



December 30, 2020

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**RE: Draft PFAS Chemical Action Plan Comments**

**General Comments from Water, Surface Water and Wastewater Utilities:**

Thank you for the opportunity to comment. The City of Vancouver Surface Water, Water and Wastewater Utilities are in support of the development of a PFAS Chemical Action Plan. The Per- and Polyfluoroalkyl Substances (PFAS) CAP and rulemaking and the assurance of providing a safe water supply and a safe environment for our residents are extremely important to the City of Vancouver. Protection of our natural resources and ultimately protection of the citizens is of the utmost concern.

**One overarching aspect of the CAP that the City supports across disciplines is the elimination of products containing PFAS and comprehensive source control measures. Working proactively on the state level with industry, manufacturers and businesses to eliminate releases to the environment and prevent soil and water contamination is the most effective approach to managing these very persistent chemicals.**

**Coordinating proper disposal of firefighting foams addresses one of most acute sources of drinking water contamination but the pervasive use of these chemicals in carpets and more common household products warrants a state-wide response. Modeling a purchasing preference policy and leading the way on safer alternatives with accompanying regulatory restrictions, bans or prohibitions on sales are needed to make strides toward controlling sources of PFAS.**

**The City supports the Dept of Ecology in seeking legislative funding for both the Safer Products for Washington as well as the Product Replacement Program. The focus on overburdened communities and low-income households along with financial assistance for replacing PFAS products in residential and public spaces is key to providing equity in reducing exposure to PFAS chemicals. The City encourages ECY to expand research across the State to determine sources, concentrations and communities most at risk of exposure to PFAS, understanding that prevention is more effective than treatment of contamination.**

With that understanding, we would like to offer the following overarching comments for DOH and Ecology consideration:

1. Vancouver supports efforts that eliminate or reduce pathways to drinking water sources, surface waters, land, animals and plants through policies and regulations that result in: source reduction in consumer and industrial products; safe containment of existing PFAS chemicals; and safe destruction of PFAS waste.
2. Vancouver supports efforts for Health and Ecology to gain more knowledge regarding fate and transport, toxicological effects and environmental impacts of PFAS chemicals through scientific research
3. Vancouver suggests inclusion of one or more statewide organizations which represent the interests of water, wastewater and biosolids, such as Washington Water Utilities Council (AWWA-PNW), Washington Association of Water and Sewer Districts, Coalition for Clean Water, Washington On-Site Sewage Association and Northwest Biosolids Association.

We also provide the following specific comments:

4. **Appendix 2: Analytical Methods (p. 35).** Two draft methods are mentioned “to be issued by EPA in 2020”, including for draft Method 8328 (p. 114), OTM Method 45 (p. 123). The document should be updated accordingly for the year 2021.
5. **Figure 23. (p. 155).** The map legend covers about ¼ of the state and likely blocks locations of depicted locations of oil facilities.

### **Wastewater Utility Specific Comments**

#### **General Comments Regarding Wastewater and Biosolids**

Throughout some sections and appendices of the draft CAP the term wastewater is used without the modifier of municipal or industrial, making it difficult to ascertain if the CAP is addressing either or both types of waste streams. Specific citations of this concern will be detailed in the following comments.

Additionally, the distinction of indirect industrial discharges (to Publicly Owned Treatment Works) and direct industrial discharges (to surface water or ground injection) was not clear in wastewater-related sections. This is important as proposed action plans would be carried out by local versus state authority. Specific citations of this concern will be detailed in the following comments.

#### Appendix 3: Sources and Uses

6. **3.0.1 Findings (p. 142).** In the 4<sup>th</sup> paragraph for waste management, it is unclear if the cited waste streams are all from industrial sources. Suggest to: “Waste management related to industrial releases of PFAS have been documented . . . ”
  - a. Whether explicit or implied, it should be clear that groundwater, surface waters and municipal wastewater are not sources (or uses) of PFAS. Rather they are receptors of PFAS.
7. **3.0.1 Findings (p. 142).** In the 5<sup>th</sup> paragraph, the bullet list includes nonstick cookware as a source of PFAS. This contradicts a statement on p. 160, 1<sup>st</sup> paragraph “Some PFAS such as fluoropolymers in non-stick cookware have shown to be stable”.
  - a. Consider removing nonstick cookware from list.

8. **Table 30. (p. 161)** Consumer products that have potential to contribute to human and environmental exposure of PFAS in Washington state. For product “Carpet treatments” suggest to add:
  - a. “Carpet cleaning wastewater discharged to sewer may be discharged to a sewage treatment plant.”
9. **3.4.2 Wastewater Treatment plants (p. 164)**
  - a. The subsection title appears to imply the subject “Sewage treatment plants” or otherwise “municipal wastewater treatment plants” based on the narrative in the following paragraphs rather than generalized term, which could include industrial wastewater treatment plants. The title should be changed to reflect one of the offered terms, so as not to confuse with “industrial wastewater treatment plants”.
  - b. On-site treatment of industrial wastewater may be discharged either directly to receiving waters or to a Publicly Owned Treatment Works. This should be noted in the paragraph.
  - c. The qualifier of “large volumes of waste” is subjective as municipal (and industrial) wastewater treatment plants come in all sizes and capacities. In relative terms, there are many examples of POTWs that receive much larger volumes of industrial wastewater compared to domestic wastewater. The paragraph could be re-written to simply state:
    - i. “Sewage (or municipal wastewater) is any combination of domestic (household) waste and industrial waste that is treated at a Publicly Owned Treatment Works (sewage treatment plant).
  - d. In the last paragraph under subtitle “Publicly owned WWTPs” regarding solids, the paragraph should clarify handling and treatment in several aspects:
    - i. “Solids” should be clarified as those collected in primary treatment and secondary treatment processed as sewage sludge and further for biosolids. These solids do NOT include influent screenings and grit, which are managed as a solid waste.
    - ii. Suggest removing the term “transformed”. Replace sentence with: “Sludge from many domestic WWTPs are processed with further digestion or composting processes to produce biosolids product.”
  - e. For the subsection “On-site wastewater treatment systems”, the paragraph should include a discussion that solids are periodically removed and delivered to WWTPs or commercial processing facilities.
10. **3.6.1. Data gaps – WWTPs section (p. 180).** Suggest adding to the after the second sentence:
  - a. “In addition the information should inform state and local agencies for upstream strategies to reduce receipt of PFAS in influent, such as pretreatment technologies at industrial sources, consumer and commercial source control efforts, and consumer educational materials.
11. **Recommendation 4.1 Evaluate PFAS in wastewater treatment (p. 183).** The description of the three types of treatment plants is confusing. For example, what is meant by “advanced solids removal”?
  - a. Ecology should carefully consider process points in varying types of treatment plants to help understand the fate of PFAS and their degradation products, including secondary activated sludge processes; membrane processes; filtration processes; chlorine disinfection; uv disinfection.
  - b. Ecology should also develop guidance for monitoring requirements for certain industries through state or locally issued Industrial Wastewater Discharge Permits.

- c. The section should make a nexus to Section 8 for biosolids, since biosolids are generated at WWTPs.
  - d. Assigning this as Recommendation 4.1 (and the next as 4.2 for “Evaluate landfill PFAS emissions”) is confusing as there is a separate Section 4 for Fate and Transport, and that Section has its own 4.1 and 4.2. Suggest re-numbering Recommendations 4.1 and 4.2 to be consistent with numbering of Section 3.
12. **Section 4.3.2 Water (Release to aqueous media) (p. 211).** 4<sup>th</sup> paragraph. (Correction) . . . . domestic wastewater effluents released from domestic onsite wastewater systems . . .
  13. **Section 4.3.3 Solids (p. 213).** In the 3<sup>rd</sup> paragraph, the last sentence states “Biosolids have been identified as a significant source of PFAS emissions”. The statement does not include data or context to qualify the assertion of “significant source”. The NWGA 2017 report is not freely available to the public so it is not possible to evaluate data that may be included in the report.
    - a. Suggest removing the word “significant” from the sentence.
  14. **Section 5.01 Findings (p.231).** In the 4<sup>th</sup> paragraph regarding osprey eggs – make note “WWTP sources” should be “WWTP effluent discharges”. WWTPs are not sources of PFAS. They are “pass through” facilities.
    - a. Suggest changing “WWTP sources” to: “WWTP effluent discharges”.
  15. **Section 8.2 Federal and state regulations (p. 403).** In the 2<sup>nd</sup> paragraph, it should be noted sewage sludge can be disposed via incineration, in addition to landfill.
  16. **Section 8.7.1 PFAS concentration data. (p. 411).** In the 3<sup>rd</sup> paragraph, Ned Beecher is cited from Northeast Biosolids Association, is Ned from Northwest or Northeast Biosolids Association?
  17. **Section 8.8 Biosolids policy discussion (p. 413).** In the 2<sup>nd</sup> paragraph, we support and express reinforcement of the statement: “As such, upstream source reduction – reduced use of products containing these compounds – will be the direct means of lowering PFAS exposure from biosolids for Washingtonians”.

**Water Utility Specific Comments**

The City of Vancouver Water utility is in support of the development of a PFAS Chemical Action Plan. The Per- and Polyfluoroalkyl Substances (PFAS) CAP and rulemaking and the assurance of providing a safe water supply are extremely important to the Vancouver Water Utility, the third largest provider of drinking water in the state of Washington with a water system that is exclusively supplied from groundwater. Protection of our natural resources and ultimately protection of the citizens is of the utmost concern. With that understanding, we would like to offer the following comments for DOH consideration:

18. **Executive Summary Section 1.1** – An overview with specific funding options are given, but there is currently no direct knowledge of how many water utilities will be impacted by the creation of the proposed State Action Levels (SAL). More relevant than the specific examples given would be to identify an estimated number of utilities that will be impacted and the estimated cost to mitigate. The CAP grossly underestimates the cost that water utility purveyors face in dealing with PFAS contamination and does not address how many utilities will likely be impacted.
19. Section 1 and Appendix 10 grossly underestimate and do not cover all the costs associated with the installation, long-term maintenance and effort to recover costs from contaminators that water utility rate payers will have to absorb to meet the action levels.

20. **Section 1.0 States** “Less than 1% of all Group A systems have been tested for PFAS. However, those that have been tested serve most water customers in the state.” It should define when they were tested for PFAS. Was it UCMR3?
21. **Section 1.0 under “Interim CAP”** bullet one outlines the planned action levels expected to have no known adverse impact to health over lifetime of exposure for five PFAS chemicals. It should reference to Appendix 7. Although Appendix 7 outlines where the proposed SALs come from, it is not clear in the information provided that the proposed SALs are necessary at such low levels.

EPA has established a health advisory level at 70 ppt for combined PFOA and PFOS. These levels were established to provide Americans, including the most sensitive populations, with a margin of protection from a lifetime of exposure to PFOA and PFOS from drinking water.

22. If EPA set the health advisory at a level that offers a margin of protection for all Americans throughout their life from adverse health effects resulting from exposure to PFOA and PFOS in drinking water, how did DOH conclude that an SAL for combined PFOA and PFOS should be set much lower at 25 ppt and, furthermore, that individual SALs should be set for five different PFAS chemicals?

Creating yet another state standard outside of a federal regulation for individual PFAS compounds creates a variation in health risk goals and risk reductions among multiple states in the absence of federal standards. This further creates public confusion about what levels of PFAS are safe in drinking water. The limits should be set and regulated as a combined mixture and not individually. The currently available data is not clear enough to justify individual SALs.

EPA’s PFA Action Plan (Feb 2020 Program Update) proposes to regulate PFOA and PFOS under the SDWA. Washington State efforts should complement federal activities to limit public confusion via conflicting standards.

23. **On pg. 45 after Second**, it is unclear if DOH planned to implement a statewide testing plan and just didn’t have enough funds or water utilities were not willing to participate. Vancouver recommends the state implement a statewide testing plan to evaluate the number of water utilities that will be impacted by the proposed rulemaking.

Based on a review of available information at state and federal levels, the City of Vancouver Water Utility is concerned that the Washington State Department of Health is proceeding with rulemaking without sufficient data and a full understanding of potential impacts to utilities statewide. Furthermore, it appears that many municipal water providers throughout the state do not clearly understand the impacts of the proposed rule, and as a result, are unlikely to provide comments on the rulemaking effort. This is the reason why Vancouver did not initially submit comments until now, when staff had the time and opportunity to look further into this issue.

We now believe that many utilities believe the false assumption that they have no PFAS present in their water supplies based on the results of a UCMR 3 test method (Method 537) in 2013-2015, when EPA mandated a higher reporting level than the 537 method's allowable reporting limit. The new method's (Method 537.1) reporting level has dropped with 2 parts per trillion (ppt) confidently reported during testing. In the case of three of the PFAS chemicals, the reporting level used during the UCMR 3 testing was significantly higher than the proposed State Action Level (SAL) planned by DOH, which ultimately means many water utilities throughout the state are apt to be completely unaware that their water supplies potentially exceed the proposed SALs. This is going to be a significant surprise and concern to many utilities upon the first round of tests that will be required under the proposed PFAS Rule. We believe the potential impact may also be a significant surprise to DOH, as well as water utility customers throughout the state.

A comparison between the reporting limits of the two EPA Methods are shown below.

		<b>Method 537</b>	<b>Method 537.1</b>	
ACRONYM	UNITS	Minimum Reporting Level	Minimum Reporting Level	Proposed SAL
PFBS	ng/l	90	2	860
PFHxS	ng/l	30	2	70
PFOS	ng/l	40	2	15
PFNA	ng/l	20	2	14
PFOA	ng/l	20	2	10

The three compounds shown above that are of primary concern are PFOS, PFOA and PFNA. All three have proposed SALs below the EPA mandated minimum reporting level of Method 537 used during UCMR 3. As a result, there is no way of knowing how many utilities will not only have detections, but will have detections above the proposed SAL. The Vancouver utility is concerned that DOH appears to be making assumptions that the rulemaking will have a limited impact on only a few utilities, though that is likely not the case given how the data has been gathered.

24. Is DOH using UCMR 3 results to make assumptions on the number of utilities that have detected levels of PFAS in their water supplies and the level of those PFAS? The Vancouver Utility believes that proceeding with the rulemaking and the proposed SALs without an understanding

of the actual impacts to utilities is outside of the normal contaminant regulation setting processes, is not warranted and will impact customer confidence and finances for utilities statewide.

25. **Section 1.0** the following statement is misleading “As described in Appendix 7, Health is working closely with public drinking water systems known to be affected by PFAS releases.” It may be true, but there are many other utilities that will likely be impacted by the proposed rulemaking that Health is not aware of because Health has not required testing and is relying on UCMR 3 data that utilized a higher reporting level, as previously described.
26. **Section 1.1 under Why?** “When PFAS concentrations in drinking water supplies exceed health advisory levels, timely mitigation may be needed to protect human health. This can create immediate costs to water systems.” The term “may” is not clear. It is unclear what is expected of utilities if they exceed one or more SAL. Will treatment be expected if one SAL is minimally exceeded?

The potential for erosion of consumer confidence may direct many utilities to spend millions of ratepayer dollars on treatment systems that may not necessarily be warranted if the exceedance is only minimally above one of the limits. An exceeded SAL will create a perception of mistrust and a lack of faith in the quality of drinking water systems, as well as misunderstanding since treatment can't be required with a SAL. There is an expectation of clean, safe, high quality water from the public, and we, along with other utilities in the state, are committed to providing that, based on sound science. The limits should be set and regulated as a combined mixture and not individually. The currently available data is not clear enough to justify individual SALs.

27. **Section 1.1 under Cost** “Without knowing the number of impacted systems in the state, we are unable to estimate total costs to implement this recommendation.”

It is recommended that at a minimum DOH delay the rulemaking further and go through a required process similar to a UCMR testing process using Method 537.1 in order to determine the actual number of systems that will be impacted by the proposed SALs. This will allow DOH and water utilities to better prepare for the impacts of the rulemaking, including mitigation costs and necessary public outreach efforts.

The rulemaking process that EPA follows in establishing limits for contaminants in drinking water is not only clear, it is a well-established process. The establishment of a SAL at the state level in Washington is not clear nor is it an established process and the impacts will be immediate, problematic and cause increases in utility rates and decreases in consumer confidence related to drinking water supplies.

28. **Section 2.0 under Manage environmental PFAS contamination** “In Washington, PFAS-containing Class B firefighting foam used in firefighter training seems to be the primary source of drinking water supply contamination.” This statement is based on what data, UCMR3? Again, UCMR3 data is not reliable because of the reporting limit. Furthermore, it is unclear how widespread PFAS contamination is in water supplies or what the primary source of PFAS in drinking water supplies is. It is clear that groundwater supplies with the highest concentration

of PFAS are caused by Class B firefighting foams, but the source of the more prevalent, lower concentration PFAS contamination has yet to be determined.

## **Appendix 2, PFAS Analytical Methods**

Recent analytical advances all within the last year: EPA Method 533 published, 537.1 updated and a pending Draft Method 8329 continue to expand and improve our PFASs awareness. These advances allow drinking water purveyors to obtain previously unreported detection levels.

EPA's PFA Action Plan (Feb 2020 Program Update) includes a commitment to include additional PFAS testing with UCMR5. The analytical advances utilized with UCMR5 will provide a consistent institutional framework to obtain PFAS levels with unprecedented accuracy.

## **Appendix 7, Section 7.4 Known areas of PFAS contamination in drinking water aquifers in Washington state**

It is clear that Health has not determined how many utilities will be impacted by this rule? UCMR3 is again mentioned, yet there is not discussion included on the difference between test method 537 and method 537.1 and the fact that UCMR3 data is not indicative of the prevalence of PFAS in drinking water supplies.

### **29. Figure 45 Is Confusing**

The section states "In Figure 45, red dots mean that at least one private water system (PWS) well tested positive to PFAS compounds. The source of data for red dots include the Unregulated Contaminant Monitoring Survey (UCMR3), voluntary testing by the Navy, Air Force, and Army on or around four military bases between 2016 and 2020, and proactive testing by nearby PWS." Is PWS "public water system" and not "private water system" as indicated? Did private water system test during UCMR3? It is very confusing what the figure is actually representing and what this paragraph is saying that it represents.

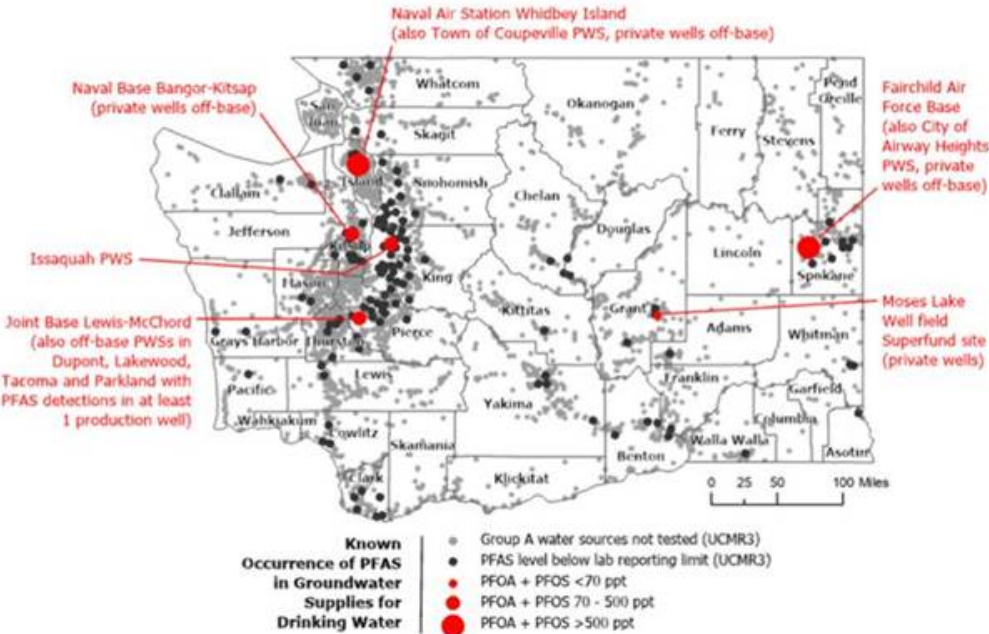
It appears that DOH is assuming that Figure 45 shown below, which has appeared in state presentations, is representative of the PFAS occurrence throughout the state. Unfortunately, the source of the data is not representative of PFAS prevalence in the state. Based on the map, the black dots seem to represent sources tested during UCMR 3 that were below the lab reporting level, but that have a known occurrence of PFAS. If they were below the reporting level, how are they a known occurrence? If instead the black dots are meant to represent all sources that were below the reporting level during UCMR3, we would expect to see more black dots around Vancouver, given that all our sources were below the reporting level. The legend for the smallest red dots is confusing as well. Is it meant to show where concentrations of PFOA + PFOS were less than 70 ppt, but above the EPA reporting limits with Method 537? If that is the case the legend for the small red dot should say 25 – 70 ppt, not < 70 ppt. As shown, all black dots would also be red as all the black dots were below 70 ppt as well. This map mentions UCMR 3, but there are so many light gray dots indicating sources not tested that it is apparent



that the extent of the impacts the rulemaking will have on utilities is unknown. The map also highlights the high-profile cases related to firefighting foam while missing the ubiquitous nature of PFAS at low levels in groundwater. This map does not in any way represent PFAS prevalence in groundwater in the state.

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Figure 45. Known areas of PFAS contamination in drinking water supplies.



The top of pg. 327 states “The maximum detected level of PFOA and PFOA” one should say PFOS.

Section 7.5.2 Washington Department of Health advice for PFAAs in drinking water states “The draft public health advice reflects our best judgement for protecting Washington state residents while we continue to follow advancements in PFAS research.” Implementing State Action Levels based on “best judgement” instead of fact-based research has created multiple and confusing regulated levels in various states across the nation. Creating yet another state standard outside of a federal regulation for individual PFAS compounds creates public confusion about what levels of PFAS are safe in drinking

water. We urge the state to allow EPA to complete the rulemaking process to determine an MCL based on all the facts.

30. It is unclear what will happen if and when a PFAS MCL(s) are adopted by EPA. Will the EPA MCL(s) override the WA SAL?

The majority of public water systems make the provision of clean, safe water to their customers their number one priority. This rulemaking process and lack of uncertainty to the data and results can only create mistrust around the state. Water utilities will inevitably struggle to explain sample results to their customers amid substantial differences between levels set by the federal and state agencies. A period of information gathering, distribution and community preparation provides regulators, purveyors and consumers the best path to understanding, addressing and communicating risks.

Thank you for your consideration of these comments.

Sincerely,

A handwritten signature in blue ink, appearing to read "Tyler Clary".

Tyler Clary  
Water Engineering Program Manager  
City of Vancouver

cc: Dan Swensen  
Brian Wilson  
Nikki Guillot  
Kris Olinger  
Annette Griffy  
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