
Aqueous Film-Forming Foam Collection and Disposal Program



Final Programmatic Environmental Impact Statement Fact Sheet and Summary

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PUBLICATION INFORMATION

This report is available on the Washington State Department of Ecology's website at:
<https://apps.ecology.wa.gov/publications/summarypages/2404048.html>.

Related publication:

[Aqueous Film-Forming Foam Collection and Disposal Program: Final Environmental Impact Statement¹](#)

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¹ apps.ecology.wa.gov/publications/SummaryPages/2404040.html

² ecology.wa.gov/contact

³ ecology.wa.gov/accessibility

Fact Sheet

Aqueous Film-Forming Foam Collection and Disposal Program: Final Programmatic Environmental Impact Statement

Date of Issuance

October 15, 2024

Description

Aqueous film-forming foam (AFFF) is used to put out fires fueled by flammable liquids, such as oil or gasoline. AFFF is concerning because it contains per- and polyfluoroalkyl substances (PFAS). These toxic chemicals do not easily break down and can negatively impact human health and the environment.

In 2018, Washington passed the [Firefighting Agents and Equipment law](#),⁴ which restricts AFFF manufacture, sale, and use for firefighting training. This leaves municipal fire departments and other first responders with unused AFFF stored on site. In response, the Washington State Department of Ecology (Ecology, we) proposed the AFFF Collection and Disposal Program to help fire departments safely dispose of their on-site AFFF at little to no cost to participants.

This final Programmatic Environmental Impact Statement (EIS) provides the environmental and public health information needed for an informed and transparent decision on how to safely dispose of AFFF stockpiled at the state's municipal fire departments.

We prepared this EIS in compliance with the State Environmental Policy Act (SEPA) requirements described in [Chapter 43.21C RCW \(Revised Code of Washington\)](#)⁵ and [Chapter 197-11 WAC \(Washington Administrative Code\)](#).⁶ SEPA provides guidance to state and local governments involved in environmental policy decisions. The SEPA process is intended to ensure that environmental values are considered during decision-making actions by state and local agencies.

Included in this EIS

As required under SEPA guidance, this EIS includes:

- ▶ Information on existing uses of AFFF.
- ▶ Analysis of current laws and regulations governing hazardous materials.
- ▶ Policies for the protection of important and sensitive ecological areas and their existing uses.

⁴ Chapter 70A.400 RCW (<https://app.leg.wa.gov/rcw/default.aspx?cite=70A.400>)

⁵ <https://app.leg.wa.gov/RCW/default.aspx?cite=43.21C>

⁶ <https://apps.leg.wa.gov/WAC/default.aspx?cite=197-11>

- ▶ Commitments to coordinate with key stakeholders, which include government agencies, organizations, Native American Tribes, and interested individuals.

Alternatives Considered

Alternatives presented in this EIS are:

- ▶ Alternative 1: Approved Hold in Place
- ▶ Alternative 2: Incineration
- ▶ Alternative 3: Solidification and Landfilling
- ▶ Alternative 4: Class I Deep Well Injection
- ▶ Alternative 5: No Action

Timing of Next Steps

At least seven days after the release of this final EIS, we will select the AFFF disposal alternative(s) and begin its implementation.

Document Availability

This final EIS for the AFFF Collection and Disposal Program is available on Washington State Department of Ecology's website at:

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

Print copies of this document may be obtained by email request to hwtrpubs@ecy.wa.gov.

For More Information

During the past several years, we coordinated a team of state agencies and worked with a wide range of experts to study and collect information on the program area. We collaborated with residents, stakeholders, Tribes, and other state agencies to present the most accurate, science-based information possible. The final EIS builds off this work. Background materials and other information are available in the appendices to this final EIS and online through the following webpages and publications:

Webpages:

- ▶ [AFFF environmental impact statement](#)⁷
- ▶ [PFAS in firefighting foam EZView page](#)⁸
- ▶ [Aqueous film-forming foam](#)⁹
- ▶ [AFFF collection and disposal program](#)¹⁰

⁷ ecology.wa.gov/AFFF-EIS

⁸ www.ezview.wa.gov/site/alias__1962/37693/pfas_in_firefighting_foam.aspx

⁹ ecology.wa.gov/AFFF

¹⁰ ecology.wa.gov/AFFF-Disposal

Publications:

- ▶ [How Should We Dispose of Toxic Firefighting Foam?](#)¹¹
- ▶ [AFFF Collection and Disposal Program Alternatives](#)¹²
- ▶ [Focus on: What Is an EIS?](#)¹³
- ▶ [PFAS in Firefighting Foam](#)¹⁴
- ▶ [AFFF Draft Environmental Impact Statement](#)¹⁵
- ▶ [AFFF Draft Environmental Impact Statement Fact Sheet & Summary](#)¹⁶

This summary is also available in the following languages:

- [Chinese](#)¹⁷
- [Korean](#)¹⁸
- [Russian](#)¹⁹
- [Spanish](#)²⁰
- [Tagalog](#)²¹
- [Vietnamese](#)²²

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¹¹ apps.ecology.wa.gov/publications/SummaryPages/2304052.html

¹² apps.ecology.wa.gov/publications/SummaryPages/2304013.html

¹³ apps.ecology.wa.gov/publications/SummaryPages/2304012.html

¹⁴ apps.ecology.wa.gov/publications/SummaryPages/2204037.html

¹⁵ apps.ecology.wa.gov/publications/SummaryPages/2304064.html

¹⁶ apps.ecology.wa.gov/publications/SummaryPages/2304070.html

¹⁷ apps.ecology.wa.gov/publications/SummaryPages/2304070ZH.html

¹⁸ apps.ecology.wa.gov/publications/SummaryPages/2304070KO.html

¹⁹ apps.ecology.wa.gov/publications/SummaryPages/2304070RU.html

²⁰ apps.ecology.wa.gov/publications/SummaryPages/2304070ES.html

²¹ apps.ecology.wa.gov/publications/SummaryPages/2304070TL.html

²² apps.ecology.wa.gov/publications/SummaryPages/2304070VI.html

Executive Summary

Aqueous film-forming foam (AFFF) is used to put out fires fueled by flammable liquids, such as oil or gasoline. AFFF is concerning because it contains per- and polyfluoroalkyl substances (PFAS). These toxic chemicals don't easily break down, and they can negatively impact human health and the environment.

In 2018, Washington passed the Firefighting Agents and Equipment law,²³ which restricts AFFF manufacture, sale, and use for firefighting training. This leaves municipal fire departments and other first responders with on-site stockpiles of AFFF that they may never use.

In response, Washington State Department of Ecology (Ecology, we) proposed the Aqueous Film-Forming Foam Collection and Disposal Program, intended to help fire departments safely dispose of stockpiles of AFFF at little to no cost to participants. The Washington Legislature appropriated funds for this program because it recognized the threat AFFF and PFAS pose to the state's environment and public health.

The program is not specific to a particular site or location. All Washington State municipal fire departments storing AFFF may elect to participate at their individual discretion.

Project History

- ▶ **September 1, 2020:** We released a State Environmental Policy Act (SEPA) checklist containing an initial Determination of Non-Significance (DNS) relative to the proposed collection, transportation, treatment, and disposal of AFFF at the Clean Harbors federally permitted incinerator in Aragonite, Utah.
- ▶ **October 1, 2020:** We closed a 30-day comment period on the SEPA checklist and DNS.
- ▶ **January 15, 2021:** After reviewing the comments, we decided to withdraw the DNS.
- ▶ **January 19, 2021:** We issued a Determination of Significance (DS), finding that the foam disposal program could potentially generate significant adverse impacts on the environment. We initiated an environmental impact statement (EIS) to evaluate alternative ways to implement the AFFF program.
- ▶ **February through April 2021:** We solicited scoping comments regarding issues, resources, and impacts to investigate in an EIS.
- ▶ **November 2021:** We began the draft EIS.
- ▶ **February 2022:** We held Tribal-specific forums to engage with and solicit input from our Tribal partners regarding the draft EIS.

²³ Chapter 70A.400 RCW. (<https://app.leg.wa.gov/rcw/default.aspx?cite=70A.400>)

- ▶ **December 20, 2023:** The draft EIS was released for public comment.
- ▶ **January 17, 2024:** We held a public information session to answer the public's questions about the draft EIS and to provide clarifying information.
- ▶ **January 31, 2024:** We held a public hearing to receive on-the-record public comment about the draft EIS.
- ▶ **February 5, 2024:** We closed the public comment period.
- ▶ **October 15, 2024:** The final EIS is released.

What Is the Purpose of a Programmatic Environmental Impact Statement?

An EIS is a report that details the potential environmental and public health impacts of a proposed action. A programmatic EIS assesses these impacts for a proposed program or plan, rather than a specific action or project. A programmatic EIS provides the basis for review of related actions or projects undertaken at a later date.

An EIS does not approve or deny a proposed project. It provides information about the probable significant adverse environmental impacts of a proposal. We prepared this final EIS in accordance with SEPA requirements.²⁴ The results of the EIS must be considered by Ecology and any other relevant agency in decisions regarding selection and implementation of a proposed action.

For more information, see the publication [Focus on: What Is an EIS?](#)²⁵

What Is Addressed in this Programmatic EIS?

This EIS addresses the potential impacts of AFFF collection, storage, transport, and disposal on public health and the environment. Issues addressed in this EIS include:

- ▶ A reasonable range of alternative approaches to addressing the AFFF concern.
- ▶ Potential adverse environmental impacts. Potential impacts by alternative are summarized in Chapter 4: Mitigation Measures.
- ▶ Possible mitigation measures to reduce or eliminate significant impacts.

For each resource area addressed in the EIS, the following information is presented:

- ▶ Analytical methodology and thresholds of significance determinations.
- ▶ Potential significant impacts on the resource area.
- ▶ Potential adverse effects on human health and the environment.

²⁴ Chapter 197-11 WAC: <https://apps.leg.wa.gov/WAC/default.aspx?cite=197-11>

²⁵ <https://apps.ecology.wa.gov/publications/SummaryPages/2304012.html>

- ▶ Mitigation measures and best practices.
- ▶ Data gaps.
- ▶ Significant, unavoidable, adverse impacts.

Alternatives

SEPA requires that an EIS provides a reasonable range of alternative approaches to the proposed action. Usually, the alternatives considered could achieve the project objectives, and some may have lower environmental costs. Four alternatives and a “no action” alternative have been identified and are analyzed in this EIS:

- ▶ **Alternative 1: Approved Hold in Place.** AFFF would be held in place at participating fire stations. Suitable containment would be approved and reimbursed by Ecology until acceptable advanced treatment technology becomes available.
- ▶ **Alternative 2: Incineration.** AFFF would be collected and transported to a selected existing treatment facility for incineration.
- ▶ **Alternative 3: Solidification and Landfilling.** AFFF would be collected and transported to a selected landfill facility or facilities for solidification and disposal.
- ▶ **Alternative 4: Class I Deep Well Injection.** AFFF would be collected and transported to a selected Class I deep well injection facility or facilities for disposal.
- ▶ **Alternative 5: No Action.** AFFF would be left as is at participating fire stations.

Legal Requirements

Numerous regulations, laws, and treaty obligations have guided the development of this EIS. Chapter 2: Project Description and Alternatives describes specific laws and regulations for dangerous waste treatment, storage, and disposal. These include Washington State regulations as well as federal regulations and permitting requirements under the Resource Conservation and Recovery Act (RCRA). Chapter 3: Affected Environment and Environmental Consequences offers crucial insights into Tribal treaties and federal management areas within the AFFF study area.

Regardless of the chosen alternative, we commit to conducting necessary engagement, consultations, and coordination with federally recognized Tribes. In addition, for all alternatives except the no action alternative, we will adhere to the state's regional spill response plans before foam collection, including mandatory communication and coordination with federal, state, Tribal, and local entities.

Required Permits, Licenses, and Approvals

Because any Washington State municipal fire department with qualifying foam may participate, the AFFF collection program is not specific to a particular site or location. Also, because this is a programmatic EIS, the specific method of AFFF collection, transport, and

disposal remains undetermined. Thus, a comprehensive list of potential required permits, licenses, and approvals cannot be provided at this time.

We've listed the fire departments that would likely participate in the collection program in [Appendix A.2](#).²⁶ This list may grow if more fire departments choose to join the program.

Of the five proposed alternatives analyzed in this EIS, four (incineration, solidification and landfilling, deep well injection, and no action) do not require Ecology to secure additional permits, licenses, or approvals.

Key Programmatic Concerns

PFAS within AFFF are water soluble and highly mobile, meaning they can easily contaminate groundwater and can be hard to filter out. There are no known natural processes that can break down these substances. Exposures could continue for hundreds of years or more.

In April 2024, the U.S. Environmental Protection Agency (EPA) published a national primary drinking water regulation in the [Federal Register](#).²⁷ The regulation includes maximum contaminant level goals (MCLGs) and maximum contaminant levels (MCLs) in drinking water for six PFAS. It took effect on June 25, 2024.

In May 2024, the EPA published the rulemaking for the designation of perfluorooctanesulfonic acid (PFOS) and perfluorooctanoic acid (PFOA) as hazardous substances under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) in the [Federal Register](#).²⁸ This rulemaking will increase transparency around releases of PFAS and ultimately facilitate cleanup of sites contaminated with PFOS and PFOA. It took effect on July 8, 2024.

To date, EPA has not regulated any other PFAS compounds.²⁹ The State of Washington has published [screening levels for several PFAS](#).³⁰

[EPA's Strategic Roadmap](#),³¹ released in October 2021, identifies actions they plan to complete over the next several years.

²⁶ <https://apps.ecology.wa.gov/publications/summarypages/2404040.html>

²⁷ <https://www.federalregister.gov/documents/2024/04/26/2024-07773/pfas-national-primary-drinking-water-regulation>. 40 CFR Parts 141 and 142.

²⁸ <https://www.federalregister.gov/documents/2024/05/08/2024-08547/designation-of-perfluorooctanoic-acid-pfoa-and-perfluorooctanesulfonic-acid-pfos-as-cercla-hazardous>. 40 CFR Part 302.

²⁹ 89 FR 49101. EPA Final Rule finalized National Primary Drinking Water Regulations under the Safe Drinking Water Act. Published April 26, 2024. Correction Published June 11, 2024.

<https://www.federalregister.gov/documents/2024/06/11/2024-12645/pfas-national-primary-drinking-water-regulation-correction#:~:text=The%20EPA%20issued%20a%20final,%2C%20HFP0%2DDA%20and%20PFBS>

³⁰ <https://ecology.wa.gov/waste-toxics/reducing-toxic-chemicals/addressing-priority-toxic-chemicals/pfas/cleanup-sites>

³¹ https://www.epa.gov/system/files/documents/2021-10/pfas-roadmap_final-508.pdf

Program Implementation

The following actions would be necessary to implement each program alternative:

- ▶ **For Alternative 1: Approved Hold in Place**, we may need to draft new regulations, policies, permits, or guidance on proper storage of AFFF for fire departments. We may need to acquire approval from the receiving state before foam disposal can proceed. We may also need to develop a treatment, storage, and disposal permit. This process may take months to years to complete.
- ▶ **For Alternative 2: Incineration**, we would authorize our existing waste contractor to transport AFFF to either the Clean Harbors facility in Aragonite, Utah, or the Kimball facility in Nebraska for incineration. This process may take months to complete.
- ▶ **For Alternative 3: Solidification and Landfilling and Alternative 4: Class I Deep Well Injection**, we would solicit bids from qualified dangerous waste contractors. This process would include public notice, a request for bids, transparent bid review, announcement of the chosen hazardous waste transporter/disposal company, and opportunity to challenge or review the selected bid. This process may take months to a year to complete.

We would require existing or newly selected hazardous waste transporter/disposal companies to adhere to all local, state, and federal rules for regulated waste collection, transport, and disposal. This includes, but is not limited to:

- ▶ Compliance with U.S. Department of Transportation transporter permits, regulations, and spill response plans.
- ▶ EPA Air and Water Quality discharge permits.
- ▶ Washington's dangerous waste rules.
- ▶ Other states' regulated waste rules.

Finally, prior to foam collection, we would enter into participation agreements with fire departments taking part in the program. We would gather updated foam inventories, including foam volume, the number of containers and their sizes, and the foam locations. Participating fire departments would also be required to complete a participation agreement and file all required dangerous waste paperwork with Ecology. Some fire stations may also be required to apply for an EPA Site ID number, if they do not already have one.

Significance Determination

Our analysis determined that none of the proposed alternatives would result in significant adverse impacts to communities or natural resources. Alternatives 2, 3, and 4 will not adversely affect natural resources, communities, and Tribes' usual and accustomed areas or treaty rights when appropriate mitigation measures are implemented.

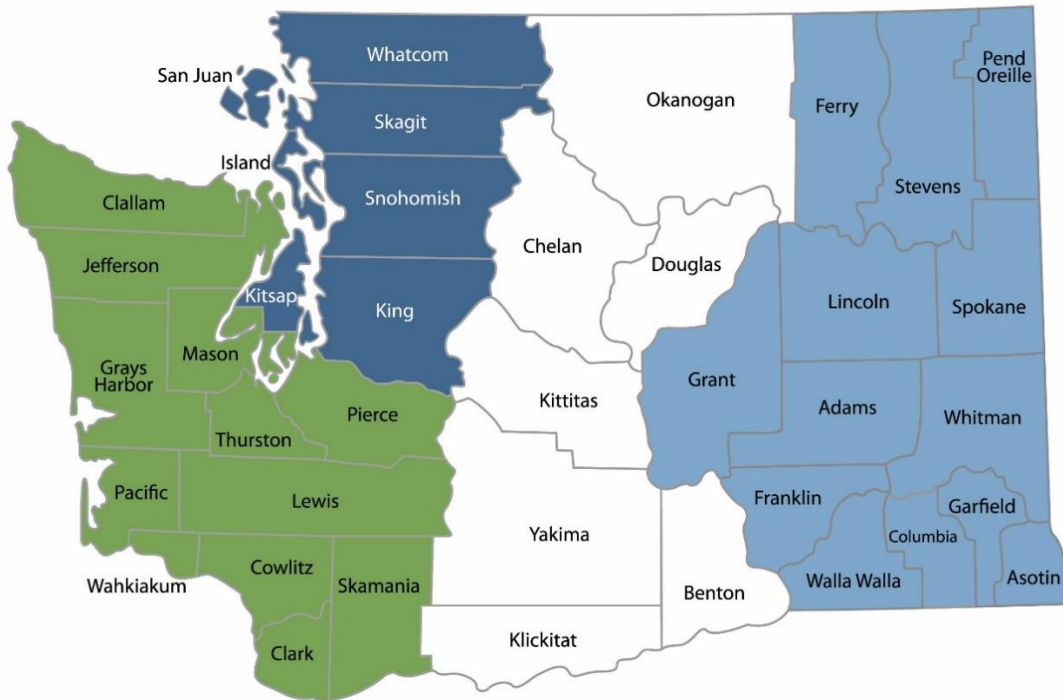
What Happens Next?

After the final EIS is released, we will identify the selected disposal alternative(s) in a separate notice.

Depending on the option selected, foam collection could take months to years to begin. Regardless of the option selected, we will work with fire departments to reconfirm their participation, including verification of the type, location, and amount of foam they are storing. We will also communicate with the public, overburdened communities, vulnerable populations, and Tribes on the timing and process for the foam's collection, transport, and disposal.

DEPARTMENT OF ECOLOGY'S REGIONAL OFFICES

Map of Counties Served



Southwest Region 360-407-6300	Northwest Region 206-594-0000	Central Region 509-575-2490	Eastern Region 509-329-3400
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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 47600 Olympia, WA 98504	360-407-6000