



Washington State Department of Ecology

2007 National Pollutant Discharge Elimination System (NPDES) and Industrial Stormwater General Permit

Economic Impact Analysis

Prepared for
Ecology's Water Quality Program

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Executive Summary

The Industrial Stormwater General Permit is a statewide permit that provides coverage for discharges of stormwater from industrial facilities. The permit specifically regulates discharges of stormwater to surface water bodies. This document evaluates the economic impact of the new Industrial Stormwater General Permit.

Most of the costs analyzed in this document are similar to the costs under the previous permit. The new Industrial General Stormwater Permit will have a disproportionate impact. Ecology can offer very little mitigation without violating requirements of state or federal water pollution control laws. Also, in all the typical cases analyzed, costs to comply are no higher than 0.12% of sales, and they only reach as high as 0.17% in a scenario with a combination of conservative assumptions. Costs may be higher for those in the new Step A or B.

The new permit imposes new costs:

- Hazardous waste treatment, storage, disposal (TSDs), and hazardous waste recycling facilities must apply for coverage under the new permit. This is an expected new federal requirement that has not yet been finalized. Therefore, the costs have been evaluated here.
- New, more stringent benchmarks will trigger a response at some facilities which were in compliance with the last permit:
 - Ammonia benchmarks reflect updated EPA values.
 - Metals benchmarks reflect Washington State stream conditions.
 - Lead is removed as a core sampling parameter.
 - Copper is added as a core sampling parameter.
- Responses are modified:
 - Level 1 will not be in a Step.
 - Level 2 is converted to Step A - Permittees are required to investigate source control and treatment BMPs in Step A.
 - Level 3 is converted to Step B - Permittees are required to prepare an engineering report to verify compliance with the limits and the adaptive management strategy.
 - Permittees are required to evaluate and correct existing BMPs within two weeks of a sample greater than 10 times that of a benchmark.

The new permit reduces sampling costs for most facilities. Facilities can now sample:

- Anytime during discharge rather than being required to sample during the first hour of discharge.
- When a discharge occurs, instead of having to wait until there is at least 0.1 inches of rainfall in a 24-hour period after a 24-hour dry period.

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Introduction

WAC 173-226-120 requires the Department of Ecology to perform an economic analysis of any proposed water quality permit that directly covers small businesses. The analysis must:

1. Explain the compliance requirements of the permit,
2. Determine whether the permit will have a disproportionate impact on small businesses compared to large businesses, and
3. If a disproportionate impact is expected, explain what the permit provides to reduce the impact on small businesses, without compromising the intent of the permit.

Permit Requirements

General

The Industrial Stormwater General Permit regulates stormwater discharges from industrial facilities to surface water bodies. This statewide permit currently provides coverage for approximately 1,150 industrial facilities that discharge stormwater to waters of the state. Ecology may also require industries to seek permit coverage for areas of their industrial sites if their stormwater may pollute surface waters. Ecology typically determines if this applies to an industry on a case-by-case basis but may also apply it to an industrial sector when reissuing the permit.

Ecology requires permit coverage for industrial facilities that conduct activities with specific Standard Industrial Classification (SIC) codes. Facilities with one of these SIC codes must apply for coverage if they discharge stormwater from their industrial areas to storm drains or directly to surface waters. Facilities do not require a permit if they treat and retain all the stormwater on-site (discharge to ground). If the facility has no potential to expose stormwater to pollutants, that facility may apply for a Conditional No Exposure Certificate rather than a permit.

The outline format of the draft permit provides greater clarity of permit requirements. In addition, Ecology removed technical jargon and simplified the wording. Ecology has made several other changes to the draft permit. These include who is required to apply, sampling requirements, benchmarks, and corrective actions.

Evaluation Process

Ecology based our analysis of the new state initiated general permit requirements on:

1. Capital expenses related to Step A and B compliance when facilities exceed benchmarks.
2. Operations and maintenance of pollution control measures used to maintain compliance.
3. Water quality monitoring and analysis, which exceeds the federal requirements.
4. Immediate reporting if the facility exceeds a threshold.
5. Record keeping.

All facilities covered under the permit must comply with both state and federal water pollution legislation and regulation. In practice, this means they must implement AKART, an acronym for

“all known, available, and reasonable methods of prevention, control, and treatment”. Ecology’s *Stormwater Management Manuals* (SWMMs) spell out AKART in the form of Best Management Practices (BMPs) for specific industries. Ecology has published two separate SWMMs, one for eastern and one for western Washington. Ecology revised both manuals in (date?) but there have been no substantive changes in the economic impacts of these documents since the general permit was issued in 2002. Which BMPs are implemented depends upon the facility. Ecology allows a facility to propose alternate BMPs to those published in the SWMMs and expects they will if they can develop more cost effective BMPs than those in the manual.

Capital expenses

Capital expenses fall into two categories:

1. Source control BMPs are those measures designed to prevent contact between potential contaminants and stormwater. Source control BMPs can be as simple as a roof over a storage area to protect stored materials from the rain. They also can be the installation of an impermeable surface where fueling and oil changes occur to reduce the seepage of spills and drips into the ground and the contamination of groundwater.
2. Treatment BMPs remove contamination that has already occurred before stormwater is released from a facility to surface or ground waters. Examples include settlement ponds that allow suspended particles to settle and separate from stormwater; and oil/water separators to remove oil. Source control BMPs remains the higher priority since prevention is typically more effective than treatment.

Operation and maintenance measures

If a facility is placed in Step A or Step B compliance or if they exceed one of their thresholds the Permittees must conduct self-inspections, and if they identify inadequate BMPs or poorly described pollutant sources, they must modify the SWPPP and correct the problems. The operating and maintenance associated with this activity is part of the cost of this permit. This includes regular operation and maintenance activities that keep the BMPs functioning properly. These BMPs include inspections for unexpected failures of the BMPs to regular tasks such as cleaning of an oil/water separator or sump.

Monitoring and Analysis

Monitoring involves visual inspections and three to five samples of discharge water per year. All facilities must analyze their samples for five parameters:

1. Total copper
2. Turbidity
3. Oil and grease
4. pH
5. Total Zinc

Copper and zinc are indicator parameters for metals pollutants. Copper was chosen because small amounts of this metal can cause potential harm to aquatic life including endangered species. Zinc was chosen because it shows up in most stormwater discharges, because galvanized surfaces are often used at facilities. Furthermore, when copper and zinc are found in

the discharge at levels that fall below the benchmarks, the amounts of other metals are probably within the limits of the water quality standards.

Various industrial groups must also test for other pollutants that are likely to be present in their discharge. The costs for a representative selection of industrial groups are analyzed below. All the industries sample for turbidity, pH, zinc, petroleum, and copper. Below is a list of additional required federal tests for the selected industrial groups, which the state is requiring on a more frequent basis.

Industrial Group	Types of Pollutant
Timber products and Paper and allied products	<ul style="list-style-type: none"> • Biological Oxygen Demand (BOD) • Chemical Oxygen Demand (COD) • Total Suspended Solids (TSS) • Benzene, Toluene, Ethylbenzene, Xylene (BTEX)
Air transportation ¹	<ul style="list-style-type: none"> • Ammonia • Nitrate/Nitrite as N • BOD
Chemical and allied products, food and kindred products	<ul style="list-style-type: none"> • Nitrate/Nitrite as N • Phosphorus (TP) • BOD
Primary metals, metals mining, automobile salvage, scrap recycling, metals fabricating	<ul style="list-style-type: none"> • Lead

Ecology is adding a new set of requirements for stormwater from TSDs, and Hazardous Waste Recycling Facilities. This is a subset of the companies within the more general classification of Refuse Systems.

Industrial Group	Type of Pollutant
Hazardous Waste Treatment Storage, and Disposal Facilities, and Recyclers	<ul style="list-style-type: none"> • COD • Ammonia • TSS • Arsenic Total Recoverable • Cadmium Total Recoverable • Cyanide Total Recoverable • Copper Total Recoverable • Lead Total Recoverable • Magnesium Total Recoverable • Mercury Total Recoverable • Selenium Total Recoverable • Silver Total Recoverable • BTEX Total • Total petroleum hydrocarbons

¹ The contamination is from deicing/anti-icing operations. Testing for ammonia and nitrate/nitrite is required only if urea is applied.

	<ul style="list-style-type: none"> • Total organic halides
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Consistent attainment of benchmark values is achieved during two consecutive wet seasons in which the test parameters do not exceed the median of the benchmarks specified in the permit. Consistent attainment on any given set of monitoring parameters exempts the facility from sampling and analysis on that particular set of parameters for the remaining term of the permit.

Reporting

New reporting includes immediate reports of incidents when the facility exceeds a threshold. Reporting includes both Discharge Monitoring Reports (DMR’s) and noncompliance issues. Facilities must submit their monitoring data to the department no later than the due dates for that region.

Record Keeping

Facilities must keep records of their monitoring results for three years. This has been reduced from the prior five-year requirement. This includes:

- Calibration and maintenance records
- Original recordings for continuous monitoring instrumentation
- Records of data used to complete the application for the permit
- Lab results from sampling

Should a facility’s discharge become the subject of unresolved litigation, then the permit provides for an extension of the three-year retention period. Ecology also maintains the right to request an extension of the retention period until resolution of the litigation.

Included vs. Excluded Costs for This Analysis

WAC 173-226-120(3)(b)(i) states:

“The economic analysis of a draft general permit shall include the minimum technology based treatment requirements identified as necessary under WAC 173-226-070.”

WAC 173-226-120(4)(a) states:

“The analysis shall not include the costs necessary to comply with chapters 173-200, 173-201A², 173-204, and 173-224 WAC, nor costs associated with compliance with federal law or regulation.”

Therefore, the last column in the table indicates whether Ecology should consider the costs associated with sections of the individual permit requirements.

Requirement	Condition #	Basis of Requirement ¹	Required to be Considered in Economic Analysis
Submittal of application for	S2.A	Federal	No

² This presumably refers to chapter 173-201A WAC.

Requirement	Condition #	Basis of Requirement ¹	Required to be Considered in Economic Analysis
coverage			
Development of SWPPP	S3.A	Federal	No
General sampling req't (relevant to specific sampling, below)	S4.A	Federal (for years 2 and 4 of a 5-year permit) State (for remainder of 5-year permit)	No Yes
Specific sampling parameters			
Core parameters	S5.A	State	Yes
Industry-specific parameters	S5.B	Federal	No except state is every year
Industries with effluent limits	S5.C	Federal	No except state is every year
Sampling discharges to impaired waters			
Discharges to 303(d)-listed waters	S6.A	State ²	No
Discharges to waters with TMDLs	S6.A	State ²	No
Inspections	S7.	Federal (MSGP requires monthly inspections)	No
Corrective Actions (tentative)			
Step A	S8	State ³	Yes
Step B	S8	State ³	Yes
Reporting			
DMRs	S9	Federal	No
Non-compliance	S9	Federal	No

1. A permit requirement for both state and federal regulations is noted as federal because Ecology's permit is not allowed to be less stringent than the federal permit.
2. 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, the economic analysis is not allowed to consider these sampling costs.
3. MSGP requires permittees "determine what changes are needed," but nothing as prescriptive as Ecology's permit.

Economic Analysis

Definition of small business

For the purposes of this study, a small business is an independent entity with fewer than 50 employees organized for the purpose of making a profit. Enterprises owned by larger corporations are excluded, as are not-for-profit and government enterprises.

Sectors for analysis and sales estimates

The permit involves six different levels of monitoring for different groups of industries. One of these sectors, Hazardous Materials Recyclers and TSDs, has at least nine companies in the state and a very different list of tests for monitoring so we analyzed them separately.³ The other sectors are large with a wide variety of company types so we analyzed a representative sector in each of these five groups. The criteria for “representative” are below:

1. The analysis requires the use of data sources built on the old Standard Industrial Classification system (SIC) together with sources, which use the new North American Industry Classification System (NAICS). Therefore, there must be a reasonable “mapping” between a given SIC sector and some corresponding NAICS sector(s).
2. The sector must have a mix of large and small businesses in Washington.
3. Within the previous two criteria, the sector should be as highly represented as possible among current holders of the stormwater general permit (permit-holders are still classified by SIC).

Data

The first step in the calculation is to estimate a range of sales for small and large firms within the given sector. For each sector chosen, sales and employment are taken from the Economic Census of 2002 (which uses NAICS). These data are presented in Table 1 A. These figures yielded an average level of sales per employee in the sector within Washington. Firm-size data are then gathered from the County Business Patterns (CBP) for 2004. The CBP data give numbers of firms in certain size ranges defined by the number of employees (for instance, how many firms in an industry have 1 to 4 employees, or 5 to 9 employees, and so on). These data are also presented in Table 1 A. By taking the mid-points of these employee ranges, we can derive a range of typical sizes for both small and the 10% of firms that are the largest in the industry. These data are also presented in Table 1 A. Multiplying these firm sizes by the sales-per-employee numbers derived in the first step of calculation described above, we get estimates of average sales by small and large firms in the sector. These data are presented in Table 1 B.

Table 1A: Sales and Employment Data and Table 1B: Calculations

Table 1 A: Sales and Employment Data			2002 Economic Census		County Business Patterns	
Description	1987 SIC	NAICS 2002	Sales	Employees	Average employees	
					Small	Large
Refuse Systems	4953	5622 562920	\$929,778,000	5,837	15.6	221.4
Sawmills and Planing Mills, General	2421	321113 3219	\$3,165,378,000	14,421	12.7	203.6
Airports, Flying Fields, & Airport Terminal Services	4581	4881	\$379,504,000	4,629	15.3	513.9
Prepared Fresh or Frozen Fish and Seafoods	2092	311712	\$1,138,017,000	6,580	20.2	300.0
Scrap and Waste Materials, Metals	5093	423930	\$420,058,000	1,508	9.0	100.0
Hazardous Waste: Treatment Storage & Disposal	4953	562211 562112	\$852,193,000	5,184	17.8	124.5
Table 1 B: Calculations			Sales			
Description	1987 SIC	NAICS 2002	per Employee	Estimated Sales		
				Small	Large	
Refuse Systems	4953	5622 562920	\$159,290	\$2,480,800	\$35,271,443	
Sawmills and Planing Mills, General	2421	321113 3219	\$219,498	\$2,785,934	\$44,683,484	
Airports, Flying Fields, & Airport Terminal Services	4581	4881	\$81,984	\$1,250,256	\$42,130,674	
Prepared Fresh or Frozen Fish and Seafoods	2092	311712	\$172,951	\$3,489,539	\$51,885,274	
Scrap and Waste Materials, Metals	5093	423930	\$278,553	\$2,518,394	\$27,855,305	
Hazardous Waste: Treatment Storage & Disposal	4953	562211 562112	\$164,389	\$2,927,390	\$20,466,441	

³ The economic data for this subset was drawn from a larger group.

Cost estimates

The three major cost components are:

1. Lab fees
2. Labor
3. Equipment

Table 2 presents the estimated annual costs of lab fees. In 1998, Ecology's Lab Accreditation Program surveyed environmental laboratories regarding their fees for various water quality parameters.⁴ In addition, in 2007 Ecology surveyed the three primary labs used by TSDs. The indexed dollar values from the 1998 survey were similar to the more recent data. Therefore, the more recent data was used. This provided average fee levels for each of the monitoring parameters required by the stormwater general permit. It is assumed that small firms will have one sample analyzed for each parameter, while large firms 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 installation.

Table 2: Annual Laboratory Fees

Table 2. Annual Laboratory Fees				
Sector	SIC	Testing group	Small	Large
Refuse Systems	4953	Basic	\$595	\$1,190
Sawmills and Planing Mills, General	2421	Timber Products etc.	\$1,145	\$2,291
Airports, Flying Fields, and Airport Terminal Services	4581	Air transportation	\$989	\$1,978
Prepared Fresh or Frozen Fish and Seafoods	2092	Chemicals and food	\$1,120	\$2,239
Scrap and Waste Materials	5093	Primary metals etc.	\$878	\$1,755
Hazardous Waste: Treatment Storage & Disposal	4953	Transportation Storage and Disposal	\$2,851	\$5,703

Water Quality Program staff provided estimates of employee time required to carry out each of the major tasks required by the permit, divided into time of professional or supervisory personnel and time of other employees. The economic analysis of the 1995 stormwater general permit used labor costs of \$50/hr for professional or supervisory personnel and \$16/hr for employees. These costs included salaries, benefits, and overhead. For the present study, the costs are brought up to date by applying a 12.6% inflationary factor for 1995-2006.⁵ The calculations are based on \$67.37⁶ for professional or supervisory personnel and \$21.56⁷ for employees. For activities associated with monitoring (such as sample collection, record keeping, reporting), large firms are

⁴ Over time, the federal testing requirements are increasing. The analysis does not include COD and TSS tests for Saw Mills because they are a federal requirement. COD, ammonia, TSS, NH₃, NO₃/NO₂, and BOD are not analyzed for Air Transport Service because they are a federal requirement. NO₃/NO₂, BOD, TSS, and COD, are not analyzed for Food and Kindred Service because they are a federal requirement. Lead is not analyzed for Scrap and Waste Materials (metals, auto) because it is a federal requirement.

⁵ <http://www.stls.frb.org/fred/data/gdp/gnpdef>

⁶ This is done for consistency with past reviews of this permit. The value is high given that the mean wage for (classification 11-1021) General and Operations Managers is \$57.87.

http://www.bls.gov/oes/current/oes_wa.htm#b11-0000 downloaded 1/30/2007.

⁷ This is done for consistency with past reviews of this permit. The value is high given that the mean wage for (classification 00-0000) All Occupations is \$19.93. http://www.bls.gov/oes/current/oes_wa.htm#b11-0000 downloaded 1/30/2007.

assumed to require twice as much labor as small firms, to reflect greater sampling activity described above. See Table 3A and Table 3B.

Note: The industry specific sampling costs presented are required by the federal government. However, under the federal program sampling would not occur every year. Since the costs are state costs in 3 out of 5 years, the costs have been included as annual costs to generate the highest costs likely for the years when the federal program would not have required the samples to be taken. Sampling costs are based on professional laboratory fees.

Table 3A: Labor Costs for Small Businesses and Table 3B: Labor Costs for Large Businesses

Table 3 A. Labor Costs for Small Businesses				
Time	Low		High	
	Prof/Sup	Staff	Prof/Sup	Staff
Sampling	1	6	2	12
Training	0	0	2	0
Recordkeeping	0	2	0	4
Total Time	1	8	4	16
Cost	\$67	\$172	\$269	\$345
Total Labor Cost	\$240		\$614	
Note: Professional/Supervisory cost calculated as \$67.370/hr				
Staff cost calculated as \$21.56/hr				

Table 3 B. Labor Costs for Large Businesses				
Time	Low		High	
	Prof/Sup	Staff	Prof/Sup	Staff
Sampling	2	12	4	24
Training	0	0	4	0
Recordkeeping	0	4	0	8
Total Time	2	16	8	32
Cost	\$135	\$345	\$539	\$690
Total Labor Cost	\$480		\$1,229	
Note: Professional/Supervisory cost calculated as \$67.370/hr				
Staff cost calculated as \$21.56/hr				

Note: These labor costs do not include the cost of Step A or B compliance. These are included below.

The Lab Accreditation Program also provided information on equipment requirements for pH testing. For a sample to be valid, pH testing needs to be done immediately after a sample is drawn. Ecology used annualized values for long-term purchases based on a 3% real rate of interest and a 5-year period of use. A suitable pH meter and probe was assumed to cost \$225, with annual replacement parts costs of \$56.⁸ For the low cost estimate, facilities were assumed to already own the equipment, leaving only the annual purchase of replacement parts. Large firms were assumed to have double the replacement parts costs, to reflect increased sampling. Because pH testing is done on-site, no lab fee is included for pH in the analysis.

Table 4: Equipment Costs

⁸ Indexed from 1995 values. The vast majority of facilities are not subject to pH limits and can, therefore, use litmus paper rather than having to use a meter. This is a considerable savings, so the inclusion of the meter cost in the analysis is a conservative assumption, tending to make the estimated compliance costs higher than the actual compliance costs.

Table 4. Equipment Costs		
<u>Small businesses</u>	Low	High
Initial cost, annualized	\$0	\$49
Annual replacement cost	\$56	\$56
Total annual cost	\$56	\$105
<u>Large businesses</u>	Low	High
Initial cost, annualized	\$0	\$49
Annual replacement cost	\$113	\$113
Total annual cost	\$113	\$162

Conversion of Level 1, 2, and 3 to Steps A and B

Comments on an earlier version of the permit indicated that Level 1 through 3 compliance was expensive and required additional review. The revised permit has Steps A and B only. Most companies don't have to comply with Steps A and B. Companies currently in Level 1 will not have these existing costs unless their discharge exceeds benchmarks. Companies currently in Level 2 will be in Step A. Companies currently in Level 3 will be in Step B. Only companies with discharges, which exceed the benchmark, will experience these costs. Finally, companies, which exceed a threshold, must correct existing BMPs and the time frame for response will be compressed because they must respond immediately. Given that these are unusual, the reader should view these costs as atypical. NOTE: In Step A, the facility is required to investigate and implement new source control and treatment BMPs. With a threshold exceedance, the facility is only required to correct existing BMPs.

In order to calculate the effect of these requirements Ecology surveyed companies in the existing Levels 1 through 3 to obtain cost estimates. There were 28 respondents in Level 1, 20 respondents in Level 2, and 22 respondents in Level 3. Costs varied widely based on the circumstances. There was an odd result for Level 2, in that many small companies in Level 2 had costs that were higher than those small businesses in Level 3. Ecology staff believe this is due to a statistical problem that arises with a small sample. Removal of high and low values from the ranges produces substantial differences in the mean estimates. In Level 1, the range for costs above the standard stormwater permit was \$0 to \$18,000, for Level 2 \$400 to \$85,000, and for Level 3 \$30 to \$120,000. In Level 3, there was one cost of a capital installation greater than this but that cost is not repeating and was therefore divided over 4 years bringing it down to \$100,000 per year for the life of a permit.

Given that survey respondents are reluctant to give income or sales figures, Ecology asked the respondents about employment. The number of employees in small businesses within the sample of companies who were in level 1, 2, and 3 is higher than the norm for companies who simply have a stormwater permit. Companies with less than 10 employees numbered 4, 4, and 2 respectively for the existing levels. This tends to indicate that this level of compliance costs will be unusual for very small businesses, as measured by employment.

Given that the data set for this issue came from the facilities directly, it was difficult to use the Step A and B data with the other general permit data.

Conclusion on Disproportionate Costs

Tables 5A and 5B give costs of compliance with the typical requirements of the state portion of the stormwater permit, without the Step A and B compliance, as a percentage of costs, for small and large businesses, respectively.

Table 5A: Cost-to-Sales comparisons, Small businesses and Table 5B: Cost-to-Sales, Large businesses

Table 5 A. Cost-to-sales comparisons, Small businesses						
Sector	SIC	Sales	Annualized Cost Range		Costs as % of sales	
		Mid Range	Low	High	Low	High
Refuse Systems	4953	\$2,480,800	\$891	\$1,315	0.04%	0.05%
Sawmills and Planing Mills, General	2421	\$2,785,934	\$1,441	\$1,865	0.05%	0.07%
Services	4581	\$1,250,256	\$1,285	\$1,709	0.10%	0.14%
Prepared Fresh or Frozen Fish and Seafoods	2092	\$3,489,539	\$1,416	\$1,840	0.04%	0.05%
Scrap and Waste Materials	5093	\$2,518,394	\$1,174	\$1,597	0.05%	0.06%
Hazardous Waste: Treatment Storage & Disposal	4953	\$2,927,390	\$3,148	\$3,571	0.11%	0.12%

Table 5 B. Cost-to-sales comparisons, Large businesses						
Sector	SIC	Sales	Annualized Cost Range		Costs as % of sales	
		Mid Range	Low	High	Low	High
Refuse Systems	4953	\$35,271,443	\$1,782	\$2,580	0.005%	0.007%
Sawmills and Planing Mills, General	2421	\$44,683,484	\$2,883	\$3,681	0.006%	0.008%
Airports, Flying Fields, and Airport Terminal Services	4581	\$42,130,674	\$2,570	\$3,368	0.006%	0.008%
Prepared Fresh or Frozen Fish and Seafoods	2092	\$51,885,274	\$2,832	\$3,630	0.005%	0.007%
Scrap and Waste Materials	5093	\$27,855,305	\$2,347	\$3,146	0.01%	0.01%
Hazardous Waste: Treatment Storage & Disposal	4953	\$20,466,441	\$6,295	\$7,093	0.03%	0.03%

As the numbers demonstrate, the draft general permit for stormwater does have disproportionately higher costs for small businesses.

However, two points are important to keep in mind with regard to this conclusion.

1. At its highest, the permit represents 0.11% of average sales or 11 cents per \$100.
2. The underlying factor is the fact that permit compliance costs do not scale up in line with the size of a business. The numbers presented in this study show the typical large business is seven to thirty times larger than the typical small business. At the same time, while a large business will possibly require more sampling than a small one, it does not need ten times as much. Therefore, it is hard to avoid disproportionate costs for smaller businesses and still assure compliance with benchmarks which monitoring provides.

Response to Comments:

Steps A and B Compliance

Ecology evaluated this Step A and B compliance costs separately. The cost of compliance with Steps A and B are also disproportionate. Costs are reduced due to the elimination of Level 1.

Table 6: Disproportionate costs from existing Level 2, 2, and 3 compliance

Companies Reporting Cost of Level 1 to 3 Compliance		
Level	Large Businesses \$/Employee	Small Businesses \$/Employee
1	\$6.55	\$161.44
2	\$20.35	\$641.70
3	\$40.95	\$435.14
New Steps		
A	\$20.35	\$641.70
B	\$40.95	\$435.14

Other Comments

Ecology received comments on the cost of the SWPPP and the overall cost of compliance with the ISWGP.

- The SWPPP is a federal requirement and is not evaluated here.
- In comments, the estimated hours for compliance with the Industrial Stormwater General Permit hours were criticized. We believe the comment is correct about total overall compliance. However, the hours listed in the comment were for all compliance under the ISWGP. The analysis only evaluates specific components of the permit.

Mitigation of Small Business Impact

Ecology has tried to balance two legal objectives. WAC 173-226-120 requires Ecology to reduce the burden of the requirements of the general permit on small businesses. Ecology must stay in compliance with the stated objectives of the federal water pollution control act and the state water pollution control act (chapter 90.48 RCW).

Ecology has reduced the cost of the permit where possible. Reducing costs does not remove the disproportionate impact. The size of the impermeable surface and the nature of the activity determines the quantity and quality of the stormwater discharge. Given this, there is no reason to believe small businesses will have a smaller stormwater impact simply because they have fewer employees. Therefore, 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. A discharge of pollutants to receiving water requires a permit. If Ecology issues a general permit that allows people to harm the quality of the water receiving the discharge then Ecology would be in violation. Ecology hopes the benchmarks coupled with the adaptive management strategy in the general permit will allow the dischargers to meet water quality standards without excessive costs.

None-the-less, the elements below can potentially reduce the cost of the permit. The WAC requires that Ecology reduce the economic impact through the following mechanisms when it is legal and feasible to do so. The mechanisms are listed along with the option Ecology included.

- a. *Establishing differing compliance or reporting requirements or timetables for small businesses:*
 - Some sampling requirements have been reduced. This is not just for small business but may benefit some small businesses.

- b. *Clarifying, consolidating, or simplifying the compliance and reporting requirements under the general permit for small businesses:*
 - The permit has been reorganized. Ecology hopes this is helpful but it is not clear what economic impact the change will have.
 - The general permit itself provides a cost savings because facilities do not have to obtain an individual permit.

- c. *Establishing performance rather than design standards:*
 - The permit is essentially a performance standard in that sampling is done first and then, based on the result, the necessary steps to prevent harm are taken.
 - Ecology also varied the requirements of the permit based on the nature of the activity to reduce unnecessary efforts in some sectors but still avoid water quality standards violations.
 - Ecology recognizes the high degree of variability of stormwater quality and quantity and bases compliance upon effective adaptive management practices in response to exceedances of wet season medians.

- d. *Exempting small businesses from parts of the general permit:*
 - There is an Extreme Hardship waiver. Any industrial facility required to pay a permit fee may apply for a fee reduction if it meets certain conditions (see WAC 173-224-090). This includes whether the business has less than \$1,000,000 in revenue from the process, which necessitates the permit. A further reduction may be available if revenues from the permitted process are less than \$100,000 and the business demonstrates the permit fee represents an extreme hardship. Under the stormwater general permit, businesses that qualify for this “extreme hardship” reduction may also be eligible for reduced monitoring requirements, if Ecology determines stormwater from their facility represents no significant environmental risk. One facility has received this kind of waiver but others may apply.
 - The permit suspends sampling requirements for those businesses that demonstrate “consistent attainment” referred to in the section on “Permit Requirements”. Facilities receive “consistent attainment” of benchmark values during two consecutive wet seasons in which the test parameters do not exceed the median of the benchmarks specified in the permit. Consistent attainment on any given set of monitoring parameters exempts the facility from sampling and analysis on that particular set of parameters for the remaining term of the permit.

- Ecology has simplified the number of corrective action levels. This may reduce costs for both large and small companies currently in Level 1, unless their future discharge exceeds benchmarks.