/24 storm event (1.24 in rainfall), a 0.25 MG discharge event occurred over 0.6 hours at the Elliott West WWTS. During the event, the effluent reached a minimum pH of 5.1 and was below the effluent limit for 0.32 hours or 0.13 MG.	This event was a very short duration lasting less than hour making it challenging for the chemical system to stabilize. Dechlorination using SBS consumes alkalinity and can easily depress the pH in the final effluent below 6.0. In addition, there was very little alkalinity from the large amounts of rain leading up to this treatment and discharge event.	Staff monitor and work to optimize the disinfection and dechlorination processes with each event. Improvements to the hypochlorite and SBS pumping systems and the chemical feed and pump turn-down and control strategies are underway as interim actions prior to completion of the larger Elliott West project.					
3	King County West Point WWTP		Jan. 2024	27 (EWCSD)	Monthly Geomean	1	Fecal coliform	#/100mL	1,300	N/A	400	Permit Violation	Numeric effluent violation	There were six inflow events and one discharge event during the month of January. The discharge event was a short event that lasted 0.6 hrs and 0.25 MG on 1/28/24. The monthly average exceedance was a result of a single sample collected during the 1/28 event.	The January 28 event was short duration with the only fecal coliform sample result at 1,300/100 mL. The short event did not allow enough time for the hypochlorite feed system to be optimized. The hypochlorite dose event average dose was 16.3 mg/L and the average pre-dechlorination TRC was 0.55 mg/L. Typically the event average hypochlorite dose is approximately 20 mg/L, so it's likely that the brevity of the event results in the fecal coliform exceedance.	Staff monitor and work to optimize the disinfection and dechlorination processes with each event. Improvements to the hypochlorite and SBS pumping systems and the chemical feed and pump turn-down and control strategies are underway as interim actions prior to completion of the larger Elliott West project.					
4	King County West Point WWTP		2/28/2024	27 (EWCSD)	Maximum Daily Average	1/Day	Chlorine, Total residual	Micrograms/L (ug/L)	527	N/A	109	Permit Violation	Numeric effluent violation	During the 2/28/24 storm event (0.75 in rainfall), a 0.3 MG discharge event occurred over 0.7 hours at the Elliott West WWTS. The exceedance of the interim TRC limit occurred for 0.57 hrs of the event and 0.27 MG.	The event was less than one hour long, and the chemical systems were in the process of adjusting and stabilizing to the incoming flows. The facility operated at minimum flows and the chemical pumps were operating at minimum levels. With chemical pumps operating at minimum levels, it is challenging to optimize chemical dosing.	Staff monitor and work to optimize the disinfection and dechlorination processes with each event. Improvements to the hypochlorite and SBS pumping systems and the chemical feed and pump turn-down and control strategies are underway as interim actions prior to completion of the larger Elliott West project.					
5	King County West Point WWTP		2/28/2024	27 (EWCSD)	Minimum Instantaneous	1/Day	minimum pH	standard pH unit	5.7	6.0	9.0	Permit Violation	Numeric effluent violation	During the 2/28/24 storm event (0.75 in rainfall), a 0.3 MG discharge event occurred over 0.7 hours at the Elliott West WWTS. During the event, the effluent reached a minimum pH of 5.7 and was below the effluent limit for 0.1 hours and 0.05 MG.	The event was less than one hour long, and the chemical systems were in the process of adjusting and stabilizing to the incoming flows. The facility operated at minimum flows and the chemical pumps were operating at minimum levels. The inability to turn down sodium hypochlorite feed resulted in sodium bisulfite dosing that consumed more alkalinity than what was available, depressing the pH below 6.	Staff monitor and work to optimize the disinfection and dechlorination processes with each event. Improvements to the hypochlorite and SBS pumping systems and the chemical feed and pump turn-down and control strategies are underway as interim actions prior to completion of the larger Elliott West project.					
6	King County West Point WWTP	#733135	8/17/2024	27 (EWCSD)	Maximum Daily Average	1/Day	Chlorine, Total residual	Micrograms/L (ug/L)	110	N/A	109	Permit Violation	Numeric effluent violation	The 8/17 storm event (0.47 in rainfall) resulted in a relatively short inflow and discharge event of 3.5 hrs. The exceedance of the interim TRC limit occurred for 0.28 hrs of the event (out of 3.5 hrs) and 1.2 MG (out of 4.0 MG).	The TRC issues occurred during the beginning of the end, the start of events is always challenging for the chemical systems, since systems are having to adjust and stabilize to the incoming flows (both the volume and the strength), and with the long dry spell, the "first flush" nature of the event made the event even more challenging. The average TRC during the first hour was 373 ug/L, the average during the rest of the event was 0.4 ug/L.	Due to the reliance on the Mercer Tunnel for solids removal, there are no interim actions prior to the completion of the larger Elliott West project. When the new facility comes online, increased solids removal performance and chemical treatment can be used to reduce effluent copper.					
7	King County West Point WWTP	#733135	8/17/2024	27 (EWCSD)	Minimum Instantaneous	1/Day	minimum pH	standard pH unit	5.8	6.0	9.0	Permit Violation	Numeric effluent violation	During the 8/17/24 storm event (0.47 in rainfall), a 4.0 MG discharge event occurred over 3.5 hours at the Elliott West WWTS. During the event, the effluent reached a minimum pH of 5.8 and was below the effluent limit for 1.1 hours.	The pH issues were towards the end of the event and were likely caused by inability to turn down sodium hypochlorite feed resulting in sodium bisulfite dosing that consumed more alkalinity than what was available.	Staff monitor and work to optimize the disinfection and dechlorination processes with each event. Improvements to the hypochlorite and SBS pumping systems and the chemical feed and pump turn-down and control strategies are underway as interim actions prior to completion of the larger Elliott West project.					
8	King County West Point WWTP	#733135	8/17/2024	27 (EWCSD)	Daily Maximum	1/Day	Copper	Micrograms/L (ug/L)	107	N/A	84.1	Permit Violation	Numeric effluent violation	See above for the 8/17/2024 entry: the copper sample exceeded the interim effluent limit.	This was the first discharge event since late February. With the long dry spell, the "first flush" nature of the event contributed to increased solids loading, and thus increased copper loading.						
9	King County West Point WWTP	#733135	8/17/2024	27 (EWCSD)	Daily Maximum	1/Day	Zinc	Micrograms/L (ug/L)	314	N/A	162.5	Permit Violation	Numeric effluent violation	See above for the 8/17/2024 entry: the zinc sample exceeded the interim effluent limit.	This was the first discharge event since late February. With the long dry spell, the "first flush" nature of the event contributed to increased solids loading, and thus increased zinc loading.						

King County West Point Permit (WA0029181) - CSO System Violations _ Sanitary Sewer Overflows and Dry Weather Overflows

2024 (January through September)

Chrono-logical Number	ERTS Number	Type of Incident	Location of incident (address or intersection)	Outfall Number, if applicable	Pump Station Number, if applicable	Date(s) of Incident	Date of KC Discovery	Date of Ecology/ EPA Notification	Date of DOH - Shellfish Notification	Estimated overflow duration (min)	Estimated overflow volume (gallons)	Estimated volume entering receiving water (gallons)	Receiving Water that Discharge Entered	Primary Cause	Secondary Cause, if any	Additional Contributing Cause, if any	What Steps has KC Taken to Prevent Recurrence	Comments	Ecology/EPA Notes	Stipulated Penalty Recommended Y/N	Additional Information from King County	FINAL DECISION	STIP VALUE
1	#729145	CSO system overflow	West Marginal Pump Station (WMPS)			2/29/2024	2/29/2024	2/29/2024	N/A	120	2,100,000	2,100,000	Duwamish River	Failure of the station's Uninterruptible Power Supply (UPS). The UPS failure caused the pumps to shut down and without the UPS, telemetry was lost to the station. With the telemetry loss, Main Control stopped receiving alarms and monitoring information from WMPS.			Procured a replacement UPS. For the long term, a program is currently in development to evaluate and replace the UPS units. The assessment has already been done for the West Point Treatment Plant and is currently in development for the offsite locations. However, if a UPS shows signs of potential failure before it can be addressed by the program, staff will immediately initiate replacement.						
2	#734008	CSO system overflow	Harbor Regulator	037		9/25/2024	9/25/2024	9/25/2024	N/A	20	67,000	67,000	West Duwamish Waterway	Overflow occurred because of a "hardware failure" alarm in a gate actuator. The alarm appears to have been triggered when the regulator's generator was being tested for readiness. The entire volume was attributable to the failure and no other CSOs occurred in the system; thus this event was not associated with any lack of conveyance capacity.			WTD will update procedures such that an operator immediately checks facility status after each monthly generator test.						