

Appendix A.5

AFFF Collection and Disposal Final Environmental Impact Statement: Information Session Summary

Information Session Goals

- Inform attendees about the programmatic [draft Environmental Impact Statement \(draft EIS or DEIS\)](#)¹—including alternatives, environmental impacts, and next steps—in a transparent and accessible way.
- Create an opportunity for attendees to ask questions about the program and the draft EIS.
- Involve attendees in the Aqueous Film-Forming Foam (AFFF) collection and disposal program beyond this session; invite them to submit comments on the draft EIS and attend the upcoming public hearing.

Publication Information

This appendix is part of Washington State Department of Ecology’s publication number 24-04-040, [Aqueous Film-Forming Foam Collection and Disposal Program: Final Programmatic Environmental Impact Statement](#).²

ADA Accessibility

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Information Session Details and Agenda

Wednesday, January 17, 2024, from 10:00 – 11:30 a.m.

Table 1. Agenda for the AFFF Collection and Disposal Draft EIS information session.

Duration	Item
10 min 10:00 – 10:10	Welcome and Introductions <ul style="list-style-type: none"> • Welcome and team introduction • Zoom tools and tech introduction • Review agenda and ground rules
30 min 10:10 – 10:40	AFFF Collection/Disposal Draft EIS Overview <ul style="list-style-type: none"> • Presentation on draft EIS purpose, alternatives, and analysis
45 min 10:40 – 11:25	Q&A <ul style="list-style-type: none"> • Subject-matter experts answer questions from the audience

¹ <https://apps.ecology.wa.gov/publications/SummaryPages/2304064.html>

² <https://apps.ecology.wa.gov/publications/SummaryPages/2404040.html>

Duration	Item
5 min 11:25 – 11:30	Next Steps and Adjourn <ul style="list-style-type: none"> • Upcoming public hearing on January 31, 2024 • Public comment open until February 5, 2024 • Next steps after public comment period closes

Meeting Roles

Table 2. Ecology and consultant staff roles during information session.

Name	Affiliation	Role
Sean Smith	Ecology	Presenter and Answering Audience Questions
Gretchen Muller	Cascadia	Facilitator
Alle Brown-Law	Cascadia	Facilitation Support + Tech Support
Taylor Magee	Cascadia	Notetaker + Tech Support
Amy Wilson	TRC	Subject Matter Expert (PFAS, AFFF)
Jason Landskron	Ecology	Subject Matter Expert (PFAS, AFFF)
Victoria Banks	Attorney General’s Office	Legal Subject Matter Expert
Meg Bommarito	Ecology	Subject Matter Expert (SEPA)

Introduction

- Sean welcomed everyone to the meeting and noted that the meeting would be recorded. He then introduced the project team and those on the call before turning it over to Gretchen.
- Gretchen reviewed Zoom logistics with the group before diving into the purpose of the information session and the logistics. She noted that the information session was intended to answer any questions presented, and that Ecology would not be receiving any formal comments during this session. She shared that any public comments should be submitted via the [public comment website](https://hwtr.ecology.commentinput.com/?id=hYEe5GPAC)³ or at the public hearing later in the month. She then shared the information session goals and agenda before turning it back over to Sean for the draft EIS overview.
- Peak attendance reached **127 participants**, including the project team on the call. For full list of attendees, see .

³ <https://hwtr.ecology.commentinput.com/?id=hYEe5GPAC>

AFFF Collection and Disposal Draft EIS Overview

- Sean provided his presentation on the draft EIS, including the purpose and background of the EIS and the AFFF disposal options. To view the presentation, [watch the recording here on YouTube](#).⁴

Question and Answer Session

Sean and the panel of experts answered questions from the public. During the meeting, the audience asked a total of 33 questions, and the team answered all questions but one (the remaining question was asked after Q&A ended).

Recurring questions and themes from Q&A

- Who is eligible for the AFFF disposal program? What kinds of firefighting foam are included for disposal?
 - Is there additional guidance and information for entities that have AFFF in stock or storage now?
- Did Ecology analyze the cost of each alternative in the EIS? Was cost a consideration for analysis?
- Did Ecology consider other disposal technologies?

All questions and answers

1. Have you considered the Chemical Waste Management, Arlington, OR location for disposal of the AFFF? They currently accept it.
 - No. We are considering two locations because of their remote location and arid climate, which limits the amount of leachate required to collect, manage, and dispose of AFFF. While the Arlington facility is a Class E, RCRA-permitted facility, so it can accept the waste, we chose the two specific facilities to further mitigate risk in the future.
2. It sounds like landfilling, injection, and incineration all would require out-of-state transport, has Ecology considered the potential issues associated with transportation? I understand there was a spill of manufacturing waste during transport of waste from a manufacturing facility in NC to the deep well injection facility in TX.
 - Yes. The draft EIS analyzes the environmental impacts of collection, transport, and disposal of AFFF. We are looking at efforts to mitigate potential spill risks associated with transportation. The draft EIS also analyzes the greenhouse gas and particulate matter emissions from the vehicles themselves.
3. Did you consider cost to local fire departments for the No Action Alternative?
 - Economic impacts are not considered in a SEPA EIS, although we recognize that alternatives would have management and budgetary impacts on fire

⁴ <https://youtu.be/latyO4Y2FZo>

- departments. When we make our final decision, economic costs may play a role in this decision-making, but are not considered in the draft EIS.
- The draft EIS only analyzes the environmental impacts of a project or program, but the final decision-making process can include other, non-environmental factors as well.
4. There are other users of AFFF than Municipal Fire Stations... Ships, Aircraft Hangers, Refineries, Fire Training Facilities, Airports, etc.... what efforts are you making to reach out to them and do you plan to offer support to those of us that have had AFFF for Fire Fighting & Fire Suppression Risks, but now are stuck with quantities of it we can't dispose of?
 - This program is limited to municipal fire departments with AFFF stockpiles. We recognize that there are comparable stockpiles in other areas, but they don't currently qualify for this program. If the program goes well and receives additional resources, those areas could be included in the future. It's highly likely, however, that we would have to do additional analysis to investigate the potential impact of collecting and disposing of those other foam stockpiles.
 5. For the solidification and landfilling alternative, does the draft EIS analyze the potential impact of a landfill emitting volatile PFAS?
 - Currently the draft EIS doesn't consider that impact. We encourage you to submit this as a public comment.
 6. Are non-municipal fire stations eligible for this program? e.g., fire stations at airports? I assume foam stored at hangars and other airport facilities are not eligible.
 - No, airports and non-municipal fire departments aren't currently eligible for this program. As mentioned earlier, we may be able to expand this program in the future, which would require additional analysis.
 - We have heard from several airports and other entities about how to dispose of their foam and can provide information to them in the meantime.
 7. Are the costs of these alternatives being considered through this process? If so, when?
 - The draft EIS doesn't analyze associated costs; it focuses on the potential adverse impacts on the environment and public health. However, economic impacts or costs may factor into the final decision in order to make an informed and sound decision.
 8. Is the ability of agencies like fire departments to provide and manage long term storage of a hazardous substance been considered? That would be hundreds of hazmat storage sites around the state with no end game plan to dispose of PFAS foam.
 - This is dependent on the generator category. The size of the generator then determines the time limit for AFFF storage. This option would not be legislatively supported in the future and would require a legislative mandate or rule changes to support long-term storage.
 - While foam is stored, the Approved Hold in Place alternative offers additional guidance for fire departments and resources to effectively store foam. Participating fire departments can receive \$1,000 to buy equipment to better contain AFFF.
 9. Will Washington state ferries be eligible for the disposal program?

- Not currently, but possibly in the future.
10. Has Ecology considered the risk of seismic effects from injection? This has occurred in Oklahoma from fracking operations (injection of fluids under high pressure). Also, has Ecology considered the significant volume increase of waste from solidification?
- Seismic effects are not addressed in draft EIS; we encourage you to submit this as a public comment.
11. I have a client interested in staging some bench- or pilot-scale destruction tests to compare different destruction technologies (e.g., SCWO, UV-sulfite, HALT), would they be able to do that under the "treat on site" option for large quantity generators? If not, are there other options for them to legally stage those tests, e.g., a permit for R&D?
- They would need a research and development (R&D) permit.
12. Will it be possible for any other disposal options to be considered? There are PFAS destruction technologies not mentioned in the EIS.
- We encourage you to submit other disposal options that you'd like to be considered as a public comment.
13. By whom and how will a decision be made on which disposal option will be used for this program?
- We are currently accepting public comments on the draft EIS, which will then be incorporated into the final EIS. Ecology decision-makers use the final EIS to decide on preferred disposal options. We consider criteria such as a disposal option's ability to store or safely destroy AFFF, the associated timeline, and its impact on environment and public health.
14. Will come later for us non-eligible entities? Is there someone at Ecology that we can contact for assistance/resources for managing our own disposal?
- Contact Sean Smith at sean.smith@ecy.wa.gov.
15. Will WA be ensuring that the potential incinerator(s) under consideration perform the EPA's OTM-50 sampling technique when it becomes available (assumedly in the near future, as they had been hoping to get it released by the end of 2023)? That'll allow for at least many of the Products of Incomplete Combustion/Destruction (PICs/PIDs) to be among the analytes being measured and quantified.
- This is not specifically addressed in the draft EIS as this technique is still pending release by the EPA. If incineration is selected, then we will work closely with incinerators to ensure they're using the most recent sampling techniques. We encourage you to submit this as a public comment.
16. Does the draft EIS consider AFFF in small portable extinguisher cylinders that are under pressure? Transferring contents after releasing pressure can be messy.
- Fire departments may have portable fire extinguishers with AFFF, but that's less common. As of now, the foam we are considering is concentrate foam in containers like 5-gallon buckets up to 1,000-gallon tanks.
17. There are companies with commercially available Super Critical Water Oxidation (SCWO) technology that offer complete and broad PFAS destruction. How did Ecology evaluate those companies and SCWO technology?
- SCWO is one of the emerging technologies that's shown the potential to destroy PFAS in AFFF. We have done several things related to these emerging

- technologies; we have met (both via phone and on site) with companies that are piloting these technologies and have used the information from these meetings to help determine the effectiveness and viability of these potential technologies.
- While developing this draft EIS, PFAS disposal technology has developed quite rapidly. As technology evolves, we may be able to consider these technologies more strongly than we were able to during development of the EIS.
 - By Ecology's regulations, AFFF must go to a RCRA-permitted treatment, storage, and disposal (TSD) facility. If AFFF goes out-of-state to one of those facilities, Washington must receive permission from the other state to receive the waste. We were considering a TSD facility with SCWO capability early on, but the facility's state ultimately denied accepting Washington's AFFF waste. Thus, we will still consider SCWO an emerging technology until it's RCRA-permitted and has undergone more rigorous testing.
18. Why does Ecology have to send AFFF to a treatment, storage, and disposal (TSD) facility?
- AFFF is not a federally recognized waste under the RCRA program. Washington goes above and beyond those requirements, and Ecology has persistence criteria. This means that any halogenated waste (like AFFF and PFAS) over a hundred parts per million gets designated as a state-only waste, and by rule must go to a TSD.
19. Is there guidance/ options for those who have AFFF in storage now, to dispose now?
- Yes, contact Sean Smith at sean.smith@ecy.wa.gov.
20. Just to clarify, the storage countdown for medium-quantity generators and large-quantity generators starts only after the final EIS is published with a selected disposal alternative?
- That's not the case. The timeline or clock to dispose starts when the facility determines the AFFF to be waste. The state has banned purchase of AFFF, but facilities can still use AFFF if they deem it necessary. Ecology's program is conceived to prevent that, help dispose of AFFF, and present alternatives to AFFF.
 - AFFF use for emergencies is currently permitted in WA. Fire departments that have AFFF can use it if they determine a need. The moment they determine it's no longer a viable product, it becomes a waste with a mandated time limit for disposal.
21. What are the active materials in foam fire extinguishers?
- We encourage you to submit this as a public comment, and we can provide more information in our response to comments.
22. What is the WA-state approved alternative to PFAS-containing AFFFs? Is it fluorine-free AFFFs?
- There have not been any Washington-approved alternatives. There are fluorine-free alternatives certified by a third party, and those can be used by municipal fire departments. In addition, the Department of Defense has approved at least one fluorine-free foam for use at air bases, army bases, fire departments, and airports.

23. When you say AFFF, do you mean all fluorine-containing AFFFs, regardless of their PFAS type/chain lengths?
- Yes. We are analyzing both newer and legacy formulations of AFFFs.
24. Will WA be taking into account the info put forth by the EPA in their updated Disposal & Destruction (D & D) guidance after it gets released? Both that updated D & D guidance and the 2nd PFAS in source air test method (OTM-50) had been scheduled to get finalized before the end of 2023, so I'd expect them both to be released fairly soon.
- Yes, if it comes out before the final EIS is published. We have incorporated all guidance from EPA as it has become available, including their interim guidance on disposal technology.
25. Most municipal fire departments have switched to fluorine free foam and will not use PFAS foam anymore, obviously the real issue is storage/disposal. So, we need to NOT declare we want to get rid of it, so the clock doesn't start?
- The important takeaway is that it must be treated as a product. Fire departments need to store and manage it as a product if you want to participate in Ecology's disposal program. However, if the fire department determines that AFFF is a waste before the program is implemented, they would be responsible for disposing of it in accordance with the state's hazardous waste rules.
26. Will the slide deck for this presentation be made available on the EIS website?
- Yes, it is already available on the [EZ View page](#),⁵ and we will also upload the presentation recording on the EZ View page after this meeting.
27. Will this program also include disposal of rinsates (from transitioning a system from AFFF to Fluorine-Free), firewater, or contaminated groundwater?
- No. Separately from the EIS process, we are looking at guidance for fire departments on how to clean fire engines and apparatus that are contaminated with AFFF.
28. Will Ecology conduct inspections to verify that AFFF is properly stored so it does not enter the public sewer, or the environment?
- We currently conduct inspections of fire departments' storage of hazardous waste. For this program, if Ecology selects the Approved Hold in Place alternative, the alternative would involve the creation of storage plans, guidance for labeling AFFF, and regular inspections of foam containers to reduce or eliminate accidental release. Fire departments would be regularly inspected throughout the time AFFF is stored there.
29. Does AFFF / PFAS qualify as "Special Waste"?
- No. Special waste is a category of Washington state-only dangerous waste that must meet the following criteria:
 - Conditionally excluded state-only dangerous waste.
 - Solid only (not liquid, aqueous, or gaseous).
 - Be fully designated before it can be identified as special waste.
 - For more information, visit [our webpage on special waste](#).

⁵ https://www.ezview.wa.gov/site/alias__1962/37693/pfas_in_firefighting_foam.aspx

30. Please confirm that will this cover categories like alcohol resistant AFFF and fluoroprotein AFFFs?
- We surveyed fire departments for legacy stockpiles or any fluorine-containing stockpiles that departments would like to be included in the program. We are considering a wide range of foams for this disposal program, including any foam with intentionally added PFAS. Alcohol-resistant AFFF should qualify for the program.
31. What is your estimated timeframe for selection of an alternative, and start of collection, if the EIS will be finalized in late spring / early summer?
- It depends on the alternative that is selected. At the earliest, the fastest alternative (incineration) can be implemented in 3-6 months. Other options would take longer, potentially a year to several years (depending on rulemaking, bid process, and other factors).
32. Given the range, will timeframe be a selection factor then?
- We will examine several criteria, including implementation timeframe. We would appreciate the public providing comment on additional criteria for us to look at during decision-making. We are considering the time to collect, transport, and dispose of the foam.
33. I saw that it was indicated that the incinerator or incinerators under consideration were achieving 99.9999% destruction of certain PFAS (assumedly using the existing EPA OTM-45 sampling technique) but that test method wouldn't capture all the potential PICs/PIDs. However, is there also an acid gas scrubber control tech in place?
- The EPA has released both OTM-45 and OTM-50 methods for sampling PIC from incinerator stacks. Currently, the EPA does not require incinerators to use or comply with OTM-45 or OTM-50 and there are currently no known labs that are using these test methods.

Next Steps and Adjourn

Sean shared information about the draft EIS public hearing on January 31, 2024, from 1:00 p.m. – 4:00 p.m. During the public hearing, Ecology will take formal public comments on the draft EIS. Ecology will not answer questions during the hearing. Sean encouraged the audience to submit public comments online or during the public hearing at the end of the month.

Attendance

Peak attendance: 127

Table 3. Attendees and meeting hosts for the information session.

Number	Name	Affiliation
1	206-542-7464	Unknown
2	206-510-2736	Unknown
3	254-290-4482	Unknown
4	509-892-4165	Unknown
5	Abby Bazin	Parsons
6	Al Innes	MPCA
7	Alan Davis	Unknown
8	Alfred Martini	Unknown
9	Alicia Boyd	Ecology
10	Alle Brown-Law	Cascadia Consulting Group
11	Amanda Gillen	Ecology
12	Amanda Ringer	GCHD
13	Amber Derise	NAS Whidbey Island
14	Amy Salamone	Unknown
15	Amy Wilson	TRC
16	Andrew Rardin	Snohomish County Airport
17	Aurore	Unknown
18	Bea Covington	Green Economics
19	Bill Kidder	TRC
20	Bob Danson	Olympic View Water & Sewage
21	Bri Brinkman	Ecology
22	Carrie Crozier	Unknown
23	Celeste Pachella	HDR
24	Chris	Unknown
25	Courtney Cecale	Ecology
26	Dale Timmons	Unknown
27	Daniel Longbrake	Unknown
28	Danyel Hiland	WSDOT Environmental Services
29	Darla Smith	Eurofins Env Testing
30	Dave Gent	WAPA
31	David Trueba	Unknown

Number	Name	Affiliation
32	Dean Williams	TPCHD
33	Diane	Unknown
34	Don Martin	DLA
35	Donald Ward Jr.	NYSDEC
36	E. Hernandez	Oregon State University
37	Elaine Snouwaert	Ecology
38	Firem	Unknown
39	Franji Mayes	Ecology
40	Gerrard Jones	Oregon State University
41	Gilbert Smith	Unknown
42	Greg Caron	Ecology
43	Gretchen Greene	Greene Economics
44	Gretchen Muller	Cascadia Consulting Group
45	Heather Kibbey	WASWD
46	Jacob Blair	Unknown
47	Jason Landskron	Ecology
48	Jdavendo	Unknown
49	Jennifer Field	Oregon State University
50	Joanna Seymour	Ecology
51	John Bige	Unknown
52	John Evered	Unknown
53	John McCorkle	Unknown
54	Jon Kalmuss Katz	Earthjustice
55	Josh Evans	Unknown
56	Julian Doyle	JBLM
57	Justin Boyes	Unknown
58	Kat Krohn	Unknown
59	Katelyn Scott	Spokane Riverkeepers
60	Katy Atakturk	GeoEngineers
61	Kelly Hunter	Unknown
62	Kelsey Payne	Snoqualmie Tribe
63	Kenley Farmer	A4A
64	Kevin Bartoy	Washington State Ferries
65	Kevin Freeman	TRC

Number	Name	Affiliation
66	Kim Morley	Ecology
67	Kim Schofield	Unknown
68	kjohnston	Unknown
69	Kristen Thomas	Unknown
70	Larken Yackulic	Unknown
71	Leatta Dahlhoff	DES
72	Leslie Morris	Ecology
73	Lizzy Baskerville	Ecology
74	Lya Carini	Unknown
75	Manuel Villa	Unknown
76	Matt Ninneman	NYS DEC
77	Matthew Massey	Unknown
78	Meg Bommarito	Ecology
79	Megan King	Port of Seattle
80	Meredith Bush	GeoEngineers
81	Michael Abboud	City of Gig Harbor
82	Micheala Morris	Ecology
83	Mike Ehlebracht	Haley & Aldrich
84	Mounia Sassi	Ecology
85	Nancy Lust	Unknown
86	Naomi	374Water
87	Nick Bennett	Ecology
88	Nora Kammer	SRSC
89	Pam Hadad-Hurst	NYSDEC
90	Patrick Solomon	CEP
91	Randy Turnell	Unknown
92	Renae Z'berg	Thurston County Hazardous Waste
93	Samsung-sm-g935v	Unknown
94	Sarah B	Unknown
95	Sarah Mass	Haley & Aldrich
96	Sarah Penfield	Ecology
97	Sarah Watson	Unknown
98	Scott Cave	S.C. Communications / Friends of Rocky Top
99	Scott McQuary	Redmond

Number	Name	Affiliation
100	Sean Smith	Ecology
101	Shalene Thomas	Unknown
102	Shirlee Tan	PHSKC
103	Sonja Larson	Unknown
104	Sonya Lunder	Unknown
105	Stacey Callaway	Ecology
106	Stacy Fox (Dave Hill)	Unknown
107	Stephen H	Unknown
108	Sudhakar (Sunny) Viswanathan	374Water
109	Suzanne Yohannon	Unknown
110	Tariq Hussain	Haley & Aldrich
111	Taylor Magee	Cascadia Consulting Group
112	Thomas Cortina	Unknown
113	Tiffany Thomas	Haley & Aldrich
114	Tim Fitzgerald	American Seafoods
115	Tim Shestek	American Chemistry Council
116	Timothy Allen	WA AGO
117	Tom O'Connor	Vancouver FD
118	Tom Thorson	Unknown
119	Tom Wanzek	Unknown
120	Tracey Rogers	Unknown
121	Trevor Whitson	Unknown
122	TT Horlton	Unknown
123	Vanessa Maldonado	Geosyntec Consultants Inc
124	Vikki Barthels	Unknown
125	Wendy Jonas	LOTT Clean Water Alliance
126	Willie Knoepfle	Unknown
127	Yida Fang	Haley & Aldrich

Zoom Chat Log

10:07:28 From Alle Brown-Law, Cascadia Consulting (she/her) to Everyone

We will have time for questions after this presentation. Feel free to add your questions into the chat during the presentation. Remember that we are not capturing any questions or comments made today as formal public comments. If you would like to make a public comment on the draft EIS, or make sure your question is captured as a comment, please visit ecology.wa.gov/AFFF-comment, or attend our public hearing on January 31, at 1 p.m.

10:23:11 From Alle Brown-Law, Cascadia Consulting (she/her) to Everyone

We will have time for questions after this presentation. Feel free to add your questions into the chat during the presentation. Remember that we are not capturing any questions or comments made today as formal public comments. If you would like to make a public comment on the draft EIS, or make sure your question is captured as a comment, please visit ecology.wa.gov/AFFF-comment or attend our public hearing on January 31, at 1 p.m.

10:25:55 From Tracy Rogers to Everyone

Have you considered the Chemical Waste Management, Arlington, OR location for disposal of the AFFF? They currently accept it.

10:27:22 From Sarah Mass - Haley & Aldrich to Everyone

It sounds like landfilling, injection, and incineration all would require out of state transport, has Ecology considered the potential issues associated with transportation? I understand there was a spill of manufacturing waste during transport of waste from a manufacturing facility in NC to the deep well injection facility in TX.

10:27:51 From Tom O'Connor, Vancouver FD to Everyone

Negative - unbudgeted cost to local FDs

10:29:50 From Alan Davis to Everyone

There are other users of AFFF than Municipal Fire Stations... Ships, Aircraft Hangers, Refineries, Fire Training Facilities, Airports, etc.... what efforts are you making to reach out to them and do you plan to offer support to those of us that have had AFFF for Fire Fighting & Fire Suppression Risks, but now are stuck with quantities of it we can't dispose of?

- **10:31:41 Tim Fitzgerald, American Seafoods** reacted to "There are other user..." with 👍 (thumbs up emoji)
- **10:34:21 Sarah Mass - Haley & Aldrich** reacted to "There are other user..." with 👍 (thumbs up emoji)

10:33:06 From Jennifer Field - Oregon State University to Everyone

Negative - landfills emit volatile PFAS (6:2 FTOH), so not just a leachate issue

- **10:40:58 Vanessa** reacted to "Negative - landfills..." with 👍 (thumbs up emoji)

10:37:56 From Sarah Mass - Haley & Aldrich to Everyone

Are non-municipal fire stations eligible for this program? e.g., fire stations at airports? I assume foams stored at hangars and other airport facilities are not eligible.

10:40:01 From Tom O'Connor, Vancouver FD to Everyone

Is the ability of agencies like fire departments provide and manage long term storage of a hazardous substance been considered? That would be hundreds of hazmat storage sites around the state with no end game plan to dispose of PFAS foam.

10:40:08 From Kevin Bartoy, Washington State Ferries to Everyone

will Washington state ferries be eligible for the disposal program?

10:40:10 From Alle Brown-Law, Cascadia Consulting (she/her) to Everyone

Ecology is not capturing any questions or comments made today as formal comments for the draft EIS record.

If you would like to make a formal comment, or make sure your question is captured as a comment, you can submit written comments online, or you can attend the public hearing on January 31 from 1 – 4 p.m.

To ask a question, please write your question in the chat.

10:40:29 From Dale Timmons to Everyone

Has Ecology considered the risk of seismic effects from injection? This has occurred in Oklahoma from fracking operations (injection of fluids under high pressure). Also, has Ecology considered the significant volume increase of waste from solidification?

- **10:48:06 Wendy Jonas LOTT Clean Water Alliance** reacted to "Has Ecology consider..." with 👍 (thumbs up emoji)

10:42:13 From Sarah Mass - Haley & Aldrich to Everyone

I have a client interested in staging some bench- or pilot-scale destruction tests to compare different destruction technologies (e.g., SCWO, UV-sulfite, HALT), would they be able to do that under the "treat on site" option for large quantity generators? If not, are there other options for them to legally stage those tests, e.g., a permit for R&D?

- **10:49:20 Matthew Massey** reacted to "I have a client inte..." with 👍 (thumbs up emoji)

10:42:21 From Trevor Whitson to Everyone

Will it be possible for any other disposal options to be considered? There are PFAS destruction technologies not mentioned in the EIS.

10:44:21 From Trevor Whitson to Everyone

By whom and how will a decision be made on which disposal option will be used for this program?

10:45:49 From Donald Ward Jr (NYSDEC) to Everyone

Will WA be ensuring that the potential incinerator(s) under consideration perform the EPA's OTM-50 sampling technique when it becomes available (assumedly in the near future, as they had been hoping to get it released by the end of 2023)? That'll allow for at least many of the Products of Incomplete Combustion/Destruction (PICs/PIDs) to be among the analytes being measured and quantified.

10:49:08 From Stephen H to Everyone

Does the draft EIS consider AFFF in small portable extinguisher cylinders that are under pressure? Transferring contents after releasing pressure can be messy.

10:51:53 From Tim Fitzgerald, American Seafoods to Everyone

for us non-eligible entities, is there someone at Ecology that we can contact for assistance/resources for managing our own disposal?

10:54:28 From Matthew Massey to Everyone

There are companies with commercially available SCWO technology that offer complete and broad PFAS destruction. How did Ecology evaluate those companies and SCWO technology?

10:56:19 From Josh Evans to Everyone

Sean, made mentioned of giving guidance to agencies for proper disposal are there guidance and options for us who have it in storage now, to dispose now?

10:56:58 From Yida Fang (Haley&Aldrich) to Everyone

Just to clarify, the storage countdown for medium-quantity generators and large-quantity generators starts only after the final ESI is published with a selected disposal alternative?

10:57:05 From Alan Davis to Everyone

i am not sure exactly WHAT the active materials are in the "Foam" Fire extinguishers ... lots of them sitting around.

10:59:01 From Jennifer Field - Oregon State University to Everyone

1] What is the WA-state approved alternative to PFAS-containing AFFFs - fluorine-free AFFFs? When you say AFFF, do you mean all fluorine-containing AFFFs, regardless of their PFAS type/chain lengths?

10:59:42 From Alle Brown-Law, Cascadia Consulting (she/her) to Everyone

For those just joining us, welcome! We're currently answering audience questions. Here are a few reminders:

- Ecology is not capturing any questions or comments made today as formal comments for the draft EIS record.
- If you would like to make a formal comment, or make sure your question is captured as a comment, you can submit written comments online, or you can attend the public hearing on January 31 from 1 – 4 p.m.
- To ask a question, please write your question in the chat.

11:00:30 From Donald Ward Jr (NYSDEC) to Everyone

Will WA be taking into account the info put forth by the EPA in their updated Disposal & Destruction (D & D) guidance after it gets released? Both that updated D & D guidance and the 2nd PFAS in source air test method (OTM-50) had been scheduled to get finalized before the end of 2023, so I'd expect them both to be released fairly soon.

11:03:02 From E. Hernandez, Oregon State University to Everyone

It depends on the fire extinguisher class. Class A & B are usually the ones that contain AFFFs.

11:03:23 From Jennifer Field - Oregon State University to Everyone

https://quicksearch.dla.mil/gsDocDetails.aspx?ident_number=285047

11:03:58 From Nick Bennett to Everyone

Common ABC fire extinguishers sold to the public tend to have:

- Monoammonium Phosphate
- Ammonium Sulfate
- Mica
- Clay, Amorphous Silica 7631-86-9 < 5%
- Dye

11:04:18 From Nick Bennett to Everyone

Basically dirt under pressure

- **11:04:52 From Jennifer Field - Oregon State University to Everyone** replying to "Basically dirt under..."
 - are these for Class B fires?
- **11:04:54 From Sonya Lunder to Everyone** replying to "Basically dirt under..."
 - This is for Class A extinguishers, I believe.
- **11:05:05 From Nick Bennett to Everyone** replying to "Basically dirt under..."
 - ABC
- **11:06:03 From Nick Bennett to Everyone** replying to "Basically dirt under..."
 - Most businesses have gotten away from the Wet A/B extinguishers.

11:05:56 From Tom O'Connor, Vancouver FD to Everyone

Most municipal FDs have switched to fluorine free foam and will not use PFAS foam anymore, obviously the real issue is storage/disposal. So we need to NOT declare we want to get rid of it so the clock doesn't start?

11:06:10 From Patrick Solomon, CEP to Everyone

Will the slide deck for this presentation be made available on the EIS website?

11:07:38 From Trevor Whitson to Everyone

Will this program also include disposal of rinsates (from transitioning a system from AFFF to Fluorine-Free), firewater, or contaminated groundwater?

11:08:22 From Justin Boyes to Everyone

Will Ecology conduct inspections to verify that FAAA is properly stored so it does not enter the public sewer, or the environment?

- **11:10:54 From Wendy Jonas LOTT Clean Water Alliance** reacted to "Will Ecology conduct..." with 👍 (thumbs up emoji)
- **11:08:40 From Justin Boyes to Everyone:**
 - AFFF

11:08:40 From Jennifer Field - -Oregon State University to Everyone

SERDP project: <https://serdp-estcp.mil/toolsandtraining/details/a14338ee-5c2e-47a5-8c02-346b02fd791d>

11:08:44 From Nick Bennett to Everyone

Does AFFF / PFAS qualify as "Special Waste"?

11:11:38 From Alle Brown-Law, Cascadia Consulting (she/her) to Everyone

The slides from today's presentation are available on our PFAS in Firefighting Foam documents library: https://www.ezview.wa.gov/site/alias_1962/37693/pfas_in_firefighting_foam.aspx. They're saved under the "Documents" heading.

11:11:48 From Leslie Morris to Everyone

Special waste must be solid only

11:12:23 From Leslie Morris to Everyone

As defined in DW regulations

11:12:51 From Jennifer Field - -Oregon State University to Everyone

please confirm that will this cover categories like alcohol resistant AFFF and fluoroprotein AFFFs?

11:13:42 From Thomas Cortina to Everyone

Fluoroprotein foam is very rare in the US

11:14:00 From Megan King, Port of Seattle to Everyone

What is your estimated timeframe for selection of an alternative, and start of collection, if the EIS will be finalized in late spring / early summer?

11:15:55 From Megan King, Port of Seattle to Everyone

given the range, will timeframe be a selection factor then?

11:17:11 From Donald Ward Jr (NYSDEC) to Everyone

I saw that it was indicated that the incinerator or incinerators under consideration were achieving 99.9999% destruction of certain PFAS (assumedly using the existing EPA OTM-45 sampling technique) but that test method wouldn't capture all the potential PICs/PIDs. However, is there also an acid gas scrubber control tech in place?

11:17:50 From Alle Brown-Law, Cascadia Consulting (she/her) to Everyone

Public Hearing event page: <https://ecology.wa.gov/events/hwtr/aff-draft-eis/public-hearing>

January 31, from 1-4 pm PST.

11:18:01 From Dale Timmons to Everyone

Thank you for your time and information

11:18:32 From Alle Brown-Law, Cascadia Consulting (she/her) to Everyone

AFFF DEIS landing page: ecology.wa.gov/AFFF-comment.

This includes the DEIS, info on submitting comments, and info on the public hearing.

11:19:02 From Alle Brown-Law, Cascadia Consulting (she/her) to Everyone

- Interactive DEIS: <https://ecology.wa.gov/waste-toxics/reducing-toxic-chemicals/product-replacement-program/aff-disposal/aff-eis>
- Published DEIS: <https://apps.ecology.wa.gov/publications/SummaryPages/2304064.html>
- Submit comments here: <https://hwtr.ecology.commentinput.com/?id=hYEe5GPAC>
- Attend our public hearing: January 31, 1 p.m. <https://ecology.wa.gov/events/hwtr/aff-draft-eis/public-hearing>

11:20:25 From Alle Brown-Law, Cascadia Consulting (she/her) to Everyone

Sean Smith: sean.smith@ecy.wa.gov

11:20:48 From Tim Fitzgerald, American Seafoods to Everyone

Thank you Sean

11:20:50 From Sonya Lunder to Everyone

Thank you! This was very informative

11:20:55 From Naomi (374Water) to Everyone

Thank you!

11:20:59 From Sunny @ 374Water to Everyone

Thank you!

11:21:06 From Josh Evans to Everyone

Thank you!

11:21:06 From Stacey Callaway (she/her) to Everyone

great job!