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December 4, 2017

Kara Steward
Washington State Department of Ecology
Hazardous Waste and Toxics Reduction Program
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Re: PFAS Chemical Action Plan

Dear Ms Steward,

Public Health Seattle and King County (PHSKC) appreciates the opportunity from the Department of Ecology to comment on the PFAS Chemical Action Plan (CAP). This is a large class of chemicals and we appreciate the task at hand in identifying the sources of PFAS exposures in Washington State as well as recommendations on how best to reduce exposures to humans and the environment. King County is the most populated county in Washington State. Having already experienced the impacts of PFAS contamination to the city of Issaquah's drinking water, we are looking to the CAP for ways to prevent further exposures to the residents and environment of King County. The potential for exposure to this chemical class exists in many forms, and we worry about both ongoing exposures from legacy uses as well as exposures to alternative PFAS chemicals that serve as replacements to PFOS.

Due to the short timeline set for the interim CAP, sufficient time to research the facts and information presented in the CAP chapters was not allowed, nor is the time needed to thoroughly vet the information through our agency partners. Therefore the comments included in this are limited and more comments will be provided in greater detail at a later date. In order to inform the interim CAP, PHSKC focused comments on improvements to the document, and strengthening interim recommendations. Addressing these concerns may help clarify where jurisdictions can focus attention on reducing exposures to residents and the environment. These general areas for comment are listed below:

Consistency across document chapters

The chapters were all written by different authors from the Department of Ecology and the Department of Health. It would be useful to do a consistency check across chapters to ensure that the same approach and terminology is used throughout the CAP. A coordinated look at the content should also be performed so that chapters complement and refer to one another on related topics. The chapters should support each other in identifying the most important issues and strengthening the recommended actions. It was not possible to comment on every area where coordination across chapters is needed, so specific examples are included below to highlight where concerns are greatest or to give an idea of the kind of coordination that is needed:

- We support that the focus of this CAP and its recommendations be on ALL PFAS compounds. However, the terminology used in the document is confusing. Some chapters discuss long chain, short chain, and polymers while others do not. Some chapters consistently use PFAS while others break them into PFAAs and PFCAs. It would be good to choose one approach for clarity. With the many different chemical species within the PFAS class, we recommend that rather than identifying the chemicals by long, short or polymer chain types, that the terminology focus on uses and identify which chemicals are replacements.
- Many of the chapters have overlapping information. These need to be integrated more closely so that the information that relates to a topic is clearly connected between chapters. For example, the Chemistry and Health chapters should discuss the same chemicals. If one is mentioned in the chemistry chapter, the health chapter should also discuss it (e.g., GenX). Furthermore, the two chapters should coordinate on which chemicals are alternatives and what this could mean now and in the future. Unknowns related to replacement chemicals; new use chemicals, and the difficulties in finding health information should be clearly articulated across the chapters and if possible, examples given.
- Another example where coordination on overlapping information is needed, is regarding how groundwater, surface water, and fish relate in the Environment and Health Chapters. More coordinated discussion is needed in how groundwater PFAS measures relate to surface waters in terms of exposures, health, and sources into the environment. An integrated discussion is also needed between the two sections on fish concentrations (Environment) and fish consumption (Health). It would be useful to have some synthesis of the existing information, even if it is limited, that indicates that we have high levels in urban lakes and because fishers are known to eat fish from these locations, data are needed to create local advisories across the state.

Equity issues related to PFAS chemicals need to be discussed in the chapters and specifically addressed.

PHSKC has identified many areas related to PFAS chemicals where equity and social justice should be discussed in the chapters as well as in the CAP recommendations that move forward. These areas include:

- Legacy products – The Uses Chapter states that the lifespan of furniture or carpet in US homes is 10-12 years before it is disposed of. This is not a realistic expectation as there are many homes that contain carpet or furniture that is much older than this expected lifespan. The CAP should include a discussion of products such as carpets, furniture, old non-stick cooking pans, and other items with PFAS in them that remain in homes, or would be found on the second-hand market. We would expect low income populations and certain age brackets or cultural groups to retain these legacy products beyond their life expectancy or obtain them as second hand products. These populations may have greater exposures to legacy PFAS. For PFAS

compounds that are disposed of, the communities that are most impacted by PFAS chemicals that volatilize or leak into ground water should also be discussed.

- Fish consumption – Based on the preliminary data in King County provided in the CAP, subsistence fishers are likely consuming fish from local lakes that exceed the provisional health screening levels for PFOS. Because this is a likely risk, the CAP chapters and recommendations should be revised to include subsistence fishers.
- PFAS in drinking water – By testing many group A water systems in the State, communities with water contaminated with PFAS chemicals were identified, mostly from firefighting activities and AFFF. In each of these contamination situations, private wells were identified that would not otherwise have been identified as contaminated. In King County private drinking water wells and smaller (Group B) systems are often fed by ground water. Because smaller drinking water systems and private wells are not being tested by the State Department of Health, this is a gap that needs to be discussed in the CAP. Solutions to testing smaller drinking water systems in areas where potential groundwater contamination is high should be discussed more thoroughly in the CAP with an equity lens, and recommendations made on how populations on these smaller drinking water systems can be served.
- PFAS in food packaging – The average American family spends 43% of its food budget on eating out and the biggest category of food budget spent on foods eaten at home includes pre-prepared foods and snacks¹. In 2011–2012, 34.3% of all children and adolescents aged 2–19 consumed fast food on a given day. Almost 12% (11.6%) of children and adolescents obtained fewer than 25% of their daily calories from fast food, 10.7% obtained 25%–40% of their daily calories from fast food, and 12.1% obtained more than 40% of their daily calories from fast food². On average, American children consume 25% of their daily calories from fast-food and other restaurants³. In King County, fast food restaurants and convenience stores outnumber grocery stores and produce vendors two and a half to one, and in parts of South King County there are as many as 5-7 fast food/convenience stores to each grocery/produce vendor³. King County mirrors much of the US in that low income communities more often lack adequate access to grocery stores and fresh produce than wealthier communities. Low income communities in King County may have a greater exposure to PFAS chemicals through food packaging from greater consumption of fast food and take-out meals in areas where access to fresh produce and grocery stores is limited. Children are an especially vulnerable group as they experience greater exposures to PFAS chemicals in food packaging based on their consumption rates versus their size and fast metabolisms. The CAP does not discuss food packaging from an equity point of view. This discussion needs to be included in the document chapters. PHSKC requests that interim CAP recommendations include a proposed ban on PFAS in food packaging materials, accompanied by an analysis of the alternatives that exist and a justification of the recommended options.

What we support in the interim CAP

PHSKC applauds the efforts the Department of Ecology and the Department of Health are making in focusing the interim CAP actions on AFFF, drinking water, and source identification. We support these broad categories and encourage the Department of Ecology to include specific, forward-thinking, and well-thought-out recommendations related to these items. PHSKC has some specific recommendations.

- AFFF – Many action items were outlined at the Nov 1 meeting and in the supplemental material provided at the Nov 1 PFAS CAP meeting. However, PHSKC requests that the CAP chapters discuss the need for an alternatives assessment for AFFF, and the interim CAP recommends a detailed alternatives assessment study of AFFF that will be conducted by the Department of Ecology. Such a study is critical for understanding the scope of the problem, which regulatory actions to take, and how to craft public health messaging for both firefighters and the general public. While we support the other actions on the supplemental list given out on Nov 1st, the alternatives study is a key gap that needs to be added and clearly articulated in the interim CAP.
- Drinking water level – PHSKC agrees with the proposed approach developed by the Department of Health for determining the drinking water levels for PFAS in WA State and encourages that these levels be revisited on a regular schedule to update them with the latest scientific information. PHSKC does request, as stated above, that the Department of Health find a way to test drinking water sources from Group B and private drinking wells to provide a more holistic assessment of the State’s drinking water and address equity issues.
- Food contact materials - Because food contact paper is a category where data already exist on safer alternatives, food contact paper/packaging should be a highlighted category along with AFFF and drinking water in the Interim CAP. As stated above, PHSKC supports a ban on PFAS in food contact materials with a justification for recommended alternatives.

Additional items for inclusion in either the interim or final CAP

- Source identification – PHSKC strongly supports identifying PFAS sources in consumer products from imports, legacy uses, and as replacements in consumer products. The final CAP should include what is known about chemicals that are currently being used as replacements for PFOS in different products and to include a clear prioritization process on which products to assess first (e.g., which have greatest exposure to humans, wildlife? Are the uses of any of these unnecessary? Where should actions be prioritized?).
- Cleanup levels – PHSKC encourages the Department of Ecology to include a plan in the PFAS CAP on how MTCA cleanup levels for PFAS chemicals will be developed. PHSKC encourages Ecology to use the definition of persistent and dangerous waste as any halogenated organic compound.

- Providing a State cleanup level will help local jurisdictions to understand the levels of PFAS chemicals in their counties/cities, and will have downstream impacts that will inform other impacts on human health and the environment (e.g., setting fish advisories).
- Products produced in WA State – Although there is no known manufacturing of PFAS in WA State, the PFAS CAP chapters are limited in their discussion of how PFAS chemicals are incorporated into products made in WA. . The Uses chapter does a good job of identifying types of businesses in WA that may be adding PFAS during manufacturing. Information on how PFAS are used in WA State and how they get into products sold and made here would be useful (e.g., are there carpet producers in WA State? How do the PFAS get on the carpet at these facilities? How much carpet with PFAS is sold in WA that is locally-made vs purchase from out of state?). PHSKC would like the PFAS CAP to include a plan to obtain this kind of information (for example, through manufacturing/import records, surveys of businesses, and chemical analyses of WA-made vs imported products).
- Boats and use of AFFF – The CAP chapters have limited discussion of boats and the use of AFFF. Given the high amount of boat traffic at WA ports, the CAP should discuss the regulations for AFFF on commercial and personal recreational boats, how fire training on boats is performed, and whether recreational boaters are using AFFF fire extinguishers. The state of disposal of AFFF in WA State should also be discussed more thoroughly for both boat and general AFFF use.

PHSKC strongly supports the drafting of a CAP for PFAS. We applaud Ecology in the comprehensive review and consideration of all PFAS chemicals in the CAP. As a local jurisdiction we hope to avoid regrettable replacements that unnecessarily harm our residents, and we know that replacements to PFOS and PFOA are being used in great volumes in WA State, as are imports of the legacy chemicals. Because of the uncertainty in knowing the quantities, types, uses and health effects of the PFAS chemicals used in WA State, we support the broad review of the PFAS chemicals and hope that the recommendations will also include replacements, precursors, and degradation products.

Thank you once again for the opportunity to comment. We look forward to further participating in the interim and final CAP process.

Sincerely,



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¹ <http://www.businessinsider.com/americans-spending-food-bls-2017-2>

² CDC National Center for Health Statistics (<https://www.cdc.gov/nchs/products/databriefs/db213.htm>)

³ USDA ERS (<https://www.ers.usda.gov/topics/food-choices-health/food-consumption-demand/food-away-from-home.aspx>)

⁴ Beatty, A; Foster, D; and King County Office of Performance, Strategy and Budget (2015). The Determinants of Equity - Identifying Indicators to Establish a Baseline of Equity in King County

(http://www.kingcounty.gov/~media/elected/executive/equity-social-justice/2015/The_Determinants_of_Equity_Report.ashx?la=en)