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Subject: Comments on Washington state Draft PFAS Chemical Action Plan of October 7, 2020

Dear Ms. Makarow,

Thank you for the opportunity to comment on the Draft Chemical Action Plan (CAP) on per- and polyfluoralkyl substances (PFAS) published October 2020. We commend Washington state, Ecology, and Health for their commitment to advance protections for communities and the environment from the entire class of PFAS chemicals. We offer the following comments and recommendations for the final version of the PFAS CAP.

Overall, we ask that Ecology:

- Identify safer alternatives and ban PFAS in products beginning in 2025. While Ecology should pursue safer alternatives to the products already listed as priorities in the CAP, it should expand the priority product list to include all textiles, cleaning products and sealers, non-stick cookware, and personal care products as priority products. While bans are being put in place, the entire class of PFAS should be added to the Children's Safe Products Act Reporting Rules.
- Immediately designate the entire class of PFAS chemicals as hazardous substances under the Model Toxics Control Act; adopt cleanup standards for all PFAS in 2021; subject PFAS to the hazardous substance tax. Speed up timelines for dealing with PFAS contamination.
- Speed up timelines for cleaning up contamination in communities.
- Pursue immediate testing of sludge and develop a sludge (biosolids) standard for all PFAS.
- Adopt strong drinking water standards in 2021 for all PFAS and expand testing to identify Washington drinking water systems contaminated with PFAS.

- Ensure safe disposal of PFAS-containing products.
- Fully implement Washington state's ban on PFAS in paper food packaging.

1. **Identify safer alternatives and ban uses of PFAS by 2025 to prevent pollution.**

Eliminating the use of PFAS in products is a crucial strategy to reduce human and environmental exposure to this harmful chemical class. Ecology should take action to reduce the largest sources of PFAS by declaring all textiles, cleaning products, floor waxes and stone/wood sealers, non-stick cookware, and personal care products as priority products under the Safer Products for Washington law so that the search for safer alternatives begins now and bans can be put in place by 2025.

Textiles are a Major Use of PFAS

The agency should address all textiles, expanding its priority product designation to include apparel (including firefighter personal protective equipment) in the first round of Safer Products for WA. The current plan only identifies carpets, rugs and leather textile furnishings, and aftermarket treatments as the first set of priority products, leaving major textiles like apparel to a later date. The PFAS CAP should recommend banning the use of PFAS in all textiles and Ecology should pursue this action starting now under Safer Products for Washington.

First and foremost, PFAS are used to provide the same function across all textiles, which is water and/or stain protection. This is recognized in the agency's report to the legislature that identified priority products under Safer Products for Washington. Second, the Department must identify priority consumer products that are a significant source of or use of priority chemicals.

Apparel is a significant textile use of PFAS

In an October 2020 analysis of PFAS uses in textiles, upholstery, leather apparel, and carpet (TULAC) in the European Union (EU), the two key dominant TULAC sectors are estimated to be home textiles (50 – 53%) and consumer apparel (34 – 39%)[1], a highly significant amount. These are the percentages of total estimated PFAS in metric tons (tonnes) (1 metric ton = 2204.62 lbs.) used in textiles sold on the EU market annually - both manufactured in the EU and imported. This analysis also concludes that the dominant life cycle stage for PFAS emissions into the environment is from frequently washed textiles; the next most significant is treatment of textiles before sale[1]. This highlights the importance of wash-out from textiles during the laundry cycle and release of contaminated wastewater to sewer[1]. In addition, this report concludes that a transition period for restrictions to be put in place could be around two years for consumer apparel and home textiles[1].

Addressing this category is also important because apparel likely to contain PFAS is a growing market. Popularity of performance and athleisure wear in the apparel market is increasing with consumers'

increasing interest in casual and active lifestyles. And due to Covid-19, with more people working from home, the growth is even greater. Typical performance-wear apparel includes yoga pants, lightweight jackets, pullover tops, and running pants, and frequently contain PFAS chemicals for water resistance and breathability. The US athleisure market value is expected to grow from $155.2 billion in 2019 to $257.1 billion by 2026.

Another important sub-category of textile use for PFAS is Firefighter Personal Protective Equipment (PPE). Due to an existing law requiring disclosure of PFAS in firefighter turnout gear, the agency already has data confirming use of PFAS. Manufacturers including Tencate Fabrics, FireCraft Safety Products, Fire-Dex, CrewBoss, Globe Manufacturing, Lion Protects, Shelby Specialty Gloves, and True North Gear provided information to the agency that it uses PFAS in turnout gear and other PPE. This information should be added to the CAP.

PFAS-treated apparel is a significant source of exposure, especially for children

PFAS have been demonstrated to migrate from children's apparel into artificial saliva[2,3]. Since babies and children often mouth apparel items, if the items contain PFAS it may be ingested. A 2015 study found that in children, the frequency of wearing waterproof clothing was among significant positive predictors of perfluorinated compound blood serum levels[4]. The draft PFAS CAP presents data from a 2009 EPA study[5], an analysis of 116 articles of commerce purchased in 2008 from retail outlets in the US, which concluded that in typical American homes with carpeted floors, pre-treated carpet and commercial carpet-care liquids are likely the most significant PFCA sources. However, the authors also include apparel as a potentially important indoor source[5]. And again, babies and young children will mouth their outdoor apparel during outdoor activities when the apparel is most typically worn.

Babies' and childrens' bibs are an apparel item that often contains PFAS. In a study done on apparel purchased in North America (Canada, USA, and Mexico), 14 out of 29 (48%) of bibs tested contained PFAS chemicals[2]. Babies and young children are likely to mouth their bibs, and children's caregivers will often scoop food fallen onto bibs and offer it to the child to eat.

PFAS use in apparel is a source of occupational exposure for firefighters, apparel workers, military personnel and healthcare workers

- Cancer is now the leading cause of death among firefighters, and they have higher rates of cancer than the general population[6]. Reducing exposures to chemicals such as PFAS are a priority and PFAS turnout gear is worn regularly on the job and new studies indicate exposure for firefighters[7].
- A study of fluorotelomer alcohols (precursors of PFCAs) in indoor workplace air found the highest levels in shops selling outdoor apparel, indicating outdoor textiles to be a relevant source[8]. This study also demonstrated the emission of FTOHs from outdoor apparel[8].

- A 2014 German study reported that PFAS exposure for people working in outdoor clothing stores receive exposures that could exceed dietary intake estimates[9]. This conclusion was reached in the above-mentioned study as well[8].
- PFAS chemicals are also commonly used in textiles in health-care settings. This includes textiles used for disposable hospital gowns, surgical gowns, masks, and hospital uniforms, creating another workplace exposure. Five out of five samples (100%) of treated nonwoven medical garments (which includes disposable hospital gowns, surgical gowns, etc.) that were tested in an EPA study contained FTOHs[10].
- A report for Defence Canada provided instances of military personnel using PFAS-treated apparel[11].

Finally, there are many other examples of other work clothes containing PFAS that can be purchased for various jobs. For example, Sears' Craftsman brand includes work wear with Teflon and Chemours (formerly Dupont) promotes apparel products on its website (January 2021) that have a Teflon finish.

Aftermarket spray treatment products are used for all textiles, including apparel

Aftermarket carpet treatments and waterproofing sprays are included in the draft PFAS CAP and have been identified by Ecology as a Priority Consumer Product. These products are used to treat apparel, as well as carpet and home furnishings, as noted in the Priority Consumer Products Report. For example, Scotchgard (which contains PFAS) product information recommends its use on textile home furnishings as well as apparel. This is a reminder that home furnishing textiles and apparel textiles that are treated with PFAS have significant overlap. These spray treatments can also be a source of exposure to babies and young children not only when the products are used in the home, but also when a spray bottle is spilled, or a child inadvertently handles the bottle.

PFAS exposure in pets

Recent research shows that indoor pets are also exposed to PFAS, likely from the same sources as people (textiles, air, food, etc.)[12]. Chemours promotes a brand of pet beds made with Teflon on its website: https://www.teflon.com/en/consumers/textile-finishes/where-to-buy-textile-finishes.

Safer alternatives can be used on all textiles

Many safer alternatives to PFAS in apparel are available. A directory of PFAS-free apparel products has been compiled by Green Science Policy Institute and is available at: https://pfascentral.org/pfas-basics/pfas-free-products/.

The agency has already identified some of the alternative chemicals and materials in its report to the legislature that would apply to all textiles, including apparel.

2. **Immediately designate the entire class of PFAS chemicals as hazardous substances under the Model Toxics Control Act; adopt cleanup standards for all PFAS in 2021; and subject PFAS to the hazardous substance tax.**

Neither state nor federal law recognizes PFAS as hazardous substances despite the known harm to human health and the widespread drinking water contamination that has occurred. With approximately 5,000 different types of PFAS chemicals available for use, and PFAS contamination impacting drinking water for millions of people across the country, this is a critical step to ensure polluters pay to clean up contamination and drinking water in communities. Cleanup standards should be adopted in 2021. In addition, PFAS continues to enter the state for use by several industries; the hazardous substance tax should be collected for PFAS chemicals in products coming into Washington.

3. **Speed up timelines for dealing with PFAS contamination.**

It's not acceptable for any community to suffer health, economic or other negative consequences while the chemical industry continues to reap huge profits, and frontline communities in Washington must be prioritized for PFAS cleanups under MTCA. Communities in Washington state such as Coupeville and Airway Heights have suffered enough from PFAS contamination and new contamination in the state continues to be identified. An ambitious timeline must be established to identify and clean up toxic sites beginning in 2021. The longer the state waits, the bigger the harm to human health and the environment, and the bigger the cost to the state.

4. **Pursue immediate testing of sludge (biosolids) and develop standards for all PFAS.**

Sludge from municipal treatment plants should be tested for PFAS chemicals, beginning with biosolids applied to dairy and other farms in our state. Farms and other lands where biosolids have been applied should also be tested and Ecology should look at the runoff impacts of biosolids-laden fields and forest plots; Maine has carried out sludge testing and established restrictions. Alternative disposal methods should be investigated to keep PFAS off of farms and other lands. The standard should also apply to any consumer products made from biosolids. These actions are vital to prevent continual recontamination of our food and bodies with PFAS.

5. **Adopt strong drinking water standards in 2021 for all PFAS and expand testing to identify Washington drinking water systems contaminated with PFAS.**

The Department of Health is currently in the process of establishing standards for PFAS in drinking water, which are set to be finalized in 2021. Setting standards for all PFAS is the only way to ensure that Washingtonians have access to safe drinking water. The state must provide more testing of drinking water supplies across the state as the full extent of the problem has not yet been determined.

6. **Ensure safe disposal of PFAS-containing products.**

Washington state has one solid waste incinerator, in Spokane, and along with other solid waste it burns PFAS-containing wastes such as food packaging, furniture, and carpet. There is no recognition of this in the CAP. Available evidence suggests that incineration does not effectively destroy persistent PFAS chemicals but can result in dispersion and deposition of the chemicals to land and water. In addition, other wastes may be exported for incineration. Washington state should not allow the burning of PFAS wastes and should pursue the safest storage or disposal options.

7. **Fully implement Washington state's ban on PFAS in paper food packaging.**

In March of 2018 Washington state's legislature voted to ban PFAS chemicals in paper food packaging. Ecology has fallen behind in the timeline laid out in the act; the required alternatives assessment was supposed to be finished by Jan. 1, 2020, and the ban be effective by Jan. 1, 2022. The final alternatives assessment has not been issued. We have identified many PFAS-free alternatives. Ecology should fully implement the ban on PFAS in all paper food packaging.

Thank you again for the opportunity to comment. Please contact Laurie Valeriano at Toxic-Free Future if you have any questions at 206-200-2824.

Sincerely,

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