DEPARTMENT OF ECOLOGY
State of Washington

Small Business Economic Impact Analysis

Plant and Algae Management General Permit

National Pollutant Discharge Elimination System
and State Waste Discharge Permit

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For more information, contact:

Water Quality Program
P.O. Box 47600
Olympia, WA 98504-7600
Phone: 360-407-6600

Washington State Department of Ecology – www.ecology.wa.gov

- Headquarters, Olympia 360-407-6000
- Northwest Regional Office, Bellevue 425-649-7000
- Southwest Regional Office, Olympia 360-407-6300
- Central Regional Office, Yakima 509-575-2490
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Small Business Economic Impact Analysis

Aquatic Plant and Algae Management General Permit

National Pollutant Discharge Elimination System and State Waste Discharge General Permit

by

Kasia Patora

for the

Water Quality Program

Washington State Department of Ecology

Olympia, Washington

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Acronyms

CFR	Code of Federal Regulations
DNR	(Washington State) Department of Natural Resources
DO	Dissolved Oxygen
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
pH	Potential of hydrogen (measure of acids/bases)
RCW	Revised Code of Washington
SAW	Secure Access Washington
SBEIA	Small Business Economic Impact Analysis
WAC	Washington Administrative Code
WRIA	Water Resource Inventory Area
WSDA	Washington State Department of Agriculture

Executive Summary

This Small Business Economic Impact Analysis (SBEIA) estimates the costs of complying with the Aquatic Plant and Algae Management 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, 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.

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.

Under WAC 173-226-120(4), SBEIAs do 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:

- Wastewater discharge permit fees (WAC 173-224)
- Water Quality Standards for Surface Waters of the State of Washington (chapter 173-201A WAC)
- Ground Water Quality Standards (chapter 173-200 WAC)
- Sediment Management Standards (chapter 173-204 WAC)

- Whole Effluent Toxicity Testing and Limits (chapter 173-205 WAC)
- Human health based criteria in the National Toxics Rule (40 CFR 131.36)
- National Primary Drinking Water Regulations (40 CFR chapter 1, Part 141)
- Group A Public Drinking Water Supplies Source Water Protection and Maximum Contaminant Levels (WACs 246-290-135 and 246-290-310)
- The Washington Pesticide Control Act (chapter 15.58 RCW)
- The Washington Pesticide Application Act (chapter 17.21 RCW)
- The State Environmental Policy Act (chapter 187-11 WAC)
- 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.
- Federal Insecticide, Fungicide, and Rodenticide Act laws and labels
- Washington State Department of Agriculture (WSDA) reporting requirements

Table 1: Summary of compliance costs

Cost Type	Estimated Cost
Application labor	$19 – $96
Notification labor	$154 – $231
Notification materials	$113
Inspection labor	$0 - $19 ($7 adjusted for inspection risk)
Posting labor	$39 –$77
Posting materials (entirely privately or publicly owned shoreline; 100 signs)	$98
Posting materials (entirely public access areas; 100 signs)	$4,597 initial; $49 for subsequent projects
DO-monitoring labor*	$39
DO-monitoring materials*	$500 – $1,942
pH-monitoring labor*	$39 – $193

Cost Type	Estimated Cost
pH-monitoring materials*	$573 – $1,421
Reporting labor	$19 – $39

* Required only under certain circumstances. See section 2.1.3.

From the set of permittees operating under the existing permit, we identified eight business permittees. The rest of the permittees were either private individuals or public entities (state and county government agencies).

Most of the business permittees were licensed applicator businesses. Across all of the businesses the maximum identifiable employment was 14 employees. Some businesses consist of a single employee. This is consistent with our understanding that some application projects can be completed by a single certified applicator, or by a small number of applicators (e.g., two employees present when the chemicals used pose a potential hazard to worker safety due to noxious fumes). Employment estimates also reflect direct employment, and do not include potential subcontracting of temporary or project-based labor – who are not classified as employees of the business – as needed.

Since all of the likely permittees are small businesses, we cannot compare relative costs of compliance to those of large businesses. It, therefore, does not impose disproportionate costs on small versus large aquatic pesticide permittee businesses.

Chapter 1: Introduction to the Economic Impact Analysis

This Small Business Economic Impact Analysis (SBEIA) estimates the costs of complying with the Aquatic Plant and Algae Management 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, 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.

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 organized for the purpose of making a profit. Employment is typically based on the highest available level of ownership data. Not-for-profit and government enterprises are excluded.

1.3 Permit Coverage

This general permit covers aquatic plant and algae management activities that result in a discharge of herbicides, algaecides, adjuvants, marker dyes, shading products, biological water clarifiers, and phosphorus sequestration products into fresh water bodies of the state of Washington. The permit also covers shoreline and roadside/ditch bank emergent vegetation management activities where chemicals may enter the water.

Aquatic plant and algae management activities are organized into four categories:

- Noxious weed management
- Native nuisance plant control
- Algae control
- Phosphorus sequestration.

1.4 Excluded costs

Under WAC 173-226-120(4), SBEIAs do 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:

- Wastewater discharge permit fees (WAC 173-224)
- Water Quality Standards for Surface Waters of the State of Washington (chapter 173-201A WAC)
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- Sediment Management Standards (chapter 173-204 WAC)
- Whole Effluent Toxicity Testing and Limits (chapter 173-205 WAC)
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- Federal Insecticide, Fungicide, and Rodenticide Act laws and labels
- Washington State Department of Agriculture (WSDA) reporting requirements

1.5 Compliance costs included

The SBEIA includes estimates of costs that are discretionary (costs of requirements included by choice), and excludes the costs of complying with baseline laws and rules that set requirements regardless of whether there is a general permit. The table below summarizes the types of requirements in the permit, and whether they are included in cost estimates in the SBEIA.

Table 2: Permit requirements

Requirement	Permit Condition Number	Basis of Requirement	Required to be in SBEIA
Application for coverage	S2	Discretionary	Yes
Discharge limits	S3	Compliance with baseline laws and rules	No
Application of products	S4	Compliance with baseline laws and rules	No
Notification, inspection, and posting signs	S5	Discretionary	Yes
Monitoring	S6	Discretionary; Compliance with baseline laws and rules	Discretionary elements
Reporting and recordkeeping	S7	Discretionary	Yes
Spill prevention and control	S8	Compliance with baseline laws and rules	No
Mitigation for protection of sensitive, threatened, or endangered plants	S9	Compliance with baseline laws and rules	No

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Chapter 2: Costs of Compliance with the General Permit

We estimated likely compliance costs based on equipment and labor needed to comply with the permit, in excess of the baseline (requirements of existing laws and rules).

We note there are provisions in the permit to allow experimental use of herbicides. Since 2012, there have been three such uses of the permit, among hundreds of permittees. Moreover, all of the herbicides used under experimental circumstances at the time have since been approved for use under the permit. We therefore did not include associated costs in this analysis.

2.1 Compliance costs

Costs associated with permit requirements in excess of the baseline include costs of complying with:

- Application for coverage
- Notification, inspection, and posting
- Monitoring
- Reporting and recordkeeping

2.1.1 Application for coverage

Businesses applying for coverage under the permit would need to:

- Log in to an online system (Secure Access Washington; SAW)
- Fill in a Notice of Intent (NOI) Permit Application
- Print and sign the NOI
- Mail the signed NOI

Completing the NOI includes providing information on:

- Permittee
- Sponsor
- Discharge Location
- Aquatic plants targeted
- Herbicides to be used
- Map of area covered by permit

If a permittee is applying for or updating a permit coverage that includes fluridone treatment of more than 50 percent of the littoral zone in lakes up to 50 acres, or 40 percent of the littoral zone in lakes from 50 to 500 acres, they must also submit a signed and dated Fluridone Vegetation Management Plan.

Gathering the information required for the NOI would likely be part of the planning process to determine whether and where treatment is necessary, and therefore part of the baseline. Once information is gathered, we assumed logging in, filling out, and submitting the NOI would take one to two hours for an experienced applicant. An inexperienced applicant could require more assistance from Ecology, so we assumed across all types of applicants, application efforts would take between one and five hours.

We estimated hourly wages for applicators using the average wage for "Pesticide Handlers, Sprayers, and Applicators, Vegetation" in Washington State.[1] The May 2019 average hourly wage was $19.14. Adjusted for inflation to June 2020 dollars, this hourly wage becomes $19.27.[2]

For each permittee, then, permit application labor would cost between $19.27 and $96.35.

2.1.2 Notification, inspection, and posting

Notification
Once the permittee submits the NOI, they must:

- Fill out the Public Notice Template in the NOI.
- Publish the public notice twice (one week apart) in a local newspaper.
- Distribute the public notice to any potentially affected waterfront residents within 0.25 miles in each direction along the shoreline and across the water from treatment areas.
- Mail or deliver the public notice to:
    - Washington State Department of Natural Resources (DNR)
    - Muckleshoot Indian Tribe representatives, if permit coverage is in Water Resource Inventory Area (WRIAs) 7, 8, or 9. These are the Snohomish, Cedar/Sammamish, and Duwamish/Green river watersheds, respectively.

The labor time needed to complete these tasks depends largely on the existing level of knowledge about the affected residents. Homeowner associations that are either permittees or contracted with permittees for treatment services likely already know all of the affected residences and addresses. For other permittees, some research using county assessor maps may be necessary. As treatments are often repeated in the same areas, they may also use existing knowledge from previous treatments, and update it for any new construction.

Permittees are also required to email pre- and post-treatment notices to Ecology no later than 8 AM on Monday of each week.

- Pre-treatment notices are for work planned for the upcoming week.
- Post-treatment notices are for work that occurred the previous week.

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[1] US Bureau of Labor Statistics, 2019. May 2019 State Occupational Employment and Wage Estimates. Washington. https://www.bls.gov/oes/current/oes_wa.htm
[2] US Bureau of Labor Statistics, 2020. CPI Inflation Calculator. https://www.bls.gov/data/inflation_calculator.htm

The number of addresses that need to be notified depends on the treatment area and location. As these factors are not necessarily correlated with the size of the permittee business, we made a simplifying assumption that the permittee would need to send out 100 notifications.

We assumed the labor associated with filling out the template, distributing it (including envelope stuffing and labeling), delivering notice to DNR and the Muckleshoot Tribe (if applicable), and notifying Ecology before and after treatment would take 8 to 12 hours.

We approximated hourly wages for applicators using the average wage for "Pesticide Handlers, Sprayers, and Applicators, Vegetation" in Washington State.[3] The May 2019 average hourly wage was $19.14. Adjusted for inflation to June 2020 dollars, this hourly wage becomes $19.27.[4]

For each permittee, then, notification labor time would cost between $154.16 and $231.24.

The cost of materials, at median $0.49 per notification printing cost, and $0.64 per notification mailing cost, would be $113.[5]

Publication of the notice, twice, in a local newspaper would vary by location and the rates charged by the relevant newspaper. We estimated costs based on likely higher-cost newspapers with higher circulation, ranging between $847 and $2,541.[6]

Inspection

The permit would require permittees to schedule inspections at Ecology's request. Inspection upon request means not every permittee would necessarily undergo inspection.

Historically, Ecology has done fewer than five inspections per year.[7] Inspections are typically based on concerns raised about an application. While a single permittee could be inspected more than once, for about 70 permittees on a five-year permit, this averages to 35.7 percent of permittees experiencing an inspection over five years. A typical inspection takes one to four hours of Ecology employee time, but a permittee need not be present during the inspection. The permittee may need to do an inspection follow-up call with Ecology, however, so we assumed that would take one hour. We approximated hourly wages for applicators using the average wage for "Pesticide Handlers, Sprayers, and Applicators, Vegetation" in Washington State.[8] The May

[3] US Bureau of Labor Statistics, 2019. May 2019 State Occupational Employment and Wage Estimates. Washington. https://www.bls.gov/oes/current/oes_wa.htm
[4] US Bureau of Labor Statistics, 2020. CPI Inflation Calculator. https://www.bls.gov/data/inflation_calculator.htm
[5] Surveyed printing, copying, envelope, and stamp prices, July 2020. Survey included prices via internet and in-person services at stores with physical locations. Prices may be lower if supplies are purchased via online-only marketplaces, but would include shipping costs.
[6] 2015 survey of newspaper legal notice pricing, updated to 2020 prices using US Bureau of Labor Statistics, 2020. CPI Inflation Calculator. https://www.bls.gov/data/inflation_calculator.htm
[7] Email communication with Danielle Edelman, with information from Nathan Lubliner, WA Ecology. Best professional judgement. Email dated 08/03/20.
[8] US Bureau of Labor Statistics, 2019. May 2019 State Occupational Employment and Wage Estimates. Washington. https://www.bls.gov/oes/current/oes_wa.htm

2019 average hourly wage was $19.14. Adjusted for inflation to June 2020 dollars, this hourly wage becomes $19.27.[9]

If a permittee undergoes inspection, the total time cost for labor would be $19.27. Multiplied by the likelihood that a permittee would be inspected, this results in a risk-adjusted labor cost of about $7.

Posting signs
In some situations, the permittee must also post shoreline signs around the treatment area. Signs must use templates provided by Ecology, and inform the public about the treatment and safety precautions. This permit issuance includes updates to the templates, including pictograms intended to better communicate hazards to the public.

Signage is not required where public access is limited to boat-only access, and there are no private residents.

For privately or publicly-owned shoreline areas (excluding public access areas), the permittee must post 8.5-inch by 11-inch, two-sided signs that face the water and shore, within ten feet of the shoreline:

- At each private residence or business property that is within 400 feet of a treated area.
- Spaced every 100 feet of shoreline, as much as is possible.

For public access areas and boat launches, the permittee must post two-foot by three-foot weather-resistant signs, within 25 feet of the shoreline:

- At public access areas within 400 feet of the treatment area, facing toward the water and the shore.
- At boat launches within 0.25 miles of the treatment area, facing only the shore.
- Spaced every 100 feet of shoreline, as much as possible.
- With an 8.5-inch by 11-inch weatherproof map of the treatment area for each chemical used, including one of the following:
    - Addresses of the starting and ending points of the treatment area.
    - GPS coordinates that represent the corners of a polygon covering the treatment area.
    - Identification of a whole-waterbody treatment area, with the sign's location marked.

[9] US Bureau of Labor Statistics, 2020. CPI Inflation Calculator. https://www.bls.gov/data/inflation_calculator.htm

We conservatively assumed treatment areas would have some private shoreline access, and that signage costs would not necessarily be zero. This would only be the cost if public access is limited to boat-only access, and there are no private residents.

The number and type of signs a permittee would need to post depends on the treatment area and location. As these factors are not necessarily correlated with the size of the permittee business, we made a simplifying assumption that a permittee would need to post 100 signs.

If treatment was to occur only along privately or publicly-owned shoreline areas, a permittee would only need to post 8.5-inch by 11-inch, two-sided signs. We also assumed signs would be stapled to structures (such as docks), so each side of the sign would need to be printed separately. At a printing cost of $0.49 per sign, 200 signs (two sides of 100 signs, printed separately) would cost $98 to print.[10]

If treatment was to occur only along public access areas, a permittee would only need to post two-foot by three-foot signs. We conservatively assumed all signs would need to have two sides. At a printing cost of $45 per sign, for two-sided, corrugated plastic signs with metal stakes, this total cost would be $4,548.[11] Additional map printing would be equivalent to 100 one-sided 8.5-inch by 11-inch pages, or $49. This total cost would be $4,597 for initial new signage, but since signs would be reusable, only new maps would be printed for subsequent projects.

Some treatment areas would involve a combination of affected properties and people (private access, public access, boat launches), and require both types of signage to some degree.

We assumed the labor to fill out the appropriate template(s) and post signs would take between two and four hours. This was based on the simplifying assumption that 100 signs would be needed, and staff would take one to two minutes to put up each sign (stapling or staking, and traveling to the next sign location). We approximated hourly wages for applicators using the average wage for "Pesticide Handlers, Sprayers, and Applicators, Vegetation" in Washington State.[12] The May 2019 average hourly wage was $19.14. Adjusted for inflation to June 2020 dollars, this hourly wage becomes $19.27.[13] This total labor cost would be between $38.54 and $77.08.

Permittees doing multiple treatments over time during the life of the permit could save costs by making reusable signs. As a revised template accompanies this permit issuance, they would all incur at least the initial cost of making new reusable signs.

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[10] Surveyed printing prices, July 2020. Survey included prices via internet and in-person services at stores with physical locations. Prices may be lower if supplies are purchased via online-only marketplaces, but would include shipping costs.
[11] Surveyed printing prices, July 2020. Survey included prices via internet and in-person services at stores with physical locations that offered two-foot by three-foot weatherproof signs.
[12] US Bureau of Labor Statistics, 2019. May 2019 State Occupational Employment and Wage Estimates. Washington. https://www.bls.gov/oes/current/oes_wa.htm
[13] US Bureau of Labor Statistics, 2020. CPI Inflation Calculator. https://www.bls.gov/data/inflation_calculator.htm

2.1.3 Monitoring

Monitoring requirements before and after treatment depend on the chemical the permittee applies, and the waterbody they treat. Each type and location of monitoring has additional specific requirements for sampling locations and timing.

- The permittee must monitor dissolved oxygen (DO) when they apply herbicides and algaecides to waterbodies listed as impaired for DO.
- The permittee must monitor pH when they apply phosphorus sequestration products.

Some permittees would not incur any monitoring costs, if they are not applying herbicides or algaecides to a DO-impaired waterbody, and not applying phosphorus sequestration products.

Recall that permittees are required to comply with baseline laws and rules, regardless of this general permit. Under the baseline, they would need to ensure they are not harming water quality, including impacts to DO and pH. The permit does specify the frequency of monitoring activities, and this element is a specific compliance cost. DO or pH thresholds that could impact permittees' ability to treat or timing of treatment, however, are part of baseline practices to protect water quality.

Permittees required to monitor could invest in a DO or pH meter, as results are not required to go to a laboratory. A DO meter costs $500 to $1,942, and a pH meter costs $573 to $1,421.[14]

Labor time would also be needed if monitoring is required, for sampling itself, and for recordkeeping that includes:

- The date, exact place, and time of sampling.
- The date analyses were performed.
- Who performed the analyses.
- The analytical techniques/methods used (if any).
- The results of such analyses.

We assumed sampling and recordkeeping would take:

- Two hours for DO, reflecting two samples (surface and bottom) in one sampling location per treatment area, before and after herbicide or algaecide treatment on a DO-impaired waterbody.

[14] Surveyed online prices for scientific equipment, July 2020. Prices for DO and pH meters include the range from the meter itself, to complex test kits.

- Two to 10 hours for pH, reflecting between four and 20 samples, depending on the type of phosphorus sequestration product used, type of treatment (e.g., continuous), and duration of treatment.

We approximated hourly wages for applicators using the average wage for "Pesticide Handlers, Sprayers, and Applicators, Vegetation" in Washington State.15 The May 2019 average hourly wage was $19.14. Adjusted for inflation to June 2020 dollars, this hourly wage becomes $19.27.16

Permittees meeting the criteria that require monitoring would incur labor costs of:

- $38.54 for DO monitoring
- $38.54 to $192.70 for pH monitoring

2.1.4 Reporting

Permittees must submit an annual report of permit activities online through their SAW account. The report is required even if no treatment occurred during the reporting season and it must include the following information:

- Total amount of herbicide (pounds or gallons) used for each treatment site over the course of the season.
- Total acreage treated.
- Monitoring results (if required).
- Species targeted.
- Dates treatment occurred.

We assumed permittees would already keep records of this information, as part of planning or as part of establishing contracted services. Then they would only need one to two hours to compile the information, and enter it via their SAW account.

We approximated hourly wages for applicators using the average wage for "Pesticide Handlers, Sprayers, and Applicators, Vegetation" in Washington State.[17] The May 2019 average hourly wage was $19.14. Adjusted for inflation to June 2020 dollars, this hourly wage becomes $19.27.[18]

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[15] US Bureau of Labor Statistics, 2019. May 2019 State Occupational Employment and Wage Estimates. Washington. https://www.bls.gov/oes/current/oes_wa.htm
[16] US Bureau of Labor Statistics, 2020. CPI Inflation Calculator. https://www.bls.gov/data/inflation_calculator.htm
[17] US Bureau of Labor Statistics, 2019. May 2019 State Occupational Employment and Wage Estimates. Washington. https://www.bls.gov/oes/current/oes_wa.htm
[18] US Bureau of Labor Statistics, 2020. CPI Inflation Calculator. https://www.bls.gov/data/inflation_calculator.htm

One to two hours of reporting labor would cost between $19.27 and $38.54. We note that permittees are also required to report to WSDA, so to the extent that reporting activities overlap for multiple recipients, not all of this estimated cost is a result of the permit.

2.2 Summary of compliance costs

The table below summarizes estimated compliance costs. For underlying assumptions, see section 2.1.

Table 3: Summary of compliance costs

Cost Type	Estimated Cost
Application labor	$19 – $96
Notification labor	$154 – $231
Notification materials	$113
Inspection labor	$0 - $19 ($7 adjusted for inspection risk)
Posting labor	$39 –$77
Posting materials (entirely privately or publicly owned shoreline; 100 signs)	$98
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DO-monitoring labor*	$39
DO-monitoring materials*	$500 – $1,942
pH-monitoring labor*	$39 – $193
pH-monitoring materials*	$573 – $1,421
Reporting labor	$19 – $39

* Required only under certain circumstances. See section 2.1.3.

Chapter 3: Relative Compliance Costs for Small and Large Businesses

The SBEIA is required by WAC 173-226-120 to compare 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.

All of the businesses covered by the existing permit are small businesses (in addition to private individuals and public entities, which are not businesses), as are all of the licensed applicators in the state. We are unable to compare compliance costs for small businesses to those for large businesses. This chapter and subsequent chapters, therefore, discuss the types of identified businesses.

3.1 Facility size data

From the set of permittees operating under the existing permit, we identified eight business permittees. The rest of the permittees were either private individuals or public entities (state and county government agencies).[19]

Most of the business permittees were licensed applicator businesses. Across all of the businesses the maximum identifiable employment was 14 employees.[20] Some businesses consist of a single employee. This is consistent with our understanding that some application projects can be completed by a single certified applicator, or by a small number of applicators (e.g., two employees present when the chemicals used pose a potential hazard to worker safety due to noxious fumes). Employment estimates also reflect direct employment, and do not include potential subcontracting of temporary or project-based labor – who are not classified as employees of the business – as needed.

3.2 Relative costs of compliance

Since all of the likely permittees are small businesses, we cannot compare relative costs of compliance to those of large businesses. It, therefore, does not impose disproportionate costs on small versus large aquatic pesticide permittee businesses.

[19] WA Ecology, 2020. Permitting and Reporting Information System (PARIS). Active permittees for the Aquatic Plant and Algae Management General Permit.
[20] Infogroup, 2020. Employment database for Washington State. Missing values were determined using employer websites or aggregators.

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Chapter 4: Mitigation of Disproportional Impacts

The general permit does not impose disproportionate costs on small businesses as compared to large businesses covered by the permit, as only small businesses are covered under the current permit.

While this means Ecology is not required under the governing rule (WAC 173-226-120) to include mitigation of disproportionate impact in the permit, this chapter discusses elements of the permit that allow for flexibility and reductions in compliance costs.

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.

4.2 Mitigation actions

Ecology has taken the following actions to mitigate the compliance cost impact of the permit. These actions arose during the development of the current and past permits, as Ecology incorporated input from stakeholders to best achieve environmental protection while reducing compliance burden.

- Allowing the permittee to occasionally give Ecology less notice of a pending treatment, as needed.
- Allowing the permittee to alter an existing treatment schedule to accommodate treatment of a cyanobacterial bloom.
- Allowing one sign for two or more chemicals instead of separate signs for each chemical used.
- Allowing signage to be placed on gates that are the only access to the shoreline, in lieu of signs every 100 feet.

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.

US Bureau of Labor Statistics, 2019. May 2019 State Occupational Employment and Wage Estimates. Washington. https://www.bls.gov/oes/current/oes_wa.htm

US Bureau of Labor Statistics, 2020. CPI Inflation Calculator. https://www.bls.gov/data/inflation_calculator.htm

Internal peer review: Review by staff internal to Ecology.

n/a

External peer review: Review by persons that are external to and selected by Ecology.

n/a

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

n/a

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.

n/a

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.

Surveyed printing, copying, envelope, and stamp prices, July 2020. Survey included prices via internet and in-person services at stores with physical locations. Prices may be lower if supplies are purchased via online-only marketplaces, but would include shipping costs.

2015 survey of newspaper legal notice pricing, updated to 2020 prices using US Bureau of Labor Statistics, 2020. CPI Inflation Calculator. https://www.bls.gov/data/inflation_calculator.htm

Surveyed printing prices, July 2020. Survey included prices via internet and in-person services at stores with physical locations. Prices may be lower if supplies are purchased via online-only marketplaces, but would include shipping costs.

Surveyed printing prices, July 2020. Survey included prices via internet and in-person services at stores with physical locations that offered two-foot by three-foot weatherproof signs.

Surveyed online prices for scientific equipment, July 2020. Prices for DO and pH meters include the range from the meter itself, to complex test kits.

WA Ecology, 2020. Permitting and Reporting Information System (PARIS). Active permittees for the Aquatic Plant and Algae Management General Permit.

Infogroup, 2020. Employment database for Washington State. Missing values were determined using employer websites or aggregators.

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

Email communication with Danielle Edelman, with information from Nathan Lubliner, WA Ecology. Best professional judgement. Email dated 08/03/20.

Other: Sources of information that do not fit into other categories.

n/a