



Small Business Economic Impact Analysis

Irrigation System Aquatic Weed and Algae Control General Permit

**National Pollution Discharge Elimination System
(NPDES) Wastewater Discharge General Permit**

By

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For the

Water Quality Program

Washington State Department of Ecology

Olympia, Washington

September 2021

Publication 21-10-056

Publication Information

This document is available on the Department of Ecology's website at:
<https://apps.ecology.wa.gov/publications/SummaryPages/2110056.html>

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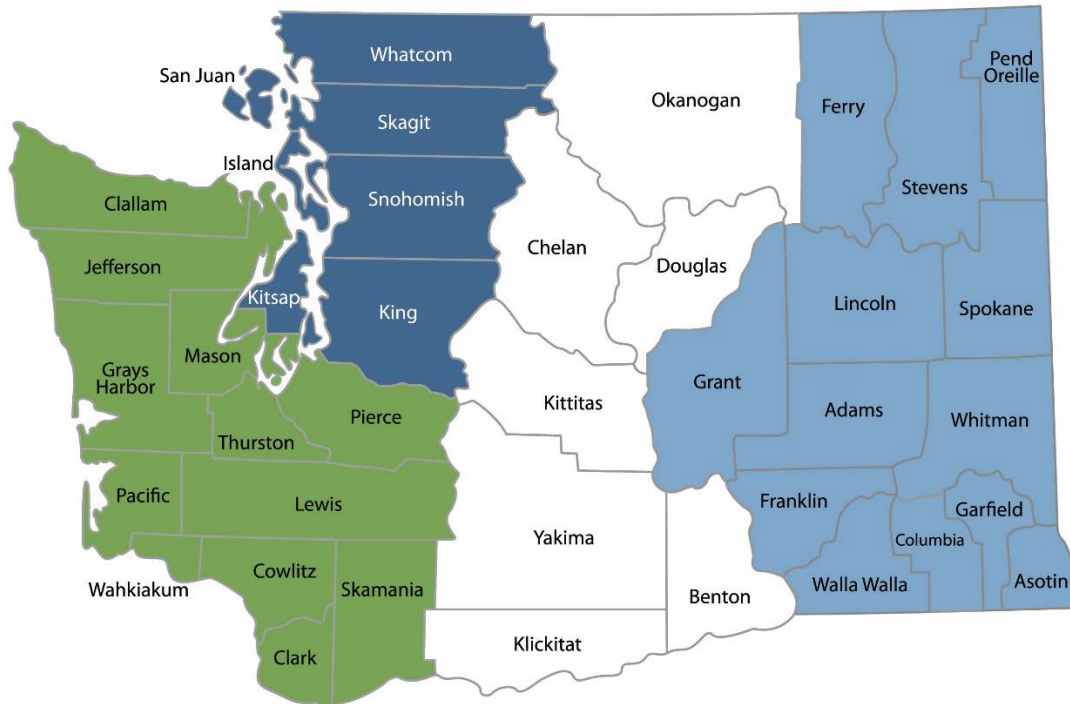
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Map of Counties Served



Southwest Region 360-407-6300	Northwest Region 206-594-0000	Central Region 509-575-2490	Eastern Region 509-329-3400
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Region	Counties served	Mailing Address	Phone
Southwest	Clallam, Clark, Cowlitz, Grays Harbor, Jefferson, Mason, Lewis, Pacific, Pierce, Skamania, Thurston, Wahkiakum	PO Box 47775 Olympia, WA 98504	360-407-6300
Northwest	Island, King, Kitsap, San Juan, Skagit, Snohomish, Whatcom	PO Box 330316 Shoreline, WA 98133	206-594-0000
Central	Benton, Chelan, Douglas, Kittitas, Klickitat, Okanogan, Yakima	1250 W Alder St Union Gap, WA 98903	509-575-2490
Eastern	Adams, Asotin, Columbia, Ferry, Franklin, Garfield, Grant, Lincoln, Pend Oreille, Spokane, Stevens, Walla Walla, Whitman	4601 N Monroe Spokane, WA 99205	509-329-3400
Headquarters	Across Washington	PO Box 46700 Olympia, WA 98504	360-407-6000

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Irrigation System Aquatic Weed and Algae Control General Permit National Pollutant Discharge Elimination System (NPDES) and State Waste Discharge General Permit

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Washington State Department of Ecology
Olympia, WA

September 2021 | Publication 21-10-056



DEPARTMENT OF
ECOLOGY
State of Washington

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Acronyms

BMP	Best Management Practice
CFR	Code of Federal Regulations
Cfs	Cubic feet per second
DMR	Discharge Monitoring Report
DNR	(Washington State) Department of Natural Resources
Ecology	Washington State Department of Ecology
EUP	Experimental Use Permit
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
NOI	Notice of Intent
NOT	Notice of Termination
NPDES	National Pollutant Discharge Elimination System
POC	Point of Compliance
RCW	Revised Code of Washington
SAW	Secure Access Washington
SEPA	State Environmental Protection Act
WAC	Washington Administrative Code
WSDA	Washington State Department of Agriculture
WQWebDMR	Ecology's Water Quality Permitting Portal

Executive Summary

This Small Business Economic Impact Analysis (SBEIA) estimates the costs of complying with the Irrigation Aquatic Weed and Algae Control 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) 173-226-120², 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:

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

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

Table 1: Estimated Annual Compliance costs by permittee geographic size

Cost Type	Small Size Low Estimate	Small Size High Estimate	Large Size Low Estimate	Large Size High Estimate
Application	\$2,574	\$12,716	\$2,574	\$12,716
Notification	\$12,628	\$37,884	\$12,628	\$37,884
Posting	\$1,296	\$2,556	\$1,296	\$2,556
Monitoring				
Acrolein	\$3,641	\$3,641	\$17,069	\$17,069
Copper (dissolved)	\$3,641	\$3,641	\$17,069	\$17,069
Endothall	\$3,641	\$3,641	\$17,069	\$17,069
Flow	\$1,849	\$1,849	\$8,669	\$8,669
Total water hardness (only when monitoring copper)	\$1,849	\$1,849	\$8,669	\$8,669
Xylene	\$3,641	\$3,641	\$17,069	\$17,069
Reporting	\$248	\$495	\$248	\$495

There are both small and large businesses currently permitted. Small businesses average 7.6 employees, and large businesses average 50 employees.

Table 2: Estimated Annual Compliance costs per employee for small businesses by permittee geographic size

Cost Type	Small Size Low Estimate	Small Size High Estimate	Large Size Low Estimate	Large Size High Estimate
Application	\$339	\$1,673	\$339	\$1,673
Notification	\$1,662	\$4,985	\$1,662	\$4,985
Posting	\$171	\$336	\$171	\$336
Monitoring				
Acrolein	\$479	\$479	\$2,246	\$2,246
Copper(dissolved)	\$479	\$479	\$2,246	\$2,246
Endothall	\$479	\$479	\$2,246	\$2,246
Flow	\$243	\$243	\$1,141	\$1,141
Total water hardness (only when monitoring copper)	\$243	\$243	\$1,141	\$1,141
Xylene	\$479	\$479	\$2,246	\$2,246
Reporting	\$33	\$65	\$33	\$65

Table 3: Estimated Annual Compliance costs per employee for large businesses by permittee geographic size

Cost Type	Small Size Low Estimate	Small Size High Estimate	Large Size Low Estimate	Large Size High Estimate
Application	\$51	\$254	\$51	\$254
Notification	\$253	\$758	\$253	\$758
Posting	\$26	\$51	\$26	\$51
Monitoring				
Acrolein	\$73	\$73	\$341	\$341
Copper (dissolved)	\$73	\$73	\$341	\$341

Cost Type	Small Size Low Estimate	Small Size High Estimate	Large Size Low Estimate	Large Size High Estimate
Endothall	\$73	\$73	\$341	\$341
Flow	\$37	\$37	\$173	\$173
Total water hardness (only when monitoring copper)	\$37	\$37	\$173	\$173
Xylene	\$73	\$73	\$341	\$341
Reporting	\$5	\$10	\$5	\$10

The cost-per-employee ratios fall as the number of employees increases. Ecology concluded, based on this result, that **the general permit has a disproportionate impact on small businesses.**

As with all aquatic pesticide permits issued by the Department of Ecology, the Irrigation System Aquatic Weed Control general permit does not direct permittees to use any specific pesticide, chemical, or other aquatic plant or algae management treatment. Entities with coverage under this permit may use their discretion to determine the feasibility, cost-effectiveness, and efficacy of treatments within their coverage area and choose management strategies accordingly. The Permit conditionally allows the use of a variety of active ingredients, and permittees may choose any products that contain aquatic formulations of those active ingredients that are approved by WSDA. Permittees may also use hand pulling or other mechanical removal methods without permit coverage, though this is often time consuming and more expensive than chemical removal.

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Chapter 1: Introduction to the Economic Impact Analysis

This Small Business Economic Impact Analysis (SBEIA) estimates the costs of complying with the Irrigation Aquatic Weed and Algae Control 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) 173-226-120³, 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

The Irrigation System Aquatic Weed Control general permit is a combined National Pollutant Discharge Elimination System general permit and State waste discharge general permit. This permit provides coverage for the conditional use of pesticides, marker dyes, and other chemicals to manage and eradicate aquatic plants and algae in irrigation canals that flow into surface Waters of the State of Washington. Under federal and state water quality laws (the Federal Clean Water Act and State Water Pollution Control Act), a permit is required for the discharge of these chemicals.

The permittees for this permit are:

- Irrigation districts.
- Reclamation districts.
- Water companies.
- Similar entities that manage irrigation systems and provide water for agriculture.

At present, there are 19 active coverages under 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).
- 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 Insecticide, Fungicide, and Rodenticide Act laws and labels.

- 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

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 4: Permit requirements

Requirement	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
Monitoring	S5	Discretionary; Compliance with baseline laws and rules	Discretionary elements
Spill prevention and control	S6B	Compliance with baseline laws and rules	No
Notification, inspection, and posting signs	S6D	Discretionary	Yes
Recordkeeping	S7	Discretionary	Yes
Reporting	S8	Discretionary	Yes

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). Many of the costs estimated depend on the physical size and geographic makeup of the irrigation district. When referring to large and small districts, this is NOT indicating large or small businesses (in terms of number of employees).

2.1 Compliance costs

Costs associated with permit requirements above the baseline include costs of complying with.

- Application for coverage.
- Notification and posting
- Monitoring.
- Reporting and recordkeeping.

2.1.1 Application for coverage

Businesses applying for coverage under the permit would need to complete the Notice of Intent (NOI) Permit Application using the Secure Access Washington (SAW) online system to provide the following:

- Permittee contact information.
- Discharge Location.
- Map of area covered by permit.
- Integrated Pest Management Plan.
- Spill Control Plan.
- Current travel time study for each segment of the canal that contains an application site where treated water flows to a point of compliance (POC).
- Endothall Application Plan.
- Fluridone Application Plan.
- Acrolein Application Plan.

Gathering the information required for the application would likely be part of the planning process to determine whether and where treatment is necessary, and therefore part of the baseline. Completion of permit-required plans is estimated to take 80 to 480 hours.

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 both types of applicants, application efforts would take between one and five hours.

To estimate the hourly wages for applicators we used the average wage for “Pesticide Handlers, Sprayers, and Applicators, Vegetation” in Washington State.⁴ The May 2020 average hourly wage was \$19.38. Adjusted for inflation to July 2021 dollars, this hourly wage becomes \$20.64.⁵

Based on the hourly wage estimate, permit application labor, for each permittee would cost between \$1,672 and \$10,010.

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.

The cost of 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 \$902 and \$2,706.⁶

Thus, the costs associated with applying for the permit are estimated to range from \$2,574 to \$12,716

2.1.2 Notification and posting

Notification

Permittees must notify the public about each herbicide treatment and can choose between two different notification methods below:

1. Post the public notice on the permittee’s website and/or distribute the notice to known interested parties through email or other electronic methods.
2. Publish the public notice in a newspaper with general circulation within the area where pesticide treatments will occur.

If the permittee uses the second option, the cost would range from \$451 to \$1,353⁷ per treatment. The number of treatments per season varies substantially between districts and across years.

⁴ US Bureau of Labor Statistics, 2020. May 2020 State Occupational Employment and Wage Estimates. Washington. https://www.bls.gov/oes/current/oes_wa.htm

⁵ US Bureau of Labor Statistics, 2021. CPI Inflation Calculator. https://www.bls.gov/data/inflation_calculator.htm

⁶ 2015 survey of newspaper legal notice pricing, updated to 2021 prices using US Bureau of Labor Statistics, 2021. CPI Inflation Calculator. https://www.bls.gov/data/inflation_calculator.htm

⁷ 2015 survey of newspaper legal notice pricing, updated to 2021 prices using US Bureau of Labor Statistics, 2021. CPI Inflation Calculator. https://www.bls.gov/data/inflation_calculator.htm

We assumed permittees apply one treatment per week between April and October, which would be 28 treatments with an estimated annual cost of \$12,628 to \$37,884. Permittees could avoid this cost if they use the first option.

Posting signs

When applying acrolein, endothall, or xylene, the permittee must also post signs at locations where the public is likely to encounter treated water.

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 5 to 50 signs. At a printing cost of \$0.50 per sign, 10 to 100 signs (two sides of 50 signs, printed separately) would cost \$5 to \$50 to print.⁸

We assumed the labor to fill out the appropriate template(s) and post signs would take about two hours. This was based on the simplifying assumption that 50 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). To estimate the hourly wages for applicators we used the average wage for “Pesticide Handlers, Sprayers, and Applicators, Vegetation” in Washington State.⁹ The May 2020 average hourly wage was \$19.38. Adjusted for inflation to July 2021 dollars, this hourly wage becomes \$20.64.¹⁰

This total labor cost would be \$41.28. When combined with the printing cost the estimated total cost, per treatment for posting, is \$46.28 to \$91.28. with an estimated annual costs of \$1,296 to \$2,556 for 28 treatments.

Permittees doing multiple treatments over time during the life of the permit could save costs by making reusable signs.

2.1.3 Monitoring

Monitoring requirements depend on the chemical the permittee applies. Each type and location of monitoring has additional specific requirements for sampling locations and timing. Permittees must monitor at each POC.

⁸ Surveyed printing prices, July 2020, updated to 2021 prices using US Bureau of Labor Statistics, 2021. CPI Inflation Calculator. https://www.bls.gov/data/inflation_calculator.htm. 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.

⁹ US Bureau of Labor Statistics, 2020. May 2020 State Occupational Employment and Wage Estimates. Washington. https://www.bls.gov/oes/current/oes_wa.htm

¹⁰ US Bureau of Labor Statistics, 2021. CPI Inflation Calculator. https://www.bls.gov/data/inflation_calculator.htm

Table 5: Monitoring requirements

Parameter	Measurement Type	Measurement Frequency
Acrolein	Grab	Twice per treatment.
Copper (dissolved)	Grab	Twice per treatment.
Endothall	Grab	Twice per treatment.
Flow	Meter or estimate ¹¹	Concurrent with all other samples; required before acrolein treatments.
Total water hardness (only when monitoring copper)	Grab	Concurrent with copper samples.
Xylene	Grab	Twice per treatment.

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

- The date, exact place, and time of sampling.
- Who performed the 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 one hour per POC. Flow and total hardness can be measured by the permittee, while the others would require lab analysis. Each sample would cost \$20 for lab analysis¹².

¹¹ A meter is required for permittees that use acrolein.

¹² Columbia Laboratories, 2021.

To estimate the hourly wages for applicators we used the average wage for “Pesticide Handlers, Sprayers, and Applicators, Vegetation” in Washington State.¹³ The May 2020 average hourly wage was \$19.38. Adjusted for inflation to July 2021 dollars, this hourly wage becomes \$20.64.¹⁴

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

- \$20.64 per POC for flow and total hardness monitoring.
- \$40.64 per POC for each type of other monitoring

The number of POCs vary by permittee. Two permittees have 15 POCs each, while the others average 3.2 POCs each. Table 3 shows monitoring costs per treatment by permittee geographic size.

Table 6: Estimated Monitoring costs per treatment by permittee geographic size

Parameter	Small Size	Large Size
Acrolein	\$130	\$610
Copper (dissolved)	\$130	\$610
Endothall	\$130	\$610
Flow	\$66	\$310
Total water hardness (only when monitoring copper)	\$66	\$310
Xylene	\$130	\$610

Table 7: Estimated Annual Monitoring costs by permittee geographic size

Parameter	Small Size	Large Size
Acrolein	\$3,641	\$17,069
Copper (dissolved)	\$3,641	\$17,069
Endothall	\$3,641	\$17,069
Flow	\$1,849	\$8,669
Total water hardness (only when monitoring copper)	\$1,849	\$8,669
Xylene	\$3,641	\$17,069

¹³ US Bureau of Labor Statistics, 2020. May 2020 State Occupational Employment and Wage Estimates. Washington. https://www.bls.gov/oes/current/oes_wa.htm

¹⁴ US Bureau of Labor Statistics, 2021. CPI Inflation Calculator. https://www.bls.gov/data/inflation_calculator.htm

2.1.4 Reporting

Permittees must submit a monthly Discharge Monitoring Report (DMR) of permit activities using the Water Quality Permitting Portal (WQWebPortal) in the SAW online system. The report is required even if no treatment occurred during the reporting season and it must include the following information:

- Sample collection information.
- Sample analysis information.
- Acrolein applications.
- Endothall applications.
- Fluridone and imazapyr applications.

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, enter, and submit through the SAW online system.

To estimate the hourly wages for applicators we used the average wage for “Pesticide Handlers, Sprayers, and Applicators, Vegetation” in Washington State.¹⁵ The May 2020 average hourly wage was \$19.38. Adjusted for inflation to July 2021 dollars, this hourly wage becomes \$20.64.¹⁶

One to two hours of reporting labor would cost between \$20.64 and \$41.28 monthly and between \$248 and \$495 annually.

¹⁵ US Bureau of Labor Statistics, 2020. May 2020 State Occupational Employment and Wage Estimates. Washington. https://www.bls.gov/oes/current/oes_wa.htm

¹⁶ US Bureau of Labor Statistics, 2021. CPI Inflation Calculator. https://www.bls.gov/data/inflation_calculator.htm

2.2 Summary of compliance costs

The table below summarizes estimated compliance costs. Not all districts will face all of these costs. For underlying assumptions, see section 2.1.

Table 8: Estimated Annual Compliance costs by permittee geographic size

Cost Type	Small Size Low Estimate	Small Size High Estimate	Large Size Low Estimate	Large Size High Estimate
Application	\$2,574	\$12,716	\$2,574	\$12,716
Notification	\$12,628	\$37,884	\$12,628	\$37,884
Posting	\$1,296	\$2,556	\$1,296	\$2,556
Monitoring				
Acrolein	\$3,641	\$3,641	\$17,069	\$17,069
Copper (dissolved)	\$3,641	\$3,641	\$17,069	\$17,069
Endothall	\$3,641	\$3,641	\$17,069	\$17,069
Flow	\$1,849	\$1,849	\$8,669	\$8,669
Total water hardness (only when monitoring copper)	\$1,849	\$1,849	\$8,669	\$8,669
Xylene	\$3,641	\$3,641	\$17,069	\$17,069
Reporting	\$248	\$495	\$248	\$495

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

There are both small and large businesses currently permitted. Small businesses average 7.6 employees, and large businesses average 50 employees.

3.2 Relative costs of compliance

To determine the relative cost of compliance, we compare the cost per employee for small businesses to the cost per employee for large businesses.

Table 9: Estimated Annual Compliance costs per employee for small businesses by permittee geographic size

Cost Type	Small Size Low Estimate	Small Size High Estimate	Large Size Low Estimate	Large Size High Estimate
Application	\$339	\$1,673	\$339	\$1,673
Notification	\$1,662	\$4,985	\$1,662	\$4,985
Posting	\$171	\$336	\$171	\$336
Monitoring				
Acrolein	\$479	\$479	\$2,246	\$2,246
Copper (dissolved)	\$479	\$479	\$2,246	\$2,246
Endothall	\$479	\$479	\$2,246	\$2,246

Cost Type	Small Size Low Estimate	Small Size High Estimate	Large Size Low Estimate	Large Size High Estimate
Flow	\$243	\$243	\$1,141	\$1,141
Total water hardness (only when monitoring copper)	\$243	\$243	\$1,141	\$1,141
Xylene	\$479	\$479	\$2,246	\$2,246
Reporting	\$33	\$65	\$33	\$65

Table 10: Estimated Annual Compliance costs per employee for large businesses by permittee geographic size

Cost Type	Small Size Low Estimate	Small Size High Estimate	Large Size Low Estimate	Large Size High Estimate
Application	\$51	\$254	\$51	\$254
Notification	\$253	\$758	\$253	\$758
Posting	\$26	\$51	\$26	\$51
Monitoring				
Acrolein	\$73	\$73	\$341	\$341
Copper (dissolved)	\$73	\$73	\$341	\$341
Endothall	\$73	\$73	\$341	\$341
Flow	\$37	\$37	\$173	\$173
Total water hardness (only when monitoring copper)	\$37	\$37	\$173	\$173
Xylene	\$73	\$73	\$341	\$341
Reporting	\$5	\$10	\$5	\$10

The cost-per-employee ratios fall as the number of employees increases. 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.

4.2 Mitigation actions

As with all aquatic pesticide permits issued by the Department of Ecology, the Irrigation System Aquatic Weed Control general permit does not direct permittees to use any specific pesticide, chemical, or other aquatic plant or algae management treatment. Entities with coverage under this permit may use their discretion to determine the feasibility, cost-effectiveness, and efficacy of treatments within their coverage area and choose management strategies accordingly. The Permit conditionally allows the use of a variety of active ingredients, and permittees may choose any products that contain aquatic formulations of those active ingredients that are approved by WSDA. Permittees may also use hand pulling or other mechanical removal methods without permit coverage, though this is often time consuming and more expensive than chemical removal.

Ecology directs permittees to use sampling methods approved and required by the EPA to avoid the necessity for additional sampling equipment or uncommon lab tests.

The Permit provides options for permittees to reduce their monitoring and sampling costs. Permittees with a history of consistent permit compliance may apply for a reduced monitoring plan, which limits the number of samples permittees must take each year. This lowers the costs of both monitoring and sampling, as permittees with these plans have fewer water samples to send to the lab for testing.

Permit reissuance, along with new permit conditions, will cause permittees additional work in the first year of the permit cycle.

There are a number of plans and reports, including Integrated Pest Management Plans, Education and Outreach Plans, Treatment Plans for certain active ingredients, and Spill Response Plans.

Permittees will have an extended deadline to complete and submit these plans to Ecology, which will reduce administrative burden on permittees. Also, permittees may work together or with an outside organization to develop Education and Outreach Plans to reduce costs. Ecology will provide technical assistance as necessary to help permittees develop and submit these plans. If permittees already have education and outreach materials or tools (e.g. a website that explains activities at the irrigation district), they may submit those materials as part of the plan.

The additional hardness testing that permittees must complete at the start of the new permit cycle is limited in scope to reduce the number of times permittees must go out into the field to collect water samples. Permittees already have the sampling equipment necessary to collect grab samples, and many permittees will already have hardness sampling equipment due to the permit requirement to sample water hardness during copper treatments. Ecology solicited advice from permittees during the permit development process to set a sampling schedule and sampling radius that reduces the impact to permittees' schedules and budgets.

Permittees will need to submit DMRs, annual reports, and proof of public notice digitally as required by the permit. Later in the permit cycle, new permittees may need to submit NOIs (Notices of Intent) digitally as well. Permittees with unreliable access to internet or with internet service that can't support document uploads will be able to request a digital reporting waiver and continue to submit hard copies of document through the mail. As a result of digital reporting, permittees will no longer be required to print out copies of every document they submit to Ecology or pay for postage on those documents.

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, 2020. May 2020 State Occupational Employment and Wage Estimates. Washington. https://www.bls.gov/oes/current/oes_wa.htm

US Bureau of Labor Statistics, 2021. 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.

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 15.58 RCW: Washington pesticide control

Chapter 17.21 RCW: Washington pesticide application.

Chapter 90.48 RCW: Water Pollution Control.

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.

2015 survey of newspaper legal notice pricing, updated to 2021 prices using US Bureau of Labor Statistics, 2021. CPI Inflation Calculator. https://www.bls.gov/data/inflation_calculator.htm.

U.S. Department of Commerce: Bureau of Economic Analysis (2021). Gross National Product: Implicit Price Deflator. <http://research.stlouisfed.org/fred2/data/GNPDEF.txt>.

U.S. Treasury (2021): Historical I-bond Rates: <https://www.treasury.gov/resource-center/data-chart-center/Pages/index.aspx>.

WA Ecology, 2021. Permitting and Reporting Information System (PARIS). Active permittees for the Irrigation System Aquatic Weed and Algae Control General Permit.

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 08/23/21.

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

n/a