



---

# Washington State Department of Ecology

---

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

### Economic Impact Analysis

*Prepared for  
Ecology's Water Quality Program*

February 2007

*Download this report from the Department of Ecology's Web Site at <http://www.ecy.wa.gov/biblio/0710019.html>*

*If you need this publication in another format, please call the Water Quality Program at (360) 407-6401. Persons with hearing loss can call 711 for Washington Relay Service. Persons with a speech disability can call 877-833-6341.*

## 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 the same as 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. In all of the cases analyzed, costs to comply are no higher than 0.17% of sales, and they only reach as high as 0.17% in a scenario with a combination of conservative assumptions.

The new permit imposes new costs:

- Hazardous Waste Treatment, Storage, and Disposal (TSDs), and Hazardous Waste Recycling Facilities must apply for coverage under the new permit.
- New, more stringent benchmarks will trigger a response at some facilities which were in compliance with the last permit:
  - Ammonia benchmarks and action levels reflect updated EPA values.
  - Metals benchmarks and action levels reflect Washington State stream conditions.
  - Lead is no longer a core sampling parameter.
  - Copper is a new core sampling parameter.
- More response is required:
  - Level 3-Permittees are required to investigate treatment BMPs.
  - Level 4-Permittees are required to prepare an engineering report and a receiving water quality assessment to verify compliance with standards. They can also submit a waiver request along with a receiving water quality assessment to verify compliance with standards.

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.



# Table of Contents

<b>EXECUTIVE SUMMARY .....</b>	<b>1</b>
<b>TABLE OF CONTENTS.....</b>	<b>3</b>
<b>TABLE OF FIGURES .....</b>	<b>3</b>
<b>INTRODUCTION.....</b>	<b>5</b>
<b>PERMIT REQUIREMENTS.....</b>	<b>5</b>
<b>General .....</b>	<b>5</b>
Capital expenses .....	5
Operation and maintenance measures.....	6
Monitoring and Analysis .....	6
Record Keeping .....	7
Reporting .....	8
<b>Included vs. Excluded Costs for This Analysis .....</b>	<b>8</b>
<b>ECONOMIC ANALYSIS .....</b>	<b>8</b>
<b>Definition of small business.....</b>	<b>8</b>
<b>Sectors for analysis and sales estimates .....</b>	<b>8</b>
<b>Data.....</b>	<b>9</b>
<b>Cost estimates.....</b>	<b>9</b>
<b>Conclusion on Disproportionate Costs .....</b>	<b>12</b>
<b>Mitigation of Small Business Impact .....</b>	<b>13</b>

# Table of Figures

TABLE 1A: SALES AND EMPLOYMENT DATA AND TABLE 1B: CALCULATIONS .....	9
TABLE 2: ANNUAL LABORATORY FEES .....	10
TABLE 3A: LABOR COSTS FOR SMALL BUSINESSES AND TABLE 3B: LABOR COSTS FOR LARGE BUSINESSES.....	11
TABLE 4: EQUIPMENT COSTS .....	11
TABLE 5A: COST-TO-SALES COMPARISONS, SMALL BUSINESSES AND TABLE 5B: COST-TO-SALES, LARGE BUSINESSES .....	12



## Introduction

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

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.
3. If a disproportionate impact is expected, explains the provisions in the permit that reduce the impact on small businesses, without compromising the intent of the permit.

## Permit Requirements

### General

The general permit requirements are evaluated based on:

1. Capital expenses
2. Operations and maintenance of pollution control measures
3. Monitoring and analysis
4. Record keeping
5. Reporting

The first two categories are explained below but are not included in the calculation of disproportionate impacts. Those calculations include only the third, fourth, and fifth category.

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 determines that there have been no substantive changes in the economic impacts of these manuals since the general permit was issued in 2002.

### Capital expenses

Capital expenses fall into two categories:

1. Source control BMPs are those measures designed to prevent contact between potential contaminants and stormwater. This can be as simple as installing a roof over a storage area to protect stored materials from the rain or an impermeable surface where fueling and oil changes occur to prevent spills and drips from seeping into the ground and contaminating 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. Between the two types of BMPs, source control remains the higher priority because prevention is more effective than treatment.

**Operation and maintenance measures**

These are regular activities that keep the BMPs functioning properly. This ranges from inspection for unexpected failures of the BMPs, to predictable tasks such as cleaning of an oil/water separator or sump.

The Stormwater Pollution Prevention Plan (SWPPP) ties together all the BMPs. Facilities must develop a SWPPP in order for Ecology to approve coverage under this general permit. A SWPPP describes all of a facility’s activities that generate pollution, describes in detail the BMPs they will use, and explains how they will monitor their activities. Permittees must conduct self-inspections, and if they identify inadequate BMPs or poorly described sources of pollution, they must modify the SWPPP and correct the problems.

**Monitoring and Analysis**

Monitoring involves 10 visual inspections and 4 grab 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. Zinc

Copper and zinc were chosen as indicator parameters for metals pollutants. Copper was chosen because small amounts of this metal can cause potential harm to aquatic life, especially 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 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. Below is a list of required federal tests. The pollutants marked with an “\*” are not included in the cost estimates.

Industrial Group	Types of Pollutant
Timber products and Paper and allied products	<ul style="list-style-type: none"> <li>• Biological Oxygen Demand (BOD)</li> <li>• Chemical Oxygen Demand (COD)*</li> <li>• Total Suspended Solids (TSS)*</li> <li>• Benzene, Toluene, Ethylbenzene, Xylene (BTEX)</li> </ul>
Air transportation <sup>1</sup>	<ul style="list-style-type: none"> <li>• Ammonia*</li> <li>• Nitrate/Nitrite as N</li> <li>• BOD*</li> </ul>

<sup>1</sup> The contamination is from deicing/anti-icing operations, so sampling is to occur 4 times between the beginning of December and the end of February. Testing for ammonia and nitrate/nitrite is required only if urea is applied.



Chemical and allied products, food and kindred products	<ul style="list-style-type: none"> <li>• Nitrate/Nitrite as N</li> <li>• Phosphorus (TP)</li> <li>• BOD*</li> </ul>
Primary metals, metals mining, automobile salvage, scrap recycling, metals fabricating	<ul style="list-style-type: none"> <li>• Lead</li> </ul>

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

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

“Consistent attainment of benchmark values” is defined as eight consecutive quarters in which parameters do not exceed the levels 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.

### **Record Keeping**

Facilities must keep records of their monitoring results for five years. 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 the permit provides for an extension of the five-year retention period. Ecology also maintains the right to request an extension of the retention period.

## Reporting

Facilities must submit their monitoring data to the department no later than 45 days after the end of each relevant quarter.

## 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, 173-201A<sup>2</sup>, 173-204, and 173-224 WAC, nor costs associated with compliance with federal law or regulation.”*

For the purposes of this analysis, the benchmarks for:

- Physical measures, – source control,
- Contamination prevention, and
- Treatment BMPs

comply with the WAC chapters listed above, federal law or rules, or both. Therefore, they are not included in this analysis.

Four other cost categories, necessary to assure compliance with the BMPs do not directly prevent water quality pollution. These are:

1. Monitoring
2. Record keeping
3. Reporting
4. Creating and updating the SWPPP

Therefore, these compliance costs are the subject of the current analysis.

## 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 Waste Treatment, Storage, and Disposal (TSDs), and Hazardous Waste Recycling Facilities, has only 15 companies in the state and a very different list of tests for monitoring so we analyzed them separately. The other sectors are large with a wide variety of

---

<sup>2</sup> This presumably refers to chapter 173-201A WAC.

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	
	1987				Paid	Average employees	
Description	SIC	NAICS 2002		Sales	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: Transportation Storage and Disposal	5093	562211	562112	\$852,193,000	5,184	17.8	124.5
Table 1 B: Calculations				Sales			
	1987			per	Estimated Sales		
Description	SIC	NAICS 2002		Employee	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: Transportation Storage and Disposal	5093	562211	562112	\$164,389	\$2,927,390	\$20,466,441	

## 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.<sup>3</sup> In addition, in 2007 Ecology surveyed the three primary labs used by Hazardous Waste Treatment, Storage, and Disposal (TSDs), and Hazardous Waste Recycling Facilities. 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. To reflect the probability that sampling in more than one location is necessary to capture the impact of a large installation; Ecology assumes that small firms will have one sample analyzed for each parameter, and large firms will have two samples analyzed for each parameter.

**Table 2: Annual Laboratory Fees**

Table 2. Annual Laboratory Fees				
Sector	SIC	Testing group	Small	Large
Refuse Systems	4953	Basic	\$500	\$1,000
Sawmills and Planing Mills, General	2421	Timber Products etc.	\$603	\$1,205
Airports, Flying Fields, and Airport Terminal Services	4581	Air transportation	\$656	\$1,312
Seafoods	2092	Chemicals and food	\$500	\$1,000
Scrap and Waste Materials	5093	Primary metals etc.	\$679	\$1,357
Hazardous Waste:	4953	Transportation Storage and Disposal	\$1,421	\$2,843

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.<sup>4</sup> The calculations are based on \$67.37<sup>5</sup> for professional or supervisory personnel and \$21.56<sup>6</sup> for employees. For activities associated with monitoring (such as sample collection, record keeping, reporting), large firms are assumed to require twice as much labor as small firms, to reflect greater sampling activity described above. See Table 3A and Table 3B.

<sup>3</sup> 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, NH<sub>3</sub>, NO<sub>3</sub>/NO<sub>2</sub>, and BOD are not analyzed for Air Transport Service because they are a federal requirement. NO<sub>3</sub>/NO<sub>2</sub>, 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.

<sup>4</sup> <http://www.stls.frb.org/fred/data/gdp/gnpdef>

<sup>5</sup> 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](http://www.bls.gov/oes/current/oes_wa.htm#b11-0000) downloaded 1/30/2007.

<sup>6</sup> 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](http://www.bls.gov/oes/current/oes_wa.htm#b11-0000) downloaded 1/30/2007.

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

Time	Low		High	
	Prof/Sup	Staff	Prof/Sup	Staff
SWPPP	1	0	4	0
Sampling	1	6	2	12
Training	0	0	2	0
Reporting	1	2	2	4
Recordkeeping	0	2	0	4
Total Time	3	10	10	20
Cost	\$202	\$216	\$674	\$431
Total Labor Cost	\$418		\$1,105	
Note: Professional/Supervisory cost calculated as \$67.370/hr Staff cost calculated as \$21.56/hr				

Time	Low		High	
	Prof/Sup	Staff	Prof/Sup	Staff
SWPPP	1	0	4	0
Sampling	2	12	4	24
Training	0	0	4	0
Reporting	2	4	4	8
Recordkeeping	0	4	0	8
Total Time	5	20	16	40
Cost	\$337	\$431	\$1,078	\$862
Total Labor Cost	\$768		\$1,940	
Note: Professional/Supervisory cost calculated as \$67.370/hr Staff cost calculated as \$21.56/hr				

This economic analysis carries over the assumptions made in the 2002 analysis regarding low and high costs of updating the SWPPP, at 1 and 4 hours of professional time respectively, per update.

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.<sup>7</sup> For the low cost estimate, Ecology assumed that facilities already own the equipment, leaving only the annual purchase of replacement parts. To reflect increased sampling Ecology assumed the costs for replacement parts is double for large businesses. Because pH testing is done on-site, no lab fee is included for pH in the analysis.

**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

<sup>7</sup> 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.

## Conclusion on Disproportionate Costs

Tables 5A and 5B give costs of 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**

<b>Table 5 A. Cost-to-sales comparisons, Small businesses</b>						
Sector	SIC	Sales	Cost Range		Costs as % of sales	
		\$1,000	Low	High	Low	High
Refuse Systems	4953	\$2,480,800	\$1,041	\$1,980	0.04%	0.08%
Sawmills and Planing Mills, General	2421	\$2,785,934	\$1,144	\$2,083	0.04%	0.07%
Airports, Flying Fields, and Airport Terminal Services	4581	\$1,250,256	\$1,197	\$2,136	0.10%	0.17%
Prepared Fresh or Frozen Fish and Seafoods	2092	\$3,489,539	\$1,041	\$1,980	0.03%	0.06%
Scrap and Waste Materials	5093	\$2,518,394	\$1,220	\$2,159	0.05%	0.09%
Hazardous Waste:	4953	\$2,927,390	\$1,963	\$2,901	0.07%	0.10%
<b>Table 5 B. Cost-to-sales comparisons, Large businesses</b>						
Sector	SIC	Sales	Cost Range		Costs as % of sales	
		\$1,000	Low	High	Low	High
Refuse Systems	4953	\$35,271,443	\$2,015	\$3,641	0.006%	0.010%
General	2421	\$44,683,484	\$2,221	\$3,846	0.005%	0.009%
Airports, Flying Fields, and Airport Terminal Services	4581	\$42,130,674	\$2,327	\$3,953	0.006%	0.009%
Prepared Fresh or Frozen Fish and Seafoods	2092	\$51,885,274	\$2,015	\$3,641	0.004%	0.007%
Scrap and Waste Materials	5093	\$27,855,305	\$2,373	\$3,998	0.01%	0.01%
Hazardous Waste:	4953	\$20,466,441	\$3,858	\$5,484	0.02%	0.03%

As the numbers demonstrate, the draft general permit for stormwater does have disproportionately high costs for small businesses. (Details of the data going into the cost and sales calculations are given in Tables 1 through 4.)

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

1. At its highest, the permit represents 0.17% of average sales or 17 cents per \$100.
2. All of the “high” numbers represent a set of conservative assumptions meant to show the worst-case scenario. These assumptions:
  - Minimize the size of small businesses, which magnifies the impact of the permit;
  - Exclude the possibility of volume discounts from environmental laboratories for multiple tests performed at once; and
  - Make generous assumptions about the time required to perform the tasks specified by the permit.
3. 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.

## **Mitigation of Small Business Impact**

WAC 173-226-120 requires Ecology to reduce the burden of the requirements of the general permit on small businesses. However, we 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). The size of the impermeable surface and the nature of the activity determines the quantity and quality of the stormwater discharge. 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.

None-the-less, the three elements below can potentially reduce the cost of the permit. One and two are available to all businesses. The third is only available to a subset of small businesses.

1. Ecology varied the requirements of the permit based on the nature of the activity for each sector to reduce unnecessary efforts in some sectors but still avoid water quality standards violations.
2. The permit suspends sampling requirements for those businesses that demonstrate “consistent attainment” referred to in the section on “Permit Requirements”.<sup>8</sup>
3. There is also 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.

The WAC requires that Ecology reduce the economic impact by doing one or more of the following when it is legal and feasible to do so:

- a. Establishing differing compliance or reporting requirements or timetables for small businesses – The 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.
- 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. It is not feasible to move the permit further in this direction.
- d. Exempting small businesses from parts of the general permit – The smaller businesses are exempted based on hardship and based on consistent attainment (see 2 and 3 above).

---

<sup>8</sup> In the case of air-travel firms testing for effects of deicing, the threshold for suspension of monitoring is eight consecutive tests, since the testing period covers only the months of December, January and February.