



DEPARTMENT OF
ECOLOGY
State of Washington

Economic Impact Analysis

*Draft Aquatic Plant and Algae Management
General Permit*

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For more information contact:

Water Quality Program
P.O. Box 47600
Olympia, WA 98504-7600

Phone: 360-407-6400

Washington State Department of Ecology - www.ecy.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
- Eastern Regional Office, Spokane 509-329-3400

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Economic Impact Analysis

Draft Aquatic Plant and Algae Management General Permit

Prepared by

Shon Kraley, Ph.D.

for the

Water Quality Program
Washington State Department of Ecology
Olympia, Washington

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Executive Summary

Purpose of the analysis

The Department of Ecology (Ecology) proposes to issue the draft general permit so dischargers operating under coverage of this draft general permit will comply with the Federal Clean Water Act (CWA) and with the Washington Water Pollution Act (Revised Code of Washington (RCW) 90.48.080). Ecology's Waste Discharge General Permit Program rule (Washington Administrative Code (WAC) 173-226-120) requires an economic analysis of any draft wastewater general permit intended to directly cover small businesses.

Requirements of the draft general permit

Applicants must apply for and receive permit coverage before any aquatic herbicide discharge (treatment). Once the NOI has been submitted, the applicant must publish a public notice in a local newspaper, and distribute the public notice to any potentially affected water front residents and businesses.

Permittees are required to post signs at the treatment site before applying herbicides. They are required to email pre- and post-treatment notices to Ecology weekly. In some cases, they are required to monitor for dissolved oxygen, pH, or rare plants.

Permittees must submit an annual report of permit activities online through Secure Access Washington (SAW). The report is required even if no treatment occurred during the reporting season.

Proportionality and mitigation

The purpose of the economic impact analysis is to provide a comparison of the cost of compliance for small businesses and large businesses. This draft permit only covers aquatic plant management or pesticide application companies that fall under the definition of a small business. Therefore, it is not possible for Ecology to compare the costs incurred by large businesses versus costs incurred by small businesses.

Because the draft permit only covers small businesses, and therefore cannot disproportionately impact them when compared to large businesses, Ecology is not required to mitigate the impacts on small businesses.

Chapter 1 Overview

1.1 Purpose of the analysis

The Department of Ecology (Ecology) proposes to issue the draft general permit so dischargers operating under coverage of this draft general permit will comply with the Federal Clean Water Act (CWA) and with the Washington Water Pollution Act (Revised Code of Washington (RCW) 90.48.080). Ecology's Waste Discharge General Permit Program rule (Washington Administrative Code (WAC) 173-226-120) requires an economic analysis of any draft wastewater general permit intended to directly cover small businesses. This analysis is required to include:

- A brief description of the compliance requirements of the draft general permit.
- The estimated costs for complying with the draft general permit, based on existing data for facilities to be covered under the draft general permit.
- 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 to be covered under the draft general permit.
- Discuss what mitigation the draft general permit provides to reduce the effect on small businesses (if a disproportionate impact is expected), without compromising the mandated intent of the draft general permit.

The Regulatory Fairness Act (RCW 19.85.020(3)) defines a small business as any business entity, including a sole proprietorship, corporation, partnership, or other legal entity, that is owned and operated independently from all other businesses, that has fifty or fewer employees.

Under WAC 173-226-120, reductions in compliance costs for small businesses may be achieved by:

- Establishing different compliance and reporting requirements for small businesses
- Clarifying, consolidation, or simplification of compliance and reporting requirements
- Establishing performance standards instead of design standards
- Exempting small businesses from parts of the draft general permit

This analysis does not include benefits or environmental impacts. It only estimates the additional costs borne by expected permittees resulting from compliance with the requirements of the draft general permit.

Chapter 2 Requirements of the draft general permit

2.1 Application for permit coverage

Applicants must apply for and receive permit coverage before any aquatic herbicide discharge (treatment). Applying for permit coverage requires:

- Logging into an online system.
- Filling out a Notice of Intent Permit Application (NOI).
- Printing and signing the NOI.

The NOI includes information on:

- Permittee
- Sponsor
- Discharge Location
- Aquatic plants targeted
- Herbicides to be used

Once the NOI has been submitted, the applicant must publish a public notice in a local newspaper, and distribute the public notice to any potentially affected water front residents and businesses.

2.2 Sign postings at the treatment site

Permittees are required to post signs at the treatment site before applying herbicides. Permittees must include the following information on each sign:

- Date of treatment
- Any water use restrictions
- Name of the chemical used
- Contact information
- GPS coordinates of the polygon corners of the treatment area

Sign templates are available on the permit webpage.

Permittees must also:

- Print the signs on 8.5" x 11" paper
- Post two signs (one facing the water and one facing the shore)
- Place the signs every 100 feet
- Post signs in the commonly spoken language(s) of the area

2.3 Notice to Ecology before and after treatment

Permittees are 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, and post-treatment notices are for work that occurred the previous week.

2.4 Monitoring for dissolved oxygen, pH, and rare plants

2.4.1 Dissolved oxygen

In some cases, permittees are required to monitor for dissolved oxygen. For example, waterbodies listed as impaired (303d list category 5).

2.4.2 pH

When the permittee is using alum or calcium hydroxide for nutrient inactivation, they must monitor pH two times each day for the duration of the treatment. For continuous injection systems for alum and calcium hydroxide, pH must be monitored once every two weeks during the first month of continuous injection and then once a month for the duration of the injection process.

2.4.3 Rare plants

Waterbodies throughout Washington contain plants that are considered rare. Rare plants are listed in the Washington State Department of Natural Resources (DNR) Natural Heritage Program (NHP) database. When treatment occurs in a waterbody with a rare plant, mitigation depends on whether the treatment is for eradication or control of aquatic plants.

2.5 Annual reporting

Permittees must submit an annual report of permit activities online through Secure Access Washington (SAW). 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

2.6 Additional compliance requirements

2.6.1 Providing alternative water supplies during restricted use due to treatment.

Permittees have other requirements that affect the application of aquatic chemicals. There are lakes from which drinking water, livestock water, or irrigation water is drawn under a legal water right. In these cases, if a legal water right holder affected by a treatment notifies the permittee beforehand, the applicator must provide an alternate water supply. The water supply must be provided for the length of time that the water right holder cannot use the water due to use restrictions.

2.6.2 Treatment windows

While developing the draft permit, Ecology worked with Washington State Department of Fish and Wildlife (WDFW) to update the treatment windows. Treatment windows are specific to each Washington lake and provide dates during which treatment may occur. Treatment outside those dates may not be allowed if there are organisms or life-stages that are sensitive to herbicides, habitat alterations, or disturbance of nesting areas. WDFW determined the presence of species; Ecology determined which chemicals fall under the treatment window for fish timing.

Littoral zone limitations apply when a permittee is treating native nuisance plants. Depending on lake size, permittees may only treat a certain portion of the littoral zone. The littoral zone is the part of the lake that supports plant growth. Ecology limits the littoral zone treatment to help preserve habitat, while allowing removal of aquatic plants and algae to support other beneficial uses of the water body.

For treatment of native nuisance plants, where littoral zone limitations apply, once an area has been treated it counts toward the total amount of littoral zone that may be treated for a lake. The treated area must remain the same for the entire draft permit life cycle. For example, 50 percent of a lake may be treated one year, but the 50 percent must remain the same for the next four years of the draft permit life cycle.

Chapter 3 Costs to comply with the draft general permit

A summary of the costs to comply with the draft general permit, attributable to Ecology's discretion, is shown below. Discretion refers to the requirements Ecology chose to include in the draft general permit. This analysis examines the requirements Ecology chose that are more stringent than the baseline, because the more stringent regulatory requirements apply. We compare Ecology's draft general permit to a baseline of no general permit and applicable laws and rules including:

- 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 CR 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).
- Federal Insecticide, Fungicide, and Rodenticide Act laws and labels.
- 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).

Table 1: Summary of additional compliance costs

Draft permit requirements (per business)	Cost
Administrative Costs	
Initial public newspaper notice ¹	\$384 - \$1,152
Business and Residential Notice ²	\$59
Equipment/Supplies	
Treatment area posting ³	\$1 per 100 feet
Dissolved oxygen meter (one-time cost)	\$400
pH meter (one-time cost)	\$100
Labor Costs	
NOI and Reporting	Extra staff time
Treatment area posting	Extra staff time
Monitoring	Extra staff time

The draft general permit may impose disproportionately larger costs on smaller businesses. The compliance costs we estimate do not vary by business size. Each business expected to be covered by the draft general permit incurs the same constant compliance costs.

¹ The cost depends on the newspaper (e.g. The Olympian and The Seattle Times, assuming 40 lines of text.

² Assuming 100 notices (\$0.10 for each copy, \$0.49 postage.

³ Two 8.5 x 11 inch signs \$0.10 each, and a grading stake – 1 x 2 x 24 inch bundle of 12, \$5.

Chapter 4 Proportionality and Mitigation

4.1 Comparison of compliance costs for large and small businesses

The purpose of the economic impact analysis is to provide a comparison of the cost of compliance for small businesses and large businesses. This draft permit only covers aquatic plant management or pesticide application companies that fall under the definition of a small business. Therefore, it is not possible for Ecology to compare the costs incurred by large businesses versus costs incurred by small businesses. However, Ecology did estimate the possible costs incurred by small businesses, or their clients, and developed a draft general permit that creates compliance with the applicable laws while minimizing burden on those required to comply. Ecology could not affect permit fees in the draft general permit, as those are set by rule.

It is possible that small businesses could incur significant costs from complying with the requirements of a permit. However, the discharge of aquatic pesticides is significantly different from a traditional discharge (e.g., industrial stormwater, wastewater treatment plant) where the business owner must comply with permit requirements and implement discharge treatment or control methods at their own cost. For aquatic herbicide treatment, the business owner is intentionally discharging a chemical for a specific purpose, the management of aquatic plants and algae. Therefore, implementing traditional discharge treatment and control methods to comply with a permit is not necessary, and not a cost that the small business bears. In addition, because the small business is contracted to perform a service, the costs (including the costs for complying with the permit) associated with the service are not typically borne by the small business. The costs of permit compliance are, to the extent possible, going to be passed on to the client.

In the event a small business is unable to pass on to its clients some or all costs of compliance with this draft permit at the risk of losing business (for example, in the case of a severe economic downturn), Ecology believes a business will choose the option with the greatest net benefit (benefit in excess of costs). This means a business will take on the smallest share of compliance costs possible, as necessary to retain clients. In a worst-case scenario, this means a business itself would incur all of the applicable compliance costs listed in this document, while a client would incur the costs of the aquatic plant and algae control service.

4.2 Existing mitigation

Though it is impossible to compare the impacts of the draft general permit on small versus large businesses, a number of measures attempting to mitigate the impacts on small businesses were included in the draft general permit. These act to either facilitate compliance or reduce compliance costs, and include:

- Allowing the permittee to occasionally give Ecology less notice of a pending treatment
- 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

Chapter 5 Conclusion

The draft Aquatic Plant and Algae Management general permit only applies to businesses classified as “small businesses” (50 employees or less). Therefore, it cannot disproportionately impact them as compared to large businesses.

Since the draft permit is not disproportional, Ecology is not required to mitigate the impacts on small businesses.