



DEPARTMENT OF
ECOLOGY
State of Washington

MTCA Cleanup Rulemaking Chapter 173-340 WAC Preliminary Draft 2

Tracked Changes to Preliminary Draft 1

September 8, 2022

Purpose of this document:

This document provides a **Preliminary Draft 2** of Ecology's proposed changes to selected Parts and Sections of Chapter 173-340 WAC, Model Toxics Control Act (MTCA) Cleanup Regulations. This document **tracks and footnotes changes** to:

- **Preliminary Draft 1**, if the section **was** previously reviewed by STAG; or
- **The current rule**, if the section **was not** previously reviewed by STAG.

This document is provided for review and consideration by the Stakeholder and Tribal Advisory Group (STAG). The document should be read in conjunction with a **separate briefing document** that provides an overview of rule changes and a list of questions that Ecology would like STAG members to consider when reviewing the rule draft to facilitate discussions and written comments.

For more information about the cleanup rulemaking:

Visit Ecology's website at <http://www.ecy.wa.gov/programs/tcp/regs/wac173360/1602inv.html>.

For more information about the Stakeholder and Tribal Advisory Group:

Visit Ecology's website at https://www.ezview.wa.gov/site/alias_1988/37514/overview.aspx.

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Accommodation requests:

To request ADA accommodation including materials in a format for the visually impaired, call Ecology's Toxics Cleanup Program at 360-407-7170. Persons with impaired hearing may call Washington Relay Service at 711. Persons with speech disability may call TTY at 877-833-6341.

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Introduction

What is included in this document?

This document includes Preliminary Draft 2 of proposed changes to the following Parts and Sections of Chapter 173-340 WAC, Model Toxics Control Act (MTCA) Cleanup Regulations:

Part or Section	Previously reviewed by STAG?
Part 1 – Overall cleanup process	NO
Part 2 – Definitions and usage	YES, except for some definitions
Part 3 – Site reports and cleanup	YES, except Sections 355, 357, 380, & 390
Part 6 – Public participation and tribal engagement	NO
Section 450 – Releases from regulated UST systems	YES
Section 510 – Administrative options for remedial actions	NO
Section 815 – Cultural resources protection (new)	NO
Section 830 – Sampling and analysis procedures	NO
Conforming changes in other sections	NO
Corrections in Part 7	NO

What do the tracked changes show?

This document tracks changes to:

- Preliminary Draft 1, if the section **was** previously reviewed by STAG;
OR
- The current rule, if the section **was not** previously reviewed by STAG.

The table above, and each section in the document, identifies whether the section was previously reviewed by STAG. The document tracks changes using ~~strikeouts~~ and underlines.

What do the footnotes identify?

This footnotes identify notable changes to, or restructuring of:

- Preliminary Draft 1, if the section **was** previously reviewed by STAG;
OR
- The current rule, if the section **was not** previously reviewed by STAG.

How can I navigate the document?

You can navigate the document using the Table of Contents in the document or using the Navigation Pane in Microsoft Word. To use the Navigation Pane, select the “View” menu and then click on “Navigation Pane” under “Show.” Under Navigation, click on “Headings.”

How can I view the tracked changes?

If you’re unable to see the tracked changes, select the “Review” menu and then select “All Markup” in the first box to the right of the “Track Changes” button. To quickly toggle between tracked and untracked versions, just click on the bar on the side of the text.

Part 1 – Overall Cleanup Process

WAC 173-340-100 Purpose.

Tracked changes to current rule

This chapter is promulgated under chapter 70A.305 RCW, the Model Toxics Control Act. It establishes administrative processes and standards to identify, investigate, and clean up ~~facilities~~sites where hazardous substances have come to be located. It defines the role of ~~the department~~Ecology and encourages public and tribal involvement in decision making at these ~~facilities~~sites.

The goal of this chapter is to implement chapter ~~70.105D~~70A.305 RCW, the Model Toxics Control Act. This chapter provides a workable process to accomplish effective and expeditious cleanups in a manner that protects human health and the environment, including vulnerable populations and overburdened communities.¹ This chapter is primarily intended to address releases of hazardous substances caused by past activities although its provisions may be applied to potential and ongoing releases of hazardous substances from current activities.

Note: All materials incorporated by reference in this chapter are available for inspection at the Department of Ecology's Toxics Cleanup Program, 300 Desmond Drive, Lacey, Washington, 98503.

WAC 173-340-110 Applicability.

Tracked changes to current rule

- (1) This chapter ~~shall apply~~applies to all ~~facilities~~sites where there has been a release or threatened release of a hazardous substance that may pose a threat to human health or the environment. Under this chapter, ~~the department~~Ecology may require or take those actions necessary to investigate and ~~remedy~~clean up these releases.
- (2) ~~Nothing herein shall be construed to diminish the department's~~Ecology retains all its authority to address a release or threatened release under other applicable laws or regulations. The cleanup process and procedures under this chapter and under other laws may be combined. ~~The department~~Ecology may initiate a remedial action under this chapter and may upon further analysis determine that another law is more appropriate, or vice versa.
- (3) If a hazardous substance remains at a ~~facility~~site after actions have been completed under other applicable laws or regulations, ~~the department~~Ecology may apply this chapter to protect human health or the environment.

¹ Emphasized that one of the goals of the chapter is to protect the health and environment of vulnerable populations and overburdened communities.

WAC 173-340-120 Overview of cleanup process.²

Tracked changes to current rule

~~(1) — Purpose.~~ This section provides an overview of the cleanup process that typically ~~will occur~~ at a site following the discovery of where a release or threatened release of a hazardous substance to the environment has been discovered with an emphasis on sites being cleaned up under order or consent decree. See WAC 173-340-510 for an overview of the administrative options for investigating and cleaning up a site.³ If there are any inconsistencies between this section and any specifically referenced sections, the referenced section ~~shall govern~~.⁴

~~(2) — Site discovery.~~ Site discovery includes:

~~(a)(1)~~ **Release reporting.** Within ninety days of discovering a hazardous substance release or threatened release that may pose a threat to human health or the environment, An owner or operator who knows of or discovers a release of a hazardous substance due to past activities must report the release to the department Ecology as described in WAC 173-340-300. Other persons are encouraged to report such releases. Most current Some releases of hazardous substances are exempt from the release reporting requirements of this chapter, including those ~~must be previously~~ reported to ~~the department Ecology~~ under the state's hazardous waste, underground storage tank, or water quality laws. The term "hazardous substance" includes a broad range of substances as defined ~~by chapter 70.105 DRCW~~ in WAC 173-340-200.

~~(b)(2)~~ **Initial investigation.** Within ninety days of learning of a hazardous substance release, ~~the department Ecology will conduct~~ an initial investigation ~~of the site~~ under WAC 173-340-310 to confirm whether a release occurred that poses a threat and to determine whether further remedial action is necessary to confirm or address that threat. Ecology may extend an initial investigation when independent remedial actions are completed within ninety days of release discovery. For sites that may need further remedial action, the department will send an early notice letter to the owner, operator, and other potentially liable persons known to the department, informing them of the department's decision. Ecology notifies owners and operators in writing of its determination. For sites where remedial action is necessary, Ecology also notifies the public in the Contaminated Site Register and provides information about the site on Ecology's website under WAC 173-340-600.

~~(3) — Site priorities.~~ Sites are prioritized for further remedial action ~~by the following process:~~

~~(a)(3)~~ **Site hazard assessment and ranking.** ~~Based on the results of the initial investigation, a site hazard assessment will be performed if necessary, as described in WAC 173-340-320. The purpose of the site hazard assessment is to gather information to confirm whether a release has occurred and to enable the department to evaluate the relative potential hazard posed by the release. If the department decides that no further action is required, it will notify the public of~~

² Updated parts of the overview to reflect changes in the proposed rule, enhanced parts to be more descriptive, and clarified as appropriate. See referenced sections for notes regarding any changes.

³ Moved and combined overview of administrative options for remedial action in Section 510.

⁴ As stated in this section, note that any inconsistencies between the overview and the referenced sections are resolved in favor of the referenced sections.

~~that decision through the Site Register.~~ Based on the results of the initial investigation, Ecology assesses and ranks the threats to human health and the environment posed by the site under WAC 173-340-320. Ecology may update the site's hazard assessment and rankings during the cleanup process when new information becomes available or conditions change. Ecology uses the results to support decisions to add or remove sites from the contaminated sites list, prioritize remedial action and funding among and within sites, track cleanup progress, and communicate threats to the public.

~~(b)(4) Hazardous sites list~~ **Listing.** The department will maintain a list of sites known as the "hazardous sites list" where further remedial action is required. The department will add sites to this list after the completion of a site hazard assessment. Sites placed on the list will be ranked using the department's hazard ranking method. The department will remove a site from the hazardous sites list if the site meets the requirements for removal described in WAC 173-340-330. Ecology lists a site based on the results of the initial investigation and the site hazard assessment and ranking.

(a) Contaminated sites list. If further remedial action is necessary, Ecology adds the site to the contaminated sites list under WAC 173-340-330. The list also identifies the site's remedial action status. Ecology updates the status during the cleanup process to reflect current conditions. The list is publicly available on Ecology's website.

(b) No further action sites list. If no further remedial action is necessary, Ecology adds the site to the no further action sites list under WAC 173-340-335. The list identifies whether institutional controls or periodic reviews remain necessary at the site. The list is publicly available on Ecology's website.

~~(c) Biennial program report.~~ Every even-numbered year, the department will prepare a biennial program report for the legislature. The hazard ranking, along with other factors, will be used in this report to identify the projects and expenditures recommended for appropriation. See WAC 173-340-340.

~~(4) Detailed site investigations and cleanup decisions.~~ The following steps will be taken to ensure that the proper method of cleanup is chosen for the site:

(5) Interim actions. Under certain conditions it may be necessary or appropriate to conduct an early, interim action at a site before conducting a cleanup action.

(a) WAC 173-340-430 describes when interim actions are typically appropriate at a site and the requirements for such actions.

(b) WAC 173-340-450 describes specific interim actions that UST system owners and operators must perform immediately or shortly after confirming a release from a regulated UST system to reduce the threats posed by the release, prevent any further release, and characterize the nature and extent of the release. As specified in chapter 173-360A WAC, such releases must be cleaned up in accordance with this chapter.

~~(a)(6) Remedial investigation of site conditions.~~ A remedial investigation will be performed at ranked sites under WAC 173-340-350. The purpose of the remedial investigation is to collect data and

~~information necessary to define the extent of contamination and to characterize the site.~~ After a detailed work plan is prepared, a remedial investigation is conducted at the site under WAC 173-340-350 to identify the sources of contamination; to characterize the nature, extent, and magnitude of contamination; and to assess the current or potential threats posed by the contamination to human health and the environment. The results of the remedial investigation are used to establish cleanup standards and to develop and evaluate cleanup action alternatives in a feasibility study.

~~(b)(7)~~ **Feasibility study of cleanup action alternatives.** ~~A feasibility study will be conducted at ranked sites under WAC 173-340-350. The purpose of the feasibility study is to develop and evaluate alternative cleanup actions. The department will evaluate the remedial investigation/feasibility study, establish cleanup levels and the point or points at which they must be complied with in accordance with the procedures provided for in WAC 173-340-700 through 173-340-760 and select a cleanup action that protects human health and the environment and is based on the remedy selection criteria and requirements in WAC 173-340-350 through 173-340-390. WAC 173-340-440 sets forth the circumstances in which institutional controls will be required to ensure continued protection of human health and the environment.~~ Based on the results of the remedial investigation, cleanup action alternatives for addressing the threats posed by the site are developed and evaluated in a feasibility study under WAC 173-340-351. The alternatives are evaluated against the requirements and expectations for cleanup actions in WAC 173-340-360 and 173-340-370. The results of the feasibility study are used to select the cleanup action for a site. A feasibility study is not required to select an applicable model remedy developed by Ecology under WAC 173-340-390.

~~(c)(8)~~ **Cleanup action plan.** ~~The cleanup action will be set forth in a draft cleanup action plan that addresses cleanup requirements for hazardous substances at the site. After public comment on the draft plan, a final cleanup action plan will be issued by the department.~~ Based on the results of the remedial investigation/feasibility study, a cleanup action is selected and a cleanup action plan is prepared under WAC 173-340-380. The cleanup action plan documents the selected cleanup action and specifies the cleanup standards and other requirements the cleanup action must meet. Cleanup standards are established under Part 7 of this chapter and include the concentrations the cleanup action must meet (cleanup levels), the location where those concentrations must be met (points of compliance), and other regulatory requirements that apply to the cleanup action or site.

~~(5)~~ **Site cleanup.** ~~Once the appropriate cleanup action has been selected for the site, the actual cleanup will be performed.~~

~~(a)~~ **Cleanup actions.** ~~WAC 173-340-400 describes the design and construction requirements for implementing the cleanup action plan.~~

~~(b)~~ **Compliance monitoring and review.** ~~The cleanup action must include compliance monitoring under WAC 173-340-410 and in some cases periodic review under WAC 173-340-420 to ensure the long-term effectiveness of the cleanup action.~~

~~(6)~~ **Interim actions.** ~~Under certain conditions it may be appropriate to take early actions at a site before completing the process described in subsections (2) through (5) of this section. WAC 173-~~

~~340-430 describes when it is appropriate to take these early or interim actions and the requirements for such actions.~~

- (9) **Cleanup.** After a cleanup action is selected, the cleanup is conducted under WAC 173-340-400 and 173-340-410. Cleanup includes design, construction, operation and maintenance, and monitoring of the cleanup action.
- (a) **Design.** Before starting construction, plans are developed to detail the cleanup action. This include engineering designs, construction plans and specifications, operation and maintenance plans, and compliance monitoring plans. Before or during this design phase, any permits or approvals needed to construct the cleanup action are identified and resolved.
- (b) **Construction.** Construction of the cleanup action is conducted in accordance with the plans and specifications prepared during the design phase. Upon completion of construction, as built reports are prepared to document all aspects of construction and compliance with plans and specifications. During and upon completion of construction, Ecology may inspect the site and provide construction oversight.
- (c) **Operation and maintenance.** After construction is complete, some cleanup actions need to be operated and maintained for a period of time to achieve cleanup standards. For example, a treatment system may be constructed and used to clean up contaminated groundwater. Operation and maintenance of such cleanup actions is conducted in accordance with a plan developed during the design phase.
- (d) **Monitoring.** During the construction and the operation and maintenance of the cleanup action, the following types of compliance monitoring are conducted. Compliance monitoring is conducted in accordance with a plan developed during the design phase.
- (i) Protection monitoring is conducted to confirm that human health and the environment are adequately protected.
- (ii) Performance monitoring is conducted to confirm that the cleanup action is achieving or has attained cleanup standards and any other applicable performance standards, such as remediation levels or permit requirements.
- (10) **Cleanup completion.** Ecology determines whether cleanup of the site is complete based on the criteria in WAC 173-340-330(5)(b). Typically, a cleanup is complete if no further remedial action is necessary to achieve cleanup standards at the site. For non-permanent cleanup actions, such as those involving containment of contamination, post-cleanup controls and monitoring may be necessary as part of the cleanup action to maintain and periodically review compliance with cleanup standards.
- (11) **Removal from contaminated sites list.** After determining the cleanup of the site is complete, Ecology removes the site from the contaminated sites list under WAC 173-340-330 and adds the site to the no further action sites list under WAC 173-340-335. The no further action sites list identifies whether institutional controls or periodic reviews remain necessary at the site.

- (12) Post-cleanup controls and monitoring.** For non-permanent cleanup actions, after the cleanup is completed and the site is delisted, one or more of the following post-cleanup remedial actions may be needed to control or monitor contamination remaining at the site.
- (a) Engineered controls.** Engineered controls are containment or treatment systems that prevent or limit movement of, or exposure to, contamination. For example, materials may be placed over contaminated soils to limit contact with contamination. For a cleanup action to remain protective, engineered controls must be operated and maintained in accordance with the plan required under WAC 173-340-400.
 - (b) Institutional controls.** Institutional controls prohibit or limit activities or uses of real property that may interfere with the integrity of engineered controls or result in exposure to contamination remaining at the site. For example, a property may be restricted to industrial land use at sites where cleanup standards are based on such use. Institutional controls may also obligate a person to operate, maintain, or monitor engineered controls to ensure the integrity of the cleanup action. Typically, institutional controls are implemented by recording a restrictive covenant on the property. For a cleanup action to remain protective, institutional controls must be maintained and enforced. See WAC 173-340-440.
 - (c) Confirmation monitoring.** Confirmation monitoring is a type of compliance monitoring used to confirm the long-term effectiveness of a cleanup action after the cleanup is completed. See WAC 173-340-410. For example, confirmation monitoring may be used to confirm that engineered controls are operating properly and effectively limiting the movement of contamination remaining at the site. For a cleanup action to remain protective, confirmation monitoring must be conducted in accordance with the plan required under WAC 173-340-400. Ecology relies on the monitoring data during periodic reviews of post-cleanup site conditions.
 - (d) Financial assurances.** Financial assurances are assurances made to Ecology by a person that sufficient financial resources are available to provide for the long-term operation, maintenance, and monitoring of a cleanup action relying on engineered or institutional controls, and for any needed corrective measures. Ecology may require financial assurances under WAC 173-340-440(11).
 - (e) Periodic reviews.** Ecology conducts periodic reviews of post-cleanup site conditions at least once every five years to determine whether they remain protective of human health and the environment. If Ecology determines that conditions are not protective and that substantial changes to the cleanup action are necessary, Ecology may relist the site on the contaminated sites list and revise the cleanup action plan. See WAC 173-340-420.
- ~~**(7) Leaking underground storage tanks.** Underground storage tank (UST) owners and underground storage tank operators regulated under chapter 90.76 RCW are required to perform specific actions in addition to what other site owners and operators would do under this chapter. WAC 173-340-450 describes the requirements for leaking underground storage tanks.~~

~~(8)~~ **Procedures for conducting remedial actions.**

- ~~(a)~~ **Remedial action agreements.** The department has authority to take remedial actions or to order persons to conduct remedial actions under ~~WAC 173-340-510 and 173-340-540.~~ However, the department encourages agreements for investigations and cleanups in appropriate cases. These agreements can be agreed orders or consent decrees reached under the procedures of WAC 173-340-520 and 173-340-530.
- ~~(b)~~ **Independent remedial actions.** Persons may conduct investigations and cleanups without department approval under this chapter. The department will use the appropriate requirements in this chapter when evaluating the adequacy of any independent remedial action. Except as limited by WAC 173-340-515(2), nothing in this chapter prohibits persons from conducting such actions before the department is ready to act at the site; however, all interim and cleanup actions must be reported to the department under WAC 173-340-515. Furthermore, independent remedial actions are conducted at the potentially liable person's own risk and the department may take or require additional remedial actions at these sites at any time. ~~(See WAC 173-340-515 and 173-340-545.)~~

~~(9)~~**(13) Public notice and participation and tribal engagement.**

- ~~(a)~~ **Site-specific information and alerts.** For all sites on the contaminated sites list and the no further action sites list, Ecology will:
- ~~(i)~~ Make key site information publicly available on Ecology's website under WAC 173-340-600(5), including the site's listing, remedial action status, hazard rankings, and remedial action plans and reports;
- ~~(ii)~~ If requested, notify a person electronically under WAC 173-340-600(6) when the site information specified on Ecology's website is added or changed; and
- ~~(iii)~~ Provide notice of proposed actions available for public comment in the *Contaminated Site Register*.
- ~~(b)~~ **Ecology-conducted and Ecology-supervised remedial actions.** ~~At sites where the department is conducting the cleanup or overseeing the cleanup under an order or decree~~For Ecology-conducted and Ecology-supervised remedial actions, Ecology provides the public ~~will receive with~~ notice and an opportunity to comment and invites tribal engagement on most ~~of the~~ steps in the cleanup process. For such sites, At many sites, a ~~Ecology prepares or requires site-specific public participation and tribal engagement plans will be prepared to provide opportunities for more extensive public involvement in the cleanup process.~~ These and other requirements are described in WAC 173-340-600(8) through (19) and 173-340-620.
- ~~(c)~~ **Independent remedial actions.** For independent remedial actions, Ecology provides the public with notice of any reports of such actions received by Ecology, the results of any Ecology review of such actions, the results of any periodic review of the site, and any

institutional controls at the site. These and other requirements are described in WAC 173-340-600(20).

WAC 173-340-130 Administrative principles.

Tracked changes to current rule

- ~~(1)~~ **Introduction.** ~~The department shall~~ Ecology will conduct or require remedial actions, or provide technical assistance for independent remedial actions, consistent with the provisions of this section.
- ~~(2)~~**(1) Sharing information-sharing.** ~~Ecology's~~ It is the policy of the department is to make information about releases or threatened releases available to owners, operators, or other persons with potential liability for a site in order to encourage them to conduct prompt remedial action. ~~It~~ Ecology's policy is also ~~the policy of the department~~ to make the same information available to interested members of the general public so they can follow the progress of site cleanup in the state.
- ~~(3)~~**(2) Information-exchange** Providing technical assistance. All persons are encouraged to contact ~~the department~~ Ecology and seek assistance on the general administrative and technical requirements of ~~this chapter~~ the state cleanup law. ~~Through its technical consultation program described in WAC 173-340-515, the department may also provide informal advice and assistance to persons conducting or proposing remedial actions at a specific site at any time. Unless the department is providing formal guidance for the implementation of an order or decree, any comments by the department or its agents are advisory and not commitments or approvals binding on the department. A person may not represent this advice as an approval of a remedial action. If the person requesting the advice is seeking binding commitments or approvals, then an order or consent decree shall be used.~~ Under Ecology's voluntary cleanup program, persons planning or conducting independent remedial action may also request technical assistance on how to investigate and clean up a site and written opinions on whether a planned or completed remedial action meets the substantive requirements of the state cleanup law. Such technical assistance is advisory only and is not binding on Ecology. Such technical assistance does not constitute, and may not be represented by a person as, an approval of a remedial action. See RCW 70A.305.170(1) and WAC 173-340-515(5). Ecology will only provide a binding commitment or approval under an order or decree.⁵
- ~~(5)~~**(3) Scope of information** Collecting adequate information. ~~It is the department's intention~~ Ecology intends that adequate information be gathered at a site to enable decisions on appropriate actions. ~~It is also the department's intention~~ Ecology also intends that decisions be made and cleanups proceed expeditiously once adequate information is obtained. Studies can be performed and submittals made at varying levels of detail appropriate to the conditions at the site. Also, steps in the cleanup process may be combined to facilitate quicker cleanups, where appropriate. Flexibility in the scope of investigations and in combining steps may be particularly appropriate for routine cleanup actions. Once adequate information has been obtained, Ecology will make decisions ~~shall be made~~ within the framework provided ~~in this chapter~~ under the state cleanup law and in site-specific orders or decrees.

⁵ Clarified Ecology's policies related to providing technical assistance.

- ~~(6)~~**(4)** ~~Preparation of~~**Preparing documents.** Except for the initial investigation and the site hazard assessment and ranking,⁶ any of the studies, reports, or plans used in the cleanup process can be prepared by either ~~the department~~Ecology or the potentially liable person. ~~The department~~Ecology retains all authority to review and verify the documents submitted and to make decisions based on the documents and other relevant information.
- ~~(4)~~**(5)** ~~Scope of~~**Encouraging and facilitating public participation.**⁷ For Ecology-conducted and Ecology-supervised remedial actions, ~~The department~~Ecology seeks to encourage public participation and facilitate equitable participation in all steps of the cleanup process under WAC 173-340-600. ~~The department shall~~Ecology will encourage a level of participation appropriate to the ~~conditions at a facility~~threats posed by a site and the level of the public's interest in the site. When assessing public participation needs at a site, Ecology will consider the interests of vulnerable populations, overburdened communities, and non-federally recognized tribes.
- (6)** **Engaging and collaborating with Indian tribes.**⁸
- (a) For Ecology-conducted and Ecology-supervised remedial actions, Ecology will seek to engage affected Indian tribes under WAC 173-340-620 by providing timely information, effective communication, continuous opportunities for collaboration and, when necessary, government-to-government consultation, as appropriate for each site.
- (b) To facilitate collaboration, it is important that Indian tribes provide specific comments, including the identification of other applicable state and federal laws and any additional information or mitigating measures that are necessary or desirable to satisfy their concerns.
- (7)** ~~Interagency coordination~~**Coordinating with agencies.**⁹
- (a) ~~If the department is conducting remedial actions or requiring remedial actions under an order or decree, the department shall~~For Ecology-conducted and Ecology-supervised remedial actions, Ecology will ensure appropriate local, state, and federal agencies ~~and tribal governments~~ are kept informed and, as appropriate, involved in the development and implementation of remedial actions. ~~The department~~Ecology may require a potentially liable person to undertake this responsibility. If the potentially liable person demonstrates that they are unable to obtain adequate involvement ~~to allow the remedial action to proceed~~ by a particular government agency ~~or tribe~~to allow the remedial action to proceed, ~~the department shall~~Ecology will request the involvement of the agency ~~or tribe~~.

⁶ Consistent with changes to Section 320, emphasized that a site hazard assessment and ranking cannot be performed by a potentially liable person.

⁷ Clarified that public participation (opportunity to comment) is limited to Ecology-conducted and Ecology-supervised remedial actions. Added policy that Ecology seeks to provide equitable participation. Also emphasized that Ecology will consider the interests of vulnerable populations, overburdened communities, and non-federally recognized tribes when assessing public participation needs at a site.

⁸ Consistent with changes in Part 6, separated out discussion of tribal engagement and collaboration in new subsection (6) from interagency coordination in subsection (7).

⁹ See comment on subsection (6) above.

- (b) The nature and degree of coordination and consultation ~~shall~~must be commensurate with the other agencies' ~~and tribes'~~ interests and needs at the site. Interested agencies ~~and tribes shall~~must also be included in the ~~mailing~~lists for public notices under WAC 173-340-600. To facilitate coordination, it is important that agencies ~~and tribes~~ provide specific comments, including the identification of other applicable state and federal laws ~~and any~~ additional information ~~needed~~ or mitigating measures that are necessary or desirable to satisfy their concerns.
 - (c) In order to provide for expeditious cleanup actions, all federal, state, and local agencies, ~~and tribes~~ are encouraged to coordinate with Ecology when providing notices, holding meetings and hearings, and preparing documents. Whenever reasonable, ~~the department shall~~Ecology will coordinate and combine its activities with other agencies ~~and tribes~~ to minimize the duplication of notices, hearings and preparation of documents, unless otherwise prohibited.
- (8) Integrating State Environmental Policy Act. See chapter 197-11 WAC for the State Environmental Policy Act requirements pertaining to the implementation of ~~the Model Toxics Control Act~~the state cleanup law.
- (9) Ecology decisions.¹⁰ Ecology retains all authority to determine compliance with state cleanup law requirements, including:
- (a) Whether a remedial action is necessary under state cleanup law;
 - (b) Whether a remedial action meets the requirements in state cleanup law; and
 - (c) Whether a remedial action plan or report meets the requirements in state cleanup law.
- ~~(9)(10) Appeals~~Appealing Ecology decisions. Unless otherwise indicated, all ~~department~~Ecology decisions made under this chapter are remedial decisions and may be appealed only as provided for in RCW ~~70.105D.060~~70A.305.070.

¹⁰ Added provision describing Ecology's authority under MTCA to determine compliance with remedial action requirements, including whether remedial action is necessary and whether such action is sufficient. This single provision replaces several provisions throughout the chapter that we proposed adding in the previous draft to emphasize Ecology's authority to make regulatory determinations under MTCA.

~~WAC 173-340-140~~ ~~Deadlines.~~¹¹

Tracked changes to current rule

- ~~(1) **Purpose.** It is the department's intent to move sites through the cleanup process as expeditiously as possible. However, the department is limited by the amount of personnel and funds it can expend in any given fiscal year. This section is intended to establish reasonable deadlines for remedying releases within these constraints. The department's process for ranking and setting site priorities is described in WAC 173-340-330 and 173-340-340, respectively.~~
- ~~(2) **Initial investigation.** Within ninety days of learning of a release or threatened release of a hazardous substance, the department shall complete an initial investigation under WAC 173-340-310.~~
- ~~(3) **Further investigation.** At least twice a year, the department shall determine which sites with completed initial investigations are a high priority for further investigation. At that time, the department shall schedule high priority sites for further investigations to begin within six months. This determination will be based on the best professional judgment of departmental staff. Sites may be scheduled for further investigation at any time if the department determines that the site warrants expedited action.~~
- ~~(4) **Site assessment and ranking.** For high priority sites, the department shall complete the site hazard assessment and hazard ranking within one hundred eighty days of the scheduled start date. These sites shall be identified in the department's *Site Register*. Sites not designated as a high priority shall be scheduled for future investigations and listed in the biennial report to the legislature (WAC 173-340-340). The department shall conduct at least thirty-five site hazard assessments each fiscal year until the number of sites needing site hazard assessments are reduced below this number.~~
- ~~(5) **Site investigation.** Within thirty days of ranking, the department shall designate which sites are a high priority for a remedial investigation/feasibility study and which sites are a lower priority where further action can be delayed. The department shall review these lower priority sites and provide an opportunity for public comment as part of the biennial report to the legislature (WAC 173-340-340).~~
- ~~(6) **Remedial investigation/feasibility study.** For all sites designated as a high priority, the remedial investigation/feasibility study shall be completed under WAC 173-340-350 within eighteen months of signing the order or decree. The department may extend the deadline up to twelve months if the circumstances at the site merit a longer time frame. The department shall provide the public an opportunity to comment on any extension. The department shall initiate a remedial investigation/feasibility study on at least ten sites per fiscal year.~~

¹¹ Eliminated Section 140, which specified schedules for “high priority” sites designated by Ecology. For such sites, Ecology was required to publish schedules, and any extensions to those schedules, in the *Site Register*. The concept of “high priority” sites is defunct. Ecology hasn’t utilized this concept for over 20 years. We are also eliminating references to the concept throughout the rest of the rule.

~~(7) — **Cleanup action.** The department shall select the cleanup action under WAC 173-340-360 and file a consent decree or issue an order for cleanup action for all designated high priority sites within six months of the completion of the remedial investigation/feasibility study. The department may extend the deadline for up to four months for consent decree and order discussions. The department shall provide the public with an opportunity to comment on any deadline extension.~~

~~(8) — **Site schedules.** The department shall publish site schedules for designated high priority sites in the *Site Register* according to WAC 173-340-600(6)~~

Part 2 – Definitions and Usage

WAC 173-340-200 Definitions.

Tracked changes to current rule. However, STAG previously reviewed definitions of many terms.

For the purpose of this chapter, the following definitions apply unless the context clearly requires otherwise:

“Acute toxicity” means the ability of a hazardous substance to cause injury or death to an organism as a result of a short-term exposure to a hazardous substance.

“Agreed order” means an order issued by ~~the department~~ Ecology under WAC 173-340-530 with which the potentially liable person receiving the order agrees to comply. An agreed order may be used to require or approve any cleanup or other remedial actions, but it is not a settlement under RCW ~~70.105D.040~~ 70A.305.040(4) and ~~shall~~ does not contain a covenant not to sue, or provide protection from claims for contribution, or provide eligibility for public funding of remedial actions under RCW ~~70.105D.070(2)(d)(xi)~~ 70A.305.190(4)(a)(v) and (vi).¹²

“Aliphatic hydrocarbons” or “aliphatics” means organic compounds that are characterized by a straight, branched, or cyclic (nonbenzene ring) arrangement of carbon atoms and that do not contain halogens (such as chlorine). See also “aromatic hydrocarbons.”

“All practicable methods of treatment” means all technologies ~~and/or~~ methods currently available and demonstrated to work under similar site circumstances or through pilot studies, and applicable to the site at reasonable cost. These include “all known available and reasonable methods of treatment” (AKART) for discharges or potential discharges to waters of the state, and “best available control technologies” (BACT) for releases of hazardous substances into the air resulting from cleanup actions.

“Applicable state and federal laws” means all legally applicable requirements specified in WAC 173-340-710(3) and those requirements that ~~the department~~ Ecology determines, based on the criteria in WAC 173-340-710(~~3~~)(4), are relevant and appropriate requirements.

“Area background” means the concentrations of a hazardous substances ~~that are~~ consistently present in the environment in the vicinity of a site ~~which are~~ as the result of human activities unrelated to releases from that site. See also “natural background.”

“Aromatic hydrocarbons” or “aromatics” means organic compounds that are characterized by one or more benzene rings, with or without aliphatic hydrocarbon substitutions of hydrogen atoms on the rings, and that do not contain halogens (such as chlorine). See also “aliphatic hydrocarbons.”

“Averaging time” means the time over which the exposure is averaged. For noncarcinogens, the averaging time typically equals the exposure duration. For carcinogens, the averaging time equals the life expectancy of a person.

¹² Updated definition of “agreed order” based on legislative changes to definition in MTCA.

“Bioconcentration factor” means the ratio of the concentration of a hazardous substance in the tissue of an aquatic organism divided by the hazardous substance concentration in the ambient water in which the organism resides.

“Carcinogen” means any substance or agent that produces or tends to produce cancer in humans. For implementation of this chapter, the term carcinogen applies to substances on the United States Environmental Protection Agency lists of A (known human) and B (probable human) carcinogens, and any substance that causes a significant increased incidence of benign or malignant tumors in a single, well conducted animal bioassay, consistent with the weight of evidence approach specified in the United States Environmental Protection Agency's Guidelines for Carcinogen Risk Assessment as set forth in 51 FR 33992 et seq.

“Carcinogenic potency factor” or “CPF” means the upper 95th percentile confidence limit of the slope of the dose-response curve and is expressed in units of (mg/kg-day)⁻¹. When derived from human epidemiological data, the carcinogenic potency factor may be a maximum likelihood estimate.

“Chronic reference dose” means an estimate (with an uncertainty spanning an order of magnitude or more) of a daily exposure level for the human population, including sensitive subpopulations, that is likely to be without an appreciable risk of adverse effects during a lifetime.

“Chronic toxicity” means the ability of a hazardous substance to cause injury or death to an organism resulting from repeated or constant exposure to the hazardous substance over an extended period of time.

“Cleanup” means the implementation of a cleanup action or interim action.

“Cleanup action” means any remedial action, except interim actions, taken at a site to eliminate, render less toxic, stabilize, contain, immobilize, isolate, treat, destroy, or remove a hazardous substance that complies with WAC 173-340-350 through 173-340-390.

“Cleanup action alternative” means one or more treatment technology, containment action, removal action, engineered control, institutional control or other type of remedial action (**“cleanup action components”**) that, individually or, in combination, achieves a cleanup action at a site.

“Cleanup action plan” means the document prepared ~~by the department~~ under WAC 173-340-380 that ~~selects documents~~ the selected cleanup action and specifies the cleanup standards and other requirements ~~for~~ the cleanup action must meet.

“Cleanup level” means the concentration of a hazardous substance in soil, water, air, or sediment that is determined to be protective of human health and the environment under specified exposure conditions.

“Cleanup standards” means the standards adopted under RCW ~~70.105D.030(2)(d)~~ 70A.305.030(2)(e). Establishing cleanup standards requires specification of the following:

- (a) Hazardous substance concentrations that protect human health and the environment (“cleanup levels”);

- (b) The location on the site where those cleanup levels must be attained ("points of compliance"); and
- (c) Additional regulatory requirements that apply to a cleanup action because of the type of action and/or the location of the site. These requirements are specified in applicable state and federal laws and are generally established in conjunction with the selection of a specific cleanup action.

“Cohen's method” means the maximum likelihood estimate of the mean and standard deviation accounting for data below the method detection limit or practical quantitation limit using the method described in the following publications:

- (a) Cohen, A.C., 1959. "Simplified estimators for the normal distribution when samples are singly censored or truncated." *Technometrics*. Volume 1, pages 217-237.
- (b) Cohen, A.C., 1961. "Tables for maximum likelihood estimates: Singly truncated and singly censored samples." *Technometrics*. Volume 3, pages 535-541.

“Compliance monitoring” means a remedial action that consists of the monitoring as described in WAC 173-340-410, including protection monitoring, performance monitoring, and confirmation monitoring.¹³

“Conceptual site model”¹⁴ means a conceptual understanding of a site that identifies known or suspected:

- (a) ~~potential or suspected sources of hazardous substances~~ hazardous substances sources and release mechanisms;
- (b) Hazardous substance types and concentrations ~~of hazardous substances;~~
- (c) Hazardous substance transport, including preferential pathways;
- (d) ~~potentially contaminated~~ environmental media, including the general extent and distribution of contamination within the media; and
- (e) ~~actual~~ Current and potential human and ecological receptors and exposure pathways and receptors (complete and incomplete); and
- (f) Physical and habitat features, including current and potential future land and water uses.

¹³ Clarified that “compliance monitoring” includes protection monitoring, performance monitoring, and confirmation monitoring. For ease of reference, also added definitions of these three specific types of compliance monitoring in Section 200. Those definitions also refer to Section 410.

¹⁴ Updated and clarified definition of conceptual site model based on comments regarding the remedial investigation in Section 350. Changed Section 350 to just refer to the definition of this term instead of repeating some or all of the description.

This model is typically ~~initially~~ developed during the scoping of ~~the~~a remedial investigation and further refined as additional information is collected ~~on~~about the site during the remedial investigation. ~~It~~The model is a tool used to assist in making decisions at a site.

“Conducting land use planning under chapter 36.70A RCW,” as used in the definition of "industrial properties," means having adopted a comprehensive plan and development regulations for the site under chapter 36.70A RCW (Growth Management Act).

“Confirmation monitoring”¹⁵ means a type of compliance monitoring described in WAC 173-340-410.

“Containment” means a container, vessel, barrier, or structure, whether natural or constructed, that confines a hazardous substance within a defined boundary and prevents or minimizes its release into the environment.

“Contaminant” means any hazardous substance that does not occur naturally or occurs at greater than natural background levels.

“Contaminated site”¹⁶ means a site for which Ecology or PLIA has determined further remedial action is necessary under the state cleanup law to:

- (a) Confirm whether there is a threat to human health or the environment posed by a release or threatened release; or
- (b) Address the threat posed by a release or threatened release, based on the criteria in WAC 173-340-330(5)(b).

A contaminated site is referred to as hazardous waste site in chapter 70A.305 RCW.

“Contaminated sites list”¹⁷ means a list of contaminated sites maintained by Ecology under WAC 173-340-330. For each listed site, the list also identifies the site’s current remedial action status. This list is referred to as the hazardous sites list in chapter 70A.305 RCW.

“Curie” means the measure of radioactivity defined as that quantity of radioactive material which decays at the rate of 3.70×10^{10} transformations per second. This decay rate is nearly equivalent to that exhibited by 1 gram of radium in equilibrium with its disintegration products.

“Day” means calendar day; however, any document due on the weekend or a holiday may be submitted on the first working day after the weekend or holiday.

¹⁵ Added definition of term “confirmation monitoring” for ease of reference. The definition refers to the description in Section 410. Also changed term from “confirmational” to “confirmation.”

¹⁶ Replaced term “hazardous waste site” with term “contaminated site.” Clarified that contaminated sites where further remedial action is necessary to confirm or address a threat. Updated definition to recognize that PLIA may also determine whether further remedial action is necessary (see RCW 70A.330.040(7) and (12)). Clarified that the delisting criteria in WAC 173-340-330(5)(b) are used to determine whether further remedial action is necessary. If a site doesn’t meet the criteria, the site is a “contaminated site” and placed on the “contaminated sites list.”

¹⁷ Replaced “hazardous sites list” with “contaminated sites list” and identified what information about a site is included on the list. Ecology already maintains such a list, which is currently referred to as the “confirmed and suspected contaminated sites list.” The list is publicly available on Ecology’s website at: <https://apps.ecology.wa.gov/tcpwebreporting/reports/cleanup/contaminated>.

“Decree” means a consent decree issued under WAC 173-340-520. “Consent decree” is synonymous with decree.

“Degradation by-products” or “decomposition by-products” means the secondary product of biological or chemical processes that break down chemicals into other chemicals. The decomposition by-products may be more or less toxic than the parent compound.

~~**“Department”**¹⁸ means the department of ecology.~~

“Developmental reference dose” means an estimate (with an uncertainty of an order of magnitude or more) of an exposure level for the human population, including sensitive subgroups, that is likely to be without an appreciable risk of developmental effects.

“Direct contact” means exposure to hazardous substances through ingestion and/or dermal contact.

“Director” means the director of the department of ecology or the director's designee.

“Disposal”¹⁹ means the discharging, discarding, or abandoning of hazardous substances or the treatment, decontamination, or recycling of such substances once they have been discarded or abandoned. This includes the discharge, discard, or abandonment of any hazardous substances into or on any land, air, or water.

“Drinking water fraction” means the fraction of drinking water that is obtained or has the potential to be obtained from the site.

“Ecology” or “department” means the department of ecology.²⁰

“Ecology-conducted remedial action”²¹ means a remedial action conducted by Ecology.

“Ecology-supervised remedial action”²² means a remedial action conducted by a potentially liable person or prospective purchaser and supervised by Ecology under an order or decree.

“Engineered controls” means a containment ~~and/or~~ treatment systems ~~that are~~is designed and constructed to prevent or limit the movement of, or the exposure to, a hazardous substances. An engineered control is a type of remedial action.²³ Examples of engineered controls include:

(a) ~~a~~ A layer of clean soil, asphalt or concrete paving, or other materials placed over contaminated soils to limit contact with contamination;

(b) ~~a~~ A groundwater flow barrier such as a bentonite slurry trench;

¹⁸ Replaced “department” with “Ecology” to refer to the department of ecology. This is intended to make it easier for readers to identify to which agency the rule is referring.

¹⁹ Added definition of “disposal.” The definition is based on the definition of the term in the dangerous waste regulations, except that we replaced the term “dangerous waste” with the term “hazardous substance” in the definition. See WAC 173-303-040.

²⁰ Replaced the term “department” with “Ecology” to refer to the department of ecology. This is intended to make it easier for readers to identify to which agency the rule is referring.

²¹ Added definition of “Ecology-conducted remedial action.”

²² Added definition of “Ecology-supervised remedial action.”

²³ Clarified that an “engineered control” is a type of “remedial action.”

(c) A groundwater gradient control system~~s~~ such as a French drains~~s~~ or a pump and treat systems~~s~~; and

(d) A vapor control system~~s~~.

“Environment” means any plant, animal, natural resource, surface water (including underlying sediments), groundwater, drinking water supply, land surface (including tidelands and shorelands) or subsurface strata, or ambient air within the state of Washington or under the jurisdiction of the state of Washington.

“Equivalent carbon number” or “EC” means a value assigned to a fraction of a petroleum mixture, empirically derived from the boiling point of the fraction normalized to the boiling point of n-alkanes or the retention time of n-alkanes in a boiling point gas chromatography column.

“Exposure” means subjection of an organism to the action, influence, or effect of a hazardous substance (chemical agent) or physical agent.

“Exposure duration” means the period of exposure to a hazardous substance.

“Exposure frequency” means the portion of the exposure duration that an individual is exposed to a hazardous substance, expressed as a fraction. For example, if a person is exposed ~~260~~250 days (five days per week for ~~52~~50 work weeks) over a year (365 days), the exposure frequency would be equal to: $(5 \times 50)/365 = 0.7$.²⁴

“Exposure parameters” means those parameters used to derive an estimate of the exposure to a hazardous substance.

“Exposure pathway” means the path a hazardous substance takes or could take from a source to an exposed organism. An exposure pathway describes the mechanism by which an individual or population is exposed or has the potential to be exposed to hazardous substances at or originating from a site. Each exposure pathway includes an actual or potential source or release from a source, an exposure point, and an exposure route. If the exposure point differs from the source of the hazardous substance, the exposure pathway also includes a transport/exposure medium.

“Facility” means (a) any building, structure, installation, equipment, pipe or pipeline (including any pipe into a sewer or publicly owned treatment works), well, pit, pond, lagoon, impoundment, ditch, landfill, storage container, motor vehicle, rolling stock, vessel, or aircraft~~;~~ or (b) any site or area where a hazardous substance, other than a consumer product in consumer use, has been deposited, stored, disposed of, or placed, or otherwise come to be located.

“Feasibility study”²⁵ means a remedial action conducted under WAC 173-340-351 that consists of developing and evaluating cleanup action alternatives to enable selection of a cleanup action.

²⁴ In definition of “exposure frequency,” corrected numbers in example calculation.

²⁵ Added definition of term “feasibility study” consistent with purpose in Section 351.

“Federal cleanup law” means the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended ~~by the Superfund Amendments and Reauthorization Act of 1986,~~ (42 U.S.C. 9601 et seq.).²⁶

“Financial assurance”²⁷ means a remedial action that consists of an assurance provided to Ecology under WAC 173-340-440(11) that sufficient financial resources are available to provide for the long-term effectiveness of engineered or institutional controls.

“Fish diet fraction” means the percentage of the total fish and/or shellfish in an individual's diet that is obtained or has the potential to be obtained from the site.

“Food crop” means any domestic plant that is produced for the purpose of, or may be used in whole or in part for, consumption by people or livestock. This ~~shall include~~ nursery, root, or seedstock to be used for the production of food crops.

“Free product” means a nonaqueous phase liquid that is present in the soil, bedrock, groundwater or surface water as a ~~distinct~~ distinct separate layer. Under the right conditions, if sufficient free product is present, free product is capable of migrating independent of the direction of flow of the groundwater or surface water.

“Gastrointestinal absorption fraction” means the fraction of a substance transported across the gastrointestinal lining and taken up systemically into the body.

“Groundwater” means water in a saturated zone or stratum beneath the surface of land or below a surface water.

“Hazard index” means the sum of two or more hazard quotients for multiple hazardous substances and/or multiple exposure pathways.

~~**“Hazardous sites list”**²⁸ means the list of hazardous waste sites maintained under WAC 173-340-330.~~

“Hazardous substance” means:

- (a) ~~a~~Any dangerous or extremely hazardous waste as defined in RCW ~~70.105.010~~ 70A.300.010 ~~(5)(1) and (6)(7),~~ or any dangerous or extremely dangerous waste as designated by rule under chapter ~~70.105~~ 70A.300 RCW;
- (b) ~~a~~Any hazardous substance as defined in RCW ~~70.105.010~~ 70A.300.010 ~~(14)(10)~~ or any hazardous substance as defined by rule under chapter ~~70.105~~ 70A.300 RCW;
- (c) ~~a~~Any substance that, on the effective date of this section, is a hazardous substance under section 101(14) of the federal cleanup law, 42 U.S.C. Sec. 9601(14);
- (d) ~~p~~Petroleum or petroleum products; and

²⁶ Updated definition of federal cleanup law to include any amendments, not just those in the Superfund Amendments and Reauthorization Act of 1986.

²⁷ Added definition of term “financial assurance” consistent with purpose in Section 440(11).

²⁸ Replaced term “hazardous sites list” with term “contaminated sites list.” See note above about “contaminated sites list.”

(e) ~~a~~Any substance or category of substances, including solid waste decomposition products, determined by the director by rule to present a threat to human health or the environment if released into the environment.

The term hazardous substance does not include any of the following when contained in an underground storage tank from which there is not a release: Crude oil or any fraction thereof or petroleum, if the tank is in compliance with all applicable federal, state, and local law.

~~“Hazardous waste site”²⁹ means any facility where there has been confirmation of a release or threatened release of a hazardous substance that requires remedial action.~~

“Hazard quotient” or “HQ” means the ratio of the dose of a single hazardous substance over a specified time period to a reference dose for that hazardous substance derived for a similar exposure period.

“Health and safety plan”³⁰ means a plan prepared under WAC 173-340-810.

“Health effects assessment summary tables” or “HEAST” means a database developed by the United States Environmental Protection Agency that provides a summary of information on the toxicity of hazardous substances.

“Henry's law constant” means the ratio of a hazardous substance's concentration in the air to its concentration in water. Henry's law constant can vary significantly with temperature for some hazardous substances. The dimensionless form of this constant is used in the default equations in this chapter.

“Highest beneficial use” means the beneficial use of a resource generally requiring the highest quality in the resource. For example, for many hazardous substances, providing protection for the beneficial use of drinking water will generally also provide protection for a great variety of other existing and future beneficial uses of groundwater.

“Inadvertent discovery plan” means a plan prepared under WAC 173-340-815 that describes procedures for responding to a discovery of archaeological materials or human remains in accordance with applicable state and federal laws.³¹

“Independent remedial actions” means a remedial actions conducted without ~~department~~Ecology oversight or approval and not under an order, ~~agreed order~~, or ~~consent~~ decree.³²

“Indian tribe” means the term as defined in RCW 43.376.010(1).³³

²⁹ Replaced term “hazardous waste site” with term “contaminated site.” See note about “contaminated site.”

³⁰ Replaced term “safety and health plan” with term “health and safety plan,” and updated usage throughout chapter to be consistent. The current rule uses both terms.

³¹ Added definition of “inadvertent discovery plan.” The contents of the plan are defined in new Section 815.

³² Corrected definition of term “independent remedial action.” The term “order” is defined in this section to mean both enforcement orders and agreed orders.

³³ Added term “Indian tribe” and defined to mean the same as specified in chapter [43.376](#) RCW, Government-to-government relationship with Indian tribes.

“Indicator hazardous substances” means the subset of hazardous substances present at a site selected under WAC 173-340-708 for monitoring and analysis during any phase of remedial action for the purpose of characterizing the site or establishing cleanup requirements for that site.

“Industrial properties” means properties that are or have been characterized by, or are to be committed to, traditional industrial uses such as processing or manufacturing of materials, marine terminal and transportation areas and facilities, fabrication, assembly, treatment, or distribution of manufactured products, or storage of bulk materials, that are either:

(a) Zoned for industrial use by a city or county conducting land use planning under chapter [36.70A](#) RCW (Growth Management Act); or

(b) For counties not planning under chapter [36.70A](#) RCW (Growth Management Act) and the cities within them, zoned for industrial use and adjacent to properties currently used or designated for industrial purposes.

See WAC 173-340-745 for additional criteria to determine if a land use not specifically listed in this definition would meet the requirement of "traditional industrial use" and for evaluating if a land use zoning category meets the requirement of being "zoned for industrial use."

“Inhalation absorption fraction” means the percent of a hazardous substance (expressed as a fraction) that is absorbed through the respiratory system.

“Inhalation correction factor” means a multiplier that is used to adjust exposure estimates based on ingestion of drinking water to take into account exposure to hazardous substances that are volatilized and inhaled during use of the water.

“Initial investigation” means a remedial action that consists of an investigation conducted under WAC 173-340-310.

“Institutional controls” means measures undertaken to limit~~s~~ or prohibit~~s~~ activities that may interfere with the integrity of an interim action or a cleanup action or result in exposure to hazardous substances at the site. An institutional control is a type of remedial action.³⁴ For examples of institutional controls, see WAC 173-340-440(1).

“Integrated risk information system” or “IRIS” means a database developed by the United States Environmental Protection Agency that provides a summary of information on hazard identification and dose-response assessment for specific hazardous substances.

“Interim action” means a remedial action conducted under WAC 173-340-430.

“Interspecies scaling factor” means the conversion factor used to take into account differences between animals and humans.

“Land's method” means the method for calculating an upper confidence limit for the mean of a lognormal distribution, described in the following publications:

³⁴ Clarified that an “institutional control” is a type of “remedial action.”

(a) Land, C.E., 1971. "Confidence intervals for linear functions of the normal mean and variance." *Annals of Mathematics and Statistics*. Volume 42, pages 1187-1205.

(b) Land, C.E., 1975. "Tables of confidence limits for linear functions of the normal mean and variance." In: *Selected Tables in Mathematical Statistics*, Volume III, pages 385-419. American Mathematical Society, Providence, Rhode Island.

"Legally applicable requirements" means those cleanup standards, standards of control, and other human health and environmental protection requirements, criteria, or limitations adopted under state or federal law that specifically address a hazardous substance, cleanup action, location, or other circumstances at the site.

"Lowest observed adverse effect level" or "LOAEL" means the lowest concentration of a hazardous substance at which there is a statistically or biologically significant increase in the frequency or severity of an adverse effect between an exposed population and a control group.

~~"Mail" means delivery through the United States Postal Service or an equivalent method of delivery or transmittal, including private mail carriers, or personal delivery.³⁵~~

"Maximum contaminant level" or "MCL" means the maximum concentration of a contaminant established by either the Washington state board of health or the United States Environmental Protection Agency under the ~~Federal~~ Safe Drinking Water Act (42 U.S.C. 300f et seq.) and published in chapter ~~248-54~~ 246-290 WAC or 40 C.F.R. Part 141.

"Maximum contaminant level goal" or "MCLG" means the maximum concentration of a contaminant established by either the Washington state board of health or the United States Environmental Protection Agency under the ~~Federal~~ Safe Drinking Water Act (42 U.S.C. 300f et seq.) and published in chapter ~~248-54~~ 246-290 WAC or 40 C.F.R. Part 141 for which no known or anticipated adverse effects on human health occur, including an adequate margin of safety.

"Method detection limit" or "MDL" means the minimum concentration of a compound that can be measured and reported with ninety-nine percent (99%) confidence that the value is greater than zero.

"Millirem" or "mrem" means the measure of the dose of any radiation to body tissue in terms of its estimated biological effect relative to a dose received from an exposure to one roentgen (R) of X-rays. One millirem equals 0.001 rem.

"Mixed funding" means any funding provided to a potentially liable persons ~~s~~ from the ~~state~~ model toxics control capital account under WAC 173-340-560.³⁶

³⁵ Eliminated definition of term "mail," and replaced usage throughout rule with "written notice" to simplify and acknowledge use of electronic means of communication, such as email.

³⁶ Updated definition of term "mixed funding" to reflect legislative changes to the MTCA account structure in SB 5993 (2019). See RCW 70A.305.190.

“Model remedy”³⁷ means a set of technologies, procedures, and monitoring protocols identified by Ecology for use in routine types of cleanup projects at facilities that have common features and lower risk to human health and the environment.

“Model Toxics Control Act” or “act” means chapter ~~70.105D~~ 70A.305 RCW, first passed by the voters in the November 1988 general election as Initiative 97 and as since amended by the legislature.

“National priorities list” or “NPL”³⁸ means the list of sites designated as a national priority by the United States Environmental Protection Agency under Section 105(a)(8)(B) of the federal cleanup law, 42 U.S.C. 9605(a)(8)(B).

“Natural attenuation” means a variety of physical, chemical or biological processes that, under favorable conditions, act without human intervention to reduce the mass, toxicity, mobility, volume, or concentration of hazardous substances in the environment. These in situ processes include: Natural biodegradation; dispersion; dilution; sorption; volatilization; and, chemical or biological stabilization, transformation, or destruction of hazardous substances. See WAC 173-340-370(7) for a description of the expected role of natural attenuation in site cleanup. A cleanup action that includes natural attenuation and conforms to the expectation in WAC 173-340-370(7) can be considered an active remedial measure.

“Natural background” means the concentration of a hazardous substance consistently present in the environment that has not been influenced by localized human activities. For example, several metals and radionuclides naturally occur in the bedrock, sediments, and soils of Washington state due solely to the geologic processes that formed these materials, ~~and the~~ The concentration of these hazardous substances would be considered natural background. Also, low concentrations of some particularly persistent organic compounds such as polychlorinated biphenyls (PCBs) can be found in surficial soils and sediment throughout much of the state due to global distribution of these hazardous substances. These low concentrations would be considered natural background. Similarly, concentrations of various radionuclides that are present at low concentrations throughout the state due to global distribution of fallout from bomb testing and nuclear accidents would be considered natural background. Compare “area background.”

“Natural biodegradation” means ~~in-situ~~ in situ biological processes such as aerobic respiration, anaerobic respiration, and cometabolism, that occur without human intervention and that break down hazardous substances into other compounds or elements. The process is typically a multiple step process and may or may not result in organic compounds being completely broken down or mineralized to carbon dioxide and water.

“Natural person” means any unincorporated individual or group of individuals. The term "individual" is synonymous with "natural person."

³⁷ Added definition of term “model remedy” to reflect legislative changes to MTCA in SB 5296 (2013). See RCW 70A.305.020(20).

³⁸ Added definition of term “national priorities list.”

“Nonaqueous phase liquid” or “NAPL” means a hazardous substance that is present in the soil, bedrock, groundwater, or surface water as a liquid not dissolved in water. The term includes both light nonaqueous phase liquid (LNAPL) and dense nonaqueous phase liquid (DNAPL).

“No further action sites list”³⁹ means a list of sites for which Ecology or PLIA has determined no further remedial action is necessary under state cleanup law to meet the criteria in WAC 173-340-330(5)(b). For each listed site, the list also identifies whether institutional controls or periodic reviews remain necessary at the site. Ecology maintains the list under WAC 173-340-335.

“No observed adverse effect level” or “NOAEL” means the exposure level at which there are no statistically or biologically significant increases in frequency or severity of adverse effects between the exposed population and its appropriate control; ~~some~~ Some effects may be produced at this level, but they are not considered to be adverse, nor precursors to specific adverse effects.

“Nonpotable” means not a current or potential source of drinking water. See WAC 173-340-720 and 173-340-730 for criteria for determining if groundwater or surface water is a current or potential source of drinking water.

“Null hypothesis” means an assumption about hazardous substance concentrations at a site when evaluating compliance with cleanup levels established under this chapter. The null hypothesis is that the site is contaminated at concentrations that exceed cleanup levels. This ~~shall~~ does not apply to cleanup levels based on background concentrations where other appropriate statistical methods supported by a power analysis would be more appropriate to use.

“Oral RFD conversion factor” means the conversion factor used to adjust an oral reference dose (which is typically based on an administered dose) to a dermal reference dose (which is based on an absorbed dose).

“Order” means an enforcement order issued under WAC 173-340-540 or an agreed order issued under WAC 173-340-530.

“Overburdened community”⁴⁰ means the term as defined in RCW 70A.02.010(11).

“Owner or operator” means any person that meets the definition of this term in RCW ~~70.105D.020(12)~~ 70A.305.020(22).

“PAHs (carcinogenic)” or “cPAHs” means those polycyclic aromatic hydrocarbons substances, PAHs, identified as A (known human) or B (probable human) carcinogens by the United States Environmental Protection Agency. These include benzo(a)anthracene, benzo(b)fluoranthene,

³⁹ Added definition of term “no further action sites list.” Ecology currently maintains and makes available the list on Ecology’s website at: <https://apps.ecology.wa.gov/tcpwebreporting/reports/cleanup/nfa>. Clarified that the no further action determination is based on the delisting criteria in WAC 173-340-330(5)(b). If the site meets the criteria, the site is placed on the “no further action sites list.” Identified what information about a site is included on the “no further action sites list.”

⁴⁰ Added definition of term “overburdened community” from the HEAL act, RCW [70A.02.010](#)(11).

benzo(k)fluoranthene, benzo(a)pyrene, chrysene, dibenzo(a,h)anthracene, and indeno(1,2,3-cd)pyrene.

“Performance monitoring”⁴¹ means a type of compliance monitoring described in WAC 173-340-410.

“Periodic review”⁴² means a remedial action that consists of a review conducted by Ecology under WAC 173-340-420.

“Permanent solution” or “permanent cleanup action” means a cleanup action in which cleanup standards of ~~WAC 173-340-700 through 173-340-760~~ 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.

“Person” means an individual, firm, corporation, association, partnership, consortium, joint venture, commercial entity, state government agency, unit of local government, federal government agency, or Indian tribe.

“Picocurie” or “pCi” means 10⁻¹² curie.

“PLIA”⁴³ means the pollution liability insurance agency.

“Point of compliance” means the point or points where cleanup levels established in accordance with WAC 173-340-720 through 173-340-760 ~~shall~~must be attained. This term includes both standard and conditional points of compliance. A conditional point of compliance for particular environmental media is only available as provided in WAC 173-340-720 through 173-340-760.

“Polychlorinated biphenyls” or “PCB mixtures” means those aromatic compounds containing two benzene nuclei with two or more substituted chlorine atoms. For the purposes of this chapter, PCB includes those congeners which are identified using the appropriate analytical methods ~~as~~ specified ~~in~~by Ecology under WAC 173-340-830.⁴⁴

“Polycyclic aromatic hydrocarbons” or “PAH” means those hydrocarbon molecules composed of two or more fused benzene rings. For the purpose of this chapter, PAH includes those compounds which are identified and quantified using the appropriate analytical methods ~~as~~ specified ~~in~~by Ecology under WAC 173-340-830.⁴⁵ The specific compounds generally included are acenaphthene, acenaphthylene, fluorene, naphthalene, anthracene, fluoranthene, phenanthrene, benzo[a]anthracene, benzo[b]fluoranthene, benzo[k]fluoranthene, pyrene, chrysene, benzo[a]pyrene, dibenzo[a,h]anthracene, indeno[1,2,3-cd]pyrene, and benzo[ghi]perylene.

⁴¹ Added definition of term “performance monitoring” for ease of reference. The definition refers to the description in Section 410.

⁴² Added definition of term “periodic review” for ease of reference. The definition refers to the description in Section 420.

⁴³ Added definition of term “PLIA” to refer to the pollution liability insurance agency.

⁴⁴ Updated to conform to changes in Section 830. See notes on Section 830.

⁴⁵ Updated to conform to changes in Section 830. See notes on Section 830.

“Potentially liable person” means any person who ~~the department~~Ecology finds, based on credible evidence, to be liable under RCW ~~70.105D.040~~ 70A.305.040.

“Practicable” means capable of being designed, constructed, and implemented in a reliable and effective manner including consideration of cost. ~~When considering cost under this analysis, a~~An alternative ~~shall~~is not ~~be considered~~ practicable if ~~the~~its incremental costs ~~of the alternative~~ are disproportionate to ~~the~~its incremental degree of benefits, ~~provided by the alternative over compared to other another lower cost alternatives.~~ Whether a cleanup action uses permanent solutions to the maximum extent practicable is determined using the procedures in WAC 173-340-360(6).⁴⁶

“Practical quantitation limit” or “PQL” means the lowest concentration that can be reliably measured within specified limits of precision, accuracy, representativeness, completeness, and comparability during routine laboratory operating conditions, using ~~department~~Ecology approved methods.

“Probabilistic risk assessment” means a mathematical technique for assessing the variability and uncertainty in risk calculations. This is done by using distributions for model input parameters, rather than point values, where sufficient data exists to justify the distribution. These distributions are then used to compute various simulations using tools such as Monte Carlo analysis to examine the probability that a given outcome will result (such as a level of risk being exceeded). When using probabilistic techniques under this chapter for human health risk assessment, distributions ~~shall~~may not be used to represent dose response relationships (reference dose, reference concentration, cancer potency factor).

“Prospective purchaser”⁴⁷ means a person who is not currently liable for remedial action at a site and who proposes to purchase, redevelop, or reuse the site.

“Protection monitoring”⁴⁸ means a type of compliance monitoring described in WAC 173-340-410.

“Public notice” means, ~~at a minimum, adequate notice mailed to all persons who have made a timely request of the department and to persons residing in the potentially affected vicinity of the proposed action; mailed to appropriate news media; published in the newspaper of largest circulation in the city or county of the proposed action; and opportunity for interested persons to comment~~ the notice and opportunity to comment required under WAC 173-340-600(2).⁴⁹

“Public participation plan” means a plan prepared under WAC 173-340-600 to encourage coordinated and effective public involvement tailored to the public's needs at a particular site.

⁴⁶ Clarified definition of “practicable” and its relationship to the determination that a cleanup action “uses permanent solutions to the maximum extent practicable.”

⁴⁷ Added definition of term “prospective purchaser” from MTCA. The definition was added to MTCA in 2013 in SB [5296](#).

⁴⁸ Added definition of term “protection monitoring” for ease of reference. The definition refers to the description in Section 410.

⁴⁹ Replaced definition of term “public notice” with a reference to the requirements governing public notice in Section 600(2). The definition and requirements need to be consistent. The rule includes additional and more specific requirements than the MTCA statute. See notes on Section 600(2).

“Rad” means that quantity of ionizing radiation that results in the absorption of 100 ergs of energy per gram of irradiated material, regardless of the source of radiation.

“Radionuclide” means a type of atom that spontaneously undergoes radioactive decay. Radionuclides are hazardous substances under the act.

“Reasonable maximum exposure” means the highest exposure that can be reasonably expected to occur for a human or other living organisms, including a vulnerable population or an overburdened community,⁵⁰ at a site under current and potential future site use.

“Reference dose” or **“RFD”** means a benchmark dose, derived from the NOAEL or LOAEL for a hazardous substance by consistent application of uncertainty factors used to estimate acceptable daily intake doses and an additional modifying factor, which is based on professional judgment when considering all available data about a substance, expressed in units of milligrams per kilogram body weight per day. This includes chronic reference doses, subchronic reference doses, and developmental reference doses.

“Regulated substance”⁵¹ means the term as defined in chapter 173-360A WAC. All regulated substances are hazardous substances, as defined in this chapter.

“Release” means any intentional or unintentional entry of any hazardous substance into the environment, including but not limited to the abandonment or disposal of containers of hazardous substances.

“Relevant and appropriate requirements” means those cleanup standards, standards of control, and other human health and environmental requirements, criteria, or limitations established under state and federal law that, while not legally applicable to the hazardous substance, cleanup action, location, or other circumstance at a site, ~~the department~~Ecology determines address problems or situations sufficiently similar to those encountered at the site that their use is well suited to the particular site. The criteria specified in WAC 173-340-710~~(3)(4)~~ shall be~~are~~ used to determine if a requirement is relevant and appropriate.

“Rem” means the unit of radiation dose equivalent that is the dosage in rads multiplied by a factor representing the different biological effects of various types of radiation.

“Remedial investigation”⁵² means a remedial action conducted under WAC 173-340-350 that consists of collecting and evaluating sufficient information about a site, including the distribution of hazardous substances and the threat they pose to human health and the environment, to enable:

(a) Cleanup standards to be established under Part 7 of this chapter; and

⁵⁰ Emphasized that “reasonable maximum exposure” includes that of a vulnerable population or an overburdened community.

⁵¹ Added definition of term “regulated substance,” which is used in Sections 300 and 450 when referring to the release reporting requirements for UST systems under chapter 173-360A WAC. Also clarified that all regulated substances under chapter 173-360A WAC are hazardous substances under this chapter.

⁵² Added definition of term “remedial investigation” consistent with purpose in Section 350.

(b) Cleanup action alternatives to be developed and evaluated in a feasibility study under WAC 173-340-351.

“Remedial investigation/feasibility study” means a remedial action that consists of ~~activities conducted under WAC 173-340-350 to collect, develop, and evaluate sufficient information regarding a site to select a cleanup action under WAC 173-340-360 through 173-340-390~~both a remedial investigation and a feasibility study.⁵³

“Remediation level (REL)” means a concentration (or other method of identification) of a hazardous substance in soil, water, air, or sediment ~~above which~~used to identify where a particular cleanup action component ~~will be~~is required as part of a cleanup action at a site. Other methods of identification include physical appearance or location. A cleanup action selected in accordance with WAC 173-340-350 through 173-340-390 that includes remediation levels constitutes a cleanup action which is protective of human health and the environment. See WAC 173-340-355 for a description of the purpose of remediation levels and the requirements and procedures for developing a cleanup action alternative that includes remediation levels.

“Remedy” or “remedial action” means any action or expenditure consistent with the purposes of chapter ~~70.105D~~ 70A.305 RCW to identify, eliminate, or minimize any threat posed by hazardous substances to human health or the environment including any investigative and monitoring activities with respect to any release or threatened release of a hazardous substance and any health assessments or health effects studies conducted in order to determine the risk or potential risk to human health.

“Restoration time frame” means the period of time needed to achieve the required cleanup levels at the points of compliance established for the site.

“Risk” means the probability that a hazardous substance, when released into the environment, will cause an adverse effect in exposed humans or other living organisms.

“Routine cleanup action” means a remedial action meeting all of the following criteria:

- Cleanup standards for each hazardous substance addressed by the cleanup are obvious and undisputed, and allow for an adequate margin of safety for protection of human health and the environment;
- It involves an obvious and limited choice among cleanup action alternatives and uses an alternative that is reliable, has proven capable of accomplishing cleanup standards, and with which ~~the department~~Ecology has experience;
- The cleanup action does not require preparation of an environmental impact statement; and
- The site qualifies under WAC 173-340-7491 for an exclusion from conducting a simplified or site-specific terrestrial ecological evaluation, or if the site qualifies for a simplified ecological

⁵³ Updated definition of combined term “remedial investigation/feasibility study” to reflect addition of definitions for the separate terms “remedial investigation” and “feasibility study.”

evaluation, the evaluation is ended under WAC 173-340-7492(2) or the values in Table 749-2 are used.

Routine cleanup actions consist of, or are comparable to, one or more of the following remedial actions:

- Cleanup of above-ground structures;
- Cleanup of below-ground structures;
- Cleanup of contaminated soils where the action would restore the site to cleanup levels; or
- Cleanup of solid wastes, including containers.

~~“Safety and health plan”⁵⁴ means a plan prepared under WAC 173-340-810.~~

“Sampling and analysis plan” means a plan prepared under WAC 173-340-820.

“Saturated zone” means the area below the water table in which all interstices are filled with water.

“Schools” means preschools, elementary schools, middle schools, high schools, and similar facilities, both public and private, used primarily for the instruction of minors.

~~“Science advisory board” means the advisory board established by the department under RCW 70.105D.030(4).⁵⁵~~

~~“Secondary maximum contaminant level”⁵⁶ means the maximum concentration of a secondary contaminant in water established by the United States Environmental Protection Agency under the Federal Safe Drinking Water Act (42 U.S.C. 300f et seq.) and published in 40 C.F.R. 143.~~

“Sediment”⁵⁷ means the term as defined in WAC 173-204-505.

“Sensitive environment” means an area of particular environmental value, where a release could pose a greater threat than in other areas including: Wetlands; critical habitat for endangered or threatened species; national or state wildlife refuge; critical habitat, breeding or feeding area for fish or shellfish; wild or scenic river; rookery; riparian area; big game winter range.

“Site” means the same as “facility.”

⁵⁴ Replaced term “safety and health plan” with term “health and safety plan,” and updated usage throughout chapter to be consistent. The current rule uses both terms.

⁵⁵ Deleted definition of term “science advisory board.” Also eliminated all requirements related to the SAB throughout the chapter. In 2009, the Legislature eliminated the statutory authority for the science advisory board SB 5995. See Section 10 in [Laws of 2009, Chapter 560](#).

⁵⁶ Deleted definition of term “secondary maximum contaminant level” because the term is not used anywhere in the chapter.

⁵⁷ Added definition of term “sediment.” Made definition consistent with the definition in Chapter 173-204 WAC, Sediment Management Standards.

“Site hazard assessment and ranking”⁵⁸ means a remedial action that consists of an ~~investigation performed~~ assessment and ranking conducted under WAC 173-340-320.

“Soil” means a mixture of organic and inorganic solids, air, water, and biota that exists on the earth's surface above bedrock, including materials of anthropogenic sources such as slag, sludge, etc.

“Soil biota” means invertebrate multicellular animals that live in the soil or in close contact with the soil.

“State cleanup law”⁵⁹ means the Model Toxics Control Act, chapter 70A.305 RCW, and the cleanup regulations adopted under that Act, chapters 173-340 and 173-204 WAC.

“Subchronic reference dose” means an estimate (with an uncertainty of an order of magnitude or more) of a daily exposure level for the human population, including sensitive subgroups, that is likely to be without appreciable risk of adverse effects during a portion of a lifetime.

“Surface water” means lakes, rivers, ponds, streams, inland waters, salt waters, and all other surface waters and water courses within the state of Washington or under the jurisdiction of the state of Washington.

“Technically possible” means capable of being designed, constructed, and implemented in a reliable and effective manner, regardless of cost.

“Terrestrial ecological receptors” means plants and animals that live primarily or entirely on land.

“Threatened or endangered species” means species listed as threatened or endangered under the federal Endangered Species Act 16 U.S.C. Section 1533, or classified as threatened or endangered by the state fish and wildlife commission under ~~WAC 232-12-011(1) and 232-12-014~~ WAC 220-200-100 or 220-610-010.⁶⁰

“Total excess cancer risk” means the upper bound on the estimated excess cancer risk associated with exposure to multiple hazardous substances and multiple exposure pathways.

“Total petroleum hydrocarbons” or “TPH” means any fraction of crude oil that is contained in plant condensate, crankcase motor oil, gasoline, aviation fuels, kerosene, diesel motor fuel, benzol, fuel oil, and other products derived from the refining of crude oil. For the purposes of this chapter, TPH ~~will~~ generally means those fractions of the above products that are the total of all hydrocarbons quantified by analytical methods NWTPH-Gx; NWTPH-Dx; volatile petroleum hydrocarbons (VPH) for volatile aliphatic and volatile aromatic petroleum fractions; and extractable petroleum hydrocarbons (EPH) for nonvolatile aliphatic and nonvolatile aromatic petroleum fractions, as appropriate, or other test methods approved by ~~the department~~ Ecology.

⁵⁸ Replaced term “site hazard assessment” with “site hazard assessment and ranking.” Changed definition to reflect changes in purpose identified under WAC 173-340-320 and to integrate the concept of ranking.

⁵⁹ Added definition of term “state cleanup law” to refer to both the Model Toxics Control Act and all cleanup regulations adopted that state law. Those regulations include both Chapter 173-340 WAC and Chapter 173-204 WAC.

⁶⁰ Updated rule citations in definition of term “threatened or endangered species.”

“Tribal lands”⁶¹ means the term as defined in RCW 70A.02.010(13).

“Type I error” means the error made when it is concluded that an area of a site is below cleanup levels when it actually exceeds cleanup levels. This is the rejection of a true null hypothesis.

“Underground storage tank” or “UST” means ~~an underground storage tank and connected underground piping as defined in the rules adopted under chapter 90.76 RCW~~ the term as defined in chapter 173-360A WAC.⁶²

“Unrestricted site use conditions” means restrictions on the use of the site or natural resources affected by releases of hazardous substances from the site are not required to ensure continued protection of human health and the environment.

“Upper bound on the estimated excess cancer risk of one in one hundred thousand” means the upper ninety-fifth percent confidence limit on the estimated risk of one additional cancer above the background cancer rate per one hundred thousand individuals.

“Upper bound on the estimated excess cancer risk of one in one million” means the upper ninety-fifth percent confidence limit on the estimated risk of one additional cancer above the background cancer rate per one million individuals.

“UST system”⁶³ means the term as defined in chapter 173-360A WAC.

“UST system operator”⁶⁴ means the same as “operator” in chapter 173-360A WAC.

“UST system owner”⁶⁵ means the same as “owner” in chapter 173-360A WAC.

“Volatile organic compound” means those carbon-based compounds listed in ~~EPA~~ United States Environmental Protection Agency methods 502.2, 524.2, 551, 601, 602, 603, 624, 1624C, 1666, 1671, 8011, 8015B, 8021B, 8031, 8032A, 8033, 8260B, and those with similar vapor pressures or boiling points. ~~See WAC 173-340-830(3) for references describing these methods.~~⁶⁶ For petroleum, volatile means aliphatic and aromatic constituents up to and including EC12, plus naphthalene, 1-methylnaphthalene and 2-methylnaphthalene.

“Vulnerable population”⁶⁷ means the term as defined in RCW 70A.02.010(14).

“Wastewater facility” means all structures and equipment required to collect, transport, treat, reclaim, or dispose of domestic, industrial, or combined domestic/industrial wastewaters.

⁶¹ Added term “tribal lands” and defined to mean the same as specified in chapter 70A.02 RCW, Environmental justice (also known as the HEAL act). This term helps define the scope of tribal interests.

⁶² Updated definition of “underground storage tank” to reflect adoption of Chapter 173-360A WAC.

⁶³ Added definitions for the terms “UST system,” “UST system owner,” and “UST system operator” to clarify applicability of the requirements in WAC 173-340-450. The terms have the same meaning as in the UST Regulations, Chapter 173-360A WAC.

⁶⁴ See note about “UST system.”

⁶⁵ See note about “UST system.”

⁶⁶ Eliminated reference to Section 830. Sampling and analysis methods are no longer listed in Section 830. See notes on Section 830.

⁶⁷ Added definition of term “vulnerable population” from the HEAL act, RCW 70A.02.010(14).

“Wetlands” means ~~lands transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water. For the purposes of this classification, wetlands must have one or more of the following attributes at least periodically, the land supports predominantly hydrophytes; the substrate is predominately undrained hydric soil; and the substrate is nonsoil and saturated with water or covered by shallow water at some time during the growing season each year~~ the term as defined in WAC 173-201A-020.⁶⁸

“Wildlife” means any nonhuman vertebrate animal other than fish.

“Zoned for (a specified) use” means the use is allowed as a permitted or conditional use under the local jurisdiction's land use zoning ordinances. A land use that is inconsistent with the current zoning but allowed to continue as a nonconforming use or through a comparable designation is not considered to be zoned for that use.

⁶⁸ Updated definition of term “wetland” to be consistent with definition in WAC [173-201A-020](#).

WAC 173-340-210 Usage.

Tracked changes to current rule

For the purposes of this chapter, the following ~~shall~~ apply:

- (1) Unless the context clearly requires otherwise, the use of the singular ~~shall~~ includes the plural and conversely.
- (2) The terms “**applicable,**” “**appropriate,**” “**relevant,**” “**unless otherwise directed by the departmentEcology**” and **similar terms implying discretion** mean as determined by ~~the departmentEcology~~, with the burden of proof on other persons to demonstrate that the requirements are or are not necessary.
- (3) “**Approved**” means for ~~department conducted or ordered remedial actions, or for potentially liable person conducted cleanups agreed to by the department in an agreed order or decree governing remedial actions at the site~~ Ecology-conducted or Ecology-supervised remedial actions.
- (4) “**Conduct**” means to perform or undertake whether directly or through an agent or contractor, unless this chapter expressly provides otherwise.
- (5) “**Include**” means included but not limited to.
- (6) “**May**” or “**should**” means the provision is optional and permissive, and does not impose a requirement.
- (7) “**Shall,**” “**must,**” or “**will**” means the provision is mandatory.
- (8) “**Threat**” means threat or potential threat.
- (9) “**Under**” means pursuant to, subject to, required by, established by, in accordance with, and similar expressions of legislative or administrative authorization or direction.

Part 3 – Site Reports and Cleanup Decisions

WAC 173-340-300 Site discovery and reporting.

Tracked changes to Preliminary Draft 1, previously reviewed by STAG.

- (1) **Purpose ~~and applicability~~.** This section sets forth the requirements for reporting a release or threatened release of a hazardous substance to the environment that may pose a threat to human health or the environment~~due to past activities⁶⁹ and any independent interim or cleanup action completed prior to such reporting.⁷⁰~~
- (a) ~~Releases from UST systems regulated under chapter 173-360A WAC must be reported to Ecology in accordance with that chapter.⁷¹~~
- (b) ~~Nothing in this section eliminates any obligations to comply with reporting requirements in other laws or permits.⁷²~~
- (c) ~~Nothing in this section precludes Ecology from taking any actions it deems appropriate to identify potential contaminated sites consistent with chapter 70.105D RCW.⁷³~~
- (2) ~~Release report.~~
- (a)(2) **Applicability and timing.** Except as provided under (a) of this subsection, ~~W~~within ninety days of discovering a release or threatened release of a hazardous substance to the environment that may pose a threat to human health or the environment, ~~owners and operators of the facility where the release occurred~~an owner or operator must report the release to Ecology ~~unless exempted under subsection (3) of this section~~. All other persons are encouraged to report such a releases to Ecology.⁷⁴
- (3)(a) **Reporting~~e~~ exemptions.** ~~Owners and operators are exempt from reporting~~An owner or operator does not need to report the following releases under this ~~chapter~~section:
- (a)(i) A release previously reported to Ecology in fulfillment of a reporting requirement in this chapter or in another law or regulation, including a release previously reported to Ecology under chapter 173-360A WAC;⁷⁵

⁶⁹ Eliminated limitation “due to past activities” since current activities may also result in releases. While some current releases, particularly from regulated facilities, do not need to be reported under state cleanup law since they must be reported under other laws (and often sooner), the release reporting exemptions in this section cover that scenario.

⁷⁰ Replaced duplicative independent remedial action reporting requirements later in this section with a reference to the applicable requirements in Section 515(4).

⁷¹ Moved to subsection (4), where expanded discussion of UST release reporting requirements.

⁷² Moved to subsection (4), where expanded discussion of other release reporting requirements.

⁷³ Moved to subsection (5).

⁷⁴ We considered, but decided not to require release reporting by environmental investigators or prospective purchasers due to the lack of specific statutory authorization.

⁷⁵ Emphasized that releases from regulated UST systems previously reported under chapter 173-360A WAC do not need to be reported again under the MTCA cleanup rule.

- ~~(e)~~(ii) A release from a heating oil tank ~~required to be~~ previously reported to ~~the pollution liability insurance agency~~ PLIA under ~~RCW 70.149.040(13)~~ WAC 374-45-030; ⁷⁶
- ~~(f)~~(iii) A release previously reported to the United States Environmental Protection Agency under CERCLA, Section 103(c) (42 U.S.C. Sec. 9603(c));
- (iv) A release previously reported to the state division of emergency management under RCW 90.56.280; ⁷⁷
- ~~(a)~~(v) Application of pesticides and fertilizers for their intended purposes and according to label instructions;
- ~~(b)~~(vi) Lawful and nonnegligent use of hazardous substances by a natural person for personal or domestic purposes;
- ~~(c)~~(vii) A release in accordance with a permit that authorizes the release;
- ~~(g)~~(viii) Except for a ~~releases~~ specified under (b)(iii) of this subsection ~~(2)(c) of this section~~, a release to the air;
- ~~(h)~~(ix) A ~~R~~ releases discovered in a ~~public water systems~~ regulated by the department of health; or
- ~~(i)~~(x) A release to a permitted wastewater facility.

An exemption from the reporting requirements in this section does not imply a release from liability under this chapter.

(b) **Examples.** ~~Persons~~ An owner or operator should use best professional judgment in deciding whether a release or threatened release of a hazardous substance to the environment may pose a threat to human health or the environment. The following, which is not an exhaustive list, are examples of situations that an owner or operator should generally ~~should be~~ reported under this section:

- ~~(a)~~(i) Contamination in a water supply well; ₂
- ~~(b)~~(ii) Contaminated seeps, sediment, or surface water; ₂
- ~~(c)~~(iii) Vapors in a building, utility vault, or other structure that appear to be entering the structure from nearby contaminated soil or groundwater; ₂

⁷⁶ Modified exemption for releases from heating oil tanks previously reported to the Pollution Liability Insurance Agency (PLIA) under WAC 374-45-030. Such releases may be reported to either Ecology or PLIA. Such releases do not need to be reported to both. If releases are reported to Ecology, we will refer to PLIA for initial investigation. PLIA's authority was added in 2017 in House Bill 1266.

⁷⁷ Added exemption for releases previously reported to the emergency management division (EMD) under RCW 90.56.280. In practice, such releases are either reported to EMD or Ecology. Any release reported to EMD is referred to Ecology. Releases previously reported to Ecology are already exempt from reporting under (b)(i) of this subsection

- ~~(d)~~(iv) ~~Free-product~~Non-aqueous phase liquid, such as a petroleum product or ~~other organic liquids~~chlorinated solvent, on the surface of the ground or in the groundwater ~~(free product)~~.⁷⁸
- ~~(e)~~(v) Any contaminated soil or unpermitted disposal of waste materials that would be classified as a hazardous waste under federal or state law.⁷⁸
- ~~(f)~~(vi) Any abandoned containers such as drums or tanks, above ground or buried, still containing more than trace residuals of hazardous substances.⁷⁸
- ~~(g)~~(vii) Sites where unpermitted industrial waste disposal has occurred.⁷⁸
- ~~(h)~~(viii) Sites where hazardous substances have leaked or been dumped on the ground;
and
- ~~(i)~~(ix) Leaking underground petroleum storage tanks not already reported under chapter 173-360A WAC.

~~(4)~~(3) **Content of release report.** ~~Owners and operators~~An owner or operators must include the following information in a release report, to the extent known:

- (a)** The identity and location of the hazardous substance;
- (b)** The circumstances of the hazardous substance release and its discovery; and
- (c)** Any ~~remedial actions~~ planned, ongoing, or completed, ~~or underway~~ independent remedial actions to investigate or clean up the release.
 - (i) See WAC 173-340-515(4) and 173-340-450 for additional reporting requirements for independent remedial actions.⁷⁹
 - (ii) See WAC 173-340-310(5) for Ecology's authority to defer completing an initial investigation of a release to review independent remedial actions completed within ninety days of release discovery.⁸⁰

~~(5) — Combined release and action report.~~⁸¹ ~~If an independent interim or cleanup action is completed within ninety days of release discovery, a single written report may be submitted on~~

⁷⁸ Clarified what free product means based on STAG input.

⁷⁹ Replaced duplicative independent remedial action reporting requirements later in former subsection (5) with a reference to the applicable requirements in Section 515(4). Independent remedial investigations, interim actions, and cleanup actions must be reported to Ecology within 90 days of completion. We expanded the reporting requirement to include independent remedial investigations in response to STAG input and preference for earlier reporting of such actions. See notes on Sections 350(4)(b) and 515(4).

⁸⁰ Referenced provision in Section 310(5)(b) that allows Ecology to defer completing an initial investigation when an independent remedial investigation, interim action, or cleanup action is completed within 90 days of release discovery. See notes on Section 310(5).

⁸¹ Changed release reporting requirements when independent remedial actions are completed within 90 days of release discovery. In such cases, releases must be reported within 90 days of discovery instead of within 90 days of completing the independent remedial action. This change is based on STAG input and preference for earlier notice. We also changed the independent remedial action reporting requirement back to 90 days, instead of 60 days. This change is also based on STAG input. We also replaced the duplicative independent remedial action

~~both the release and action within sixty days of completing the action. The report must contain the information specified in WAC 173-340-515(4)(b) in addition to the information specified in subsection (4) of this section.~~

~~(6) **Ecology response.** Within ninety days of receiving a release report under this section, Ecology must conduct an initial investigation in accordance with WAC 173-340-310.⁸²~~

(4) **Other release reporting requirements.**⁸³ Nothing in this section eliminates any obligations to comply with reporting requirements in other laws or permits, including but not limited to the following:

(a) **Releases from regulated UST systems.** Under chapter 173-360A WAC, UST system owners and operators and regulated service providers must report a confirmed release of a regulated substance from an UST system to Ecology within twenty-four hours. As specified in subsection (2)(a)(i) of this section, a release previously reported to Ecology under chapter 173-360A WAC is exempt from the release reporting requirements in this section. However, the release must still be investigated and cleaned up in accordance with this chapter. WAC 173-340-450 specifies interim actions that UST system owners and operators must perform immediately or shortly after confirming a release to reduce the threats posed by the release, prevent any further release, and characterize the nature and extent of the release;

(b) **Releases from heating oil tanks.** Under chapter 374-45 WAC, owners and operators of a heating oil tank and owners of the property where the tank is located must report a suspected or confirmed release from the tank to PLIA within ninety days. As specified in subsection (2)(a)(ii) of this section, a release previously reported to Ecology under chapter 374-45 WAC is exempt from the release reporting requirements in this section. However, the release must still be investigated and cleaned up in accordance with this chapter.

(5) **Reservation of rights.**⁸⁴ Nothing in this section precludes Ecology from taking any actions it deems appropriate to identify contaminated sites consistent with chapter 70A.305 RCW.

reporting requirements in this section with a reference to the applicable requirements in Section 515(4). See subsection (3)(c).

⁸² Eliminated provision because it is duplicative of the requirements in Section 310, which have also been modified. Ecology may defer an initial investigation if an independent remedial action is completed within 90 days of release discovery to enable review of such action. We included a cross-reference to the applicable provisions in subsection (3)(c).

⁸³ Moved from subsection (1). Added references and descriptions of release reporting requirements under other state laws for regulated UST systems and for non-regulated heating oil tanks (HOTS) based on STAG input. Also noted that releases reported under those laws are exempt from the reporting requirements of the MTCA cleanup rule. Also added references to specific interim actions for regulated UST systems in Section 450. While some STAG members wanted us to identify in the MTCA cleanup rule all other spill and release reporting requirements specified in other state and federal laws, we decided the MTCA cleanup rule was not the place to do that. Ecology already has webpages that identify other spill and release reporting requirements.

⁸⁴ Moved from subsection (1).

WAC 173-340-310 Initial investigation ~~and assessment~~.⁸⁵

Tracked changes to Preliminary Draft 1, previously reviewed by STAG.

- (1) **Purpose.** The purpose of an initial investigation is to determine:
- (a) ~~Determine w~~Whether there has been a release or threatened release of a hazardous substance to the environment;
 - (b) Whether the release or threatened release ~~that~~ may pose a threat to human health or the environment;
 - (c) Whether the population threatened may be a vulnerable population or an overburdened community;⁸⁶
 - (d) Whether further remedial action is necessary under state cleanup law to confirm whether there has been a release or threatened release that poses a threat to human health or the environment;⁸⁷
 - ~~(b)(e)~~ ~~Determine w~~(e) Whether further remedial action is necessary under this chapter state cleanup law to respond to address the threat to human health and the environment posed by the release or threatened release. This determination is based on the criteria in WAC 173-340-330(5)(b);⁸⁸ ~~and~~
 - (f) Whether an emergency remedial action or an interim action is necessary under state cleanup law to address the threat, and whether persons in the potentially affected vicinity need to be notified of such action;⁸⁹
 - (g) Whether action under another state or federal law is appropriate;⁹⁰ and
 - ~~(e)(h)~~ ~~Identify t~~(h) The current owners and operators of the site.

⁸⁵ Eliminated reference to SHARP in section header of Section 310. An assessment is conducted at several points in cleanup process, not just based on an initial investigation. Requirements related to SHARP are specified in Section 320. Change based on STAG input.

⁸⁶ Added as one of the purposes of an initial investigation to determine whether the population threatened may be a vulnerable population or an overburdened community. This is needed to complete an initial SHARP assessment under Section 320 and help prioritize sites for further action under Section 340. This initial determination will likely be based on the site's location and the environmental health disparities map or other readily available information. Change prompted by STAG input and HEAL Act.

⁸⁷ Clarified that one of the purposes of the initial investigation is to determine whether further remedial action is necessary to confirm a suspected site. This reflects actions under the current rule.

⁸⁸ Clarified that the further action determination in the initial investigation is based on the delisting criteria in WAC 173-340-330(5)(b). If the site meets those criteria, the site is placed on the no further action sites list. If the site does not meet those criteria, the site is placed on the contaminated sites list.

⁸⁹ Clarified that one of the purposes of an initial investigation is to determine whether an emergency action or an interim action is necessary, and whether persons in the potentially affected vicinity need to be notified of such action. This reflects actions under the current rule.

⁹⁰ Clarified that one of the purposes of an initial investigation is to determine whether action under another state or federal law is appropriate. This reflects actions under the current rule.

- (2) **Applicability~~and timing~~.**⁹¹ ~~Within ninety days of discovering a release or receiving a release report,~~ Ecology ~~must~~will complete an initial investigation unless:
- (a) The release is exempt from reporting under WAC 173-340-300~~(3)~~(2)(a);
 - (b) The circumstances associated with the release or threatened release are known to Ecology and have previously been or currently are being evaluated by Ecology or another government agency; or
 - (c) Ecology does not have a reasonable basis to believe that there has been a release or threatened release of a hazardous substance that may pose a threat to human health or the environment.
- ~~(4)~~(3) **Performance.** ~~When performing an initial investigation~~To make the determinations specified in subsection (1) of this section,⁹² Ecology ~~must~~will review readily available information and may collect, ~~or advise other persons to collect,~~⁹³ additional information ~~to make the determinations specified in subsection (1) of this section.~~
- ~~(5)~~(4) **~~Performance by~~Reliance on others.** Ecology may rely on another government agency or a contractor to Ecology to ~~perform~~conduct an initial investigation on its behalf, provided:
- (a) The agency or contractor is not suspected of having contributed to the release or threatened release; and
 - (b) The agency or contractor has no conflict of interest.
- ~~(3)~~(5) **~~Deadline extension~~Timing.**⁹⁴ ~~Ecology may extend the deadline for completing an initial investigation for up to an additional one hundred and eighty days to:~~
- ~~(a) — Collect, or encourage owners or operators to collect, additional information to make the determinations specified in subsection (1) of this section; or~~
 - ~~(b) — Encourage owners or operators to quickly and permanently clean up a site under the following circumstances:~~
 - ~~(i) — The releases or threatened releases at the site impact soil, but not any other environmental media;~~
 - ~~(ii) — The owner or operator provides a plan and schedule for cleaning up the site within the extension period; and~~

⁹¹ Separated applicability and timing provisions to improve clarity. Timing and extension are now discussed together under subsection (5). Change based on STAG input.

⁹² Tied performance of initial investigation back to the purposes in subsection (1).

⁹³ Clarified that Ecology may advise other persons to collect additional information during the initial investigation. This may include the owner or operator, as well as other persons, such as a prospective purchaser. Change made based on STAG input.

⁹⁴ In subsection (5), combined timing and extension provisions.

- ~~(iii) — The cleanup action is a permanent solution that does not require any institutional or engineered controls.~~
- (a) Except as provided under (b) of this subsection, Ecology will complete an initial investigation within ninety days of discovering a release or threatened release or receiving a release report under WAC 173-340-300.⁹⁵
- (b) If an independent remedial investigation, interim action, or cleanup action is completed within ninety days of the discovery of a release or threatened release, Ecology will complete an initial investigation by the earlier of the following:⁹⁶
- (i) Ninety days after receiving the independent remedial action report required under WAC 173-340-515(4);
- (ii) One-hundred and eighty days after discovering a release or threatened release or receiving a release report.
- (6) Determinations and next steps.** Within thirty days of completing the initial investigation, Ecology ~~must~~will make one of the following determinations and take the ~~specified~~applicable steps ~~based on its determination~~:
- (a)** No release or threatened release ~~has~~ occurred. In this case, Ecology ~~must~~will notify the owner and operator in writing of its determination;⁹⁷
- (b)** A release or threatened release ~~has~~ occurred, but ~~there is no~~does not pose a threat to human health or the environment requiring that requires remedial action under ~~this chapter~~state cleanup law. This determination must be based on factors other than performance of remedial action. In this case, Ecology ~~must~~will notify the owner and operator in writing of its determination;
- ~~(c) — A release or threatened release has occurred that poses a threat to human health or the environment, but action under another authority is appropriate. In this case, Ecology must notify the owner and operator in writing of its determination;⁹⁸~~
- ~~(d)~~(c) A release or threatened release occurred that posed a threat to human health or the environment, but ~~remedial action has been performed and~~ no further remedial action is necessary under ~~this chapter~~state cleanup law to address that threat based on the

⁹⁵ In subsection (5)(a), included the general rule that Ecology must complete an initial investigation within 90 days (3 months) of receiving a release report. This is consistent with the current rule.

⁹⁶ In subsection (5)(b), we retained and clarified the initial investigation extension allowed under the current rule, but eliminated the further extension allowed under the previous draft rule. Change based on STAG preference for earlier notice. Even under the current rule, the public might not be notified of a release for up to 10 months after discovery (up to 3 months to report + up to 3 months to investigate + possible 3 months extension to review completed actions + up to 1 month to make determinations). See also related change in WAC 173-340-300(4).

⁹⁷ Declined request by some STAG members to require notice of the person reporting the release, if different from the owner or operator. Such persons have other means of finding information about the site online (such as site lists, site pages, and mapping applications). Such persons can also follow up by contacting Ecology.

⁹⁸ Moved provision to subsection (6)(f).

criteria in WAC 173-340-330(5)(b).⁹⁹ In this case, Ecology ~~must~~will take the following steps:

- (i) Perform a site hazard assessment and ranking in accordance with WAC 173-340-320;
- (ii) List the site on Ecology's no further action sites list in accordance with WAC 173-340-~~330(5)~~335(2); ~~and~~

(iii) Make any initial investigation report publicly available on Ecology's website.¹⁰⁰

~~(iii)~~(iv) Notify the owner and operator in writing of Ecology's determination; and

(v) Notify the public of Ecology's determination in the *Contaminated Site Register* under WAC 173-340-600(7). The notice must include instructions on how to sign up for electronic alerts about the site under WAC 173-340-600(6).¹⁰¹ ~~or~~

(d) A release or threatened release may have occurred that poses a threat to human health or the environment, and further remedial action is necessary under state cleanup law to confirm the threat. In this case, Ecology will take the steps specified under (e) of this subsection.¹⁰²

~~(e)~~(e) A release or threatened release occurred ~~or may have occurred~~ that poses a threat to human health or the environment, and further remedial action is necessary under ~~this chapter~~state cleanup law to address threat based on the criteria in WAC 173-340-330(5)(b).¹⁰³ In this case, Ecology ~~must~~will take the following steps:

- (i) Perform a site hazard assessment and ranking in accordance with WAC 173-340-320;
- (ii) List the site on the contaminated sites list in accordance with WAC 173-340-~~300(2)~~330(2);

(iii) Make any initial investigation report publicly available on Ecology's website.¹⁰⁴

⁹⁹ Clarified that the no further action determination is based on the delisting criteria in WAC 173-340-330(5)(b). If the site meets those criteria, the site is placed on the no further action sites list.

¹⁰⁰ Added requirement that any initial investigation report, such as a field report, be posted on the site's webpage. Note the provision does not require that Ecology prepare an initial investigation report. Based on STAG input.

¹⁰¹ Added requirement to notify public in *Contaminated Site Register* when Ecology initially adds a site to one of our site lists, either the contaminated sites list or the no further action sites list (this case), based on initial investigation. However, in Sections 330 and 335, we eliminated the requirement to provide notice in the *Register* whenever the listing, ranking, or status of a site changes. If requested, Ecology will instead provide a person an electronic alert when such changes occur. Based on STAG input.

¹⁰² Separated the determination that further action is necessary to confirm a threat from the determination that further action is necessary to address a threat. Note that the next steps are the same for both determinations.

¹⁰³ Clarified that the further action determination is based on the delisting criteria in WAC 173-340-330(5)(b). If the site does not meet those criteria, the site is placed on the contaminated sites list.

¹⁰⁴ Added requirement that any initial investigation report, such as a field report, be posted on the site's webpage. Note the provision does not require that Ecology prepare an initial investigation report. Based on STAG input.

- ~~(iii)~~(iv) Notify the owner, ~~and~~ operator, and any ~~potentially liable~~ person ~~known to~~ who Ecology has preliminarily determined to be liable under WAC 173-340-500(1).¹⁰⁵ in writing of Ecology's determination. The notice may be combined with the potentially liable person status letter in WAC 173-340-500. The notice must include:
- (A) The basis for Ecology's ~~decision~~ determination;
 - ~~(B)~~ The site's hazard rankings.¹⁰⁶
 - ~~(B)~~(C) Information on the cleanup process provided for in this chapter;
 - ~~(C)~~(D) A statement that it is Ecology's policy to work cooperatively with persons to accomplish prompt and effective cleanups;
 - ~~(D)~~ An Ecology staff or office to contact regarding the contents of the letter;¹⁰⁷ ~~and~~
 - (E) A statement that the ~~letter~~ notice is not a determination of liability and that cooperating with Ecology in planning or conducting a remedial action is not an admission of guilt or liability; ~~and~~
 - ~~(F)~~ An Ecology website where information about the site is publicly available, and instructions on how to sign up for electronic alerts about the site under WAC 173-340-600(6);¹⁰⁸ ~~and~~
 - ~~(G)~~ An Ecology staff or office to contact about the contents of the notice.¹⁰⁹
- (v) Notify the public of Ecology's determination in the *Contaminated Site Register* under WAC 173-340-600(7). The notice must include instructions on how to sign up for electronic alerts about the site under WAC 173-340-600(6).¹¹⁰
- ~~(iv)~~(vi) Notify persons within the potentially affected vicinity of the threat, if Ecology ~~Determines whether that~~ an emergency remedial action or other ~~an interim action is necessary under state cleanup law to address the threat posed by the~~

¹⁰⁵ Clarified that Ecology must notify persons who Ecology has preliminarily determined to be liable under Section 500. The current rule language ("PLP known to Ecology") was unclear as to whether Ecology needed to have made a preliminary or also a final determination.

¹⁰⁶ Added requirement that Ecology include in the early notice to owners and operators the site's hazard rankings. Before SHARP, that was not possible.

¹⁰⁷ Moved to paragraph (G) below for logical flow.

¹⁰⁸ Added requirement that Ecology include in the early notice to owners and operators a link to the site's webpage and instructions for how to sign up for automatic alerts when specified information about the site changes (such as a site's listing, ranking, or status). Based on STAG input.

¹⁰⁹ Moved from paragraph (D) above for logical flow.

¹¹⁰ Added requirement to notify public in *Contaminated Site Register* when Ecology initially adds a site to one of our site lists, either the contaminated sites list (this case) or the no further action sites list, based on initial investigation. However, in Sections 330 and 335, we eliminated the requirement to provide notice in the *Register* whenever the listing, ranking, or status of a site changes. If requested, Ecology will instead provide a person an electronic alert when such changes occur. Based on STAG input.

~~release or threatened release~~ and that such notice is needed.¹¹¹ ~~If such action is necessary,~~

(A) Ecology may require the owner or operator to ~~notify persons within the potentially affected vicinity~~ provide the notice on Ecology's behalf. If required in writing by Ecology, the owner or operator must provide the notice.

(B) Ecology ~~must~~ will determine the method and nature of the ~~notification~~ notice on a case-by-case basis using the methods specified in WAC 173-340-600. ~~The owner or operator must comply with the requirement if made in writing.~~

(f)¹¹² A release or threatened release occurred that poses a threat to human health or the environment, but action under another state or federal law¹¹³ is appropriate. The steps Ecology will take depend on the other authority identified by Ecology.

(i) For all sites where Ecology determines action is appropriate under another state or federal law, Ecology will:

(A) Refer the site to the applicable government agency or program; and

(B) Notify the owner and operator in writing of its determination.

(ii) For sites where Ecology determines action is appropriate under the federal cleanup law, the federal solid waste disposal act (42 U.S.C. 6901 et seq.), the state hazardous waste management act (chapter 70A.300 RCW), the state solid waste management act (chapter 70A.205 RCW), or the state pollution liability protection act (chapter 70A.330 RCW), Ecology will also:¹¹⁴

(A) Perform a site hazard assessment and ranking in accordance with WAC 173-340-320;

(B) List the site on Ecology's contaminated sites list in accordance with WAC 173-340-330(2);

¹¹¹ Regarding emergency actions, clarified what determinations Ecology must make and who is responsible for providing notice to people in the potentially affected vicinity. These changes are based on STAG input. However, we declined requests from STAG members to provide direct notice to people in the vicinity whenever Ecology determines further action is necessary at a site. That would be incredibly difficult. Instead, we are enhancing a person's ability to find sites in their vicinity and obtain more information about those sites if they are interested, including signing up to receive automated electronic alerts when something changes about a site. Ecology retains the authority to provide or require additional notice on a site-specific basis.

¹¹² Moved from (c) of this subsection for more logical flow. Modified as noted.

¹¹³ Clarified that other authorities are state and federal laws.

¹¹⁴ For sites managed in part or all under these specific authorities, added these three steps to reflect current practice and the applicability of the new SHARP assessment. We already track these sites in our database (about 300) and list the sites, as per Toxics Cleanup Program Policy 310A. Conducting a SHARP assessment for such sites is a new requirement, but it is consistent with the purpose of SHARP (compared to the old SHA).

- (C) Make any initial investigation report publicly available on Ecology's website.¹¹⁵ and
- (D) Notify the public of Ecology's determination in the *Contaminated Site Register* under WAC 173-340-600(7). The notice must include instructions on how to sign up for electronic alerts about the site under WAC 173-340-600(6).¹¹⁶

- (7) **Reservation of rights.** Nothing in this section precludes Ecology from taking or requiring appropriate remedial action at any time.

¹¹⁵ Added requirement that any initial investigation report, such as a field report, be posted on the site's webpage. Note the provision does not require that Ecology prepare an initial investigation report. Based on STAG input.

¹¹⁶ Added requirement to notify public in *Contaminated Site Register* when Ecology initially adds a site to one of our site lists, either the contaminated sites list (this case) or the no further action sites list, based on initial investigation. However, in Sections 330 and 335, we eliminated the requirement to provide notice in the *Register* whenever the listing, ranking, or status of a site changes. If requested, Ecology will instead provide a person an electronic alert when such changes occur. Based on STAG input.

WAC 173-340-320 Site hazardous assessment and ranking process.

Tracked changes to Preliminary Draft 1, previously reviewed by STAG.

- (1) **Purpose.**¹¹⁷ The ~~purpose of the~~ site hazard assessment and ranking process ~~is to provide~~ a ~~uniform system method~~ for Ecology to ~~evaluating and comparing~~ assess and rank threats to human health and the environment posed by a ~~contaminated sites~~ based on information readily available at the time of assessment. The site hazard assessment and ranking process satisfies the requirements of RCW 70A.305.030(2)(b),¹¹⁸ and is not ~~intended to provide~~ a substitute for a ~~detailed site characterization~~ remedial investigation.¹¹⁹ Ecology uses ~~the process~~ site hazard assessments and rankings to:¹²⁰
- (a) ~~Assess threats posed by contaminated sites within each environmental medium~~ Support decisions to add or remove sites from the contaminated sites list under WAC 173-340-330 or the no further action sites list under WAC 173-340-335;
 - (b) ~~Compare threats posed within and among contaminated sites to p~~ Prioritize remedial actions and allocate agency resources among and within sites under WAC 173-340-340;
 - (c) Reflect changes in threats posed by ~~contaminated a~~ sites based on new information or changes in site conditions; ~~and~~
 - ~~(d) — Support decisions whether to list, de-list, or re-list contaminated sites under WAC 173-340-330; and~~
 - ~~(e)~~(d) Inform the legislature and the public about the threats posed by contaminated sites.
- (2) **Development.**¹²¹ Ecology ~~must develop~~ will establish and maintain a site hazard assessment and ranking process. ~~Before implementing the process, Ecology must provide the public with notice and opportunity to comment on the process.~~
- ~~(3)~~(a) **Scope and content Standards.** The A site hazard assessment and ranking process must enable Ecology to use readily available information¹²² to:
- ~~(a)~~(i) Assess and rank the potential ~~for~~ exposure of human and environmental receptors to confirmed or suspected releases ~~or threatened releases of~~ hazardous substances ~~at the contaminated site, considering exposures through~~

¹¹⁷ Clarified the purpose of the site hazard assessment and ranking process (SHARP) in response to STAG input.

¹¹⁸ Added reference to the requirement in the MTCA statute to establish a hazard ranking system.

¹¹⁹ Clarified that the SHARP process is not a substitute for a remedial investigation. We considered, but declined to include in the rule disclaimers about what SHARP does not provide. If questions should arise during implementation, Ecology may include appropriate disclaimers on site hazard rankings.

¹²⁰ Clarified how Ecology will use site hazard rankings, which are the results of SHARP assessments. That is distinguished from what Ecology does as part of SHARP (assess threats). Based on STAG input.

¹²¹ Restructured Section 320 to group SHARP development provisions, including standards and public participation, under one subsection.

¹²² Emphasized that the process is based on readily available information with a confidence evaluation.

~~soil, groundwater, surface water, sediments, and air~~ each environmental medium.¹²³

~~(b)(ii)~~ Assess and rank the ~~relative~~ severity of such ~~threats~~ exposures to human health and the environment;¹²⁴

~~(c)(iii)~~ ~~Assess and identify~~ whether the population ~~near the site is exposed~~ may be a vulnerable population or an overburdened community.¹²⁵ and

~~(d)(iv)~~ Report the ~~evaluator's~~ assessor's level of confidence in the ~~exposure and severity rankings as appropriate to the quality and quantity of information available to the evaluator at the time of ranking~~ information used for the assessment.¹²⁶

(b) Public participation. When establishing a site hazard assessment and ranking process or any substantive change to the process,¹²⁷ Ecology will provide the public with notice and an opportunity to comment. The public comment period must be at least thirty days.¹²⁸

(3) Implementation.¹²⁹

~~(4)(a)~~ **Applicability and timing.**¹³⁰

(i) Ecology ~~must perform~~ will conduct a site hazard assessment and ranking before ~~listing, de-listing, or re-listing~~ adding or removing a contaminated site from the contaminated sites list under WAC 173-340-330 ~~and when required under WAC 173-340-310(6)(d)(i)~~ or the no further action sites list under WAC 173-340-335.

¹²³ Simplified statement based on STAG input.

¹²⁴ Corrected statement.

¹²⁵ Updated to reflect HEAL act terminology. Also corrected statement to recognize that vulnerable populations and overburdened communities may be adversely affected by a site based on their use of the site (such as fishing), not just where they live. As part of the initial investigation of a site, Ecology will try to determine whether vulnerable populations or overburdened communities may be located at the site, using the environmental health disparities map or other readily available information. Subsequent remedial investigations of the site will help identify any off-site populations and their site uses. Correction based on STAG input.

¹²⁶ Simplified and corrected the statement.

¹²⁷ Added requirement that Ecology provide notice and opportunity to comment on any substantive changes to the SHARP process. Based on STAG input.

¹²⁸ Declined request by some STAG members to add a requirement that Ecology respond to comments. However, Ecology will respond to comments, both for the initial development of the SHARP tool and for any subsequent substantive change.

¹²⁹ Restructured Section 320 by grouping SHARP implementation provisions (when, who, how, notice) under one subsection.

¹³⁰ Declined request from a STAG member to provide a right to petition for a site to be re-ranked. The rule specifies when Ecology must conduct a SHARP assessment during the cleanup process, and provides Ecology the discretion to conduct SHARP assessments at other times when new information becomes available or when site conditions change. Ecology will not re-rank a site if those criteria are not met. Ecology plans to develop policies and procedures that outline when Ecology will or may conduct a SHARP assessment and what factors Ecology should consider before doing so.

(ii) For sites on the contaminated sites list on the effective date of this section, Ecology will conduct a site hazard assessment and ranking as resources permit. As part of the strategic plan required under WAC 173-340-340, Ecology will develop goals and strategies for completing a site hazard assessment and ranking of such sites.¹³¹

(iii) Ecology may also ~~perform~~conduct a site hazard assessment and ranking when new information becomes available or when site conditions change.

~~(5)(b) Performance. Ecology will review readily available information ~~W~~when performingconducting a site hazard assessment and ranking. Ecology must review available information and use best professional judgment. At a minimum, Ecology must consider the following information, as available:~~¹³²

- ~~(a) Evidence supporting or confirming a release or threatened release of hazardous substances to the environment;~~
- ~~(b) Observed or reported hazardous substances, including what was or may have been released or threatens to be released, what products of decomposition, recombination, or chemical reaction are currently present, and estimated quantities and concentrations;~~
- ~~(c) Descriptions of facilities containing releases, if any, and their condition;~~
- ~~(d) Location of areas where hazardous substances are known or suspected;~~
- ~~(e) Surface water run-on and run-off and the leaching potential of the hazardous substances;~~
- ~~(f) Characterizations of subsurface and groundwater actually or potentially affected by the release, including the depth of groundwater and distance to nearby wells, bodies of surface water, and drinking water intakes;~~
- ~~(g) Evaluations of possible receptors, including human populations and any sub-populations with increased vulnerability to harm from exposure to contaminants, food crops, recreation areas, parks, sensitive environments, irrigated areas, and aquatic resources currently or potentially affected by~~

¹³¹ Added policy regarding conducting a site hazard assessment and ranking of sites currently on the contaminated sites list. As part of its strategic plan under Section 340, Ecology will establish goals and strategies (including priorities) for completing such assessments.

¹³² Eliminated provision specifying what information Ecology must consider when conducting SHARP assessments. We decided that level of detail is best addressed in policy and procedure, not the rule. Further, this provision had been adapted from the current rule, which specified what information needed to be collected during an SHA. By contrast, SHARP relies on readily available information. Just because certain info does not exist does not mean that we won't complete a SHARP assessment. This decision was prompted in part by STAG input regarding this provision aimed at revising or adding to the list of what info we should consider when conducted assessment. Those comments made it more evident that such details should be left out of the rule.

~~contaminated soil, surface water, groundwater, vapor intrusion or sediment containing contaminants released at the site; and~~

~~(h) — Any other physical factors that may be significant in estimating the potential or current exposure to sensitive biota.~~

~~(6)(c)~~ **Performance by Reliance on others.** Ecology may rely on another government agency or a contractor to Ecology to perform a site hazard assessment and ranking on its behalf, provided:

~~(a)(i)~~ The agency or contractor is not suspected of having contributed to the release or threatened release; and

~~(b)(ii)~~ The agency or contractor has no conflict of interest.

~~(7)(d)~~ **Notification.**¹³³ ~~Upon completion of a site hazard assessment and ranking of a contaminated site, Ecology must:~~

~~(a) — Notify the owner and operator and any potentially liable person identified by Ecology under WAC 173-340-500 of the results;~~

~~(b) — Inform the public by publishing the results in the *Site Register* and making the results available on Ecology's website.~~

(i) Ecology will make the site's current hazard rankings publicly available on Ecology's website under WAC 173-340-600(5).

(ii) If requested, Ecology will notify a person electronically under WAC 173-340-600(6) upon completing a site hazard assessment and ranking.

¹³³ Replaced requirements to provide written notice to regulated persons and notice to the public in the *Contaminated Site Register* about changes to the site's listing, ranking, or status, with the requirement to provide site-specific electronic alerts to any person who requests such notice. Ecology will provide instructions on how to sign up for such alerts in our written notices to regulated persons and in our *Contaminated Site Register* notices to the public when we add a new site to the Contaminated Sites List following an initial investigation. See Section 310(6). Instructions will also be included on Ecology's website. See similar changes in Sections 330 and 335. The contaminated site's listing, ranking, and status will also be posted on the site's webpage.

WAC 173-340-330 Contaminated sites list.

Tracked changes to Preliminary Draft 1, previously reviewed by STAG.

- (1) **Purpose.** The purpose of the contaminated sites list is to identify:
- (a) ~~Identify~~ All sites where for which Ecology or PLIA¹³⁴ has determined further remedial action is or may be necessary under this chapter state cleanup law to:¹³⁵
 - (i) Confirm whether there is a threat to human health or the environment posed by a release or threatened release; or
 - (ii) Address the threat posed by a release or threatened release, based on the criteria in subsection (5)(b) of this section;¹³⁶ and
 - (b) For each listed site, Specify the site's current hazard ranking and status of remedial action ~~status for each listed site.~~¹³⁷
- (2) ~~Listing~~ Adding a sites to the list. ~~Ecology must rank and place a site on the contaminated sites list if, a~~ After completion of an initial investigation under WAC 173-340-310 or 374-45-040,¹³⁸ Ecology will add a site to the contaminated sites list if Ecology or PLIA determines further remedial action is or may be required at the site necessary under state cleanup law to:¹³⁹
- (a) Confirm whether there is a threat to human health or the environment posed by a release or threatened release; or
 - (b) Address the threat posed by a release or threatened release, based on the criteria in subsection (5)(b) of this section.
- ~~Placement of a site on the contaminated sites list does not, by itself, imply that persons associated with the site are liable under chapter 70.105D RCW.~~¹⁴⁰
- (3) ~~Status of~~ Tracking the remedial actions ~~status of a site.~~ For each site on the contaminated sites list, Ecology must will track and include on the contaminated sites list the site's status of

¹³⁴ Updated definition of contaminated site to recognize that PLIA may also determine whether further remedial action is necessary under state cleanup law (see RCW 70A.330.040(7) and (12)).

¹³⁵ Clarified definition of contaminated site (and basis for listing) to recognize that further remedial action may be necessary under state cleanup law to either confirm a suspected threat or to address a confirmed threat.

¹³⁶ Clarified that the determination as to whether further action is necessary to address a threat is based on the delisting criteria in WAC 173-340-330(5)(b). If a site doesn't meet the criteria, the site is a "contaminated site" and is added to the "contaminated sites list." Once a site meets the criteria, the site is removed from the "contaminated sites list" and added to the "no further action sites list."

¹³⁷ Replaced requirement to include site hazard rankings on the contaminated sites list with a requirement to include the rankings on Ecology's website (on the site's webpage). Including the new SHARP rankings on the list itself is impractical given the number of data points for each site (24).

¹³⁸ Added reference to PLIA's authority to determine, for heating oil tank sites, whether further remedial action is necessary based on an initial investigation.

¹³⁹ See notes on subsection (1)(a).

¹⁴⁰ Moved to subsection (10).

remedial action ~~status at each site on the list~~. Ecology may change the remedial action status of a site to reflect current conditions.

(4) Splitting or combining sites on the list. Ecology may split or combine sites on the contaminated sites list consistent with its authority under chapter 70A.305 RCW.¹⁴¹

~~(4)(5) De-listing sites~~ Criteria for removing a site from the list. Ecology will remove a site from the contaminated sites list if, and only if, Ecology or PLIA¹⁴² determines that:

~~(a) Basis. Ecology may remove a site from the contaminated sites list only after it has determined that:~~

~~(i)(a)~~ The listing of the site was erroneous; or

(b) The site meets the following criteria:

(i) For sites where the selected cleanup action is permanent:¹⁴³

(A) All cleanup standards have been achieved; and

(B) All necessary remedial actions under state cleanup law have been completed;

(ii) For sites where the selected cleanup action is not permanent and does not include containment,¹⁴⁴

(A) All cleanup standards have been achieved; and

(B) ~~a~~ All necessary remedial actions under state cleanup law, except confirmation~~at~~ monitoring and periodic reviews, have been completed and compliance with the cleanup standards has been achieved at the site; or

(iii) For sites where the selected cleanup action is not permanent and includes containment, ~~if all of the following conditions have been met:~~

(A) All cleanup standards have been achieved,¹⁴⁵

¹⁴¹ Added provision to clarify that Ecology retains its authority to split or combine sites consistent with MTCA. As provided under subsection (9), Ecology will provide automated alerts to interested persons when this occurs.

¹⁴² Updated to recognize that PLIA may also determine whether further remedial action is necessary under state cleanup law based on reviews of independent remedial actions, either during an initial investigation or under their technical assistance programs (see RCW [70A.330.040](#)(7) and (12)).

¹⁴³ For delisting criteria, separated out sites where the cleanup action is permanent from those where the cleanup action is not permanent, but does not involve containment. If the cleanup action is permanent, there are no post-cleanup controls or monitoring, including periodic reviews. This case is addressed in (b)(i) of this subsection. If the cleanup action is not permanent, but does not involve containment, post-cleanup controls and monitoring are required, including periodic reviews. This case is addressed in (b)(ii) of this subsection.

¹⁴⁴ See note for (b)(i) of this subsection.

¹⁴⁵ For sites where the cleanup action includes containment, clarified that all cleanup standards must be achieved. For cleanup actions involving soil containment, this means that Ecology has determined that the cleanup action

(B) All necessary construction has been completed.¹⁴⁶

~~(A)~~(C) All ~~construction and operation of remedial actions~~necessary operation and maintenance activities have been ~~adequately completed and,~~except for the following:

(I) ~~Only passive maintenance activities, such as monitoring, inspections, and/or periodic repairs remain;~~ or

(II) For ~~all~~ solid waste landfills permitted under chapter 173-304, 173-350, or 173-351 WAC, a closure plan meeting the substantive requirements in chapters 173-350 WAC or 173-351 WAC, whichever is deemed to be applicable or relevant and appropriate under WAC 173-340-710, has been approved by Ecology as part of a remedial action under this chapter and the only remaining active maintenance activities are any operation or maintenance activities of systems for methane explosive gas control, the operation of leachate collection and treatment systems, and/or surface water diversion run-on or runoff management.¹⁴⁷

~~(B)~~ ~~Sufficient confirmational monitoring has been done to demonstrate that the remedy has effectively contained the hazardous substances of concern at the site;~~¹⁴⁸

~~(C)~~(D) All ~~required~~necessary performance monitoring has been completed;

(E) Sufficient confirmation monitoring has been completed to demonstrate that the cleanup action effectively contains the hazardous substances of concern at the site.¹⁴⁹

~~(D)~~(F) Any required institutional controls are in place and have been demonstrated to be effective in protecting ~~public~~human health and the environment ~~from exposure to hazardous substances and protecting the integrity of the cleanup action;~~

meets the criteria in Section 740(6)(f). The current rule required indirectly by requiring completion of performance monitoring.

¹⁴⁶ Separated the construction criteria from operation and maintenance criteria.

¹⁴⁷ For solid waste landfills, updated the operation and maintenance (O&M) criteria to allow a site to be delisted even when active O&M of some specified systems is needed, provided that the landfill is permitted under either chapter 173-304, 173-350, or 173-351 WAC. Such landfills are subject to closure and post-closure plans that have been approved by the permitting authority. For landfills permitted under the older chapter 173-304 WAC, Ecology may require compliance with any more stringent requirements in chapter 173-350 or 173-351 WAC as part of a cleanup action plan if it determines they are relevant and appropriate. See WAC 173-340-710(9)(c).

¹⁴⁸ Moved to (b)(iii)(E) of this subsection for a more logical flow. Confirmation monitoring follows performance monitoring.

¹⁴⁹ Moved from (b)(iii)(B) of this subsection for a more logical flow. Confirmation monitoring follows performance monitoring.

(G) Any required financial assurances are in place;¹⁵⁰ and

~~(E)(H)~~ Written documentation is present in Ecology files that describes what hazardous substances ~~have been left~~ remain on site, where they are located, and the long-term monitoring and maintenance obligations at the site;¹⁵¹

~~(F) When required under WAC 173-340-440, financial assurances are in place;¹⁵¹ and~~

~~(G) For sites with releases to groundwater, it has been demonstrated the site meets groundwater cleanup levels at the designated point of compliance.¹⁵²~~

~~(b)~~(6) Petitions for removing a site from the list. A site owner, operator, or potentially liable person may petition Ecology to remove a site from the contaminated sites list.

~~(i)(a)~~ Content. ~~The~~A petition must be in writing and include ~~thorough documentation of all investigations performed, all cleanup actions taken, and adequate compliance monitoring to demonstrate to Ecology's satisfaction that one of the conditions in (a) of this subsection has been met.~~the following.¹⁵³

(i) For claims the listing of the site is erroneous under subsection (4)(a) of this section, sufficient documentation of investigations to demonstrate to Ecology's satisfaction that the listing is erroneous;

(ii) For claims based on an independent remedial action,¹⁵⁴ a written opinion from Ecology under WAC 173-340-515(5), or PLIA under chapter 374-80 WAC, that no further remedial action is necessary at the site to meet the criteria in subsection (5)(b) of this section; or

(iii) For claims based on an Ecology-supervised or Ecology-conducted remedial action, sufficient documentation of remedial actions, including investigations, cleanup actions, and compliance monitoring, to demonstrate to Ecology's

¹⁵⁰ Moved from former (b)(iii)(F) of this subsection for a more logical flow. Also edited to simplify.

¹⁵¹ Moved to (b)(iii)(G) of this subsection for a more logical flow.

¹⁵² Replaced by more general condition in (b)(iii)(A) of this subsection that all cleanup standards (not just groundwater cleanup standards) must be met. See also note regarding (b)(iii)(A).

¹⁵³ Separated the requirements for what must be included in a petition based on the type of claim (whether erroneous listing or whether NFA, and if the latter, whether based on an independent remedial action or an Ecology-conducted or supervised remedial action). Except as noted in (a)(ii) of this subsection, the requirements have not changed.

¹⁵⁴ For petitions to remove a site from the contaminated sites list (CSL) based on independent remedial action, added requirement that the petitioner must include a written NFA opinion from Ecology or PLIA, as applicable, under their relevant technical assistance programs. Change prompted by STAG input asking us to establish parameters for the process. This requirement would likely eliminate the need for a petition except in cases where Ecology or PLIA made an administrative mistake. That's because, if the petitioner got an NFA opinion from Ecology or PLIA, Ecology would automatically delist the site upon issuance of the NFA opinion.

satisfaction that no further remedial action is necessary at the site to meet the criteria in subsection (5)(b) of this section.

~~(ii)(b)~~ **Response.** Ecology ~~must~~will review the petition. However, the timing of Ecology's review is at its discretion and as resources permit.

~~(iii)~~ Unless Ecology determines the listing is erroneous,¹⁵⁵ Ecology may collect from the petitioner all costs incurred by Ecology in reviewing ~~and verifying the work performed~~the petition and, as applicable, providing for public participation under subsection (6) of this subsection.¹⁵⁶ Ecology may require a deposit in advance of reviewing the petition.

~~(e)(7)~~ **Public participation when removing a site from the list.** For Ecology-conducted and Ecology-supervised remedial actions, Ecology ~~must inform and will~~ provide ~~the public an opportunity to comment~~public notice in accordance with WAC 173-340-600(17) before removing a site from the contaminated sites list.

~~(5)~~ ~~**No further action sites list.** Ecology must maintain a list of sites where Ecology has determined no further remedial action is necessary under this chapter. This includes sites where Ecology made a determination based on an initial investigation under WAC 173-340-310(6)(d) and sites that Ecology has removed from the contaminated sites list under subsection (4) of this section, except for erroneously listed sites. As part of the list, Ecology must identify which sites require institutional controls under WAC 173-340-440 and which sites are subject to periodic review under WAC 173-340-420.~~¹⁵⁷

~~(6)(8)~~ **Re-listing of sites.** Ecology may re-list a site on the contaminated sites list that it previously removed from the list if Ecology or PLIA determines further remedial action is necessary at the site ~~under this chapter~~ to meet the criteria in subsection (5)(b) of this section.

~~(7)(9)~~ **Notification.** ~~Upon listing, de-listing, or re-listing of a site on the contaminated sites list, or upon any change in the remedial action status of a site on the list, Ecology must:~~

~~(a)~~ ~~Notify the owner and operator and any potentially liable person identified by Ecology under WAC 173-340-500;~~

~~(b)~~ ~~Inform the public by publishing in the *Site Register* and making available on Ecology's website.~~

(a) Ecology will make the contaminated sites list and the current list of remedial action status categories publicly available on Ecology's website.¹⁵⁸

¹⁵⁵ Eliminated Ecology's authority to recover its costs when Ecology determines the listing is erroneous (as opposed to determining no further remedial action is necessary). Change made based on STAG request.

¹⁵⁶ Clarified, consistent with [Policy 330](#), that Ecology may recover both the costs of reviewing the petition and, if applicable, provide public participation.

¹⁵⁷ Moved requirements governing the no further action sites list to the new Section 335 to clearly communicate the different purposes and requirements for the two lists.

¹⁵⁸ Added requirement that Ecology will make the contaminated sites list available on Ecology's web site. This reflects current practice. We will not publish a printed document. Also added requirement that Ecology will make

- (b) Ecology will make a site’s current remedial action status publicly available on Ecology’s website under WAC 173-340-600(5).¹⁵⁹
- (c) If requested, Ecology will notify a person electronically under WAC 173-340-600(6) upon:¹⁶⁰
 - (i) Any change in a site’s remedial action status;
 - (ii) Splitting or combining a site on the contaminated sites list; or
 - (iii) Removing or re-listing a site on the contaminated sites list.
- (10) **Liability.** Placement of a site on the contaminated sites list does not, by itself, imply that persons associated with the site are liable under chapter 70A.305 RCW.¹⁶¹

the current list of remedial action status categories available to the public on Ecology’s website. This is in place of listing those status categories in the rule, which some STAG members requested. This helps preserve our discretion to make changes outside of the rule while also notifying the public.

¹⁵⁹ Added requirement that Ecology must make available to the public on its website any changes to the contaminated sites list or the remedial action status of any site on that list.

¹⁶⁰ Replaced requirements to provide written notice to regulated persons and notice to the public in the *Contaminated Site Register* about changes to the site’s listing, ranking, or status, with the requirement to provide site-specific electronic alerts to any person who requests such notice. Ecology will provide instructions on how to sign up for such alerts in our written notices to regulated persons and in our *Contaminated Site Register* notices to the public when we add a new site to the Contaminated Sites List following an initial investigation. See Section 310(6). Instructions will also be included on Ecology’s website. See similar changes in Sections 320 and 335. The contaminated site’s listing, ranking, and status will also be posted on the site’s webpage.

¹⁶¹ Moved from subsection (2).

WAC 173-340-335 No further action sites list.¹⁶²

Tracked changes to Preliminary Draft 1, previously reviewed by STAG.

- (1) Purpose.** The purpose of the no further action sites list is to identify:
 - (a)** All sites where Ecology or PLIA has determined no further remedial action is necessary under state cleanup law to meet the criteria in WAC 173-340-330(5)(b);¹⁶³ and
 - (b)** For each listed site, whether institutional controls or periodic reviews remain necessary at the site.
- (2) Adding a site to the list.** Ecology will add a site to the no further action sites list if, and only if:
 - (a)** After completing an initial investigation, Ecology or PLIA determines that no further remedial action is necessary under state cleanup law to meet the criteria in WAC 173-340-330(5)(b);¹⁶⁴ or
 - (b)** Ecology removes the site from the contaminated sites list based on the criteria in WAC 173-340-330(5)(b).
- (3) Tracking institutional controls and periodic reviews.** For each site on the no further action sites list, Ecology will identify on the list whether the site requires:
 - (a)** Institutional controls under WAC 173-340-440; or
 - (b)** Periodic reviews under WAC 173-340-420.¹⁶⁵
- (4) Removing a site from the list.** If Ecology re-lists a site on the contaminated sites list under WAC 173-340-330(8), Ecology will remove the site from the no further action sites list.
- (5) Notification.**
 - (a)** Ecology will make the no further action sites list publicly available on Ecology's website.¹⁶⁶

¹⁶² Moved requirements governing the no further action sites list from Section 330 to this new section to clearly communicate the different purposes and requirements for the two lists. Ecology currently maintains such a list. See <https://apps.ecology.wa.gov/tcpwebreporting/reports/cleanup/nfa>.

¹⁶³ Clarified that the further action determination is based on the delisting criteria in WAC 173-340-330(5)(b). If the site meets the criteria, the site is placed on the "no further action sites list."

¹⁶⁴ Clarified that the no further action sites list must include sites where Ecology made a no further action determination based on an initial investigation.

¹⁶⁵ While we currently track the need for periodic reviews at a site, we do not document that need on the no further action sites list. But we confirmed that we can do that in the future, as we already do with institutional controls.

¹⁶⁶ Added requirement that Ecology will make the no further action sites list available to the public on Ecology's website. This reflects current practice. We will not publish a printed document.

- (b) If requested, Ecology will notify a person electronically under WAC 173-340-600(6) upon adding or removing a site on the no further action sites list.¹⁶⁷

¹⁶⁷ Replaced requirements to provide written notice to regulated persons and notice to the public in the *Contaminated Site Register* about changes to the site's listing, ranking, or status, with the requirement to provide site-specific electronic alerts to any person who requests such notice. Ecology will provide instructions on how to sign up for such alerts in our written notices to regulated persons and in our *Contaminated Site Register* notices to the public when we add a new site to the Contaminated Sites List following an initial investigation. See Section 310(6). Instructions will also be included on Ecology's website. See similar changes in Sections 320 and 330. The contaminated site's listing, ranking, and status will also be posted on the site's webpage.

WAC 173-340-340 ~~Biennial program plans and expenditures~~ Program planning and assessment.¹⁶⁸

Tracked changes to Preliminary Draft 1, previously reviewed by STAG.

- ~~(1) — Program plans.~~ Before September 20 of each even-numbered year, Ecology must prepare a comprehensive ten-year financing report for the legislature in accordance with RCW ~~70.105D.030(4)~~. The report must identify the projected financing need for remedial action projects that are eligible for funding under the model toxics control capital account over the next ten years and Ecology's budget request for the next biennium.¹⁶⁹
- ~~(a) — Prioritization.~~ When prioritizing remedial action projects for funding under the model toxics control capital account, Ecology must first protect investments in cleanups at sites where the state is required to provide assurances under section 104 of the federal cleanup law, 42 U.S.C. Sec. 9604, and at sites where Ecology is operating or maintaining the cleanup. Ecology must then consider the general funding hierarchy in RCW ~~70.105D.200(4)(a)~~.¹⁷⁰
- ~~(i) —~~ When prioritizing remedial action projects that are eligible for a grant or loan under RCW ~~70.105D.200(4)(a)(i) and (ii)~~, Ecology must comply with the requirements in chapter ~~173-322A~~ WAC.¹⁷¹
- ~~(ii) —~~ When prioritizing remedial action projects that are eligible for other types of funding under RCW ~~70.105D.200(4)(a)~~, Ecology must consider the following factors:¹⁷²
- ~~(A) —~~ The threats posed by the site to human health and the environment;
- ~~(B) —~~ Whether the site affects a highly impacted community;
- ~~(C) —~~ The land reuse potential and planning for the site; and
- ~~(D) —~~ Other factors as determined by Ecology.
- ~~(b) — Notice.~~ Ecology must provide notice in the *Site Register* when:
- ~~(i) —~~ Publishing the ten-year financing report required under subsection (1) of this section;¹⁷³ and

¹⁶⁸ Refocused Section 340 on Ecology's strategic planning and performance assessment for cleaning up contaminated sites. This planning and assessment will inform Ecology's budget requests and biennial legislative planning and expenditure reports.

¹⁶⁹ Removed from the rule the biennial MTCA 10-year cleanup financing plan mandated by statute in RCW 70A.305.030(4). The legislative report is still mandated by the statute. Ecology's strategic plan for cleanup, required under revised subsection (1), will inform the legislative report.

¹⁷⁰ Removed from the rule Ecology's overall cleanup funding hierarchy. Ecology's strategic plan for cleanup, required under revised subsection (1), will inform the legislative report.

¹⁷¹ Eliminated reference to remedial action grant prioritization factors in chapter 173-322A WAC.

¹⁷² Moved resource allocation factors to revised subsection (2) and amended as noted.

¹⁷³ Moved *Contaminated Site Register* notice requirements for legislative reports to Section 600(7)(b).

- ~~(ii) Submitting a biennial or supplemental budget request for a remedial action project eligible for funding under the model toxics control capital account.~~¹⁷⁴
- ~~(2) **Program expenditures.** By December 1st of each odd-numbered year, Ecology must provide the legislature and the public a report of Ecology's activities supported by appropriations from the model toxics control operating, capital, and stormwater accounts in accordance with RCW 70.105D.030(5). The report must be prepared and displayed in a manner that allows the legislature and the public to easily determine the statewide and local progress made in cleaning up contaminated sites under this chapter.~~¹⁷⁵ ~~When publishing the report, Ecology must provide a notice in the *Site Register*.~~¹⁷⁶
- (1) Strategic plan.**¹⁷⁷ Ecology will develop and periodically update a comprehensive and integrated strategic plan for cleaning up contaminated sites. The strategic plan must prioritize vulnerable populations and overburdened communities impacted by contaminated sites¹⁷⁸ and consider the resource allocation factors in subsection (2) of this section.¹⁷⁹ The strategic plan must include:¹⁸⁰
- (a)** Goals and strategies for all core program functions and major initiatives;
 - (b)** Metrics to track and measure progress in accomplishing the goals and implementing the strategies; and
 - (c)** Staffing and capital funds needed to accomplish the goals and implement the strategies.
- (2) Resource allocation.**¹⁸¹ In fulfilling the objectives of this chapter, Ecology will allocate staffing and capital funds based on the following factors:
- (a)** The threats posed by a contaminated site to human health and the environment;
 - (b)** Whether the population threatened by a contaminated site is a vulnerable population or an overburdened community;¹⁸²
 - (c)** The land reuse potential and planning for a contaminated site; and

¹⁷⁴ Eliminated *Contaminated Site Register* notice requirements for budget requests. The entire agency's budget requests are made publicly available on Ecology's website when submitted to the Governor's Office.

¹⁷⁵ Removed from the rule the biennial MTCA expenditure report mandated by statute in RCW 70A.305.030(5). The legislative report is still mandated by the statute. Ecology's strategic plan for cleanup, required under revised subsection (1), will inform the legislative report.

¹⁷⁶ Moved *Contaminated Site Register* notice requirements for legislative reports to Section 600(7)(b).

¹⁷⁷ Added requirement for Ecology to prepare and periodically update a comprehensive and strategic plan for cleaning up contaminated sites.

¹⁷⁸ Specified that the strategic plan must prioritize vulnerable populations and overburdened communities, consistent with the goals of the HEAL act, Chapter 70A.02 RCW.

¹⁷⁹ Specified that the strategic plan must consider the resource allocation factors in subsection (2).

¹⁸⁰ Specified that the strategic plan must identify goals and strategies, performance metrics, and needed staffing and capital funds.

¹⁸¹ Retained resource allocation factors from previous draft, and amended as noted.

¹⁸² Updated the environmental justice factor to reflect terminology in the HEAL act, Chapter 70A.02 RCW.

- (d) Other factors specified by the legislature¹⁸³ or Ecology.
- (3) Performance assessment.**¹⁸⁴ Ecology will periodically assess its progress in accomplishing its goals and implementing its strategies for cleaning up contaminated sites, including its progress in cleaning up sites impacting vulnerable populations and overburdened communities,¹⁸⁵ using the metrics established under subsection (1)(b) of this section.
- (4) Notification.**
 - (a) Ecology will make the strategic plans and performance assessments required under subsections (1) and (3) publicly available on Ecology's website.¹⁸⁶
 - (b) Ecology will provide notice in the *Contaminated Site Register* of the following:
 - (i) Any update to the strategic plans or performance assessments required under subsections (1) and (3) of this section;¹⁸⁷ and
 - (ii) Any additional resource allocation factors specified by Ecology under subsection (2)(d) of this section.¹⁸⁸

¹⁸³ Updated the other resource allocation factors to recognize that the legislature may also specify additional factors, either in a budget or otherwise.

¹⁸⁴ Added requirement that Ecology must periodically assess its progress in accomplishing its goals and implementing its strategies for cleaning up contaminated sites.

¹⁸⁵ Specified that Ecology's performance assessment must track its progress in cleaning up sites impacting vulnerable populations and overburdened communities.

¹⁸⁶ Added requirement that Ecology must make its strategic plans and performance assessments for cleaning up contaminated sites publicly available on its website.

¹⁸⁷ Added requirement that Ecology must provide notice in the *Contaminated Site Register* when it updates its strategic plans and performance assessments for cleaning up contaminated sites.

¹⁸⁸ Added requirement that Ecology must provide notice in the *Contaminated Site Register* when it specifies additional resource allocation factors for cleaning up contaminated sites.

WAC 173-340-350 Remedial investigation~~and feasibility study~~.¹⁸⁹

Tracked changes to Preliminary Draft 1, previously reviewed by STAG.

- (1) **Purpose.**¹⁹⁰ ~~The purpose of a remedial investigation/feasibility study is to collect, develop, and evaluate sufficient information regarding a site to establish cleanup standards under Part VII of this chapter and to select a cleanup action under WAC 173-340-350 through 173-340-390. This section specifies the requirements and procedures for conducting and reporting remedial investigations and feasibility studies.~~ The purpose of a remedial investigation is to adequately characterize a contaminated site, including the distribution of hazardous substances and the threat they pose to human health and the environment,¹⁹¹ to enable:
- (a) Cleanup standards to be established under Part 7 of this chapter; and
 - (b) Cleanup action alternatives to be developed and evaluated in a feasibility study under WAC 173-340-351.
- (2) **Applicability.** ~~The requirements in this section apply to all contaminated sites.~~
- (a) **Whether required.** A remedial investigation of a contaminated site must be conducted regardless of which administrative option in WAC 173-340-510 is used to conduct remedial action at the site.¹⁹²
 - (b) **Requirements.** A remedial investigation must comply with the requirements in this section and, as applicable, the following:
 - ~~(a)(i) **Sediment sites and cleanup units.**~~ ~~For sites where there is a release or threatened release to sediment, a remedial investigation/feasibility study must also comply with~~ the requirements in WAC 173-204-550.
 - ~~(b)(ii) **National Priorities List sites.**~~ ~~For sites on the federal National Priorities List, a remedial investigation/feasibility study must also comply with~~ the applicable requirements under the federal cleanup law.
- ~~(3) **Administrative options.** A remedial investigation/feasibility study may be conducted under any of the administrative options described in WAC 173-340-510 and 173-340-515.~~¹⁹³

¹⁸⁹ Split Section 350 into two sections, one focusing on remedial investigations (Section 350) and the other focusing on feasibility studies (Section 351).

¹⁹⁰ Based on split of Section 350, updated purpose of section to focus only on remedial investigations. Merged relevant statements of purpose from the current rule.

¹⁹¹ Clause moved from investigation requirements in subsection (6) of this section.

¹⁹² Further clarified that the requirement to conduct an RI applies regardless of which administrative option for remedial action is used (Ecology-conducted, Ecology-supervised, or independent). The performance of an RI is a substantive requirement, applicable to all sites. The reporting of an RI is an administrative requirement, which depends on the administrative option for remedial action. Clarification based on STAG input.

¹⁹³ Combined with administrative requirements in subsection (4).

(3) Timing and phasing.¹⁹⁴

- (a)** Except as otherwise directed by Ecology, a remedial investigation/feasibility study must be completed before cleanup standards are established and a cleanup action is selected. An emergency remedial action or an interim action may be conducted before a remedial investigation/feasibility study is completed.¹⁹⁵
- (b)** A remedial investigation/feasibility study may be conducted, or required by Ecology to be conducted, for the entire site or for separate parts of a site, such as a sediment cleanup unit as defined in WAC 173-204-505.
- (c)** A remedial investigation/feasibility study may be conducted, or required by Ecology to be conducted, as a single step or as separate steps in the cleanup process.
- (d)** A remedial investigation may be conducted, or required by Ecology to be conducted, in phases. For example, additional remedial investigation may be necessary to fill data gaps identified in earlier investigations or to determine the applicability of a model remedy at a site.

(4) Administrative options and requirements. A remedial investigation may be conducted under any of the administrative options for remedial action described in WAC 173-340-510. Reporting and public participation requirements depend on the administrative option used to conduct remedial action.¹⁹⁶

- (a) Ecology-conducted or Ecology-supervised remedial actions.** For an Ecology-conducted and/or Ecology-supervised remedial investigation, Ecology will provide or require:¹⁹⁷
 - ~~(i) Unless otherwise directed by Ecology, a remedial investigation/feasibility study must be completed before a cleanup action is selected under WAC 173-340-350 through 173-340-390;~~
 - ~~(ii) Ecology may require that a remedial investigation and a feasibility study be conducted and reported as:~~
 - ~~(A) Separate steps in the cleanup process; or~~
 - ~~(B) A single step in the cleanup process;~~

¹⁹⁴ Separated the timing and phasing provisions from the administrative requirements in subsection (4). The provisions do not depend on the administrative option used to conduct remedial action.

¹⁹⁵ Added back statement from current rule clarifying that emergency remedial actions and interim actions may be conducted before or during an RI or FS. This does not depend on the administrative option used to conduct remedial action. Clarification based on STAG input.

¹⁹⁶ Combined the administrative options and requirements in former subsections (3) and (4), and clarified that the administrative requirements (such as reporting and public participation) depend on the administrative option. Clarification based on STAG input.

¹⁹⁷ Separated and moved timing provisions to new subsection (3). See subsection (3) for additional explanation.

- ~~(iii) Ecology may require that a remedial investigation or a feasibility study be conducted and reported on:~~
 - ~~(A) Separate parts of a site, such as a sediment cleanup unit; or~~
 - ~~(B) The entire site;~~
- ~~(iv) Ecology may require reports on discrete elements of a remedial investigation or a feasibility study. For example, Ecology may require additional investigation to determine the applicability of a model remedy or a treatability or pilot study to develop and evaluate a cleanup action alternative;~~
- ~~(v)(i)~~ Before conducting a remedial investigation, a work plan must be submitted to Ecology for review and approval. A remedial investigation work plan that complies with the requirements in subsection (5)(b) of this section and WAC 173-340-840. For Ecology-supervised remedial actions, Ecology may require submittal of a work plan for its review and approval;¹⁹⁸
- ~~(vi)(ii)~~ Remedial investigation and feasibility study reports must be submitted to Ecology for review and approval. A remedial investigation report that complies with the requirements in subsection (5)(g) of this section and WAC 173-340-840. For Ecology-supervised remedial actions, Ecology may require submittal of a report for its review and approval;¹⁹⁹ and
- ~~(vii) All plans and reports required under this section must meet the general submittal requirements in WAC 173-340-840; and~~²⁰⁰
- ~~(viii)(iii)~~ Public participation must be accomplished in a manner consistent with WAC 173-340-600. Public notice of a remedial investigation report in accordance with WAC 173-340-600(13).²⁰¹
- (b) Independent remedial actions.** ~~For independent remedial actions, see WAC 173-340-515 for reporting and other administrative requirements.~~
 - (i) An independent remedial investigation must be reported to Ecology in accordance with WAC 173-340-515.²⁰²

¹⁹⁸ Clarified work plan requirements to better reflect both the Ecology-conducted and Ecology-supervised scenarios. Added cross-reference to content requirements.

¹⁹⁹ Clarified report requirements to better reflect both the Ecology-conducted and Ecology-supervised scenarios. Added cross-reference to content requirements.

²⁰⁰ Combined general submittal requirements with work plan and report requirements in (a)(i) and (ii) n.

²⁰¹ Added some specificity regarding public participation requirements that are included in Section 600 and included a more specific cross-reference.

²⁰² Added requirement that independent RI must be reported to Ecology within 90 days of completion. The current rule already requires that independent interim actions and cleanup action be reported to Ecology. See WAC 173-340-515. Based on STAG input.

- (ii) Ecology must notify the public of an independent remedial investigation report in accordance with WAC 173-340-600(20).²⁰³

~~(5) **Scope of investigations and studies.**²⁰⁴ The scope of a remedial investigation/feasibility study will vary depending on many factors, including the nature and extent of contamination, the exposure pathways of concern, the human and ecological receptors potentially impacted by the contamination, the characteristics of the site, the type of cleanup action alternatives likely to be evaluated, and information previously obtained about the site. In all cases sufficient information must be collected, developed, and evaluated to enable cleanup standards to be established under Part VII of this chapter and a cleanup action to be selected under WAC 173-340-350 through 173-340-390.~~

~~(a) **Using existing information.** Information obtained before conducting a remedial investigation/feasibility study, such as from an initial investigation or an emergency or other interim action, may be relied upon in the investigation or study and summarized and incorporated by reference in the report to avoid unnecessary duplication.~~

~~(b) **Streamlining investigations and studies.** A remedial investigation/feasibility study should remain flexible and be streamlined when possible to avoid the collection and evaluation of unnecessary information. While it may be appropriate to phase investigations at some sites, Ecology encourages expedited investigations. For example, using field screening methods to guide investigations and fast turnaround laboratory analyses to provide real-time feedback may be appropriate at some sites.~~

~~(6) **Remedial investigations.**~~

~~(a) **Purpose.**²⁰⁵ The purpose of a remedial investigation is to adequately characterize the site to enable:~~

~~(i) Cleanup standards to be established under Part VII of this chapter; and~~

~~(ii) Cleanup action alternatives to be developed and evaluated in a feasibility study under subsection (7) of this section.~~

(5) **Steps.** Except as otherwise directed by Ecology, a remedial investigation must be conducted in accordance with the following steps.²⁰⁶

²⁰³ Added requirement that independent RI reports submitted to Ecology be made available to the public to increase public awareness. Based on STAG input.

²⁰⁴ Moved and integrated scoping provisions in RI steps 1, 2, and 6. See subsections (5)(a), (b), and (g).

²⁰⁵ Merged the statement of purpose for remediation investigations with the one in subsection (1).

²⁰⁶ As previously done for the feasibility study, restructured the rule to create steps for how to conduct a remedial investigation. In general, the steps reflect current requirements and practice, and logical flow. Ecology retains discretion. Restructure prompted by STAG input on scoping versus work plans, and the development of conceptual site models and cleanup levels.

- (a) **Step 1: Identify scope.**²⁰⁷ Identify the scope of the remedial investigation. The scope depends on many factors, including the nature and extent of contamination, the exposure pathways of concern, the human and ecological receptors potentially impacted by the contamination, the characteristics of the site, the type of cleanup action alternatives likely to be evaluated, and information previously obtained about the site.²⁰⁸ To determine the scope, do the following:
- (i) Identify what information is needed about the site to comply with the requirements in (c) of this subsection and chapter 197-11 WAC, the State Environmental Policy Act rules (see WAC 197-11-250).²⁰⁹
- (ii) Assemble and evaluate relevant information collected during any prior remedial actions at the site, such as an initial investigation or an interim action. Previously collected information may be relied upon in the investigation to avoid duplication.²¹⁰ and
- (iii) Identify what additional information needs to be collected during the investigation.
- (b) **Step 2: Develop ~~W~~work plans.** Develop a remedial investigation work plan to collect and evaluate the information identified in Step 1. If required by Ecology under subsection (4)(a)(i) of this section, submit the work plan for Ecology's review and approval.
- (i) **Content.** Except as otherwise directed by Ecology, include the following in the ~~A~~ remedial investigation ~~w~~work plan ~~must include all of the following~~.²¹¹
- (A) The scope of the investigation identified in Step 1,²¹² including ~~A~~a summary of available information ~~regarding about~~ the site and data gaps needing to be addressed by the ~~remedial~~ investigation;
- (B) A preliminary conceptual site model, ~~including current and potential human and ecological receptors and exposure pathways~~ as defined in WAC 173-340-200;²¹³

²⁰⁷ Separated the scoping step from the work plan development step. The scoping step involves determining what is needed, what is already available, and then what data gaps need to be filled by the RI. Change based on STAG input about the need for scoping before developing and submitting work plan to Ecology.

²⁰⁸ Moved provision regarding what factors may affect RI scope from former subsection (5).

²⁰⁹ Moved consideration of SEPA from RI Work Plan to scoping step. You conduct a SEPA preliminary evaluation based on available info. You then determine what additional info, if any, is needed to make SEPA determinations. That info is then collected in the RI.

²¹⁰ Moved provision regarding reliance on previously collected information from former subsection (5).

²¹¹ Added provision to provide Ecology discretion to omit listed items from an RI Work Plan. Based on STAG input that certain items, such as a Health & Safety Plan, may be submitted later.

²¹² Clarified that the RI Work Plan should specify the scope of the investigation.

²¹³ Added reference to definition of conceptual site model in Section 200, and eliminated duplicative statements describing conceptual site models. Note changes to definition of conceptual site model.

- (C) A target concentration for each hazardous substance in each contaminated environmental medium identified in the preliminary conceptual site model under (b)(i)(B) of this subsection.²¹⁴
- ~~(iii) Cleanup action alternatives that are likely to be considered in the feasibility study;²¹⁵~~
- ~~(iv) A health and safety plan meeting the requirements in WAC 173-340-810;²¹⁶~~
- ~~(v)~~(D) A sampling and analysis plan meeting the requirements in WAC 173-340-820, including the analytical methods that enable detection of the target concentrations identified in (b)(i)(C) of this subsection;²¹⁷
- (E) A health and safety plan meeting the requirements in WAC 173-340-810;
- (F) An inadvertent discovery plan meetings the requirements in WAC 173-340-815.²¹⁸
- (G) Cleanup action alternatives likely to be considered in the feasibility study, based on available information;
- (H) Any studies needed to develop or evaluate cleanup action alternatives in the feasibility study, such as treatability or pilot studies.²¹⁹
- ~~(vi)~~(I) A proposed schedule for completing the remedial investigation/feasibility study and, if required, submittal of a report for Ecology review and approval;²²⁰ and
- ~~(vii) Sufficient information to enable Ecology to conduct the preliminary evaluation required under Chapter 43.21C RCW, the State Environmental Policy Act, and WAC 197-11-256;²²¹~~
- ~~(viii)~~(J) Any other information required by Ecology.

²¹⁴ Added target concentrations for sampling activities. Analytical methods specified in the sampling and analysis plan (see (b)(i)(D) of this subsection) need to be able to detect such concentrations.

²¹⁵ Moved to (b)(i)(G) of this subsection.

²¹⁶ Moved to (b)(i)(E) of this subsection.

²¹⁷ Emphasized that the sampling and analysis plan must include the analytical methods capable of detecting the target concentrations identified in (b)(i)(C) of this subsection.

²¹⁸ As part of RI work plan, added requirement to include an inadvertent discovery plan (IDP) meeting the requirements in new Section 815 regarding cultural resources. An IDP will also be required as part of interim action plans and cleanup action implementation plans.

²¹⁹ As part of RI work plan, added requirement to include any studies of cleanup action alternatives needed for the feasibility study, such as treatability or pilot studies.

²²⁰ Added schedule for submitting RI/FS report to Ecology, if required.

²²¹ Moved discussion of information needed for SEPA evaluations to Step 1 of RI in subsection (5)(a)(i).

- (ii) **Flexibility.** The work plan should remain flexible and be streamlined when possible to avoid collection and evaluation of unnecessary information. While it may be appropriate to phase investigations at some sites, Ecology encourages expedited investigations. For example, using field screening methods to guide investigations and fast turnaround laboratory analyses to provide real-time feedback may be appropriate at some sites.²²² However, in all cases, sufficient information must be collected and evaluated to meet the purposes in subsection (1) of this section.²²³
 - (c) **Step 3: Conduct investigation.** Conduct the remedial investigation in accordance with the work plan developed in Step 2.
 - (d) **Step 4: Complete conceptual site model.** Based on the results of the remedial investigation conducted in Step 3 and any previously obtained information about the site, complete the development of a conceptual site model, as defined in WAC 173-340-200.²²⁴
 - (e) **Step 5: Develop proposed cleanup levels.** Based on the conceptual site model completed in Step 4, develop a proposed cleanup level for each hazardous substance within each affected environmental medium at the site in accordance with Part 7 of this chapter.²²⁵
 - (f) **Step 6: Determine whether feasibility study is necessary.** Based on the results of the remedial investigation conducted in Step 3 and any previously obtained information about the site, determine whether a feasibility study is necessary under WAC 173-340-351(2)(a), including:
 - (i) Whether prior remedial actions conducted at the site constitute a permanent cleanup action; and
 - (ii) Whether a model remedy may be used as a cleanup action or a cleanup action component at the site.²²⁶

²²² Moved provision regarding flexibility and streamlining RIs from former subsection (5).

²²³ Added back and edited statement from subsection (6) of the current rule.

²²⁴ Added separate step for completing conceptual site model (CSM) based on investigation results. While the previous draft required a complete CSM in the RI report, the draft did not specifically require that it be developed. Clarification based on STAG input.

²²⁵ Added separate step for developing proposed cleanup levels. While the previous draft required proposed cleanup levels to be included in the RI report, the draft did not specifically require that they be developed. Clarification based on STAG input.

²²⁶ Added separate step for determining whether feasibility study (FS) is necessary. The previous draft only implied that the determination would be made in the RI by requiring documentation in the RI report (which was specified in the FS applicability section). Clarification based on internal review.

~~(d)~~(g) **Step 7: Reports results.**²²⁷ Report the results of Athe remedial investigation ~~_report~~
~~must~~in accordance with subsection (4) of this section. ~~I~~Include ~~all of~~ the following
information in the report:

- (i) General information about the site, including:
 - (A) Project title;
 - (B) Name, address, and phone number of project coordinator;
 - (C) Legal description and dimensions of the site;
 - (D) Current owners and operators; and
 - (E) Chronological listing of past owners and operators and operational history;
- (ii) Maps, figures, or diagrams ~~of existing site conditions~~ illustrating relevant existing and historic site features,²²⁸ including:
 - (A) Sources of releases;
 - (B) Property boundaries;
 - (C) Proposed site boundaries, as defined by where hazardous substances exceed the proposed cleanup levels identified in (d)(iv) of this subsection;
 - (D) Surface topography;
 - (E) Surface and subsurface structures;
 - (F) Surface water, wetlands, and undeveloped areas; and
 - (G) Utility lines and well locations;
- (iii) AThe conceptual site model completed in Step 4,²²⁹ ~~including known or suspected:~~
 - ~~(A) — Sources of hazardous substances;~~
 - ~~(B) — Types and concentrations of hazardous substances;~~
 - ~~(C) — Contaminated environmental media; and~~
 - ~~(D) — Human and ecological receptors and exposure pathways;~~

²²⁷ Made RI reporting a step in the process. Referenced administrative requirements in subsection (4), which depend on the administrative option used.

²²⁸ Added figures and diagrams as additional means of illustrating existing site conditions. Also added relevant historic features. Based on internal review.

²²⁹ Added reference to definition of conceptual site model in Section 200, and eliminated duplicative statements describing conceptual site models. Note changes to definition of conceptual site model.

- (iv) ~~For each current or potential exposure pathway identified in the conceptual site model.~~ The proposed cleanup levels developed in Step 5, including:
 - ~~(A) — A proposed cleanup level for each hazardous substance in the environmental medium;~~
 - ~~(B)~~ (A) The basis for the proposed cleanup levels; and
 - ~~(C) — A comparison of the proposed cleanup level to the concentrations of the hazardous substance in the environmental medium; and~~
 - ~~(D)~~ (B) Any regulatory designations classifications for, or laws applicable to, the each environmental medium (see WAC 173-340-710);
- (v) A comparison of the proposed cleanup levels developed in Step 5 to the hazardous substance concentrations in each environmental medium;²³⁰
- (vi) If a feasibility study is determined in Step 6 not to be necessary under subsection (7)(b) of this section, sufficient documentation to demonstrate the basis of the determination;²³¹
- (vii) ~~The results of the remedial investigations and the information required under (c) of this subsection.~~ The information collected in Step 3, and any information obtained from prior remedial actions relied on during the investigation. Previously obtained information may be summarized and referenced to avoid unnecessary duplication;²³²
- (viii) Documentation of the proper management and disposal of any waste materials generated as a result of the remedial investigations in accordance with applicable state and federal laws;²³³ and
- (viii) Any other information required by Ecology.

~~(c)(6) Investigations. Sufficient investigations must be performed to characterize the distribution of hazardous substances present at the site, and the threat they pose to human health and the environment.~~ A remedial investigation must collect and evaluate sufficient information about a site and the surrounding area to meet the purposes in subsection (1) of this section,²³⁴ including the following as applicable to the site. ~~Ecology makes the final determination as to which~~

²³⁰ Separated out from subsection (5)(g)(iv).

²³¹ Clarified that the basis for an exemption from conducting a feasibility study (FS) must be documented in the RI. Previously, the requirement to include this information in the RI report was only specified in the FS applicability provision.

²³² Clarified that relevant information from prior remedial actions must be included in the RI report, but emphasized that such info may be summarized and referenced to prevent duplication (consistent with discussion in former subsection (5)).

²³³ For RI report, added requirement that must document the management of any waste materials generated as a result of the investigations.

²³⁴ Consolidated statements of purpose in subsection (1) and clarified that RI must be sufficient to meet those purposes.

~~investigations are needed at the site and the sufficiency of those investigations.~~²³⁵ ~~Where applicable to the site, these investigations must include the following:~~

- ~~(i)~~(a) **Hazardous substance sources.** Confirmed and suspected releases must be investigated to define the location, quantity, areal and vertical extent, concentration within, and sources of hazardous substances. Where relevant, information on the physical and chemical characteristics and the biological effects of hazardous substances must be collected;;
- ~~(ii)~~(b) **Soils.** Soils must be investigated to adequately characterize:
 - ~~(A)~~(i) The areal and vertical distribution and concentrations of hazardous substances in soils; and
 - ~~(B)~~(ii) The properties of surface and subsurface soils that are likely to influence the type and rate of hazardous substance migration or to affect the ability to implement cleanup action alternatives;;
- ~~(iii)~~(c) **Groundwater, geology, and hydrogeology.** Groundwater and the geology and hydrogeology ~~of the site~~ must be investigated to adequately characterize:
 - ~~(A)~~(i) The areal and vertical distribution and concentrations of hazardous substances in the groundwater;
 - ~~(B)~~(ii) The geologic features affecting the fate and transport of hazardous substances, such as the type, physical properties (such as permeability, density, and fracture characteristics), and distribution of bedrock and unconsolidated materials;
 - ~~(C)~~(iii) The hydrogeological features affecting the fate and transport of hazardous substances, such as:
 - ~~(H)~~(A) Groundwater flow direction, rate, and vertical and horizontal gradients for affected and potentially affected groundwater;
 - ~~(H)~~(B) Groundwater divides;
 - ~~(H)~~(C) Areas of groundwater recharge and discharge;
 - (D) Areas where groundwater interfaces with surface water;²³⁶
 - ~~(H)~~(E) Location of public and private water supply wells; and
 - ~~(H)~~(F) Groundwater quality data; and

²³⁵ Consolidated previously added provisions throughout the rule clarifying that Ecology makes the final determination as to what remedial actions are needed and the sufficiency of those remedial actions in a new section in Part 1 of the rule.

²³⁶ Emphasized that investigation of hydrogeological features should include, as applicable, areas where groundwater interfaces with surface water. Such migration routes to surface water and sediment must be investigated under subsection (6)(d)(ii)(E).

(iv) The geologic and hydrogeologic features that are likely to affect the ability to implement cleanup action alternatives.²³⁷

~~(iv)~~(d) **Surface water, sediments, and hydrology.** Surface water, sediments, and the hydrology ~~of the site~~ must be investigated to adequately characterize:

~~(A)~~(i) The areal and vertical distribution and concentrations of hazardous substances in surface water and sediments;

~~(B)~~(ii) Significant hydrologic features, such as:

~~(H)~~(A) Surface drainage patterns and quantities;

~~(H)~~(B) Areas of erosion and sediment deposition, including estimates of sedimentation rates;

~~(H)~~(C) Surface waters, including flow rates;

~~(H)~~(D) Floodplains; and

~~(H)~~(E) Actual or potential hazardous substance migration routes towards and within these features; and

~~(C)~~(iii) The properties of surface and subsurface sediments that are likely to affect the type and rate of hazardous substance migration, the potential for recontamination, or the ability to implement cleanup action alternatives;.

~~(iv)~~(e) **Air and soil vapor.** The air and soil vapor must be evaluated and, where appropriate, sampled to adequately characterize the potential impacts of vapor migration on subsurface soil gas, on air quality within current and future buildings or other structures, and on outdoor ambient air;. Based on contaminant concentrations in soil gas or groundwater, Ecology may require expedited sampling of indoor air quality to assess the threat to human health. If the measured indoor air concentrations are higher than applicable cleanup levels, Ecology may require an emergency action or an interim action to mitigate the threat to human health.²³⁸

~~(vi)~~(f) **Climate.** Sufficient information, based on best available science, must be collected on current and projected local and regional climatological characteristics ~~that are likely to determine which could~~ affect the migration of hazardous substances or the resilience of cleanup action alternatives. Relevant characteristics can include temperature extremes, ~~rise in~~ sea level, seasonal patterns of rainfall, the magnitude and frequency of extreme

²³⁷ Added requirement that remedial investigation must include, as applicable, an assessment of the geologic and hydrogeologic features of the site that are likely to affect the ability to implement cleanup action alternatives. This requirement is consistent with the requirement for investigating other environmental media.

²³⁸ Clarified that Ecology may require expedited sampling of indoor air quality to assess threats to human health and require emergency action or interim action to mitigate any such threats. Based on STAG input.

storm events (such as flooding), the potential for landslides, prevailing wind direction and velocity, variations in barometric pressure, and the potential for wildfires²³⁹.

~~(vii)~~(g) **Land and resource use.**²⁴⁰ Sufficient information must be collected on:

~~(A)~~ — ~~The~~ the present and proposed land and resource uses, comprehensive plan, and zoning for the site and potentially affected areas; ~~and to determine the exposure or potential exposure of human and ecological receptors, including vulnerable populations and overburdened communities,~~²⁴¹ to hazardous substances at the site.

~~(B)~~(h) **Human receptors.** Sufficient information must be collected on ~~H~~human ~~and ecological populations~~receptors, including vulnerable populations and overburdened communities,²⁴² that are reasonably likely to be exposed or potentially exposed to ~~the release~~hazardous substances based on ~~such~~the land and resource uses identified in (g) of this subsection to determine the impact or potential impact of such exposure~~;~~.

~~(viii)~~(i) **Natural resources and ecological receptors.** Sufficient information must be collected on natural resources and ecological receptors that are reasonably likely to be exposed or potentially exposed to hazardous substances based on the land and resource uses identified in (g) of this subsection to determine the impact or potential impact of ~~hazardous substances on natural resources and ecological receptors such exposure,~~ includingThis includes any information needed to conduct a sediment evaluation under chapter 173-204 WAC and²⁴³ any information needed to conduct a terrestrial ecological evaluation or establish an exclusion under WAC 173-340-7490 through 173-340-7494.

~~(A)~~(i) Where appropriate, a terrestrial ecological evaluation may be conducted so as to avoid duplicative studies of soil contamination that will be remediated to address other concerns, such as protection of human health or aquatic ecological receptors. This may be accomplished by evaluating residual threats to the environment after cleanup action alternatives for human health or aquatic ecological protection have been developed. If this approach is used, the remedial investigation may be phased. ~~Examples of sites where~~~~t~~This approach may not be appropriate ~~include: A site contaminated with~~at a site where a hazardous substance ~~that~~is primarily an ecological concern and will not obviously be addressed by the cleanup action for the protection of human

²³⁹ Further clarified requirements related to climate resilience based on STAG input. Added that information must be based on best available science. Clarified for what purpose the information is collected. Added flooding as an example.

²⁴⁰ Separated the requirements on investigating land and resource uses (paragraph (g)), human receptors (paragraph (h)), and ecological receptors (paragraph (i)).

²⁴¹ Emphasized that investigations of land and resource uses must include the uses of vulnerable populations and overburdened communities.

²⁴² Emphasized that investigations of affected human populations must include vulnerable populations and overburdened communities.

²⁴³ Further integrated MTCA rule requirements with SMS rule requirements in chapter 173-204 WAC based on STAG input. One of the purposes of collecting information on natural resources and ecological receptors is to conduct necessary sediment evaluations under the SMS rule.

health, such as zinc; or at a site where the development of a human health based ~~remedy~~cleanup action is expected to be a lengthy process, and postponing the terrestrial ecological evaluation would cause further harm to the environment.

~~(B)~~(ii) If a simplified or site-specific terrestrial ecological evaluation is not required under WAC 173-340-7491, the basis for the determination must be included in the remedial investigation report;²⁴⁴

~~(ix) — Effects on highly impacted communities. Sufficient information must be collected to identify whether and how the site may affect a highly impacted community.²⁴⁵ When identifying effects, a cumulative impacts analysis must be conducted based on existing and available data. Effects may be health, social, cultural, or economic.²⁴⁶~~

(j) Feasibility of cleanup action alternatives.²⁴⁷ Sufficient information must be collected to develop and evaluate cleanup action alternatives in the feasibility study under WAC 173-340-351, such as treatability or pilot studies.

~~(k)~~(k) **Applicability of model remedies.** Sufficient information must be collected to determine whether a model remedy established by Ecology may be used as a cleanup action or a cleanup action component at the site under WAC 173-340-390.

²⁴⁴ Made minor clarifications to the terrestrial ecological evaluation (TEE) provisions in the RI and FS based on STAG input. In the RI, we added a reference to aquatic ecological receptors. In the FS, we added a reminder that additional remedial investigations, including a TEE, may be necessary to complete the FS. We decided to defer making any substantive changes to the TEE process or how the TEE process should be integrated into the RI/FS process until the cleanup standards rulemaking.

²⁴⁵ Moved and integrated investigations of whether and how a site may affect the health and environment of vulnerable populations and overburdened communities under investigation of land and resource uses under (g) of this subsection and investigation of human receptors under (h) of this subsection.

²⁴⁶ Eliminated requirements for conducting a cumulative impact analysis of existing burdens on a vulnerable population or overburdened community for the purposes of selecting a remedy for a contaminated site. Such analyses may still be relevant when prioritizing contaminated sites for cleanup, funding, or enforcement.

²⁴⁷ As part of remedial investigation, added requirement to conduct any studies needed to develop and evaluate cleanup action alternatives in the feasibility study, such as treatability or pilot studies.

WAC 173-340-351 Feasibility study.²⁴⁸

Tracked changes to Preliminary Draft 1, previously reviewed by STAG.

(a)(1) Purpose. The purpose of the feasibility study is to develop and evaluate cleanup action alternatives to enable the selection of a cleanup action to be selected for the site that meets the requirements in WAC 173-340-360 and conforms, as appropriate, to the expectations in WAC 173-340-370.²⁴⁹

(b)(2) Applicability.

(a) Whether required. A feasibility study of cleanup action alternatives must be conducted and reported as specified in (c) and (d) of this subsection, regardless of which administrative option in WAC 173-340-510 is used to conduct remedial action,²⁵⁰ except in the following circumstances. ~~Ecology makes the final determination as to whether a feasibility study is required.~~²⁵¹

(i) Permanent cleanup action completed. ~~If a feasibility study is not required if~~ prior remedial actions at the site constitute a permanent cleanup action and meet the criteria in WAC 173-340-330(5)(b)(i), a feasibility study is not required.²⁵² To qualify for this exemption, sufficient information must be collected and ~~included in the remedial investigation report reported to Ecology~~ to demonstrate that the ~~prior remedial actions at the site constitute a permanent cleanup action~~ site meets the criteria (see WAC 173-340-350(5)(f) and (5)(g)(v)).²⁵³

(ii) Model remedy selected. ~~If a feasibility study is not required to select~~ a model remedy ~~is selected~~ as the cleanup action or as a component of the cleanup action for a site, ~~a feasibility study is not required to select the model remedy~~ (see WAC 173-340-390). However, a feasibility study is still required to select any remaining cleanup action components for the site. To qualify for this exemption or partial exemption, sufficient information must be collected and ~~included in the remedial investigation report reported to Ecology~~ to

²⁴⁸ Split Section 350 into two sections, one focusing on remedial investigations (Section 350) and the other focusing on feasibility studies (Section 351).

²⁴⁹ Based on split of Section 350, updated purpose of Section 351 to focus only on feasibility studies. Merged relevant statements of purpose from the current rule.

²⁵⁰ Further clarified that the requirement to conduct a feasibility study (FS) applies regardless of which administrative option for remedial action is used (Ecology-conducted, Ecology-supervised, or independent). Performing an FS is a substantive requirement, applicable to all sites. Reporting an FS is an administrative requirement, which depends on the administrative option for remedial action. Clarification based on STAG input.

²⁵¹ Eliminated previously added provisions throughout the rule clarifying that Ecology makes the final determination as to what remedial actions are needed and the sufficiency of those remedial actions. Consolidated those provisions in a new section in Part 1 of the rule.

²⁵² Clarified that the permanent cleanup action completed at the site must meet the delisting criteria for such actions in WAC 173-340-330(5)(b)(i). Changed based on STAG input.

²⁵³ Added cross references to explicit steps added in remedial investigation (RI) for determining whether feasibility study (FS) is necessary, and documenting the basis for determination.

demonstrate that the site meets the conditions established by Ecology for using the model remedy (see ~~subsection (6)(c)(x) of this section~~ WAC 173-340-350(6)(k), (5)(f), and (5)(g)(v)).²⁵⁴

(b) Requirements. A feasibility study must comply with the requirements in this section and, as applicable, the following:

(i) For sites where there is a release or threatened release to sediment, the requirements in WAC 173-204-550; and

(ii) For sites on the federal National Priorities List, the applicable requirements under the federal cleanup law.

(3) Timing and phasing.²⁵⁵

(a) Except as otherwise directed by Ecology, a remedial investigation/feasibility study must be completed before cleanup standards are established and a cleanup action is selected. An emergency remedial action or an interim action may be conducted before a remedial investigation/feasibility study is completed.

(b) A remedial investigation/feasibility study may be conducted, or required by Ecology to be conducted, for the entire site or for separate parts of a site, such as a sediment cleanup unit as defined in WAC 173-204-505.

(c) A remedial investigation/feasibility study may be conducted, or required by Ecology to be conducted, as a single step or as separate steps in the cleanup process.

(d) A feasibility study may be conducted, or required by Ecology to be conducted, in phases. For example, additional study may be necessary to evaluate the feasibility of a cleanup action alternative.

(4) Administrative options and requirements.²⁵⁶ A feasibility study may be conducted under any of the administrative options for remedial action described in WAC 173-340-510. Reporting and public participation requirements depend on the administrative option used to conduct remedial action.

(a) Ecology-conducted or Ecology-supervised remedial actions. For an Ecology-conducted or Ecology-supervised feasibility study, Ecology will provide or require:

(i) A feasibility study report that complies with the requirements in subsection (6)(f) of this section and WAC 173-340-840. For Ecology-supervised remedial

²⁵⁴ Added cross references to explicit steps added in remedial investigation (RI) for determining whether feasibility study (FS) is necessary, and documenting the basis for determination.

²⁵⁵ Duplicated relevant timing and phasing requirements for feasibility studies consistent with those for remedial investigations. See WAC 173-340-350(3).

²⁵⁶ Duplicated relevant administrative options and requirements for feasibility studies consistent with those for remedial investigations. See WAC 173-340-350(4).

- actions, Ecology may require submittal of a report for its review and approval; and
- (ii) Public notice of a feasibility study report in accordance with WAC 173-340-600(13).
- (b) Independent remedial actions. An independent feasibility study must be reported to Ecology in accordance with WAC 173-340-515.
- (5) Scope.²⁵⁷ A feasibility study must adequately evaluate a reasonable number and type of cleanup action alternatives to meet the purposes in subsection (1) of this section.
- (a) The scope of the study depends on many factors, including the nature and extent of contamination, the exposure pathways of concern, the human and ecological receptors potentially impacted by the contamination, the characteristics of the site, the type of cleanup action alternatives being evaluated, and any previous evaluations of cleanup action alternatives.
- (b) The study may rely on previously collected information about the site and previous evaluations of cleanup action alternatives, such as treatability or pilot studies. Such information may be summarized and incorporated by reference in the feasibility study report to avoid unnecessary duplication.
- ~~(c)(6)~~ **Study Steps.** Except as otherwise directed by Ecology, A feasibility study of cleanup action alternatives must be conducted in accordance with the following steps, ~~except as otherwise directed by Ecology.~~ The study should remain flexible to avoid collecting unnecessary information or conducting unnecessary evaluations.²⁵⁸ ~~The study must be sufficient to enable the selection of a cleanup action that meets the requirements in WAC 173-340-360 and conforms, as appropriate, to the expectations in WAC 173-340-370.²⁵⁹ Ecology makes the final determination as to which cleanup action alternatives or components need to be evaluated in the study and the sufficiency of the study.²⁶⁰~~
- ~~(i)(a)~~ **Step 1: Identify cleanup goals.** Identify the goals for the cleanup action, in addition to compliance with the requirements in WAC 173-340-360.
- ~~(ii)(b)~~ **Step 2: Identify alternatives.** Identify cleanup action alternatives for evaluation in the study. The alternatives must achieve the goals identified ~~under~~in Step 1 and comply with the requirements in WAC 173-340-360. Include:
- ~~(A)(i)~~ A reasonable number and type of alternatives, taking into account:

²⁵⁷ Duplicated relevant scoping provisions for feasibility studies consistent with those for remedial investigations. See former WAC 173-340-350(5).

²⁵⁸ Duplicated relevant streamlining provision for feasibility study consistent with that for remedial investigations. See former WAC 173-340-350(5).

²⁵⁹ Combined deleted provision with statements of purpose in subsection (1) and scope in subsection (5).

²⁶⁰ Eliminated previously added provisions throughout the rule clarifying that Ecology makes the final determination as to what remedial actions are needed and the sufficiency of those remedial actions. Consolidated those provisions in a new section in Part 1 of the rule.

- (A) ~~†~~The characteristics and complexity of the site, including current site conditions and physical constraints; and
- (B) The threats posed by the site to human health and the environment, including vulnerable populations and overburdened communities;²⁶¹
- ~~(B)~~(ii) At least one permanent cleanup action alternative;
- ~~(C)~~(iii) For each environmental medium, at least one alternative with a standard point of compliance (see Part 7 of this chapter);
- ~~(D)~~(iv) As appropriate, alternatives with a conditional point of compliance for one or more environmental media (see Part ~~VII~~7 of this chapter); and
- ~~(E)~~(v) As appropriate, alternatives relying on a combination of cleanup action components for an environmental medium (such as treatment of some soil contamination and containment of the remainder). The alternatives must specify remediation levels for each component (see WAC 173-340-355 ~~and 173-340-357 and Part VII of this chapter~~).²⁶²
- ~~(iii)~~(c) **Step 3: Screen alternatives and components.** Based on a preliminary analysis, eliminate from further evaluation the following cleanup action alternatives or components identified ~~under~~in Step 2:

 - ~~(A)~~(i) Alternatives that clearly do not meet the requirements for a cleanup actions in WAC 173-340-360~~;~~ including alternatives for which costs are clearly disproportionate to benefits under WAC 173-340-360(5).²⁶³
 - ~~(B)~~ ~~— Alternatives for which costs are clearly disproportionate to benefits under WAC 173-340-360(4); and~~
 - ~~(C)~~(ii) Alternatives or components that are not technically possible at the site.
- ~~(iv)~~(d) **Step 4: Evaluate remaining alternatives.**²⁶⁴ Conduct a detailed evaluation of each remaining cleanup action alternative to determine whether it meets the requirements in WAC 173-340-360 and conforms to the expectations in WAC 173-340-370. If necessary, conduct additional remedial investigations under WAC 173-340-350 to complete the evaluation, including any investigations needed to complete a terrestrial ecological evaluation;²⁶⁵

²⁶¹ Emphasized that the number and type of alternatives needs to account for threats posed by the site, including the threats posed to vulnerable populations and overburdened communities. Based on STAG input.

²⁶² Simplified reference for remedial action levels. Section 355 is the main section and references other sections, as relevant.

²⁶³ Clarified that the permanent to the maximum extent practicable (DCA) requirement is one of the cleanup action requirements.

²⁶⁴ Clarified header based on STAG input.

²⁶⁵ Clarified that addition remedial investigation may be necessary to complete a feasibility study, including in particular a terrestrial ecological evaluation (TEE). Change based on STAG input. See also note under WAC 173-340-350(6)(h) regarding integration or TEE and RI/FS processes.

~~(d)~~(e) **Step 5: Select preferred alternative.** Based on the detailed evaluation in Step 4, select a preferred cleanup action alternative that meets the requirements in WAC 173-340-360 and conforms, as appropriate, to the expectations in WAC 173-340-370.

~~(d)~~(f) **Step 6: Report results.**²⁶⁶ ~~A feasibility study report must include all of the following information~~ Report the results of the feasibility study in accordance with subsection (4) of this section. Include the following information in the report:

- (i) If the remedial investigation report is not combined with the feasibility study report, a summary of remedial investigation results, including:
 - (A) The conceptual site model used to develop and evaluate cleanup action alternatives;
 - (B) The proposed cleanup level for each hazardous substance within each affected environmental medium at the site, and the basis for the cleanup level; and
 - (C) 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;
- (ii) Results of any additional investigations conducted after completing the remedial investigation report;
- (iii) Results of any treatability or pilot studies needed to develop or evaluate cleanup action alternatives;
- (iv) The cleanup goals identified in Step 1 of the feasibility study;
- (v) The cleanup action alternatives identified in Step 2 of the feasibility study. For each alternative, include:
 - (A) The cleanup action components relied on to clean up each affected environmental medium;
 - (B) For alternatives relying on a combination of cleanup action components to clean up an environmental medium, the proposed remediation levels and the basis for those levels;
 - (C) The proposed point of compliance for each hazardous substance within each affected environmental medium at the site, and the basis for any conditional points of compliance (see Part 7 of this chapter);

²⁶⁶ Restructured rule to make reporting feasibility study results a step in the process.

- (D) The location and estimated amount of each hazardous substance to be removed or treated by the alternative and the estimated time frame in which removal or treatment will occur; and
- (E) The location, estimated amount, and projected concentration distribution of each hazardous substance remaining above proposed cleanup levels after implementing the alternative;
- (vi) The cleanup action alternatives eliminated from further evaluation during the screening process in Step 3 of the feasibility study, and the basis for elimination;
- (vii) Documentation of the detailed evaluation process in Step 4 of the feasibility study, including how ~~equity for any highly impacted community is considered in that process (see WAC 173-340-360(3)(d))~~ impacts on vulnerable populations and overburdened communities were considered in the evaluation,²⁶⁷ and the basis for eliminating any alternative from further evaluation;
- (viii) The preferred cleanup action alternative selected in Step 5 of the feasibility study, including:
 - (A) The basis for selecting the alternative and for any non-conformance to the expectations in WAC 173-340-370;
 - ~~(B) The degree to which the benefits and burdens of the alternative are equitably distributed between any highly impacted and other communities affected by the site and the basis for any inequitable distribution;~~²⁶⁸
 - ~~(C)~~(B) Any local, state, or federal laws applicable to the alternative, including any known permits or approval conditions (see WAC 173-340-710);
 - ~~(D)~~(C) As appropriate, proposed indicator hazardous substances for the alternative (see WAC 173-340-703); and
 - ~~(E)~~(D) Sufficient information about the alternative to enable Ecology to conduct the evaluations and make the determinations required under chapter 43.21C RCW, the State Environmental Policy Act, and chapter 197-11 WAC, the State Environmental Policy Act Rules;
- (ix) Documentation of the proper management and disposal of any waste materials generated as a result of the feasibility study in accordance with applicable state and federal laws; and
- (x) Any other information required by Ecology.

²⁶⁷ Updated language to reflect terminology in the HEAL act, chapter 70A.02 RCW.

²⁶⁸ Eliminated the feasibility study reporting requirement related to the equitability requirement for cleanup actions included in Section 360(3)(d) of Preliminary Draft 1. That requirement is eliminated in this draft. See the related note about that equitability requirement in Section 360(3)(d).

WAC 173-340-355 Development of cleanup action alternatives that include remediation levels.

Tracked changes to current rule.

- (1) **Purpose.**²⁶⁹ A cleanup action ~~selected for a site will~~ often ~~involve~~ relies on a combination of cleanup action components to remediate an environmental medium, such as ~~For example, to remediate soil, a cleanup action may rely on~~ treatment of some soil contamination and containment of the remainder. The purpose of a remediation level is to specify when the various components are used as part of a cleanup action. ~~Remediation levels are used to identify the concentrations (or other methods of identification) of hazardous substances at which different cleanup action components will be used. (See the definition of remediation level in WAC 173-340-200.) Remediation levels may be used at sites where a combination of cleanup actions components are used to achieve cleanup levels at the point of compliance (see the examples in subsection (3)(a) and (c) of this section). Remediation levels may also be used at sites where the cleanup action involves the containment of soils as provided under WAC 173-340-740(6)(f) and at sites conducting interim actions (see the examples in subsection (3)(b) and (d) of this section).~~
- (2) **Applicability.**²⁷⁰ Remediation levels must be established as part of a cleanup action if the cleanup action relies on a combination of cleanup action components to remediate an environmental medium.
- (3) **Types.**²⁷¹ Remediation levels may be based on a concentration (e.g., all soil above concentration X will be treated), or other method of identification, such as the physical appearance or location of the contamination (e.g., all of the green sludge will be removed from the northwest quadrant of the site).
- (4) **Development.**²⁷² Remediation levels must be developed and evaluated as part of a cleanup action alternative during the feasibility study conducted under WAC 173-340-351. Quantitative or qualitative methods may be used to develop remediation levels. The methods may include a human health or ecological risk assessment. The methods may also consider fate and transport issues. The methods may be simple or complex, as appropriate to the site. Where a quantitative risk assessment is used, see WAC 173-340-357.
- ~~(2)~~(5) **Relationship to cleanup levels and cleanup standards.** Remediation levels are not the same as cleanup levels or cleanup standards.

 - (a) A cleanup level defines the concentration of a hazardous substances above which a contaminated environmental medium ~~(e.g., such as~~ soil) must be remediated in some manner ~~(e.g., such as~~ treatment, containment, or institutional controls). A remediation

²⁶⁹ Refocused subsection (1) on the purpose of remediation levels and made clarifying edits. Deleted duplicative statements included elsewhere in this section.

²⁷⁰ Moved applicability of remediation levels from subsection (1) and former subsection (4). Corrected statement to say that remediation levels must be used when a cleanup action relies on a combination of cleanup action components.

²⁷¹ Moved types of remediation levels from former subsection (4) and made clarifying edits.

²⁷² Moved development of remediation levels from former subsection (4) and made clarifying edits.

level, on the other hand, defines the concentration (or other method of identification) of a hazardous substance in a particular environmental medium above or below at which a particular cleanup action component (~~e.g., such as~~ soil treatment versus ~~or~~ containment) will be used.²⁷³ Remediation levels, by definition, exceed cleanup levels.

(b) Cleanup levels must be established for every site. Remediation levels, on the other hand, ~~may not be necessary at a site. Whether remediation levels are necessary depends on the cleanup action selected. For example, remediation levels would not be necessary if the selected cleanup action removes for offsite disposal all soil that exceeds the cleanup level at the applicable points of compliance.~~ must be established only if a cleanup action relies on a combination of cleanup action components to remediate an environmental medium.²⁷⁴

(c) ~~A~~ Cleanup actions, including those that relying on uses remediation levels a combination of cleanup action components to remediate an environmental medium, must meet each of the ~~minimum~~ requirements specified in WAC 173-340-360, including ~~the requirement that all cleanup actions must comply~~ compliance with cleanup standards. ~~Compliance with cleanup standards requires, in part, that cleanup levels are met at the applicable points of compliance. If the~~ a remedial action does not comply with cleanup standards, the remedial action is an interim action, not a cleanup action. ~~Where a cleanup action involves containment of soils with hazardous substance concentrations exceeding cleanup levels at the point of compliance, the cleanup action may be determined to comply with cleanup standards, provided the requirements specified in WAC 173-340-740 (6)(f) are met.~~²⁷⁵

(3)(6) Examples.²⁷⁶ The following examples of cleanup actions that use remediation levels are for illustrative purposes only. All cleanup action alternatives in a feasibility study, including those ~~with proposed~~ using remediation levels, must be evaluated to determine whether they meet each of the ~~minimum~~ requirements specified in WAC 173-340-360 ~~(see WAC 173-340-360 (2)(h)). This evaluation requires, in part, a determination that a more permanent cleanup action is not practicable, based on the disproportionate cost analysis in WAC 173-340-360 (3)(e).~~²⁷⁷

(a) Example of a site meeting soil cleanup levels at the point of compliance. Assume ~~that~~ the soil cleanup level for a hazardous substance at a site is 20 ppm. This means any soil exceeding 20 ppm at the applicable point of compliance must be remediated. Further assume ~~that~~ the cleanup action alternative determined to comply with the minimum requirements in WAC 173-340-360 and selected for the site consists of soil treatment treating soil above 100 ppm and removal removing to an offsite landfill soil between 100 and 20 ppm and a remediation level of 100 ppm to define when those two components are used. In this case, 100 ppm is a remediation level that defines which

²⁷³ Corrected statement to say “at” instead of “above or below.” Since remediation levels are not always concentrations, one can’t always say “above or below.”

²⁷⁴ Clarified by focusing on when remediation levels are required, not on when they are not required.

²⁷⁵ Clarified by eliminating more detailed and unnecessary explanations that distract from main point.

²⁷⁶ Clarified all examples in subsection (6). No changes were made to the substance of the examples.

²⁷⁷ Clarified by eliminating more detailed and unnecessary explanations that distract from main point.

~~soil will be treated and which soil will be removed from the site. Under the cleanup standard, any soil that exceeds the 20 ppm cleanup level at the applicable point of compliance must be remediated in some manner. Under the selected cleanup action, any soil that exceeds the 100 ppm remediation level must be removed and treated. Any soil that does not exceed the 100 ppm remediation level, but exceeds the 20 ppm cleanup level, must be removed and landfilled.~~ The cleanup action may be determined to comply with the cleanup standard because the 20 ppm soil cleanup level is met at the applicable point of compliance.

- (b) **Example of a site not meeting soil cleanup levels at the point of compliance.** Assume ~~that~~ the soil cleanup level for a hazardous substance at a site is 20 ppm. This means any soil exceeding 20 ppm at the applicable point of compliance must be remediated. Further assume ~~that~~ the cleanup action ~~alternative determined to comply with the minimum requirements in WAC 173-340-360 and selected for the site~~ consists of soil treatment ~~treating soil above 100 ppm and containment and a remediation level of 100 ppm to define when those two components are used~~ containing soil between 100 and 200 ppm. The 100 ppm concentration is a remediation level that defines which soil will be treated and which soil will be contained at the site. ~~Under the cleanup standard, any soil that exceeds the 20 ppm cleanup level at the applicable point of compliance must be remediated in some manner. Under the selected cleanup action, any soil that exceeds the 100 ppm remediation level must be treated. Any soil that does not exceed the 100 ppm remediation level, but exceeds the 20 ppm cleanup level, must be contained. Residual contamination above the cleanup level will remain at the site. However, assuming~~ Even though contamination above the 20 ppm cleanup level remains at the site, if the cleanup action meets the requirements specified in WAC 173-340-740(6)(f) for soil containment actions, the cleanup action may be determined to comply with cleanup standards.

- (c) **Example of site meeting groundwater cleanup levels at the point of compliance.** Assume ~~that~~ the groundwater cleanup level for a hazardous substance at a site is 500 ug/l and ~~that~~ a conditional point of compliance is established at the property boundary. This means any groundwater exceeding 500 ug/l at the point of compliance must be remediated. Further assume ~~that~~ the cleanup action ~~alternative determined to comply with the minimum requirements in WAC 173-340-360 and selected for the site~~ consists of: Removing the source of the groundwater contamination (e.g., ~~removal of~~ removing a leaking tank and associated soil contamination above the water table); extracting free product and any groundwater exceeding a concentration of 2,000 ug/l; and utilizing natural attenuation to restore the groundwater to 500 ug/l before it arrives at the property boundary. The ~~groundwater concentration of 2,000 ug/l~~ concentration constitutes ~~is~~ a remediation level ~~because it~~ that ~~defines the concentration of a hazardous substance at which different cleanup action components are used~~ which groundwater will be actively treated and which groundwater will be naturally attenuated at the site. As long as the groundwater meets the 500 ug/l cleanup level at the conditional point of compliance ~~(the property boundary)~~, the cleanup action may be determined to comply with cleanup standards.

(d) Example of a site not meeting groundwater cleanup levels at the point of compliance.

Assume ~~that~~ the groundwater cleanup level at a site is 5 ug/l and ~~that~~ a conditional point of compliance is established at the property boundary. This means any groundwater exceeding 5 ug/l at the point of compliance must be remediated. Further assume ~~that~~ the remedial action selected for the site consists of: Vapor extraction of the soil to nondetectable concentrations (to prevent further groundwater contamination); extraction and treatment of groundwater with concentrations in excess of 100 ug/l; and installation of an air stripping system to treat groundwater at a water supply well beyond the property boundary to less than 5 ug/l. Further assume ~~that~~ the groundwater cleanup level will not be met at the conditional point of compliance (the property boundary). The ~~groundwater~~ concentration of 100 ug/l ~~constitutes~~ is a remediation level because it ~~that~~ defines the concentration of a hazardous substance at which different cleanup action components are used which groundwater will be treated on site. ~~However, in this example, the remedial action does not constitute a cleanup action because it does not comply with cleanup standards, one of the minimum requirements for cleanup actions in WAC 173-340-360. Consequently, the~~ In this example, the remedial action is ~~considered~~ an interim action, not a cleanup action, until because it does not comply with cleanup standards (that is, it does not achieve the 5 ug/l cleanup level ~~is attained~~ at the conditional point of compliance (the property boundary).

~~(4) — General requirements.~~²⁷⁸ ~~Potential remediation levels may be developed as part of the cleanup action alternatives to be considered during the feasibility study (see WAC 173-340-350 (8)(c)(i)(D)). These potential remediation levels may be defined as either a concentration or other method of identification of a hazardous substance. Other methods of identification include physical appearance or location (e.g., all of the green sludge will be removed from the northern area of the site). Quantitative or qualitative methods may be used to develop these potential remediation levels. These methods may include a human health risk assessment or an ecological risk assessment. These methods may also consider fate and transport issues. These methods may be simple or complex, as appropriate to the site. Where a quantitative risk assessment is used, see WAC 173-340-357. All cleanup action alternatives in a feasibility study, including those with proposed remediation levels, must still be evaluated to determine whether they meet each of the minimum requirements specified in WAC 173-340-360 (see WAC 173-340-360(2)(h)).~~

²⁷⁸ Broke up former subsection (4) and moved provisions to new subsections (2), (3), and (4).

WAC 173-340-357 Quantitative risk assessment of cleanup action alternatives.

Tracked changes to current rule.

- (1) **Purpose.**²⁷⁹ A cleanup action must protect human health and the environment, including vulnerable populations and overburdened communities (see WAC 173-340-360(3)(a)(i)).²⁸⁰ A quantitative site-specific risk assessment may be used to help determine whether cleanup action alternatives, including those ~~using~~ relying on a remediation level, engineered ~~control and/or~~ institutional controls to limit exposure to contamination remaining at a site, ~~are protective of~~ protect human health and the environment.²⁸¹ ~~If a quantitative site-specific risk assessment is used, then other considerations may also be needed in evaluating the protectiveness of the overall cleanup action. Methods other than a quantitative site-specific risk assessment~~ Other methods may also be used in addition to, or instead of, a quantitative site-specific risk assessment to determine if whether a cleanup action alternative is protective ~~of~~ human health and the environment.
- ~~(2) —~~ **Relationship to selection of cleanup actions.**²⁸² ~~Selecting a cleanup action requires a determination that each of the requirements specified in WAC 173-340-360 is met, including the requirement that the cleanup action is protective of human health and the environment. A quantitative risk assessment conducted under this section may be used to help determine whether a particular cleanup action alternative meets this requirement. A determination that a cleanup action alternative evaluated is protective of human health and the environment does not mean that the other minimum requirements specified in WAC 173-340-360 have been met.~~
- ~~(3)~~(2) **Protection of h** Human health risk assessment. A quantitative site-specific human health risk assessment may be used to help determine whether cleanup action alternatives, including those ~~using~~ relying on a remediation level, engineered ~~control and/or~~ institutional controls to limit exposure, ~~are protective of~~ protect human health. This subsection defines the framework for assessing cleanup action alternatives relying on engineered or institutional controls to limit exposure.²⁸³ ~~For the purpose of this assessment, the default assumptions in the standard Method B and C equations in WAC 173-340-720 through 173-340-750 may be modified as provided for under modified Method B and C. In addition to those modifications, adjustments to the reasonable maximum exposure scenario or default exposure assumptions may also be made. See WAC 173-340-708(3)(d) and (10)(b).~~²⁸⁴ ~~References to Method C in this subsection~~

²⁷⁹ Merged former subsection (2), relationship to cleanup action requirements, with subsection (1), purpose of quantitative risk assessments, and simplified.

²⁸⁰ Emphasized, as in the referenced cleanup action requirement, that cleanup actions must protect vulnerable populations and overburdened communities.

²⁸¹ Clarified statements in subsection (1) and elsewhere in this section that quantitative risk assessments may be used to assess the protectiveness of cleanup action alternatives relying on engineered or institutional controls to limit exposure (such as containment). Eliminated reference to remediation levels in these statements since they only define when different cleanup action components are used as part of a cleanup action (such as when contaminated material must be removed versus contained).

²⁸² Merged former subsection (2) into subsection (1), and simplified. See note on subsection (1).

²⁸³ Clarified purpose of requirements in this subsection.

²⁸⁴ Eliminated duplicative statements found in (a) and (b) of this subsection.

apply to ~~a~~an environmental medium only if the ~~particular~~ medium for which the a remediation level is being established ~~for~~ qualifies for a Method C cleanup level under WAC 173-340-706.

- (a) **Reasonable maximum exposure.** Standard reasonable maximum exposures and corresponding Method B and C equations in WAC 173-340-720 through 173-340-750 may be modified as provided under WAC 173-340-708(3)(d). For example, land uses other than residential and industrial may be used as the basis for an alternative reasonable maximum exposure scenario for the purpose of assessing the protectiveness of a cleanup action alternative that ~~uses~~relies on a remediation level, engineered ~~control, and/or~~ institutional controls (such as containment) to limit exposure to contaminated soil.
- (b) **Exposure parameters.** Exposure parameters for the standard Method B and C equations in WAC 173-340-720 through 173-340-750 may be modified as provided in WAC 173-340-708(10).
- (c) **Acceptable risk level.** The acceptable risk level ~~for~~used to establish a remediation levels for a hazardous substance shall must be the same as that used ~~for to establish~~ the cleanup level for the substance.²⁸⁵
- (d) **Soil to groundwater pathway.** The methods specified in WAC 173-340-747 to develop soil concentrations that are protective of groundwater beneficial uses may also be used ~~during remedy selection~~ to help assess whether the protectiveness to human health of a cleanup action alternative that ~~uses a remediation level, relies on~~ engineered ~~control, and/or~~ institutional controls (such as soil containment) will protect groundwater.²⁸⁶
- (e) **Burden of proof, new science, and quality of information.** Any modification of the default assumptions in the standard Method B and C equations, including modification of the standard reasonable maximum exposures and exposure parameters, or any modification of default assumptions or methods specified in WAC 173-340-747 requires compliance with WAC 173-340-702(14), (15) and (16).
- (f) **Commercial gas station scenario.**²⁸⁷ At active commercial gas stations, where there are retail sales of gasoline or diesel, one of the following may be done to demonstrate when a cap is protective of the soil ingestion and dermal pathways:
 - (i) ~~At active commercial gas stations, where there are retail sales of gasoline and/or diesel,~~ Equations 740-3 and 740-5 may be ~~used with~~ modified by reducing the exposure frequency ~~reduced to 0.25 to demonstrate when a cap is protective of the soil ingestion and dermal pathways.~~ This ~~scenario~~ exposure frequency is intended to be a conservative estimate of a child trespasser scenario at a commercial gas station where contaminated soil has been

²⁸⁵ Edited for clarity. No changes are intended.

²⁸⁶ Clarified what is being protected, which is groundwater.

²⁸⁷ Edited for clarity. No changes are intended.

excavated and stockpiled or soil is otherwise accessible. To rely on this exposure frequency: ~~Sites using remediation levels~~

(A) The cleanup action must ~~also use~~include institutional controls ~~to that~~ prevent uses that could result in a higher level of exposure; and

(B) ~~assess the protectiveness for o~~Other exposure pathways (e.g., soil vapors and soil to groundwater) must be assessed to determine whether they are protective; ~~or~~

(ii) Equations 740-3 and 740-5 may ~~also~~ be modified on a site-specific basis as described in WAC 173-340-740(3)(c).

~~(4)(3)~~ Protection of the environment Ecological risk assessment. A quantitative site-specific ecological risk assessment may be ~~conducted~~used to help determine whether cleanup action alternatives, including those ~~using~~relying on a remediation level, engineered ~~control and/or~~ institutional controls to limit exposure, ~~are protective of~~protect the environment.

WAC 173-340-360 **Cleanup action Requirements for cleanup actions.**

Tracked changes to Preliminary Draft 1, previously reviewed by STAG.

- (1) **Purpose.** This section specifies requirements for cleanup actions and the procedures for determining whether a cleanup action alternative meets those requirements. ~~This section is intended to be used in conjunction with the other remedy selection requirements and procedures in WAC 173-340-350 through 173-340-390.~~²⁸⁸
- (2) **Applicability.** ~~The requirements in this section apply to all contaminated sites.~~ A cleanup action at a contaminated site must comply with the requirements in this section, regardless of which administrative option in WAC 173-340-510 is used to conduct remedial action at the site.²⁸⁹
 - (a) **Sediment sites and sediment cleanup units.** For sites where there is a release or threatened release to sediment, a ~~cleanup actions~~ must also comply with the requirements in WAC 173-204-570.
 - (b) **National Priority List sites.** For sites on the federal National Priorities List, a ~~cleanup actions~~ must also comply with applicable requirements under the federal cleanup law.
- (3) **Requirements.** A cleanup action must meet all of the ~~following~~ requirements in this subsection. When a cleanup action includes more than one cleanup action component, the overall cleanup action must meet ~~these~~ requirements. Ecology recognizes that some of ~~these~~ requirements contain flexibility and require the use of professional judgment in determining how to apply them at a particular site. ~~Ecology makes the final determination as to whether a cleanup action meets these requirements.~~²⁹⁰
 - (a) **General requirements.** A cleanup action must:
 - (i) Protect human health and the environment, including vulnerable populations and overburdened communities,²⁹¹
 - (ii) Comply with cleanup standards (see Part ~~W4~~7 of this chapter);
 - (iii) Comply with applicable state and federal laws (see WAC 173-340-710);
 - (iv) Prevent or minimize present and future releases and migration of hazardous substances in the environment;

²⁸⁸ Eliminated statement to simplify and avoid confusion regarding the applicability of Sediment Management Standard requirements in chapter 173-204 WAC. Applicability is addressed in subsection (2) of this section.

²⁸⁹ Further clarified that the cleanup action requirements in this section apply regardless of which administrative option for remedial action is used (Ecology-conducted, Ecology-supervised, or independent). Clarification based on STAG input.

²⁹⁰ Eliminated previously added provisions throughout the rule clarifying that Ecology makes the final determination as to what remedial actions are needed and the sufficiency of those remedial actions. Consolidated those provisions in a new section in Part 1 of the rule

²⁹¹ Emphasized that cleanup actions must protect vulnerable populations and overburdened communities.

- (v) Provide resilience to climate change impacts that have a high likelihood of occurring and severely compromising its long-term effectiveness;²⁹²
 - (vi) Provide for compliance monitoring (see WAC 173-340-410 and Part ~~VII~~7 of this chapter);
 - ~~(vii)~~²⁹³ Not rely primarily on institutional controls and monitoring at a site, or portion thereof,²⁹⁴ if it is technically possible to implement a more permanent cleanup action;
 - ~~(viii)~~²⁹⁵ Not rely primarily on dilution and dispersion unless the incremental costs of any active remedial measures over the costs of dilution and dispersion grossly exceed the incremental degree of benefits of active remedial measures over the benefits of dilution and dispersion. Determine the benefits and costs using the criteria in subsection (5)(d) of this section.²⁹⁶
 - ~~(vii)(ix)~~ Provide for a reasonable restoration time frame (see subsection (4) of this section); and
 - ~~(viii)(x)~~ Use permanent solutions to the maximum extent practicable (see subsection (5) of this section); and.
 - ~~(ix)~~ ~~Consider public concerns (see WAC 173-340-600).~~²⁹⁷
- (b) **Action-specific requirements.**²⁹⁸ As applicable, Aa cleanup action must:

²⁹² We declined a request by a STAG member to incorporate consideration of an alternative's carbon impacts in the remedy selection process. Our policy remains that a cleanup action should be selected without consideration of carbon impacts. However, when implementing the selected remedy, it should be optimized to limit its carbon impact. Our policy is based on the following: (1) our mandate under MTCA is to protect the health and environment of the communities impacted by contamination, including vulnerable populations and already overburdened communities; and (2) consideration of carbon impacts are unlikely to effect the remedy selected.

²⁹³ Moved requirement from action-specific requirements to general requirements. We limited the action-specific requirements category to those requiring use of specific remedial actions, such as institutional controls or periodic reviews. This requirement focuses on relative permanence of competing alternatives. Move based in part on STAG input.

²⁹⁴ Clarified requirement by moving language "at a site, or portion thereof" from end of sentence. Clarification based on STAG input.

²⁹⁵ Moved requirement from action-specific requirements to general requirements. We limited the action-specific requirements category to those requiring use of specific remedial actions, such as institutional controls or periodic reviews. This requirement establishes a preference for active (over passive) measures. Move based in part on STAG input.

²⁹⁶ Clarified that the benefits and costs that must be considered in the evaluation are the same as those considered in the DCA. Clarification based on STAG input.

²⁹⁷ Moved to subsection (3)(d) and amended. See note on that subsection.

²⁹⁸ Limited the action-specific requirements category to those requiring use of specific remedial actions, such as institutional controls or periodic reviews. We moved the two "primary reliance" requirements under the general requirements. We also emphasized upfront that the requirements depend on the alternative. Changes based in part on STAG input.

- (i) Use remediation levels ~~when and as required under~~ in accordance with WAC 173-340-355 ~~and 173-340-357 and Part VII of this chapter;~~
 - (ii) Use institutional controls ~~when and as required under~~ in accordance with WAC 173-340-440;
 - (iii) ~~Use~~ Provide financial assurances ~~when and as required by Ecology under~~ in accordance with WAC 173-340-440(11); and
 - (iv) Provide for periodic reviews ~~when and as required under~~ in accordance with WAC 173-340-420(2); .
 - ~~(v)²⁹⁹ — Not rely primarily on institutional controls and monitoring where it is technically possible to implement a more permanent cleanup action for all or a portion of the site; and~~
 - ~~(vi)³⁰⁰ — Not rely primarily on dilution and dispersion unless the incremental costs of any active remedial measures over the costs of dilution and dispersion grossly exceed the incremental degree of benefits of active remedial measures over the benefits of dilution and dispersion.~~
- (c) **Media-specific requirements.**
- (i) A soil cleanup action must treat, remove, or contain contaminated soils located on properties:
 - (A) Where a school or child care center is located;
 - (B) That qualify as a residential area based on current use; or
 - (C) That qualify as a potential future residential area based on zoning, statutory and regulatory restrictions, comprehensive plans, historical use, adjacent land uses, and other relevant factors.
 - (ii) A groundwater cleanup action must be permanent (achieve groundwater cleanup levels at the standard point of compliance without further remedial action being required)³⁰¹ if:
 - (A) Such an action is practicable; or
 - (B) Ecology determines such an action is in the public interest.
 - (iii) A non-permanent groundwater cleanup action must:
 - (A) Treat or remove the source of groundwater contamination at sites where there are liquid wastes, areas contaminated with high

²⁹⁹ Moved to subsection (3)(a)(vii).

³⁰⁰ Moved to subsection (3)(a)(viii).

³⁰¹ Added back the explanation in the current rule of what a permanent groundwater cleanup action involves. The term “permanent cleanup action” is defined in Section 200.

concentrations of hazardous substances, highly mobile hazardous substances, or hazardous substances that cannot be reliably contained. This includes removal of free product consisting of petroleum and other light nonaqueous phase liquid (LNAPL) from the groundwater using normally accepted engineering practices. Source containment may be appropriate when the free product consists of a dense nonaqueous phase liquid (DNAPL) that cannot be recovered after reasonable efforts have been made;

- (B) Contain contaminated groundwater to the maximum extent practicable to ~~avoid~~prevent lateral and vertical expansion of the groundwater volume affected by the hazardous substances and to ~~avoid~~prevent the migration of the hazardous substances. This includes barriers or hydraulic control through groundwater pumping, or both; and
- (C) ~~If the release impacts water users, p~~Provide an alternate water supply or treatment if the cleanup action does not protect an existing use of the groundwater. A cleanup action is not protective of an existing use if a hazardous substance concentration exceeds the protective groundwater concentration for that use.³⁰²

~~(d) — Equitable distribution of benefits and burdens.~~³⁰³ ~~When determining whether a cleanup action alternative meets the requirements in this subsection, evaluate and document the following:~~

- ~~(i) — How the alternative may benefit or burden any highly impacted community affected by the site. When evaluating burdens, a cumulative impact analysis must be conducted based on existing and available data. Burdens may be health, social, cultural, or economic; and~~
- ~~(ii) — The degree to which the alternative equitably distributes its benefits and burdens between any highly impacted and other communities affected by the site.~~

³⁰² Clarified intent of provision in response to several questions from STAG members, including which uses of groundwater should be considered (any use, not just drinking water), whether current or future use (only current) and what constitutes an impact to those uses (if concentration exceeds protective concentration for that use).

³⁰³ Eliminated separate equitability requirement for cleanup actions, including consideration of any cumulative environmental or health impacts on vulnerable populations and overburdened communities from sources other than the contaminated site. Under MTCA, a cleanup action must still protect the health and environment of such populations. And impacts on such populations must still be considered when evaluating the reasonableness of a restoration time frame and the benefits of cleanup action as part of a DCA. Under the HEAL act, if a cleanup action meets the definition of a “significant agency action” (see RCW [70A.02.010](#)(12)), an environmental justice assessment of the cleanup action will also need to be conducted in accordance with the HEAL act (see RCW [70A.02.060](#)).

(d) Public concerns and tribal rights and interests.³⁰⁴ For Ecology-conducted or Ecology-supervised remedial actions, Ecology must consider the following when selecting a cleanup action:

- (i)** Public concerns, including the concerns of vulnerable populations and overburdened communities,³⁰⁵ identified under WAC 173-340-600(13) and (14); and
- (ii)** Indian tribes' rights and interests in their tribal lands identified under WAC 173-340-620.

(4) Determining whether a cleanup action provides for a reasonable restoration time frame.

(a) Purpose. The restoration time frame is the period of time needed for a cleanup action to achieve cleanup levels at the point of compliance (see WAC 173-340-200). This subsection specifies the requirements and procedures for determining whether a cleanup action alternative provides for a reasonable restoration time frame, as required under subsection (3)(a)~~(vii)~~(ix) of this section.

(b) Applicability.

- (i) Whether evaluation required.**³⁰⁶ An evaluation of whether a cleanup action alternative provides a reasonable restoration time frame must be conducted unless a model remedy is selected as the cleanup action. The evaluation must be conducted regardless of which administrative option in WAC 173-340-510 is used to conduct remedial action at the site.
- (ii) Evaluation requirements.**³⁰⁷
 - (A)** For restoration of environmental media other than sediment, the evaluation must be conducted in accordance with this subsection;
 - (B)** For restoration of sediment, the evaluation must be conducted in accordance with WAC 173-204-570(5).

³⁰⁴ Moved requirement to consider public concerns when selecting a cleanup action from under subsection (3)(a) to subsection (3)(d), and separated out tribal rights and interests. Also clarified how public concerns and tribal rights and interests are identified, which is through the public participation process under Section 600 and the tribal engagement process under new Section 620. For Ecology-conducted and ecology-supervised remedial actions, such public participation and tribal engagement is always required.

³⁰⁵ Emphasized that, when considering public concerns when selecting a cleanup action, Ecology must consider the concerns of vulnerable populations and overburdened communities.

³⁰⁶ Clarified applicability of whether a restoration time frame evaluation is required based on STAG input. The evaluation is not required if a model remedy is selected as the cleanup action. This applicability is the same as for the larger feasibility study in which the evaluation would occur.

³⁰⁷ Clarified applicability of restoration time frame evaluation requirements in this section to sediment, based on STAG input. The requirements in this subsection apply to environmental media other than sediment. The requirements applicable to sediment are specified in WAC 173-204-570(5).

- ~~(b)~~(c) **Evaluation.** To determine whether a cleanup action alternative provides for a reasonable restoration time frame, the following factors must be considered at a minimum.³⁰⁸
- (i) Potential risks posed by the site to human health and the environment, including vulnerable populations and overburdened communities.³⁰⁹
 - (ii) Practicability of achieving a shorter restoration time frame. A restoration time frame is not reasonable if an active remedial measure with a shorter restoration time frame is practicable;
 - (iii) Long-term effectiveness of the alternative. A longer restoration time frame may be reasonable if the alternative has a greater degree of long-term effectiveness than one that primarily relies on on-site or off-site disposal, isolation, or containment;
 - (iv) Current use of the site, surrounding areas, and associated resources that are, or may be, affected by releases from the site;
 - (v) Potential future use of the site, surrounding areas, and associated resources that are, or may be, affected by releases from the site;
 - (vi) Availability of alternative water supplies;
 - (vii) Likely effectiveness and reliability of institutional controls;
 - (viii) Ability to control and monitor migration of hazardous substances from the site;
 - (ix) Toxicity of the hazardous substances at the site; ~~and~~
 - (x) Natural processes that reduce concentrations of hazardous substances and have been documented to occur at the site or under similar site conditions; and
 - (xi) For Ecology-conducted or Ecology-supervised remedial actions, public concerns identified under WAC 173-340-600(13) and (14) and Indian tribes' rights and interests in their tribal lands identified under WAC 173-340-620.³¹⁰
- ~~(c)~~(d) **Cleanup levels below area background concentrations.** ~~When~~At sites where area background concentrations, as defined in WAC 173-340-200, would result in recontamination of the site to levels that exceed cleanup levels:

³⁰⁸ Clarified that list of restoration time frame evaluation factors is not an exclusive list, as under the current rule.

³⁰⁹ Emphasized that one must consider the potential risks posed by the site to the health and environment of vulnerable populations and overburdened communities when evaluating the reasonableness of a restoration time frame. Based on STAG input.

³¹⁰ Based on requirement in Section 360(3)(d), clarified how public concerns and tribal rights and interests must be considered when determining whether the restoration time frame for a cleanup action alternative is reasonable.

- (i) The remedial action must achieve area background concentrations within a reasonable restoration time frame, as determined under ~~(b)~~(c) of this subsection.
 - (ii) Cleaning up the site below area background concentrations may be delayed until the off-site sources of hazardous substances are controlled; and
 - (iii) The remedial action is ~~considered~~ an interim action until cleanup levels are attained.
- ~~(d)~~(e) **Cleanup levels below technically possible concentrations.**³¹¹ At sites ~~W~~where cleanup levels determined under Method C in WAC 173-340-706 are below concentrations that are technically possible to achieve:
 - (i) The remedial action must achieve concentrations that are technically possible to achieve within a reasonable restoration time frame, as determined under ~~(b)~~(c) of this subsection; and
 - (ii) The remedial action is ~~considered~~ an interim action until cleanup levels are attained.
- (5) **Determining whether a cleanup action uses permanent solutions to the maximum extent practicable.**
 - (a) **Purpose.** This subsection specifies the requirements and procedures for determining whether a cleanup action uses permanent solutions to the maximum extent practicable, as required under RCW ~~70.105D.030~~70A.305.030(1) and subsection (3)(a)~~(viii)~~(x) of this section. A permanent cleanup action or permanent solution is defined in WAC 173-340-200.
 - (b) **Applicability.** The evaluation required under this subsection must be conducted unless a permanent cleanup action alternative or a model remedy is selected as the cleanup action.³¹² The evaluation must be conducted regardless of which administrative option in WAC 173-340-510 is used to conduct the cleanup action.³¹³
 - (c) **Procedure.** To determine which cleanup action alternative included in the feasibility study uses permanent solutions to the maximum extent practicable, do the following:
 - (i) **Step 1:** Determine the benefits and costs of each cleanup action alternative using the criteria in (d) of this subsection.

³¹¹ We declined a request by a STAG member to provide site closure in situations where cleanup levels are below technically possible concentrations or area background concentrations. We are not delisting sites in these situations.

³¹² Emphasized that a DCA is also not required if a model remedy is selected. If a model remedy is selected, no feasibility study is required, including a DCA. While this is already stated in Section 351(2)(a), it makes sense to restate here. Clarification based on STAG input.

³¹³ Emphasized that the need for a DCA does not depend on the administrative option used to conduct remedial action at the site (Ecology-conducted, Ecology-supervised, or independent). Clarification based on STAG input.

- (A) The estimation and comparison of benefits and costs may be quantitative, but will often be qualitative and require the use of best professional judgment.
- (B) ~~Based on~~ On a site-specific ~~factors~~ basis, Ecology may weight the criteria in (d) of this subsection and favor or disfavor qualitative benefits and costs estimates ~~and use that information~~ in the analysis.³¹⁴
- (C) For Ecology-conducted or Ecology-supervised remedial actions, when determining or weighting the benefits in (d) of this subsection, Ecology must consider:

 - (i) Public concerns identified under WAC 173-340-600(13) and (14); and
 - (ii) Indian tribes' rights and interests in their tribal lands identified under WAC 173-340-620.³¹⁵
- (ii) **Step 2:** Rank the cleanup action alternatives by degree of permanence. To determine the relative permanence of an alternative, consider the definition of a permanent cleanup action in WAC 173-340-200 and the criteria in (d)(ii) of this subsection.
- (iii) **Step 3:** Identify the initial baseline alternative for use in the disproportionate cost analysis in Step 4.

 - (A) If the feasibility study includes only one permanent cleanup action alternative, use that alternative as the initial baseline.
 - (B) If the feasibility study includes more than one permanent cleanup action alternative, determine which ~~one~~ permanent cleanup action alternative is the most ~~practicable~~ cost-effective (that is, the alternative with the lowest cost per degree of benefit) and use it as the initial baseline. Eliminate from further evaluation the less ~~practicable~~ cost-effective permanent cleanup action alternatives.³¹⁶
 - (C) If all permanent cleanup action alternatives are eliminated from evaluation in the feasibility study during the screening process in WAC

³¹⁴ Clarified that Ecology has the discretion to both weight the benefit and cost criteria and favor or disfavor qualitative benefit and cost estimates in the analysis. Clarifications based on STAG questions and internal review.

³¹⁵ Based on requirement in Section 360(3)(d), added requirement that, for Ecology-conducted or Ecology-supervised remedial actions, one must consider both public concerns and tribal rights and interests both when determining and when weighting each of the five benefit criteria (protectiveness, permanence, long-term effectiveness, management of short-term risks, and implementability). This requirement replaces the separate “public concerns” DCA criterion under Section 360(5)(d). This change was prompted by STAG discussion as to how public concerns and tribal interests should be considered in the DCA.

³¹⁶ Changed and clarified the standard for selecting the initial baseline when the feasibility study includes more than one permanent alternative from “most practicable” to “most cost-effective” (lowest cost per degree of benefit). Based on questions posed by a STAG member.

173-340-350(7)(c)(iii), use the most permanent cleanup action alternative identified in Step 2 as the initial baseline.

- (iv) **Step 4:** Conduct a disproportionate cost analysis of the ranked list of cleanup action alternatives identified in Step 2. Use the cleanup action alternative identified in Step 3 as the initial baseline for the analysis.

(A) **Analysis.** To conduct the analysis, do the following:

- (I) First, compare the costs and benefits of the baseline alternative with the costs and benefits of the next most permanent alternative; and
- (II) Second, determine whether the incremental costs of the baseline alternative over the next most permanent alternative ~~substantially exceed~~are disproportionate to the incremental degree of benefits of the baseline alternative over the next most permanent alternative.³¹⁷

(B) **Decision.** Based on the results of the analysis, do the following:

- (I) If the incremental costs ~~do~~are not ~~substantially exceed~~disproportionate to the incremental degree of benefits, the baseline alternative ~~is~~uses permanent solutions to the maximum extent practicable and the analysis under this subsection is complete.
- (II) If the benefits of the two alternatives are the same or similar, the lower cost alternative ~~is~~uses permanent solutions to the maximum extent practicable and the analysis under this subsection is complete.
- (III) If the incremental costs ~~substantially exceed~~are disproportionate to the incremental degree of benefits, eliminate the baseline alternative from further analysis and make the next most permanent alternative the baseline for further analysis. Repeat Step 4. However, if the new baseline is the least permanent alternative on the ranked list of alternatives identified in Step 2, that alternative ~~is~~uses

³¹⁷ Changed the wording of the DCA test based on STAG input. We propose relying simply on the term “disproportionate” instead of defining that term as meaning either “exceed” (which could mean 1 cent) or “substantially exceed” (which arguably changes the standard altogether). We are not seeking the authority to select a more permanent alternative when its incremental costs clearly exceed its incremental benefits. Rather, we are seeking to retain the discretion to select the more permanent alternative when it’s uncertain whether its incremental costs exceed its incremental benefits. We are trying to capture the inherent difficulty and uncertainty in estimating and comparing costs and benefits, particularly qualitative benefits.

permanent solutions to the maximum extent practicable and the analysis under this subsection is complete.

- (d) **Criteria.** When conducting a disproportionate cost analysis under this subsection, use the following criteria to evaluate and compare the costs and benefits of each cleanup action alternative.³¹⁸
- (i) **Protectiveness.** The degree to which the alternative protects human health and the environment, including vulnerable populations and overburdened communities.³¹⁹ When assessing protectiveness, consider at least the following:
- (A) The degree to which the alternative reduces existing risks;
 - (B) The time required for the alternative to reduce risks at the site and attain cleanup standards;
 - (C) The on-site and offsite risks ~~resulting from~~ remaining after implementing the alternative,³²⁰ and
 - (D) Improvement of the overall environmental quality;
- (ii) **Permanence.** The degree to which the alternative permanently reduces the toxicity, mobility, or mass of, or ~~volume of~~ exposure to,³²¹ hazardous substances, including:
- (A) The adequacy of the alternative in destroying the hazardous substances;
 - (B) The reduction or elimination of hazardous substance releases and sources of releases;
 - (C) The degree of irreversibility of waste treatment process; and
 - (D) The characteristics and quantity of treatment residuals generated;
- (iii) **Effectiveness over the long term.** The degree to which the alternative is likely to be effective over the long term, including for vulnerable populations and overburdened communities.³²²

³¹⁸ We declined a request by a STAG member to consider past natural resource damages (NRD) and cultural injuries in the DCA. Remedy selection and NRD assessments serve different purposes.

³¹⁹ Emphasized that, when assessing the protectiveness of a cleanup action, one must consider impacts on vulnerable populations and overburdened communities.

³²⁰ Clarified that the referenced risks are those remaining after implementing the alternative, not those created by constructing and implementing the alternative. Management of cleanup risks is addressed under the criterion in subsection (5)(d)(iv).

³²¹ Removed “volume” and added “exposure” as a factor that must be considered when assessing the permanence of a cleanup action alternative. Based on STAG input.

³²² Emphasized that, when assessing the long-term effectiveness of a cleanup action, one must consider impacts on vulnerable populations and overburdened communities.

- (A) **Factors.** When assessing the long-term effectiveness of the alternative, consider at least the following ~~at a minimum~~:
 - (I) The degree of certainty that the alternative will be successful;
 - (II) The reliability of the alternative during the period of time hazardous substances are expected to remain on-site at concentrations that exceed cleanup levels;
 - (III) The resilience of the alternative to climate change impacts;
 - (IV) The magnitude of residual risk with the alternative in place; and
 - (V) The effectiveness of controls required to manage treatment residues or remaining wastes.
- (B) **Hierarchy.** Except as provided for sediment sites and cleanup units in WAC 173-204-570(4)(b), when assessing the relative degree of long-term effectiveness of cleanup action components, the following types of components may be used as a guide, in descending order:
 - (I) Reuse or recycling;
 - (II) Destruction or detoxification;
 - (III) Immobilization or solidification;
 - (IV) On-site or offsite disposal in an engineered, lined and monitored facility;
 - (V) On-site isolation or containment with attendant engineering controls; and
 - (VI) Institutional controls and monitoring;
- (iv) **Management of ~~short-term~~ implementation risks.**³²³ The risks to human health and the environment, including vulnerable populations and overburdened communities,³²⁴ associated with the alternative during construction and implementation, and the effectiveness of the alternative to manage such risks;
- (v) **Technical and administrative implementability.** The ability to implement the alternative, including consideration of:

³²³ Clarified the header to better describe what risks are considered under this criterion, which are the implementation risks.

³²⁴ Emphasized that, when assessing the short-term risks of a cleanup action during construction and implementation, one must consider impacts on vulnerable populations and overburdened communities.

- (A) ~~Whether the alternative is technically possible~~ The technical difficulty of designing, constructing, and otherwise implementing the alternative in a reliable and effective manner, regardless of cost;³²⁵
- (B) The availability of necessary offsite facilities, services, and materials;
- (C) Administrative and regulatory requirements;
- (D) Scheduling, size, and complexity;
- (E) Monitoring requirements;
- (F) Access for construction operations and monitoring; and
- (G) Integration with existing facility operations and other current or potential remedial actions; and

~~(vi) — Consideration of public concerns.~~³²⁶ ~~Whether the community has concerns about the alternative and, if so, the extent to which the alternative addresses those concerns. Consider concerns from individuals, community groups, local governments, tribes, federal and state agencies, or any other organization that may have an interest in or knowledge of the site; and~~

~~(vii)~~(vi) **Costs.** The costs of remedial actions necessary to implementing the alternative, including ~~Do not include the costs of redeveloping the site. Include the following costs:~~

- (A) **Construction costs**, such as pre-construction engineering design and permitting, physical construction (including labor, equipment, ~~and~~ materials, and contingencies³²⁷), waste management and disposal,³²⁸ compliance monitoring during construction (including sampling and analysis), construction management, establishment of institutional controls, regulatory oversight, and quality assurance and quality control; and
- (B) **Post-construction costs**, such as operation and maintenance activities necessary to maintain the effectiveness of a constructed cleanup action

³²⁵ Clarified that one should consider the relative technical difficulty of implementing an alternative, not just whether the alternative is technically possible. Alternatives that are clearly technically impossible are screened out in Step 3 of the feasibility study (see Section 351(6)(c)). The term “technically possible” is defined in Section 200.

³²⁶ Replaced the separate “public concerns” DCA criterion with a requirement in Section 360(5)(c)(i)(C) that one must consider both public concerns and tribal rights and interests when determining and weighting each of the five benefit criteria (protectiveness, permanence, long-term effectiveness, management of short-term risks, and implementability). This change was prompted by STAG discussion as to how public concerns and tribal interests should be considered in the DCA.

³²⁷ Added contingencies as another construction cost example. Based on STAG input.

³²⁸ Added waste management and disposal as another construction cost example.

component, waste management and disposal,³²⁹ replacement or repair of equipment (including labor, equipment, and materials), permit renewal, compliance monitoring (including sampling and analysis), maintaining institutional controls, financial assurances, periodic reviews, post-construction management, and regulatory oversight.

(I) **Design life.** Estimate the design life of cleanup action components, including engineered controls. If the period of time in which a component is needed exceeds the design life of the component, include the cost of replacing or repairing the component in the cost estimate.

(II) ~~Present worth~~**Future costs.** ~~If present worth analysis is used to estimate future costs, consider both of the following:~~Future costs may be discounted using present worth analysis.³³⁰ When discounting future costs, do the following.³³¹

- Estimate future costs using an appropriate construction cost index; and
- ~~Discount rate.~~ ~~If project costs do not exceed thirty years, use~~Discount future costs using the current U.S. Treasury nominal interest rate for bonds of comparable maturity to the period of analysis. If project costs exceed thirty years, use the current U.S. Treasury thirty-year nominal interest rate.
- ~~Inflation of construction and maintenance costs.~~ ~~Use an appropriate construction cost index.~~

³²⁹ Added waste management and disposal as another post-construction cost example.

³³⁰ Retained option to discount future costs. However, we are not requiring discounting. We did not add option to discount future benefits (which are not monetary). Based on STAG input and advice of our agency economist.

³³¹ When discounting future costs, we decided to continue to rely on the U.S. Treasury interest rate. Given that we require consideration of inflation when estimating future costs, we also clarified that the nominal (as opposed to real) interest rate should be used. Some STAG members wanted to be able to use the discount rate used by the PLP or other person conducting the cleanup. We declined that option because the analysis is focused on the community impacted (net social benefit), not the person conducting the cleanup. Otherwise, the cleanup action selected (and the extent to which environmental harms are reduced) would depend on who happens to be conducting the cleanup.

WAC 173-340-370 Cleanup action ~~Expectations for cleanup actions.~~

Tracked changes to Preliminary Draft 1, previously reviewed by STAG.

Ecology has the following expectations for cleanup actions. The expectations represent the likely results of the ~~remedy~~cleanup action selection process described in WAC 173-340-350 through 173-340-390. Ecology recognizes that conformance with the expectations may not be appropriate at some sites. Selecting a cleanup action conforming to the expectations is not a substitute for conducting a feasibility study. The expectations must be considered when evaluating cleanup action alternatives in the feasibility study. Any non-conformance of the preferred cleanup action alternative to the expectations must be documented and explained in the feasibility study report.

- (1) Ecology expects that treatment technologies will be emphasized at sites containing liquid wastes, areas contaminated with high concentrations of hazardous substances, highly mobile materials, and/or discrete areas of hazardous substances that lend themselves to treatment.
- (2) To minimize the need for long-term management of contaminated materials, Ecology expects that all hazardous substances will be destroyed, detoxified, and/or removed to concentrations below cleanup levels throughout sites containing small volumes of hazardous substances.
- (3) Ecology recognizes the need to use engineering controls, such as containment, for sites or portions of sites that contain large volumes of materials with relatively low levels of hazardous substances where treatment is impracticable.
- (4) To minimize the potential for migration of hazardous substances, Ecology expects that active measures will be taken to prevent precipitation and subsequent runoff from coming into contact with contaminated soils and waste materials. When such measures are impracticable, such as during active cleanup, Ecology expects that site runoff will be contained and treated prior to release from the site.
- (5) Ecology expects that when hazardous substances remain on-site at concentrations exceeding cleanup levels, those hazardous substances will be consolidated to the maximum extent practicable where needed to minimize the potential for direct contact and migration of hazardous substances.
- (6) Ecology expects that, ~~for sites adjacent to a surface water body,~~³³² active measures will be taken to prevent/minimize releases to surface water or sediment³³³ via surface runoff and groundwater discharges in excess of cleanup levels. Ecology expects that dilution will not be the sole method for demonstrating compliance with cleanup standards in these instances.
- (7) Ecology expects that natural attenuation of hazardous substances may be appropriate at sites where:

³³² Eliminated unnecessary language limiting the applicability of the expectation. Where there are releases to surface water or sediment, the expectation applies.

³³³ Expanded expectation to include releases to sediment, which are also impacted by surface runoff and groundwater discharges. Added to better integrate sediment requirements in chapter 173-204 WAC.

- (a) Source control (including removal and/or treatment of hazardous substances) has been conducted to the maximum extent practicable;
 - (b) Leaving contaminants on-site during the restoration time frame does not pose an unacceptable threat to human health or the environment;
 - (c) There is evidence that natural biodegradation or chemical degradation is occurring and will continue to occur at a reasonable rate at the site; and
 - (d) Appropriate monitoring requirements are conducted to ensure that the natural attenuation process is taking place and that human health and the environment are protected.
- (8) Ecology expects that cleanup actions conducted under this chapter will not result in a significantly greater ~~overall~~long-term threat to human health and the environment from hazardous substances, either at the site being cleaned up or at another site involved with the cleanup action, than other cleanup action alternatives.³³⁴
- ~~(9) Ecology expects that cleanup actions conducted under this chapter will provide an equitable distribution of benefits and avoid an inequitable distribution of burdens between any highly impacted and other communities affected by the site. Ecology further expects that any inequitable distribution will be mitigated in consultation with highly impacted communities.~~³³⁵
- ~~(10) Ecology expects that cleanup actions conducted under this chapter will be effective over the long term and resilient to those climate change impacts that are both highly likely to occur and could severely compromise cleanup actions.~~³³⁶

³³⁴ Clarified the expectation by focusing on the long-term threat posed by contamination either at the site or another site involved with the cleanup action. Examples include removing contaminated soil and taking it to a poorly designed or operated landfill that already has contamination issues; taking the waste to a poorly operated treatment facility; pumping contaminated groundwater and discharging it without adequate treatment to a location where exposure is more likely; spreading the waste out in a field to dilute the concentration and contaminating a much larger area.

³³⁵ Consistent with the elimination of the equitability requirement for cleanup actions in Section 360, eliminated the equitability expectation for cleanup actions in this section. Under MTCA, a cleanup action must still protect the health and environment of vulnerable populations and overburdened communities. And impacts on such populations must be considered when evaluating the reasonableness of a restoration time frame and the benefits of cleanup action as part of a DCA. Under the HEAL act, if a cleanup action meets the definition of a “significant agency action” (see RCW [70A.02.010](#)(12)), an environmental justice assessment of the cleanup action will also need to be conducted in accordance with the HEAL act (see RCW [70A.02.060](#)).

³³⁶ Eliminated the climate resilience expectation proposed in Preliminary Draft 1. We determined the expectation was both duplicative and conflicting with the requirement in Section 360. The expectation in Section 370 essentially implied that the requirement in Section 360 may not always need to be met. Based on STAG input.

WAC 173-340-380 Cleanup action plan.

Tracked changes to current rule.

- (1) Purpose.** The purpose of a cleanup action plan is to document the selected cleanup action and to specify the cleanup standards and other requirements the cleanup action must meet.
- (2) Applicability.**³³⁷

 - (a) Whether required.** A cleanup action must be selected and a cleanup action plan must be developed regardless of which administrative option in WAC 173-340-510 is used to conduct remedial action at the site.³³⁸
 - (b) Requirements.** A cleanup action plan must comply with the requirements in this section. For sites where there is a release or threatened release to sediment, a cleanup action plan must also comply with the requirements in WAC 173-204-575.³³⁹
- (3) Timing.**³⁴⁰ Except as otherwise directed by Ecology, a remedial investigation/feasibility study must be completed before cleanup standards are established and a cleanup action is selected. An emergency remedial action or an interim action may be conducted before a cleanup action is selected.
- (4) Administrative options and requirements.**³⁴¹ A cleanup action may be selected and a cleanup action plan may be developed under any of the administrative options for remedial action described in WAC 173-340-510. Reporting and public participation requirements depend on the administrative option used to conduct remedial action.

 - (a) Ecology-conducted or Ecology-supervised remedial actions.** For an Ecology-conducted or Ecology-supervised cleanup action, Ecology will:

 - (i)** Select the cleanup action and establish the cleanup standards and other requirements that the cleanup action must meet;³⁴²

³³⁷ In subsection (2), separated out and clarified applicability of this section.

³³⁸ Clarified that the requirement to select a cleanup action based on a remedial investigation/feasibility study and to document the plan applies to all sites, regardless of which administrative option for remedial action is used to clean them up (Ecology-conducted, Ecology-supervised, or independent). The reporting of a cleanup action plan is an administrative requirement, which depends on the administrative option for remedial action. See subsection (4) of this section.

³³⁹ Clarified that for sites where there is a release or threatened release to sediment, a cleanup action plan must also comply with the requirements in WAC [173-204-575](#).

³⁴⁰ In subsection (3), added provision to clarify timing selecting a cleanup action and developing cleanup action plan. This provision reflects the timing provisions in Sections 350 and 351 for the remedial investigation/feasibility study.

³⁴¹ In subsection (4), grouped together the administrative requirements (reporting and public participation) as done in other sections, such as in Section 350 and 351. Clarified the differences in requirements between Ecology-conducted or supervised remedial actions and independent remedial actions.

³⁴² Clarified that, for Ecology-conducted and Ecology-supervised remedial actions, Ecology selects the cleanup action and sets the cleanup standards.

- (ii) Issue a draft cleanup action plan that includes the information required in subsection (5) of this section. For routine actions,³⁴³ Ecology may include the draft cleanup action plan in an order or decree instead of in a separate document;
 - (iii) Provide or require public notice of the draft cleanup action plan in accordance with WAC 173-340-600(14);³⁴⁴
 - (iv) After review and consideration of public comments, issue a final cleanup action plan. For routine actions,³⁴⁵ Ecology may include the final cleanup action plan in an order or decree instead of in a separate document;
 - (v) Provide notice of the final cleanup action plan in accordance with WAC 173-340-600(14);³⁴⁶ and
 - (vi) If Ecology subsequently determines, following implementation of the selected cleanup action, that the cleanup standards or, where applicable, remediation levels established in the cleanup action plan cannot be achieved, Ecology will provide notice of the determination in accordance with WAC 173-340-600(15).³⁴⁷
- (b) Independent remedial actions. An independent cleanup action plan must be reported to Ecology in accordance with WAC 173-340-515.³⁴⁸
- ~~(1)(4) Draft~~Content of cleanup action plan. The department shall issue a draft cleanup action plan for a cleanup action to be conducted by the department or by a potentially liable person under an order or decree.³⁴⁹ A cleanup action plan must include the following information and provide a

³⁴³ Moved from former subsection (4).

³⁴⁴ Moved from former subsection (2).

³⁴⁵ Moved from former subsection (4).

³⁴⁶ Moved from former subsection (3).

³⁴⁷ Moved from former subsection (3) and amended. Ecology will provide notice of the determination on its website, through site-specific electronic alerts, and on the *Contaminated Site Register*. However, we eliminated the requirement of “public notice” (which includes opportunity to comment) on such determinations since Ecology is already required to provide public notice on any cleanup action plan amendment based on the determination.

³⁴⁸ For independent remedial actions, a cleanup action must still be selected and a cleanup action plan must still be developed. However, a separate cleanup action plan does not need to be submitted to Ecology for review and approval before conducting the cleanup action. A person may submit an independent cleanup action plan for Ecology review and opinion under the Voluntary Cleanup Program (VCP) before conducting the cleanup, seeking an “NFA likely” opinion (WAC 173-340-515(5)). In such cases, the independent cleanup action plan must include sufficient information to serve the same purpose as the plan required under this section (WAC 173-340-515(3)(c) and (4)). Upon completing the cleanup action, a person must submit an independent cleanup action report to Ecology regardless of whether they are seeking Ecology’s review and opinion under the VCP. The report must include sufficient information to serve the same purpose as all of the remedial action plans and reports required under this chapter, including the plan required under this section (WAC 173-340-515(3)(c) and (4)).

³⁴⁹ Moved to subsection (3)(a).

~~The level of detail in the draft cleanup action plan shall be~~ commensurate with the complexity of the site and ~~proposed~~ cleanup action.³⁵⁰

~~(a) The draft cleanup action plan shall include the following:~~

~~(i)(a)~~ A general description of the ~~proposed~~ cleanup action ~~developed~~ selected in accordance with WAC 173-340-350 through 173-340-390, including any model remedy.³⁵¹

~~(ii)(b)~~ A summary of the rationale for selecting the ~~proposed alternative~~ cleanup action, including any model remedy.³⁵²

~~(c)~~ For Ecology-conducted or Ecology-supervised remedial actions, a brief summary of how Ecology considered the following when selecting the cleanup action:

(i) Public concerns identified under WAC 173-340-600(13) and (14); and

(ii) Indian tribes' rights and interests in their tribal lands identified under WAC 173-340-620.³⁵³

~~(iii)(d)~~ A brief summary of the other cleanup action alternatives evaluated in the remedial investigation/feasibility study.³⁵⁴

~~(iv)(e)~~ Cleanup standards and, where applicable, remediation levels, for each hazardous substance and for each environmental medium of concern at the site.³⁵⁴

~~(f)~~ Any changes to the default assumptions or reasonable maximum exposure scenarios used to establish cleanup standards or to demonstrate the protectiveness of the cleanup action.³⁵⁴

~~(v)(g)~~ The schedule for ~~implementation of~~ implementing the cleanup action plan including, if known, the restoration time frame.³⁵⁴

~~(vi)(h)~~ Any ~~institutional controls, if any,~~ required as part of the ~~proposed~~ cleanup action.³⁵⁴

~~(vii)(i)~~ Any ~~Applicable state and federal laws, if any,~~ for the ~~proposed~~ cleanup action, ~~when these are~~ known at this step in the cleanup process. ~~(f) This does not preclude subsequent identification of applicable state and federal laws~~.³⁵⁴

³⁵⁰ Clarified that cleanup actions plans must include the specified information, whether draft or final.

³⁵¹ Emphasized that the cleanup action plan must identify any model remedy selected as part of the cleanup action.

³⁵² Emphasized that the cleanup action plan must summarize the basis for selecting a model remedy as part of the cleanup action, consistent with WAC 173-340-390(4).

³⁵³ Added requirement that cleanup action plans must summarize how public concerns and tribal interests were considered when selecting the cleanup action. This requirement reflects the cleanup action requirement in Section 360(3)(d) that such concerns and interests must be considered.

³⁵⁴ Added requirement that cleanup action plans document any changes to the default assumptions or reasonable maximum exposure scenarios used to establish cleanup standards or to demonstrate the protectiveness of the cleanup action.

- ~~(viii)~~(i) A preliminary determination by ~~the department~~Ecology that the ~~proposed~~ cleanup action will comply with WAC 173-340-360~~;~~ and
- ~~(ix)~~(k) ~~Where~~If the cleanup action involves on-site containment, specification of the types, ~~levels~~concentrations, and amounts of hazardous substances remaining on site and the measures that will be used to prevent migration of and ~~contact with those~~exposure to the substances.
- ~~(b)~~ ~~For routine actions the department may use an order or decree to fulfill the requirements of a cleanup action plan, provided that the information in (a) of this subsection is included in an order or decree. The scope of detail for the required information shall be commensurate with the complexity of the site and proposed cleanup action.~~³⁵⁵
- ~~(2)~~ ~~Public participation.~~ The department will provide public notice and opportunity for comment on the draft cleanup plan, as required in WAC ~~173-340-600(13)~~.³⁵⁶
- ~~(3)~~ ~~Final cleanup action plan.~~ After review and consideration of the comments received during the public comment period, the department shall issue a final cleanup action plan and publish its availability in the *Site Register* and by other appropriate methods.³⁵⁷ ~~If the department determines, following the implementation of the preferred alternative, that the cleanup standards or, where applicable, remediation levels established in the cleanup action plan cannot be achieved, the department shall issue public notice of this determination.~~³⁵⁸
- ~~(4)~~(5) ~~Federal cleanup~~National priorities list sites.³⁵⁹ For ~~federal cleanup sites on the national priorities sites list~~, Ecology may use a record of decision or an order or consent decree prepared under the federal cleanup law ~~may be used by the department~~ to meet the requirements of this section, provided that:
- (a) The cleanup action meets the requirements ~~under~~in WAC 173-340-360;
- (b) The state ~~has concurred~~concurs with the cleanup action; and
- (c) The public ~~An opportunity~~ was provided ~~for the public to~~an opportunity to comment on the cleanup action.

³⁵⁵ Moved discussion of routine actions to subsections (3)(a)(ii) and (iv).

³⁵⁶ Moved public participation requirements for draft plans to subsection (3)(a)(iii).

³⁵⁷ Moved public participation requirements for final plans to subsection (3)(a)(v).

³⁵⁸ Moved public participation requirements for remedy failure determinations to subsection (3)(a)(vi).

³⁵⁹ Clarified that federal cleanup sites are national priorities list sites.

WAC 173-340-390 Model remedies.³⁶⁰

Tracked changes to current rule.

- (1) **Purpose.**³⁶¹ The purpose of model remedies is to streamline and accelerate the selection of a cleanup actions ~~that protect human health and the environment, with a preference for permanent solutions to the maximum extent practicable~~ for routine types of cleanup projects at sites with common features and lower risk to human health and the environment.
- (2) **Development of model remedies.**³⁶² ~~The department may, from time to time, identify~~ Ecology may establish model remedies for common categories of ~~facilities~~ sites, types of ~~contamination~~ hazardous substances, types of media, and geographic areas. ~~In identifying a model remedy, the department shall identify the circumstances for which application of the model remedy meets the requirements under WAC 173-340-360. The department shall provide an opportunity for the public to review and comment on any proposed model remedies. When establishing a model remedy, Ecology will:~~
 - (a) Identify the applicability of the model remedy for use at a site, the site characterization required under WAC 173-340-350 to select the model remedy, and the compliance monitoring required under WAC 173-340-410 to implement the model remedy;
 - (b) Describe how the model remedy meets the cleanup standards established under Part 7 of this chapter and the requirements for cleanup actions in WAC 173-340-360; and
 - (c) Provide the public with notice and an opportunity to comment on the proposed model remedy and the conditions under which it may be used at a site. The public comment period must be at least thirty days.
- (3) **Soliciting proposals.**³⁶³ When developing model remedies, Ecology will solicit and consider proposals from qualified persons. The proposals must, in addition to describing the model remedy, provide the information required under subsection (2)(a) and (b) of this section.
- ~~(3) — **Applicability and effect of model remedies.** Where a site meets the circumstances identified by the department under subsection (2) of this section, the components of the model remedy may be selected as the cleanup action, or as a portion of the cleanup action. At such sites, it shall not be necessary to conduct a feasibility study under WAC 173-340-350(8) or a disproportionate cost analysis under WAC 173-340-360(3) for those components of a cleanup action to which a model remedy applies.~~³⁶⁴

³⁶⁰ Updated Section 390 to reflect legislative changes to MTCA in SB [5296](#) in 2013. See RCW [70A.305.030](#)(1)(j)). The 2013 legislation was built upon the 2001 rule language and modified for technical and policy reasons. The VCP fee waiver will be added to Part 5 of the rule in a future rulemaking.

³⁶¹ Updated purpose to reflect definition of “model remedy” added in 2013 legislation. See RCW [70A.305.020](#)(20) and RCW [70A.305.030](#)(1)(j).

³⁶² Updated requirements for developing a model remedy based on 2013 legislation. See RCW [70A.305.030](#)(1)(j)(i).

³⁶³ Added solicitation requirements based on 2013 legislation. See RCW [70A.305.030](#)(1)(j)(ii).

³⁶⁴ Moved to subsection (4).

~~(4) — **Public notice and participation.** Where a model remedy is proposed as the cleanup action or as a portion of the cleanup action, the cleanup action plan is still subject to the same public notice and participation requirements in this chapter as any other cleanup action.~~³⁶⁵

(4) Selection.³⁶⁶ A model remedy may be selected as a cleanup action, or as a component of a cleanup action, at a site without conducting a feasibility study under WAC 173-340-351, provided that:

(a) The site meets the conditions for using the model remedy identified by Ecology under subsection (2)(a) of this section; and

(b) For Ecology-conducted and Ecology-supervised remedial actions, Ecology provides or requires public notice of the proposed use of the model remedy in the draft cleanup action plan under WAC 173-340-380.

³⁶⁵ Moved to subsection (4)(b).

³⁶⁶ Edited for clarity and consistency with 2013 legislation. See RCW [70A.305.030](#)(1)(j)(iii).

Part 6 – Public Participation and Tribal Engagement

WAC 173-340-600 Public ~~notice~~notification and participation.

Tracked changes to current rule.

- (1) **Purpose.** Public participation is an integral part of ~~the department's~~Ecology's responsibilities under chapter 70A.305 RCW, the Model Toxics Control Act. ~~The department's~~Ecology's goal is to provide the public with timely information and meaningful opportunities for participation that are commensurate with each site. ~~The department~~Ecology will meet this goal through a public participation program that includes:³⁶⁷
- (a) Site-specific information on Ecology's website;
 - (b) A Contaminated Site Register and, if requested, site-specific electronic alerts of changes to site information; and
 - (c) For Ecology-conducted and Ecology-supervised remedial actions, The early planning and development of a site-specific public participation plans; the provision of public notices of proposed actions; a site register; and public meetings or hearings; and the participation of regional citizens' advisory committees.
- ~~(2) **Other requirements.**~~³⁶⁸ ~~In addition to the requirements in this section, other sections of this chapter contain specific notice requirements that must also be followed. See WAC 173-340-720 for notice requirements on an off-property conditional point of compliance and cleanup levels for groundwater flowing into nearby surface water; WAC 173-340-545 for public notice requirements for private rights of action; WAC 173-340-440 for local government notification requirements for restrictive covenants; and WAC 173-340-310 for public notice requirements for emergency or interim actions required by the department as a result of an initial investigation.~~
- ~~(4)~~(2) **Public notice.** Whenever public notice of a proposed action is required ~~by chapter 70.105D RCW~~under this chapter, ~~the department shall, at a minimum, Ecology will~~ provide or require at least the following notice and opportunity to comment~~as described in this section except as specified for the biennial report in WAC 173-340-340.~~
- (a) Notification methods.
 - (i) Website.³⁶⁹ Ecology will make the proposed action publicly available on Ecology's website under subsection (5) of this section;

³⁶⁷ Updated summary based on other changes in Part 6 of the rule, including the addition of electronic notification methods, and the elimination of regional citizens' advisory committees by the Legislature in 2001 (see [Laws of 2001, Chapter 291](#) and [SB 5401](#)).

³⁶⁸ Moved list of other requirements to subsection (22).

³⁶⁹ Added posting on Ecology's website under subsection (5) as a required method of public notice of a proposed action. Ecology will make a proposed action (such as a draft cleanup action plan) available on Ecology's website when the document is available for public comment.

- (ii) **Electronic alert.**³⁷⁰ If requested, Ecology will alert a person electronically of the proposed action's availability under subsection (6) of this section;
- (iii) **Contaminated Site Register.**³⁷¹ Ecology will provide notice of the proposed action's availability in the *Contaminated Site Register* under subsection (7) of this section.
- ~~(a)(iv)~~ **Request for Persons requesting notice.** ~~Notice shall~~ Written notice must be mailed ~~sent~~ to persons who have made a timely request ~~of Ecology~~. A request for notice is timely if received before or during the public comment period for the current phase of remedial action at the ~~facility~~ site. However, the receipt of a request for notice ~~shall~~ does not require ~~the department~~ Ecology to extend the comment period associated with the notice. Ecology may use an electronic alert under subsection (6) of this section to satisfy this requirement.³⁷²
- ~~(b)(v)~~ **Mail Persons residing within potentially affected vicinity.** ~~Notice shall~~ Written notice must be mailed ~~sent~~ to persons ~~who reside~~ residing within the potentially affected vicinity of the proposed action. The potentially affected vicinity ~~shall~~ includes all property within and contiguous to the site and any other area that ~~the department~~ Ecology determines to be directly affected by the proposed action.
- ~~(d)(vi)~~ **Other Appropriate news media.** ~~Written~~ Notice ~~of the proposed action shall~~ must be ~~mailed~~ sent to any ~~other~~ news media that ~~the department~~ Ecology determines to be appropriate. ~~The department~~ Ecology may consider how a news medium compares with the newspaper of largest circulation in terms of: Audience reached; timeliness; adequacy in conveying the particular information in the notice; cost; or other relevant factors.
- ~~(e)(vii)~~ **Newspaper publication.** If required under chapter 70A.305 RCW or by Ecology,³⁷³ ~~written~~ Notice ~~of the proposed action shall~~ must be published in the newspaper of largest circulation in the city or county of the proposed action, by one or more of the following methods: Display ad; legal notice; or any other appropriate format, as determined by ~~the department~~ Ecology.

(b) Comment opportunity.

³⁷⁰ Added site-specific electronic alerts under subsection (6) as a required method of public notice of a proposed action. Ecology will send the alerts when the proposed action (such as a draft cleanup action plan) is available on Ecology's website.

³⁷¹ Emphasized that notice in the Contaminated Site Register under subsection (7) is a required method of public notice of a proposed action. This was already required in the current rule, but the connection with public notice was not clear.

³⁷² Clarified that a site-specific electronic alert provided under subsection (6) of this section would satisfy this requirement. This does not preclude the use of other methods of providing written notice.

³⁷³ Limited the applicability of newspaper publication as a required method of public notice to instances where such notice is required by the MTCA statute or by Ecology. Publication in the newspaper of largest circulation in the city or county is no longer always the best or more cost-effective means of providing notice to the public.

- ~~(e)~~(i) **Comment periods.** ~~All~~A public notices ~~shall~~must indicate the public comment period on the proposed action. Unless ~~stated otherwise~~ specified in this chapter, the public comment periods ~~shall~~must be ~~for at least~~ thirty days at a minimum. ~~The department~~Ecology may extend the public comment period, as appropriate.
- (ii) **Public meetings.**³⁷⁴ During any comment period announced by a public notice issued under this chapter, if ten or more persons request a public meeting on the subject of the public notice, Ecology will hold a public meeting for the purpose of receiving comments.
- ~~(f)~~(c) **Combining public comment requirements**Consolidating notice and comment opportunities. Whenever reasonable, ~~the department shall~~Ecology will consolidate public notice ~~and opportunities for public comment required~~ under this chapter with public notice and comment ~~requirements~~opportunities required under other laws and regulations.
- ~~(g)~~(d) **Site-specific risk assessment.** For public notices describing cleanup plans that use site-specific risk assessment or would restrict future site or resource use, the public notice ~~shall~~must specifically identify the restrictions and invite comments on these elements of the cleanup plan. This notice ~~shall~~must also include a statement indicating the availability of public participation grants ~~and of the department's citizen technical advisor for providing technical assistance to citizens on site-specific risk assessment and other issues related to site remediation.~~³⁷⁵
- (3) **Criteria**Additional opportunities.³⁷⁶ ~~In order to~~To promote effective and meaningful public participation, ~~the department~~Ecology may ~~determine that~~provide or require public participation opportunities in addition to those specifically required ~~by chapter 70.105D RCW, or under~~ this chapter, ~~are appropriate and should be provided~~. In making this determination, ~~the department~~Ecology may consider:
- (a) Known or potential risks to human health and the environment that could be avoided or reduced by providing information to the public;
 - (b) Public concerns about the ~~facility~~site;
 - (c) The need to contact the public in order to gather information about the ~~facility~~site;
 - (d) The extent to which the public's opportunity to affect subsequent ~~departmental~~Ecology decisions at the ~~facility~~site may be limited or foreclosed ~~in the future~~;
 - (e) The need to prevent disclosure of confidential, unverified, or enforcement-sensitive information;

³⁷⁴ Moved from former subsection (5).

³⁷⁵ Eliminated discussion of a citizen technical adviser. See note regarding former subsection (18).

³⁷⁶ In subsection (13)(d) below, added requirement that Ecology must consider the factors in subsection (3) when deciding whether to consolidate public notice of a RI/FS report and a draft cleanup action plan.

- (f) The routine nature of the contemplated remedial action;
 - (g) Interest in expediting remedial action at the site;³⁷⁷ and
 - ~~(g)~~(h) Any other factors as determined by ~~the department~~Ecology.
- ~~(5) — **Public meetings.**~~³⁷⁸ ~~During any comment period announced by a public notice issued under this chapter, if ten or more persons request a public meeting on the subject of the public notice, the department shall hold a public meeting for the purpose of receiving comments.~~
- ~~(6)~~(4) **Additional methods.** ~~In addition to "public notice" required by chapter 70.105D RCW, or this chapter, the department may use any of the following methods to~~To provide information to the public, Ecology may use or require any of the following methods in addition to those specifically required under this chapter:
- (a) Press releases;
 - (b) Fact sheets;
 - (c) Public meetings and transcription of such meetings;³⁷⁹
 - (d) Publications;
 - (e) Personal contact by ~~department~~Ecology employees;
 - (f) Posting signs at the ~~facility~~site;
 - (g) Notice in the Contaminated Site Register;
 - (h) Notice through the internet;
 - (i) Any other methods as determined by ~~the department~~Ecology.
- ~~(5) **Site-specific information on website.**~~³⁸⁰ For sites on the contaminated sites list and the no further action sites list, Ecology will make at least the following site-specific information publicly available on Ecology's website:
- (a) The site's current listing and remedial action status identified under WAC 173-340-330;
 - (b) The site's current hazard rankings identified under WAC 173-340-320;
 - (c) Any initial investigation report prepared under WAC 173-340-310;
 - (d) For Ecology-conducted or Ecology-supervised remedial actions:

³⁷⁷ Added interest in expediting remedial action at a site as another factor when deciding whether to provide additional public participation opportunities and when deciding whether to consolidate existing opportunities, such as on a RI/FS report and draft cleanup action plan under subsection (13)(d).

³⁷⁸ Moved to subsection (4)(b)(ii).

³⁷⁹ Added meeting transcription as an additional method of informing the public.

³⁸⁰ Added posting information on Ecology's website as a required method of providing notice about each site. The website must include at least the specified information. This includes proposed actions requiring public notice.

- (i) Any proposed action requiring public notice under this chapter;
 - (ii) Any final cleanup action plan issued under WAC 173-340-380; and
 - (iii) Any Ecology determination that the selected cleanup action cannot achieve established cleanup standards or, where applicable, remediation levels;
- (e) For independent remedial actions:
 - (i) Any independent remedial investigation, interim action, or cleanup action report required under WAC 173-340-515(4) and received by Ecology; and
 - (ii) The results of any Ecology review of an independent remedial action, including any written opinion issued by Ecology under WAC 173-340-515(5);
- (f) Whether institutional controls are currently required, and any document implementing, amending, or removing an institutional control under WAC 173-340-440;
- (g) Whether periodic reviews are currently required, and any periodic review report prepared under WAC 173-340-420; and
- (h) Any other information Ecology considers appropriate for inclusion.
- (6) **Site-specific electronic alerts.**³⁸¹ For sites on the contaminated sites list and the no further action sites list, Ecology will provide a person, if requested, a site-specific electronic alert when the site information specified in subsection (5) of this subsection is added or changed on Ecology's website. Ecology will establish the means for providing such electronic alerts.
- ~~(7) **Site Register.** The department shall regularly publish, make available electronically, and maintain a publication called the *Site Register*, which provides notice of the following:~~
 - ~~(a) Determinations of no further action under WAC 173-340-320;³⁸²~~
 - ~~(b) Results of site hazard rankings;³⁸³~~
 - ~~(c) Availability of annual and biennial reports;~~
 - ~~(d) Issuance of enforcement orders, agreed orders, or proposed consent decrees;~~
 - ~~(e) Public meetings or hearings;~~
 - ~~(f) Scoping notice of department-conducted remedial investigation/feasibility study;~~

³⁸¹ Added providing site-specific electronic alerts, if requested, as a required method of providing notice about each site. Ecology will provide such alerts when the information required on Ecology's website under subsection (5) is added or changed. This includes proposed actions requiring public notice.

³⁸² Consistent with changes to Section 320, eliminated the requirement to provide notice in the *Contaminated Site Register* of a no further action determination based on a site hazard assessment. Ecology will not make such determinations under the new process.

³⁸³ See note on subsection (7)(b)(x).

- ~~(g) — Availability of remedial investigation/feasibility study reports and draft and final cleanup plans;~~
 - ~~(h) — Change in site status or placing sites on or removing sites from the hazardous sites list under WAC 173-340-330;³⁸⁴~~
 - ~~(i) — Availability of engineering design reports under WAC 173-340-400;~~
 - ~~(j) — Schedules developed under WAC 173-340-140;³⁸⁵~~
 - ~~(k) — Reports of independent cleanup actions received under WAC 173-340-300;³⁸⁶~~
 - ~~(l) — Beginning of negotiations or discussions under WAC 173-340-520 and 173-340-530;~~
 - ~~(m) — Deadline extensions or missed deadlines under WAC 173-340-140;³⁸⁷~~
 - ~~(n) — A summary of any notices received under WAC 173-340-545 for cleanup actions and interim actions being conducted where a private right of action is anticipated;~~
 - ~~(o) — A list of available department publications, including guidance, technical reports and policies pertinent to remedial actions;~~
 - ~~(p) — The results of department review of reports on independent remedial actions submitted under WAC 173-340-515;³⁸⁸ and~~
 - ~~(q) — Any other notice that the department considers appropriate for inclusion.~~
- (7) Contaminated Site Register.**³⁸⁹ Ecology will maintain and regularly publish a *Contaminated Site Register*.
- (a) Publication.**³⁹⁰ Ecology will establish the method for publishing the *Contaminated Site Register*, which may include making it publicly available on Ecology’s website, electronically distributing it to interested persons, or any other method deemed appropriate by Ecology.
 - (b) Content.** Ecology will include notice of the following in the *Contaminated Site Register*:

³⁸⁴ See note on subsection (7)(b)(x).

³⁸⁵ Eliminated the concept of “high priority” sites in Section 140, and related requirements throughout the rule, including notice in the *Contaminated Site Register*. See note on Section 140.

³⁸⁶ See note on subsection (7)(b)(xii).

³⁸⁷ Eliminated the concept of “high priority” sites in Section 140, and related requirements throughout the rule, including notice in the *Contaminated Site Register*. See note on Section 140.

³⁸⁸ See note on subsection (7)(b)(xii).

³⁸⁹ Changed the name of the “Site Register” to the “Contaminated Site Register” to make the name more self-explanatory to the public.

³⁹⁰ Added flexibility in how Ecology may publish the *Contaminated Site Register*. This would allow Ecology to convert the *Register* into an online database that is updated continuously. This would make it more like the *SEPA Register*. See WAC [197-11-508](#).

- (i) The availability of any legislative report required under chapter 70A.305 RCW related to remedial action;³⁹¹
- (ii) Any rulemaking notice requiring publication in the Washington State Register under chapter 34.05 RCW related to remedial action;³⁹²
- (iii) The availability of any Ecology publication related to remedial action, including any new, revised, or rescinded interpretive or policy statement requiring notice in the Washington State Register under RCW 34.05.230;³⁹³
- (iv) Any proposed substantive change to the site hazard assessment and ranking process developed under WAC 173-340-320(2);³⁹⁴
- (v) Any update to Ecology's strategic plans or performance assessments required under WAC 173-340-340(1) and (3);³⁹⁵
- (vi) Any additional resource allocation factors specified by Ecology under WAC 173-340-340(2)(d);³⁹⁶
- (vii) Any proposed model remedy developed under WAC 173-340-390(2);³⁹⁷
- (viii) Any change to the program support cost multiplier calculated under WAC 173-340-550(2)(c);³⁹⁸
- (ix) Any change to the list of Ecology-approved sampling and analysis methods maintained under WAC 173-340-830(4)(a);³⁹⁹
- (x) Any initial investigation determination under WAC 173-340-310(6) resulting in the listing of a site on either the contaminated sites list or the no further action sites list. The notice must include instructions on how to sign up for electronic alerts about the site under WAC 173-340-600(6);⁴⁰⁰

³⁹¹ Updated to include all legislative reports related to remedial action. This is consistent with current practice.

³⁹² Added rulemaking notices related to remedial action. This is consistent with current practice.

³⁹³ Clarified that relevant publications include any new, revised, or rescinded interpretive or policy statement requiring notice in the Washington State Register under RCW 34.05.230.

³⁹⁴ Added to the list of required notices in the *Contaminated Site Register* notice of any proposed substantive change to the site hazard assessment and ranking process developed under Section 320(2).

³⁹⁵ Added to the list of required notices in the *Contaminated Site Register* notice of any update to Ecology's strategic plans or performance assessments required under Section 340(1) and (3).

³⁹⁶ Added to the list of required notices in the *Contaminated Site Register* notice of any additional resource allocation factors specified by Ecology under Section 340(2)(d).

³⁹⁷ Added to the list of required notices in the *Contaminated Site Register* notice of any proposed model remedy developed under Section 390(2). This is consistent with current practice.

³⁹⁸ Consolidated existing requirement in Section 550(2)(c).

³⁹⁹ Added to the list of required notices in the *Contaminated Site Register* notice of any change to the list of Ecology-approved sampling and analysis methods maintained under Section 830(4)(a).

⁴⁰⁰ Added requirement to notify public in *Contaminated Site Register* when Ecology initially adds a site to one of our site lists, either the contaminated sites list or the no further action sites list. However, we eliminated the requirement to provide notice in the *Register* whenever the listing, ranking, or status of a site changes. If

- (xi) For Ecology-conducted or Ecology-supervised remedial actions:
 - (A) Any initiation of a negotiation for a consent decree under WAC 173-340-520 or a discussion for an agreed order under WAC 173-340-530;⁴⁰¹
 - (B) Any proposed action requiring public notice under this chapter, including any related public meeting or hearing;⁴⁰²
 - (C) Any issuance of a final cleanup action plan under WAC 173-340-380;⁴⁰³
and
 - (D) Any Ecology determination that the selected cleanup action cannot achieve established cleanup standards or, where applicable, remediation levels;⁴⁰⁴
- (xii) For independent remedial actions:⁴⁰⁵
 - (A) Any notice of a planned independent interim action or cleanup action submitted to Ecology in anticipation of a private right of action under WAC 173-340-545(3)(a); and
 - (B) Any proposed area-wide groundwater conditional point of compliance under WAC 173-340-720(8)(d)(iii)(D); and
- (xiii) Any other notice that Ecology considers appropriate for inclusion.⁴⁰⁶

- (8) Evaluation of public participation needs.** ~~As part of requiring or conducting a remedial action at any facility~~ For Ecology-conducted and Ecology-supervised remedial actions, the department shall ~~Ecology will~~ evaluate public participation needs at the ~~facility~~ site. The evaluation ~~shall~~ must include an identification of the potentially affected vicinity for the remedial action. For sites where site-specific risk assessment is used, ~~the department shall~~ Ecology will also evaluate public interest in the site, significant public concerns regarding future site use, and public values to be addressed through the public participation plan.

requested, Ecology will instead provide a person site-specific electronic alerts when such changes occur. Ecology will provide instructions in the *Register* notice about how to sign up for such alerts. Ecology will also post the site's current listing, ranking, and status on Ecology's website.

⁴⁰¹ Retained existing *Contaminated Site Register* requirement.

⁴⁰² Consolidated existing *Contaminated Site Register* requirements.

⁴⁰³ Retained existing *Contaminated Site Register* requirement.

⁴⁰⁴ Added to the list of required notices in the *Contaminated Site Register* notice of any Ecology determination that the selected cleanup action cannot achieve established cleanup standards or, where applicable, remediation levels. See related notes on Section 600(15)(c) and Section 380(3)(a)(vi).

⁴⁰⁵ Eliminated several notices in the *Contaminated Site Register* related to independent remedial actions (IRAs), including IRA reports received by Ecology, written opinions on IRAs issued by Ecology, delisting of sites cleaned up independently; periodic reviews by Ecology of IRAs, and any amendment or removal of institutional controls for IRAs. In place of such notice, Ecology will provide notice of those actions on its website under subsection (5) and through site-specific electronic alerts under subsection (6). See subsection (20) for a complete list of when Ecology will provide notice related to IRAs.

⁴⁰⁶ Retained existing discretion to provide additional notices in the *Contaminated Site Register*.

- (9) **Public participation plans.** For Ecology-conducted and Ecology-supervised remedial actions, except emergency remedial actions, Ecology will ensure that a public participation plan is developed and implemented.⁴⁰⁷
- (a) **Purpose and Scope.** ~~The~~ A public participation plans ~~required by this section are~~ is intended to encourage a coordinated and effective public involvement tailored to the public's needs at a ~~particular facility~~ site, and facilitate equitable participation by the public.⁴⁰⁸ The scope of ~~a~~ the plan ~~shall~~ must be commensurate with: ~~the nature of the proposed remedial actions; the level of public concern; and the risks posed by the facility~~
- (i) The threats posed by the site to human health and the environment, including vulnerable populations and overburdened communities;⁴⁰⁹
- (ii) The level of public concern regarding the threats; and
- (iii) The nature of the proposed remedial actions to address the threats.
- (b) **Early planning encouraged.** In order to develop an appropriate plan, ~~the department~~ Ecology or a potentially liable person or prospective purchaser⁴¹⁰ (if submitting a plan to ~~the department~~ Ecology) should engage in an early planning process to assess the public participation needs at the ~~facility~~ site. This process may include identifying and conferring with individuals, community groups, local governments, non-federally recognized tribes,⁴¹¹ public agencies, or any other organizations that may have an interest in or knowledge of the ~~facility~~ site.
- (c) **Plan Development.** ~~The department shall~~ Ecology will develop the plan, or work with ~~the~~ a potentially liable person or prospective purchaser to develop the plan.
- (i) If a plan already exists for ~~a facility~~ the site, ~~the department shall~~ Ecology will consider whether the existing plan is still appropriate or whether the plan should be amended. For example, a plan originally developed to address a remedial investigation/feasibility study may need to be amended to address implementation phases.

⁴⁰⁷ Moved applicability provision from former (d) of this subsection, and expanded applicability to include all Ecology-conducted or Ecology-supervised remedial actions, not just those at sites on hazardous sites list. Under the proposed rule, all sites will be ranked using SHARP and placed on the contaminated site list.

⁴⁰⁸ Added equitable participation goal for public participation plans.

⁴⁰⁹ Emphasized that the scope of the public participation plan must consider the threats posed to vulnerable populations and overburdened communities.

⁴¹⁰ Reflected requirement in Section 520 that prospective purchasers may be required to develop draft public participation plan when initiating negotiations for a consent decree and then to work with Ecology when implementing the plan. Made same change throughout this subsection.

⁴¹¹ Specified that the public participation plan needs to address participation of non-federally recognized tribes. Ecology proposes to address the engagement of federally-recognized Indian tribes in a separate tribal engagement plan under new Section 620.

- ~~(d)~~ **Plans required.** As part of requiring or conducting a remedial action, except emergency actions, at any site that has been assigned a hazard ranking score, the department shall ensure that a public participation plan is developed and implemented. The department may also require the development of a public participation plan as part of an agreed order (see WAC 173-340-530) or consent decree (see WAC 173-340-520) for facilities that have not been assigned a hazard ranking score.⁴¹²
- ~~(e)~~ If the variables proposed to be modified in a site-specific risk assessment or alternative reasonable maximum exposure scenario may affect the significant public concerns regarding future land uses and exposure scenarios, then the department shall assure appropriate public involvement and comment opportunities will occur as identified in the public participation plan.⁴¹³
- ~~(f)(ii)~~ **Plan as part of order or decree.** Unless otherwise directed by Ecology, ~~A~~a potentially liable person or prospective purchaser requesting an agreed order under WAC 173-340-530 or a consent decree under WAC 173-340-520 ~~will ordinarily be required to~~must submit a proposed ~~public participation~~ plan as part of its request ~~for an agreed order or a consent decree~~. If a plan already exists for the ~~facility~~site, the potentially liable person or prospective purchaser may either resubmit the existing plan with any proposed amendments or submit an entirely new proposed plan. The proposed plan may be revised during the course of discussions ~~or negotiations~~ on the agreed order ~~(see WAC 173-340-530)~~ or negotiations on the consent decree ~~(see WAC 173-340-520)~~. The final ~~public participation~~ plan may become part of the agreed order or consent decree.
- ~~(g)(d)~~ **Contents.** ~~The~~A public participation plan ~~shall~~must include the following:
- (i) Applicable public notice requirements and how these will be met, including:
 - (A) When public notice will occur;
 - (B) ~~The~~ length of the comment periods accompanying each notice;
 - (C) ~~The~~ potentially affected vicinity and any other areas to be provided notice, to the extent known~~;~~
 - (ii) Information repositories. The plan should identify at least one location where the public can review information about the remedial action. Multiple locations may be appropriate~~;~~
 - (iii) Methods of identifying the public's concerns. Such methods may include:~~i~~interviews~~;~~ questionnaires~~;~~ meetings~~;~~ contacts with community groups or other organizations that have an interest in the site~~;~~ or establishing citizen

⁴¹² Moved applicability provision to beginning of subsection (9), and expanded applicability to include all Ecology-conducted or Ecology-supervised remedial actions, not just those at sites on hazardous sites list. Under the proposed rule, all sites will be ranked using SHARP and placed on the contaminated site list.

⁴¹³ Moved to (e) of this subsection.

- advisory groups for sites; ~~or obtaining advice from the appropriate regional citizens' advisory committee.~~⁴¹⁴
- (iv) Methods of addressing the public's concerns and conveying information to the public. These may include any of the methods listed in subsection ~~(6)~~(4) of this section;
- (v) Coordination of public participation requirements. The plan should identify any public participation requirements of other applicable federal, state or local laws, and address how such requirements can be coordinated. For example, if ~~Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)~~the federal cleanup law applies to the proposed action, the plan should explain how ~~CERCLA~~the federal cleanup law and this chapter's public comment periods will be coordinated;
- (vi) Amendments to the plan. The plan should outline the process for amending the plan. Any amendments must be approved by ~~the department~~Ecology; and
- ~~(vii) Citizen technical advisor: A statement indicating the availability of the department's citizen technical advisor for providing technical assistance to citizens on issues related to the investigation and cleanup of the site.~~⁴¹⁵
- (viii) Any other elements that ~~the department~~Ecology determines to be appropriate for inclusion in the final public participation plan.
- (e) **Site-specific risk assessment.** If the variables proposed to be modified in a site-specific risk assessment or alternative reasonable maximum exposure scenario may affect the significant public concerns regarding future land uses and exposure scenarios, Ecology will assure appropriate public involvement and comment opportunities will occur as identified in the plan.⁴¹⁶
- ~~(h)~~(f) **Implementation.** ~~The department shall~~Ecology retains approval authority over the actions taken by a potentially liable person or prospective purchaser to implement the plan.
- (10) **Consent decrees.** ~~In addition to any other applicable public participation requirements, the following shall be required for consent decrees~~Ecology will provide or require the following notice and comment opportunities when negotiating a consent decree under WAC 173-340-520.
- (a) **Public participation plan.** ~~A plan meeting the requirements of subsection (9) of this section shall be developed when required by subsection (9)(d) of this section.~~Ecology

⁴¹⁴ Deleted reference to regional citizens' advisory committees, which were eliminated by the Legislature in 2001 (see [Laws of 2001, Chapter 291](#) and [SB 5401](#)).

⁴¹⁵ Eliminated reference to a citizen technical advisor to reflect the fact that this pilot concept, added to the rule in 2001, was never implemented. Eliminating the reference in the rule does not eliminate Ecology's authority to establish such a position in the future. There was no specific legislative direction.

⁴¹⁶ Moved from former (e) of this subsection.

will develop, or require the development of, a public participation plan in accordance with subsection (9) of this section.

- (b) **Notice of negotiations.** When ~~the department~~ Ecology decides to proceed with negotiations for a consent decree, it shall place a notice Ecology will notify the public in the Contaminated Site Register ~~advising the public that negotiations have begun.~~ This notice ~~shall~~ must include the name of the ~~facility~~ site, a general description of the subject of the ~~consent~~ decree, and the deadlines for negotiations.
- (c) **Public ~~N~~ notice of proposed decree.** ~~The department shall~~ Ecology will provide or require public notice of a proposed consent decree in accordance with subsection (2) of this section.⁴¹⁷ The public notice may be ~~combined~~ consolidated with public notice of other documents under this chapter, such as a cleanup action plan, or notice required under other laws.
- (i) **Timing.**⁴¹⁸ The public must be provided with notice and an opportunity to comment on a proposed consent decree before Ecology agrees to a settlement.
- (ii) **Content.** ~~The n~~ Notice of a proposed consent decree ~~shall~~ must briefly:
- ~~(i)~~ (A) Identify and generally describe the ~~facility~~ site;
 - ~~(ii)~~ (B) Identify the person~~(s)~~ who are parties to the consent decree;
 - ~~(iii)~~ (C) Generally describe the remedial action proposed in the proposed consent decree, including institutional controls and permit exemptions authorized under RCW ~~70.105D.090~~ 70A.305.090;
 - ~~(iv)~~ (D) Indicate the ~~date~~, place, date, and time of ~~the any planned~~ public hearing on the proposed consent decree. ~~Where~~ if a public hearing is not planned, specify the procedures for requesting one and indicate that Ecology will only hold a public hearing ~~will only be held~~ if at least ten persons request one ~~and the procedures for requesting a public hearing~~; and
 - ~~(v)~~ (E) Invite the public to comment at ~~the a~~ public hearing (if applicable) or in writing.
- (iii) **Comment opportunity.** ~~The public comment period shall run for~~ Ecology will provide the public at least thirty days from the date ~~of the issuance of~~ the notice is issued to comment on the proposed consent decree.
- ~~(d)~~ (iv) **Public hearing.** ~~The department shall~~ Ecology will hold a public hearing on the proposed consent decree for the purpose of providing the public with an opportunity to comment whenever ten or more persons request a public

⁴¹⁷ Clarified that public notice must comply with requirements in subsection (2).

⁴¹⁸ Clarified that public notice of a consent decree must occur before Ecology agrees to a settlement (before decree entered by a court).

hearing or whenever ~~the department~~ Ecology determines a public hearing is necessary.

~~(e)(d)~~ **Revisions** Public notice of substantial changes to proposed decree. If the state and the potentially liable person or prospective purchaser agree to substantial changes to ~~the~~ a proposed consent decree, ~~the department shall~~ Ecology will provide or require additional public notice ~~and opportunity to comment~~ of the proposed changes in accordance with subsection (2) of this section.

~~(f)~~ **Extensions.** ~~The department shall publish in the next Site Register the extension of deadlines for designated high priority sites.~~⁴¹⁹

(11) **Agreed orders.** ~~In addition to any other applicable public participation requirements, the following shall be required for~~ Ecology will provide or require the following notice and comment opportunities when discussing an agreed orders ~~s~~ under WAC 173-340-530.

(a) **Public participation plan.** Ecology will develop, or require the development of, ~~A plan meeting the requirements of subsection (9) of this section shall be developed when required by subsection (9)(d) of this section~~ a public participation plan in accordance with subsection (9) of this section.

(b) **Notice of discussions.** When ~~the department~~ Ecology decides to proceed with discussions for an agreed order, it shall place a notice Ecology will notify the public in the Contaminated Site Register ~~advising the public that discussions have commenced.~~ This notice ~~shall~~ must include the name of the facility site, a general description of the subject of the order, and the deadlines for discussions.

(c) **Public ~~N~~notice of proposed agreed orders.**⁴²⁰ ~~Public notice shall be provided by the department for any agreed order~~ Ecology will provide or require public notice of a proposed agreed order in accordance with subsection (2) of this section.⁴²¹ The public notice may be consolidated with public notice of other documents under this chapter, such as a cleanup action plan, or notice required under other laws.⁴²²

(i) **Timing.** Ecology will provide or require notice of a proposed agreed order before or concurrent with the issuance of the agreed order. The ~~For all agreed orders, a notice shall~~ must be mailed provided no later than three days after Ecology issues the issuance of the agreed order. ~~For all agreed orders, the comment period shall be at least thirty days.~~⁴²³ Unless Ecology determines that it is not in the public interest, ~~The~~ an agreed order may ~~be~~ become effective

⁴¹⁹ Eliminated the concept of “high priority” sites in Section 140, and related requirements throughout the rule. See note on Section 140.

⁴²⁰ Restructured the public notice requirements for proposed agreed orders consistent with other subsections to makes them easier to identify and compare.

⁴²¹ Clarified that public notice must comply with requirements in subsection (2).

⁴²² Emphasized that Ecology may consolidate public notice of a proposed order with public notice of other documents under this chapter, such as a cleanup action plan. This is stated elsewhere under the current rule.

⁴²³ Moved to (c)(ii) of this subsection.

before the comment period ~~is over ends~~, unless the department determines it is in the public interest to complete the public comment period before the effective date of the agreed order. The department may determine that it is in the public interest to provide public notice before the effective date of any agreed order or to hold a public meeting or hearing on the agreed order.⁴²⁴

(ii) **Content.** Notice of a proposed agreed orders ~~shall~~must briefly:

~~(i)~~(A) Identify and generally describe the ~~facility~~site;

~~(ii)~~(B) Identify the person~~(s)~~s who are parties to the agreed order;

~~(iii)~~(C) Generally describe the remedial action proposed in the proposed agreed order, including institutional controls and permit exemptions authorized under RCW ~~70.105D.090~~70A.305.090; and

~~(iv)~~(D) Invite the public to comment on the proposed agreed order.

(ii) **Comment opportunity.** Ecology will provide the public at least thirty days from the date the notice is issued to comment on a proposed agreed order.

(iii) **Public hearing.** Ecology may hold a public meeting or hearing on a proposed agreed order if it determines that it is in the public interest.

(d) ~~Revisions~~**Public notice of substantial changes to proposed order.** If ~~the department~~Ecology and the potentially liable person or prospective purchaser agree to substantial changes to ~~the~~a proposed agreed order, ~~the department shall~~Ecology will provide or require additional public notice ~~and opportunity to comment~~of the proposed changes in accordance with subsection (2) of this section.

~~(e) — Extensions.~~ The department shall publish in the next *Site Register* the extension of deadlines for designated high priority sites.⁴²⁵

(12) **Enforcement orders.**⁴²⁶ ~~In addition to any other applicable public participation requirements, the department shall provide public notice of all enforcement orders~~Ecology will provide the public with the following notice and comment opportunities when preparing an enforcement order under WAC 173-340-540.

(a) **Public participation plan.**⁴²⁷ Ecology will develop a public participation plan in accordance with subsection (9) of this section.

⁴²⁴ Moved to (c)(iii) of this subsection.

⁴²⁵ Eliminated the concept of “high priority” sites in Section 140, and related requirements throughout the rule. See note on Section 140.

⁴²⁶ Restructured the public notice requirements for enforcement orders consistent with other subsections to makes them easier to identify and compare.

⁴²⁷ Emphasized that a public participation plan is required for sites where Ecology supervises remedial actions under and enforcement order. This is currently required under subsection (9).

- (b) Public notice of proposed order.** Ecology will provide public notice of a proposed enforcement order in accordance with subsection (2) of this section.⁴²⁸ The public notice may be consolidated with notice of other documents under this chapter, such as a cleanup action plan, or under other laws.⁴²⁹
- (i) Timing.** Ecology will provide notice of a proposed enforcement order before or concurrent with the issuance of the order.⁴³⁰
- (A)** Except in ~~the case of~~ emergencies, Ecology will provide the notice ~~shall be mailed~~ no later than three days after ~~the date of the issuance of~~ Ecology issues the enforcement order.
- (B)** In emergencies, Ecology will provide the notice ~~shall be mailed~~ no later than ten days after ~~the issuance of~~ Ecology issues the enforcement order.
- ~~(a)(ii)~~ **Contents of notice.** ~~All notices~~ Notice of a proposed enforcement order ~~shall~~ must briefly:
- ~~(i)(A)~~ **(A)** Identify and generally describe the ~~facility~~ site;
- ~~(ii)(B)~~ **(B)** Identify the person~~(s)~~ who are parties to the enforcement order;
- ~~(iii)(C)~~ **(C)** Generally describe the terms of the proposed enforcement order, including institutional controls and permit exemptions authorized under RCW ~~70.105D.090~~ 70A.305.090; and
- ~~(iv)(D)~~ **(D)** Invite the public to comment on the proposed enforcement order.
- (iii) Comment opportunity.**⁴³¹ Ecology will provide the public at least thirty days from the date Ecology issues the notice to comment on a proposed enforcement order.
- (b) Public notice of substantial changes to proposed order.** ~~The department~~ Ecology may amend the enforcement order ~~on the basis of~~ based on public comments. ~~The department shall provide additional public notice and opportunity to comment if~~ If Ecology substantially changes the enforcement order ~~is substantially changed~~, Ecology will provide additional public notice of the proposed changes in accordance with subsection (2) of this section.

⁴²⁸ Clarified that public notice must comply with requirements in subsection (2).

⁴²⁹ Emphasized that Ecology may consolidate public notice of a proposed order with public notice of other documents under this chapter, such as a cleanup action plan. This is stated elsewhere under the current rule.

⁴³⁰ Clarified when notice of a proposed order may be provided.

⁴³¹ Emphasized that Ecology will provide at least 30 days for public comment on a proposed order, consistent with existing requirements stated elsewhere in this section.

- (13) **Remedial investigation/feasibility study.**⁴³² ~~In addition to any other applicable public participation requirements, the following shall be required during a remedial investigation/feasibility study.~~ For Ecology-conducted and Ecology-supervised remedial actions, Ecology will require or provide the public with the following notice and comment opportunities during a remedial investigation and/or feasibility study conducted under WAC 173-340-350 and/or 173-340-351.
- (a) **Scoping Public notice of work plan.**⁴³³ ~~When the department elects to perform a remedial investigation/feasibility study, the department shall provide public notice and an opportunity to comment on the scope of the remedial investigation/feasibility study.~~ For Ecology-conducted remedial actions, Ecology will provide public notice of a remedial investigation work plan in accordance with subsection (2) of this section.⁴³⁴ Ecology will provide the public at least thirty days from the date Ecology issues the notice to comment on the plan.⁴³⁵
- ~~(b) — Extensions. The department shall publish in the next Site Register the extension of deadlines for designated high priority sites.~~⁴³⁶
- ~~(c)(b)~~ **Public notice of Report.** ~~The department shall~~ Ecology will provide or require public notice of a remedial investigation and/or feasibility study reports prepared under WAC 173-340-350 in accordance with subsection (2) of this section.⁴³⁷ ~~This~~ The public notice may be ~~combined~~ consolidated with public notice of ~~the~~ a draft cleanup action plan. When deciding whether to consolidate public notice, Ecology will consider the factors in subsection (3) of this section.⁴³⁸
- (i) **Content.** ~~At a minimum, public notice shall~~ Notice of a remedial investigation and/or feasibility study report must briefly:
- ~~(i)(A)~~ (A) Describe the site; ~~and~~
 - (B) Describe the remedial investigation and/or feasibility study results;
 - ~~(ii)(C)~~ (C) If available, identify ~~the department's~~ Ecology's proposed cleanup action and provide an explanation for its selection; ~~and~~
 - ~~(iii)(D)~~ (D) Invite public comment on the report.

⁴³² Restructured the public notice requirements for RI/FSs consistent with other subsections to makes them easier to identify and compare.

⁴³³ Refocused the notice on the remedial investigation work plan, which includes the scope.

⁴³⁴ Clarified that public notice must comply with requirements in subsection (2).

⁴³⁵ Emphasized that Ecology will provide at least 30 days for public comment on a remedial investigation work plan, consistent with existing requirements stated elsewhere in this section.

⁴³⁶ Eliminated the concept of “high priority” sites in Section 140, and related requirements throughout the rule. See note on Section 140.

⁴³⁷ Clarified that public notice of a RI/FS report must comply with requirements in subsection (2).

⁴³⁸ Added requirement that Ecology must consider the factors in subsection (3) when deciding whether to consolidate public notice of a RI/FS report and a draft cleanup action plan.

- (ii) **Comment opportunity.** ~~The public comment period shall extend for~~ Ecology will provide the public at least thirty days from the date ~~of mailing of~~ the notice is issued to comment on a remedial investigation and/or feasibility study report.
- (14) **Selection of cleanup actions.**⁴³⁹ ~~In addition to any other applicable public participation requirements, the department shall:~~ For Ecology-conducted and Ecology-supervised remedial actions, Ecology will require or provide the public with the following notice and comment opportunities when selecting a cleanup action under WAC 173-340-380.
- ~~(a) Provide a notice of availability of draft or final cleanup action plans and a brief description of the proposed or selected alternative in the Site Register;~~⁴⁴⁰
- ~~(b)(a) Public notice of draft cleanup action plan. Provide public notice of the draft cleanup action plan.~~ When issuing a draft cleanup action plan, Ecology will provide or require public notice of the plan in accordance with subsection (2) of this section.⁴⁴¹ ~~A notice of a draft cleanup plan.~~ The public notice may be ~~combined~~ consolidated with public notice ~~on the~~ of a remedial investigation/feasibility study report or a proposed order or decree. ~~Notice of a draft cleanup action plan may be combined with notice on a draft consent decree or on an order.~~
- (i) **Content.** ~~At a minimum, public notice shall~~ Notice of a draft cleanup action plan must briefly:
- ~~(i)(A)~~ (A) Describe the site;
- ~~(ii)(B)~~ (B) Identify ~~the department's~~ Ecology's proposed cleanup action, including any model remedy,⁴⁴² and provide an explanation for its selection; and
- ~~(iii)(C)~~ (C) Invite public comment on the ~~draft~~ proposed cleanup action plan.
- (ii) **Comment opportunity.** ~~The public comment period shall run for~~ Ecology will provide the public at least thirty days from the date ~~of publication of~~ the public notice is issued to comment on a proposed cleanup action.
- (b) **Notice of final cleanup action plan.** When issuing a final cleanup action plan, Ecology will:⁴⁴³

⁴³⁹ Restructured the public notice requirements for cleanup actions consistent with other subsections to makes them easier to identify and compare.

⁴⁴⁰ Incorporated the *Register* notice requirement for draft cleanup action plans as part of the public notice requirements under subsection (2). Moved the *Register* notice requirement for final cleanup actions plans to (b)(iii) of this subsection.

⁴⁴¹ Clarified that public notice of a draft cleanup action plan must comply with requirements in subsection (2).

⁴⁴² Emphasized that notice of a draft cleanup action plan must identify any model remedy.

⁴⁴³ For final cleanup action plans, added requirement that, in addition to providing notice in the *Contaminated Site Register* (which was required under former (a) of this subsection), Ecology must provide notice on its website and, if requested, through a site-specific electronic alert.

- (i) Make the plan publicly available on Ecology’s website under subsection (5) of this section;
 - (ii) If requested, notify a person electronically of the plan’s availability under subsection (6) of this section; and
 - (iii) Provide notice of the plan’s availability and a brief description of the selected cleanup action in the *Contaminated Site Register* under subsection (7) of this section.
- ~~(c) Whenever the cleanup action plan proposes a restrictive covenant as part of the draft cleanup plan, provide notice to and seek comments from the city or county department with land use planning authority for real property subject to the restrictive covenant. The purpose of this notification is to solicit comment on whether the proposed restrictive covenant is consistent with any current or proposed land use plans.⁴⁴⁴~~
- (15) Cleanup action implementation.**⁴⁴⁵ ~~In addition to any other applicable public participation requirements, the following shall be required~~For Ecology-conducted and Ecology-supervised remedial actions, Ecology will require or provide the public with the following notice and comment opportunities during cleanup action implementation under WAC 173-340-400.
 - ~~(b)(a)~~ **Public notice of engineering design report.** ~~When the department conducts a cleanup action~~For Ecology-conducted remedial actions, Ecology will provide public notice and an opportunity to comment shall be provided on the of an engineering design report ~~and notice shall be given in the *Site Register*~~in accordance with subsection (2) of this section.⁴⁴⁶ Ecology will provide the public at least thirty days from the date Ecology issues the notice to comment on the report.⁴⁴⁷
 - ~~(a)(b)~~ **Public notice of plans implementing cleanup action.** Ecology will provide or require ~~P~~public notice ~~and opportunity to comment~~ on any plans prepared under WAC 173-340-400 that represent a substantial change from the cleanup action plan. The public notice must be provided in accordance with subsection (2) of this section.⁴⁴⁸ Ecology will provide the public at least thirty days from the date the notice is issued to comment on the plan.⁴⁴⁹

⁴⁴⁴ Eliminated duplicate requirement from Section 440(10) for consulting local governments when proposing institutional controls as part of a cleanup action plan. The requirement in Section 440(10) is also cross-referenced in subsection (22)(f).

⁴⁴⁵ Restructured the public notice requirements for cleanup action implementation consistent with other subsections to makes them easier to identify and compare.

⁴⁴⁶ Clarified that public notice of a proposed engineering design must comply with requirements in subsection (2).

⁴⁴⁷ Emphasized that Ecology will provide at least 30 days for public comment on a proposed engineering design, consistent with existing requirements stated elsewhere in this section.

⁴⁴⁸ Clarified that public notice of a proposed cleanup action implementation plan must comply with requirements in subsection (2).

⁴⁴⁹ Emphasized that Ecology will provide at least 30 days for public comment on a proposed cleanup action implementation plan, consistent with existing requirements stated elsewhere in this section.

(c) Notice of failure of selected cleanup action.

(i) If Ecology determines, following implementation of the selected cleanup action, that the cleanup standards or, where applicable, remediation levels established in the cleanup action plan cannot be achieved, Ecology will.⁴⁵⁰

(A) Make the determination publicly available on Ecology's website under subsection (5) of this section;

(B) If requested, notify a person electronically of the determination's availability under subsection (6) of this section; and

(C) Provide notice of the determination in the *Contaminated Site Register* under subsection (7) of this section.

(ii) If Ecology makes the determination based on a periodic review under WAC 173-340-420, Ecology may consolidate notice of the determination with public notice of the periodic review under subsection (18) of this section.⁴⁵¹

(16) ~~Routine cleanup⁴⁵² and interim actions.~~⁴⁵³ ~~In addition to any other applicable public participation requirements, the following will be required for routine cleanup actions and interim actions.~~ For Ecology-conducted and Ecology-supervised remedial actions, Ecology will provide or require public notice of a draft interim action plan prepared under WAC 173-340-430. The public notice must be provided in accordance with subsection (2) of this section.⁴⁵⁴ The public notice may be consolidated with public notice of a proposed order or decree.⁴⁵⁵

~~**(a)** Public notice shall be provided for any proposed routine cleanup or interim actions. This public notice shall be combined with public notice of an order or settlement whenever practicable.~~

(b)(a) Content. ~~At a minimum, public notice shall~~ Notice of a draft interim action plan must briefly:

(i) Describe the site;

⁴⁵⁰ Eliminated the requirement of "public notice" (which includes opportunity to comment) on such determinations of failure of a selected cleanup action since Ecology is already required to provide public notice on any substantial changes to a cleanup action plan based on the determination. However, Ecology will still provide notice of the determination on its website, through site-specific electronic alerts, and on the *Contaminated Site Register*. See also note on Section 380(3)(a)(vi).

⁴⁵¹ Emphasized that Ecology may combine notice of the determination with public notice of a periodic review under subsection (18).

⁴⁵² Eliminated separate procedures for public notice of routine cleanup actions. Ecology will provide public notice of routine cleanup actions just as for any other cleanup action under subsection (14) of this section.

⁴⁵³ Restructured the public notice requirements for interim actions consistent with other subsections to makes them easier to identify and compare.

⁴⁵⁴ Clarified that public notice of a proposed interim action must comply with requirements in subsection (2).

⁴⁵⁵ Moved from former (a) of this subsection.

- (ii) Identify the proposed interim action, including institutional controls and the permit exemptions authorized under RCW ~~70.105D.090~~70A.305.090;
- (iii) Identify the likely or planned schedule for the proposed interim action;
- (iv) Reference any planning documents prepared for the proposed interim action;
- (v) Identify ~~department~~Ecology staff who may be contacted for further information; and
- (vi) Invite public comment on the ~~routine cleanup or~~proposed interim action.

(b) Comment period. ~~The public comment period shall extend for~~ Ecology will provide the public at least thirty days from the date of the mailing of the notice is issued to comment on a proposed interim action.

(17) Removing sites from contaminated sites list.⁴⁵⁶ For Ecology-conducted and Ecology-supervised remedial actions, Ecology will provide public notice before removing a site from the contaminated sites list under WAC 173-340-330. The public notice must be provided in accordance with subsection (2) of this section. Ecology will provide the public at least thirty days from the date Ecology issues the notice to comment on the proposed removal from the contaminated sites list.

(18) Periodic reviews.⁴⁵⁷ For Ecology-conducted and Ecology-supervised remedial actions, Ecology will provide public notice of a periodic review report prepared under WAC 173-340-420. The public notice must be provided in accordance with subsection (2) of this section. Ecology will provide the public at least thirty days from the date Ecology issues the notice to comment on a periodic review.

(19) Institutional controls.⁴⁵⁸ For Ecology-conducted and Ecology-supervised remedial actions, before amending or removing an institutional control required under WAC 173-340-440, Ecology will provide or require public notice on the proposal in accordance with subsection (2) of this section. Ecology will provide the public at least thirty days from the date the notice is issued to comment on the proposal.

⁴⁵⁶ Consolidated public notice requirements for removing sites from the contaminated sites list in this section instead of in Section 330. Also limited the applicability of these public notice requirements (which include comment opportunities) to Ecology-conducted and Ecology-supervised remedial actions. For independent remedial actions, notice is still required under subsection (20) of this section. That includes notice on our website and site-specific electronic alerts.

⁴⁵⁷ Consolidated public notice requirements for periodic reviews in this section instead of in Section 420. Also limited the applicability of these public notice requirements (which include comment opportunities) to Ecology-conducted and Ecology-supervised remedial actions. For independent remedial actions, notice is still required under subsection (20) of this section. That includes notice on our website and site-specific electronic alerts.

⁴⁵⁸ Consolidated public notice requirements for amending or removing an institutional control in this section instead of in Section 440. Also limited the applicability of these public notice requirements (which include comment opportunities) to Ecology-conducted and Ecology-supervised remedial actions. For independent remedial actions, notice is still required under subsection (20) of this section. That includes notice on our website and through site-specific electronic alerts.

(20) Independent remedial actions.⁴⁵⁹

- (a)** For independent remedial actions, Ecology will notify the public of the following using the methods specified in subsections (5) and (6) of this section:⁴⁶⁰
 - (i)** The site's listing and remedial action status identified under WAC 173-340-330;
 - (ii)** The site's current hazard rankings identified under WAC 173-340-320;
 - (iii)** Any initial investigation report prepared under WAC 173-340-310;
 - (iv)** Any independent remedial investigation, interim action, or cleanup action report required under WAC 173-340-515(4) and received by Ecology;
 - (v)** The results of any Ecology review of an independent remedial action, including any written opinion issued by Ecology under WAC 173-340-515(5);
 - (vi)** Any periodic review of a site under WAC 173-340-420; and
 - (vii)** Any document implementing, amending, or removing an institutional control under WAC 173-340-440.
- (b)** Ecology will provide notice of the following independent remedial actions in the *Contaminated Site Register* under subsection (7) of this section:⁴⁶¹
 - (i)** Any notice of a planned independent interim action or cleanup action submitted to Ecology in anticipation of a private right of action under WAC 173-340-545(3)(a); and
 - (ii)** Any proposed area-wide groundwater conditional point of compliance under WAC 173-340-720(8)(d)(iii)(D).
- (c)** For independent remedial actions, Ecology may provide public notice of any proposed action for which public notice is required under this chapter for an Ecology-conducted or Ecology-supervised remedial action.⁴⁶²

(17-21) Public participation grants. RCW ~~70.105D.070~~70A.305.180(4) requires funds be allocated for public participation grants to persons, including groups, who may be adversely affected by a release or threatened release of a hazardous substance. Persons interested in applying for such grants are encouraged to contact ~~the department~~Ecology to learn about available funding, grant

⁴⁵⁹ Consolidated notice and participation requirements for independent remedial actions in subsection (20) for ease of reference.

⁴⁶⁰ In subsection (20)(a), added requirement that Ecology must notify the public of specific information about independent remedial actions on Ecology's website and, if requested, through site-specific electronic alerts. Except for a site's initial listing based on an initial investigation, this notice is replacing Ecology's notice on the *Contaminated Site Register*. Ecology must also continue to provide notice of the information specified in subsection (20)(b) on the *Contaminated Site Register*.

⁴⁶¹ In subsection (20)(b), consolidated remaining *Contaminated Site Register* notice requirements regarding independent remedial actions.

⁴⁶² In subsection (20)(c), emphasized Ecology existing discretion to provide, on a site-specific basis, public notice for independent remedial actions.

application procedures, and deadlines. See chapter [173-321](#) WAC for additional information on public participation grants.

~~(18) **Technical assistance.** There is created within the department a citizen technical advisor office to provide independent technical assistance to citizens concerning the Model Toxics Control Act and remedial actions occurring under the act. This office will be established upon the effective date of this rule revision and continue for three years. Before the end of the three-year period, the department will work with citizen and business representatives to evaluate the effectiveness of this office and to determine whether the office should continue. The costs of this office shall be recovered by the department as provided for in WAC 173-340-550.~~⁴⁶³

(22) Other requirements.⁴⁶⁴ The following sections of this chapter specify additional requirements for providing notice or opportunity to comment.

- (a) WAC 173-340-310(6)(e)(vi) contains focused notice requirements for emergency or interim actions required by Ecology as a result of an initial investigation.
- (b) WAC 173-340-320(2)(b) contains notice and comment requirements for developing and updating the site hazard assessment and ranking process.
- (c) WAC 173-340-330(9)(a) and 173-340-335(5)(a) contain requirements for making the contaminated sites list and the no further action sites list publicly available.
- (d) WAC 173-340-340(4)(a) contains requirements for making Ecology's strategic plans and performance assessments publicly available.
- (e) WAC 173-340-390(2)(c) contains notice and comment requirements for developing model remedies.
- (f) WAC 173-340-440(10) contains local government consultation requirements for proposing institutional controls.
- (g) WAC 173-340-545(3) contains public notice requirements for private rights of action.
- (h) WAC 173-340-720(6)(c)(A) contains focused notice and comment requirements for establishing site-specific non-potable groundwater cleanup levels.
- (i) WAC 173-340-720(8)(d) contains focused notice and comment requirements for establishing off-property conditional points of compliance.

⁴⁶³ Eliminated reference to a citizen technical advisor to reflect the fact that this pilot concept, added to the rule in 2001, was never implemented. Eliminating the reference in the rule does not eliminate Ecology's authority to establish such a position in the future. There was no specific legislative direction.

⁴⁶⁴ Moved from former subsection (2) the cross-references to other notice or participation requirements in the rule. The references were updated and expanded to include new or previously omitted requirements.

~~WAC 173-340-610~~ — ~~Regional citizens' advisory committees.~~⁴⁶⁵

Tracked changes to current rule.

- ~~(1) — The department shall establish regional citizens' advisory committees as part of a public participation program. The regional citizens' advisory committees are intended to promote meaningful and effective public involvement in the department's remedial action program under chapter 70.105D RCW. The committees will advise the department as to the concerns of citizens locally and regionally regarding the remedial actions within each committee's region, with emphasis on issues that affect the region as a whole, rather than site-specific concerns.~~
- ~~(2) — **Location.** There shall be a regional citizens' advisory committee representing each geographic region of the state served by a regional office of the department.~~
- ~~(3) — **Membership.** At any time, each committee shall have no fewer than five and no more than twelve members. The director shall, no later than July 1, 1990, appoint five members to each committee to represent citizens' interests in the region. These members shall serve three-year terms that may be renewed at the director's discretion. These members should represent citizen interests in the region.~~
- ~~(a) — The director may appoint up to seven additional members to represent communities that may be affected by the remedial actions within each region. These members shall serve two-year terms that may be renewed at the director's discretion.~~
- ~~(b) — At no time shall more than twenty-five percent of the membership of any committee consist of persons who are elected or appointed public officials or their representatives.~~
- ~~(c) — The department shall advise the public as to whether any vacancies exist on the committees, and shall accept applications from interested citizens.~~
- ~~(d) — The following persons shall not be eligible to serve on any committee:~~
- ~~(i) — Persons whom the department has found are potentially liable persons under WAC 173-340-500 with regard to any facility that is currently the subject of department investigative, remedial or enforcement actions, not including compliance monitoring;~~
- ~~(ii) — Agents or employees of such potentially liable persons as described in (d)(i) of this subsection; and~~
- ~~(iii) — Agents or employees of the department.~~
- ~~(e) — A member shall refrain from participating in a committee matter if that member for any reason cannot act fairly and in the public interest with regard to that matter.~~
- ~~(f) — The director may dismiss a member for cause in accordance with the terms of the regional citizens' advisory committee charter.~~

⁴⁶⁵ Eliminated Section 610, which governs use of the regional citizens' advisory committees. The committees were eliminated by the Legislature in 2001 (see [Laws of 2001, Chapter 291](#) and [SB 5401](#)).

- ~~(4) — **Meetings.** The committees shall meet at least twice a year at the regional offices or elsewhere as agreed upon by a committee and the department. Appropriate department staff may attend these meetings. The department shall brief the committees on the program's major planned and ongoing activities for the year.~~
- ~~(a) — The department and the committees may agree to additional meetings.~~
- ~~(b) — Each committee will designate one of its members to serve as chair. The committee chairs shall meet every year with the program manager or his/her designee.~~
- ~~(c) — All committee meetings shall be open to the public. The department shall inform the public of committee meetings.~~
- ~~(5) — **Resources allocated to the committees.**~~
- ~~(a) — The department shall determine, after consulting with the committees, the amount of staff time and other department resources that shall be available to the committees for each biennium.~~
- ~~(b) — The department shall designate staff to work with the committees.~~
- ~~(c) — Members shall be reimbursed for travel expenses (as provided for in chapter 43.03 RCW) for any meetings approved by the department.~~
- ~~(6) — **Responsibilities.** The committees are directed to:~~
- ~~(a) — Meet at least twice annually;~~
- ~~(b) — Inform citizens within each region as to the existence of the committees and their availability as a resource;~~
- ~~(c) — Review the department's biennial program priorities, and advise the department of citizen concerns regarding the program priorities;~~
- ~~(d) — Advise the department of community concerns about the cleanup program's activities and develop proposals for addressing these concerns. Committees may use issues at specific sites as a foundation for understanding regional issues;~~
- ~~(e) — Annually prepare a brief report to the department describing:~~
- ~~(i) — Major citizen concerns that have been brought to the committee's attention during the past year;~~
- ~~(ii) — Any committee proposals or recommendations to address these concerns;~~
- ~~(iii) — The committee's plans for the coming year; and~~
- ~~(iv) — Any other information or issues which the committee believes appropriate for inclusion.~~
- ~~(f) — The committees are encouraged to work with the department and the public to develop additional committee goals or responsibilities.~~

WAC 173-340-620 Tribal engagement.⁴⁶⁶

Tracked changes to current rule.

- (1) Purpose.** Tribal engagement is an integral part of Ecology’s responsibilities under chapter 70A.305 RCW, the Model Toxics Control Act. Ecology’s goal is to provide Indian tribes with timely information, effective communication, continuous opportunities for collaboration and, when necessary, government-to-government consultation, as appropriate for each site.
- (2) Applicability.**⁴⁶⁷ This section applies to Ecology-conducted and Ecology-supervised remedial actions affecting Indian tribes’ rights or interests in their tribal lands.⁴⁶⁸
- (3) Tribal engagement plan.**⁴⁶⁹

 - (a)** Ecology will develop a site tribal engagement plan that identifies Indian tribes that may be adversely affected by the site, opportunities for government-to-government collaboration and consultation, and protocols for communication.
 - (b)** Ecology encourages early planning and engagement. Ecology will seek to engage affected Indian tribes before initiating a remedial investigation or an interim action at a site.
- (4) Relationship with public participation.**⁴⁷⁰ Engagement of Indian tribes under this section must be in addition to and independent of any public participation process under this chapter or applicable laws.

⁴⁶⁶ Established requirements for tribal engagement in new Section 620 that are separate from the public participation requirements in Section 600.

⁴⁶⁷ Limited the applicability of the requirements in this section to Ecology-conducted or Ecology-supervised remedial actions. The requirements do not apply to independent remedial actions. The applicability of this section reflects the applicability of the public participation requirements in Section 600.

⁴⁶⁸ Limited the applicability of the requirements in this section to Indian tribes’ rights or interests in their tribal land. The term “Indian tribe” is defined in Section 200 to mean the term as defined in RCW [43.376.010](#)(1), which includes federally-recognized Indian tribes whose traditional lands and territories included parts of Washington. The term “tribal land” is defined in Section 200 to mean the term as defined in RCW [70A.02.010](#)(13). This includes “Indian country” as provided in 18 U.S.C. Sec. 1151, as well as sacred sites, traditional cultural properties, burial grounds, and other tribal sites protected by federal or state law. Ecology will continue to engage non-federally recognized tribes as part of its community engagement under Section 600.

⁴⁶⁹ Added requirement for Ecology to develop a tribal engagement plan for each site that identifies affected Indian tribes and opportunities for engagement. Ecology intends to develop a template that can be modified on a site-specific basis as needed based on tribal interest. Ecology encourages early planning and engagement.

⁴⁷⁰ Added requirement that engagement of federally-recognized Indian tribes must be independent of any public participation process. This statement is based on a similar statement in the HEAL act (see RCW [70A.02.100](#)(3)).

Other Focal Sections

WAC 173-340-450 Releases from regulated underground storage tank systems.

Tracked changes to Preliminary Draft 1, previously reviewed by STAG.

(1) Applicability.

(a) Releases. This section applies only to underground storage tank (UST) systems regulated under chapter [173-360A](#) WAC from which there has been a confirmed release of a regulated substance that may pose a threat to human health or the environment.⁴⁷¹ Under chapter 173-360A WAC, UST system owners and operators and regulated service providers must report such a release to Ecology within twenty-four hours.⁴⁷²

(b) Persons. This section applies only to UST system owners and operators. UST system owners and operators must comply with the requirements in this section in addition to the other requirements in this chapter.⁴⁷³

(c) Other requirements. This section does not alter the applicability of requirements in other sections in this chapter.

(2) Purpose. Under chapter [173-360A](#) WAC, UST system owners and operators must investigate and clean up confirmed releases in accordance with the requirements of this chapter. This section specifies interim actions that UST system owners and operators must perform immediately or shortly after confirming a release⁴⁷⁴ to reduce threats posed by ~~a~~the release, prevent any further release, and characterize the nature and extent of ~~a~~the release. ~~UST system owners and operators must comply with the requirements in this section in addition to the other requirements in this chapter.~~⁴⁷⁵ Further remedial action may be necessary under this chapter to investigate and clean up the release.⁴⁷⁶ WAC 173-340-120 provides an overview of the cleanup process in this chapter.⁴⁷⁷

(3) Enforcement. UST system owners and operators who violate any requirement in this chapter are subject to enforcement, including civil penalties and orders, under:

(a) Chapter ~~70.105~~[70A.305](#) RCW and this chapter; or

(b) Chapter ~~90.76~~[70A.355](#) RCW and chapter [173-360A](#) WAC.

⁴⁷¹ Clarified that the section applies to confirmed releases of a “regulated substance” from an UST system. We added a definition of the term “regulated substance” in Section 200. All regulated substances, as defined in chapter [173-360A](#) WAC, are hazardous substances, as defined in this chapter.

⁴⁷² Added reference to UST reporting requirements for confirmed UST releases. Based on STAG input.

⁴⁷³ Moved from subsection (2).

⁴⁷⁴ Emphasized that the interim actions required under this section must be performed immediately or shortly after confirming a release. Timeframes for completing and reporting actions are specified elsewhere in this section.

⁴⁷⁵ Moved to subsection (1)(b).

⁴⁷⁶ Emphasized that further remedial action may be necessary to investigate or clean up a release from an UST system after completing the interim actions specified in this section.

⁴⁷⁷ Added reference to the cleanup process overview in Section 120. The overview does not itself impose any requirements. But it does outline the steps reflected in the rest of the rule.

- (4) **Administrative options.** The interim actions specified in this section may be conducted under any of the procedures described in WAC 173-340-510 ~~and 173-340-515~~.
- (5) **Interim actions.** UST owners and operators must perform the following interim actions after confirming a release.
- (a) **Initial response.** Within twenty-four hours of release confirmation, UST system owners and operators must:
- (i) Remove as much of the hazardous substance from the UST system as is possible and necessary to prevent further release to the environment;
 - (ii) Eliminate or reduce any fire, explosion, or vapor hazards and do so in a manner that minimizes any release of hazardous substances to surface water and groundwater; and
 - (iii) Visually inspect any aboveground releases or exposed belowground releases and prevent further migration of released hazardous substances into surrounding soils, groundwater, and surface water.
- (b) **Initial site characterization.** Within thirty days of release confirmation, UST system owners and operators must investigate the site to identify the hazardous substances released, the source of the release, the media impacted by the release, and the potential for vapors from contaminated soil or groundwater to enter building, utility vaults, or other structures. At a minimum, UST system owners and operators must:
- (i) Develop a sampling and analysis plan meeting the requirements of WAC 173-340-820. The sampling and analysis plan must be based on ~~the nature of the stored~~ substances currently or previously stored in the UST system,⁴⁷⁸ type of subsurface soils, depth to groundwater, vapor intrusion pathways,⁴⁷⁹ and other factors as appropriate for identifying the presence and source of the release;
 - (ii) Collect, handle, and analyze samples in accordance with the requirements in WAC 173-340-830;
 - (iii) Collect samples in the environment where hazardous substances are most likely to be present;
 - (iv)⁴⁸⁰ ~~UST system owners and operators must~~ investigate groundwater for the presence of hazardous substances and free product if there is evidence of any of the following conditions at the site:
 - (A) Contaminated soil is in contact with the groundwater;

⁴⁷⁸ Consistent with the UST rule, clarified that the sampling and analysis plan must be based on the substances currently or previously stored in the UST system.

⁴⁷⁹ Emphasized that the vapor intrusion pathway must be considered when developing the sampling and analysis plan. Based on STAG input.

⁴⁸⁰ Broke out as a separate requirement when groundwater must be investigated.

- (B) Contaminated soil extends below the lowest soil sampling depth;
 - (C) Groundwater contamination has been detected or observed ~~(such as sampling results or the presence of a sheen on water in the excavation while removing an UST system);~~⁴⁸¹
 - (D) The release has migrated to surface water or wetlands; or
 - (E) There is no evidence of the conditions in (b)(iii)(A) through (D) of this subsection, but UST owners and operators cannot demonstrate to Ecology's satisfaction that the release does not pose a threat to groundwater;⁴⁸²
- ~~(iv)~~(v) Analyze collected samples for the hazardous substances released from the UST system, including:
- (A) For petroleum, the substances specified in Table 830-1 based on the product stored; and
 - (B) For other hazardous substances, the substance stored and any likely decomposition by-products; ~~and~~
- ~~(v)~~(vi) Conduct any other investigations required by Ecology; ~~and~~
- (vii) Properly manage and dispose any waste materials, including contaminated soil and water, generated as a result of the initial site characterization in accordance with applicable state and federal laws. See WAC 173-340-710.⁴⁸³
- (c) **Free product removal.** If free product is discovered at the site, as soon as possible but no later than ~~sixty~~thirty days after release confirmation,⁴⁸⁴ UST system owners and operators must initiate actions to remove the free product while continuing, as necessary, any other actions required under this section. At a minimum, UST system owners and operators must:
- (i) Conduct free product removal to the maximum extent practicable and in a manner that minimizes the spread of hazardous substances by using recovery and disposal techniques appropriate to the hydrogeologic conditions at the site.

⁴⁸¹ Eliminated examples of observations that might instigate a groundwater investigation. Prompted by STAG input. Ecology plans to update its [Guidance for Remediation of Petroleum Contaminated Sites](#) to enhance discussion of this topic.

⁴⁸² Based on STAG comments, Ecology plans to update its [Guidance for Remediation of Petroleum Contaminated Sites](#) to address this topic (what demonstration is necessary), including the separation distance between soil contamination and groundwater (see section 6.9.1, p. 68). We declined providing further specificity in rule.

⁴⁸³ Consistent with similar provisions in other parts of the MTCA cleanup rule, added provision that wastes generated as a result of remedial action must be properly managed and disposed in accordance with applicable state and federal laws.

⁴⁸⁴ Changed deadline to initiate free product recovery to "as soon as possible but no later than 30 days after release confirmation." This is the same deadline as for completing the initial site characterization. Based on STAG input.

At a minimum, the free product removal system must be designed and operated to stop the free product migration;

- (ii) Properly treat, discharge, or dispose of any hazardous substance, water, sludge or any other materials collected in the free product removal process in ~~compliance with all applicable local, state, and federal regulations and permits~~ accordance with applicable state and federal laws. See WAC 173-340-710;⁴⁸⁵
 - (iii) Handle all flammable products safely to prevent fires and explosions;
 - (iv) Monitor, in accordance with WAC 173-360A-0665(4), for the presence of free product at least quarterly; and
 - (v) Unless otherwise directed by Ecology, ~~S~~submit to Ecology written quarterly progress reports describing the results of the monitoring and free product removal actions. The first report may be combined with the interim action report required under subsection (6) of this section.⁴⁸⁶
- (d) **Continuing obligations.** UST system owners and operators must continue to conduct the following measures to abate hazards at the site while continuing, as necessary, any other remedial action required under this ~~section~~chapter:⁴⁸⁷
- (i) Monitor and mitigate any additional fire and safety hazards posed by vapors or free product that may have migrated from the UST system into nearby buildings or other structures, such as underground utilities;~~and~~
 - (ii) Reduce the threat to human health and the environment posed by contaminated soils ~~that are~~ excavated or discovered as a result of ~~investigation or cleanup activities~~any remedial action; ~~and~~
 - (iii) ~~Treatment, storage, and disposal of soils must be carried out in compliance with all applicable local, state, and federal requirements~~Properly manage and dispose any waste materials, including contaminated soil and water, generated as a result of any remedial action in accordance with applicable state and federal laws. See WAC 173-340-710.⁴⁸⁸
- (6) **Interim action report.** Within ninety days of release confirmation, UST system owners and operators must submit an interim action report to Ecology about the site and nature of the release. This report must comply with the submittal requirements in WAC 173-340-840 and include, at a minimum, the following information:

⁴⁸⁵ Edited to make consistent with statements on proper waste management throughout the MTCA cleanup rule.

⁴⁸⁶ Changed requirement to allow Ecology to modify reporting frequency on a site-specific basis. While more frequent reporting is needed early in the process, less frequent reporting may be appropriate later in the process as the volume recovered decreases over time. Based on STAG input.

⁴⁸⁷ Changed “section” to “chapter” to reflect that the obligations in this provision apply until no further action is necessary under this chapter, not just until the interim actions required under this section are completed.

⁴⁸⁸ Edited to make consistent with statements on proper waste management throughout the MTCA cleanup rule.

- (a) A summary of the initial response actions required under subsection (5)(a) of this section, and any resulting information and data;
- (b) The results of the initial site characterization required under subsection (5)(b) of this section, and any other investigations conducted at the site, including:
 - (i) The source(s) of the releases;
 - (ii) An explanation of how the releases occurred;
 - (iii) The hazardous substances released, and the estimated quantity of hazardous substances released;
 - (iv) The media contaminated by those releases and, to the extent known, the nature and extent of contamination within those media, and sample locations.
 - (A) If groundwater has not been tested, ~~then~~ UST system owners and operators must include a demonstration that the release does not pose a threat to groundwater⁴⁸⁹.
 - (B) If no potential vapor intrusion pathways have been identified, UST system owners and operators must include a demonstration that there is no potential for vapors from contaminated soil or groundwater to enter buildings, utility vaults, or other structures.⁴⁸⁹
 - (v) The results of the free product investigation, if applicable; and
 - (vi) To the extent known, the pathways of exposure at the site and the human or ecological receptors affected by the releases;
- (c) The physical characteristics of the site, including:
 - (i) The location of tax parcels, property boundaries, right-of-ways, and above and below-ground structures;
 - (ii) The geology of the site, including subsurface soil conditions;
 - (iii) The hydrology of the site, including depth to groundwater, direction of groundwater flow, approximate location of wells potentially affected by the release, proximity of the release to and potential for affecting surface water and wetlands, the quality and use of groundwater and surface water;
 - (iv) The location of underground utilities and other potential conduits for vapor or free product migration; and

⁴⁸⁹ Added reporting requirement for cases where no potential vapor intrusion pathways have been identified. As part of the investigation, UST owners and operators must always identify whether there are any potential vapor intrusion pathways. That investigation should be done in accordance with Ecology's vapor intrusion guidance. Based on the results of the investigation, UST owners and operators must either identify potential vapor intrusion pathways or demonstrate that there are no potential vapor intrusion pathways. That is what needs to be included in the report. Prompted by STAG input.

- (v) The population and uses of the site and surrounding area;
 - (d) Diagrams and cross-sections of the site, as appropriate, reflecting the information required in (b) and (c) of this subsection;
 - (e) At sites where investigations indicate free product is present, information on the free product removal efforts, including:
 - (i) Name of the person responsible for implementing the free product removal measures;
 - (ii) The estimated quantity, type, and thickness of free product observed or measured in wells, boreholes and excavations;
 - (iii) The type of free product recovery system used;
 - (iv) If the recovery or monitoring of free product results in any discharges, then:
 - (A) The location of such discharges;
 - (B) The type of treatment applied to, and the effluent quality expected from such discharges; and
 - (C) The steps taken and planned to obtain necessary permits for such discharges; and
 - (v) Disposition of recovered free product and other contaminated materials generated by site investigations and cleanup;
 - (f) A description of any other on-going or completed remedial actions, and the results of such actions;
 - (g) A description of any planned remedial actions;
 - (h) The type of mechanism used to meet the financial responsibility requirements of WAC [173-360A-1045](#)(2)(a), and if the mechanism is an insurance policy, then:
 - (i) Whether a claim has been made on the policy; and
 - (ii) Whether the insurer has accepted or denied the claim; and
 - (i) Any other information required by Ecology.
- (7) **Periodic updates on remedial actions.** At least every ~~five~~three years after release confirmation or more frequently as directed by Ecology,⁴⁹⁰ UST system owners and operators must update

⁴⁹⁰ Changed frequency of periodic updates from 5 years to 3 years to reflect the UST inspection cycle, and added language to allow Ecology to require more frequent reporting on site-specific basis. We declined to extend the obligation to MTCA owners and operators at UST facilities that were permanently closed. We also declined to extend the obligation to other types of sites. However, we did expand the independent remedial action reporting requirement to include investigations, not just interim actions and cleanup actions. See Sections 350. Based on STAG input.

the interim action report required under subsection (6) of this section and submit it to Ecology unless:

- (a)** The site has been removed from the contaminated sites list under WAC 173-340-330;
- (b)** Ecology is conducting remedial actions at the site or is supervising remedial actions at the site under an order or decree; or
- (c)** The site is enrolled in a technical assistance program under WAC 173-340-515(5) or chapter [374-80](#) WAC.

WAC 173-340-510 Administrative options for remedial actions.⁴⁹¹

Tracked changes to current rule.

At sites where Ecology has determined remedial action is necessary under the state cleanup law, it is the responsibility of each and every liable person to conduct remedial action so that the sites are cleaned up well and expeditiously.⁴⁹² This section provides an overview of the administrative options for remedial action and the process for initiating remedial action. If there are any inconsistencies between this section and any specifically referenced sections, the referenced section governs.⁴⁹³

~~(1) — **Policy.** It is the responsibility of each and every liable person to conduct remedial action so that sites are cleaned up well and expeditiously where a release or threatened release of a hazardous substance requires remedial action.~~⁴⁹⁴ ~~Potentially liable persons are encouraged to initiate discussions and negotiations with the department and the office of the attorney general that may lead to an agreement on the remedial action to be conducted with the state of Washington.~~⁴⁹⁵ ~~The department may provide informal advice and assistance on the development of proposals for remedial action, as provided by WAC 173-340-515.~~⁴⁹⁶ ~~Any approval by the department or the state of remedial action shall occur by one of the means described in subsections (2) and (3) of this section.~~⁴⁹⁷

~~(2) — **Actions initiated by the potentially liable person.**~~⁴⁹⁸ ~~Potentially liable persons may initiate a remedial action, as follows:~~

~~(a) — A person may initiate negotiations for a consent decree by submitting a letter under WAC 173-340-520(1).~~

~~(b) — A person may request an agreed order by submitting a letter under WAC 173-340-530.~~

~~(3) — **Action initiated by the department.**~~⁴⁹⁹ ~~The department may initiate remedial action by:~~

~~(a) — Issuing a letter inviting negotiations on a consent decree under WAC 173-340-520(2); or~~

~~(b) — Requesting an agreed order under WAC 173-340-530; or~~

~~(c) — Issuing an enforcement order under WAC 173-340-540.~~

~~(4) — **Department remedial action.**~~⁵⁰⁰ ~~Nothing in this chapter shall preclude the department from taking appropriate remedial action on its own at any time. Except for emergency actions and~~

⁴⁹¹ Updated and reorganized the section to provide a more complete overview of administrative options for remedial action. Also integrated the overview included in Section 120(8) of the current rule.

⁴⁹² Moved statement from former subsection (1).

⁴⁹³ Emphasized that this section provides only an overview of administrative options for remedial action, and that the referenced section governs if there are any inconsistencies with the referenced section.

⁴⁹⁴ Incorporated within first sentence of this section.

⁴⁹⁵ Incorporated within new subsection (2).

⁴⁹⁶ Incorporated within new subsection (1).

⁴⁹⁷ Incorporated within new subsection (2).

⁴⁹⁸ Incorporated within new subsection (2).

⁴⁹⁹ Incorporated within new subsection (2).

⁵⁰⁰ Incorporated within new subsection (3).

~~initial investigations, reasonable effort will be made to notify potentially liable persons before the department takes remedial actions for which the recovery of public funds can be sought under RCW 70.105D.050(3).~~

- (1) **Independent remedial action.**⁵⁰¹ A person may investigate or clean up a site independently, without Ecology supervision or approval, except as provided under WAC 173-340-515(2).
- (a) **Standards.** When reviewing an independent remedial action, Ecology determines whether it complies with the substantive requirements of the state cleanup law. Persons conducting an independent remedial action do so at their own risk. Ecology may require additional remedial action if it determines that such action is necessary under the state cleanup law. See WAC 173-340-515(3).
- (b) **Reports.** Persons conducting independent remedial action must report all remedial investigations, interim actions, and cleanup actions to Ecology. Reports must include sufficient information for Ecology to determine whether the remedial action meets the substantive requirements of the state cleanup law. See WAC 173-340-515(4).
- (c) **Technical assistance.** Persons planning or conducting independent remedial action may request technical assistance from Ecology, including advice on how to investigate and clean up a site and written opinions on whether a planned or completed remedial action meets the substantive requirements of the state cleanup law. Ecology may charge a fee for providing requested technical assistance. PLIA may also provide technical assistance for certain sites under RCW 70A.330.040(7) and chapter 374-80 WAC.
- (2) **Ecology-supervised remedial action.**⁵⁰² Ecology may supervise the investigation or cleanup of a site by a potentially liable person or a prospective purchaser under an order or decree. Such persons are encouraged to initiate discussions and negotiations with Ecology and the attorney general that may lead to an agreement with the state of Washington on the remedial action to be conducted at a site. Ecology and the state will only approve of remedial action if it is an Ecology-supervised remedial action.
- (a) **Consent decree.** Ecology and the attorney general may require remedial action as part of a settlement agreement with a potentially liable person or a prospective purchaser. A settlement agreement must be entered as a consent decree issued by a court of competent jurisdiction. See RCW 70A.305.040(4) and (5), and WAC 173-340-520.
- (i) **Settlement.** A consent decree may contain a covenant not to sue and provide protection from contribution claims.
- (ii) **Initiation.** Negotiations for a consent decree may be initiated by a potentially liable person, a prospective purchaser, or Ecology.

⁵⁰¹ Expanded the overview of independent remedial actions, including when one may conduct such actions, what standards apply to such actions, when such actions need to be reported, and what technical assistance is available to persons conducting such actions.

⁵⁰² Reorganized the overview of Ecology-supervised remedial actions to highlight the differences between consent decrees, agreed orders, and enforcement orders.

- (b) Agreed order.** Ecology may issue an order requiring remedial action with which a potentially liable person or a prospective purchaser agrees to comply. See RCW 70A.305.020(1), 70A.305.050(1), and 70A.305.040(6) and WAC 173-340-530.

 - (i) No settlement.** An agreed order is not a settlement agreement and does not contain a covenant not to sue or provide protection from contributions claims.
 - (ii) Initiation.** Discussions for an agreed order may be initiated by a potentially liable person, a prospective purchaser, or Ecology.
- (c) Enforcement order.** Ecology may issue an enforcement order requiring a potentially liable person to conduct remedial action. See RCW 70A.305.050(1) and WAC 173-340-540.
- (3) Ecology-conducted remedial action.**⁵⁰³ Ecology may take appropriate remedial action to investigate or clean up a site at any time. Ecology typically conducts remedial action when a potentially liable person cannot be identified or when such persons are technically or financially unable to conduct remedial action. Ecology may seek to recover its remedial action costs from potentially liable persons. Except for emergency actions and initial investigations, Ecology will make a reasonable effort to notify potentially liable persons before conducting remedial action. See RCW 70A.305.030(1) and 70A.305.050(3).

⁵⁰³ Expanded the overview of Ecology-conducted remedial actions.

WAC 173-340-815 Cultural resource protection.

Tracked changes to current rule.

- (1) **Purpose.**⁵⁰⁴ This section specifies requirements that are intended to avoid, minimize, or mitigate adverse effects from remedial actions on archeological and historic archaeological sites, historic buildings and structures, traditional cultural places, sacred sites, and other cultural resources.
- (2) **Applicable laws.**⁵⁰⁵ Remedial actions must comply with applicable state and federal laws regarding cultural resource protection, including:
- (a) The National Historic Preservation Act of 1966, as amended (54 U.S.C. 300101 et seq.);
 - (b) The Archaeological and Historic Preservation Act of 1974, as amended (54 U.S.C. 312501 et seq.);
 - (c) The Archaeological Resource Protection Act of 1979, as amended (16 U.S.C 470aa et seq.);
 - (d) The Native American Graves Protection and Repatriation Act of 1990, as amended (25 U.S.C. 3001 et seq.);
 - (e) Chapter 27.53 RCW, Archaeological Sites and Resources;
 - (f) Chapter 27.44 RCW, Indian Graves and Records;
 - (g) Chapter 68.50 RCW, Human Remains; and
 - (h) Chapter 68.60 RCW, Abandoned and Historic Cemeteries and Historic Graves.
- (3) **Consultations and inadvertent discovery plans.**⁵⁰⁶
- (a) **Applicability.**⁵⁰⁷ The requirements in this subsection apply to:
 - (i) Ecology-conducted remedial actions, except initial investigations;⁵⁰⁸
 - (ii) Ecology-supervised remedial actions; and
 - (iii) Ecology-funded independent remedial actions.

⁵⁰⁴ Added statement of purpose, which is based on Section 3 of Executive Order [21-02](#).

⁵⁰⁵ Identified federal and state laws applicable to cultural resource protection. The identification of applicable laws is consistent with the approach used in Section [810](#) for health and safety requirements.

⁵⁰⁶ Added cultural resource consultation and inadvertent discovery planning requirements for remedial actions that Ecology either conducts, requires, or funds.

⁵⁰⁷ The applicability of the consultation requirements is consistent with Executive Order [21-02](#), except that we also included Ecology-supervised remedial actions not funded by Ecology. The applicability of the inadvertent discovery planning requirements is consistent with existing agency policy.

⁵⁰⁸ Exempted initial investigations from the cultural resource consultation requirements, consistent with the scope of Executive Order [21-02](#). However, we plan to develop procedures for initial investigations involving sampling activities, including use of inadvertent discovery plans.

- (b) Requirements.** Before any person conducts a field activity capable of affecting a cultural resource, if encountered, Ecology will:
- (i)** Consult with the department of archaeology and historic preservation and affected Indian tribes on the potential effects of planned remedial actions on cultural resources at the site, unless the remedial action is subject to Section 106 review under the National Historic Preservation Act of 1966, as amended (54 U.S.C. 300101 et seq.),⁵⁰⁹ and
 - (ii)** Prepare or require an inadvertent discovery plan for the site.⁵¹⁰
 - (A)** The inadvertent discovery plan must be prepared using the applicable form provided by Ecology or an equivalent document that includes the same or more comprehensive information.
 - (B)** For Ecology-supervised remedial actions, Ecology may require submittal of the inadvertent discovery plan for its review.
 - (C)** The inadvertent discovery plan must be readily available during all remedial actions at the site. Persons conducting remedial actions at the site must be familiar with the contents and location of the plan.
 - (D)** The inadvertent discovery plan must be updated as needed to reflect the discovery of cultural resources.

⁵⁰⁹ Added cultural resource consultation requirement consistent with Executive Order [21-02](#). However, unlike EO 21-02, Ecology will not delegate consultation responsibility to other parties, such as PLPs or grant recipients.

⁵¹⁰ Added inadvertent discovery planning (IDP) requirement consistent with agency policy. One may use the IDP form provided by Ecology or an equivalent document. Unlike for cultural resource consultations, Ecology may require another party to prepare an IDP. Consistent with program policy, the IDP must be kept at the site during all remedial actions and persons conducting remedial action must be familiar with its contents and its location at the site. The plan must be kept up to date based on any discoveries at the site.

WAC 173-340-830 **Analytical**~~Sampling and analysis~~ procedures.

Tracked changes to current rule.

- (1) **Purpose.** This section specifies ~~acceptable analytical methods and other testing requirements for sites where remedial action is being conducted under this chapter~~ requirements for sampling and analysis activities conducted as part of a remedial action. These activities include sample collection, handling, preservation, transportation, holding time, preparation, laboratory analysis, method detection limits, practical quantitation limits, quality assurance, quality control, data reporting, and other technical requirements and specifications.⁵¹¹
- (2) **Applicability.** All sampling and analysis activities conducted as part of a remedial action must comply with the requirements in this sections and, for sites where there is a release or threatened release to sediment, the requirements in chapter 173-204 WAC.⁵¹²
- ~~(2) —~~ **General requirements.**⁵¹³
- (a) ~~All hazardous substance analyses shall be conducted by a laboratory accredited under chapter 173-50 WAC, unless otherwise approved by the department.~~
- (b) ~~All analytical procedures used shall be conducted in accordance with a sampling and analysis plan prepared under WAC 173-340-820.~~
- (c) ~~Tests for which methods have not been specified in this section shall be performed using standard methods or procedures such as those specified by the American Society for Testing of Materials, when available, unless otherwise approved by the department.~~
- (d) ~~Samples shall be analyzed consistent with methods appropriate for the site, the media being analyzed, the hazardous substances being analyzed for, and the anticipated use of the data.~~
- (e) ~~The department may require or approve modifications to the standard analytical methods identified in subsection (3) of this section to provide lower quantitation limits, improved accuracy, greater precision, or to address the factors in (d) of this subsection.~~
- (f) ~~Limits of quantitation. Laboratories shall achieve the lowest practical quantitation limits consistent with the selected method and WAC 173-340-707.~~
- (g) ~~Where there is more than one method specified in subsection (3) of this section with a practical quantitation limit less than the cleanup standard, any of the methods may be selected. In these situations, considerations in selecting a particular method may include confidence in the data, analytical costs, and considerations relating to quality assurance or analysis efficiencies.~~

⁵¹¹ Moved sentence from former subsection (3)(a) to expand on what the requirements in this section cover.

⁵¹² Added applicability provision to clarify that, for sites where there is a release or threatened release to sediment, sampling and analysis activities must also comply with the requirements in chapter 173-204 WAC.

⁵¹³ Broke apart former subsection (2) into four different subsections. See new subsections (2) through (5). Disposition of each provision is identified in the footnotes.

- ~~(h) — The department may require an analysis to be conducted by more than one method in order to provide higher data quality. For example, the department may require that different separation and detection techniques be used to verify the presence of a hazardous substance (“qualification”) and determine the concentration of the hazardous substance (“quantitation”).~~
- ~~(i) — The minimum testing requirements for petroleum-contaminated sites are identified in Table 830-1.~~
- (3) — Analytical methods.**⁵¹⁴
 - ~~(a) — The methods used for sample collection, sample preservation, transportation, allowable time before analysis, sample preparation, analysis, method detection limits, practical quantitation limits, quality control, quality assurance and other technical requirements and specifications shall comply with the following requirements, as applicable:~~
 - ~~(i) — **Method 1. Test Methods for Evaluating Solid Waste**, Physical/Chemical Methods, U.S. EPA, SW-846, fourth update (2000);~~
 - ~~(ii) — **Method 2. Guidelines Establishing Test Procedures for the Analysis of Pollutants**, 40 C.F.R. Chapter 1, Part 136, and Appendices A, B, C, and D, U.S. EPA, July 1, 1999;~~
 - ~~(iii) — **Method 3. Standard Methods for the Examination of Water and Wastewater**, American Public Health Association, American Water Works Association, and Water Pollution Control Federation, 20th edition, 1998;~~
 - ~~(iv) — **Method 4. Recommended Protocols for Measuring Selected Environmental Variables in Puget Sound**, Puget Sound Estuary Program/Tetra Tech, 1996 edition;~~
 - ~~(v) — **Method 5. Quality Assurance Interim Guidelines for Water Quality Sampling and Analysis**, Groundwater Management Areas Program, Washington Department of Ecology, Water Quality Investigations Section, December 1986;~~
 - ~~(vi) — **Method 6. Analytical Methods for Petroleum Hydrocarbons**, Ecology publication #ECV-97-602, June 1997; or~~
 - ~~(vii) — Equivalent methods subject to approval by the department.~~
 - ~~(b) — The methods used for a particular hazardous substance at a site shall be selected in consideration of the factors in subsection (2) of this section.~~

⁵¹⁴ Eliminated former subsection (3). We eliminated the list of Ecology-approved methods from the rule to make it easier to update the list based on technological changes. Under the new rule, Ecology is required to maintain and make available to the public a list of Ecology-approved methods. Ecology may add or remove methods from the list without changing the rule. Ecology must maintain a record of any such decision. See new subsection (4)(a).

~~(c) **Groundwater.** Methods 1, 2, 3 and 4, as described in (a) of this subsection, may be used to determine compliance with WAC 173-340-720.~~

~~(d) **Surface water.** Methods 1, 2, 3, 4 and 5 as described in (a) of this subsection, may be used to determine compliance with WAC 173-340-730.~~

~~(e) **Soil.** Method 1, as described in (a) of this subsection, may be used to determine compliance with WAC 173-340-740 and 173-340-745.~~

~~(f) **Air.** Appropriate methods for determining compliance with WAC 173-340-750 shall be selected on a case-by-case basis, in consideration of the factors in subsection (2) of this section.~~

(3) Plans. All sampling and analysis must be conducted in accordance with a sampling and analysis plan prepared under WAC 173-340-820.⁵¹⁵

(4) Methods.

(a) All sampling and analysis must be conducted in accordance with an Ecology-approved method or, if Ecology has not approved an applicable method, a standard method or procedure such as those specified by the American Society for Testing of Materials, when available.⁵¹⁶

(i) Ecology will maintain a list of Ecology-approved methods and make the list publicly available on Ecology's website.

(ii) Ecology will provide notice in the *Contaminated Site Register* when Ecology adds or removes a method from the list of Ecology-approved methods.

(iii) Ecology will maintain a record of its decisions to add or remove a method from the list of Ecology-approved methods.

(iv) Any person may propose another method for Ecology review and approval.

(b) The methods used to collect, handle, and analyze samples must be appropriate for the site, the media being analyzed, the hazardous substances being analyzed for, and the anticipated use of the data.⁵¹⁷

⁵¹⁵ Moved from former subsection (2)(b).

⁵¹⁶ Eliminated list of Ecology-approved methods from the rule to make it easier to update the list based on technological changes. Under the new rule, Ecology is required to maintain and make available to the public a list of Ecology-approved methods. Ecology may add or remove methods from the list without changing the rule. Ecology must maintain a record of any such decision, and notify the public of any such decision in the *Contaminated Site Register*. As under the current rule, when Ecology has not identified an approved method, a standard method (such as those specified by ASTM) may be used, if available (see former subsection (2)(c)).

⁵¹⁷ Moved from former subsection (2)(d).

(c) Ecology may require or approve modifications to a method identified under (a) of this subsection to provide lower quantitation limits, improved accuracy, greater precision, or to address the factors in (b) of this subsection.⁵¹⁸

(d) Ecology may require an analysis to be conducted by more than one method in order to provide higher data quality. For example, Ecology may require that different separation and detection techniques be used to verify the presence of a hazardous substance (“qualification”) and determine the concentration of the hazardous substance (“quantitation”).⁵¹⁹

(e) If Ecology has approved more than one method with a practical quantitation limit less than the cleanup level, any of those methods may be used. When selecting a method in these situations, consider confidence in the data, analytical costs, quality assurance, and analysis efficiencies.⁵²⁰

(5) Laboratories.

(a) All hazardous substance analyses must be conducted by a laboratory accredited under chapter 173-50 WAC, unless otherwise approved by Ecology.⁵²¹

(b) Laboratories must achieve the lowest practical quantitation limits consistent with the selected method and WAC 173-340-707.⁵²²

(6) Petroleum testing. The minimum testing requirements for petroleum releases are identified in Table 830-1.⁵²³

⁵¹⁸ Moved from former subsection (2)(e).

⁵¹⁹ Moved from former subsection (2)(h).

⁵²⁰ Moved from former subsection (2)(g).

⁵²¹ Moved from former subsection (2)(a).

⁵²² Moved from former subsection (2)(f).

⁵²³ Moved from former subsection (2)(i).

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Conforming Changes in Other Sections

WAC 173-340-420 Periodic reviews.

Tracked changes to current rule.

...

- (5) ~~Notice and public comment~~ **Public participation or notification.** ~~The department shall publish a notice of all periodic reviews in the *Site Register* and provide an opportunity for public comment. The department shall also notify all potentially liable persons known to the department of the results of the periodic review.~~

(a) For an Ecology-conducted or an Ecology-supervised remedial action, Ecology will:

- (i) Provide public notice of a periodic review in accordance with WAC 173-340-600(18);⁵²⁴ and
- (ii) Notify all potentially liable persons known to Ecology of the results of the periodic review.

(b) For an independent remedial action, Ecology will provide notice of a periodic review in accordance with WAC 173-340-600(20).⁵²⁵

...

⁵²⁴ For periodic reviews of Ecology-conducted and Ecology-supervised remedial actions, changed how Ecology will provide public notice of a periodic review. Ecology will provide notice of such actions the same as for other steps in the cleanup process for Ecology-conducted or Ecology-supervised remedial actions. See WAC 173-340-600(18). Ecology will provide public notice as specified in WAC 173-340-600(2).

⁵²⁵ For periodic reviews of independent remedial actions, Ecology will still notify the public, but will no longer provide the public an opportunity to comment. This is consistent with other steps in the cleanup process for independent cleanup sites. Ecology will notify the public by making periodic reviews publicly available on Ecology's website and, if requested, by alerting interested persons electronically when periodic reviews are completed. Ecology will no longer provide notice of independent remedial actions in the *Contaminated Site Register*. See WAC 173-340-600(20).

WAC 173-340-440 Institutional controls.

Tracked changes to current rule.

...

(12) ~~Removal of restrictions~~ **Amendment or removal of institutional controls.** ~~If the conditions at the site requiring an institutional control under subsection (4) of this section no longer exist, then the owner may submit a request to the department that the restrictive covenant or other restrictions be eliminated. The restrictive covenant or other restrictions shall be removed, if the department, after public notice and opportunity for comment, concurs.~~

(a) Request. Any person who has an interest in the real property subject to an institutional control⁵²⁶ may submit a request to Ecology that the control be amended or removed if the conditions at the site requiring the control under subsection (4) of this section have changed or no longer exist. The request must be in writing.

(b) Determination. If Ecology determines that the conditions requiring an institutional control under subsection (4) of this section have changed or no longer exist, then the institutional control must be amended or removed.

(c) Public participation or notification.

(i) For Ecology-conducted or Ecology-supervised remedial actions, Ecology will provide or require public notice of any proposal to amend or remove an institutional control in accordance with WAC 173-340-600(19).⁵²⁷

(ii) For independent remedial actions, Ecology will provide notice of any amendment or removal of an institutional control in accordance with WAC 173-340-600(20).⁵²⁸

⁵²⁶ Clarified that any person who has an interest in the real property subject to an institutional control may request amendment or removal of the control based on changed conditions.

⁵²⁷ For Ecology-conducted and Ecology-supervised remedial actions, clarified how Ecology will provide public notice when amending or removing an institutional control. Ecology will provide notice of such actions the same as for other steps in the cleanup process for Ecology-conducted or Ecology-supervised remedial actions. See WAC 173-340-600(19). Ecology will provide public notice as specified in WAC 173-340-600(2).

⁵²⁸ For independent remedial actions, Ecology will still notify the public, but will no longer provide the public an opportunity to comment when amending or removing institutional controls. This is consistent with other steps in the cleanup process for independent cleanup sites. Ecology will notify the public by making institutional controls publicly available on Ecology's website and, if requested, by alerting interested persons electronically when such controls are amended or removed. Ecology will no longer provide notice of independent remedial actions in the *Contaminated Site Register*. See WAC 173-340-600(20).

WAC 173-340-515 Independent remedial actions.

Tracked changes to current rule.

...

(4) Reports to the department.

- (a) **Applicability and timing.** Any person who conducts an independent remedial investigation,⁵²⁹ interim action, or cleanup action for a release that is required to be reported under WAC 173-340-300 ~~shall~~must submit a written report to the department within ninety days of the completion of the action. For the purposes of this section, the department will consider an interim action or cleanup action complete if no remedial action other than compliance monitoring has occurred at the site for ninety days. This does not preclude earlier reporting of such actions ~~or reporting of site investigations~~. See WAC 173-340-450 for additional requirements for reporting independent remedial actions for releases from ~~underground storage tanks~~ UST systems regulated under chapter 173-360A WAC.
- (b) **Content.** ~~The~~An independent remedial action report ~~shall~~must include the information in WAC 173-340-300 ~~(2)~~(3) if not already reported, and enough information to determine if the ~~independent~~ remedial action meets the substantive requirements of this chapter, including, the results of all site investigations, cleanup actions, and compliance monitoring planned or under-way. If a restrictive covenant is used, it must be included in the report and it must meet the requirements specified in WAC 173-340-440(9). The department may require additional reports on the work conducted.
- (c) **Initial investigation.** If the independent remedial investigation, interim action, or cleanup action is completed within ninety days of release discovery, ~~a single written report may be submitted on both the release and the action taken. The report shall contain the information specified in provision (b) of this subsection and shall be submitted within ninety days of completion of the remedial action~~⁵³⁰ the department may defer completing any needed initial investigation of the release to enable review of the independent remedial action and report in accordance with WAC 173-340-310(5)(b).⁵³¹
- (d) **Notification.** The department ~~shall publish in the Site Register a notice of all reports on~~ will provide notice of an independent remedial investigation, interim actions, ~~and or~~ cleanup actions ~~s report~~ received under this section in accordance with WAC 173-340-

⁵²⁹ Expanded the reporting requirement for independent remedial actions to include independent remedial investigations in response to STAG input and preference for earlier reporting of such actions.

⁵³⁰ Changed release reporting requirements when independent remedial actions are completed within 90 days of release discovery. In such cases, releases must be reported within 90 days of discovery instead of within 90 days of completing the independent remedial action. This change is based on STAG input and preference for earlier notice. See notes on WAC 173-340-300(3).

⁵³¹ Referenced provision in Section 310(5)(b) that allows Ecology to defer completing an initial investigation when an independent remedial investigation, interim action, or cleanup action is completed within 90 days of release discovery. See notes on Section 310(5).

~~600(20).~~⁵³² ~~If deemed necessary, the department shall also conduct an initial investigation under WAC 173-340-310.~~

(e) Liability. Neither submission of information on an independent remedial action nor any response by the department shall release the person submitting the report or any other person from liability. The department reserves all rights to pursue any subsequent action it deems appropriate.

(5) Technical consultations. The department may provide informal advice and assistance (technical consultations) on the administrative and technical requirements of this chapter to persons conducting or otherwise interested in an independent remedial action. Such advice or assistance is advisory only and not binding on the department. This advice may include written opinions. These written opinions shall be limited to whether the independent remedial actions or proposals for those actions meet the substantive requirements of this chapter and/or whether the department believes further remedial action is necessary at the facility.

(a) Upon completing the review of an independent remedial action report or proposal that is voluntarily submitted for the department's review and opinion, the department will:

~~(a)(i)~~ Provide a written opinion regarding the remedial actions performed or proposed at the site;

~~(b)(ii)~~ Provide a written opinion regarding the remedial actions performed at the site and remove the site ~~or a portion of the site~~⁵³³ from the ~~hazardous~~contaminated sites list if the department has sufficient information to show that the independent remedial actions are appropriate to characterize and address contamination at the site, as ~~provided for~~specified in WAC 173-340-330~~(4)(b)(5)(b)~~; or

~~(c)(iii)~~ Provide a written opinion describing the deficiencies with the remedial action or proposal for a remedial action at the site.

(b) It is the department's policy, in conducting reviews under this subsection, to promote independent remedial actions by delisting sites ~~or portions of sites~~ whenever petitions and supporting documents show that the actions taken are appropriate to characterize and address the contamination at the site.

⁵³² Changed how Ecology will notify the public when Ecology receives an independent remedial action report. Ecology will make the report publicly available on Ecology's website and, if requested, alert an interested person when the report is available. Ecology will no longer provide such notice in the *Contaminated Site Register*. See WAC 173-340-600(20).

⁵³³ Clarified that Ecology does not remove portions of a site from the contaminated sites list, or redefine a contaminated site, when a portion of a site (cleanup unit) is cleaned up. Rather, Ecology tracks the progress in cleaning up a site, and any units within the site, on its database and makes such information available to the public.

(c) The department will provide notice of a written opinion issued under this subsection in accordance with WAC 173-340-600(20).⁵³⁴

...

⁵³⁴ Changed how Ecology will notify the public when Ecology provides a written opinion on an independent remedial action. Ecology will make the opinion publicly available on Ecology's website and, if requested, alert an interested person when the opinion is available. Ecology will no longer provide such notice in the *Contaminated Site Register*. See WAC 173-340-600(20).

Corrections in Part 7

Tracked changes to current rule.

Section or Equation	Correction
Section 704(2)(c)	Concentrations that result in no significant adverse effects on the protection and propagation of terrestrial ecological receptors using the procedures specified in WAC 173-340-7490 through 173-340- 7493 7494, unless it is demonstrated under those sections that establishing a soil concentration is unnecessary;
Equation 720-1	ED = Exposure duration (1.0) (6 years)
Equation 720-3	INH(i) = Inhalation correction fraction factor for petroleum component (i) (use value of 2 for volatile organic compounds and 1 for all other components [unitless])
Equation 730-1	UCF2 = Unit conversion factor (1,000 grams/ kg liter)
Equation 730-2	UCF2 = Unit conversion factor (1,000 grams/ kg liter)
Equation 740-3	ABS = Dermal absorption fraction for petroleum component (i) (unitless). May use chemical-specific values or the following defaults: <ul style="list-style-type: none"> • 0.0005 for volatile petroleum components with vapor pressure <u>> = benzene</u> • 0.03 for volatile petroleum components with vapor pressure <u>< benzene</u> • 0.1 for other petroleum components
Equation 740-4	ABS = Dermal absorption fraction (unitless). May use chemical-specific values or the following defaults: <ul style="list-style-type: none"> • 0.01 for inorganic hazardous substances • 0.0005 for volatile organic compounds with vapor pressure <u>> = benzene</u> • 0.03 for volatile organic compounds with vapor pressure <u>< benzene</u> • 0.1 for other organic hazardous substances
Equation 740-5	ABS = Dermal absorption fraction (unitless). May use chemical-specific values or the following defaults: <ul style="list-style-type: none"> • 0.01 for inorganic hazardous substances • 0.0005 for volatile organic compounds with vapor pressure <u>> = benzene</u> • 0.03 for volatile organic compounds with vapor pressure <u>< benzene</u> and for mixtures of dioxins and/or furans • 0.1 for other organic hazardous substances
Section 745(3)(b)(iii)	Concentrations that result in no significant adverse effects on the protection and propagation of terrestrial ecological receptors using the procedures specified in WAC 173-340-7490 through 173-340- 7493 7494, unless it is demonstrated under those sections that establishing a soil concentration is unnecessary; and
Equation 745-3	ABS = Dermal absorption fraction for petroleum component (i) (unitless). May use chemical-specific values or the following defaults: <ul style="list-style-type: none"> • 0.0005 for volatile petroleum components with vapor pressure <u>> = benzene</u>

	<ul style="list-style-type: none"> 0.03 for volatile petroleum components with vapor pressure < benzene 0.1 for other petroleum components
Equation 745-4	<p>ABS = Dermal absorption fraction (unitless). May use chemical-specific values or the following defaults:</p> <ul style="list-style-type: none"> 0.01 for inorganic hazardous substances 0.0005 for volatile organic compounds with vapor pressure > = benzene 0.03 for volatile organic compounds with vapor pressure < benzene 0.1 for other organic hazardous substances
Equation 745-5	<p>ABS = Dermal absorption fraction (unitless). May use chemical-specific values or the following defaults:</p> <ul style="list-style-type: none"> 0.01 for inorganic hazardous substances 0.0005 for volatile organic compounds with vapor pressure > = benzene 0.03 for volatile organic compounds substances with vapor pressure < benzene and for mixtures of dioxins and/or furans 0.1 for other organic hazardous substances
Equation 747-2	<p>Koc = Soil organic carbon-water partitioning coefficient (ml/g)(L/kg). See (c)(i) of this subsection.</p>
Section 7493(2)(a)(i)	<p>The person conducting the evaluation may eliminate hazardous substances from further consideration where the maximum or the upper ninety-five percent confidence limit soil concentration found at the site does not exceed ecological indicator concentrations described in Table 749-3. For industrial or commercial land uses, only the wildlife values need to be considered. Any chemical that exceeds the ecological indicator concentrations shall be included as a chemical of ecological concern in the evaluation unless it can be eliminated based on the factors listed in WAC 173-340-708<u>703</u>(2)(b).</p>
Section 750(3)(c)(i)	<p>The inhalation absorption percentage<u>fraction</u> may be modified if the requirements of WAC 173-340-702 (14), (15), (16) and WAC 173-340-708(10) are met;</p>
Section 750(6)	<p>Points of compliance. Cleanup levels established under this section shall be attained in the ambient <u>(outdoor) air and air within any building, utility vault, manhole or other structure large enough for a person to fit into,</u> throughout the site. For sites determined to be industrial sites under the criteria in WAC 173-340-745, the department may approve a conditional point of compliance not to exceed the property boundary. A conditional point of compliance shall not be approved if use of a conditional point of compliance would pose a threat to human health or the environment.⁵³⁵</p>

⁵³⁵ Corrects inconsistency with applicability statement in Section 750(1)(a).