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THE SUQUAMISH INDIAN TRIBE

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TRANSMITTED BY ONLINE COMMENT FORM

July 7, 2023

Tricia Miller
Permit Administrator
WA State Dept of Ecology - NWRO
PO Box 330316
Shoreline, WA 98133-9716

RE: West Point Wastewater Treatment Plant National Pollutant Discharge Elimination System (NPDES) Wastewater Discharge Draft Permit, Permit WA0029181

Dear Ms. Miller,

The Suquamish people have lived, fished, hunted, and gathered in and around Puget Sound since time immemorial. The Suquamish Indian Tribe takes its name from the traditional Lushootseed phrase for "people of the clear salt water" and is signatory to the 1855 Treaty of Point Elliott, in which the Tribe forever reserved the right to take fish in its usual and accustomed fishing areas (U&A). The Suquamish U&A includes portions of Puget Sound and connected waterbodies into which King County's West Point Wastewater Treatment Plant and Combined Sewer Overflow System discharges. Untreated or improperly treated wastewater, including from West Point and other sources regulated in the draft permit, are discharged into these waters resulting in impacts to the Suquamish Indian Tribe and its members. These discharges result in harmful algae blooms, posting of health advisories, and closure of beaches where Suquamish tribal members harvest shellfish and engage in traditional cultural activities. In addition, these discharges have prompted and will continue to prompt recalls of commercially sold shellfish. All these impacts interfere with tribal member commercial and subsistence harvest activities that are reserved under the treaty. Discharges that result in health advisories and beach closures, negatively impact Suquamish tribal members ability to safely practice traditional life ways such as canoe racing, potlach ceremonies, and canoe journey, to name a few.

The Suquamish Indian Tribe has reviewed the West Point Wastewater Treatment Plant draft NPDES permit and requests Ecology include certain changes so that the permit protects water quality and complies with federal and state law. In general, the Tribe is concerned that Ecology is, for the most part, maintaining the status quo rather than forcing meaningful action from the State's largest wastewater treatment plant to improve water quality in Puget Sound.

In association with these comments, please also closely review the Technical Memorandum prepared on behalf of the Suquamish Indian Tribe by CEA Engineers, P.C. ("CEAPC"), which is attached to these comments and incorporated by reference. We also support the comments provided by Washington Conservation Action (WCA) and Puget

Soundkeeper Alliance (Puget Soundkeeper), some of which we specifically highlight in the sections below.

I. The Draft Permit Does Not Force Actions Necessary to Address King County's WPTP and Combined Sewer Overflow System's Long History of Impairing Water Quality in Puget Sound.

The waters of Puget Sound and the entire Puget Sound are the Tribe's most treasured resource. We are obliged to protect these waters, not only for ourselves but for all who rely on them for healthy seafood, recreation, and cultural practices for the next seven generations (Suquamish Tribal Chairman Leonard Forsman). We acknowledge King County's investments to improve its wastewater treatment systems, but the Suquamish Indian Tribe and its members are frustrated by ongoing sewage releases and NPDES exceedances in Puget Sound that include nutrient loads, which continue to harm marine water quality and the Tribe's ability to exercise treaty reserved rights and engage in cultural activities. We are running out of time and need swifter action. It is time to increase commitments in improving and protecting our shared waters.

King County is responsible for numerous NPDES permit violations, discharging untreated and improperly treated wastewater into Puget Sound between 2015 and 2021. These discharges occurred at the West Point Treatment Plant, the CSO treatment facilities, and combined sewer outfalls (CSOs), affecting, among others, the shores of Centennial Park on Elliott Bay in downtown Seattle, Alki Beach in West Seattle, Discovery Park Beach in Magnolia, and the beaches at the Port Madison Reservation. Ecology must do more to force action to address these unpermitted discharges than its draft permit provides for.

As noted in Ecology's fact sheet, even with the use of mixing zones, King County has not consistently complied with effluent limits and permit conditions throughout the duration of the existing permit, issued December 2014. In addition to violating effluent limits, King County has had unauthorized bypasses and CSO overflows. As a result, the Suquamish Indian Tribe notified King County that it was responsible for at least 19 significant illegal discharges from the WPTP into the Tribe's treaty-protected fishing areas and that the Tribe intended to file suit for ongoing violations of the Clean Water Act (33 U.S.C. §1251 *et seq.*) and King County's NPDES permit. The subsequent settlement agreement between King County and the Tribe, executed on October 20, 2022, requires King County to upgrade infrastructure to eliminate or further reduce untreated discharges from WPTP into Puget Sound. However, the Tribe should not be forced to engage in such resource-intensive actions to protect the Sound's water quality and the free and safe exercise of tribal fishing rights. That is Ecology's obligation, and one major avenue for doing so is through issuing permits with conditions that force dischargers to reduce pollutant loads, including through implementation of the best available technology.

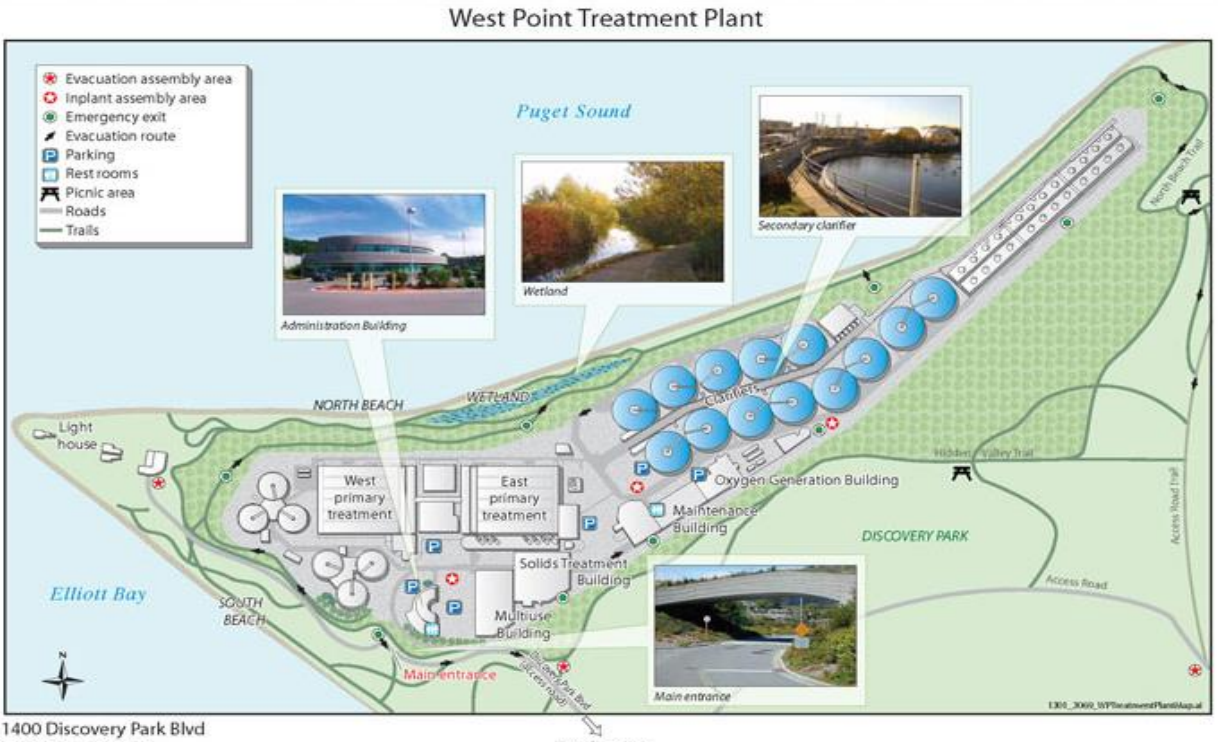
Any new expansion, discharge increase, or permit application must be thoroughly reviewed to identify alternatives to degrading water quality. Local jurisdictions repeatedly state that they have made heroic efforts in determining how to best invest limited funds to produce the biggest benefits. We have heard in meetings and read in comments submitted that "we can't do everything, so we need to determine what the highest priority investments are." The investments jurisdictions make are not just in the physical infrastructure that make up the treatment facility, but investments in a healthy and recovered Puget Sound with abundant salmon and orca whales,

and with clean and abundant shellfish beds that support tribal treaty rights without interruption or closures from sewage spills (including CSO events) or from harmful algal blooms.

Membrane technology is repeatedly overlooked as a viable and feasible alternative. By applying membrane technology, one can convert a traditional activated sludge system into a membrane bioreactor (MBR). Those differ from conventional systems in two ways:

1. In MBR applications the activated sludge tanks can be operated with a far higher concentration of bacteria. This leads to a higher treatment capacity at the same tank volume.

2. In MBR applications the treated clear water is not separated by means of gravity settling but by means of membrane filtration. Therefore, there is no secondary clarifier necessary and the output quality is vastly improved. The Tribe has been told that limited area available makes most upgrades impossible yet secondary clarifiers take up almost half of the facility footprint (see West Point Treatment Plant map below).



II. Ecology Should Determine AKART for Nutrients from the West Point Treatment Plant and Include Nutrient Effluent Limits in the Permit.

Washington's Water Pollution Control Act establishes a public policy of maintaining "the highest possible standards to insure the purity of all waters of the state" and to exercise state authority "as fully and effectively as possible, to retain and secure high quality for all waters of

the state." RCW 90.48.010. The Act makes it unlawful to discharge any matter that shall cause or tend to cause pollution, and defines pollution broadly to include any discharge that will, or is likely to, render a water of the state harmful to fish or other aquatic life. RCW 90.48.080, .020; *see also* WAC 173-226-020.

"No waste discharge permit can be issued that causes or contributes to a violation of water quality criteria, except as provided for in this chapter." WAC 173-201A-510(1). When issuing a permit, Ecology must ensure that "all known, available, and reasonable methods of treatment"—or AKART—are implemented by treatment plants. RCW 90.52.040, 90.54.020. WAC 173-220-130(1) requires, in pertinent part, that "[a]ny permit issued by [Ecology] shall apply and insure compliance with all of the following, whenever applicable: (a) All known, available, and reasonable methods of treatment required under RCW 90.52.040, 90.54.020 (3)(b), and 90.48.520." "Permits must be modified by the department when it is determined that the discharge causes or contributes to a violation of water quality standards." WAC 173-201A-510(1)(b); 40 C.F.R. § 122.44(d)(1)(iii) (permit must contain an effluent limit for parameter when permitting authority determines that discharge causes, has the reasonable potential to cause, or contributes to an excursion above the water quality standards). Ecology is also required by its antidegradation policy to take appropriate and definitive steps to bring the water quality back into compliance with the water quality standards for waters that do not meet assigned criteria or protect existing or designated uses. WAC 173-201A-310(2); Fact Sheet at 62.

Nutrient pollution causes an increase in harmful algal growth, which in turn can result in reduced or depleted levels of dissolved oxygen, an imbalanced ecosystem, significant public health risks, loss of critical habitat for beneficial aquatic life, greatly reduced biodiversity, and a general decline in fish and aquatic life. These impairments pose a direct threat to aquatic life and the abundance of treaty-reserved resources. In the case of harmful algal blooms, it also threatens the Tribe's access and ability to harvest treaty reserved resources. Shellfish closures due to paralytic shellfish toxins in the central basin of Puget Sound were almost unheard of until the 1970s but had become commonplace by the 1990s and continue to the present.

Ecology should expressly confirm that nutrient discharges from the West Point Wastewater Treatment Plant are causing and contributing to violations of the state's dissolved oxygen water quality criteria. The fact sheet recognizes that Ecology's Salish Sea Model predicts "that nutrients discharged from wastewater treatment plants have a reasonable potential to contribute to existing low dissolved oxygen levels, below state water quality criteria, in the Salish Sea (which includes Puget Sound)." Fact Sheet at 83. But it says no more. However, this conclusion should not be up for dispute. Elsewhere, Ecology has recognized:

1. "Recent studies led Ecology to determine that anthropogenic (human) sources of nutrients lead to instances of low DO concentrations throughout Puget Sound (Khangaonkar et al., 2018, Pelletier et al., 2017, Ahmed et al., 2014, Roberts et al., 2014, Khangaonkar et al., 2012 b, Albertson et al., 2002) exacerbating those effects in areas that may have naturally occurring lower DO and creating additional conditions (areas or duration) where water quality standards are not met." Puget Sound Nutrient General Permit (PSNGP) Fact Sheet at 26.

2. "With at least 10 years dedicated to the technical work and development of water quality models, Ecology has reached the point where the science clearly demonstrates that cumulative point and nonpoint sources deplete DO resulting in nonattainment of standards within Washington waters of the Salish Sea." PSNGP Fact Sheet at 31.

3. "Ecology documented reasonable potential with the determination that domestic wastewater discharges may cause or contribute to a violation of surface water quality standards for dissolved oxygen." PSNGP Fact Sheet at 34.

And the U.S. Environmental Protection Agency (EPA) has explained: "Discharges of excess nutrients, specifically nitrogen, to Puget Sound from domestic WWTPs are contributing to existing low DO levels in Puget Sound. Through use of the Salish Sea Model, Ecology concluded that all domestic WWTPs that discharge to Puget Sound have reasonable potential to contribute to existing impairments." U.S. EPA, *Fact Sheet Addendum for Proposal of Additional Conditions Related to PFAS and Nutrient Optimization/Reduction*, at 4 (April 11, 2023), https://www.epa.gov/system/files/documents/2023-04/R10-NPDES-Lummi-Sandy-Point-WA0025658-Fact-Sheet-Addendum-2023.pdf.

West Point Treatment Plant's 2019 total inorganic nitrogen loading into the Puget Sound was 18,290 lbs/day, the highest of any wastewater treatment plant, and 25.6% of total cumulative nutrient load. PSNGP Fact Sheet at 78. There should be no dispute based on the modeling and data that West Point and its nutrient discharge are causing and contributing to violations of the state's dissolved oxygen water quality criteria.

Ecology has also recognized that "the existing DO impairments within the Washington Waters of the Salish Sea *require* nitrogen reduction from domestic POTWs (and other sources) in order to meet surface water quality standards," PSNGP Response to Comments at 26 (emphasis added), and "population growth will make the duration and extent of [the Sound's] existing impairments worsen," *id.* at 14. Ecology should confirm that nutrient reduction is required from West Point.

The fact sheet states that "Technology-based limits, in combination with the Puget Sound Nutrient General Permit discussed above, will ensure that dissolved oxygen criteria are met in the receiving water." Fact Sheet at 84. The Tribe requests that Ecology explain how it reached this conclusion and what time frame it is based on. There does not appear to be support for it and to the contrary, all the evidence suggests Ecology is aware the dissolved oxygen impairment will only get worse without nutrient discharge reductions and nothing in this permit or the PSNGP if and even once fully implemented will lead to nutrient reductions in the near future.

Yet the draft permit includes no effluent limits for nutrients (technology-based, water quality-based, numeric, or narrative) that Ecology acknowledges are necessary to control nutrient pollution to the Puget Sound in a manner protective of water quality. Instead, the fact sheet merely states:

> On December 1, 2021, Ecology issued the Puget Sound Nutrient General Permit (PSNGP) to regulate the discharge of Total Inorganic Nitrogen from 58 domestic wastewater treatment plants that discharge to marine and estuarine waters in

> Washington's waters of the Salish Sea (https://ecology.wa.gov/Regulations-Permits/Permits-certifications/Nutrient-Permit). King County's West Point Treatment Plant is covered by the PSNGP, which includes requirements for the control and monitoring of nutrients. This individual permit does not contain limits or other conditions related to the regulation of nutrients.

Fact Sheet at 83. This is insufficient for numerous reasons.

This justification ignores the context of the PSNGP and the permittee's efforts to have its limited requirements stayed and vacated. First, the PSNGP makes no findings regarding "all known, available and reasonable methods of prevention, control and treatment" (AKART) for the removal of nutrient pollutants from discharges by wastewater treatment plants into Puget Sound. It requires the permittees to undertake evaluations and analyses, but doesn't require dominant or moderate loaders to implement optimization; it only requires dominant or moderate discharging plant to implement a proposed approach to reduce its discharge by at least 10% below the action level exceedance if it exceeds the action level two years in a row, or for three years in the five-year permit term. This does not achieve Ecology's obligation to make an AKART determination and by not addressing nutrients in West Point's individual permit, Ecology is not addressing the Plant's discharges that cause or contribute to an exceedance of the relevant dissolved oxygen criteria.

Second, King County has sought and partially succeeded in staying most of the limited substantive requirements contained in the PSNGP, in particular the entire "Compliance with Standards" section and the sections on "Action Level Exceedance Corrective Actions" are stayed and not in effect pending an appeal of the PSNGP. *See* Stipulation for Partial Stay of Puget Sound Nutrient General Permit, PCHB No. 21-082c (Jan. 14, 2022). The appeal before the Pollution Control Hearings Board itself only got to briefing on preliminary issues, did not complete discovery, and based on a request joined by the permittee here, the appeal is currently stayed pending resolution of *City of Tacoma v. Dep't of Ecology*, No. 56859-4-II, before Division Two of the Court of Appeals. The substantive requirements contained in the PSNGP are thus likely multiple years away from becoming effective.

Third, the permittee itself is arguing that the PSNGP is unlawful and the limited nutrient control requirements it contains must be accomplished through individual permits. *See* Permittee Appellants' Joint Motion for Partial Summary Judgment on Threshold Issues, PCHB No. 21-082c, at 1-2, 14-21 (March 18, 2022) ("Ecology is only authorized, however, to require permit coverage for a discharge through either an individual permit or a general permit. Ecology does not have the authority to issue a mandatory general permit regulating the same discharge already authorized by an individual permit. Ecology could reissue individual permits with new requirements addressing each WWTP's specific contribution to discharges of total inorganic nitrogen ("TIN") and associated dissolved oxygen impairments."); Permittee Appellants' Reply in Support of Joint Motion for Partial Summary Judgment on Threshold Issues, PCHB No. 21-082c, at 3-10 (April 29, 2022). While the Tribe agrees with Ecology's response in the appeal that the permittee is incorrect, King County should not be able to have it both ways. This context shows that the West Point Wastewater Treatment Plant is currently "covered" by the PSNGP in only a narrow technical sense divorced from the reality of the situation and that the permittee itself should be viewed as requesting nutrient limits be incorporated into its individual permit

rather than the general permit. *See, e.g.*, WAC 173-226-080(2) ("The director may require any discharger to apply for and obtain an individual permit, or to apply for and obtain coverage under another more specific general permit."); WAC 173-226-240(3) ("Any discharger authorized by a general permit may request to be excluded from coverage under the general permit by applying for and being issued an individual permit."). Importantly, what is Ecology's plan should the permittee succeed in this, or any of its other arguments and gets the PSNGP thrown out? The Puget Sound cannot wait another five, eight, or more years before addressing West Point's nutrient discharges, and Ecology has the opportunity now to begin restoring it with the individual permit of the single largest nutrient discharger.

The failure to address nutrients in the permittee's individual permit is all the more troubling given the options Ecology is aware of. Ecology is aware of technology limiting nitrogen discharges to 3 mg/L. The Tribe requests that Ecology make a site-specifical finding on AKART for the removal of nutrient pollutants from West Point's discharges and set water-quality based effluent limits. Please also carefully review the attached CEAPC Technical Memorandum's "Lack of Nitrogen Permit Effluent Limits" section.

Alternatively, implementing the stayed provisions of the PSNGP is a bare minimum option. Ecology could require King County to conduct an engineering analysis to determine what constitutes all known, available, and reasonable methods of prevention, control and treatment (AKART) for nitrogen removal at the facility. The analysis must highlight an alternative representing the greatest total inorganic nitrogen reduction that is reasonably feasible on an annual basis. King County then must implement the option selected as AKART, within the permit term. Ecology could set an action level for total inorganic nitrogen; however, the Tribe requests the yearly action level be reduced from the level in the PSNGP as that level was set too high to be meaningful. Limits should be based on monthly average flows not the sum of monthly flows over one year. Flows during dry summer months can significantly skew annual averages by averaging out high flow events effectively allowing discharges resulting in water quality violations during the rainy winter and spring months.

The yearly "action levels" that Ecology calculated for the West Point Wastewater Treatment Plant and the other discharges used an egregiously lax statistical basis. The 99th percentile of the existing discharge loads would allow King County to continue to increase nitrogen pollution loads over many years. We urge Ecology to first review King County's 2022 nitrogen loads reporting under the Puget Sound Nutrient General Permit, which have not been made available to the public, and calculate the ratio of the actual monthly loads to the action levels.[1]

Any action level exceedance should also require both short term and long-term corrective actions. Waiting potentially 5 years for an exceedance to be addressed and implementation of an action is unacceptable.

[1] The Tribe recognizes the PSNGP allowed the permittee to "bubble" West Point with two other plants but sees no reason that would prevent Ecology from addressing West Point's nutrient discharges through its individual permit.

III. Ecology Has Not Imposed Adequate Compliance Schedules in the Draft Permit for Infrastructure Improvements at West Point WWTP, the County's CSO System, or Elliott West CSO Treatment Plant.

"When appropriate," NPDES permits may include "a schedule of compliance leading to compliance with CWA and regulations . . . as soon as possible, but not later than the applicable statutory deadline under the CWA." 40 C.F.R. § 122.47(a)(1). Compliance schedules "shall be developed to ensure final compliance with all water quality-based effluent limits in the shortest practicable time" and "shall generally not exceed the term of any permit." WAC 173-201A-510(4); *see* WAC 173-220-140(1)(b) ("Schedules of compliance, shall set forth the shortest, reasonable period of time, to achieve the specified requirements"); WAC 173-220-140(2) ("in no event shall more than one year elapse between interim dates").

"Any compliance schedule contained in an NPDES permit must include an enforceable final effluent limitation and a date for its achievement that is within the timeframe allowed by the applicable State or federal law provision authorizing compliance schedules as required by CWA sections 301(b)(1)(C); 502(17); the Administrator's decision in *Star-Kist Caribe, Inc.* 3 E.A.D. 172, 175, 177-178 (1990); and EPA regulations at 40 C.F.R. §§ 122.2, 122.44(d) and 122.44(d)(1)(vii)(A)." Memo from James Hanlon, Director of EPA's Office of Wastewater Management to Alexis Strauss, Dir. of the Water Division, Region 9, at 2 (May 11, 2007), https://www3.epa.gov/npdes/pubs/memo_complianceschedules_may07.pdf. "In order to grant a compliance schedule in an NPDES permit, the permitting authority has to make a reasonable finding, adequately supported by the administrative record and described in the fact sheet (40 C.F.R. § 124.8), that a compliance schedule is 'appropriate' and that compliance with the final WQBEL is required 'as soon as possible.' *See* 40 C.F.R. §§ 122.47(a), 122.47(a)(1)." *Id.*

Ecology does not include compliance schedules that should be incorporated in the draft permit. Instead of establishing a compliance schedule for the infrastructure projects the County, Ecology, and the Suquamish Indian Tribe have identified to address various problems in the County's West Point WWTP and CSO system (e.g., the 2022 settlement agreement and 2013 consent decree, as modified) in the draft permit, Ecology merely references documents external to the permit in its fact sheet or does not mention them at all.

For example, King County has had numerous, serious problems with power supply and intermediate pump station (IPS) failures at West Point, which have caused extremely significant discharges of untreated sewage through its emergency bypass and inadequately treated non-wet weather secondary treatment diversions. While the Fact Sheet (page 11) briefly notes the power disruption that caused the catastrophic failure of West Point in 2017, it fails to even mention the 1.28 million gallon secondary treatment diversion on May 19, 2018, the 1 million gallon secondary treatment diversion on March 17, 2019, the 2.1 million gallon *full plant* diversion on July 19, 2019 (which fouled Suquamish's beaches during the Canoe Journey and led to the Tribe sending a notice of intent to sue), the 2.5 million gallon secondary treatment diversion less than two months later on September 7, 2019, the 11 million gallon *full plant* diversion on January 13, 2021, or the 3.5 million gallon secondary treatment diversion on February 2, 2021. And this list does not even include the frequent secondary treatment bypasses and emergency bypasses in the tens of thousands and hundreds of thousands of gallons during the current permit's term. *See, e.g.*, Suquamish Tribe's Third Supplemental Notice of Intent to Sue Under the Clean Water Act

to King County (July 19, 2021). The Fact Sheet and draft permit certainly do not mention the significant power supply and IPS pump failures that have led to these serious violations of the Clean Water Act.

More importantly, neither the fact sheet nor the permit *addresses* the IPS pump failures (or human error) that have led to many of these serious bypasses in any way. Regarding power supply, the draft permit merely repeats conditions S5.D (Electrical Power Failure) and G.8 (Reduced Production for Compliance) from the current permit, which have done absolutely nothing to prevent the emergency bypasses and power-related secondary treatment bypasses. With respect to the emergency bypasses (i.e., no treatment whatsoever), the most Ecology does is state the following:

> As discussed above, the West Point WWTP has the potential to discharge untreated wastewater to Puget Sound through an emergency bypass outfall when necessary to protect the treatment plant and its operators. The emergency outfall consists of a 12-ft by 12-ft square pipe located approximately 600 feet offshore of West Point's north beach. The outfall discharges at a depth of approximately 40 feet. While Ecology recognizes the importance of this outfall to protect the facility and its operators, the proposed permit does not consider the outfall as a permitted discharge location. Ecology *may* take enforcement actions for discharges through this outfall. Figure 2 also shows the location of this outfall.

Fact Sheet at 17-18 (emphasis added). "*May* take enforcement actions for discharges through this outfall"? Such equivocation with respect to Ecology's enforcement intent is woefully insufficient to address the significant, ongoing problems with emergency bypasses at West Point. In any event, the emergency bypass and non-wet weather secondary treatment diversion problems must be better and more directly addressed *in the final permit's conditions*, including through compliance schedules for infrastructure improvements. As noted below, Ecology should specifically incorporate the infrastructure requirements and deadlines from the Tribe's settlement with the County in the permit, along with any additional requirements that Ecology believes are necessary in order to avoid unpermitted secondary treatment diversions and emergency bypasses.

Another issue of great concern to the Tribe is King County's lack of progress on addressing combined sewer overflows (CSOs). CSOs harm Suquamish tribal members through diminished use of beaches, decreased fishing and shellfishing opportunities in the Tribe's U&A, and the accumulation of metals and other toxics in fish that are then ingested by tribal members. EPA finalized the federal policy for reducing pollution from combined sewer overflows in 1994, and in 2007, EPA concluded that King County's ongoing CSOs violated state and federal regulations. This led to a 2013 Consent Decree between King County, Ecology, EPA, and the U.S. Department of Justice that required actions necessary to bring King County's CSO program into compliance with the Clean Water Act. King County has repeatedly complained about the deadlines in the 2013 Consent Decree (as modified in 2016), and on October 28, 2019, requested that the terms be renegotiated. In that letter, King County cited as one basis for modification the "Clean Water Plan," a wide-ranging planning process that the County has now abandoned citing the PSNGP and its negotiations with Ecology and EPA on the 2013 Consent Decree. *See* https://kingcounty.gov/depts/dnrp/wtd/ system-planning/clean-water-plan.aspx. The public, including the Suquamish Indian Tribe, has been excluded from negotiations regarding

modification of the consent decree. We have found this distressing and believe that the County must, at an absolute minimum, adhere to the schedule established in the 2013 consent decree, as modified in 2016, in order to meet its very long-standing obligations under the Clean Water Act.

In short, both Ecology and the Suquamish Indian Tribe have invested considerable time and resources into addressing the issues discussed in this section with King County, resulting in external documents that can and should inform and be incorporated into permit conditions in the new permit, including compliance schedules. Though such permit conditions need not be limited to the terms of such external documents (and certainly could not exceed any deadlines or contradict other conditions imposed in them), at a minimum, Ecology should establish compliance schedules in this permit consistent with provisions of the Tribe's settlement agreement with King County (Section IV), which contains deadlines that have not yet passed regarding the Uninterruptible Power Supply, Voltage Sag Mitigation, and Peak Flow Redundancy to address the emergency bypass and non-wet weather secondary treatment bypasses at West Point, and the 2013 consent decree (as modified in 2016), which establishes deadlines to address King County's persistent and significant CSO problems. Please also see Puget Soundkeeper's comments regarding controlled and uncontrolled CSOs.

The draft permit does—finally—impose a compliance schedule for improvements at the Elliott West CSO Treatment Plant, which routinely violates the current NDPES permit's effluent limits. Elliott West has been a significant and persistent source of the County's numerous Clean Water Act violations. The Tribe's 3rd Supplemental Notice of Intent to Sue, dated July 19, 2021, tracked nearly 100 violations at Elliott West CSO (Outfall 27b) between 2015 and 2021 alone. More violations followed. The draft permit imposes a compliance schedule for improvements at S15.A.[2] While the Tribe would very strongly prefer that the construction completion deadline for improvements at Elliott West occur within the permit term, it recognizes that there are scheduling difficulties with that timeframe and that the new total residual chlorine limit for Elliott West CSO treatment plant may have necessitated King County's reassessment of its prior alternatives analysis for the facility. The County recently updated the Tribe on its Elliott West alternatives analysis and schedule for Elliott West CSO Treatment Plant improvements. The Tribe appreciated the update but was also troubled by aspects of it. While the Tribe can live with the compliance schedule at S15.A of the draft permit, it cannot accept the County's current anticipated schedule, which would extend construction completion to a year longer than contemplated in the draft permit (i.e., December 31, 2032 instead of December 31, 2031). The County also contemplates submitting its final plans and specifications to Ecology by June 30, 2028 (rather than December 31, 2027) and completing bidding for construction for the approved improvement project by December 31, 2028 (rather than May 30, 2028). The Tribe urges Ecology to retain the compliance schedule included in the draft permit, and at the very least, bidding must be completed by the end of the permit term. Ecology must also hold firm on the construction completion date, including making the date binding through all means available.

Further, in light of the lower limits for total residual chlorine included in the draft permit (which the Tribe appreciates), the County is re-evaluating disinfection alternatives for Elliott West, including ultra-violet disinfection, to meet the new permit condition. As the CEAPC

[2] Note that the 80% draft plans and specifications deadline should be June 30, 2027 rather than July 1, 2027 to comply with WAC 173-220-140(2).

Technical Memorandum (page 8) indicates: "Implementation of ultraviolet disinfection entirely eliminates TRC from discharges from Elliott West, thus providing a clear environmental and ecological benefit, and will benefit the County by eliminating the potential for penalties resulting from NPDES Permit violations related to discharges of TRC from Elliott West." Consequently, the Tribe urges Ecology to add to Permit Condition S15.B (Requirements for engineering documents) or to Task 1 in S15.A (Table 36) that the modifications required to bring the Elliott West CSO Treatment Plant effluent into compliance with its permitted limits must include ultraviolet disinfection.

Finally, as described in the next section, the Tribe also urges Ecology to include a compliance schedule for completing a robust inflow and infiltration (I&I) removal program within the term of the permit.

IV. The Draft Permit Fails to Address Inflow and Infiltration (I&I) in a Meaningful Manner.

The Tribe is deeply concerned that Ecology has not addressed I&I in any meaningful way in the draft permit. The failure to do so means that Ecology is not forcing actions that would reduce flows into the County's West Point plant and CSO system that could reduce the severity and/or frequency of: CSOs, sanitary sewer overflows (SSO), CSO treatment facility discharges, secondary treatment bypasses, and emergency bypasses at the West Point WWTP influent control structure, all of which result in the discharge of elevated pollutants loads to the environment, which can adversely affect public health and the exercise of treaty fishing rights. Each of these types of discharge are therefore of significant concern to the Tribe, and Ecology should be doing everything within its power to force the County to reduce their frequency and severity, including meaningfully addressing inflow and infiltration. Please carefully review the CEAPC Technical Memorandum comments in the section entitled "Draft Permit Lack Requirements for Inflow and Infiltration Reductions." As CEAPC notes,

> The Draft Permit requires that as part of the County's operation and maintenance program that the County strictly enforce its sewer ordinances to not allow connection of inflow sources, such as roof drains or foundation drains, to the sanitary sewer system, but contains no means of monitoring this requirement. The only other requirement the Draft Permit includes for reducing RDII [i.e., rainfall-derived inflow and infiltration] is *consideration* of methods for I&I removal if a plan for maintaining adequate capacity at the West Point WWTP is triggered through either the actual flow or waste load to West Point WWTP reaches 85% of its design criteria for three consecutive months or the projects flows or loading would reach design capacity within five years. Either triggering event occurring is unlikely, meaning that the Draft Permit will most likely not force action to reduce I&I but rather only maintain the status quo. Even if one of the two triggering events occurred, the County would not have to take any measures to actually identify and eliminate RDII sources, but would only have to *consider* them in a plan.

Technical Memorandum at 4. The existing and proposed requirements are plainly insufficient to address the problem. The Tribe very strongly encourages Ecology to adopt the following

recommendation described in the CEAPC Technical Memorandum (pages 4-5):

> Consistent with Industry Standards and with common NPDES permitting requirements, Ecology should include requirements in the Draft Permit for the County to implement an I&I removal program in the County-owned and operated portions of its SSS that convey flows to the West Point WWTP and the ICS SSS that convey flows to the County's collection system for treatment at the West Point Treatment Plan in order to reduce the occurrence of untreated wastewater discharges through CSOs, SSOs, and Emergency Bypass and partially-treated wastewater through CSO treatment facility discharges and Bypass. Areas of the SSS identified with excessive RDII should be prioritized for pipe and manhole inspections and illicit inflow source identification investigations (e.g., smoke testing) and I&I source removal through prioritized manhole and pipe rehabilitation and illicit inflow source elimination. The Draft Permit should include a compliance schedule for completion of the I&I removal program within the term of the Permit, a required level of I&I removal resulting from the I&I removal program, and clear demonstration through flow monitoring results that the County achieved the required level of I&I removal.
>
> Also consistent with Industry Standards, King County and the ICS should address privately sourced I&I to have the most effective I&I removal program possible. Recent I&I removal efforts by the City of St. Petersburg, Florida identified that private I&I source removal through service lateral pipe rehabilitation combined with public I&I source removal through main pipe and manhole rehabilitation resulted in a 64% reduction in total RDII, while public source removal alone resulted in only a 30% reduction in RDII.[27] In support of environmental justice and to ensure the most effective I&I removal efforts possible, St. Petersburg instituted a program to assist private property owners with the costs of inspecting and rehabilitating private service laterals. The County and ICS should consider funding and implementing a similar comprehensive I&I reduction program addressing private and public I&I source removal to reduce excess flows in the County collection system and to West Point WWTP.

Beyond these specific requests, Ecology should require the County to evaluate and provide a report to Ecology regarding a plan to update its current service agreements with the independent collection systems that contribute to flows in the County collection system, which do not currently contain restrictions on the quantity of flows discharged to the County collection system, and to explain how the County will provide incentives for ICS to reduce flow by identifying and eliminating I&I sources.

The Tribe also concurs with the comments of Washington Conservation Action and Puget Soundkeeper on this topic,[3] including WCA's suggestion of including metering requirements for contributing jurisdictions based on the experience of jurisdictions on the east coast.

[3] The Tribe also directs Ecology's attention to Puget Soundkeeper's comments regarding I&I being listed at WAC 173-245-040(2)(b) as the first control alternative that "shall" be considered to achieve the greatest reasonable reduction at each CSO site. As Puget Soundkeeper notes, there is little indication that King County has considered any meaningful I&I reduction measures via the consent decree or otherwise.

V. Comments on Specific Pollutants

The Tribe briefly comments on some of the specific pollutants included (or not included) in the draft permit. In addition, the Tribe directs Ecology's attention to the comments in the CEAPC Technical Memorandum, as well as the comments of Washington Conservation Action and Puget Soundkeeper, regarding specific pollutants. While we appreciate that Ecology has added and, in some cases, strengthened certain effluent limits, we do have concerns about how some pollutants have been addressed or not been included in the permit at all.

A. Per-and polyfluoroalkyl substances (PFAS)

As the fact sheet explains, "Ecology published a revised PFAS Chemical Action Plan that include[s] a recommendation to 'Understand and manage PFAS in waste', which included recommendations related to wastewater treatment. Fact Sheet at 103. In that Chemical Action Plan, Ecology recognized the danger from PFAS and the need for action to address PFAS contamination. Ecology has recognized that "PFAS have been detected in Washington [] surface waters, groundwater, wastewater treatment plant (WWTP) effluent, freshwater and marine sediments, freshwater and marine fish tissue, and osprey eggs. Any toxic or other hazardous effects of these chemicals will be with us for many decades." *Per- and Polyfluoroalkyl Substances Chemical Action Plan, Hazardous Waste and Toxics Reduction Program*, Wash. State Dept. of Ecology, Publication 21-04-048, at 12 (Sept. 2022), https://apps.ecology.wa.gov/publications/documents/2104048.pdf. Bioaccumulation of PFAS has been confirmed in marine and terrestrial species, zooplankton and other invertebrates, and fish. *Id.* at 13. PFAS exposure in humans can occur through consuming contaminated water or food. PFAS have shown harmful effects to wildlife and to people. *Id.* One recommendation from Ecology's PFAS Chemical Action Plan was that: "Ecology should evaluate PFAS in WWTP influent and effluent to better understand PFAS discharges in Washington state." *Id.* at 27.

The Tribe supports the draft permit's requirement for monitoring of PFAS in influent to the West Point WWTP in 2025 and 2026 and the steps required to identify and control PFAS discharges such as updating industrial users inventory, requiring those industrial users to complete a PFAS prevention/source reduction evaluation, and evaluate other best management practices and pollution prevention strategies. Draft Permit at 17, 43. However, those requirements are not sufficient:

1. Consistent with U.S. EPA and Ecology's own recommendations, Ecology should not just require influent monitoring, but also effluent and biosolids monitoring. Memo from Radhika Fox, Assistant Administrator U.S. EPA to EPA Regional Water Division Directions, Regions 1-10, *Addressing PFAS Discharges in NPDES Permits and Through the Pretreatment Program and Monitoring Programs*, at 4 (Dec. 5, 2022), https://www.epa.gov/system/files/documents/2022-12/NPDES_PFAS_State%20Memo_December_2022.pdf; *see also* Authorization to Discharge Under the National Pollutant Discharge Elimination System, U.S. Department of the Navy Naval Magazine Indian Island Wastewater Treatment Plant, Permit No. WA0021997 (June 21, 2023) https://www.epa.gov/system/files/documents/2023-06/R10-NPDES-Naval-Magazine-Indian-Island-WA0021997-Final-Permit-2023.pdf (requiring quarterly influent, effluent, and sludge PFAS monitoring). While influent monitoring will

be valuable in helping to identify potential sources of PFAS coming into the facilities, effluent and residuals monitoring are necessary to address potential impacts to receiving waters and inform future permitting decisions, including the potential development of water quality-based effluent limits on a facility-specific basis.

2. Also consistent with U.S. EPA recommendations, the influent, effluent, and biosolids monitoring should require monitoring once the NPDES Permit is in effect (i.e., not wait until 2025) and last for its entire term (i.e., not stop in 2026). The permit should continue to require regular monitoring during its term to validate PFAS reductions are working. *Addressing PFAS Discharges in NPDES Permits and Through the Pretreatment Program and Monitoring Programs*, at 4-5.

The Tribe requests the permit should be revised to include PFAS monitoring of influent, effluent, and wastewater residuals monitoring for the entirety of the permit term and on a frequent enough period (i.e., more than quarterly) to be able to characterize the presence and concentration in the facilities' waste streams. Finally, in section S6.E(1), we believe that the industrial categories listed are underinclusive of potential sources of PFAS, such as laundries, electronic products, hazardous waste, chemical wholesalers, and that Ecology should enumerate such potential sources in the list included at that section.

B. Other Chemicals of Emerging Concern (CECs) and Other Known Toxics

In addition to PFAS, other chemicals of emerging concern should be monitored under the permit and similar requirements to those established for PFAS should be incorporated. For instance, 6PPD-Q is a contaminant of concern due to its known effects on salmonids. Since stormwater constitutes the majority of CSOs, it is important to know whether the CSOs are discharging 6PPD-Q and to monitor for such discharges. Other important CECs include a variety of endocrine disrupters, such as those found in some pharmaceuticals and personal care products, which can affect aquatic species important to the Tribe. The Tribe recommends expanding monitoring to include these other CECs.

The Tribe also believes that Ecology should establish effluent limits for PCBs and other known toxics found in wastewater effluent streams. The Tribe directs Ecology's attention to the comments of Washington Conservation Action and Puget Soundkeeper on these topics.

C. Total Residual Chlorine (TRC)

The Tribe appreciates that Ecology has significantly reduced the TRC limit at Elliott West CSO Treatment Plant and at least marginally reduced the TRC limits at some of the other CSO treatment plants. The TRC limit at West Point remains high, and we request that Ecology justify the Average Monthly limit of 139 micrograms/liter and Maximum Daily Limit of 364 micrograms/liter. West Point has already demonstrated that its average discharge is well below either of these limits (Fact Sheet at Table 19). Unlike the CSO treatment plants, West Point discharges daily, and the Tribe would like to understand Ecology's reasoning for allowing this load of TRC into Puget Sound.

D. Copper Effluent Limit for Henderson/MLK CSO treatment plant

Ecology determined that copper has a reasonable potential to cause a violation of the water quality standards at the Henderson/MLK CSO treatment plant. However, due to the fact that the facility is located near the upstream boundary that Ecology recognizes as the line between brackish and freshwater conditions, Ecology has proposed to increase the effluent limit derived using EPA's 1991 *Technical Support Document for Water Quality-based Toxics Control* (EPA/505/2-90-001) [hereinafter "EPA, 1991"] for copper, which was 12.3 µg/l, to 22.3 µg/l (i.e., 95th percentile value of monitored data) based on a number of questionable factors (Fact Sheet at 94) to protect aquatic life based on *freshwater* criteria.

The Tribe does not agree with this approach and directs Ecology's attention to the attached CEAPC Technical Memorandum's section discussing the Henderson/MLK Copper Effluent Limit Determination. As there is no hard or physical boundary between brackish and freshwater conditions, it is likely that marine organisms, or organisms adapted to brackish conditions, are present at the site. It is well known that copper is toxic to many aquatic organisms, including shellfish and salmonids. The Tribe believes allowing more copper to be discharged than the 12.3 µg/l effluent limit derived using methods from 1991, EPA (Fact Sheet at 94 and Appendix D) would be less protective than is required under the Clean Water Act and to protect important tribal resources.

VI. CSO Pollution Prevention Program Best Management Practices Should be Reviewed and Evaluated for Effectiveness and Consistency in Annual Reporting.

The draft permit requires implementation of a pollution prevention program focused on reducing the impact of CSOs on receiving waters (S11.B.7). As an element of the pollution prevention program, best management practices (BMPs) must be implemented to control the sources of pollutants in stormwater runoff that enters the Permittee's combined sewer system. The draft permit includes BMPs, however, the permit must go further and require that BMPs will be reviewed and evaluated for effectiveness and consistency in annual reporting. Requiring an annual evaluation of BMPs ensures accountability.

VII. The Draft Permit Impermissibly Employs Mixing Zones.

In permits that address the discharge of wastes that have caused or contributed to water quality violations in the past, the use of dilution is inappropriate and unlawful. Yet Ecology continues to rely on the old concept that "the solution to pollution is dilution," despite the fact that pollutants do not flush to the Pacific Ocean but continue to circulate throughout the Salish Sea. EPA created the concept of the mixing zone but it also has asserted that they can only be used when "where appropriate." 40 C.F.R. § 122.44(d)(1)(ii).

The Pollution Control Hearings Board has held that "[t]he granting of a mixing zone, which allows the discharge of pollutants at a greater concentration than the calculated effluent limit, is an exception to the water quality standards and is to be granted sparingly." Puget Soundkeeper Alliance v. Washington Ecology, PCHB No. 13-137c, Findings of Fact, Conclusions of Law, and Order (July 23, 2015) at 43 (emphasis added).

In general, mixing zones permit the discharge of effluent that is more polluted than allowed by water quality standards for the protection of aquatic organisms and designated uses, including the harvest and consumption of fish and shellfish. Mixing zones are typically used when effluent will not meet standards at the point of discharge without dilution by the receiving water. While dilution may reduce some effects, it does not eliminate impacts or risks.

Wastewater-impacted environments often show increased concentrations of total organic carbon, total nitrogen, phosphorus, and toxic chemicals in sediments. The effects of organic enrichment and contamination on the seabed usually follow a gradient of type and intensity with distance from the source. However, regardless of their scale intensity, duration or frequency, these effects may be influenced by other factors (physical, climatic or anthropogenic) to produce cumulative environmental impacts that are not considered in the permitting process establishing mixing zones. For example, studies by Ecology have long ago concluded that nitrogen in municipal sewage discharges is causing and contributing to low levels of dissolved oxygen. Decreased levels of dissolved oxygen results in nuisance algal blooms that further depress dissolved oxygen levels and have other deleterious effects, such as the replacement of Puget Sound's forage fish with jellyfish, and other food web and water quality changes.

Under WAC 173-201A-400, a discharger shall be required to fully apply All Known and Reasonable Technologies (AKART) prior to being authorized a mixing zone. The Tribe believes that other technologies, specifically membrane bioreactor (MBR) technology, offers viable and feasible approaches to improve effluent quality, ensuring compliance with permit limits without the use of mixing zones. For CSO discharges, we question whether Ecology has the authority to assign dilution factors and mixing zones at all, and especially not for toxic chemicals. The Tribe incorporates the comments provided by Puget Soundkeeper and Washington Conservation Action by reference.

The permit needs to be revised to authorize only temporary mixing zones and require a defined process, including benchmarks, to upgrade treatment that will meet effluent limits at the point of discharge (e.g., MBR technology).

VIII. The Tribe Requests that the Permit Require Sediment Monitoring at the Alki and Carkeek CSO Treatment Facilities.

The draft permit requires sediment monitoring in the vicinity of the Barton CSO outfall (057), Martin Luther King Jr. Avenue Regulator outfall (013), and the Henderson Pump Station outfall (045) based on the 2012 Post Construction Monitoring Plan (PCMP) for King County CSO Controls and the 2018 King County Sediment Management Plan (SMP) Update.

The fact sheet states that the most recent sediment data from these two sites were collected in 2001 and 2000, respectively. At that time, all detected chemicals were less than their respective SQS criteria or LAET values. Given the fact that there were no historical SMS exceedances, and because source conditions have not changed, no additional sediment monitoring is required in this permit. The Tribe believes that 20-year-old sediment data may not reflect current conditions and sediment monitoring should be required to confirm sediments in the vicinity of the discharge points meet SMS criteria.

IX. Combined Sewer Overflows Cannot Cause an Exceedance of the Sediment Management Standards.

The draft permit fact sheet explains that, among other regulations, the sediment management standards apply to domestic wastewater NPDES permits, Fact Sheet at 7, and this permit "has a role in assuring [CSO outfall] discharges comply with the Sediment Management Standards," Fact Sheet at 50. Section 11.A. of the current NPDES permit states, regarding combined sewer overflow discharge locations: "This permit does not authorize discharges from CSO outfalls that threaten characteristic uses of the receiving water as identified in the water quality standards, Chapter 173-201A WAC, *or that result in an exceedance of the Sediment Management Standards, Chapter 173-204 WAC*." (emphasis added). Section 11.A. of the draft permit uses different language: "In accordance with chapters 173-201A-400(4) and 173-245-015 WAC, this permit does not authorize a mixing zone or discharge from a CSO outfall when doing so causes adverse impacts that threaten characteristic uses of the receiving water, cause a loss of sensitive or important habitat, or adversely affects public health."

Why does the draft permit remove the language that is in the current permit stating that the permit does not authorize CSO outfalls that result in an exceedance of the Sediment Management Standards? The removal of that language will only serve to create confusion, when it should be clear that the permit does not and cannot authorize a discharge that would result in an exceedance of the Sediment Management Standards. Clean Water Act Section 402(o) prohibits backsliding, or reissuing a permit with effluent limitations that are less stringent than comparable effluent limitations in the previous permit, subject to certain exceptions. 33 U.S.C. § 1342(o); *see also* 40 C.F.R. § 122.44(l)(1). This change appears to violate the Clean Water Act's backsliding prohibition, or at least the spirit of that prohibition. The Tribe requests that the final permit maintain the language that the permit does not authorize CSO outfalls that result in an exceedance of the Sediment Management Standards or clearly explain the agency's intent with respect to the Sediment Management Standards.

X. The Final Permit Should Require Notices Be Provided to the Suquamish Indian Tribe.

As Ecology is aware and as described in these comments, Puget Sound, including those portions into which King County's West Point WWTP and CSO system discharge, are of existential importance to the Tribe and its members. As a sovereign that is directly affected by King County's discharges, the Tribe requests that all reporting required under the final permit, including but not limited to all non-compliance reporting and all immediate reporting to Ecology, the Department of Health Shellfish Program, and local health jurisdictions, be provided to the Tribe at the same time. King County must already report certain instances of non-compliance to the Tribe under the 2022 settlement agreement, and similar reporting requirements to affected Tribes are becoming more common place in the region. *See, e.g.*, NPDES Permit Issued by EPA to the U.S. Navy for the Naval Magazine WWTP (to become effective on October 1, 2023), https://www.epa.gov/system/files/documents/2023-06/R10-NPDES-Naval-Magazine-Indian-Island-WA0021997-Final-Permit-2023.pdf (Special Condition III.G.4 at page 25).

The Tribe also directs Ecology's attention to Washington Conservation Action's important comments regarding public transparency and accountability section.

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Thank you for the opportunity to comment on the draft individual King County Wastewater Treatment Division West Point Wastewater Treatment Plant and Combined Sewer Overflow System NPDES permit. We are available at your convenience to discuss these comments and to answer any questions you may have about them. You may contact Denice Taylor at dtaylor@suquamish.nsn.us in regard to these comments. We look forward to seeing our comments addressed in the final permit.

Sincerely,

/s/ Alison O'Sullivan

Alison O'Sullivan
Ecosystem Recovery Program Manager
Natural Resources Department
Suquamish Indian Tribe

ATTACHMENT

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Technical Memorandum

Date: July 6, 2023

To: Suquamish Indian Tribe, Office of Tribal Attorney; Kendra Martinez, Esq.; Jane Steadman, Esq.

From: Kevin Draganchuk, P.E., BCEE

Re: Draft NPDES Permit WA0029181 – King County Wastewater Treatment Division West Point Wastewater Treatment Plant and Combined Sewer Overflow System

CEA Engineers, P.C. Job No.: J23-04

On behalf of the Suquamish Indian Tribe ("Tribe"), this Technical Memorandum conveys an evaluation by CEA Engineers, P.C. ("CEAPC") of the Draft National Pollutant Discharge Elimination System ("NPDES") Permit No. WA0029181 ("Draft Permit") for the King County ("County") Department of Natural Resources and Parks Wastewater Treatment Division West Point Wastewater Treatment Plant ("West Point WWTP") and Combined Sewer Overflow ("CSO") System developed by the State of Washington Department of Ecology ("Ecology") issued for public comment on April 5, 2023. CEAPC evaluated the Draft Permit for adequacy to be protective of public health and well-being and environmental and ecological resources and in accordance with the general standard of care to adhere to best engineering practices and industry standards in the wastewater treatment and combined/sanitary sewer system industries ("Industry Standards").

Documents Relied Upon

CEAPC relied upon the following documents in completing its evaluation and this Technical Memorandum:

- State of Washington Department of Ecology, Draft National Pollutant Discharge Elimination System Permit No. WA0029181, King County Wastewater Treatment Division West Point Wastewater Treatment Plant and Combined Sewer Overflow System.
- State of Washington Department of Ecology, Fact Sheet for NPDES Permit WA0029181, West Point Wastewater Treatment Plant and Combined Sewer Overflow System, April 5, 2023. ("Fact Sheet")
- State of Washington Department of Ecology, West Point Draft Permit Information Session.
- State of Washington Department of Ecology, National Pollutant Discharge Elimination System Permit No. WA0029181, King County Wastewater Treatment Division - West

Point Wastewater Treatment Plant & Combined Sewer Overflow System, Effective February 1, 2015. ("Current Permit")

Collection System Overview

The County's wastewater collection system infrastructure conveys wastewater to the West Point WWTP and consists partially of a combined sewer system ("CSS") to collect and convey both sanitary sewage and stormwater runoff and a separate sanitary sewer system ("SSS") to collect and convey sanitary sewage, including from numerous tributary jurisdictions with service agreements with the County. The SSS discharges to the CSS for ultimate conveyance to West Point WWTP for treatment.[1]

The West Point WWTP treatment train consists of primary treatment, secondary treatment through the activated sludge process, and chlorine disinfection. Fully treated effluent discharges through Outfall 001 to Puget Sound.[2,3]

During wet weather conditions when instantaneous flows exceed 300 million gallons per day ("MGD"), the design capacity of the secondary treatment process at West Point WWTP, the excess flows bypass secondary treatment and receive only primary treatment and disinfection prior to discharge to Outfall 001 ("Bypass"). Bypass is authorized by the Current Permit under these wet weather conditions, and the Draft Permit proposes to continuing Bypass authorization.[4]

The CSS includes five CSO treatment facilities that treat combined sewage flows in excess of the CSS capacity through primary settling to reduce solids loading and disinfection to reduce bacteria loading in discharges from the CSO treatment facilities. The five CSO treatment facilities include: [5]

- Elliott West
- Henderson/MLK
- Carkeek
- Alki
- Georgetown

Disinfection at Georgetown is performed using ultraviolet radiation.[6] The other four CSO treatment facilities utilize chlorine disinfection and subsequently dechlorinate CSO discharges

1 King County, Clean Water Plan, Existing Conditions Report, April 2020, pages 41 and 43.
2 State of Washington Department of Ecology, Draft National Pollutant Discharge Elimination System Permit No. WA0029181, King County Wastewater Treatment Division West Point Wastewater Treatment Plant and Combined Sewer Overflow System, page 2. (Hereafter, "Draft Permit").
3 State of Washington Department of Ecology, Fact Sheet for NPDES Permit WA0029181, West Point Wastewater Treatment Plant and Combined Sewer Overflow System, April 5, 2023, pages 12 - 13. (Hereafter, "Fact Sheet").
4 Draft Permit, pages 31 and 47.
5 Draft Permit, page 2.
6 Draft Permit, page 2.

through addition of sodium bisulfite.[7] The chlorine disinfection/dechlorination process introduces an additional pollutant to CSO discharges, total residual chlorine ("TRC") that requires monitoring and effluent limitations at Elliott West, Henderson/MLK, Carkeek, and Alki.[8]

The CSS includes 38 permitted CSO outfalls for discharges of combined sewage when flows exceeded regulated capacity of the CSS at the CSO outfall locations.[9]

Draft Permit Lacks Requirements for Inflow and Infiltration Reductions

Based on historical flow records, approximately 25% of flows to the West Point WWTP consist of inflow and infiltration ("I&I") and 75% of peak flows in the SSS result from rainfall-derived inflow and infiltration ("RDII").[10,11]

Wastewater flow in an SSS consists of base sanitary flow, groundwater infiltration, dry weather inflow, and RDII. Infiltration results from groundwater seepage into the SSS through structural defects, such as faulty joints between pipes or service connections, defects in manhole walls, or defects in pipes.[12] Inflow results from stormwater runoff that enters an SSS through directly connected roof leaders, foundation drains, sump pumps, cellar drains, yard drains; cleanouts; defective manhole covers; and improper connections between the sanitary and storm sewers. Inflow can also occur in dry weather from sump pumps or foundation drains that receive groundwater under dry conditions or from structurally defective SSS infrastructure that traverses surface waters.[13,14,15,16]

Stormwater inflow to a CSS differs from inflow to an SSS, since a CSS is intended and designed to collect and convey stormwater flows. An SSS is not designed to collect and convey stormwater flows, which are intended for collection and conveyance by a separate storm sewer system in areas with an SSS.

34 independently owned and operated collection systems discharge to the County collection system. The combined length of the 34 independent collection systems ("ICS") is over 5,900 miles of pipelines.[17] The County's current service agreements with ICS do not contain

7 Fact Sheet, pages 19, 21, 23, 26.
8 Draft Permit, pages 10 and 11.
9 Draft Permit, page 2 and Special Condition S.11, pages 47-48.
10 Fact Sheet, page 14.
11 King County, Clean Water Plan, Existing Conditions Report, April 2020, page 60.
12 Service connections are the locations where lateral pipes enter mains.
13 Water Environment Federation, Wastewater Collection Systems Management Seventh Edition, Manual of Practice No. 7, 2021, page 6.
14 Water Environment Federation, Prevention and Control of Sewer System Overflows, WEF Manual of Practice No. FD-17, Third Edition, 2011, pages 28 and 176.
15 2016 WCS O&M Manual, pages 4-1 and 4-2.
16 United States Environmental Protection Agency, Guide for Estimating Infiltration and Inflow, June 2014.
17 King County, Clean Water Plan, Existing Conditions Report, April 2020, pages 40 - 41.

restrictions on the flow quantity discharged to the County collection system and do not provide incentives for ICS to reduce flows by identifying and eliminating I&I sources.[18]

CEAPC Comment

The Draft Permit fails to address excess flows resulting from I&I in a meaningful way. The Draft Permit requires as part of the County's operation and maintenance program that the County strictly enforce its sewer ordinances to not allow connection of inflow sources to the SSS, such as roof drains or foundation drains, but contains no means of monitoring this requirement.[19] The only other requirement the Draft Permit includes for reducing RDII is *consideration* of I&I removal methods within a plan for maintaining adequate capacity at the West Point WWTP. Development of such a plan is only triggered through either the actual flow or waste loads to West Point WWTP reaching 85% of the design criteria for three consecutive months or flow or loading projections reaching design capacity within five years.[20] Either triggering event occurring is unlikely, meaning that the Draft Permit will most likely not force action to reduce excess flows resulting from I&I, but rather maintain the status quo. Even if one of the two triggering events occurred, the County would not have to take any measures to actually identify and eliminate RDII sources, but would only have to *consider* them in a plan.

The lack of requirements in the Draft Permit to address excess flows resulting from RDII is problematic because RDII contributes to CSOs, sanitary sewer overflows ("SSOs"), CSO treatment facility discharges, Bypass, and emergency bypasses at the West Point WWTP influent control structure ("Emergency Bypass"), all of which result in the discharge of elevated pollutants loads to the environment, including pathogens, nutrients, and oxygen-demanding substances, that can adversely impact public health and well-being and environmental and ecological resources. SSOs and dry weather CSOs are prohibited by the Draft Permit, and, in addition to authorized Bypass, require immediate reporting to Ecology, the Department of Health Shellfish Program, and local health jurisdiction due to their potential adverse impacts to public health and well-being.[21]

Consistent with Industry Standards and with common NPDES permitting requirements, Ecology should include requirements in the Draft Permit for the County to implement an I&I removal program in the County-owned and operated portions of its SSS that convey flows to the West Point WWTP and the ICS SSS that convey flows to the County's collection system for treatment at the West Point Treatment Plan in order to reduce the occurrence of untreated wastewater discharges through CSOs, SSOs, and Emergency Bypass and partially-treated wastewater

18 Fact Sheet, page 15.
19 Draft Permit page 34,
20 Draft Permit, pages 31 – 32.
21 Draft Permit, page 28.

through CSO treatment facility discharges and Bypass. [22,23,24,25,26] Areas of the SSS identified with excessive RDII should be prioritized for pipe and manhole inspections and illicit inflow source identification investigations (e.g., smoke testing) and I&I source removal through prioritized manhole and pipe rehabilitation and illicit inflow source elimination. The Draft Permit should include a compliance schedule for completion of the I&I removal program within the term of the Permit, a required level of I&I removal resulting from the I&I removal program, and clear demonstration through flow monitoring results that the County achieved the required level of I&I removal.

Also consistent with Industry Standards, King County and the ICS should address privately sourced I&I to have the most effective I&I removal program possible. Recent I&I removal efforts by the City of St. Petersburg, Florida identified that private I&I source removal through service lateral pipe rehabilitation combined with public I&I source removal through main pipe and manhole rehabilitation resulted in a 64% reduction in total RDII, while public source removal alone resulted in only a 30% reduction in RDII.[27] In support of environmental justice and to ensure the most effective I&I removal efforts possible, St. Petersburg instituted a program to assist private property owners with the costs of inspecting and rehabilitating private service laterals.[28] The County and ICS should consider funding and implementing a similar comprehensive I&I reduction program addressing private and public I&I source removal to reduce excess flows in the County collection system and to West Point WWTP.

Lack of Nitrogen Permit Effluent Limits

West Point WWTP is a dominant total inorganic nitrogen ("TIN") loader to Puget Sound, defined by the Puget Sound Nutrient General Permit ("Nutrient General Permit") as a discharger of more than 2,000 pounds TIN/day ("lb/d").[29] The Nutrient General Permit does not contain

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22 United States Environmental Protection Agency, Guide for Estimating Infiltration and Inflow, June 2014.

23 American Society of Civil Engineers, United States Environmental Protection Agency, and Black and Veatch Corporation, Sanitary Sewer Overflow Solutions Guidance Manual, EPA Cooperative Agreement # CP-828955-01-0, April 2004, pages ES-1 and 1.

24 United States Environmental Protection Agency, "National Pollutant Discharge Elimination System (NDPES), Sanitary Sewer Overflows Frequent Questions," June 21, 2022. https://www.epa.gov/npdes/sanitary-sewer-overflow-sso-frequent-questions, last accessed June 29, 2023.

25 New York State Department of Environmental Conservation, State Pollutant Discharge Elimination System (SPDES) Discharge Permit, SPDES Number: NY-0026697, Permittee: Westchester County Department of Environmental Facilities, New Rochelle Sanitary Sewer District WWTP.

26 New York State Department of Environmental Conservation, State Pollutant Discharge Elimination System (SPDES) Discharge Permit, SPDES Number: NY-0026701, Permittee: Westchester County Department of Environmental Facilities, Mamaroneck Sanitary Sewer District WWTP.

27 City of St. Petersburg Private Laterals I/I Pilot Study Report, January 2023.

28 City of St. Petersburg, Lateral Line Rehabilitation, 2023, https://www.stpete.org/residents/current_projects/lateral_lines_rehabilitation_project.php. Accessed July 6, 2023.

29 State of Washington Department of Ecology, Puget Sounds Nutrient General Permit, Effective Date: January 1, 2022, pages 7 and 53 and Table 3. (Hereafter, "Nutrient General Permit").

effluent limits, but rather requires that TIN loaders achieve an Action Level that indicates treatment effectiveness.[30] The Action Level for West Point WWTP's only permitted outfall, Outfall 001, is 6,670,000 pounds TIN/year, which equates to a permitted daily average TIN discharge of over 18,000 lb TIN/day that is more than nine times greater than the Nutrient General Permit threshold for defining a dominant loader.[31] Though not technically an effluent limit, the Action Level allows the County to discharge on average over nine tons of nitrogen daily to Puget Sound.

Dominant loaders are required to complete a Nutrient Reduction Evaluation ("NRE") for review by Ecology by December 31, 2025, that provides a pathway to achieving an annual average concentration of 10 mg TIN/l and a seasonal average concentration between April and October of 3 mg TIN/l (collectively, "Nutrient General Permit TIN Concentrations"). Dominant loaders that demonstrate to Ecology in their annual reports that they are already achieving the Nutrient General Permit TIN Concentrations and their Action Levels do not need to prepare an NRE.[32] The Nutrient General Permit TIN Concentrations are not effluent limits, but rather are guidance values that require additional action if not achieved.

CEAPC Comment

Further examination of West Point WWTP effluent TIN discharges demonstrate that Ecology should consider more stringent requirements in the Draft Permit than those contained in the Nutrient General Permit to be protective of Puget Sound and the Salish Sea. TIN is the sum of nitrite-nitrogen, nitrate-nitrogen, and ammonia-nitrogen. Between January 2015 and December 2021, effluent from West Point WWTP Outfall 001 contained an average of 25.5 mg TIN/l, far in excess of the Nutrient General Permit TIN Concentrations.[33] The monthly average flow from Outfall 001 was 92.3 MGD, which equates to a daily average load of 19,600 lb/d that exceeds West Point WWTP's Action Level.

It is essential for Ecology to consider that the Nutrient General Permit pertains solely to Outfall 001. The Draft Permit authorizes TIN-containing discharges not only from Outfall 001, but also the five CSO treatment facilities and 38 CSOs that are not covered under the Nutrient General Permit. As a result, even if West Point WWTP begins to meet its Action Level and achieves the Nutrient General Permit TIN Concentrations, it is highly likely that the true TIN loads from the discharges authorized by the Draft Permit exceed the requirements of the Nutrient General Permit. Furthermore, if the performance identified in the Fact Sheet for West Point WWTP persists and it does not meet its Action Level and does not achieve the Nutrient General Permit TIN Concentrations, the Draft Permit is authorizing TIN loads that likely far exceed the requirements of the Nutrient General Permit and will continue to do so for years into the future through subsequent permit cycles due to the required NRE submission date and lengthy

30 Nutrient General Permit, page 42.
31 Nutrient General Permit, page 12 and Table 5.
32 Nutrient General Permit, pages 16 – 17.
33 Draft Permit, page 39, Table 19.

timeframe to implement capital projects to improve TIN removal from influent wastewater to West Point WWTP.

Based on CEAPC's experience in wastewater engineering and NPDES permitting for wastewater treatment plants that discharge to sensitive marine waters adversely impacted by nitrogen in New York, Connecticut, and Florida, including Long Island Sound adjacent New York and Connecticut and Tampa Bay, Sarasota Bay, the Manatee River, and the Eastern Gulf of Mexico adjacent to Florida, it is common practice for permitting authorities to include stringent NPDES permit effluent limits for maximum and average total nitrogen ("TN") concentrations and loads (typically on an annual average basis). Annual average total nitrogen concentrations are often permitted up to advanced wastewater treatment ("AWT") standards of 3 mg TN/l.[34,35,36,37] TN consists of TIN and organic nitrogen, the latter of which is present at low concentrations in domestic wastewater (often ~ 1 mg/l) but difficult to remove and thus results in a higher level of TIN removal to achieve permit effluent limits.

Considering West Point's recent effluent TIN concentrations and loads and its identification as the second-largest dominant loader based on Action Levels in the Nutrient General Permit, Ecology should implement an expediated compliance schedule for development and implementation of an NRE beyond what is required in the Nutrient General Permit and interim effluent limits for TIN concentration and loads from Outfall 001. Inclusion of these requirements in the Draft Permit will begin moving West Point WWTP towards achieving the Nutrient General Permit TIN Concentrations, compliance with Nutrient General Permit, and improved water quality in Puget Sound and Salish Sea.

Elliott West

The proposed TRC effluent limit for Elliott West in the Draft Permit reduces the existing effluent limit of 109 µg/l to 33.8 µ/l, a nearly 70% reduction.[38] The average TRC from 95 samples collected between January 2015 and December 2021 at Elliot West was 297.69 µg/l, far in excess of both the existing and proposed TRC effluent limit.[39] During the same time period, Elliott West exceeded the TRC effluent limit 49 times, the most recent of which were once in December 2020 and twice in January 2021.[40]

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34 Florida Department of Environmental Protection, State of Florida Domestic Wastewater Facility Permit, City of Largo, Permit Number: FL0026603, Revision Date: June 24, 2021.

35 Florida Department of Environmental Protection, State of Florida Domestic Wastewater Facility Permit, City of Bradenton, Permit Number: FL0021369, Effective Date: September 9, 2020.

36 New York State Department of Environmental Conservation, State Pollutant Discharge Elimination System (SPDES) Discharge Permit, SPDES Number: NY-0026701, Permittee: Westchester County Department of Environmental Facilities, Mamaroneck Sanitary Sewer District WWTP.

37 New York State Department of Environmental Conservation, State Pollutant Discharge Elimination System (SPDES) Discharge Permit, SPDES Number: NY-0026697, Permittee: Westchester County Department of Environmental Facilities, New Rochelle Sanitary Sewer District WWTP.

38 Fact Sheet, page 98, Table 49 – Elliott West CSO treatment plant (Outfall 027b) Limit Comparison.

39 Fact Sheet, page 43, Table 23 – Elliott West CSO Treatment Plant Effluent Characterization.

40 Fact Sheet, pages 152 - 155, Elliott West CSO Treatment Plant Violations.

CEAPC Comment

The Draft Permit requires the County to plan and design improvements to Elliot West to ensure compliance with the conditions of the Draft Permit and provides Ecology the ability to review, comment on, and approve the County's submissions, including the engineering report, plans and specification.[41] Considering the history of TRC exceedances of the effluent limit at Elliott West, Ecology should strongly consider requiring that the County implement ultraviolet disinfection at Elliott West. Implementation of ultraviolet disinfection will entirely eliminate TRC from Elliott West discharges, thus providing a clear environmental and ecological benefit, and will benefit the County by eliminating the potential for penalties resulting from NPDES Permit violations resulting from discharges of TRC from Elliott West in excess of the effluent limit.

Henderson/MLK Copper Effluent Limit Determination

The outfall from Henderson/MLK discharges into the Duwamish River ("Duwamish") at approximately river kilometer 10.5 along its northern bank at a depth of approximately 12 feet below the water surface. This portion of the Duwamish is less tidally influenced and more influenced by the Green River, leading Ecology to consider it freshwater in nature rather than estuarine.[42]

Ecology calculated an aquatic life daily maximum copper effluent limit ("copper effluent limit") of 12.3 µg/l based on marine criteria, though it does not consider the Duwamish to be estuarine in nature at the Henderson/MLK outfall location. The reasonable potential analysis used by Ecology to determine if water quality based effluent limits are needed in the Draft Permit is based on relatively consistent discharge conditions; however, Henderson/MLK historically discharges between one and three times per year for approximately 14 hours during each discharge.[43] Based on the frequency and duration of discharges from Henderson/MLK and consideration Duwamish as a freshwater at the discharge location, Ecology determined that a "performance-based" copper effluent limit of 22.3 µg/l consistent with the 95th percentile of copper monitoring results between 2014 and 2019 was "appropriate" and adequate to protect aquatic life based on a freshwater criteria.[44]

CEAPC Comment

Ecology discusses in the Fact Sheet that evaluating the discharge from Henderson/MLK using freshwater conditions and criteria "suggests" that existing copper concentrations "may not result in toxicity in freshwater aquatic life"; however, no evaluation or calculations based on freshwater conditions or criteria are included in the Fact Sheet and Ecology's basis for its discussion is unclear.[45] Hardness-dependent freshwater aquatic life criteria can be calculated in accordance

41 Draft Permit, pages 60 and 61.
42 Fact Sheet, pages 80 – 82.
43 Fact Sheet, pages 27, 94 and 138 and Table 8 – Henderson/MLK CSO Treatment Plant Performance.
44 Fact Sheet, pages 44 and 94 and Table 24 – Henderson/MLK CSO Treatment Plant Effluent Characterization.
45 Fact Sheet, page 94.

with the Washington State water quality standards.[46] The performance-based copper effluent limit is based on only nine samples collected between January 2015 and December 2021.[47]

Considering the limited number of effluent copper samples collected, the overall limited number and duration of discharges from Henderson/MLK, and the freshwater nature of the Duwamish at the Henderson/MLK outfall location, Ecology needs to clearly demonstrate that the performance-based daily maximum copper effluent limit of 22.3 µg/l will be protective of aquatic life and achieve acute freshwater water quality criteria. If it is not, Ecology needs to revise the daily maximum copper effluent limit for Henderson/MLK to ensure it is protective of aquatic life.

Furthermore, setting the copper effluent limit at the 95th percentile of the nine samples which has proven readily achievable by discharges from Henderson/MLK means that achieving the copper effluent limit will maintain the status quo and is unlikely to result in water quality improvements and improved protection of aquatic life in the Duwamish. Furthermore, if discharges from Henderson/MLK tend closer to simply meeting the readily achievable copper effluent limit (meaning consistent discharge concentrations near but not exceeding 22.3 µg/l), a degradation in water quality and protection of aquatic life would result, since average overall acute loads would increase (assuming similar flows).

Improvements in the Draft Permit from the Current Permit

The Draft Permit includes several provisions that are improvements over the Current Permit for protecting public health and well-being and environmental and ecological resources, including:

- new or reduced effluent limits for the County's CSO treatment facilities, including:[48,49]
  - lower TRC effluent limits at Elliot West, Alki, and Henderson/MLK
  - new copper effluent limit at Henderson/MLK
  - new zinc effluent limit at Elliott West
  - new interim copper effluent limit at Elliott West that will remain in place through the term of the new NPDES permit[50]
  - Upon completion of the upgrades to Elliott West, which likely will take a number of NPDES permit cycles, the final copper limit included in the Draft Permit will take effect.[51]
- efforts to reduce discharges of Per-/Polyfluorinated substances ("PFAS")[52,53]

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46 Washington Administrative Code, Title 173, Ecology, Department of, Chapter 173, Water Quality Standards for Surface Waters of the State of Washington, Section 240 Toxic Substances, https://app.leg.wa.gov/WAC/default.aspx?cite=173-201A-240. Accessed June 29, 2023.
47 Fact Sheet, page 44, Table 24 – Henderson/MLK CSO Treatment Plant Effluent Characterization.
48 Draft Permit, pages 10 – 12.
49 Fact Sheet, pages 2 and 97 - 99.
50 Draft Permit, page 12.
51 Draft Permit, page 12.
52 Fact Sheet, page 103.
53 Draft Permit, page 43.

- influent monitoring for PFAS at West Point WWTP during 2025 and 2026[54]
  - CEAPC Comment: The Draft Permit should require that influent monitoring for PFAS begin once the NPDES Permit is effective and not delay commencing monitoring until 2025. Developing an influent monitoring program for PFAS is not a lengthy process and could be initiated prior to the effective date as long as the County is aware it will be required.
- identification of potential industrial users ("IU") discharging PFAS to the County collection system and submission by the County of an updated IU inventory identifying potential IU discharges of PFAS by April 30, 2025.
- inclusion of a pretreatment permit requirement that IUs identified as known or suspected PFAS sources complete a PFAS pollution prevention and source reduction evaluation
- evaluation by the County of PFAS pollution prevention strategies and best management practices for inclusion in future pretreatment permits

[54] Draft Permit, page 17.