



PROPOSED RULE MAKING

CR-102 (July 2022)
(Implements RCW 34.05.320)
Do **NOT** use for expedited rule making

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DATE: February 15, 2023

TIME: 8:32 AM

WSR 23-05-092

Agency: Department of Ecology AO #18-09

Original Notice

Supplemental Notice to WSR _____

Continuance of WSR _____

Preproposal Statement of Inquiry was filed as WSR 19-02-013 ; or

Expedited Rule Making--Proposed notice was filed as WSR _____ ; or

Proposal is exempt under RCW 34.05.310(4) or 34.05.330(1); or

Proposal is exempt under RCW _____.

Title of rule and other identifying information: (describe subject) Ecology proposes to amend Chapter 173-340 WAC, Model Toxics Control Act (MTCA) Cleanup Regulations. Chapter 173-340 WAC regulates the investigation and cleanup of contaminated sites in Washington state.

Hearing location(s):

Date:	Time:	Location: (be specific)	Comment:
March 23, 2023	10:00 a.m.	Webinar hearing via Zoom	<p>Presentation, questions and answer session, followed by the hearing.</p> <p>We are fholding this hearing via webinar. This is an online meeting that you can attend from any computer using internet access.</p> <p>Join online: https://waecy-wa.gov.zoom.us/meeting/register/tZErceyvzrsjHNehuxcfmhzOP5-yddIKedXf</p> <p>For call in only, use your phone to call 253-215-8782 and enter meeting ID 856 6571 0963.</p>
March 27, 2023	5:00 p.m.	Webinar hearing via Zoom	<p>Presentation, questions and answer session, followed by the hearing.</p> <p>We are fholding this hearing via webinar. This is an online meeting that you can attend from any computer using internet access.</p> <p>Join online: https://waecy-wa.gov.zoom.us/meeting/register/tZEpdemptj0rGN1G0Umtahjkbpr7-PGvUIYc</p> <p>For call in only, use your phone to call 253-215-8782 and enter meeting ID 854 2058 6129.</p>

Date of intended adoption: On or after August 1, 2023 (Note: This is **NOT** the **effective** date)

Submit written comments to:

Name: Sarah Wollwage

Address: Department of Ecology
PO Box 47600
Olympia, WA 98504-7600

Email: N/A

Fax: N/A

Assistance for persons with disabilities:

Contact Ecology ADA Coordinator

Phone: 360-407-6831

Fax: N/A

TTY: People with speech disability may call 877-833-6341.
People with impaired hearing may call Washington Relay Service at 711.

Other: Please submit comments by mail, online at <https://tcp.ecology.commentinput.com/?id=uJVx2>, or at a public hearing.

By (date) April 16, 2023

Email: ecyadacoordinator@ecy.wa.gov

Other:

By (date) March 16, 2023

Purpose of the proposal and its anticipated effects, including any changes in existing rules: The Department of Ecology (Ecology) proposes to amend Chapter 173-340 WAC, the Model Toxics Control Act (MTCA) Cleanup Regulations. As part of this rulemaking, Ecology is not proposing to change the cleanup standards in Parts 7 and 9 of the chapter, but is proposing to:

- Update the title of the chapter.
- Update the general provisions and defined terms in Parts 1 and 2 of the chapter.
- Update the requirements for release reporting, initial investigation, site hazard assessment and ranking, site listing, and program planning under Part 3 of the chapter.
- Update the requirements for conducting a remedial investigation and selecting a cleanup action for a site in Part 3 of the chapter.
- Update the requirements in WAC 173-340-450 for investigating and cleaning up underground storage tanks regulated under Chapter 173-360A WAC.
- Update the requirements for public participation and tribal engagement in Part 6 of the chapter.
- Incorporate requirements for cultural resource protection in WAC 173-340-815 and update procedures for identifying appropriate sampling and analytical methods in WAC 173-340-830.
- Make other conforming and selective changes to the administrative and procedural requirements in Parts 4, 5, and 8 of the chapter.
- Make other changes in Parts 1 through 6 and Part 8 of the chapter to streamline and clarify requirements, make minor corrections, and improve consistency with other laws and rules.
- Make changes in Parts 7 and 9 of the chapter to clarify language and make corrections without changing the effect of the rule.
- Incorporate changes to the cleanup program specified in Chapter 70A.305 RCW, Hazardous Waste Cleanup – Model Toxics Control Act.

Reasons supporting proposal: Ecology is conducting this rulemaking to update and clarify many of the existing administrative and procedural requirements for cleaning up contaminated sites. These requirements have not been updated since 2001. Ecology is updating these requirements based on:

- Statutory changes to the authorizing state statute, Chapter 70A.305 RCW, enacted since the last update of the regulations.
- Ecology's experience investigating and cleaning up more than 6,000 contaminated sites since the last update of the regulations.
- Comments from practitioners and stakeholders received during the MTCA Cleanup Regulation Exploratory rulemaking process. For more information, see <https://ecology.wa.gov/Spills-Cleanup/Contamination-cleanup/Rules-directing-our-cleanup-work/Model-Toxics-Control-Act/Exploratory-rulemaking>.

By conducting this rulemaking, Ecology intends to:

- Improve the site hazard assessment and ranking process.
- Revitalize MTCA cleanup program planning and assessment.
- Update and clarify remedial investigation and remedy selection requirements.
- Distinguish more clearly requirements applying to independent remedial actions.
- Improve response to underground storage tank (UST) releases, and maintain federal approval of the state's UST program, as required by Chapter 70A.355 RCW.
- Strengthen environmental justice principles when prioritizing and cleaning up contaminated sites.
- Advance public participation and tribal engagement.
- Make the rule easier to use and understand.

Ecology believes the proposed amendments are necessary to achieve the statutory goals and objectives of MTCA more effectively.

Statutory authority for adoption:

Chapter 70A.305 RCW, Model Toxics Control Act.
Chapter 70A.355 RCW, Underground Storage Tanks.

Statute being implemented:

Chapter 70A.305 RCW, Model Toxics Control Act.
Chapter 70A.355 RCW, Underground Storage Tanks.

Is rule necessary because of a:

Federal Law? Yes No

Federal Court Decision? Yes No

State Court Decision? Yes No

If yes, CITATION: The rulemaking is necessary in part to maintain federal approval of the state's underground storage tank regulatory program, which is required by Chapter 70A.355 RCW. The federal requirements for state program approval are specified in 40 C.F.R. Parts 280 and 281.

Agency comments or recommendations, if any, as to statutory language, implementation, enforcement, and fiscal matters: N/A

Type of proponent: Private Public Governmental
Name of proponent: (person or organization) Department of Ecology

Name of agency personnel responsible for:

	Name	Office Location	Phone
Drafting:	Michael Feldcamp	Lacey, WA	360-791-9390
Implementation:	Kris Grinnell & Sarah Wollwage	Lacey, WA	360-870-8459 360-481-9101
Enforcement:	Barry Rogowski	Lacey, WA	360-485-3738

Is a school district fiscal impact statement required under [RCW 28A.305.135](#)? Yes No

If yes, insert statement here:

The public may obtain a copy of the school district fiscal impact statement by contacting:

Name:
Address:
Phone:
Fax:
TTY:
Email:
Other:

Is a cost-benefit analysis required under [RCW 34.05.328](#)?

Yes: A preliminary cost-benefit analysis may be obtained by contacting:

Name: Clint Stanovsky
Address: Department of Ecology
PO Box 47600
Olympia, WA 98504-7600
Phone: 360-742-9703
Fax: N/A
TTY: People with speech disability may call 877-833-6341. People with impaired hearing may call Washington Relay Service at 711.
Email: MTCARule@ecy.wa.gov
Other:

No: Please explain:

Regulatory Fairness Act and Small Business Economic Impact Statement
Note: The [Governor's Office for Regulatory Innovation and Assistance \(ORIA\)](#) provides support in completing this part.

(1) Identification of exemptions:
This rule proposal, or portions of the proposal, **may be exempt** from requirements of the Regulatory Fairness Act (see [chapter 19.85 RCW](#)). For additional information on exemptions, consult the [exemption guide published by ORIA](#). Please check the box for any applicable exemption(s):

This rule proposal, or portions of the proposal, is exempt under [RCW 19.85.061](#) because this rule making is being adopted solely to conform and/or comply with federal statute or regulations. Please cite the specific federal statute or regulation this rule is being adopted to conform or comply with, and describe the consequences to the state if the rule is not adopted.
Citation and description:

This rule proposal, or portions of the proposal, is exempt because the agency has completed the pilot rule process defined by [RCW 34.05.313](#) before filing the notice of this proposed rule.

This rule proposal, or portions of the proposal, is exempt under the provisions of [RCW 15.65.570\(2\)](#) because it was adopted by a referendum.

This rule proposal, or portions of the proposal, is exempt under [RCW 19.85.025\(3\)](#). Check all that apply:

- | | |
|--|--|
| <input checked="" type="checkbox"/> RCW 34.05.310 (4)(b)
(Internal government operations) | <input checked="" type="checkbox"/> RCW 34.05.310 (4)(e)
(Dictated by statute) |
| <input type="checkbox"/> RCW 34.05.310 (4)(c)
(Incorporation by reference) | <input type="checkbox"/> RCW 34.05.310 (4)(f)
(Set or adjust fees) |
| <input checked="" type="checkbox"/> RCW 34.05.310 (4)(d)
(Correct or clarify language) | <input type="checkbox"/> RCW 34.05.310 (4)(g)
((i) Relating to agency hearings; or (ii) process requirements for applying to an agency for a license or permit) |

This rule proposal, or portions of the proposal, is exempt under [RCW 19.85.025\(4\)](#) (does not affect small businesses).

This rule proposal, or portions of the proposal, is exempt under RCW _____.

Explanation of how the above exemption(s) applies to the proposed rule:

(2) Scope of exemptions: *Check one.*

The rule proposal is fully exempt (*skip section 3*). Exemptions identified above apply to all portions of the rule proposal.

The rule proposal is partially exempt (*complete section 3*). The exemptions identified above apply to portions of the rule proposal, but less than the entire rule proposal. Provide details here (consider using [this template from ORIA](#)): Ecology baselines are typically complex, consisting of multiple requirements fully or partially specified by existing rules, statutes, or federal laws. Where the proposed rule differs from this baseline of existing requirements, it is typically subject to (i.e., not exempt from) analysis required under the Regulatory Fairness Act (RFA; Chapter 19.85 RCW) based on meeting criteria referenced in RCW 19.85.025(3) as defined by the Administrative Procedure Act in RCW 34.05.310. The Small Business Economic Impact Statement (SBEIS) below includes a summary of the baseline for this rulemaking, and whether or how the proposed rule differs from the baseline. We identify relevant exemptions (if any) and statutory requirements for each set of requirements.

The rule proposal is not exempt (*complete section 3*). No exemptions were identified above.

(3) Small business economic impact statement: *Complete this section if any portion is not exempt.*

If any portion of the proposed rule is **not exempt**, does it impose more-than-minor costs (as defined by RCW 19.85.020(2)) on businesses?

No Briefly summarize the agency's minor cost analysis and how the agency determined the proposed rule did not impose more-than-minor costs. _____

Yes Calculations show the rule proposal likely imposes more-than-minor cost to businesses and a small business economic impact statement is required. Insert the required small business economic impact statement here:

This Small Business Economic Impact Statement (SBEIS) presents the:

- Compliance requirements of the proposed rule.
- Results of the analysis of relative compliance cost burden.
- Consideration of lost sales or revenue.
- Cost-mitigating action taken by Ecology, if required.
- Small business and local government consultation.
- Industries likely impacted by the proposed rule.
- Expected net impact on jobs statewide.

A small business is defined by the Regulatory Fairness Act (chapter 19.85 RCW) as having 50 or fewer employees. Estimated costs are determined as compared to the existing regulatory environment—the regulations in the absence of the rule. The SBEIS only considers costs to “businesses in an industry” in Washington State. This means that impacts, for this document, are not evaluated for government agencies.

The existing regulatory environment is called the “baseline” in this document. It includes only existing laws and rules at federal and state levels.

This information is excerpted from Ecology's complete set of regulatory analyses for this rulemaking. For complete discussion of the likely costs, benefits, minimum compliance burden, and relative burden on small businesses, see the associated Regulatory Analyses document (**Ecology publication no. 23-09-066, February 2023**). **We have retained section headings, table numbers, and cross-references for easier reference within the document.**

COMPLIANCE REQUIREMENTS OF THE PROPOSED RULE, INCLUDING PROFESSIONAL SERVICES

The baseline for our analyses generally consists of existing rules and laws, and their requirements. This is what allows us to make a consistent comparison between the state of the world with and without the proposed rule amendments.

For this rulemaking, the baseline includes:

- Chapter 70A.305 RCW, Hazardous Waste Cleanup – Model Toxics Control Act
- Chapter 173-340 WAC, Model Toxics Control Act – Cleanup (the existing rule).

- Chapter 70A.355 RCW, Underground Storage Tanks
- Chapter 173-360A WAC, Underground Storage Tank Regulations
- Executive Order 21-02, Archeological and Cultural Resources
- Other cited and relevant regulations.

The proposed rule amendments include changes that would impact only internal Ecology operations (exempt from analysis under RCW 34.05.328(5)(b)(ii) and therefore also RCW 34.05.310(4)(b)), or would not materially impact rule requirements:

- Amending internal procedures (procedures internal to Ecology). Including, but not limited to:
 - Initial investigations.
 - Site hazard assessment and ranking.
 - Site listing.
 - Program planning and performance assessment.
 - Public notification and participation.
- Clarifying, correcting, and restructuring the rule, with no material impact.

The proposed rule amendments include the following changes that potentially impact external parties (not just Ecology):

- Adding new definitions to support new requirements.
- Expanding release reporting exemptions.
- Updating release reporting timelines.
- Emphasizing consideration of vulnerable populations, overburdened communities, and Tribes, including documentation requirements.
- Adding documentation of appropriate management of waste generated during investigation to the Remedial Investigation Report.
- Emphasizing consideration of climate change impacts.
- Establishing a stepwise procedure for the Disproportionate Cost Analysis (DCA), and clarifying how public concerns and tribal interests are considered in the DCA.
- Adding documentation requirements in the Feasibility Study report.
- Updating UST site characterization requirements.
- Updating UST free product removal deadline and reporting.
- Modifying demonstrations and documentation of groundwater and vapor intrusion threats in UST interim actions.
- Requiring periodic updates for UST reporting.
- Expanding cultural resource protection requirements.
- Adding a requirement to report separate independent investigations of a site.
- Aligning the rule with current guidance and practice.

2.3.1 Amending internal procedures (procedures internal to Ecology)

Baseline

Many of the baseline rule requirements affect only Ecology internal procedures. These procedures may or may not have indirect impacts on entities outside of Ecology.

Proposed

The proposed rule amendments would clarify or update internal procedures that are not likely to have impacts external to Ecology, including but not limited to:

- Updating methods of informing the public about remedial actions at sites.
- Publication of information on the Ecology website.
- Investigations of sites, including timelines, and next steps.
- Consideration of vulnerable populations or overburdened communities during initial investigations and strategic planning.
- Deletion of obsolete internal procedures.

The proposed rule amendments would also change internal procedures that may result in indirect impacts (costs and/or benefits) outside of Ecology. These include, but are not limited to:

- Site hazard assessment and ranking
- Site listing and delisting procedures
- Program planning and performance assessment
- Public notification and participation

In many cases, these proposed amendments overlap with baseline or amended requirements reflected in current guidance and practice, or with clarifications of the rule that have no material impact.

Expected impact

Where proposed amendments to internal operations are unlikely to result in impacts external to Ecology, we do not expect them to result in costs or benefits beyond internal efficiencies or clarity. Elements of the proposed rule that affect only internal government operations are exempt from this analysis under RCW 34.05.328(5)(b)(ii) (“Rules relating only to internal governmental operations that are not subject to violation by a nongovernment party”).

2.3.2 Clarifying, correcting, and restructuring the rule, with no material impact

Baseline

Through years of implementation of the baseline rule, and through extensive engagement with stakeholders, Ecology identified elements of the rule language that would benefit from clarification.

Proposed

The proposed rule amendments would significantly restructure the rule and clarify language throughout. These changes are not intended to change rule requirements.

Expected impact

We do not expect costs or benefits from these proposed rule amendments beyond clarity that facilitates understanding of the rule requirements and, therefore, possible greater efficiency for regulated parties seeking to understand and comply with MTCA requirements.

2.3.3 Adding new definitions supporting new requirements

Baseline

The baseline rule includes multiple definitions necessary to implement it.

Proposed

The proposed rule would add new or significantly revised definitions, to support proposed new requirements.

Expected impact

Definitions do not, in and of themselves, have impacts. Their associated costs or benefits result from how each definition functions or is applied in the rule. Any costs and benefits of the proposed rule amendments that involve these new definitions are discussed in their corresponding sections, below.

2.3.4 Expanding release reporting exemptions

Baseline

The baseline rule allows exemptions from reporting releases if the release has been previously reported to:

- Ecology to fulfill a reporting requirement in this chapter or in another Ecology law or rule, including chapter 173-360A WAC.
- The United States Environmental Protection Agency under CERCLA, Section 103(c) (42 U.S.C. Sec. 9603(c)).

It also includes an exemption for application of pesticides and fertilizers for their intended purposes and according to label instructions.

Proposed

The proposed rule amendments would add an exemption for releases previously reported to:

- The state division of emergency management under RCW 90.56.280.
- PLIA under WAC 374-45-030 for a release from a heating oil tank.

Expected impact

We expect this proposed rule amendment to result in benefits of avoided reporting costs for releases previously reported to the division of emergency management or PLIA.

2.3.5 Updating release reporting timelines

Baseline

Under the baseline, releases must be reported within 90 days unless some type of remedial action is completed within that time. When this is the case, both the release and the action must be reported within 90 days of the remedial action being completed.

Proposed

The proposed rule amendments would require all releases to be reported within 90 days, regardless of whether remedial action has occurred.

Expected impact

We expect this proposed rule amendment to result in minor costs associated with the timing of reporting releases for some sites. At sites that complete a remedial action within 90 days of release, the release would need to be reported separately within 90 days of the release, rather than later once the remedial action has been completed. This amendment would result in benefits of comprehensive and timely knowledge of releases, regardless of whether remedial action has been taken, and support uniformity of site assessment and ranking under the newly proposed process.

2.3.6 Emphasizing consideration of vulnerable populations, overburdened communities, and Tribes, including documentation requirements

Baseline

Under the baseline, including its interpretation in guidance, site managers must consider impacts of remedial options on vulnerable populations, overburdened communities, and Tribes. While this is not explicitly stated in the law and rules, the statute declares that “each person has a fundamental and inalienable right to a healthful environment.” Accordingly, baseline requirements include protecting public health and accounting for public concerns. The current understanding is that this includes vulnerable populations, overburdened communities, and Tribes, because they are part of the public. However, Ecology is unable to track how consistently these requirements are applied due to lack of clarity and explicit requirements.

Proposed

The proposed rule amendments would require explicit consideration of vulnerable populations, overburdened communities, and Tribes, and would add requirements to document this consideration in the Remedial Investigation and the Feasibility Study.

Expected impact

We expect these proposed rule amendments to result in costs because of the extra time needed to document the concerns and impacts on these specific populations. We also expect to see benefits from this documentation, including increased public engagement, greater transparency, and improved environmental justice.

2.3.7 Adding documentation of appropriate management of waste generated during investigation to the Remedial Investigation Report

Baseline

Under the baseline waste generated during remedial investigation must be handled appropriately. While the current rule does not explicitly require documentation of waste management, Ecology site managers routinely require such documentation under the rule when conducting, supervising, or evaluating investigations and cleanups of contaminated sites. The current rule allows Ecology to require additional information as part of a remedial investigation.

Proposed

The proposed rule amendments would add a requirement to include documentation of appropriate management of hazardous wastes generated during remedial investigation. This documentation would be included in the Remedial Investigation Report.

Expected impact

We do not expect this proposed rule amendment to result in significant new costs or benefits arising from additional documentation because this information is routinely required in practice by Ecology site managers as part of additional Remedial Investigation information requested, which is allowed under the current rule.

2.3.8 Emphasizing consideration of climate change impacts

Baseline

Under the baseline, consideration of resilience to likely climate change impacts during the feasibility study are not explicit and clear. Baseline requirements do exist, however, for consideration of the protectiveness and the long-run effectiveness of a cleanup action, which would include accounting for climate change risks to the action. In addition, Ecology provides guidance for increasing the protectiveness and resilience of cleanup actions to high-likelihood impacts of climate change under current law.

Proposed

The proposed rule amendments would make resilience to high-likelihood impacts of climate an explicit general requirement for cleanup actions, and include such resilience in the assessment of long-term effectiveness during the Disproportionate Cost Analysis of cleanup action alternatives.

Expected impact

We would expect this proposed rule amendment to result in costs and benefits of documenting and assuring consideration of climate change resilience during the development and selection of cleanup action alternatives in the feasibility study, to the extent that is not already done. Under the baseline, however, we expect that likely climate change impacts are already a consideration in determining the protectiveness and long-run effectiveness of remedial actions, so we do not expect that this proposed amendment will result in significant additional costs, but rather an emphasis and focus to comprehensively verify this work is being done.

2.3.9 Establishing stepwise procedure for Disproportionate Cost Analysis (DCA), and clarifying how public concerns and Tribal interests are considered in DCA

Baseline

Under the baseline, cleanup actions are required to meet certain requirements, including but not limited to:

- Protecting human health and the environment.
- Complying with cleanup standards.
- Complying with applicable state and federal laws.
- Providing for compliance monitoring.
- Using permanent solutions to the maximum extent practicable.
- Providing for a reasonable restoration time frame.
- Considering public concerns.
- Meeting additional requirements for groundwater cleanup and institutional controls.

The baseline also sets out a procedure and evaluation criteria for the Disproportionate Cost Analysis (DCA) of any non-permanent cleanup action alternatives to determine which of the alternatives is permanent to the maximum extent practicable. The DCA process includes:

- The test: “Costs are disproportionate to benefits if the incremental costs of the alternative over that of a lower cost alternative exceed the incremental degree of benefits achieved by the alternative over that of the other lower cost alternative.”
- Evaluation criteria, including:
 - Protectiveness.
 - Permanence.
 - Cost.
 - Long-term effectiveness.
 - Management of short-term risks.
 - Technical and administrative implementability.
 - Consideration of public concerns.

Proposed

The proposed rule amendments would largely clarify baseline requirements, but would add an explicit, stepwise procedure for Disproportionate Cost Analysis (each with relevant subsections and clarification):

- **Step 1:** Determine the benefits and costs of each cleanup action alternative using the criteria in (d) of this subsection.

- **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.
- **Step 3:** Identify the initial baseline alternative for use in the disproportionate cost analysis in Step 4.
- **Step 4:** Conduct a disproportionate cost analysis of the ranked list of cleanup action alternatives identified in Step 2, based on criteria. Use the cleanup action alternative identified in Step 3 as the initial baseline for the analysis.

The proposed rule amendments also replace the separate “public concerns” DCA criterion with the requirement to consider public concerns and tribal interests when determining and when weighting each of the five remaining benefit criteria (protectiveness, permanence, long-term effectiveness, management of short-term risks, and implementability).

Expected impact

We expect the proposed rule amendments to result in benefits of clarity and potential reductions in time cost performing the Disproportionate Cost Analysis and/or needing technical support and additional revisions. We also expect the amendments to assure that public concerns and tribal interests are considered when determining and weighting each of the DCA criteria.

2.3.10 Adding documentation requirements in the Feasibility Study report

Baseline

The baseline rule sets out expectations for cleanup action alternatives.

Proposed

The proposed rule amendments would retain the baseline expectations and would add requirements to the Feasibility Study, to document:

- When a preferred cleanup action does not conform to the expectations.
- Remedial Investigation results, if the two reports are not combined.

Expected impact

We expect the proposed rule amendments to result in costs associated with additional documentation, as well as benefits of:

- Identifying nonconformance and determining whether it is appropriate for the site in question. The inability to adequately explain any non-conformance could result in increased benefits and costs of an alternative that does meet the expectations.
- Consistent and accessible documentation of Remedial Investigation results in the Feasibility Study report.

2.3.11 Amending UST site characterization requirements

Baseline

The baseline rule sets requirements for initial UST site characterization. These include identification of hazardous substances released, the source of the release, and impacted media. The baseline specifies minimum requirements for sampling and analysis, and investigation of groundwater. UST system owners have 20 days from confirmation of a release to perform the initial site characterization tasks

Proposed

The proposed rule amendments would extend the deadline for initial UST site characterization to 30 days and add investigation of the potential for vapors from contaminated soil or groundwater to enter a building, utility vault, or other structure.

Expected impact

We expect these proposed rule amendments to result in benefits of ten additional days to perform site characterization, as well as costs and benefits associated with characterizing the potential for vapor intrusion. The latter would include costs of additional time and effort for site characterization, and benefits of reduction or prevention of vapor intrusion into structures.

2.3.12 Updating UST free product removal deadline and reporting

Baseline

The baseline specifies minimum requirements related to removal of free product from an UST site as soon as possible after discovery. These include free product removal to the maximum extent practicable, proper treatment or disposal, and monitoring.

Proposed

The proposed rule amendments would set a deadline of 30 days after discovery to start removal of free product. They would also add a requirement to submit a quarterly progress report, describing the results of free product removal and monitoring.

Expected impact

We expect these proposed rule amendments to result in costs and benefits associated with earlier removal of free product, at sites that currently take longer than 30 days. They would also result in costs associated with writing quarterly progress reports, and benefits of:

- Comprehensive knowledge of the current status of free product removal.
- Monitoring that would also facilitate ongoing assistance in effective free product removal that is protective of human health and the environment.
- An enforceable requirement to monitor assuring that recovery continues until the source is removed.

2.3.13 Modifying demonstrations and documentation of groundwater and vapor intrusion threats in UST interim actions

Baseline

Under the baseline, UST site owners must submit Interim Action Reports within 90 days of release confirmation. Reports must include the results of the initial site characterization, site characteristics, diagrams, free product removal, remedial actions and results, and planned actions.

Proposed

The proposed rule amendments would add the following to Interim Action Report requirements:

- Demonstration that the release does not threaten groundwater, if groundwater has not been tested.

- Demonstration that no potential for vapor intrusion exists, if none has been identified.

Expected impact

We expect these proposed rule amendments to result in costs associated with developing the demonstrations and documenting them in Interim Action Reports for UST sites. We also expect them to generate benefits of comprehensive knowledge of initial site characterization regarding groundwater and vapor intrusion, which would also facilitate ongoing assistance in effective cleanup that is protective of human health and the environment.

2.3.14 Requiring periodic updates for UST reporting

Baseline

Under the baseline, UST site owners are not required to update the Interim Action Report. However, they are required under the baseline to submit to Ecology reports of independent interim actions or cleanup actions. See WAC 173-340-450(8) and 173-340-515(4) in the current rule.

Proposed

The proposed rule amendments would add a requirement to update Interim Action Reports at least every three years (or more frequently as directed by Ecology). The following would exempt a site from this requirement:

- The site is removed from the contaminated sites list.
- Ecology is conducting or supervising remedial action at the site.
- Ecology or PLIA is providing technical assistance for independent remedial actions at the site.

Expected impact

We expect this proposed rule amendment to result in costs of additional effort to update Interim Action Reports every three years, as well as benefits associated with up-to-date knowledge of UST site and cleanup attributes and site hazard assessment, which would also facilitate ongoing assistance in effective cleanup that is protective of human health and the environment. The additional effort is mitigated by the fact that independent interim actions and cleanup actions must already be reported under baseline and that separate independent investigations must be reported under the proposed rule amendments, which is analyzed separately in Section 2.3.16. Those reports can be summarized and referenced.

2.3.15 Expanding cultural resource protection requirements

Baseline

Across multiple state and federal regulations, the baseline sets requirements intended to avoid, minimize, or mitigate impacts of remedial actions on:

- Archeological and historic archeological sites.
- Historic buildings and structures.
- Traditional cultural places.
- Sacred sites.
- Other cultural resources.

These requirements apply to remedial actions conducted by Ecology, and remedial actions funded by Ecology.

Under the baseline, for Ecology-funded cleanups, Ecology is required to consult with the Department of Archaeology and Historic Preservation (DAHP) and with Tribes 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.](#)). Based on these consultations, cultural resource work plans sometimes required to conduct remedial actions. Under the baseline, inadvertent discovery plans are not explicitly required for any cleanups.

Executive Order 21-02, Archeological and Cultural Resources, directs all Executive Branch and Small Cabinet agencies in their planning and actions related to cultural resources, including, but not limited to:

- Consult with DAHP and affected tribes on the potential effects of projects on cultural resources proposed in state-funded construction or acquisition projects that will not undergo Section 106 review under the National Historic Preservation Act of 1966.
- Initiate consultation with DAHP and affected tribes early in the project planning process, and complete it before the expenditure of any state funds for construction, demolition, or acquisition.
- Take all reasonable action to avoid, minimize, or mitigate adverse effects to archeological and historic archaeological sites.
- Ensure, and provide records to demonstrate to DAHP to demonstrate, that any delegated non-state recipient of state funds completes an adequate consultation process.
- Consult with DAHP and the affected tribes when notified that an archaeological or historic archaeological site, historic building/structure, or traditional/sacred place study is needed before a project may proceed. The purpose of consultation is to seek agreement on studies that must be completed before the expenditure of any state funds for construction or purchase.
- Consult with DAHP or the affected tribes on avoidance strategies and harm minimization, if DAHP or the affected tribes identify a known archaeological or historic archaeological site, historic building/structure, cultural, or sacred place that may be impacted by either direct or indirect effects of an activity.
- Develop mitigation strategies for impacts to historic buildings/structures, and develop mitigation strategies if avoidance cannot be attained for all other cultural resources including archaeological and historic archaeological sites or traditional and sacred places.
- Identify mitigation strategies through consultation with DAHP and the affected tribes.

Proposed

The proposed rule amendments would add a section specifying all requirements and other applicable regulations that must be met to protect cultural resources. The amendments would expand applicability of cultural resource consultation and inadvertent discovery planning as follows:

- For Ecology-conducted but not funded cleanups, Ecology would be required to conduct consultations with DAHP and tribes. Ecology could recover costs from potentially liable persons.
- Based on those consultations, Ecology may require the development and implementation of a cultural resources work plan (e.g., survey or monitoring plan) to identify cultural resources and to avoid, minimize, or mitigate impacts to them. This work plan would be implemented and funded by potentially liable persons.
- For all Ecology-conducted, required, or funded cleanups, an inadvertent discovery plan is required that is readily available during all remedial actions and would be updated as needed.

Expected impact

We expect these proposed rule amendments to result in additional costs to liable parties, including:

- Consultation costs recovered by Ecology.
- Development and implementation of cultural resources work plans, if required.
- Development of inadvertent discovery plans.

These proposed rule amendments would also generate benefits of more comprehensive engagement, planning, and documentation that would reduce likelihood of impacts to cultural resources.

2.3.16 Adding a requirement to report separate independent investigations of a site

Baseline

Under the baseline, independent cleanups of contaminated sites must include an investigation of the site meeting the requirements in the rule. Results of such investigations must be reported to Ecology when reporting interim actions or cleanup actions. Results of investigations do not need to be reported separately to Ecology when they occur.

Proposed

Under the proposed rule amendments, persons conducting independent investigations of contaminated sites would be required to submit a separate site investigation report to Ecology if further remedial action does not occur at the site within 90 days of completion of the investigation.

Expected impact

For sites at which further remedial action does not occur within 90 days of completion of independent investigations, this proposed rule amendment would result in marginal costs associated with developing a separate site investigation report. Earlier reporting of site investigations would enable Ecology to better assess and rank the hazards posed by a site to the public and the environment, and to make more informed site prioritization and management decisions. It would also enable the public to better understand the hazards posed by the site to them.

2.3.17 Aligning the rule with current guidance and practice

Baseline

Multiple elements of the baseline necessitate interpretation via guidance, policies, procedures, and implementation memoranda. These interpretations inform current practice. Section 2.2.1, above, summarizes the policy, procedure, guidance, and memorandum documents that inform current practice.

Proposed

The proposed rule amendments would add many elements of current practice to the rule, including but not limited to sections related to:

- Coordinating with agencies.
- Conceptual site models.
- Collecting additional information if needed for an initial investigation determination.
- Processes for conducting remedial investigation and feasibility study.
- Groundwater investigations, such as groundwater interface with surface water and the geologic and hydrogeologic impacts on cleanup action alternative implementation.
- The impact of future site uses on cleanup actions.

In many cases, these proposed amendments overlap with baseline or amended requirements affecting internal Ecology operations, or with clarifications of the rule that have no material impact.

Expected impact

Where current practice is the only reasonable interpretation of existing baseline, we do not expect proposed amendments that align with current practice to result in costs or benefits beyond clarity.

Where current practice is unclear or undocumented, or multiple possible interpretations or implementations of the baseline are plausible, we discuss the baseline, proposed rule amendments, and expected impacts in relevant sections, above:

- 2.3.6 Emphasizing consideration of populations, overburdened communities, and Tribes explicit, including documentation requirements.
- 2.3.7 Adding documentation of appropriate management of waste generated during investigation to the Remedial Investigation Report.
- 2.3.8 Emphasizing consideration of climate change impacts.

- 2.3.9 Establishing stepwise procedure for Disproportionate Cost Analysis (DCA) and clarifying how public concerns and Tribal interests are considered in DCA.

COSTS OF COMPLIANCE: EQUIPMENT, SUPPLIES, ADMINISTRATIVE COSTS, OTHER

Compliance with the proposed rule, compared to the baseline, is not likely to impose these categories of additional cost. Where applicable, Ecology estimates administrative costs (“overhead”) as part of the cost of labor and professional services.

COSTS OF COMPLIANCE: LABOR

- Emphasizing consideration of vulnerable populations, overburdened communities, and Tribes, including documentation requirements:
 - Annual costs: \$0.3 million – \$1.4 million.
 - 20-year present value costs: \$5.7 million – \$26.6 million.
- Adding documentation requirements in the Feasibility Study report:
 - Annual costs: \$42,000 – \$84,000.
 - 20-year present value costs: \$0.8 million – \$1.5 million.
- Amending UST free product removal reporting requirements:
 - Annual costs: \$16,800 – \$33,600.
 - 20-year present value costs: \$0.3 million – \$0.6 million.
- Modifying demonstrations and documentation of groundwater and vapor intrusion threats in UST interim actions:
 - Annual costs: \$0.2 million – \$0.6 million.
 - 20-year present value costs: \$4.2 million – \$10.6 million.
- Requiring periodic updates for UST reporting:
 - Annual costs: \$1.2 million – \$6.0 million.
 - 20-year present value costs: \$22.3 million – \$111.3 million.
- Expanding cultural resource protection requirements:
 - Annual costs: \$0.1 million – \$0.3 million.
 - 20-year present value costs: \$2.1 million – \$4.7 million.
- Adding a requirement to report separate independent investigations of a site:
 - Annual costs: \$57,000 – \$113,000.
 - 20-year present value costs: \$1.0 million – \$2.1 million.

COSTS OF COMPLIANCE: PROFESSIONAL SERVICES

Compliance with the proposed rule, compared to the baseline, is not likely to impose additional costs of professional services that are not reflected in the additional labor costs above. This labor may be professionally contracted or internal.

COMPARISON OF COMPLIANCE COST FOR SMALL VERSUS LARGE BUSINESSES

We calculated the estimated per-business costs to comply with the proposed rule amendments, based on the costs estimated in Chapter 3 of this document. In this section, we estimate compliance costs per employee.

The average affected small business likely to be covered by the proposed rule amendments employs approximately 10 people. The largest ten percent of affected businesses employ an average of 107,743 people. We note that due to the nature of site contamination, there is not likely to be a universal correlation between the magnitude of costs and the size of businesses – although initial contamination may be more likely at sites occupied by industrial businesses, sites may ultimately be discovered and remediated by other parties. For the comparison in this section, we made the simplifying assumption that low estimated costs would be incurred by small businesses, while high estimated costs would be incurred by the largest businesses.

Identifying the total cost per business for this rulemaking is complicated by the fact that a site might incur only a subset of the costs identified in Chapter 3, depending on the site’s characteristics and need for additional effort in compliance. Rather than assuming the subset of costs incurred by a site, we calculated the estimated costs per employee for each type of cost (and underlying number of sites). The table below summarizes these costs and the cost per employee to the largest businesses as a percentage of the costs per employee for small businesses.

Table 1: Compliance costs per employee

<i>Cost Category</i>	Small Businesses	Largest 10%	Ratio of Costs Largest to Small
<i>Reporting exemptions</i>	(\$2.59)	(\$0.00)	0.019%
<i>Consideration of populations – Feasibility study</i>	\$1,680.00	\$0.06	0.003%
<i>Consideration of populations – Cleanup action plan</i>	\$840.00	\$0.04	0.005%
<i>Consideration of populations – Equitable participation</i>	\$4,200.00	\$0.02	0.000%
<i>Stepwise DCA</i>	(\$840.00)	(\$0.16)	0.019%
<i>Feasibility study</i>	\$840.00	\$0.04	0.005%
<i>UST – Free product</i>	\$336.00	\$0.06	0.019%
<i>UST – Groundwater</i>	\$420.00	\$0.08	0.019%
<i>UST – Vapor intrusion</i>	\$105.00	\$0.04	0.037%

<i>UST – Periodic updated</i>	\$168.00	\$0.08	0.046%
<i>Cultural resource protection – Engagement plan</i>	\$63.00	\$0.02	0.031%
<i>Cultural resource protection – Work plan</i>	\$210.00	\$0.07	0.032%
<i>Cultural resource protection – Inadvertent discovery plan</i>	\$420.00	\$0.08	0.019%
<i>Separate remedial investigation report</i>	\$210.00	\$0.04	0.019%

We conclude that the proposed rule amendments are likely to have disproportionate impacts on small businesses, and therefore Ecology must include elements in the proposed rule amendments to mitigate this disproportion, as far as is legal and feasible.

CONSIDERATION OF LOST SALES OR REVENUE

Businesses that would incur costs could experience reduced sales or revenues if the proposed rule amendments significantly affect the prices of the goods they sell. The degree to which this could happen is strongly related to each business’s production and pricing model (whether additional lump-sum costs would significantly affect marginal costs), as well as the specific attributes of the markets in which they sell goods, including the degree of influence each firm has on market prices, as well as the relative responsiveness of market demand to price changes.

We used the REMI E3+ model for Washington State to estimate the impact of the proposed rule amendments on directly affected markets, accounting for dynamic adjustments throughout the economy. The model accounts for: inter-industry impacts; price, wage, and population changes; and dynamic adjustment of all economic variables over time.

As inputs into the model and based on how costs were estimated in Chapter 3, we allocated costs across industries by the proportion of all identified industries (see Section 7.6) represented by each industry at the 4-digit NAICS code level, or at the lowest aggregation level in the model.

We found that the proposed rule amendments would not significantly affect price levels and would negatively impact output in the state by the amounts below. For context, we note that baseline state output is forecast to be over \$1.2 trillion by 2027, of which the highest modeled impacts would be less than one-five-hundredth of one percent.

Table 2: Modeled impacts to output (billions of \$)

<i>Cost Impact</i>	2023	2030	2040
<i>Low</i>	-\$0.004	-\$0.007	-\$0.007
<i>High</i>	-\$0.016	-\$0.029	-\$0.032

Following parallel trajectories, modeled results indicate the highest impacts in the following industries, with total output losses across each industry of up to \$2 million:

- Construction.
- Real estate.
- Retail trade.

MITIGATION OF DISPROPORTIONATE IMPACT

We considered all of the options for cost mitigation required by the Regulatory Fairness Act, the goals and objectives of the authorizing statutes (see Chapter 6), and the scope of this rulemaking. We limited compliance cost-reduction methods to those that:

- Are legal and feasible.
- Meet the goals and objectives of the authorizing statute.
- Are within the scope of this rulemaking.

The proposed rule amendments:

- Include reductions in substantive regulatory requirements, in terms of restructuring public involvement requirements (such as eliminating public comment processes for independent cleanups of less complex sites) and streamlining processes to reduce delays and rework. Other requirements are necessary to meet the goals and objectives of the authorizing statute (see Chapter 6), such as explicit requirements for engagement and consideration of the public, Tribal interests, vulnerable populations, and overburdened communities. Other significant MTCA regulatory requirements, such as cleanup levels, are outside the scope of this rulemaking.
- Include reductions in reporting requirements, in terms of expanding reporting exemptions. Other reporting requirements are necessary for Ecology to implement the rule and meet the objectives of the statute for protection of human health and the environment.
- Do not address inspections, which are outside the scope of this rulemaking.
- Extend the timeframe for UST release sites to begin free product removal.
- Do not address fines, which are outside the scope of this rulemaking.

Finally, multiple proposed rule amendments will serve to reduce errors, need for additional interactions, and rework that may result from lack of clarity in baseline requirements.

SMALL BUSINESS AND LOCAL GOVERNMENT CONSULTATION

We involved small businesses and local governments in its development of the proposed rule amendments, using:

- The MTCA Email distribution list: Emails sent to over 400 subscribers regarding the rulemaking, between December 2018 and November 2022.
- Stakeholder and Tribal Advisory Group (STAG) meetings: A total of 11 meetings including representation from:

- Eight consulting engineers and attorneys whose practices represent a variety businesses involved in MTCA cleanups, including both large and small businesses.
- 9 county, municipal, Tribal, and local governments.
- 5 nonprofit organizations representing community and environmental concerns.
- Yakama Nation and Colville Tribes.
- Two STAG webinars.
- Five external presentations for representatives and members of:
 - Local Ports.
 - Attorneys working for small businesses.
 - Seattle Sierra Club.
 - Suquamish Tribe Cleanup team.
- Preproposal Statement of Inquiry (also known as the CR-101 form) notice sent to:
 - MTCA email list subscribers.
 - STAG members.
 - MTCA attorneys.

NAICS CODES OF INDUSTRIES IMPACTED BY THE PROPOSED RULE

NAICS	Description	NAICS	Description
1111	Oilseed and Grain Farming	3366	Ship and Boat Building
1113	Fruit and Tree Nut Farming	3369	Other Transportation Equipment Manufacturing
1114	Greenhouse, Nursery, and Floriculture Production	4231	Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers
1119	Other Crop Farming	42XX	Wholesale Trade
1121	Cattle Ranching and Farming	44XX	Retail Trade
2121	Coal Mining	4411	Automobile Dealers
2123	Nonmetallic Mineral Mining and Quarrying	4413	Automotive Parts, Accessories, and Tire Retailers
2211	Electric Power Generation, Transmission and Distribution	4441	Building Material and Supplies Dealers
2213	Water, Sewage and Other Systems	4442	Lawn and Garden Equipment and Supplies Retailers
23XX	Construction	4451	Grocery and Convenience Retailers
311X	Food Manufacturing	455X	General Merchandise Retailers
3114	Fruit and Vegetable Preserving and Specialty Food Manufacturing	4811	Scheduled Air Transportation
3117	Seafood Product Preparation and Packaging	4821	Rail Transportation
3118	Bakeries and Tortilla Manufacturing	4841	General Freight Trucking
3119	Other Food Manufacturing	4842	Specialized Freight Trucking
3121	Beverage Manufacturing	4851	Urban Transit Systems
3141	Textile Furnishings Mills	4854	School and Employee Bus Transportation
321X	Wood Product Manufacturing	4881	Support Activities for Air Transportation
3211	Sawmills and Wood Preservation	4884	Support Activities for Road Transportation
3212	Veneer, Plywood, and Engineered Wood Product Manufacturing	4931	Warehousing and Storage
3219	Other Wood Product Manufacturing	5133	Newspaper, Periodical, Book, and Directory Publishers
3241	Petroleum and Coal Products Manufacturing	5311	Lessors of Real Estate
3251	Basic Chemical Manufacturing	5312	Offices of Real Estate Agents and Brokers
3253	Pesticide, Fertilizer, and Other Agricultural Chemical Manufacturing	5321	Automotive Equipment Rental and Leasing
3273	Cement and Concrete Product Manufacturing	5617	Services to Buildings and Dwellings
3313	Alumina and Aluminum Production and Processing	5621	Waste Collection
3314	Nonferrous Metal (except Aluminum) Production and Processing	5622	Waste Treatment and Disposal
3315	Foundries	5629	Remediation and Other Waste Management Services
3327	Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing	6211	Offices of Physicians
3328	Coating, Engraving, Heat Treating, and Allied Activities	6221	General Medical and Surgical Hospitals

3331	Agriculture, Construction, and Mining Machinery Manufacturing	7121	Museums, Historical Sites, and Similar Institutions
3334	Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing	7139	Other Amusement and Recreation Industries
3359	Other Electrical Equipment and Component Manufacturing	7211	Traveler Accommodation
3361	Motor Vehicle Manufacturing	7223	Special Food Services
3363	Motor Vehicle Parts Manufacturing	8111	Automotive Repair and Maintenance
3364	Aerospace Product and Parts Manufacturing	8114	Personal and Household Goods Repair and Maintenance
		8123	Drycleaning and Laundry Services

IMPACT ON JOBS

We used the REMI E3+ model for Washington State to estimate the impact of the proposed rule amendments on jobs in the state, accounting for dynamic adjustments throughout the economy. See Section 7.3 for discussion of model inputs. The proposed rule amendments would result in transfers of money within and between industries, as compared to the baseline. The modeled impacts on employment are the result of multiple small increases and decreases in employment, prices, and other economic variables across all industries in the state. Overall, the highest modeled impacts to jobs were for 2030, with a total statewide loss of 35 to 152 FTE equivalents across all sectors of the state economy. Note that the likelihood of jobs impacts is not uniform over this range. Most MTCA sites are relatively simple, indicating that costs are likely to be at the lower end of estimated ranges, and thus jobs impacts are also likely to be toward the lower end of this range. The high end of the range would reflect the highest estimated costs being incurred at all affected sites.

The public may obtain a copy of the small business economic impact statement or the detailed cost calculations by contacting:

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Other:

Date: February 15, 2023	Signature: 
Name: Heather Bartlett	
Title: Deputy Director	