



King County

Solid Waste Division

Department of Natural Resources and Parks

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January 22, 2021

VIA ELECTRONIC MAIL:

ChemActionPlans@ecy.wa.gov

Ms. Irina Makarow
Washington Department of Ecology
PO Box 47600
Olympic, Washington 98504-7600

RE: Draft PFAS Chemical Action Plan Comments

Dear Ms. Makarow:

Thank you for the opportunity to comment on the Washington State Departments of Ecology and Health's Draft Per- and Polyflouroalkyl Substances (PFAS) Chemical Action Plan (CAP). The King County Solid Waste Division (KCSWD) appreciates the hard work by Ecology and Health to address these "forever" chemicals and protect the public health and the environment.

The KCSWD is keenly interested in the PFAS CAP as we are directly impacted by its recommendations and forthcoming regulatory requirements. KCSWD provides garbage transfer and disposal and recycling services for approximately 1.3 million residents and 660,000 employees in King County. The King County solid waste system serves 37 of the 39 cities in King County (the cities of Milton and Seattle are not part of the King County system) and all the unincorporated area of King County. To serve such a large population and area, the KCSWD operates eight transfer stations, a moderate risk waste facility, and two drop boxes. In addition to receiving solid waste from curbside collection, these facilities accept solid waste from residential and non-residential self-haulers. KCSWD also provides comprehensive recycling services at most of our transfer stations and drop boxes.

KCSWD also operates the Cedar Hills Regional Landfill – the only active municipal solid waste landfill in King County. KCSWD also has custodial responsibility for seven closed landfills located across King County. Work at these sites include ongoing environmental monitoring of groundwater, surface water, wastewater (leachate), and landfill gas. Many of these closed and custodial landfills were operating before modern waste regulations and landfill design standards were established and were designed with unlined garbage cells and accepted all types of waste.

KCSWD commends Ecology and Health for recommending actions to reduce the use, release, and exposure to PFAS. We believe that the best course of action is to stop PFAS at their source and agree with the recommendations set forth in the CAP regarding prevention. We also support

efforts towards safe drinking water as this is known to be one of most common routes of human exposure.

As the lead agency responsible for managing solid waste and the cleanup of custodial landfills in King County, we are particularly interested in recommendations regarding the establishment of cleanup standards of PFAS in groundwater, surface water, air, and soil, the life cycle of PFAS, and evaluating PFAS waste management. Provided below are our comments regarding these aspects of the Draft PFAS CAP.

General Comments

The PFAS CAP is taking a smart path towards prevention. As is true with all known harmful substances, source control is the most effective and efficient way to protect the public health and the environment. However, what is lacking in the CAP is a comprehensive examination of the life cycle of PFAS containing wastes and PFAS waste management.

KCSWD recommends that PFAS are managed holistically with science driving the decision making coupled with sound, realistic, and economic judgment. It is well known that the science is still evolving. At this point in time we do not understand the fate, transport, exposure, and toxicity of PFAS in various environmental media. Analytical and monitoring methods are still in development and effective remediation technologies of PFAS are in their infancy. In some areas, such as PFAS in landfill gas emissions, there is very little to no data and studies are just beginning. We strongly encourage Ecology and Health keep this in mind and not make decisions or enact regulatory requirements prematurely.

KCSWD is a “receiver” of PFAS wastes. Although we do not manufacture nor use PFAS in our operations, we are the receiver of PFAS wastes. The quantities of PFAS we receive varies widely as PFAS products are used throughout society through a wide array of products and processes. It is important to acknowledge that as long as PFAS remain ubiquitous in society, they will find their way into landfills and consequent landfill leachate. PFAS cannot be eliminated from landfills if PFAS continue to circulate in the economy. Landfills cannot and should not avoid receipt of PFAS containing wastes. KCSWD encourages Ecology and Health to evaluate the various methods of disposal, destruction, and end of life options for PFAS waste and associated regulatory requirements.

Like landfills, recycling and composting facilities are unable to avoid receiving PFAS containing wastes in food packaging, biodegradable products, carpeting, textiles and other recyclable materials. Policies affecting “receivers” such as landfills, recyclers, and composters should balance the impact of managing PFAS contaminated wastes with their environmental value and their necessity.

Specific Comments on Draft CAP Recommendations

2.0 Manage environmental PFAS contamination

- The CAP cited an example of assisting the city of Issaquah with cleanup. This cleanup is directly impacting their drinking water supply and the source identified is from the AFFF. Although this work is commendable, it should be addressed under the category of ensuring safe drinking water.

2.1 Establish PFAS cleanup levels for soil and groundwater

- KCSWD is concerned how PFAS shall be classified as to their type of waste and product as defined under various State and Federal regulations. This will significantly impact how PFAS containing waste shall be managed in the future. If PFAS containing wastes are classified as a Dangerous Waste, KCSWD recommends that provisions be made in Chapter 173-303 WAC Dangerous Waste Regulations, to allow for their disposal at a municipal solid waste landfill.
- KCSWD understands that PFAS cleanup actions will fall under the authority of the Model Toxics Control Act (MTCA) in the future. However, the CAP states that there are no enforceable standards, and, best practices for conducting such a cleanup are not established. It also was stated in the CAP that there are no approved analytical methods to test for PFAS in soil, groundwater, and other media; the only approved analytical methods at this time are for drinking water. Therefore, there are no analytical laboratories certified by Health to perform any type of PFAS analysis of soil, groundwater, surface water, leachate, or air.

Sites impacted by PFAS will go through the cleanup process established by MTCA in the future. To move forward in making these regulatory changes now is premature. KCSWD recommends that these regulatory changes be made once the science has been more established, and proven, affordable, and effective remediation technologies exist.

- The second bullet states “Ecology will explore methods for investigation and cleanup of PFAS contamination”. This work is to be funded out of the operating budget. KCSWD believes that this important work is inadequately funded and recommends additional funding be provided for this work.
- The establishment of cleanup levels needs to be determined based on available technologies and achievable results. KCSWD recommends Ecology incorporate this into their decision making and approach.

2.3 Work to prevent PFAS released from firefighting foam use and manufacturing

- Although landfills were listed as a source of firefighting foam, no recommendations were made that supports keeping AFFF waste out of the landfill or any clear programs to prevent AFFF from being generated.
- KCSWD questions the identification of landfills as a source of firefighting foam. As previously stated, landfills are “receivers” of PFAS containing waste and are not generators or users of the waste. KCSWD believes that clear definitions of “sources” be included in future PFAS regulations.

- The recommendations indicate that Ecology will work with airports, manufacturing, and transportation facilities that have foam stockpiles. This assistance includes disposal. The recommendation does not include where this material will be disposed. KCSWD recommends that these materials are incinerated and not landfilled.
- KCSWD recommends a program be launched that focuses on collecting and destroying all PFAS containing AFFF through incineration from all sources rather than the limited group with stockpiled material identified in the CAP.

3.1 Reduce PFAS exposure from carpets and rugs, water and stain resistance treatments, and leather and textile furnishings

- Recommendations should include researching a recycling process for legacy carpet that removes PFAS from the material. PFAS carpet should not be disposed of in a landfill; it should be recycled and made safe for reuse. Zero waste actions would support lowering the exposure for consumers and lower the amount of PFAS put into landfills. It is known that carpets, furniture, and other textiles are difficult to recycle due to their composition. Product stewardship programs for carpet, furniture, and other textiles could be of benefit.

4.0 Understand and manage PFAS in waste

- The CAP does not address the life cycle of PFAS containing waste. There is no discussion nor recommendations to evaluate landfilling as a final repository of PFAS wastes, the different types of landfills, incineration, or sequestration in landfills.
- EPA recently released their “Interim Guidance on the Destruction and Disposal of Perfluoroalkyl and Polyfluoroalkyl Substances and Materials Containing Perfluoroalkyl and Polyfluoroalkyl Substances”, dated December 18, 2020. This document is currently open for public comment. KCSWD recommends that Ecology and Health review, evaluate, and incorporate the findings of the final document into the Final CAP.

4.1 Evaluate PFAS in wastewater treatment

- KCSWD’s comments and references to wastewater in this section are regarding leachate from our landfill operations. We understand that King County’s Wastewater Treatment Division is submitting comments separately to address the broader wastewater issues.
- KCSWD is pleased to see Ecology and Health addressing PFAS in wastewater. KCSWD recommends that the study includes research into identifying treatment methods to remove PFAS from wastewater.
- KCSWD recommends statistically significant data be collected and peer reviewed before determining monitoring and other regulatory requirements.
- EPA issued a memorandum in November 2019 detailing an interim NPDES permitting strategy for addressing PFAS in EPA issued wastewater permits. They are in the process of developing the underlying science and permitting techniques to address PFAS in wastewater. This body of work includes new analytical methods to test for PFAS compounds in wastewater and other media. Currently, drinking water has the only

approved analytical method and is only for 20 PFAS chemicals. EPA anticipated that multi-lab validated testing will be finalized in 2021. KCSWD recommends that Ecology and Health incorporate the findings of this work into their studies and decision-making process.

- KCSWD recommends that Ecology and Health further explore where the responsibility will lie for treating PFAS in wastewater. The burden of this requirement could have other consequences such as discontinuation of recycling services, which would be contrary to Washington’s State Solid and Hazardous Waste Plan, King County’s Comprehensive Solid Waste Management Plan, and our overarching goals of waste reduction and social equity.

4.2 Evaluate landfill PFAS emissions

- “Landfill waste makeup” research is not well-integrated into this section. It states that Ecology will “continue to research” but does not provide basic information about this continuation or outline a course of action for PFAS waste entering landfills. The cost of this research doesn’t appear accounted for.
- One assumes, though it is not stated outright, that the results of the emissions and waste makeup research would provide a basis for prohibiting certain wastes from future landfill disposal, but that is not included in the “why” statement.
- Landfills provide three main environmental control systems with effluent in stormwater, groundwater, and air. This section needs a Landfill Gas section that evaluates the landfill gas-leachate two phase transfer potential to groundwater. This should be done at the same time as the leachate evaluation to reduce sampling costs.
- Leachate generated at landfills, recyclers, and composters co-mingles with other wastewater sources as it flows through the public wastewater collection system to the WWTP. PFAS is ubiquitous in society and is likely found in wastewater from almost all sources. Currently there are no approved test methods for analyzing leachate, groundwater, or landfill emissions. Based on KCSWD’s knowledge, the only environmental laboratories that are testing for PFAS are in Canada and other states besides Washington. Additionally, the only approved analytical methods are for drinking water, which is inapplicable for these recommendations in the CAP. Modifying WAC 173-351 and 173-350 requiring “receivers” to monitor for PFAS in their leachate serves no purpose and is a waste of resources.
- KCSWD recommends that Ecology and Health do not move forward with rulemaking at this time and it be performed holistically and based in science.

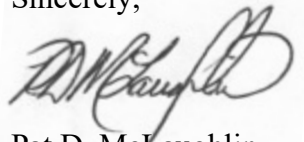
Ms. Irina Makarow

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KCSWD appreciates the opportunity to comment on the Draft PFAS CAP and we look forward to continuing to work with Ecology and Health on this important topic. We encourage and support both agencies as you move forward. If you have any questions regarding KCSWD comments, please contact Joan Kenton, Environmental Compliance Coordinator at jkenton@kingcounty.gov or 206. 263.0805 or the undersigned at any time.

Sincerely,



Pat D. McLaughlin
Division Director

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