Small Business Economic Impact Analysis

Vessel Deconstruction General Permit

National Pollutant Discharge Elimination System (NPDES)

By

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For the

Water Quality Program

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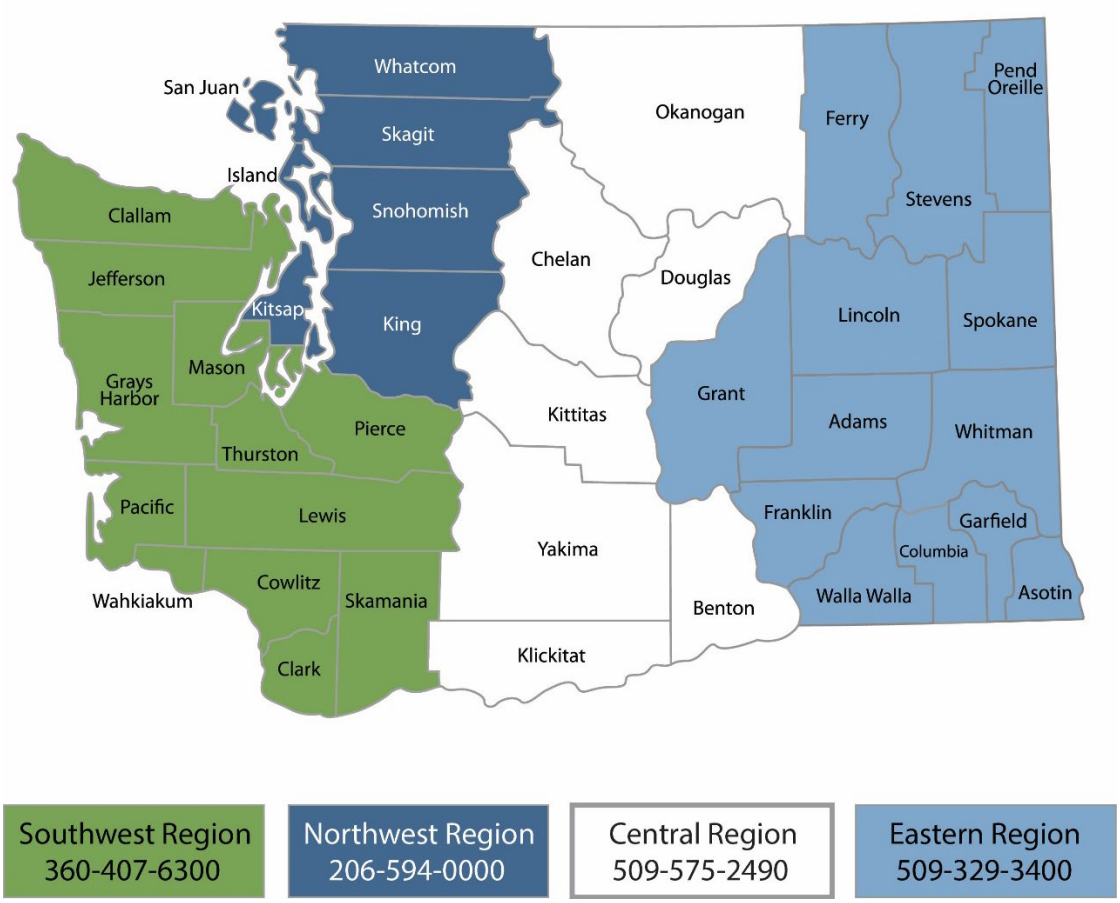

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Abbreviations and Acronyms

AKART	All Known, Available, and Reasonable Methods of Prevention, Control, and Treatment
BMP	Best Management Practice
CFR	Code of Federal Regulations
DMR	Discharge Monitoring Report
MSGP	Federal Multi-Sector General Permit
NAICS	North American Industry Classification System
NPDES	National Pollutant Discharge Elimination System
RCW	Revised Code of Washington
TMDL	Total Maximum Daily Load
WAC	Washington Administrative Code
WQ	Water Quality

Executive Summary

This Small Business Economic Impact Analysis (SBEIA) estimates the costs of complying with the Vessel Deconstruction General Permit ("permit"). It compares the costs of complying with the permit for small businesses to the costs of compliance for the largest 10 percent of businesses, to determine whether the permit disproportionately impacts small businesses. This analysis is required by state rule in Washington Administrative Code (WAC) 173-226-120[2], which directs Ecology to determine if the permit imposes disproportionate burden on small businesses, and if it does, to mitigate the disproportion to the extent that is legal and feasible.

The Vessel Deconstruction General Permit authorizes the discharge of stormwater and a limited number of non-stormwater discharges associated with deconstruction of floating vessels and vessels deconstructed while over water, on a floating drydock, on a barge, or in limited cases on land, and not associated with a facility that holds an existing NPDES permit for this work.

The following NAICS code groups are required to get permit coverage.

Table 1. Impacted NAICS Codes.

Impacted Industries' NAICS Codes	Industry Description
336611	Ship building and repairing
336612	Boat building
488390	Other support activities for water transportation

Costs associated with permit requirements include costs of complying with:

- Sampling and monitoring
- Sample analysis
- Visual inspections
- Record retention

Compliance costs are dependent on the size of the deconstruction project. Ecology estimated ranges of costs for most requirements–a low cost and a high cost. The low cost estimate is for small projects and the high cost estimate is for large projects. Some requirements have the same cost for small and large projects. Permittees face both costs that accrue weekly and costs that accrue annually. These costs depend on the size of deconstruction project.

[2] Chapter 173-226 WAC Waste Discharge General Permit Program
https://apps.leg.wa.gov/wac/default.aspx?cite=173-226

Table 2. Estimated Weekly Compliance Costs for Vessel Deconstruction Permit Holders

Project Size	Low Estimate	High Estimate
Small	$269	$368
Large	$537	$737

Table 3. Estimated Annual Compliance Costs for Vessel Deconstruction Permit Holders

Project Size	Low Estimate	High Estimate
Small	$64	$121
Large	$128	$185

When comparing the costs of compliance per employee for small businesses to the compliance cost per employee at the largest ten percent of businesses covered by the permit, Ecology found the following:

Table 4. Average Number of Employees, Small and Large Businesses by NAICS

Sector Descriptions	NAICS	Small Businesses	Large Businesses	Ratio
Ship Building and Repairing	336611	8.4	220.3	26.2
Boat Building and Repairing	336612	7.0	190.8	27.3
Water Transportation Services, Not Elsewhere Classified	488390	3.7	75.0	20.3

When comparing the average number of employees between large and small businesses, there is more than a 20 to 1 disparity. Even if we make the assumption that large businesses only do large projects and small businesses only do small projects (which is the most conservative assumption possible), the costs, while larger for larger projects, will not be 20 times greater. Therefore, the cost-per-employee ratios fall as business size rises. Ecology concluded, based on this result, that the general permit has a disproportionate impact on small businesses.

Given that the permit likely imposes disproportionate costs on small versus large businesses complying with it. In compliance with WAC 173-226-120, Ecology included elements in the general permit that reduce compliance costs, and attempted to reduce disproportionate costs. Further cost reductions, or reductions to disproportion, were not possible due to limitations of federal and state rules protecting the environment and regulating permittee behavior.

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Chapter 1: Introduction to the Small Business Economic Impact Analysis

This Small Business Economic Impact Analysis (SBEIA) estimates the costs of complying with the Vessel Deconstruction General Permit ("permit"). It compares the costs of complying with the permit for small businesses to the costs of compliance for the largest 10 percent of businesses, to determine whether the permit disproportionately impacts small businesses. This analysis is required by state rule in Washington Administrative Code (WAC) 173-226-120[3], which directs Ecology to determine if the permit imposes disproportionate burden on small businesses, and if it does, to mitigate the disproportion to the extent that is legal and feasible.

1.1 Scope

WAC 173-226-120 requires the SBEIA to include:

- A brief description of the compliance requirements of the general permit.
- The estimated costs of complying with the permit, based on existing data for businesses intended to be covered under the general permit, including:
    - The minimum technology based treatment requirements identified as necessary under WAC 173-226-070.
    - The monitoring requirements contained in the general permit.
    - The reporting and recordkeeping requirements.
    - Plan submittal requirements.
    - Equipment.
    - Supplies.
    - Labor.
    - Increased administrative costs.
- A comparison, to the greatest extent possible, of the cost of compliance for small businesses with the cost of compliance for the largest ten percent of businesses intended to be covered under the permit.
- A summary of how the permit provides mitigation to reduce the effect on small businesses (if a disproportionate impact is expected), without compromising the mandated intent of the permit.

[3] Chapter 173-226 WAC Waste Discharge General Permit Program
https://apps.leg.wa.gov/wac/default.aspx?cite=173-226

1.2 Definitions of small and large businesses

For the purposes of the SBEIA, a small business is an independent entity with 50 or fewer employees. Government enterprises are excluded. Employment is typically based on the highest available level of ownership data.

1.3 Permit Coverage

1.3.1 Overview

The Vessel Deconstruction General Permit authorizes the discharge of stormwater and a limited number of non-stormwater discharges associated with deconstruction of floating vessels and vessels deconstructed while over water, on a floating drydock, on a barge, or in limited cases on land, and not associated with a facility that holds an existing NPDES permit for this work.

Ecology requires industrial facilities that conduct activities under specific North American Industry Classification System (NAICS) codes to apply for a permit if they discharge stormwater, drydock floodwater, or non-routine discharges from their industrial areas to storm drains or directly to surface waters during deconstruction activities. This activity does not have to be the primary activity for a facility; it only has to be part of a facility's activities.

The following NAICS code groups are required to get permit coverage.

Table 5. Impacted NAICS Codes.

Impacted Industries' NAICS Codes	Industry Description
336611	Ship building and repairing
336612	Boat building
488390	Other support activities for water transportation

1.3.2 Deconstruction and Site Management Plan

All permit holders and applicants for coverage under this permit are required to develop a Deconstruction and Site Management Plan for the permitted activity. The Deconstruction and Site Management Plan must contain:

- A site map.
- A detailed assessment of the vessel.
- A detailed description of the best management practices (BMPs) necessary to:
    - Provide all known, available, and reasonable methods of prevention, control, and treatment (AKART).
    - Comply with chapter 173-201A WAC, Water Quality Standards for Surface Waters of the State of Washington and applicable federal technology-based treatment requirements under 40 CFR 125.3.

- A sampling plan.

1.3.3 Sampling and testing

Stormwater associated with deconstruction and deconstruction support activities

All permit holders must sample stormwater discharges from designated locations at their facilities once every calendar week[4] when they discharge stormwater (or authorized non-stormwater) from the site. Permittees must sample each distinct point of discharge, before it enters into waters of the state.

Permittees must visually monitor each sample for oil sheen and test the sample using the following parameters:

1. Oil and Grease
2. Turbidity
3. Total suspended solids
4. pH
5. Copper, Total
6. Zinc, Total
7. Lead, Total

Permittees must ensure the analytical methods they use to meet the sampling requirements conform to the latest versions of the **Guidelines Establishing Test Procedures for the Analysis of Pollutants** contained in 40 CFR Part 136.

For each stormwater sample taken, facilities must record the following in the site log:

- Sample date, time, and location.
- Method of sampling and method of sample preservation.
- Name of person who performed the sampling.

Drydock Effluent

Subject to compliance with the terms and conditions of this permit, Ecology authorizes permittees to discharge drydock floodwater to surface waters of the state. The general permit limits the following in these discharges.

- Oil sheen
- Oil and grease
- Turbidity

[4] A **week** beginning with Sunday and ending with Saturday.

Non-Routine Discharges

Non-routine discharges are allowed on a case-by-case basis if Ecology approves them in advance. In such cases, the permittee is required to test for a variety of parameters as discussed in special condition S5.B of the permit. Because such discharges cannot be anticipated at the time of this analysis (only anticipated in the short-run by the permittee) and occur at the discretion of the Permittee, Ecology did not include these costs in this analysis.

1.3.4 Visual inspections

Facilities must conduct visual inspections of the site each day and document these inspections with the Deconstruction and Site Management Plan. Each inspection shall consist of:

- Observations made at all areas disturbed or otherwise impacted by deconstruction activities, all BMPs, and all discharge points.
- Observations for the presence of turbidity, floating materials, visible sheen, discoloration, etc., in the discharge.
- Observation for the presence of illicit discharges.
- Assessment of all BMPs that have been implemented.

1.3.5 Reporting and recordkeeping

The general permit sets reporting and recordkeeping requirements for all facilities.

Reporting

Facilities must use Discharge Monitoring Report forms to submit the sampling data they collect each reporting period to Ecology using Ecology's WQWebDMR program.

Records retention

Facilities must keep the following records for 3 years or the entire life of the deconstruction project, whichever is longer:

- All monitoring information (site log book, sampling results, inspection reports/checklists, etc.)
- Deconstruction and Site Management Plan.
- Any other documentation of compliance with permit.
- All calibration and maintenance records.
- Records of all data used to complete the application for this permit.

1.4 Excluded costs

This SBEIA does not include the costs of complying with existing laws and rules, as permittees would be required to comply with requirements regardless of whether the permit reiterated or referenced them, or if the permit did not exist. Costs excluded from all SBEIAs include the costs of complying with:

- State ground water quality standards (WAC 173-200).
- State surface water quality standards (WAC 273-201A).
- State sediment management standards (WAC 173-204).
- Wastewater discharge permit fees (WAC 173-224).
- Federal laws and rules, including but not limited to the Clean Water Act and federal National Pollutant Discharge Elimination System (NPDES) regulations if discharging to surface waters.

1.5 Compliance costs included in the SBEIA

According to WAC 173-226-120, Ecology must estimate the following costs in the SBEIA:

- Minimum treatment technology
- Monitoring
- Reporting
- Recordkeeping
- Plan submittal
- Equipment
- Supplies
- Labor
- Administrative costs

The following table is a summary of the permit requirements, and the last column indicates whether Ecology is required to consider the costs associated with each permit condition for the economic analysis.

Table 6. Compliance costs included in the SBEIA

Requirement	Condition Number	Basis of Requirement	Required to be in SBEIA
Submittal of application for coverage	S2.A	Federal	No
Development of Deconstruction and Site Management Plan	S3	Federal	No
General sampling requirements - annual	S4	Federal	No
General sampling requirements - weekly	n/a	State	Yes, extra Samples
Non-Routine Discharges	S5	State	Yes

Table 7. Sampling discharges to impaired waters

Requirement	Condition Number	Basis of Requirement	Required to be in SBEIA
Discharges to 303(d)-listed waters	S6	State[5]	No
Discharges to waters with TMDLs	S6	State[6]	No
Visual inspections - quarterly	S7	Federal	No
Visual inspections - daily	n/a	State	Yes
Corrective Actions	S8	State[7]	No
Solid and Liquid Waste Disposal	S9	Federal	No

Table 8. Reporting and Recordkeeping

Requirement	Condition Number	Basis of Requirement	Required to be in SBEIA
Discharge Monitoring Reports	S10.A	Federal	No
Records Retention	S10.B	Federal (3 years)	Yes, beyond 3 years as necessary for project completion
Non-Compliance	S10.E	Federal	No

[5] The Federal Multi-Sector General Permit (MSGP) largely defers to the appropriate state authority. Sampling requirements in Ecology's permit are primarily a state requirement. However, since the benchmarks are based on the acute water quality criterion in chapter 173-201A WAC, Water Quality Standards for Surface Waters of the State of Washington, the economic analysis is not allowed to consider these sampling costs.

[6] MSGP largely defers to the appropriate state authority. Sampling requirements in Ecology's permit are primarily a state requirement. However, since the benchmarks are based on the acute water quality criterion in chapter 173-201A WAC Water Quality Standards for Surface Waters of the State of Washington the economic analysis is not allowed to consider these sampling costs.

[7] MSGP does not require eventual compliance with all benchmarks and therefore the corrective action and adaptive management set in this permit are primarily a state requirement. However, these benchmarks and the adaptive management conditions are necessary to comply with chapter 173-201 WAC, Water Quality Standards for Surface Waters of the State of Washington and are therefore exempt from the economic analysis.

Chapter 2: Costs of Compliance with the General Permit

Compliance costs are dependent on the size of the deconstruction project. In this chapter, Ecology estimated ranges of costs for most requirements–a low cost and a high cost. The low cost estimate is for small projects and the high cost estimate is for large projects. Some requirements have the same cost for small and large projects.

We present the assumptions we used to estimate compliance cost in this chapter. In general, we assume that large projects will have twice as many samples and requirements and will take twice as long to complete. We also included the assumptions we used to estimate capital costs.

It is necessary to annualize some costs because some costs are annual (incurred every year), while other costs are capital costs (incurred once). For example, equipment for pH testing is a one-time capital cost, while monitoring is an annual cost that permittees will incur every year.

2.1 Compliance costs

Costs associated with permit requirements include costs of complying with:

- Sampling and monitoring
- Sample analysis
- Visual inspections
- Record retention

2.1.1 Sampling and monitoring

All permittees must sample and monitor their discharges weekly. Based on previous experience, Ecology staff estimated the time needed for facility staff to carry out each of the major tasks required by the permit, divided into time of professional or supervisory personnel and time of other staff.

The Bureau of Labor Statistics[8] identified labor costs of $67.14 per hour for professional or supervisory personnel and $24.69 per hour for staff. The calculations in Table 3 use these wages. For activities associated with monitoring (such as sample collection, record keeping, reporting), large projects are assumed to require twice as much labor as small projects, to reflect greater sampling activity.

[8] http://www.bls.gov/oes/current/oes_wa.htm for occupations 11-1021 and 47-3019.

Table 9. Labor Costs for Sampling and Monitoring Small Projects

Labor Type	Sampling	Training	Recordkeeping	Total Time	Weekly Cost
Prof/Sup	.25 – .5 hr.	0 – .5 hr.	0 hr.	.25 – 1 hr.	$17 - $67
Staff	1.5 – 3 hr.	0 hr.	.5 – 1 hr.	2 – 4 hr.	$49 - $99
Total	n/a	n/a	n/a	n/a	$66 - 166

Table 10. Labor Costs for Sampling and Monitoring Large Projects

Labor Type	Sampling	Training	Recordkeeping	Total Time	Weekly Cost
Prof/Sup	.5 – 1 hr.	0 – 1 hr.	0 hr.	.5 - 2 hr.	$34- $134
Staff	3 – 6 hr.	0 hr.	1 – 2 hr.	4 – 8 hr.	$98 - 198
Total	n/a	n/a	n/a	n/a	$132 - 332

2.1.2 Sample Analysis

Lab fees

The permit also requires permittees to send samples to a laboratory for analysis. Ecology surveyed the three primary labs used by treatment, storage, and disposal facilities regarding their fees for various water quality parameters[9]. This provided average fee levels for each of the monitoring parameters required by the permit.

We assume that small projects will have one sample analyzed for each parameter, while large projects will have two samples analyzed for each parameter, to reflect the probability that sampling in more than one location would be necessary to capture the impact of a large project. These lab fees only include the cost for analyzing parameters that are not required in the Federal Multi-Sector General Permit (MSGP).

Table 11. Weekly Laboratory Fees by Project Size

Small Project	Large Project
$116	$232

pH

Through discussion with Ecology's Lab Accreditation Program and environmental laboratories the necessary equipment requirements for on-site pH testing was determined.[10] For a sample to be valid, permittees must do pH testing immediately after they draw a sample. We

[9] Personal communication with Als Global, Edge Analytical, and Fremont Analytical, 2023.
[10] Personal communication with Rebecca Wood, 2019.

annualized values for long-term purchase based on a three percent real rate of interest and a five-year period of use.

We assumed a suitable pH meter and probe would cost $255, with annual costs of replacement parts and consumables used to calibrate the probe of $64.[11] For the low cost estimate, we assumed permittees already own the equipment, leaving only the annual purchase of replacement parts. We assumed large projects have twice the replacements parts cost, to reflect increased sampling. There are no lab fees for pH analysis because Permittee does pH testing on site.

Total

Table 12. Equipment Costs for pH Testing by Project Size (Annual)

Project Size	Small	Large
Initial Cost, Annualized	$0 - $57	$0 - $57
Annual Replacement Cost	$64	$128
Total Annual Cost	$64 - $121	$128 - $185

2.1.3 Visual inspections

Permittees are required to visually inspect their site each day and document the inspection with the Deconstruction and Site Management Plan. The Federal MSGP requires only quarterly inspections, so Ecology estimated the cost for the additional inspections on a weekly basis. We assume visual inspection will take a small project half an hour and large project a full hour. The Bureau of Labor Statistics[12] identified labor costs of $24.69 per hour for staff.

Table 13. Weekly Inspection Costs for Small and Large Projects

Method	Project Size	Hours	Frequency	Duration	Weekly Cost
Visual Inspections	Small Projects	0.5	1/day	1 week	$86
Visual Inspections	Large Projects	1	1/day	1 week	$173

2.1.4 Record Retention

[11] The cost of equipment meeting the minimum requirements was found to range from $255 - $804. The lower cost was used as it meets all of the necessary requirements.
[12] http://www.bls.gov/oes/current/oes_wa.htm for occupation 47-3019.

Permittees must retain records on site until the completion of the project. Federal requirements include retention for three years. Costs attributable to the permit include retention beyond three years for projects that last beyond this period. The cost of complying with this provision is the cost of storing records. This cost is likely very low or close to zero.

2.2 Total Costs

This section presents the total costs of compliance under the Vessel Deconstruction General Permit. Permittees face both costs that accrue weekly and costs that accrue annually. These costs depend on the size of deconstruction project.

Table 14. Estimated Weekly Compliance Costs for Vessel Deconstruction Permit Holders

Project Size	Low Estimate	High Estimate
Small	$269	$368
Large	$537	$737

Table 15. Estimated Annual Compliance Costs for Vessel Deconstruction Permit Holders

Project Size	Low Estimate	High Estimate
Small	$64	$121
Large	$128	$185

Chapter 3: Relative Compliance Costs for Small and Large Businesses

This chapter compares the costs of compliance per employee for small businesses to the compliance cost per employee at the largest ten percent of businesses covered by the permit. The governing rule (173-226-120) allows for this comparison to be made on one of the following bases:

- Cost per employee
- Cost per hour of labor
- Cost per one hundred dollars of sales

We use cost per employee, because this data is readily and most comprehensively available for businesses operating in Washington State.

3.1 Facility size data

Table 16 lists the average number of employees for the small businesses (less than 50 employees) and the largest ten percent of industries in each of the representative industries.[13]

Table 16. Average Number of Employees, Small and Large Businesses by NAICS

Sector Descriptions	NAICS	Small Businesses	Large Businesses
Ship Building and Repairing	336611	8.4	220.3
Boat Building and Repairing	336612	7.0	190.8
Water Transportation Services, Not Elsewhere Classified	488390	3.7	75.0

3.2 Relative costs of compliance

Compliance costs are dependent on the size and complexity of the vessel deconstruction project. While our assumption is that a large business takes on a small project, it is highly unlikely that a small business will take on a large project. Because we determined the costs on a weekly basis, and larger projects tend to take more time than smaller projects, costs for larger projects are larger than costs for smaller projects. When comparing the average number of employees between large and small businesses, there is more than a 20 to 1 disparity.

Even if we make the assumption that large businesses only do large projects and small businesses only do small projects (which is the most conservative assumption possible), the

[13] Dun & Bradstreet, 2023. D&B Market Insight Database.

costs, while larger for larger projects, will not be 25 times greater. Therefore, the cost-per-employee ratios fall as business size rises. Ecology concluded, based on this result, that the general permit has a disproportionate impact on small businesses.

Chapter 4: Mitigation of Disproportional Impacts

The general permit likely imposes disproportionate costs on small businesses, so Ecology took the legal and feasible actions described in this chapter to reduce small business compliance burden.

4.1 Mitigation options under WAC 173-226-120

The governing rule states the following options should be considered to reduce the impact of the permit on small businesses.

- Establishing differing compliance or reporting requirements or timetables for small businesses.
- Clarifying, consolidating, or simplifying the compliance and reporting requirements under the general permit for small businesses.
- Establishing performance rather than design standards.
- Exempting small businesses from parts of the general permit.

The Waste Discharge General Permit Program rule requiring economic impact analysis (WAC 173-226-120) states that mitigation only needs to be undertaken when it is legal and feasible in meeting the stated objectives of the federal Clean Water Act, and chapter 90.48 RCW, the State Water Pollution Act. This provision is an important restriction. If a proposed mitigation measure violates federal law or rules, or if it violates state law or rules, then it cannot be undertaken.

The conditions of the general permit based on federal rules are requirements of federal law. Significant mitigation of these conditions would be a violation of federal NPDES program rules, which establish effluent standards. Because these conditions are a consequence of federal law, Ecology cannot mitigate them, and we cannot reduce the associated compliance costs. Recall that these costs were not included in this analysis, as they are not a result of general permit requirements in excess of the requirements in federal and state rule. The general permit must contain effluent limits that are at least as strict as federal effluent standards.

Conditions required to meet the AKART requirement of the state Water Pollution Control Act (chapter 90.48 RCW) are also legal requirements that Ecology cannot allow permittees to violate. Thus, Ecology cannot mitigate compliance costs based on the AKART requirement. Recall that these costs were not included in this analysis, as they are not a result of general permit requirements in excess of requirements in federal and state rule.

Ecology also places conditions in general permits to ensure discharges do not violate the state surface water quality, ground water quality, or sediment management standards (chapters 173-200, 173-201, 173-204 WAC). These conditions are legal requirements that Ecology cannot allow permit holders to violate. Compliance costs associated with these permit conditions cannot be mitigated. Recall that these costs were not included in this analysis, as they are not a result of general permit requirements in excess of requirements in federal and state rule.

The above circumstances severely limit Ecology's ability to reduce the cost, to comply with the rule, on small businesses. The only costs we can legally mitigate are the costs imposed by permit conditions that are stricter than those required by law.[14] Because, for the most part, the permit simply contains conditions needed to comply with these laws, usually only minor mitigation measures can legally be undertaken. The cost reductions that result are usually small.

Impact of mitigation on effectiveness of general permit

The general permit rule15 states mitigation only needs to be undertaken when it is legal and feasible in meeting the stated objectives of the federal Clean Water Act and chapter 90.48 RCW, the State Water Pollution Control Act. Even if a proposed mitigation measure is legal, if it would limit the general permit's effectiveness in controlling water pollution too much, it should not be undertaken.

Ecology has reduced the cost of the permit where possible. Reducing costs does not remove the disproportionate impact. There is no basis that would allow Ecology to be more lenient on small businesses without an unreasonable risk of violating federal or state water quality laws and rules.

If Ecology issues a general permit that allows permittees to harm the quality of the water receiving the discharge then Ecology would be in violation of state and federal law. The elements in the following section can potentially reduce the cost of the permit. Most of the mitigation presented is not only for small businesses, but applies to all permittees and therefore will benefit small and large businesses alike.

4.2 Mitigation actions

Ecology considered options for lessening the burden of permit compliance on businesses where possible while protecting water quality and maintaining compliance with federal and state law and rule. The primary area where Ecology provided mitigation for smaller, less complicated vessel deconstruction activities is in permit section *S8. Deconstruction and Site Management Plan requirements*. The requirements in this section are scalable based on the size and complexity of the vessel deconstruction project that needs permit coverage. For example, a barge without propulsion systems is likely to contain less hazardous waste and have less potential to discharge spills and debris into state waters. For these vessels, a more streamlined Deconstruction and Site Management Plan would be acceptable. Larger, more complex projects will require more BMPs and are likely to contain more hazardous materials and potential for discharge. The Deconstruction and Site Management Plan for these larger projects will be accordingly more extensive and costly to produce.

Ecology based most of the other requirements of the permit on federal rule. The requirements in this permit are comparatively more restrictive than for example, the Boatyard General

[14] chapter 90.48 RCW
[15] chapter 173-226 WAC

Permit. This is due to the nature of the work and the fact that it occurs over water where options for capturing and treating discharges are limited. The permit therefore relies on more source control BMPs to prevent exposure of pollutants to rainfall and other flows that could cause a discharge. Again, the required BMPs will vary based on the size and complexity of the vessel deconstruction activity.

4.3 Conclusion

This analysis found that the Vessel Deconstruction General Permit likely imposes disproportionate costs on small versus large businesses complying with it. In compliance with WAC 173-226-120, Ecology included elements in the general permit that reduce compliance costs, and attempted to reduce disproportionate costs. Further cost reductions, or reductions to disproportion, were not possible due to limitations of federal and state rules protecting the environment and regulating permittee behavior.

References

RCW 34.05.272 requires Ecology to categorize sources of information used in significant agency actions made in the Water Quality Program.

Independent peer review

Review is overseen by an independent third party.

Internal peer review

Review by staff internal to Ecology.

External peer review

Review by persons that are external to and selected by Ecology.

Open review

Documented open public review process that is not limited to invited organizations or individuals.

Legal and policy documents

Documents related to the legal framework for the significant agency action, including but not limited to: federal and state statutes, court and hearings board decisions, federal and state administrative rules and regulations, and policy and regulatory documents adopted by local governments.

Chapter 173-200 WAC: Water quality standards for groundwaters of the state of Washington.

Chapter 173-201A WAC: Water quality standards for surface waters of the state of Washington.

Chapter 173-204 WAC: Sediment management standards.

Chapter 173-224 WAC: Water quality permit fees.

Chapter 173-226 WAC: Waste discharge general permit program.

Chapter 90.48 RCW: Water Pollution Control.

Independent data

Data from primary research, monitoring activities, or other sources, but that has not been incorporated as part of documents reviewed under independent, internal, or external peer review.

Dun & Bradstreet, 2023. D&B Market Insight Database.

Records of the best professional judgment of Ecology employees or other individuals.

Personal communication between Shon Kraley and Rebecca Wood, April 2019 on necessary equipment to conduct on-site ph monitoring.

Personal communication between Shon Kraley and Als Global, Edge Analytical, and Fremont Analytical, July 2023 on cost of laboratory testing of stormwater samples for various substances.

Other

Sources of information that do not fit into other categories.

United States Bureau of Labor Statistics (2023) http://www.bls.gov/oes/current/oes_wa.htm