July 25, 2019

Ms. Kara Steward
Washington Department of Ecology
300 Desmond Drive SE
Lacey, WA 98503

Re: PFAS Chemical Action Plan Comments

Dear Kara:

We appreciate the opportunity to comment on the draft PFAS Chemical Action Plan (CAP) recommendations. Thank you for your team's work on this draft to update Ecology's approach in accordance with the framework provided by the newly adopted Pollution Prevention for Our Future Act of 2019 (SSB 5135).

The serious health and environmental threats posed by PFAS are tremendous and growing. Drinking water in Washington state is contaminated, and legacy pollution and current uses impact sensitive populations. At the same time, our state has a huge opportunity with its new law (SSB 5135) to further tackle the problem at its source. In part due to work on the CAP, Washington state has led the nation in putting in place proactive bans on PFAS in firefighting foam and food packaging that will stop PFAS pollution before it starts. Now it is time to expand preventive measures and take other actions to ensure PFAS cleanup, monitoring, and protection of water, food and communities.

Overall, the CAP recommendations should make it clear that Ecology will address PFAS as a class in ALL regulations. The state legislature has passed three laws that require the Department of Ecology to address PFAS as a class, including a ban on PFAS in firefighting foam (RCW 70.75A), a ban on PFAS in paper food packaging (70.95G), and a comprehensive law giving the agency the authority to ban PFAS in products and/or require disclosure (SSB 5135). All regulation, whether it is for drinking water or cleanup or bans, must follow these legal precedents and include all PFAS. This is the only way to comprehensively address the PFAS problem.

Ecology has acknowledged the class approach in the CAP, but it should be clearer that all regulations will address PFAS as a class and why it is important. It is critical to address PFAS as a class because:

- PFAS are extremely persistent, with no known degradation pathways in the environment for certain compounds.
- Some PFAS, particularly the terminal degradation products, are highly mobile in the environment and move through soil into groundwater and surface water, and can move long distances in ocean water. Other PFAS are volatile and move long distances through the atmosphere. As a result, PFAS are found in the ocean, in rain and snow, and concentrations in the Arctic atmosphere are similar to those in urban areas.
- PFAS that have been studied extensively have been found to be toxic at very low concentrations. Current-use PFAS are extremely similar to those well-studied compounds.
- PFAS are present in products and the environment as complex mixtures. Even though most toxicity studies look at one chemical at a time, we are never exposed to just one PFAS. In a recent study of drinking water in five U.S. communities, the U.S. Geological Survey found 10 of the 17 PFAS it was looking for had a detection rate of 90% or more. Tests of products containing PFAS find complex mixtures including parent compounds, precursors, and terminal breakdown products.

We urge the agency to adopt the following recommendations:

1. **Phase out PFAS in products.** The CAP should clearly state the recommendation as phasing out PFAS in products where safer alternatives have been identified. More specifically, the agency should:

    A. **Immediately move forward with designating PFAS in carpet, carpet-care products, upholstery textiles and upholstery treatments as priority products and move forward with a phaseout.** As identified in the preliminary CAP recommendations, treated carpet and carpet care products, are likely a significant source of PFAS exposure. The category should also include upholstery textiles, given these products are similar in the types of PFAS treatment used, the purpose of the treatment, and in their impact on the indoor environment. We do not believe it is necessary to obtain the manufacturer information before moving forward with a priority product designation and proposed actions to phase out PFAS in carpet, carpet care, upholstery textiles, and upholstery treatments. Resources would be better spent identifying safer alternatives, some of which have already been identified by other government entities, including the California Department of Toxic Substances Control.

    B. **Immediately move forward with designating PFAS-containing firefighting foam as a priority product and phase out remaining uses**. Since the passage of our PFAS foam law in 2018, there has been a lot of new information on the availability and effectiveness of fluorine-free foams. In addition, the Federal Aviation Administration is under a Congressional timeline to phase out PFAS-foams at certain size airports and Congress is currently considering an urgent phase out timeline for a military PFAS foam phase out (2023). Given PFAS firefighting foam has been identified as a

primary way PFAS gets into groundwater and drinking water, all users should be aggressively pursuing alternatives and the state should put in place a more comprehensive ban.

We support Ecology's effort to "assist state, and local governments, airport, industry, and fire districts with prioritizing the disposal and replacement of PFAS-containing Class B firefighting foam in communities with cumulative impacts, health disparities, and environmental justice considerations." We also request that you investigate and adopt non-incineration methods for disposal of hazardous PFAS foams. It is important that PFAS disposal does not further contaminate communities traditionally overburdened by pollution including low-income communities and communities of color.

C. **Establish a timeline for phasing PFAS out of all textiles (e.g. water resistant clothing, gear).** PFAS in textiles should be identified as a priority products and work should focus on identifying safer alternatives and setting a timeline for phaseout.

   For firefighter turnout gear, RCW 70.75A has produced information from manufacturers that they are using PFAS. Now it is time for the agency to identify safer alternatives. This is the same for other uniforms for other workers that contain PFAS.

D. **Determine other PFAS priority product categories, including cleaning, floor waxes, ski waxes, car wash products and personal care products.** Ecology should begin immediate work on gathering existing information and assessing safer alternatives where the information is not currently available. We support recommendation 3.2 with added timelines for actions. However, we believe enough information exists to move forward on upholstery and other textiles (including the treatments) as priority products as mentioned above. Ecology's resources should be focused on gathering existing information and assessing alternatives in this category.

E. **Ensure drinking water is safe.** We fully support the state moving forward with drinking water standards for ALL PFAS to protect the most sensitive populations. We also support DOH seeking state funding for testing and mitigation of PFAS. Recovering costs from the manufacturers of PFAS should be a critical component, but it should not delay communities getting resources to test and clean up their water supplies. Many state legislatures (e.g. NC, MI, NY) have invested heavily in PFAS testing and mitigation and Washington lags behind. We request a specific level of funding be identified, at least for testing, as soon as possible. Testing should include private wells and smaller systems given they cover about 20% of the population.

   We also support state funding for Ecology to pursue groundwater and surface water monitoring. For all environmental monitoring, we request the agency use a method

that screens beyond the typical short list of analytes, such as total fluorine or TOP assay, along with compound-specific analysis.

Ecology should also create guidance that helps other agencies test for PFAS so that the most appropriate sampling and analytical methods are used.

Finally, we support DOH pursuing state funding, not just grants, to help communities carry out biomonitoring.

F. **Require manufacturers of products in the state that may use PFAS to provide information to the agency to assist in identifying other priority consumer products.** The new law (SB 5135) provides authority to obtain information from manufacturers. Ecology should use this new law and request information from tanneries, metal plating facilities, pulp and paper mills and other facilities that produce products that may contain PFAS.

> "Under Section 3(4): To assist with identifying priority consumer products under this section and making determinations as authorized under section 4 of this act, the department may request a manufacturer to submit a notice to the department that contains the information specified in RCW 70.240.040 (1) through (6) or other information relevant to subsection (2)(a) through (d) of this section. The manufacturer must provide the notice to the department no later than six months after receipt of such a demand by the department."

G. **Adopt strong regulations to clean up PFAS contamination.** The recommendation (2.1) is inadequate because it only addresses PFOS and PFOA. The standards must address all PFAS in order to be protecting of public health and the environment. This is especially important given that there are PFAS in current use (not PFOA/PFOS) that will become a cleanup problem for the future. If the standards are not clear from the very beginning that all PFAS are included, there is less of an incentive to end PFAS use and we will be facing more cleanups in the future. Furthermore, some cleanup technologies like Granular Activated Carbon (GAC) are less effective for short-chain PFAS so remediation targeted at PFOS and PFOA will not necessarily be effective on other PFAS.

There should be no question that ALL PFAS are hazardous substances under MTCA (p.14). A hazardous substance is defined in MTCA (70.105D.030) as "any hazardous substance as defined in RCW 70.105.010(10) or any hazardous substance as defined by rule pursuant to chapter 70.105 RCW."

RCW 70.105.010 states, "Hazardous substances" means any liquid, solid, gas, or sludge, including any material, substance, product, commodity, or waste, regardless of quantity, that exhibits any of the characteristics or criteria of hazardous waste as described in rules adopted under this chapter. Under dangerous waste rules

adopted under RCW 70.105.010, **ALL PFAS are halogenated organic compounds and exhibit the characteristic of persistence (WAC 173-303-040). Please make this clear in the chemical action plan.**

H. **Obtain more information on waste sources of PFAS.** We support testing of sewage sludge (biosolids) for ALL PFAS, starting immediately with those that are applied to dairy and other farms in Washington. The agency should establish annual testing requirements for PFAS and other emerging contaminants. There are several farms in the country that have already been seriously impacted by PFAS.

(See https://bangordailynews.com/2019/03/23/news/york/maine-dairy-farm-plagued-by-chemical-contaminants-may-be-tip-of-the-toxic-iceberg/

https://www.theguardian.com/us-news/2019/feb/20/new-mexico-contamination-dairy-industry-pollution)

The draft recommendation is lacking in urgency given farmers and landowners have a right to know what chemicals are being applied to their land. In addition, when it comes to PFAS, the risk assessment is an inadequate tool to address health concerns. These chemicals are highly persistent and some increase in concentration as they move up the chain. Rather than spending time and resources on risk assessment, the agency needs to include approaches in the CAP that avoid spreading any PFAS-containing sludge on land that can contaminate food and water. This includes exploring and investing in alternative sludge disposal technologies.

Finally, we support the recommendations for testing wastewater treatment plant effluent for PFAS and ultimately establishing effluent limitations. Once PFAS enter these systems they are extremely difficult to address and will merely be shifted from one medium to another. That is why Ecology's upfront, prevention-based regulations are the key to addressing PFAS and need to be as strong as possible.

We have these additional, specific line-item comments on the Draft Recommendations:

1. Page 1, introduction: This paragraph should focus only on the basic description of PFAS and the reasons Ecology elected to conduct a CAP.

2. Page 1, Why are we concerned about PFAS?: As stated in the first paragraph, PFAS are a complex class of more than 4,700 compounds including cyclic and branched compounds. It is an oversimplification to divide them into "long-chain" and "short-chain" compounds. Rather, the document should describe the concerns regarding PFAS as a class. If a distinction needs to be made to clarify that current-use compounds are an ongoing concern, PFAS can be designated as "phased-out" or "current-use" chemicals.

3. Page 2, PFAS Concerns: We agree with the importance of emphasizing persistence. Mobility should also be emphasized. In section 3, it should be added that people who

live near landfills, wastewater treatment plants, and airfields may have increased exposure.

4. Page 15, Section 3.0: The first paragraph should note that the product uses of PFAS create indoor contamination of PFAS in dust and air, and result in outdoor contamination before, during, and after product use through manufacturing releases, intentional and unintentional product releases, contribution of PFAS to wastewater treatment, with PFAS released during treatment to air and after treatment to sewage sludge and wastewater effluent, and through release from landfills and into compost. The reference to PFOS and PFOA in this paragraph should be replaced with information relevant to PFAS as a class or sub-classes of PFAS if needed. Please see Wang et al. 2017 for a typical classification scheme.[1]

5. Page 17, Section 3.2: This section should be reframed with the goal of reducing PFAS exposure from other products. While we agree with Ecology's plan to consider the factors outlined in the Pollution Prevention for Our Future Act to determine priority products, we believe the agency can do this as part of the CAP process. The law sets a deadline of June 2020 for making this determination for all classes of chemicals, so it is reasonable for Ecology to accomplish this in 2019. The process set out in the law does not include additional research; rather, it is designed to use existing information to prioritize products and determine what actions should be taken to reduce exposure.

6. Page 18, Section 3.3: The last paragraph on this page is not relevant, since it pertains to regulatory actions already taken. Ecology's focus should be on actions it can take to reduce exposure to and environmental loading with the class of PFAS. The first paragraph under the "Why?" header fully explains the reasoning, with the exception that it should be clarified that Ecology has also been directed by the legislature to take this action.

Thank you again for the opportunity to provide these comments. Please contact Laurie Valeriano if you have any questions.

Sincerely,

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1. Wang, Z.; DeWitt, J.; Higgins, C.; Cousins, I. T., A never-ending story of per- and polyfluoroalkyl substances (PFASs)? *Environ Sci Technol* **2017,** *51*, 2508-2518.