Response to Comments

Draft Agreed Orders

Lower Issaquah Valley PFAS Cleanup Sites Issaquah, WA

- **EFR HQ IVES (Eastside Fire & Rescue Headquarters and Issaquah Valley Elementary School) site**
- **Rainier Trail & Memorial Field site**

Toxics Cleanup Program

Washington State Department of Ecology
Northwest Regional Office
Shoreline, Washington

August 2024

Publication Information

This document is available on the following Department of Ecology's cleanup site pages.

- EFR HQ IVES (Eastside Fire & Rescue Headquarters and Issaquah Valley Elementary School) site[1]
  Facility Site ID: 83936264 | Cleanup Site ID: 16581
- Rainier Trail & Memorial Field site[2]
  Facility Site ID: 57044 | Cleanup Site ID: 16582

Contact Information

Toxics Cleanup Program

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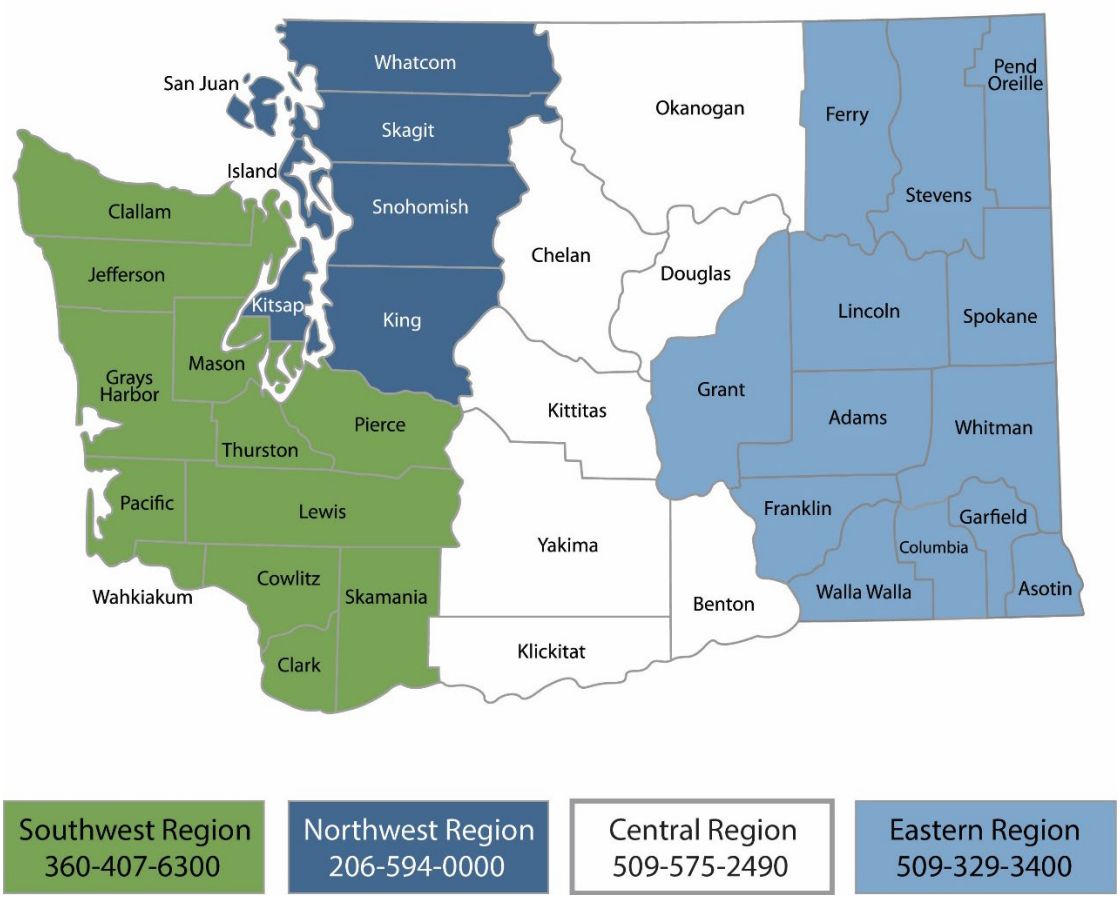
[1] https://apps.ecology.wa.gov/cleanupsearch/site/16581
[2] https://apps.ecology.wa.gov/cleanupsearch/site/16582
[3] https://ecology.wa.gov/About-us/Contact-us

Department of Ecology's Region Offices

Map of Counties Served



Region	Counties served	Mailing Address	Phone
Southwest	Clallam, Clark, Cowlitz, Grays Harbor, Jefferson, Mason, Lewis, Pacific, Pierce, Skamania, Thurston, Wahkiakum	PO Box 47775 Olympia, WA 98504	360-407-6300
Northwest	Island, King, Kitsap, San Juan, Skagit, Snohomish, Whatcom	PO Box 330316 Shoreline, WA 98133	206-594-0000
Central	Benton, Chelan, Douglas, Kittitas, Klickitat, Okanogan, Yakima	1250 W Alder St Union Gap, WA 98903	509-575-2490
Eastern	Adams, Asotin, Columbia, Ferry, Franklin, Garfield, Grant, Lincoln, Pend Oreille, Spokane, Stevens, Walla Walla, Whitman	4601 N Monroe Spokane, WA 99205	509-329-3400
Headquarters	Across Washington	PO Box 46700 Olympia, WA 98504	360-407-6000

Response to Comments

Lower Issaquah Valley PFAS Cleanup Sites
Issaquah, WA

Toxics Cleanup Program
Washington State Department of Ecology
Northwest Region Office
Shoreline, WA

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DEPARTMENT OF
ECOLOGY
State of Washington

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Public Outreach Summary

The EFR HQ IVES (Eastside Fire & Rescue Headquarters and Issaquah Valley Elementary School) cleanup site and the Rainier Trail & Memorial Field cleanup site, both located in the Lower Issaquah Valley east of Seattle, are continuing Washington State's formal cleanup process[4] as directed under the Model Toxics Control Act (MTCA[5]). The City of Issaquah (City) and Eastside Fire & Rescue (EF&R) are addressing contamination under legal agreements with Ecology.

The Department of Ecology held 45-day public comment periods for both sites from April 22 – June 6, 2024. The public involvement activities included:

- **Postcard and Fact Sheet:**
  - US mail distribution of a postcard providing information about the cleanup sites, the public comment period, and public meetings to over 37,000 addresses, including all those in the impacted water service areas as well as other interested parties.
  - Email distribution of the fact sheet to over 150 people, including interested individuals, local/county/state/federal agencies, neighborhood associations, and interested community groups.
  - The postcard and fact sheet were available digitally through Ecology's cleanup site webpage.[6]

- **Legal Notices:**
  - Publication of one print display ad in *The Seattle Times*,[7] dated Sunday, April 21, 2024.
  - Publication of digital ads with the online *Issaquah Reporter*[8] from Friday, April 19 to Thursday, May 2, 2024.

- **Contaminated Site Register:**
  - Publication of 5 notices in Ecology's *Contaminated Site Register*:[9]
    - Comment Period Notice:
      - April 18, 2024
      - May 2, 2024
      - May 16, 2024
      - May 30, 2024
    - Response Summary Notice:
      - September 5, 2024

[4] https://ecology.wa.gov/MTCA-process
[5] https://ecology.wa.gov/mtca
[6] https://ecology.wa.gov/liv
[7] https://www.seattletimes.com/
[8] https://www.issaquahreporter.com/
[9] https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Site-Register-lists-and-data

- Visit Ecology's Contaminated Site Register website[10] to download PDFs.

  Media Notification:
  - Ecology sent a media notice on Thursday, April 18, 2024, to *The Seattle Times* newspaper, the online *Issaquah Reporter*, the online *Sammamish Independent,* and the online *Issaquah Daily.*

- **Media Coverage:**
  - None

- **Social Media:**
  - **Twitter:** Ecology – Northwest Region @ecyseattle posted a tweet[11] on Monday, April 22, 2024
  - **Blog:** Ecology posted a blog[12] (with video) on Wednesday, May 1, 2024 connecting readers to the comment period including the cleanup site webpage and public meeting details.

- **Online Public Meeting**
  - Ecology hosted an online meeting Wednesday, May 1, 2024, at 6:30 p.m. Ecology, City of Issaquah, Eastside Fire & Rescue, and WA Dept of Health staff presented information and answered questions about both sites and the documents for review.

- **In-person Open House and Public Meeting**
  - Ecology hosted an in-person Open House event from 5:30 pm to 6:30 pm and a public meeting beginning at 6:30 pm on Thursday, May 2, 2024, at the Issaquah Senior Center. During the Open House event, staff from Ecology, City of Issaquah, Eastside Fire & Rescue, and WA Dept of Health were available to talk with community members and answer questions. During the public meeting, staff formally presented information about both sites, and answered questions following the presentation.

- **Websites**:
  - Ecology announced the public comment period and public meetings, posted the fact sheet, postcard, and video, and made the review documents available at the following webpages:
    - Ecology's EFR HQ IVES cleanup site webpage[13]

[10]https://apps.ecology.wa.gov/publications/UIPages/PublicationList.aspx?IndexTypeName=Program&NameValue=Toxics+Cleanup&DocumentTypeName=Newsletter
[11] https://twitter.com/ecyseattle/status/1782449757409116669
[12] https://ecology.wa.gov/blog/may-2024/cleaning-up-pfas-in-the-lower-issaquah-valley
[13] https://apps.ecology.wa.gov/cleanupsearch/site/16581

- Ecology's Rainier Trail & Memorial Field cleanup site webpage[14]
- Ecology's Public Inputs & Events webpage[15]

- **Document Repositories:**
  - Copies of the review documents and fact sheets (including translations) were available for review at the Issaquah Public Library.
  - Outreach materials also directed the public to contact Kristen Forkeutis, Outreach Specialist, for document review assistance.

Comment Summary

From April 22 – June 6, 2024, Ecology solicited public comments on legal agreements (Agreed Orders) for the two Lower Issaquah Valley PFAS Cleanup Sites: EFR HQ IVES (Eastside Fire & Rescue Headquarters and Issaquah Valley Elementary School) cleanup site and the Rainier Trail & Memorial Field cleanup site.

For the EFR HQ IVES cleanup site, the Agreed Order is between Ecology, the City of Issaquah (City) and Eastside Fire & Rescue (EF&R), and it requires the City and EF&R to investigate environmental conditions, complete a Remedial Investigation, Feasibility Study, and a draft Cleanup Action Plan.

For Rainier Trail & Memorial Field site, the Agreed Order is between Ecology and the City, and it requires the City to investigate environmental conditions, complete a Remedial Investigation, Feasibility Study, and a draft Cleanup Action Plan.

Ecology received a total of 7 comments during the 45-day comment period.

Table 1: List of Commenters

	First Name	Last Name	Agency/Organization/Business	Submitted By	Submittal Date
1	Gwen	Anonymous		Individual	06/06/24
2	John	Krauss	Sammamish Plateau Water	Water District	06/04/24
3	Addison	Anonymous		Individual	05/29/24
4	Michael	O'Connell		Individual	05/18/24

[14] https://apps.ecology.wa.gov/cleanupsearch/site/16582
[15] https://ecology.wa.gov/Events/Search/Listing

	First Name	Last Name	Agency/Organization/Business	Submitted By	Submittal Date
5	Michael	O'Connell		Individual	05/18/24
6	Jill	Purse		Individual	05/05/24
7	Kristina	Mitchell		Individual	05/02/24

Next Steps

Ecology has reviewed and considered the public comments received on the legal agreements and Public Participation Plan. Based on Ecology's evaluation of the comments, no changes to the documents were necessary, and both will be finalized.

A general timeline for the remaining steps is provided below.

- **2024 through 2025:** Complete studies of the sites (remedial investigations).
- **2025 through 2026:** Initiate potential interim action(s) and consider options for cleanup (feasibility studies) for each site.
- **2027 and beyond:** Plan the cleanup (cleanup action plan), design the cleanup (engineering design), and implement the cleanup. Monitor, maintain, and review the sites. Another legal agreement and public review and comment period will take place for each site before the cleanup plans are finalized and implemented.

Review the graphic below and visit Ecology's cleanup process webpage[16] to learn more about Washington's formal cleanup process.

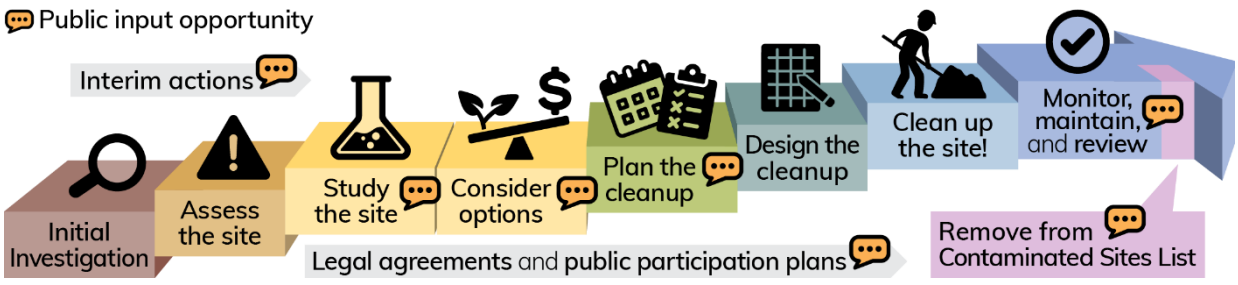

Figure 1: Washington's formal cleanup process

[16] https://ecology.wa.gov/MTCA-process

Comments and Responses

The public comments are presented below, along with Ecology's responses. Appendix A contains the comments in their original format.

Comment from: Gwen Anonymous

Washington Dept of Ecology
PO BOX 330316
Shoreline, WA 98133-9716
Brett.Carp@ecy.wa.gov

RE: Public Comment to Lower Issaquah Valley PFAS Cleanup

I am a 19+ year resident and homeowner in census tract 321.03, living within direct proximity to the EFR. My daughter also spent her middle school and high school years at this address, attending schools in the valley. I submit the following comments and questions:

1. Why hasn't the City of Issaquah moved fully to another regional drinking water supply for the City of Issaquah Water Service area (rather than a dilution strategy), given the history and levels of contaminants (arsenic, PFAs, PFOAs), natural limits to utilizing the aquifer, increasing flood & drought cycles (climate change) and continued growth and development, with a necessary move toward population density for this area in particular? Other areas of Issaquah on regional water supplies do not have these issues.

2. Given the levels of contaminants to groundwater and the number of sites involved, what is the required frequency of drinking water testing for the City of Issaquah Water Service area for the interim, clean-up and post clean-up periods? How often would you want this water supply tested if it was your family's only source of drinking water/household water?

3. Why aren't residents in these impacted areas [minimally] being provided with funds to purchase or offset purchase for reverse osmosis filtration units (e.g., under sink, household) for the interim? The Issaquah Valley area has a higher concentration of the city's most "affordable" housing options – and more vulnerable community members as identified within your own scoping documents.

4. Documents mention preliminary groundwater flow and transport findings related to the minimal extent of contaminated groundwater plumes, .e.g., for EFR & IVES/Dodds Fields in directions northward. However, there is no more detailed information related to potential flows eastward from originating sites – i.e., that would impact surrounding neighborhoods and Issaquah Creek. Similarly flow finding descriptions for the Rainier Trail and Memorial Field also present as limited.

This lack of important data or clarifying language, related to what is known and unknown for flows: North, South, East and West, could be interpreted as intentionally minimizing the extent of [potential] contamination across the valley.

5. The City of Issaquah typically does a great job of communicating with residents. However, given the limited public comment, and the lack of regular (i.e.) repeated email announcements,

social media announcements and community-based signage – more frequent communication and more accessible modes / formats for communication would be important going forward.

Again, without changes and more detail and transparency related to a communications and engagement strategy, it could be interpreted that this information (e.g., contaminant levels, affected areas/boundaries, extent of clean up required) is intentionally being minimized.

Thank you.

Response:

1. Why hasn't the City of Issaquah moved fully to another regional drinking water supply for the City of Issaquah Water Service area (rather than a dilution strategy), given the history and levels of contaminants (arsenic, PFAs, PFOAs), natural limits to utilizing the aquifer, increasing flood & drought cycles (climate change) and continued growth and development, with a necessary move toward population density for this area in particular? Other areas of Issaquah on regional water supplies do not have these issues.

Response provided by the City of Issaquah – The City meets all standards for water distribution and strives to provide potable water at a fiscally responsible rate to customers. All water sources are treated to meet state and federal standards for consumption. All water requires some sort of treatment, whether it be from well or a surface source. The City currently blends water from its wells with regional water distributed by Cascade Water Alliance. Having multiple sources of water means the City has a more resilient supply and reduces our dependency on purchasing regional water. The regional water we receive from Cascade Water Alliance is surface water purchased from Seattle Public Utilities, which is more subject to drought, climate impacts and demands by other member agencies than the water we extract from our groundwater wells.

2. Given the levels of contaminants to groundwater and the number of sites involved, what is the required frequency of drinking water testing for the City of Issaquah Water Service area for the interim, clean-up and post clean-up periods? How often would you want this water supply tested if it was your family's only source of drinking water/household water?

Response provided by the City of Issaquah – The City tests for all contaminants on a schedule that meets national and state standards. The frequency of testing varies by the contaminant being tested. Currently, we test for PFAS on a monthly basis. This exceeds the current requirements, which are to test quarterly.

3. Why aren't residents in these impacted areas [minimally] being provided with funds to purchase or offset purchase for reverse osmosis filtration units (e.g., under sink, household) for the interim? The Issaquah Valley area has a higher concentration of the city's most "affordable" housing options – and more vulnerable community members as identified within your own scoping documents.

Response provided by the City of Issaquah – The City meets all standards for water drinking water. The City has taken steps such as filtering water before it enters the distribution system, removing an untreated well from the distribution system and purchasing regional, replacement water. We have invested in providing safe drinking water at the point of distribution, as this is the most effective way to ensure that outcome for all community members.

4. Documents mention preliminary groundwater flow and transport findings related to the minimal extent of contaminated groundwater plumes, .e.g., for EFR & IVES/Dodds Fields in directions northward. However, there is no more detailed information related to potential flows eastward from originating sites – i.e., that would impact surrounding neighborhoods and Issaquah Creek. Similarly flow finding descriptions for the Rainier Trail and Memorial Field also present as limited.

This lack of important data or clarifying language, related to what is known and unknown for flows: North, South, East and West, could be interpreted as intentionally minimizing the extent of [potential] contamination across the valley.

Response provided by Ecology – We understand that you are concerned that more information was not provided regarding the location and/or amount of contaminated groundwater. Be aware that this cleanup process is at the early stages. The next step in the cleanup process, the Remedial Investigation, will generate data regarding the nature and extent of contamination, including many of those areas that you mention. A scope of work to complete the remedial investigation will be provided in a Remedial Investigation Work Plan. The scope will include additional investigation of the lateral and vertical extents of the releases in the affected media. Field observations, measurements, and laboratory chemical analytical results collected during the remedial investigation will then be documented in a Remedial Investigation Report for each Site. Conclusions regarding groundwater fate and transport will also be documented in the Remedial Investigation Reports. The Remedial Investigation Reports will be provided to the public for review and comment before the documents are finalized.

5. The City of Issaquah typically does a great job of communicating with residents. However, given the limited public comment, and the lack of regular (i.e.) repeated email announcements, social media announcements and community-based signage – more frequent communication and more accessible modes / formats for communication would be important going forward.

Again, without changes and more detail and transparency related to a communications and engagement strategy, it could be interpreted that this information (e.g., contaminant levels, affected areas/boundaries, extent of clean up required) is intentionally being minimized.

Response provided by the City of Issaquah and Ecology – Thank you for your feedback. The City, Eastside Fire and Rescue, and Ecology will continue to provide progress updates for this work. The City has provided ongoing information about this issue since late 2014.

Public participation is an integral part of Ecology's responsibilities under chapter **70A.305**[17] RCW, the Model Toxics Control Act. Ecology's goal is to provide the public with timely information and meaningful opportunities for participation that are commensurate with each site. We encourage you to review the Public Participation Plan[18] for both cleanup sites. This plan is our framework for a communications and engagement strategy. It describes how Ecology will inform the community about site activities and ways to become involved. It is designed to be updated as the cleanup process continues, and we learn about additional ways to present accessible information to everyone interested. Please reach out to us with specific suggestions on how we can better communicate cleanup information.

Comment from: John Krauss (Sammamish Plateau Water)

The comments are shown below as images.

Please see Appendix A to view these comments in the original PDF format.

[17] https://app.leg.wa.gov/RCW/default.aspx?cite=70A.305
[18] https://apps.ecology.wa.gov/cleanupsearch/document/139136

Sammamish Plateau Water

1510 228th Avenue SE
Sammamish, WA 98075
Main: 425.392.6256
Fax: 425.391.5389
www.spwater.org

Submitted via Ecology's eComment System and email

June 4, 2024

Brett Carp, Aquatics Unit Supervisor
Washington Department of Ecology
PO Box 330316
Shoreline, WA 98133-9716
Brett.Carp@ecy.wa.gov

Re: Public comment on Agreed Orders for the Lower Issaquah Valley PFAS Cleanup Sites
Eastside Fire & Rescue Headquarters / Issaquah Valley Elementary Site (Site ID 16581)
Rainier Trail & Memorial Field Site (Site ID 16582)

Dear Mr. Carp:

Introduction

Sammamish Plateau Water and Sewer District (the District or Sammamish Plateau Water) appreciates the opportunity to comment on the proposed Agreed Orders for the two Lower Issaquah Valley cleanup sites noted above. These cleanup sites and the related Agreed Orders are matters of great importance to residents of the Issaquah Valley and Sammamish Plateau, including customers of the District. The District will continue to monitor Ecology's application of MTCA, and provide comments and input on behalf of its substantial customer base due to the PFAS contamination of its groundwater resources. In providing input, the District's comments are not intended to be critical of the City of Issaquah or East Side Fire and Rescue, but are intended to ensure appropriate steps are taken to fully comply with MTCA, and to recognize impacts to the District's and its customers' interests.

For the reasons discussed below, the District recommends several important revisions to the Orders before they are signed by Ecology and implemented. The revisions are necessary to ensure that the resulting remedial investigations comply with the Model Toxics Control Act (MTCA) and result in timely identification of cleanup options that address the entire area impacted by the sites. Revisions are also necessary to ensure that the proposed interim action at the Eastside Fire & Rescue (EFR) Headquarters Site is more thoroughly evaluated for long-term effectiveness so that it does not create long-term problems while attempting to address short-term PFAS source control.

As you know, the District serves approximately 66,000 customers with potable drinking water, much of it drawn from the Lower Issaquah Valley Aquifer (LIVA). The District and its customers have been directly impacted by the per and poly-fluorinated alkyl substances (PFAS) groundwater contamination of the LIVA

that the Agreed Orders are intended to address. The District had to suspend production at two of its wells in 2017 due the LIVA PFAS contamination. And the District is currently planning for installation of a brand new state of the art water treatment facility to address the LIVA PFAS contamination. The District acknowledges that some funding for the treatment system's construction is coming from Ecology, but the District's customers will still have to shoulder substantial additional capital costs, and operating costs for decades to come, to address the contamination impacting the District's wells. It is therefore essential that the Agreed Orders acknowledge the documented impacts to the District's wells, include them in the scope of the remedial investigation (RI), and support evaluation of appropriate cleanup actions in the feasibility study (FS). Failure to do so now will only result in further delay in the investigation and cleanup selection process after the initial RI work is complete.

The District also believes that the Interim Action being proposed for the EFR headquarters site requires substantially more review and analysis before proceeding. Specifically, the District is concerned about the potential impact to the LIVA after the sequestration media (AKA "permeable reactive barrier") becomes saturated with PFAS and other naturally present chemicals such as iron and manganese that are also sequestered and reduce the performance life of the media. Based on District review of the pilot test report for this media, there is little to no mention of how the injected media, once saturated, could be removed and regenerated. Without the ability to perform routine removal and replacement (due to the extensive depth this media will be applied to treat the source) the sequestration media will eventually become saturated and likely act as an ongoing source of PFAS in years to come. The Interim Action Work Plan should fully evaluate the long-term effectiveness of this media against other potential interim and permanent remedial actions. Additionally, any interim action should also include appropriate contingency measures.

Given the importance of these PFAS cleanup sites to the communities relying on the LIVA for drinking water, the District expects Ecology to closely adhere to MTCA's requirements. Along with Ecology's role as a major funder of the work to be completed under the Agreed Orders should come absolute adherence to MTCA.

Specific Comments

The District provides the following specific comments and requests for revisions to the City of Issaquah and EFR Headquarters proposed Agreed Orders and related Exhibits.

Site definition:

> Both Agreed Orders should include references to groundwater contamination in the definition of the "Site" (Paragraph 4.1). Groundwater contamination is a key component of the human health risk to be addressed by the Agreed Orders, and is the dominant driver of where the contamination has "come to be located." WAC 173-340-200 (definition of Facility/Site). As currently drafted, the definitions of the "Sites" only refer to the respective source areas. Omission of contaminated groundwater creates an inaccurate impression of the extent of the Sites that must be addressed under the Orders.

History of PFAS use:

Both Agreed Orders, in the findings of fact, should acknowledge the decades-long period of time (30 or more years) over which substantial quantities of materials containing per and poly-fluorinated alkyl substances were released to ground at the respective source areas.[1] The long release period, coupled with natural groundwater flow and past and present groundwater withdrawal, resulted in the extensive groundwater plumes that now require investigation and remediation. Omission of this essential fact obscures the impact of the releases and the scope of the resulting contamination that must be addressed.

Extent and delineation of EFR plume:

The EFR Agreed Order (Paragraph 5.7) should be revised to state that the extent of the groundwater plume has not been fully delineated, and that the RI will be used to define the full nature and extent of the plume, as required by MTCA. Determining the full areal and vertical extent of contamination that is above cleanup levels (CULs) is required for a MTCA RI. WAC 173-340-350(1),[2] (5)(g)(ii)(C)[3] and (6)(c)(i).[4] EPA's recently adopted PFAS Maximum Contaminant Levels (MCLs) are the presumptive CULs for the LIVA PFAS Sites.[5] Fully delineating the horizontal and vertical extent of the plume exceeding CULs during the RI is also necessary for preparation of a MTCA-compliant FS, which must include a permanent remedy and one with standard points of compliance (i.e., points at which CULs must be achieved). WAC 173-340-351(6)(b)(ii),[6] (6)(b)(iii)[7] and (6)(f)(i)(C).[8] Failure to delineate the groundwater plume exceeding CULs during the RI will only delay the FS and development of a cleanup action plan.

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[1] Per- and Poly-Fluoroalkyl Substances Characterization Study Summary Report, Lower Issaquah Valley, Farallon Consulting, LLC, March 27, 2019, at Section 2.5.

[2] Purpose of RI is to "adequately characterize a contaminated site, including the distribution of hazardous substances and the threat they pose to human health and the environment."

[3] RI report must include "Proposed site boundaries, as defined by where hazardous substances exceed the proposed cleanup levels identified in (d)(iv) of this subsection."

[4] RI investigations must collect sufficient information to meet the purposes of WAC 173-340-350(1), including, for groundwater "The areal and vertical distribution and concentrations of hazardous substances in the groundwater."

[5] WAC 173-340-720(3)(b)(ii)(A) provides that MTCA CULs must be at least as stringent as federal MCLs.

[6] Alternatives evaluated in the FS must include "At least one permanent cleanup action alternative." Permanent cleanup alternative means "a cleanup action in which cleanup standards of Part 7 of this chapter can be met without further action being required at the site being cleaned up or any other site involved with the cleanup action, other than the approved disposal of any residue from the treatment of hazardous substances."

[7] FS alternatives must include "For each environmental medium, at least one alternative with a standard point of compliance." The standard point of compliance for groundwater is across the entire Site and to the full depth potentially affected by the Site. WAC 173-340-720(8)(b).

[8] FS report must include "Maps, cross-sections, and calculations illustrating the location, estimated amount, and concentration distribution of hazardous substances above the proposed cleanup levels for each affected environmental medium at the site" unless already provided in RI report.

As currently drafted, the EFR Agreed Order (Paragraph 5.7) suggests that the EFR groundwater plume has been delineated, is largely linear in nature, and extends to the City's well COI-PW04. Exhibit 1 (Site Location) and Exhibit B (Scope of Work and Schedule at "Purpose") reinforce this overly determinative conclusion. The language in the City Agreed Order (Paragraph 5.5 – "The groundwater plume has not yet been delineated") is more appropriate and should be included in the EFR Order at Paragraph 5.7 and in Exhibit B.

Figure 1 of the EFR Order should also be expanded to include the District's Wells 7 and 8, which have been impacted by the PFAS plume and must be addressed by the RI and FS. Ecology's Fact Sheet for the City and EFR Sites[9] recognizes the impact to the District's wells from the Sites by showing the District's South Zone as an "Impacted Service Area." The District took wells 7 and 8 out of service in 2017 due to high levels of PFAS. PFAS levels have remained elevated at the wells despite being out of service for seven years. The most recent monitoring results show PFAS levels that are still approximately 10x the EPA's MCLs.[10] As demonstrated by the District's groundwater modeling,[11] the EFR plume migrated towards District Wells 7 and 8 over the course of their 30 years of operation (1987-2017). As a result, the residual PFAS from this migration continues to be hydraulically captured by District Wells 7 and 8. The attached annotated copy of Figure 36 from the District's groundwater modelling report shows the likely interrelationship of the EFR plume and District Wells 7 and 8, as well as the current maximum PFAS levels at wells 7 and 8. It also shows the area between the modeled EFR plume and wells 7 and 8 in which no data has been collected, highlighting a data gap that must be addressed in the RI.

The District has repeatedly advised Ecology of the impact of the EFR plume on the District wells, including as recently as March of this year (see attached letter from March 29. 2024). The EFR Agreed Order and Scope of Work should therefore recognize the impact on the District's wells, take advantage of the extensive data set available from the District's wells, and include characterization of the PFAS plume, in relation to the CULs/MCLs, at and around the District's wells in the required scope for the RI. The District fully expects that the RI will include impacts to the District's wells as part of the required delineation of the areal and vertical extent of contamination above CULs/MCLs. Failure to do so now would waste time and resources on

[9] Lower Issaquah Valley PFAS Cleanup Sites, Washington Department of Ecology, April 2024, p.5.

[10] Recent sampling detected PFAS above the MCLs in District wells 7 and 8 as follows:

Sample Date	2/12/2024	
PFAS Chemical	PFOS	PFHxS
MCL	4 ppt	10 ppt
Well 7	39.0 ppt	38.0 ppt
Well 8	35.0 ppt	34.0 ppt

Note: The most recent test results for Well 7 and 8 for the other two PFAS chemicals with MCLs (PFOA (MCL 4ppt) and PFNA (MCL 10 ppt)) were under the MCLs.

[11] Technical Memorandum re Groundwater Model Development and Applications for PFC Risk Mitigation, CDM Smith, April 17, 2017, see p. 10, Figure 36.

preparing a deficient RI report[12] that inevitably triggers the need for more data collection and analysis.

EFR HQ Interim Action:

The proposed Interim Action for EFR Headquarters, specifically the proposed "permeable reactive barrier," appears to be premature based on the information presented in the Agreed Order, including Exhibit C (Interim Action Summary). The barrier needs vigorous review before implementation, including additional public comment under MTCA (WAC 173-340-430(6)(a)) and environmental review under SEPA (WAC 197-11-268). In addition to the required elements in Exhibit C, the Agreed Order should require the Interim Action Work Plan (IAWP) to describe how it meets the requirements of WAC 173-340-430(1)-(3), including a demonstration that it will not foreclose reasonable alternatives for permanent cleanup of the Site (WAC 173-340-430(3)(b) and (7)(a)). The IAWP should also describe alternative interim actions considered and an explanation of why they were not selected (WAC 173-340-430(7)(B)(ii)).

In addition, the IAWP for the barrier needs to fully evaluate the potential impacts of introducing PFAS sequestration media deep into the aquifer, including performance effectiveness after the sequestration media becomes saturated with PFAS. By nature and design, as well as the chemical it is targeting, the media proposed for use in this barrier has a fixed capacity and lifespan, much like the carbon vessels used to sequester PFAS for water treatment.[13] Because there is no practical way to remove saturated media from the depths being proposed for the Interim Action, the IAWP must consider the long-term impact of saturated media on the aquifer and on groundwater quality. The IAWP should also contain long-term monitoring and appropriate contingency plans for responding to remedy failure, such as saturated media becoming a source of future groundwater contamination.

SPW modeling:

The Agreed Orders should acknowledge the District's 2017 modeling work,[14] which was provided to the City, EFR and Ecology, and which was the basis of subsequent modeling work referenced in Paragraph 5.4 of the City Agreed Order and Paragraph 5.5 of the EFR Order. The District's modeling report documents plume transport under production well operations prior to 2017 and demonstrates how the EFR plume migrates towards and is hydraulically captured by District wells 7 and 8. The subsequent modeling work referenced in the Orders primarily assumes no pumping from District wells 7 and 8, which is inconsistent with historical conditions, and with

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[12] Both Scopes of Work require the RIs to "determine the nature and extent of contamination exceeding preliminary MTCA cleanup levels . . . and other regulatory requirements at the Site [e.g., EPA MCLs]. **The RI must provide sufficient data and information to define the nature and extent of contamination.**" City Scope of Work at p. 3, Task 2; EFR Scope of Work at p. 4-5, Task 4 (emphasis added).

[13] The City of Issaquah Well 4 performs routine removal and replacement of the carbon treatment media based on diligent monitoring and predictive calculations and/or indications of chemical saturation.

[14] *Id.*

future production expectations after installation of the PFAS treatment system being partially funded by Ecology.

Conclusion

Sammamish Plateau Water appreciates the willingness of the City of Issaquah and EFR to undertake this important work affecting the Lower Issaquah valley, its residents, and the beneficial use of affected groundwater. The District also appreciates Ecology's willingness to support this work through MTCA grant funding. The District encourages Ecology to carefully consider the District's comments and make changes to the Agreed Orders as requested above. The District also remains ready and willing to share its extensive data set and collaborate on the evaluation of impacts to the District's wells. We would be happy to meet with Ecology, the City and EFR at any time to discuss our comments. We look forward to continued engagement as the work under these Agreed Orders begins and proceeds.

Sincerely,

John C. Krauss

General Manager

Cc

Jay Regenstreif, Sammamish Plateau Water
Scott Coffey, CDM Smith
Matt Wells, Doll Mack Wells PLLC

Attachments

3/19/24 Sammamish Plateau Water letter to Ecology

Annotated PFAS plume map (from CDM Smith, 2017)

4887-2720-6852, v. 1
24-06-04

Response:

Thank you for your comments on this phase of the work. We appreciate your input and look forward to continuing to work with you as the project progresses. We also appreciate your willingness to share data to help our overall understanding of the extent of the sites.

While the discussion of identified source areas for each site was sufficient for the Agreed Order documents, Ecology is also committed to a full identification of the lateral and vertical extent of soil and groundwater contamination for each site in the Remedial Investigations for those sites. We have not ruled out any areas (i.e. Wells 7 and 8) from that Investigation at this time.

A number of the specific topics mentioned in your letter – history of PFAS use, site definition, incorporation of SPW modeling data – are items that Ecology agrees will need a more detailed write-up. The appropriate document for this discussion, however, is the Remedial Investigation

Report and not the Agreed Orders. The Agreed Orders detail out the steps of the cleanup process. The Remedial Investigation (one of the first steps being done under the Agreed Order) will generate data regarding the nature and extent of contamination. Information about the contamination (e.g., PFAS) found at the site, property use and history, field observations, contaminant measurements, and laboratory chemical analytical results collected during the remedial investigation will then be documented in a Remedial Investigation Report for each Site. Conclusions regarding groundwater fate and transport will also be documented in the Remedial Investigation Reports. The Remedial Investigation Reports will be provided to the public for review and comment before the documents are finalized.

We acknowledge that the language in Appendix C related to the permeable reactive barrier implied an Interim Action had already been selected, when it has not. We have updated the language accordingly. An Interim Action work plan will go out for public comment prior to the implementation of the Interim Action. We hope that document will answer many of the questions you raise in these comments, and we appreciate any additional comments you may have on the document at that time.

Comment from: Addison Anonymous

I appreciate the opportunity to provide comments on the Lower Issaquah Valley PFAS cleanup sites. My name is Addison, a high school student on the Eastside looking to inquire about the cleanup documents.

The Agreed Order for EFR HQ IVES takes strong steps to study and contain the release of hazardous substances on Rainier Trail and Memorial Field. In particular, the inclusion of soil removal, groundwater remediation, and removal of contaminated objects in the Interim Actions portion of the SOW demonstrates an impressive stride towards preventing contamination from spreading. One further step that the City should consider taking is designating the Interim Actions as a required step (instead of an optional task) before the implementation of the RI/FS. Even if Interim Actions are not technically necessary to reduce contamination threats, any preventative actions to limit future risks should be considered during the early stages of the project, especially if final cleanup actions are extended.

In regard to the Public Participation Plan for the Lower Issaquah Valley PFAS Cleanup Sites, the inclusion of mailing lists, newspaper ads, and social media outreach concerning the cleanup all represent effective ways for the City to engage public participation. However, I would also like to underscore the importance of signage at the site to guarantee the public can be further educated about the cleanup. Presently, the Public Participation Plan includes vague language that does not ensure signage will be present at the site. To engage the community most thoroughly, signage about project status should be a required component of the Public Participation Plan. Especially because one of the sites includes Issaquah Valley Elementary School, it would be remiss not to guarantee the presence of signage to educate local citizens about the project.

For the reasons stated above, I support the cleanup documents but inquire for further guaranteed action about specific components of the project.

Sincerely,

Addison

Response:

Thank you for the comments. We agree that Interim Actions are a powerful tool to help limit the migration of contamination and will continue to evaluate these sites for potential Interim Action opportunities as more data is available in the Remedial Investigation step.

We appreciate your input about the Public Participation Plan. Development of a site-specific Public Participation Plan varies for each site. While signage is not required for every site (under chapter **70A.305**[19] RCW, section 173-340-600 of the Model Toxics Control Act), we do evaluate signage on a site-specific basis; and it is something that has been incorporated into public communication at other cleanup sites. The need for signage at the Lower Issaquah Valley PFAS cleanup sites will be evaluated during the remedial investigation for each site and will be based on the potential contaminant exposure pathways that may impact human health and the environment.

Comment from: Michael O'Connell

What are our current levels of PFAS in drinking water? Given that no amount of PFS is safe, why aren't we advising recipients of that water to use reverse osmosis filtration or another source of drinking water? It seems that we keep leaning on the current standards and not the current science when advising the public.

"The previous guideline, set in 2016, set a limit of 70 parts per trillion (ppt) for both PFOS and PFOA in drinking water. The new advisories decrease that by more than a thousandfold. The new limit for PFOS is 0.02 ppt; for PFOA, it's 0.004 ppt. Essentially, the EPA wants the limits to be as close as possible to zero as a growing body of research has shown how toxic these compounds are."

https://www.hsph.harvard.edu/news/features/stricter-federal-guidelines-on-forever-chemicals-in-drinking-water-pose-challenges/#:~:text=The%20previous%20guideline%2C%20set%20in,how%20toxic%20these%20compounds%20are.

[19] https://app.leg.wa.gov/RCW/default.aspx?cite=70A.305

Response:

The drinking water provided by the City of Issaquah and Sammamish Plateau Water & Sewer currently meets EPA's recently released drinking water standards, or Maximum Contaminant Levels (MCLs),[20] for six PFAS in drinking water.

Residents who receive water from the City of Issaquah are encouraged to access water quality reports (which include PFAS data), by submitting a public records request with the City here: https://issaquahwapd.govqa.us/WEBAPP/_rs/(S(mhsnfnfsa0vvzx144cvcuiq2))/RequestLogin.aspx?sSessionID=&rqst=3&target=YpURA3m6cNU+N1K9kEqQhqz8yC2ZLKNdSdB4wnowVJ5S8CGTBp2GIItHg4/I0pUM8Jvp1AAd4YheCcTrA795fG9P3xL5LmB/wFQjiIoSWN4SAYPjsJhHgDIgDR5ZQb6A

Residents who receive water from Sammamish Plateau Water & Sewer are encouraged to access their annual drinking water quality reports (which include PFAS data) here: https://spwater.org/Archive.aspx?AMID=36.

There has not been a recommendation to all individual residents receiving water from the City of Issaquah or Sammamish Plateau Water & Sewer to treat their drinking water because the tap water meets current drinking water standards. However, residents who desire a higher level of protection are free to install filters. Further information about water filtration from the WA State Dept of Health can be found here:

https://doh.wa.gov/community-and-environment/contaminants/pfas

https://doh.wa.gov/sites/default/files/2022-10/331-699.pdf

https://doh.wa.gov/sites/default/files/2023-02/331-713_0.pdf

Comment from: Michael O'Connell

I understand that wastewater sludge from sewage plants with PFAS in the water was used to fertilize farmlands in our state. What are we doing to test those lands and the crops grown in them for PFAS? See https://www.maine.gov/dacf/ag/pfas/pfas-response.shtml#:~:text=Maine%20is%20not%20the%20only,continue%20to%20safely%20produce%20products

Response:

Thank you for the comment; however, this comment period is related to the Agreed Orders for the sites and not a general discussion on how PFAS may be impacting biosolids and their use in farming.

To learn more about biosolids and how PFAS may impact influent, effluent, sludge and biosolids, please reach out to Ecology's biosolids program at the links below.

[20] https://www.epa.gov/sdwa/and-polyfluoroalkyl-substances-pfas

- Program contacts - Washington State Department of Ecology[21]
- Learn about biosolids - Washington State Department of Ecology[22]

Another helpful resource about biosolids may be King County, WA:

- Biosolids - King County, Washington[23]
- Leading with science - King County, Washington[24]

For more information about PFAS in wastewater please visit:

- Wastewater - Washington State Department of Ecology[25]

Comment from: Jill Purse

The timeline for this project looks very long, given this is regarding contaminated soil at an elementary school and a playground. The clean up should be completed quicker, as this is impacting young children. Also, can you explain how the boundaries for the clean up have been chosen? If the contamination affecting IVE is from the EF&R site, would this not impact the areas in-between the sites? My son's daycare is located directly in-between EF&R and IVE.

Response

Thank you for the comment. Boundaries for the cleanup action have not been selected yet. Before they are selected, we need more information to understand the full extent of contamination. The next step to get the data we need to answer that question is a scope of work to complete the remedial investigation, provided in a Remedial Investigation Work Plan. The Work Plan will include details on where additional investigation will take place to define the lateral and vertical extents of the releases. Field observations and laboratory chemical analytical results collected during the remedial investigation will then be documented in a Remedial Investigation Report for each Site.

Firefighting training was conducted at Eastside Fire & Rescue and at Issaquah Valley Elementary but not at the properties between them. The boundaries for each soil source area will be defined during the remedial investigation. Contaminated groundwater might be flowing under your son’s daycare, but it is unlikely that the soil at the daycare is contaminated.

[21] https://ecology.wa.gov/waste-toxics/reducing-recycling-waste/biosolids/program-contacts
[22] https://ecology.wa.gov/waste-toxics/reducing-recycling-waste/biosolids/learn-about
[23] https://kingcounty.gov/en/dept/dnrp/waste-services/wastewater-treatment/resource-recovery/biosolids
[24] https://kingcounty.gov/en/dept/dnrp/waste-services/wastewater-treatment/resource-recovery/biosolids/leading-with-science
[25] https://ecology.wa.gov/waste-toxics/reducing-toxic-chemicals/addressing-priority-toxic-chemicals/pfas/wastewater

Comment from: Kristina Mitchell

I clearly do not live in the District. I came to learn more around the state! I would love to see more ASL used w/in government agencies.

Response:

Thank you for your feedback about using more American Sign Language (ASL) within government agencies. The Department of Ecology is committed to providing people with disabilities access to information and services by meeting or exceeding the requirements of the Americans with Disabilities Act (ADA), Section 504 and 508 of the Rehabilitation Action, and Washington State Policy #188. As such, Ecology included information to request an ADA accommodation on the direct mailer for this public comment period. An example of this language follows.

To request an ADA accommodation, contact Ecology by phone at 360-407-6831 or email ecyadacoordinator@ecy.wa.gov. For Washington Relay Service or TTY call 711 or 877-833-6341. Visit Ecology's website[26] for more information.

[26] https://ecology.wa.gov/about-us/accessibility-equity/accessibility

Appendices

Appendix A. Public comments in original format

June 6, 2024

Brett Carp, Aquatics Unit Supervisor
Washington Dept of Ecology
PO BOX 330316
Shoreline, WA 98133-9716
Brett.Carp@ecy.wa.gov

RE: Public Comment to Lower Issaquah Valley PFAS Cleanup

I am a 19+ year resident and homeowner in census tract 321.03, living within direct proximity to the EFR. My daughter also spent her middle school and high school years at this address, attending schools in the valley. I submit the following comments and questions:

1. ***Why*** hasn't the City of Issaquah moved ***fully*** to another regional drinking water supply for the City of Issaquah Water Service area (rather than a dilution strategy), given the history and levels of contaminants (arsenic, PFAs, PFOAs), natural limits to utilizing the aquifer, increasing flood & drought cycles (climate change) and continued growth and development, with a necessary move toward population density for this area in particular? Other areas of Issaquah on regional water supplies do not have these issues.

2. Given the levels of contaminants to groundwater and the number of sites involved, what is the required frequency of drinking water testing for the City of Issaquah Water Service area for the interim, clean-up and post clean-up periods? **How often would you want this water supply tested if it was your family's only source of drinking water/household water?**

3. Why aren't residents in these impacted areas [minimally] being provided with funds to purchase or offset purchase for reverse osmosis filtration units (e.g., under sink, household) for the interim? The Issaquah Valley area has a higher concentration of

   the city's most "affordable" housing options – and more vulnerable community members as identified within your own scoping documents.

4. Documents mention ***preliminary groundwater flow and transport findings*** related to the minimal extent of contaminated groundwater plumes, .e.g., for EFR &

IVES/Dodds Fields in directions northward. However, there is no more detailed information **related to potential flows eastward from originating sites** – i.e., that would impact **surrounding neighborhoods** and **Issaquah Creek**. Similarly flow finding descriptions for the Rainier Trail and Memorial Field also present as limited.

This lack of important data or clarifying language, related to what is known and unknown for flows: North, South, East and West, could be interpreted as intentionally minimizing the extent of [potential] contamination across the valley.

5. The City of Issaquah typically does a great job of communicating with residents. However, **given the limited public comment**, and the lack of regular (i.e.) repeated email announcements, social media announcements and community-based signage – more frequent communication and more accessible modes / formats for communication would be important going forward.

   Again, without changes and more detail and transparency related to a communications and engagement strategy, it could be interpreted that this information (e.g., contaminant levels, affected areas/boundaries, extent of clean up required) is intentionally being minimized.

Thank you.

Sammamish Plateau Water

1510 228th Avenue SE
Sammamish, WA 98075
Main: 425.392.6256
Fax: 425.391.5389
www.spwater.org

Submitted via Ecology's eComment System and email

June 4, 2024

Brett Carp, Aquatics Unit Supervisor
Washington Department of Ecology
PO Box 330316
Shoreline, WA 98133-9716
Brett.Carp@ecy.wa.gov

Re: Public comment on Agreed Orders for the Lower Issaquah Valley PFAS Cleanup Sites
Eastside Fire & Rescue Headquarters / Issaquah Valley Elementary Site (Site ID 16581)
Rainier Trail & Memorial Field Site (Site ID 16582)

Dear Mr. Carp:

Introduction

Sammamish Plateau Water and Sewer District (the District or Sammamish Plateau Water) appreciates the opportunity to comment on the proposed Agreed Orders for the two Lower Issaquah Valley cleanup sites noted above. These cleanup sites and the related Agreed Orders are matters of great importance to residents of the Issaquah Valley and Sammamish Plateau, including customers of the District. The District will continue to monitor Ecology's application of MTCA, and provide comments and input on behalf of its substantial customer base due to the PFAS contamination of its groundwater resources. In providing input, the District's comments are not intended to be critical of the City of Issaquah or East Side Fire and Rescue, but are intended to ensure appropriate steps are taken to fully comply with MTCA, and to recognize impacts to the District's and its customers' interests.

For the reasons discussed below, the District recommends several important revisions to the Orders before they are signed by Ecology and implemented. The revisions are necessary to ensure that the resulting remedial investigations comply with the Model Toxics Control Act (MTCA) and result in timely identification of cleanup options that address the entire area impacted by the sites. Revisions are also necessary to ensure that the proposed interim action at the Eastside Fire & Rescue (EFR) Headquarters Site is more thoroughly evaluated for long-term effectiveness so that it does not create long-term problems while attempting to address short-term PFAS source control.

As you know, the District serves approximately 66,000 customers with potable drinking water, much of it drawn from the Lower Issaquah Valley Aquifer (LIVA). The District and its customers have been directly impacted by the per and poly-fluorinated alkyl substances (PFAS) groundwater contamination of the LIVA

that the Agreed Orders are intended to address. The District had to suspend production at two of its wells in 2017 due the LIVA PFAS contamination. And the District is currently planning for installation of a brand new state of the art water treatment facility to address the LIVA PFAS contamination. The District acknowledges that some funding for the treatment system's construction is coming from Ecology, but the District's customers will still have to shoulder substantial additional capital costs, and operating costs for decades to come, to address the contamination impacting the District's wells. It is therefore essential that the Agreed Orders acknowledge the documented impacts to the District's wells, include them in the scope of the remedial investigation (RI), and support evaluation of appropriate cleanup actions in the feasibility study (FS). Failure to do so now will only result in further delay in the investigation and cleanup selection process after the initial RI work is complete.

The District also believes that the Interim Action being proposed for the EFR headquarters site requires substantially more review and analysis before proceeding. Specifically, the District is concerned about the potential impact to the LIVA after the sequestration media (AKA "permeable reactive barrier") becomes saturated with PFAS and other naturally present chemicals such as iron and manganese that are also sequestered and reduce the performance life of the media. Based on District review of the pilot test report for this media, there is little to no mention of how the injected media, once saturated, could be removed and regenerated. Without the ability to perform routine removal and replacement (due to the extensive depth this media will be applied to treat the source) the sequestration media will eventually become saturated and likely act as an ongoing source of PFAS in years to come. The Interim Action Work Plan should fully evaluate the long-term effectiveness of this media against other potential interim and permanent remedial actions. Additionally, any interim action should also include appropriate contingency measures.

Given the importance of these PFAS cleanup sites to the communities relying on the LIVA for drinking water, the District expects Ecology to closely adhere to MTCA's requirements. Along with Ecology's role as a major funder of the work to be completed under the Agreed Orders should come absolute adherence to MTCA.

Specific Comments

The District provides the following specific comments and requests for revisions to the City of Issaquah and EFR Headquarters proposed Agreed Orders and related Exhibits.

Site definition:

> Both Agreed Orders should include references to groundwater contamination in the definition of the "Site" (Paragraph 4.1). Groundwater contamination is a key component of the human health risk to be addressed by the Agreed Orders, and is the dominant driver of where the contamination has "come to be located." WAC 173-340-200 (definition of Facility/Site). As currently drafted, the definitions of the "Sites" only refer to the respective source areas. Omission of contaminated groundwater creates an inaccurate impression of the extent of the Sites that must be addressed under the Orders.

History of PFAS use:

Both Agreed Orders, in the findings of fact, should acknowledge the decades-long period of time (30 or more years) over which substantial quantities of materials containing per and poly-fluorinated alkyl substances were released to ground at the respective source areas.[1] The long release period, coupled with natural groundwater flow and past and present groundwater withdrawal, resulted in the extensive groundwater plumes that now require investigation and remediation. Omission of this essential fact obscures the impact of the releases and the scope of the resulting contamination that must be addressed.

Extent and delineation of EFR plume:

The EFR Agreed Order (Paragraph 5.7) should be revised to state that the extent of the groundwater plume has not been fully delineated, and that the RI will be used to define the full nature and extent of the plume, as required by MTCA. Determining the full areal and vertical extent of contamination that is above cleanup levels (CULs) is required for a MTCA RI. WAC 173-340-350(1),[2] (5)(g)(ii)(C)[3] and (6)(c)(i).[4] EPA's recently adopted PFAS Maximum Contaminant Levels (MCLs) are the presumptive CULs for the LIVA PFAS Sites.[5] Fully delineating the horizontal and vertical extent of the plume exceeding CULs during the RI is also necessary for preparation of a MTCA-compliant FS, which must include a permanent remedy and one with standard points of compliance (i.e., points at which CULs must be achieved). WAC 173-340-351(6)(b)(ii),[6] (6)(b)(iii)[7] and (6)(f)(i)(C).[8] Failure to delineate the groundwater plume exceeding CULs during the RI will only delay the FS and development of a cleanup action plan.

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[1] Per- and Poly-Fluoroalkyl Substances Characterization Study Summary Report, Lower Issaquah Valley, Farallon Consulting, LLC, March 27, 2019, at Section 2.5.

[2] Purpose of RI is to "adequately characterize a contaminated site, including the distribution of hazardous substances and the threat they pose to human health and the environment."

[3] RI report must include "Proposed site boundaries, as defined by where hazardous substances exceed the proposed cleanup levels identified in (d)(iv) of this subsection."

[4] RI investigations must collect sufficient information to meet the purposes of WAC 173-340-350(1), including, for groundwater "The areal and vertical distribution and concentrations of hazardous substances in the groundwater."

[5] WAC 173-340-720(3)(b)(ii)(A) provides that MTCA CULs must be at least as stringent as federal MCLs.

[6] Alternatives evaluated in the FS must include "At least one permanent cleanup action alternative." Permanent cleanup alternative means "a cleanup action in which cleanup standards of Part 7 of this chapter can be met without further action being required at the site being cleaned up or any other site involved with the cleanup action, other than the approved disposal of any residue from the treatment of hazardous substances."

[7] FS alternatives must include "For each environmental medium, at least one alternative with a standard point of compliance." The standard point of compliance for groundwater is across the entire Site and to the full depth potentially affected by the Site. WAC 173-340-720(8)(b).

[8] FS report must include "Maps, cross-sections, and calculations illustrating the location, estimated amount, and concentration distribution of hazardous substances above the proposed cleanup levels for each affected environmental medium at the site" unless already provided in RI report.

As currently drafted, the EFR Agreed Order (Paragraph 5.7) suggests that the EFR groundwater plume has been delineated, is largely linear in nature, and extends to the City's well COI-PW04. Exhibit 1 (Site Location) and Exhibit B (Scope of Work and Schedule at "Purpose") reinforce this overly determinative conclusion. The language in the City Agreed Order (Paragraph 5.5 – "The groundwater plume has not yet been delineated") is more appropriate and should be included in the EFR Order at Paragraph 5.7 and in Exhibit B.

Figure 1 of the EFR Order should also be expanded to include the District's Wells 7 and 8, which have been impacted by the PFAS plume and must be addressed by the RI and FS. Ecology's Fact Sheet for the City and EFR Sites[9] recognizes the impact to the District's wells from the Sites by showing the District's South Zone as an "Impacted Service Area." The District took wells 7 and 8 out of service in 2017 due to high levels of PFAS. PFAS levels have remained elevated at the wells despite being out of service for seven years. The most recent monitoring results show PFAS levels that are still approximately 10x the EPA's MCLs.[10] As demonstrated by the District's groundwater modeling,[11] the EFR plume migrated towards District Wells 7 and 8 over the course of their 30 years of operation (1987-2017). As a result, the residual PFAS from this migration continues to be hydraulically captured by District Wells 7 and 8. The attached annotated copy of Figure 36 from the District's groundwater modelling report shows the likely interrelationship of the EFR plume and District Wells 7 and 8, as well as the current maximum PFAS levels at wells 7 and 8. It also shows the area between the modeled EFR plume and wells 7 and 8 in which no data has been collected, highlighting a data gap that must be addressed in the RI.

The District has repeatedly advised Ecology of the impact of the EFR plume on the District wells, including as recently as March of this year (see attached letter from March 29. 2024). The EFR Agreed Order and Scope of Work should therefore recognize the impact on the District's wells, take advantage of the extensive data set available from the District's wells, and include characterization of the PFAS plume, in relation to the CULs/MCLs, at and around the District's wells in the required scope for the RI. The District fully expects that the RI will include impacts to the District's wells as part of the required delineation of the areal and vertical extent of contamination above CULs/MCLs. Failure to do so now would waste time and resources on

[9] Lower Issaquah Valley PFAS Cleanup Sites, Washington Department of Ecology, April 2024, p.5.

[10] Recent sampling detected PFAS above the MCLs in District wells 7 and 8 as follows:

Sample Date	2/12/2024	
PFAS Chemical	PFOS	PFHxS
MCL	4 ppt	10 ppt
Well 7	39.0 ppt	38.0 ppt
Well 8	35.0 ppt	34.0 ppt

Note: The most recent test results for Well 7 and 8 for the other two PFAS chemicals with MCLs (PFOA (MCL 4ppt) and PFNA (MCL 10 ppt)) were under the MCLs.

[11] Technical Memorandum re Groundwater Model Development and Applications for PFC Risk Mitigation, CDM Smith, April 17, 2017, see p. 10, Figure 36.

preparing a deficient RI report[12] that inevitably triggers the need for more data collection and analysis.

EFR HQ Interim Action:

The proposed Interim Action for EFR Headquarters, specifically the proposed "permeable reactive barrier," appears to be premature based on the information presented in the Agreed Order, including Exhibit C (Interim Action Summary). The barrier needs vigorous review before implementation, including additional public comment under MTCA (WAC 173-340-430(6)(a)) and environmental review under SEPA (WAC 197-11-268). In addition to the required elements in Exhibit C, the Agreed Order should require the Interim Action Work Plan (IAWP) to describe how it meets the requirements of WAC 173-340-430(1)-(3), including a demonstration that it will not foreclose reasonable alternatives for permanent cleanup of the Site (WAC 173-340-430(3)(b) and (7)(a)). The IAWP should also describe alternative interim actions considered and an explanation of why they were not selected (WAC 173-340-430(7)(B)(ii)).

In addition, the IAWP for the barrier needs to fully evaluate the potential impacts of introducing PFAS sequestration media deep into the aquifer, including performance effectiveness after the sequestration media becomes saturated with PFAS. By nature and design, as well as the chemical it is targeting, the media proposed for use in this barrier has a fixed capacity and lifespan, much like the carbon vessels used to sequester PFAS for water treatment.[13] Because there is no practical way to remove saturated media from the depths being proposed for the Interim Action, the IAWP must consider the long-term impact of saturated media on the aquifer and on groundwater quality. The IAWP should also contain long-term monitoring and appropriate contingency plans for responding to remedy failure, such as saturated media becoming a source of future groundwater contamination.

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[12] Both Scopes of Work require the RIs to "determine the nature and extent of contamination exceeding preliminary MTCA cleanup levels . . . and other regulatory requirements at the Site [e.g., EPA MCLs]. **The RI must provide sufficient data and information to define the nature and extent of contamination**." City Scope of Work at p. 3, Task 2; EFR Scope of Work at p. 4-5, Task 4 (emphasis added).

[13] The City of Issaquah Well 4 performs routine removal and replacement of the carbon treatment media based on diligent monitoring and predictive calculations and/or indications of chemical saturation.

[14] *Id.*

future production expectations after installation of the PFAS treatment system being partially funded by Ecology.

Conclusion

Sammamish Plateau Water appreciates the willingness of the City of Issaquah and EFR to undertake this important work affecting the Lower Issaquah valley, its residents, and the beneficial use of affected groundwater. The District also appreciates Ecology's willingness to support this work through MTCA grant funding. The District encourages Ecology to carefully consider the District's comments and make changes to the Agreed Orders as requested above. The District also remains ready and willing to share its extensive data set and collaborate on the evaluation of impacts to the District's wells. We would be happy to meet with Ecology, the City and EFR at any time to discuss our comments. We look forward to continued engagement as the work under these Agreed Orders begins and proceeds.

Sincerely,

John C. Krauss

General Manager

Cc

Jay Regenstreif, Sammamish Plateau Water
Scott Coffey, CDM Smith
Matt Wells, Doll Mack Wells PLLC

Attachments

3/19/24 Sammamish Plateau Water letter to Ecology

Annotated PFAS plume map (from CDM Smith, 2017)

4887-2720-6852, v. 1
24-06-04

Sammamish Plateau Water

1510 228th Avenue SE
Sammamish, WA 98075
Main: 425.392.6256
Fax: 425.391.5389
www.spwater.org

March 19, 2024

Kristen Forkeutis
Community Outreach & Environmental Education Specialist
Department of Ecology

via email: kristen.forkeutis@ecy.wa.gov

Re: Lower Issaquah Valley PFAS Contamination MTCA Public Comment Process

Dear Ms. Forkeutis:

The District appreciates being brought into the conversation in anticipation of the MTCA formal public comment process to date. As we continue to collaborate with Ecology we want to reiterate the following points that have been discussed in the past along with new requests, to ensure they are considered as the process moves forward.

1. As you know, our customers have been impacted by the PFAS contamination in the Lower Issaquah Valley Aquifer (LIVA), and Ecology intends to provide mail notification to our customers. This notification is based upon the District's assembled mailing list for Ecology's use. Once the mailings go out and the process begins, we anticipate our customers will show interest and will contact the District regarding the process. As such, we would appreciate that you would share the draft Public Participation Plan (PPP) with us prior to the date when the formal process will be initiated. Note that we have a larger number of customers that will receive the mailing than the City of Issaquah, and fully understanding PPP process before the mailing goes out will help us provide the best information to our customers.

2. You have previously indicated that the Fact Sheet was still being developed and would not be provided to the District prior to initiation of the public comment period, when it is available to all customers and interested parties. As advocates for our customers we wanted to ask again to receive a copy of this Fact Sheet before the process goes live. This will allow us to be fully aware of what is being provided to our customers and will assist us in answering their questions on this topic of great concern.

3. The City of Issaquah and EFR depended heavily on test results from Sammamish Plateau Water wells and a 3D numerical groundwater model which we provided to the City and EFR. We feel that level of cooperation by the District should be reciprocated by providing timely access to the model results, as well as underlying assumptions used for the model, such as the scope of the aquifer modeled, well operations and the time frame over which the model was run.

4. It is the District's opinion that any Remedial Investigation (RI) plan that does not specifically include the District's wells (and other nearby commercial/industrial wells)

would be deficient under MTCA. The District's wells are known to be impacted by PFAS in the LIVA, and so must be included in the scope of the RI in order to adequately characterize the nature and extent of the LIVA PFAS contamination. The District's wells, including both production and monitoring wells, can provide a wealth of current and historical data. Since 2016 the District has conducted regular and extensive testing and PFAS presence has remained constant. Our data should be included in the RI, and the impact to the District's resources must be addressed. When the presence of PFAS was first identified in 2015/2016, there was no question that both Issaquah and the District's supplies were impacted by the same source.

As Ecology knows, our customers and water resources have been impacted by the PFAS contamination in the LIVA. Our customers will be incurring significant expense for long-term treatment for PFAS contamination, and we appreciate Ecology's generous support in securing grant funds from the State for this treatment. We look forward to continuing to participate in the public comment process and in the MTCA RI and Feasibility Study process. We also look forward to the ultimate remediation of PFAS from our drinking water resources. If it would be helpful, we are open to meeting with you prior to the initiation of the public process to ensure our interests and concerns are addressed in the MTCA actions to be presented to the public, which includes, significantly, the District's many thousand customers.

Sincerely

John C. Krauss
General Manager

c: Pricilla Tomlinson, DOE
Brett Carp, DOE
Scott Coffey, CDM
Jay Regenstreif, SP Water

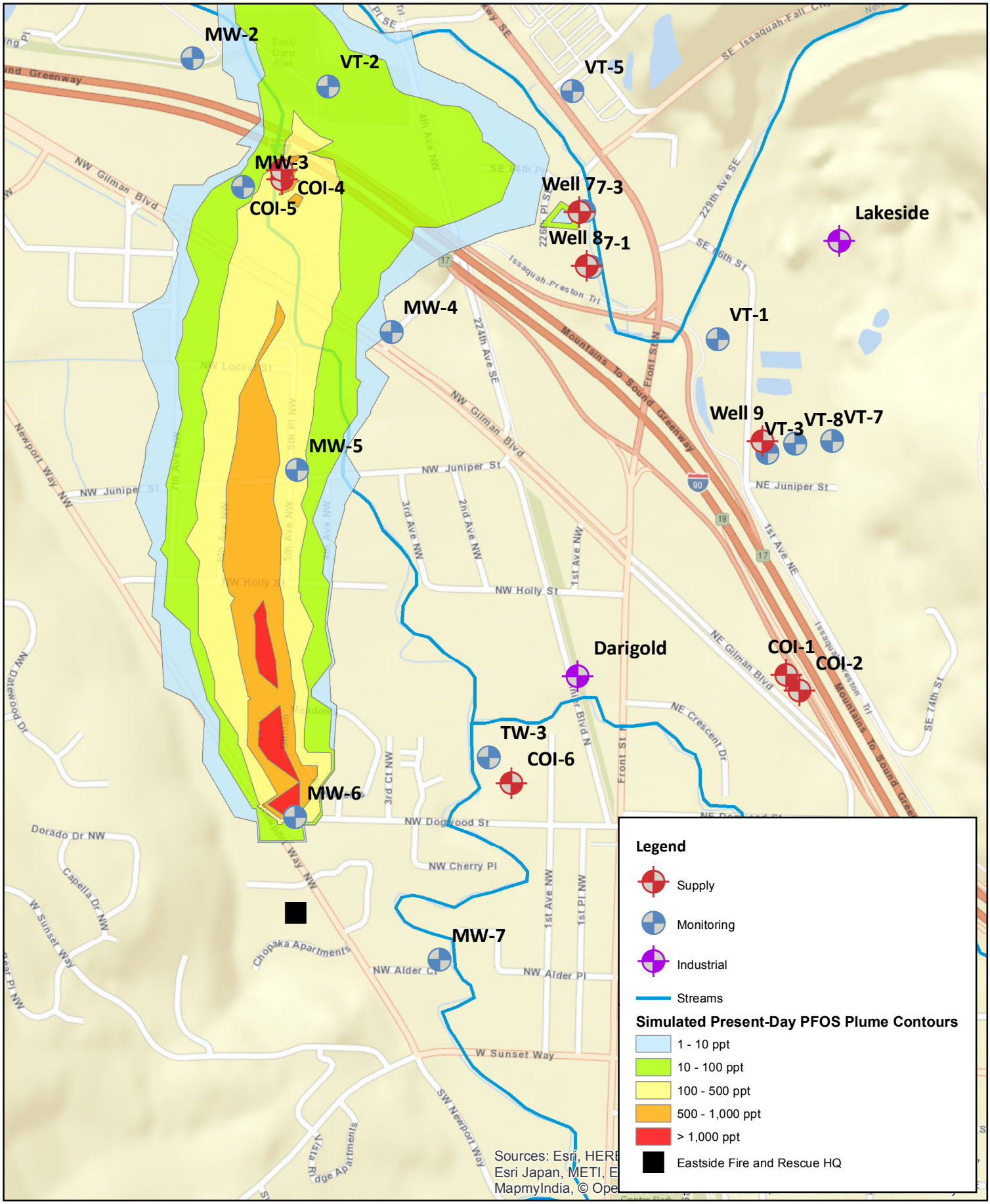

Figure 36
Simulated Present-Day A Sand PFOS Concentrations from MW-6 Source
Sammamish Plateau Water

Addison Anonymous

I appreciate the opportunity to provide comments on the Lower Issaquah Valley PFAS cleanup sites. My name is Addison, a high school student on the Eastside looking to inquire about the cleanup documents.

The Agreed Order for EFR HQ IVES takes strong steps to study and contain the release of hazardous substances on Rainier Trail and Memorial Field. In particular, the inclusion of soil removal, groundwater remediation, and removal of contaminated objects in the Interim Actions portion of the SOW demonstrates an impressive stride towards preventing contamination from spreading. One further step that the City should consider taking is designating the Interim Actions as a required step (instead of an optional task) before the implementation of the RI/FS. Even if Interim Actions are not technically necessary to reduce contamination threats, any preventative actions to limit future risks should be considered during the early stages of the project, especially if final cleanup actions are extended.

In regard to the Public Participation Plan for the Lower Issaquah Valley PFAS Cleanup Sites, the inclusion of mailing lists, newspaper ads, and social media outreach concerning the cleanup all represent effective ways for the City to engage public participation. However, I would also like to underscore the importance of signage at the site to guarantee the public can be further educated about the cleanup. Presently, the Public Participation Plan includes vague language that does not ensure signage will be present at the site. To engage the community most thoroughly, signage about project status should be a required component of the Public Participation Plan. Especially because one of the sites includes Issaquah Valley Elementary School, it would be remiss not to guarantee the presence of signage to educate local citizens about the project.

For the reasons stated above, I support the cleanup documents but inquire for further guaranteed action about specific components of the project.

Sincerely,

Addison

Michael O'Connell

What are our current levels of PFAS in drinking water? Given that no amount of PFS is safe, why aren't we advising recipients of that water to use reverse osmosis filtration or another source of drinking water? It seems that we keep leaning on the current standards and not the current science when advising the public.

"The previous guideline, set in 2016, set a limit of 70 parts per trillion (ppt) for both PFOS and PFOA in drinking water. The new advisories decrease that by more than a thousandfold. The new limit for PFOS is 0.02 ppt; for PFOA, it's 0.004 ppt. Essentially, the EPA wants the limits to be as close as possible to zero as a growing body of research has shown how toxic these compounds are."

https://www.hsph.harvard.edu/news/features/stricter-federal-guidelines-on-forever-chemicals-in-drinking-water-pose-challenges/#:~:text=The%20previous%20guideline%2C%20set%20in,how%20toxic%20these%20compounds%20are.

Michael O'Connell

I understand that wastewater sludge from sewage plants with PFAS in the water was used to fertilize farmlands in our state. What are we doing to test those lands and the crops grown in them for PFAS? See https://www.maine.gov/dacf/ag/pfas/pfas-response.shtml#:~:text=Maine%20is%20not%20the%20only,continue%20to%20safely%20produce%20produc

Jill Purse

The timeline for this project looks very long, given this is regarding contaminated soil at an elementary school and a playground. The clean up should be completed quicker, as this is impacting young children. Also, can you explain how the boundaries for the clean up have been chosen? If the contamination affecting IVE is from the EF&R site, would this not impact the areas in-between the sites? My son's daycare is located directly in-between EF&R and IVE.

DEPARTMENT OF ECOLOGY
State of Washington

Please Write Clearly or Go Online:
www.ecology.wa.gov/liv

Public Comment Form

1 Comment → 2 Review → 3 Your Copy

Commenting open: **April 22, 12:00 AM PT—June 6, 2024 11:59 PM PT.**

Lower Issaquah Valley PFAS Cleanup Sites:
Two Legal Agreements and the Public Participation Plan

Please note that this comment form is for the purpose of submitting a comment to the Washington State Department of Ecology. Commenter contact information is optional. Contact information is necessary if you want to receive future notices or responses related to this topic.

The Department of Ecology invites you to review and comment on two Agreed Orders (legal agreements) and the Public Participation Plan related to the cleanup of the Lower Issaquah Valley PFAS cleanup sites. Access these documents and learn more on the cleanup site's webpage at https://ecology.wa.gov/liv (scan the QR code below).

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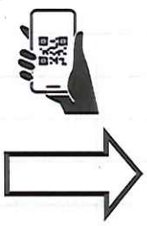

Contact Information

I clearly do not live in District I came to learn more around the stack!

All fields are optional unless otherwise indicated.

Submitted by: (Check one and write name)

- [x] Individual (add name below)
- [ ] Organization: _____
- [ ] Agency: _____
- [ ] Other _____
- [ ] Business: _____

First Name	Last Name
Kristina	Mitchell

Address	City/Town
816 151st pl SW	Lynnwood

Country: Snohomish

* I would love to see more ASL used w/in government agencies.

State/Province	ZIP
Washington	98087

Email: contact@Kristina4Change.com

Please write comment clearly on other side:

DEPARTMENT OF ECOLOGY
State of Washington

Public Comment Form

1 Comment | 2 Review | 3 Your Copy

Your Comment

Comments are due by June 6, 2024 at 11:59 p.m.
Please enter comments in the text area. To submit attachments please visit Ecology's online comment form at https://bit.ly/ecology-liv-comments.

Any information (e.g., personal or contact) you provide on this comment form or in an attachment may be publicly disclosed and posted on the Internet.

To submit comments for a group please visit our "Commenting Tips" webpage at https://ecology.wa.gov/About-us/Get-involved/Public-input-events/Commenting-tips

Next Steps: After the close of the comment period, Ecology will review and consider all comments received as we finalize the documents and respond accordingly.

DEPARTMENT OF ECOLOGY
State of Washington

Brett Carp | Washington State Department of Ecology
206-594-0094
Brett.Carp@ecy.wa.gov

Accessibility: https://ecology.wa.gov/About-us/Accountability-transparency/Our-website/Accessibility