Fact Sheet for the
Sand and Gravel General Permit

National Pollutant Discharge Elimination System and
State Waste Discharge General Permit

For discharges from
For Process Water, Stormwater, and Mine Dewatering Water Discharges Associated with Sand and Gravel Operations, Rock Quarries, and Similar Mining Facilities, Including Stockpiles of Mined Materials, Concrete Batch Operations and Hot Mix Asphalt Operations

September 9, 2015

State of Washington
Department of Ecology
Olympia, Washington 98504-7600

Table of Contents

Figures

Tables

1.0 Introduction

This Fact Sheet accompanies the formal draft *Sand and Gravel General Permit – A National Pollutant Discharge Elimination System (NPDES) and State Waste Discharge Permit.* The Fact Sheet serves as the documentation of the legal, technical, and administrative decisions Ecology has made in the process of reissuing the permit.

The Washington Department of Ecology (Ecology) issued the Sand and Gravel General Permit on August 4, 2010, and modified it on August 17, 2011 (referred to in this fact sheet as the 2010 permit). The Sand and Gravel General Permit authorizes the discharge of process water, stormwater, and mine dewatering water to waters of the State of Washington from sand and gravel operations, rock quarries, and similar mining facilities, including concrete batch operations and hot mix asphalt operations.

This proposed general permit limits the discharge of pollutants to surface waters under the authority of the Federal Water Pollution Control Act (U.S.C.S. 1251) and limits the discharge of pollutants to surface and ground water under the authority of Chapter 90.48 RCW.

You may download copies of the draft permit documents at:
http://www.ecy.wa.gov/programs/wq/sand/index.html.

2.0 Public Involvement Opportunities

2.1 Public Comment Period

Ecology invites public comment on the proposed draft permit and fact sheet until ***11:59 p.m. on Friday, October 23, 2015***. Ecology welcomes all comments that address the permit requirements in the formal draft Sand and Gravel General Permit.

In order for Ecology to adequately address comments, please include the following information with each comment:

- The specific permit language used in the requirement subject to your comment. Include the page number(s) and, where indicated, section reference (i.e., S8.E.7.a).
- A brief, concise comment including the basis for the comment, and in particular the administrative, legal, technical, or other basis for the concern.
- Suggested permit language or a conceptual alternative to address your concern.

Submit oral comments by attending and testifying at the public hearings. Send written comments to Ecology by one of the methods below:

- Send permit comments by e-mail to: carrie.graul@ecy.wa.gov

- Send permit comments in hard copy by mail to:

  Carrie Graul
  Washington State Department of Ecology
  PO Box 47696
  Olympia, WA 98504-7696

2.2 Public Workshop and Hearings Schedule

Ecology will host public workshops and hearings on the proposed changes in the draft. The workshops provide Ecology an opportunity to explain the proposed changes to the permit and to answer questions. Each workshop will be immediately followed by a public hearing. The public hearings will provide an opportunity for the public to give formal comments on the draft permit or fact sheet.

October 5, 2015 9am	Lacey workshop and public hearing (and webinar) Washington State Department of Ecology 300 Desmond Drive SE Lacey, WA 98503 Also via webinar Visit http://www.ecy.wa.gov/programs/wq/sand/index.html to sign-up.
October 8, 2015 1pm	Spokane workshop and public hearing Washington State Department of Ecology – Eastern Regional Office 4601 N Monroe Spokane, WA 99205-1295

Please direct questions about the workshops, hearings, draft permit, or fact sheet to Carrie Graul, carrie.graul@ecy.wa.gov or 360-407-6967.

2.3 Issuance of the Final Permit

Ecology will issue the final permit after reviewing and considering all public comments. Ecology expects to issue the final permit in December 2015. Ecology will send a copy of the Notice of Issuance to all persons who submitted written comment or gave public testimony at the public hearings.

During the public comment period, Ecology typically receives public comments on the proposed permit and fact sheet. Ecology will append the final fact sheets for the permits with a summary of a response to comments (Appendix *A – Response to Comments*). Parties submitting comments will receive a notice on how to obtain copies of the final permit and Ecology's response to comments. Ecology will only revise this fact sheet for factual errors.

2.4 Public Involvement Opportunities Prior to September 2015

From February 2014 through May 2015 Ecology held and participated in several meetings with stakeholders to discuss permit issues and concerns in preparation for reissuance of the Sand and Gravel General Permit.

From May 26, 2015 to June 23, 2015 Ecology invited informal public comment on a preliminary draft version of the Sand and Gravel General Permit. Ecology also held a public meeting to discuss the preliminary draft permit and to accept verbal comments.

From July 7, 2015 to July 21, 2015 Ecology invited public comment on the preliminary draft concrete recycling language within the Sand and Gravel General Permit. Ecology also held a public meeting and webinar to explain the preliminary draft concrete recycling language, to provide the basis for the preliminary draft language, and to discuss the environmental concerns regarding recycled concrete.

Ecology received comments during these periods from several individuals and organizations. This extra step in the public process provided valuable input. Ecology considered the comments as it developed these proposed draft permit requirements. The preliminary draft language, associated handouts, and concrete recycling presentation are available on Ecology's website at: http://www.ecy.wa.gov/programs/wq/sand/permit.html.

3.0 Background

A general permit is designed to provide coverage for a group of related facilities or operations of a specific industry type or group of industries. Ecology issues general permits when the discharge characteristics are similar and a standard set of permit requirements can effectively provide environmental protection and comply with water quality standards for discharges to surface water or ground water. The sand and gravel general permit provides coverage for discharges of process water, mine dewatering water, and stormwater associated with certain types of mining operations, concrete and asphalt production.

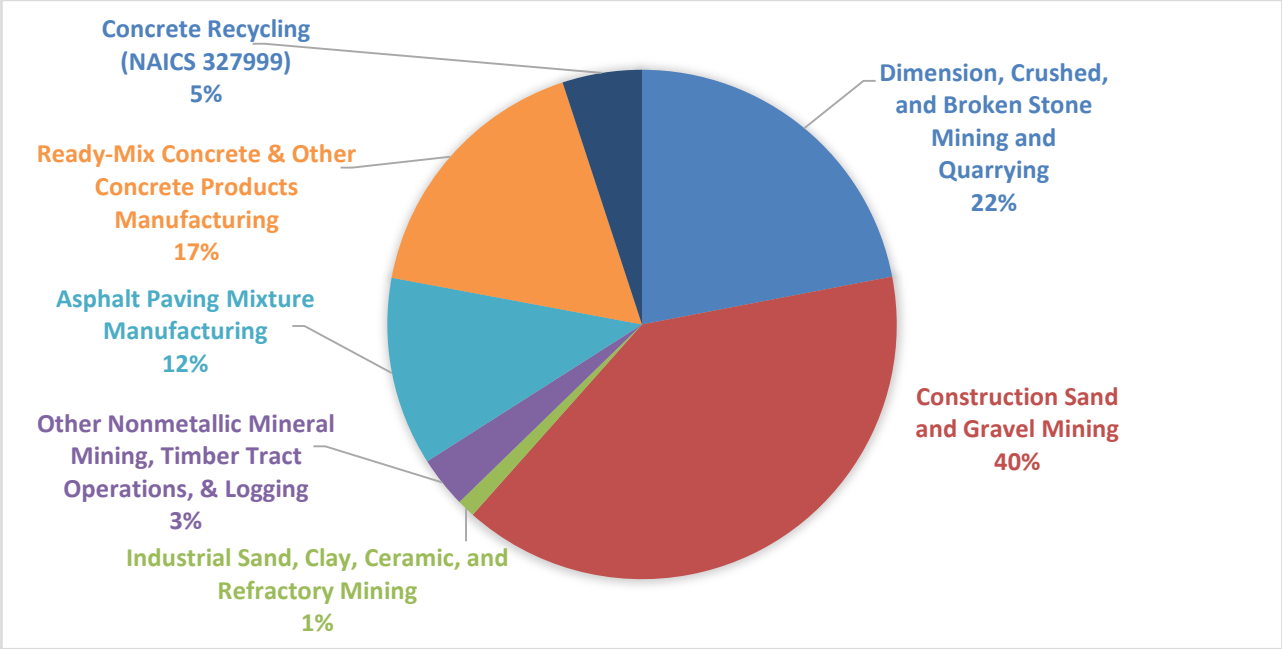
3.1 Description of the Sand and Gravel Industry

There are approximately 926 facilities covered under this general permit; 599 of these have active site status and 85 of them are portable.[1]

[1] PARIS Database Query 7/29/15

The Sand and Gravel General Permit uses the North American Industrial Classification System (NAICS) Codes to designate which types of typical activities may receive permit coverage. Multiple NAICS codes may apply to one permitted site. Figure 1 shows the approximate percentage of permittees based on their activities. The majority of permittees (40%) have NAICS Code 212321, Construction Sand and Gravel Mining. The next largest group is dimension, crushed, and broken stone mining and quarrying (NAICS Codes 212311, 212312, 212313, and 212319).

Figure 1: Approximate Percentages of Permittee Activity Types



The Sand and Gravel General Permit provides coverage for discharges of wastewater (includes stormwater, process water, and mine dewatering water) to surface water and groundwater. Approximately 78% of permittees discharge to ground only, 18% discharge to both surface water and ground, and only 3% discharge to surface water only. Permittees on the west side of the Cascade Mountains are much more likely to have a surface water discharge than those on the east side.

3.2 Wastewater Characterization

Wastewater is a general term which includes contaminated stormwater, process water, and mine dewatering water.

3.2.1 Stormwater

Mining activities typically begin by removal of the overburden to expose the desired material. Removing topsoil and disturbing the land surface increases the potential for adverse consequences to surface and ground water quality. Removing the vegetative cover and disturbing

the soil makes the area more susceptible to erosion. Stormwater readily suspends the exposed soil and carries it to nearby surface water. Sediment can harm the health of aquatic life in surface water bodies.

Vegetation and soil also serve to protect groundwater from pollutants. They provide filtration, chemical and physical reactions, and biological activity that often will remove pollutants before they can enter ground water. As a result, mining activities which remove vegetation and topsoil will typically make underlying ground water more vulnerable to pollution.

Ecology has defined three types of stormwater for this general permit. Segregation of stormwater types is essential to minimizing the quantity of stormwater, which requires treatment before discharge. One type of stormwater does not require treatment, while the other two may require physical or chemical treatment in order to meet the conditions of this permit. BMPs, directly or indirectly, apply to all three types of stormwater.

Type 1 Stormwater: Stormwater falling on undisturbed, natural areas, or completely reclaimed areas should remain clean and require no treatment. Ecology does not consider this type of stormwater as associated with industrial activity so long as this stormwater reaches waters of the state without contacting any machinery, product or raw material piles or other water that has contacted such material. Ecology classified this type of stormwater as Type 1 stormwater for this general permit.

Type 2 Stormwater: Stormwater falling on a portion of a site that has been disturbed, as for example land cleared in preparation for mining or other industrial activity, is classified as Type 2 stormwater until industrial activity such as mining, processing or manufacturing occurs.

Type 3 Stormwater: The proposed permit classifies stormwater falling on the part of a site where manufacturing, processing, active storage, or mining takes place as Type 3 stormwater. This type of stormwater has the greatest potential to become contaminated prior to discharge to waters of the state.

Although stormwater discharges are more common in Western Washington than Eastern Washington, all parts of the state will occasionally receive significant rainfall events that can result in the discharge of stormwater. The proposed permit requires implementation of best management practices (BMPs) for stormwater management in all locations.

3.2.2 Process Water

Most mining-related facilities use some water to mine, process, handle or transport mined material. This water is categorized as process wastewater. Most process wastewater results from washing and screening mined aggregate materials. Facilities may also use water to clean truck tires and wheels in order to prevent tracking of mud and dirt onto public paved roads.

In addition to these easily identified sources of wastewater, many other activities covered under this permit can impact groundwater and surface water. The activities that may generate wastewater include concrete truck cleanup, equipment maintenance, and cleanup of spills or leaks from tanks and equipment. Facilities that conduct many types of activities, from mining through batch plant operations, generate the greatest volume of wastewater and have the most varied sources of potential water contamination.

3.2.3 Mine Dewatering Water

Mine dewatering water is a type of wastewater generated at some facilities which is not a direct result of using water to accomplish a processing function. This water is incidental to the mining operation and includes groundwater that seeps into the mine pit or accumulates due to precipitation into the mine pit. Suspended solids may be the only contaminant requiring treatment in these circumstances. Water entering the mine site; subsequently commingling with process water becomes process water and is subject to process water requirements.

3.2.4 Wastewater Volume and Pollutant Characteristics

The wastewater discharges from the facilities covered under this general permit are usually intermittent or "batch" discharges. The size of facilities covered under this permit ranges from facilities discharging only as a result of precipitation to large integrated sand and gravel mines with associated concrete manufacturing discharging on a daily basis. Wastewater generation varies significantly from site to site. Facilities substantially reduce the total quantity of effluent discharged when they reuse settled water for processing and washing.

Facilities can potentially cause adverse water quality impacts through wastewater discharges from on-site processes or conditions. Table 1 below summarizes these potential water pollutants and sources. These sources and pollutants can lead to wastewater characterized by: elevated pH, excessive suspended solids, elevated dissolved solids, or petroleum products contamination.

Table 1: Potential Pollutants and Sources at Sand and Gravel Facilities

Contaminant	Source
Hydrocarbons (oil and grease, hydraulic fluid, and fuels)	Spills or leaks from equipment and storage tanks Maintenance shop Hot mix asphalt plant wet scrubber Vehicle and equipment washing Release agent application
Turbidity, Suspended solids	Washing, screening, or crushing rock Stripping and digging operations Seepage from working face Stormwater run-on and runoff from disturbed areas Runoff from overburden, waste piles, and stockpiles Dust suppression Processing wastes

Contaminant	Source
	Wet scrubber wastes Vehicle washing and cleanout
Alkalinity/High pH, Total Dissolved Solids	Concrete truck wash water Concrete batch plant water Concrete recycling
Chlorides	Concrete admixtures
Sulfates	Concrete admixtures
Ligninsulfonate	Dust suppression

The following is a list of typical impacts caused by polluted wastewater discharges:

- **Human Health:** In general, untreated wastewater is unsafe. Untreated wastewater is not safe for people to drink, and is not recommended for swimming.
- **Drinking Water:** In some areas of Washington, notably Spokane County and parts of Pierce and Clark counties, gravelly soils allow rapid infiltration of stormwater. Untreated stormwater discharging to the ground could contaminate aquifers that are used for drinking water.
- **Salmon Habitat:** Toxic chemicals in wastewater can harm immature fish and the adults returning to spawn. Sediment can affect spawning grounds.

3.3 Summary of Compliance with the Previous Permit

The original Sand and Gravel General Permit went into effect in 1994. Since then there has been a large decrease in the number of numerical effluent violations. The Sand and Gravel Industry has worked to comply with the conditions in the permit and their efforts have shown in their reported monitoring data, reduction of violations, and the reduction of Ecology enforcement actions.

Table 2 represents the approximate number of violations during the 2010 permit cycle (Ecology ran a compliance report that spanned from October 1, 2010 to August 1, 2015). During this time there were 3,634 permit violations. This is almost a 30% reduction in the number of violations compared to the amount reported (4,992 permit violations) in the August 2010 Sand and Gravel Fact Sheet. Late submittal of Discharge Monitoring Reports (DMRs) continues to be the most common permit violation.

Table 2: Types and Approximate Number of Violations during the 2010 Permit

Violation	Number of Violations	Percentage of all Violations
Late Submittal of DMRs	1,541	42%
Failure to submit required report (non-DMR, non-pretreatment)	726	20%
Numeric effluent violation	485	13%
Analysis not Conducted	436	12%
Frequency of Sampling Violation	151	4%
Improper/ Incorrect Reporting	85	2%
Failure to Submit DMRs	52	1%
Improper Chemical Handling	34	1%
Best Management Practice Deficiencies	33	1%
Violation Specified in Comment (Other)	25	1%
Warning Limit Exceedance	25	1%
Failure to develop any or adequate SWPPP/SWMP	14	0%
Discharge Without a Valid Permit	6	0%
Improper Operation and Maintenance	6	0%
Failure to Conduct Inspections	6	0%
Failure to Notify	2	0%
Unapproved Bypass	2	0%
Invalid/Unrepresentative Sample	1	0%
Failure to Implement SWPPP/SWMP	1	0%
Failure to Maintain Records	1	0%
Failure to Allow Entry	1	0%
Benchmark Exceedance	1	0%
Total	**3,634**	

The amount of numeric effluent violations also decreased significantly to 485 from the 980 reported in the August 2010 Fact Sheet. This represents approximately a 50% reduction in the number of numeric effluent violations. Table 3 shows the breakout of numerical effluent violations from October 1, 2010 to August 1, 2015. pH violations continue to be the most common type of effluent violation; followed by turbidity. Section 6.2.2 of this fact sheet contains additional information about the numerical effluent violations.

Table 3: Approximate Number of Effluent Violations during the 2010 Permit

Parameter	Number of Violations	Percentage of Total Violations
pH (Hydrogen Ion)	232	48%
Turbidity	152	31%
Nitrate + Nitrite	68	14%
Total suspended (TSS)	12	2%
Oil and Grease	11	2%
Total Dissolved Solids (TDS)	10	2%
Total	**485**	

During the same period of October 1, 2010 to August 1, 2015, Ecology took 616 enforcement actions. Over 75% of these permit enforcement actions were informal. Table 4 shows the number of the different types of enforcement actions Ecology took during this period.

Table 4: Approximate Number of Ecology Enforcement Actions during the 2010 Permit

Enforcement Action Type	Total	Percentage of all Enforcement Actions
Informal Action – Letter	463	75%
Field Ticket - Corrections Required	85	14%
Informal Action - Phone call	32	5%
Civil Penalty	11	2%
Field Ticket Notice Of Penalty	10	2%
Notice Of Violation	7	1%
Admin Order	4	1%
Informal Action – Email	3	0%
Admin Order Immediate Action	1	0%
Total	**616**	

Ecology staff try to visit every site at least once per five year permit cycle. Because of the large number of Permittees, and the excellent compliance rates for the industry as a whole, Ecology typically concentrates repeat visits on facilities with compliance problems.

4.0 Laws and Regulations

This section contains a brief description of Federal and State laws related to the Sand and Gravel General Permit. More information about these laws and the determination of effluent limits is within Section 6.2.2 of this fact sheet.

4.1 Federal Clean Water Act

This permit implements sections of the Federal Clean Water Act (CWA), the U.S. Environmental Protection Agency rules, and the Washington State Water Pollution Control Act (RCW 90.48).

The federal Clean Water Act (CWA, 1972, and later modifications in 1977, 1981, and 1987) established water quality goals for the surface waters of the United States. One of the mechanisms for achieving goals of the CWA is the National Pollutant Discharge Elimination System (NPDES) permitting program. In Washington State, Ecology has been delegated authority to administer the NPDES program for most dischargers. Chapter 90.48 RCW defines Ecology's authority and obligations in administering the NPDES permit program.

4.1.1 EPA Rules / Human Health Criteria

The EPA has promulgated 91 numeric water quality criteria for the protection of human health that are applicable to Washington State (40 CFR Part 131.36). These criteria are designed to protect humans from cancer and other disease and are primarily applicable to fish and shellfish consumption and drinking water from surface waters. Ecology has determined that the discharge from this industry group is unlikely to contain chemicals regulated for human health.

4.2 The State Water Pollution Control Act and State Standards

In addition to federal laws, there are state laws for the control of pollution. Chapter 90.48 Revised Code of Washington (RCW), known as the Water Pollution Control Act, requires a permit to regulate discharges of pollutants or waste materials to waters of the state (RCW 90.48.162). The act prohibits the discharge of toxicants which would violate any water quality standard, including toxicant standards, sediment criteria, and dilution zone criteria (RCW 90.48.520). RCW 90.48.035 grants Ecology the authority to adopt water quality standards for waters of the state. Ecology has adopted the following standards:

- Chapter 173-200 WAC Ground Water Quality Standards
- Chapter 173-201A WAC Water Quality Standards for Surface Waters
- Chapter 173-204 WAC Sediment Management Standards

These standards were designed to protect existing water quality and preserve the beneficial uses of waters of the state. These standards generally require that permits issued by Ecology ensure that regulated discharges will not violate standards, or that a compliance schedule be in place to bring dischargers into compliance. Additionally, Ecology must include permit conditions which require all known, available, and reasonable methods to control toxicants in the applicant's wastewater.

4.3 Whole Effluent Toxicity

The Water Quality Standards for Surface Waters require that the effluent not cause toxic effects in the receiving waters. The commonly available detection methods cannot detect many toxic pollutants. However, one can measure toxicity directly by exposing living organisms to the wastewater in laboratory tests and measuring the response of the organisms. Toxicity tests measure the aggregate toxicity of the whole effluent, and therefore this approach is called whole effluent toxicity (WET) testing.

Ecology does not expect toxicity caused by unidentified pollutants in the discharge as determined by the screening criteria given in Chapter 173-205 WAC. Therefore, the proposed permit does not include whole effluent toxicity testing. Ecology may require effluent toxicity testing in the future, if it receives information that toxicity may be present in this effluent. The permit requires that discharges cause no toxicity.

5.0 Antidegradation

Federal regulations (40 CFR 131.12) and the Water Quality Standards for Surface Waters of the State of Washington (WAC 173-201A-300, 310, 320, 330) establish a water quality antidegradation program. The purpose of the antidegradation program is to:

- Restore and maintain the highest possible quality of the surface waters of Washington.
- Describe situations under which water quality may be lowered from its current condition.
- Apply to human activities that are likely to have an impact on the water quality of surface water.
- Ensure that all human activities likely to contribute to a lowering of water quality, at a minimum, apply all known, available, and reasonable methods of prevention, control, and treatment (AKART).
- Apply three Tiers of protection (described below) for surface waters of the state.

The federally mandated program establishes three tiers of protection for water quality. Tier I ensures the maintenance and protection of existing and designated uses. Tier I applies to all waters and all sources of pollution. Tier II prevents the degradation of waters that are of a higher quality than the criteria assigned, except where such lowering of water quality is shown to be necessary and in the overriding public interest. Tier II applies only to a specific list of polluting activities. Tier III prevents the degradation of waters formally listed as “outstanding resource waters,” and applies to all sources of pollution.

This permit addresses antidegradation of Tier I and Tier II waters. Ecology has determined that there are no coverages under this permit to Tier III waters.

Washington’s Tier II requirements for general permits are outlined in WAC 173-201a-320(6).

5.1 How the Sand and Gravel General Permit meets the Antidegradation Requirement

Each time Ecology reissues the Sand and Gravel General Permit, it evaluates the permit conditions to determine if additional or more stringent requirements should be incorporated.

Ecology's evaluation of the Sand and Gravel General Permit includes an ongoing review of information on pollution prevention and treatment practices for wastewater discharges. Sources of such information include:

1. **Comments on draft permit.** Ecology's public process for developing the proposed permit included a preliminary draft language comment period and stakeholder meetings. Ecology asked for input on opportunities to improve and simplify requirements without compromising environmental protection. Ecology received written comments from over 16 entities and additional verbal comments.
2. **Statewide implementation team.** A statewide Ecology Sand and Gravel Permit Team discusses compliance issues, guidance, and information on improved BMPs.
3. **Ecology's Stormwater Management Manuals.** Ecology periodically updates the stormwater management manuals based on new information and science. The update process includes a public involvement element. Since the Sand and Gravel General Permit requires permittees to select BMPs from the most recent edition of the stormwater manuals (or functionally equivalent) the BMPs contained in updated stormwater manuals are adopted by permittees. This improves the effectiveness of stormwater controls for protecting water quality and meeting the intent of the antidegradation provisions of the water quality standards.
4. **Technology Assessment Protocol – Ecology (TAPE) process.** This formal process reviews and tests emerging treatment technologies for eventual adoption in Ecology's stormwater management manuals.
5. **Permittee compliance reports.** Each permittee submits to Ecology monitoring results and special submittals. Ecology staff review and act on reports to address compliance issues and provide technical assistance.
6. **Informal literature review and expert discussions.** When determining some of the requirements in the permit Ecology conducted informal literature reviews to gather information. Ecology also held e-mail and phone conversations with professional hydrogeologists, professional engineers, and other experts.
7. **Public hearings and formal draft comment period.** Ecology will review and use public comment and testimony from public hearings and during the public comment period on the formal draft permit to develop the final permit.

8. **Adaptive permit management.** The permit contains an adaptive management process that requires permittees to implement timely revisions to their Site Management Plans when discharges exceed the effluent limits. As such, stormwater and process water controls on individual projects are subject to ongoing refinement (such as addition of new BMPs enhancement of existing BMPs, and/or improvements to chemical treatment processes). This reduces the amount of pollutants that would otherwise be discharged to receiving waterbodies.

These efforts and the effluent limits in this permit, based on water quality criteria, constitute Ecology's antidegradation plan.

6.0 Explanation of Permit Conditions and Revisions

Ecology issued the original Sand and Gravel General Permit in 1994. Since then the permit has been revised five times by five different permit writers. One of the most common comments Ecology receives from Sand and Gravel personnel is how difficult the permit is to read and understand. These comments have come from not only new permittees but from veteran operators as well.

During this fifth revision of the Sand and Gravel General Permit, Ecology has focused on improving the reading ease of the permit. Thus, although there are numerous changes within the draft permit, the overwhelming majority of the changes will not result in operational changes at Sand and Gravel facilities.

Ecology recognizes that most Sand and Gravel personnel are familiar with the layout and format of the 2010 Sand and Gravel General Permit. Therefore, Ecology attempted to maintain the basic structure of the 2010 permit within the draft permit.

However, Ecology proposes elevating the four main sections of the Site Management Plan into their own main sections within the draft permit. Thus, the Erosion and Sediment Control Plan is now S6, the Monitoring Plan is S7, the Stormwater Pollution Prevention Plan is S8, the Spill Control Plan is S9, and the remaining sections of the special conditions have been renumbered accordingly.

Table 5 shows these changes within the Table of Contents structure and how it compares to the 2010 permit and the formal draft Sand and Gravel General Permits.

Table 5: Comparison of the 2010 and Formal Draft Sand and Gravel General Permits

Section in 2010 Permit	Section in Formal Draft Permit
S1. Permit Coverage	S1. Permit Coverage
S2. Effluent Limits	S2. Effluent Limits

S3. Additional Discharge Limits	S3. Additional Discharge Limits
S4. Monitoring Requirements	S4. Monitoring Requirements
S5. Site Management Plan (SMP)	S5. Site Management Plan (SMP)
	S6. SMP Section 1: Erosion and Sediment Control Plan
	S7. SMP Section 2: Monitoring Plan
	S8. SMP Section 3: SWPPP
	S9. SMP Section 4: Spill Control Plan
S6. Reporting and Record Keeping Requirements	S10. Reporting and Record Keeping Requirements
S7. Solid Waste Disposal	S11. Solid Waste Disposal
S8. Other/Unpermitted Uses of the Site	<Moved to subsection in S1>
S9. Permit Application	S12. Permit Application
General Conditions	General Conditions

This change has multiple benefits for sand and gravel personnel:

- This layout change will help new personnel realize the importance of the SMP sections within the permit by increasing the emphasis on these sections within the Table of Contents.
- It will be easier and quicker for personnel to find and refer to the SMP sections. For example, the source control BMPs (a major component of the permit) were previously in S5.C.5.f and now they are in S8.E.
- Personnel will be able to look in one spot for the general SMP requirements, modifications, and site map requirements; instead of needing to read and re-read multiple sections scattered throughout the permit.

Within the explanations below, the permit references will refer to the draft permit and this new numbering of the special conditions unless indicated otherwise.

6.1 S1. Permit Coverage

Permit Special Condition S1, Permit Coverage, defines the types of specific activities that qualify for coverage under the permit. Some facilities may require coverage for stormwater only because zero discharge categories for process water apply according to Federal Regulations.

Because a general permit is designed to provide environmental protection under conditions typical for the covered industry group as a whole, it will not be appropriate for every situation. Environmental protection cannot always be assured when site specific conditions at a facility are not typical of the industry group or are beyond the scope of the proposed general permit. Special

Condition S1.B identifies specific situations where facilities are excluded from coverage under the proposed general permit and may require coverage under an individual permit.

6.1.1 Proposed Revisions

Ecology removed the following references to the Code of Federal Regulations in the first paragraph of S1:

- Subparts of 40 CFR Part 443, Effluent Limitations Guidelines for Existing Sources and Standards of Performance and Pretreatment Standards for New Sources for The Paving and Roofing Materials (Tars and Asphalt) Point Source Category
- 40 CFR Part 436, Mineral Mining and Processing Point Source Category
- 40 CFR Part 411, Cement manufacturing

Ecology hopes that by removing these unneeded references new permittees will find this first section of the permit easier to read.

Ecology also proposes splitting S1 into additional sections (S1.B-E); this assists with flow and referencing.

North American Industry Classification System (NAICS) and Ecology Codes

The North American Industry Classification System (NAICS) was adopted in 1997 to replace the Standard Industrial Classification (SIC) system. Ecology proposes removing the SIC codes from the table in S1 and to list the NIACS codes in numerical order. Appendix 1 of the Permit will still provide the corresponding SIC Codes.

The primary purpose of the NAICS is for the use by Federal statistical agencies to classify business establishments for the purpose of collection, analyzing, and publishing national business economy data. The NAICS was not established for the purpose of applying environmental requirements. However, Ecology and EPA use the NAICS/SIC codes within regulations and permits because they are already familiar to permittees and provide an already existing classification system. The NAICS does have some limitations.

In the 2010 permit asphalt recycling activities were associated with code 324121 (Asphalt Paving Mixture and Block Manufacturing); concrete recycling activities were associated with code 327999 (All Other Miscellaneous Nonmetallic Mineral Product Manufacturing). The North American Industry Classification System does not have specific codes related to the recycling of asphalt and concrete. Instead, per NAICS the activities would fall under the classification of the end product of the recycling activities.

For example, a permittee might recycle concrete and use the material to form concrete blocks (NACIS 327331), or Ready-Mix Concrete (NAICS 327320), or a new statue (NAICS 327390), and there is no clear code for activities where the material is crushed and then sold as an

intermediate product. Thus, there is an unlimited number of NAICS codes that could be associated with recycling activities.

Instead of having multiple codes associated with asphalt and concrete recycling, Ecology proposes to assign asphalt recycling and concrete recycling new codes created by Ecology. ECY001 will now relate to asphalt recycling and ECY002 will relate to concrete recycling. This will help Ecology track the process water and stormwater discharges associated with these specific recycling activities. This information can assist Ecology in future permit revisions to determine effluent limits and best management practices. Plus, this data can show consistent compliance of the industry with meeting effluent limits.

The new Ecology codes also allow Ecology to establish requirements only for the applicable industry segment that conducts recycling activities as opposed to all concrete or asphalt related NAICS activities. This allow Ecology to focus BMPs and technical assistance on activities that potentially have a higher environmental risk.

Ecology proposes to revise the language in S1 and in other applicable permit sections to refer to activities instead of NAICS codes or characteristics. This provides a better description of the classification in Table 1 of the permit, include recycling activities, and includes other similar activities that may need coverage but are not specifically classified by a NAICS code.

Indian County

Ecology proposes to update the exemption for Indian Country. It is not Ecology's intention to issue permit coverage when coverage is already provided by a tribal government or another tribal or Federal water quality program.

Authorization

Ecology proposes to relocate some of the language from S2 to this new section S1 that address authorization. Ecology wants to clarify that permittees are only authorized to discharge process water, mine dewatering water, and stormwater per their coverage page. This includes both the NAICS codes (and /or concrete /asphalt recycling activities) and the types of discharge (surface, groundwater, or both).

For example, Ecology personnel have visited sites where the permittee was authorized to discharge to groundwater but was also discharging to surface water without getting prior authorization (through the permit application or by contacting Ecology). Also, personnel have come across permittees discharging process water associated with NAICS codes for which Ecology was not notified about.

In order for Ecology to administer the permit and to ensure that permittees are meeting SEPA and Public Notice Requirements, Ecology must know what activities are occurring on the site and the location of potential discharges.

Permittees can modify their coverage pages by contacting their regional Ecology office. Some changes require Permittees to complete a form whereas other changes may only require an e-mail, phone call or letter.

Accessory Uses of Site

Ecology proposes to move this section from the back of the permit (S8 in the 2010 permit) and place it here as a subsection under S1. The main purpose of S1 is to clarify what activities are and are not covered under the Sand and Gravel General permit. This section meets that purpose by addressing unpermitted activities.

Ecology has observed activities at permitted sites that are not consistent with activities in S1. These activities include composting operations, vehicle storage, and disposing of construction materials. These activities have the potential to discharge pollutants other than those characteristic of this industry. Facilities must obtain the appropriate permit(s) for those additional activities not covered under this general permit. Permittees must also separate these waste streams from their wastewater covered under the Sand and Gravel General Permit.

6.2 S2. Effluent Limits

Permit Special Condition S2, Effluent Limits, lists the effluent limits based on discharge type, NAICS (or Ecology) code, and discharge location. S2 also details the monitoring schedule for each parameter.

Table 2 in S2 details the effluent limit and monitoring schedule for discharges of process water and mine dewatering water. Table 3 in S2 details the effluent limits and monitoring schedule for discharges of stormwater.

6.2.1 Proposed Revisions

The proposed permit contains no changes to the effluent limits for pH, turbidity, total suspended solids, oil sheen, and total dissolved solids. Ecology proposes the following revisions to S2:

- Remove the effluent limits and monitoring requirements for Nitrate + Nitrite.
- Add a row to Table 2 for NAICS code 324121 (Asphalt Paving Mixture and Block Manufacturing) to indicate that process water discharges to surface water and groundwater are prohibited.
- Add the Ecology codes ECY001 and ECY002 to both Table 2 and Table 3.
- Clarify that some process water discharges to surface water associated with NAICS 212319 (Other Crushed and Broken Stone Mining and Quarrying) are prohibited.

Removal of Nitrate + Nitrite Effluent Limits

Ecology is proposing to remove the effluent limit and monitoring requirements for Nitrate + Nitrite from the permit. Ecology took the limit for Nitrate + Nitrite from EPA's Multi Sector General Permit which list 0.68 mg/L as a benchmark for SIC Codes 1442, 1446 (Corresponding NAICS codes 212321 Construction Sand and Gravel Mining, and 212322 Industrial Sand

Mining). EPA selected this benchmark for Nitrate + Nitrite from the median concentration in the 1983 National Urban Runoff Program.

In the 1983 National Urban Runoff Program, data was grouped by parameter and by general land use category. The category for industrial sites did not include heavy industrial sites, but more typically reflected an industrial park types, such that the industrial category more typically related to commercial use than industrial sites. Therefore, none of the locations selected for the National Urban Runoff Program reflected the typical conditions at Sand and Gravel facilities.

Ecology inappropriately made this benchmark into a limit and applied it to additional NAICS codes that were not identified by EPA or the National Urban Runoff Program. Ecology also took this benchmark and conditioned it based on blasting. EPA's description in the Multi Sector General Permit does not list nitrate + nitrite as a pollutant associated with blasting activities.

Additionally, the original 1994 Sand and Gravel General Permit required permittees to monitor for nitrate. In the second issuance of the Sand and Gravel General Permit in 1999, Ecology determined that the data from the monitoring required by the 1994 permit indicated that nitrates were not found at levels of concern. Therefore the 1999 permit did not require monitoring for nitrates.

Ecology also didn't take into account naturally high nitrate + nitrite background levels in Washington State when proposing this limit.

Process Water Discharges Prohibited from Asphalt Paving Mixture and Block Manufacturing

Process water discharges to surface waters were prohibited in the first issuance of the Sand and Gravel General permit in 1994 for asphalt paving mixture and block manufactures (in accordance with 40 CFR Part 443, Subpart B). Beginning in August 4, 2006 these permittees were also prohibited from discharging process water to groundwater.

These prohibitions to surface water were included in S3.G of the 2010 permit and the 2005 permit but not clearly stated within Table 2 in S2 of the 2010 permit. The draft permit continues these requirements and clearly states them by adding a row to Table 2 for NAICS 324121.

What about Dust Control?

Spraying, with non-process water or process water that has been treated is permitted under this permit for use on unpaved access roads, to maximize dust control, and to minimize the off-site tracking of sand, soil, sediment, or similar materials. However, permittees cannot allow untreated discharges of dust control water to run off-site or to surface water. Also, pools or ponds of dust control water may be considered a groundwater discharge. Permittees should attempt to minimize puddling, pooling, and ponding of dust control water. If a discharge to surface water or groundwater occurs then the dust control water is considered a process water discharge.

The lined impoundment requirements in S3.E allow asphalt batch plants to discharge process water to a lined impoundment; however, even after treatment, the permittee is still prohibited from discharging the wastewater per the prohibitions listed in Table 2.

Ecology codes ECY001 and ECY002 added to Table 2 and Table 3

Concrete recycling activities were previously listed under NAICS code 327999. Ecology proposes to maintain the process water and stormwater effluent limits and monitoring requirements for concrete recycling activities. An example of process water from recycling concrete activities is water used to wash the recycled concrete material in order to remove fines.

Permittees that conduct concrete recycling activities that have a discharge to groundwater that has a pH higher than 8.5 must follow the Pollution Prevention Schedule in Appendix C of the permit. Ecology has added a footnote to Tables 2 and 3 noting these additional instructions.

Asphalt recycling activities were previously listed under NAICS code 324121. Ecology proposes to instead group asphalt recycling activities with those associated with recycled concrete. So that both concrete and asphalt recycling process water and stormwater discharges will have the same effluent limits and monitoring requirements.

Often, permittees receive a mixture of concrete and asphalt recycling materials from construction demolition. Separating the concrete materials from the asphalt materials would be time intensive, difficult, and is unnecessary. Hardened asphalt materials represent less risk to water quality compared to hot, ambient, or cold mix asphalt products that have not hardened.

NAICS 212319 process water discharges to surface water

S3.G of the 2010 permit prohibited the discharge of process water to surface waters from "NAICS 212319, (SIC 1499), All other Nonmetallic Minerals". SIC code 1499 corresponds to both NAICS codes 212319 and 212399.

Ecology looked at the SIC code 1499 description and compared the activities within it to NAICS codes 212319 and 212399. The majority of activities were classified under NAICS code 212399 the only exceptions were bitumens (native) mining, bituminous limestone quarrying, and bituminous sandstone quarrying. These three activities were classified under NAICS code 212319. Ecology therefore added a footnote to Table 2 to note that the permit prohibits surface water discharges of process water associated with these activities.

6.2.2 Background

Federal and State regulations require that effluent limits set forth in a NPDES permit must be either technology-based or water quality-based.

- **Technology-based limits:** are set by regulation or developed on a case-by-case basis (40 CFR 125.3, and Chapter 173-220 WAC). Technology-based limits are based upon the treatment methods available to control or treat specific pollutants.

- **Water quality-based limits:** are based upon compliance with the Surface Water Quality Standards (Chapter 173-201A WAC), Ground Water Standards (Chapter 173-200 WAC), Sediment Quality Standards (Chapter 173-204 WAC) or the National Toxics Rule (40 CFR 131.36).

The more stringent of these two limits must be chosen for each parameter of concern

The federal government evaluated many categories of dischargers as a result of the directives of the Clean Water Act. Section 301(b) of the Clean Water Act requires the achievement of effluent limits for point sources, which are based on the application of the best practicable control technology currently available (BPT) and the best available demonstrated control technology (BCT) which will result in reasonable further progress toward the national goal of eliminating the discharge of all pollutants.

The information contained in the Code of Federal Regulations (and the associated development documents) and analyses of the data submitted on recent DMRs from permitted facilities form the basis for the technology-based effluent limits of this proposed general permit.

State law also requires facilities to treat all wastewater with all known, available and reasonable methods of prevention, control and treatment (AKART). This State technology-based requirement may be more stringent than federal requirements.

State law contains both numerical and narrative water quality criteria. They limit the levels of pollutants allowed in receiving water to protect aquatic life, recreation, aesthetic values, and human health. Ecology uses the numerical surface water quality criteria along with chemical and physical data for the wastewaters and receiving waters to derive the effluent limits in the discharge permit. When water quality-based limits are more stringent or potentially more stringent than technology-based limits, the discharge must meet the water quality-based limits.

Although water quality concerns for the state's groundwater and surface water are not truly separate and distinct, there are potential differences in the fate of pollutants traveling to groundwater versus direct discharge to surface water. The 2010 permit reflects these differences with additional monitoring parameters for those discharges to surface water (e.g. turbidity and total suspended solids). Because of these differences, water quality-based considerations will consider groundwater discharges and surface water discharges separately.

pH

The technology-based limit for pH of discharges is 6 to 9 standard units. Ecology derived this pH range from the federal effluent guidelines (40 CFR Part 436, Mineral Mining and Processing Point Source Category). The costs and benefits of pH adjustment are presented in the "Development Document for Concrete Products."

Applicable criteria are defined in Chapter 173-201A WAC for aquatic biota. Criteria for some parameters consider the type of water body (e.g., lake, stream, or ocean) and the beneficial uses.

The tables below list the criteria for pH for both fresh and marine water.

Table 6: Aquatic Life Criteria for pH from Chapter 173-201A WAC

Aquatic Life pH Criteria in Fresh Water	
Use Category	**pH Units**
Char Spawning and Rearing	pH shall be within the range of 6.5 to 8.5, with a human-caused variation within the above range of less than 0.2 units.
Core Summer Salmonid Habitat	Same as above.
Salmonid Spawning, Rearing, and Migration	pH shall be within the range of 6.5 to 8.5 with a human-caused variation within the above range of less than 0.5 units.
Salmonid Rearing and Migration Only	Same as above.
Non-anadromous Interior Redband Trout	Same as above.
Indigenous Warm Water Species	Same as above.

Aquatic Life pH Criteria in Marine Water	
Use Category	**pH Units**
Extraordinary quality	pH must be within the range of 7.0 to 8.5 with a human-caused variation within the above range of less than 0.2 units.
Excellent quality	pH must be within the range of 7.0 to 8.5 with a human-caused variation within the above range of less than 0.5 units.
Good quality	Same as above.
Fair quality	pH must be within the range of 6.5 to 9.0 with a human-caused variation within the above range of less than 0.5 units.

A general permit must consider the typical discharge conditions and cannot readily accommodate site specific variables. Ecology determined that surface water discharges for this industry group are most likely to freshwater (WAC 173-201A-200).

Chapter 173-200 WAC has established a numerical criteria for pH of 6.5 to 8.5 standard units for groundwater.

Since both the surface and groundwater criteria are more restrictive than the technology-based limit of in the range of 6.0 to 9.0 standard units, the proposed permit assigns a water quality-based limit of 6.5 to 8.5 standard units for discharges to both groundwater and surface water.

Figure 2 shows the reported pH values during the 2010 permit cycle[2]. The compliance rate with the effluent limits of 6.5 to 8.5 during the 2010 permit was 99%.

Figure 2: Reported pH Values during the 2010 Permit[2]

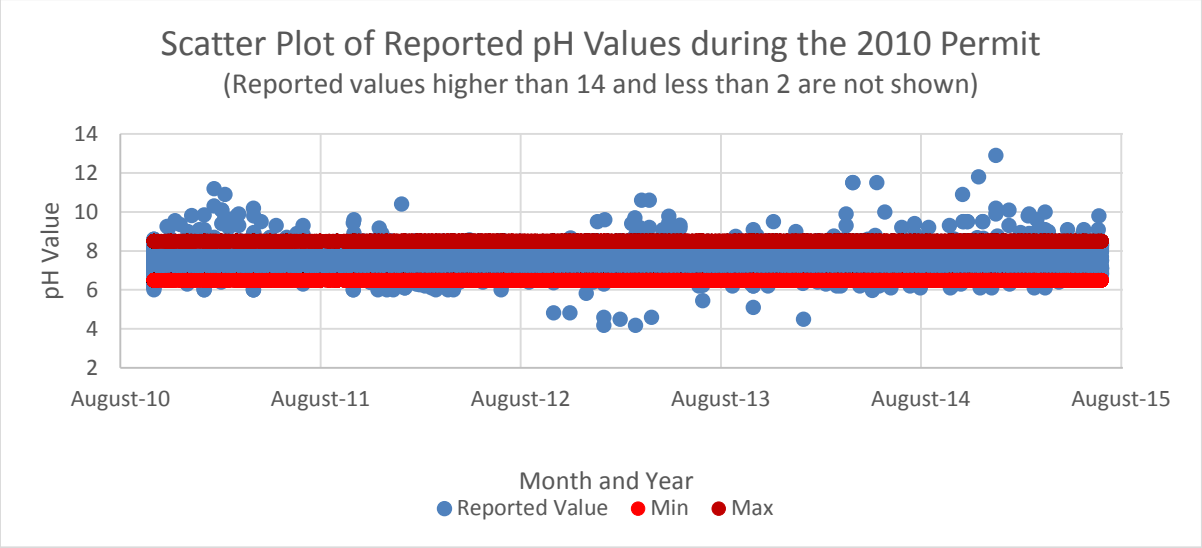
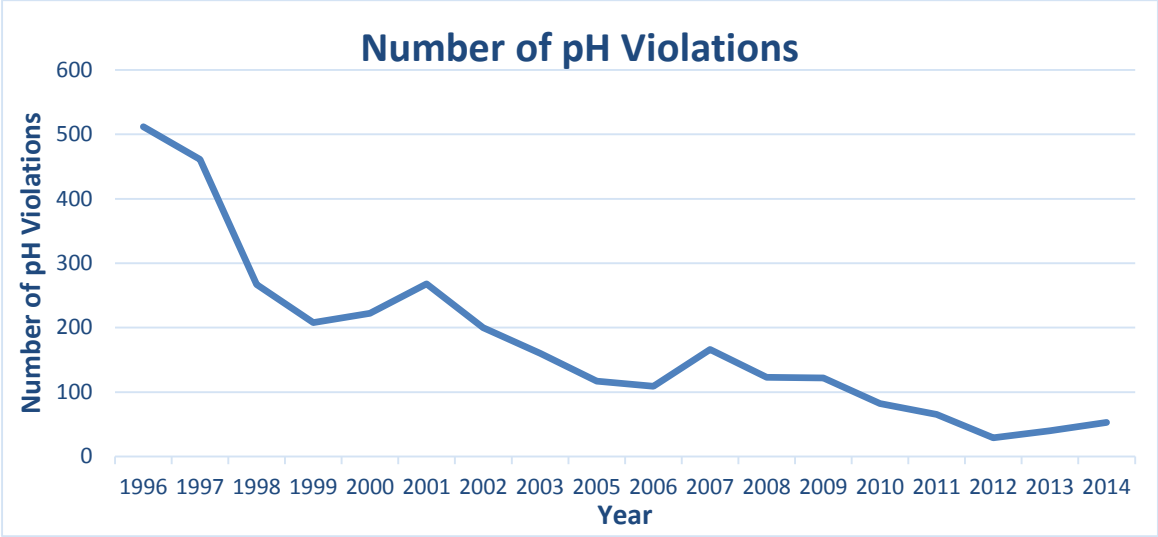


Figure 3 shows the number of pH violations based on values reported to Ecology by permittees for several years. The graph shows that in the last ten years the number of pH violations has been reduced by approximately 50%.

Figure 3: Approximate Number of pH Violations per Year



[2] Data from October 1, 2010 to August 1, 2015.

(Note: In 2004 Ecology transitioned between tracking databases, thus the information for 2004 is incomplete and not reflected in the figure).

The proposed permit retains the 6.5 – 8.5 pH effluent limits.

Turbidity

Table 7 lists the applicable criteria for turbidity as defined in Chapter 173-201A WAC for aquatic biota for both fresh and marine water.

Table 7: Aquatic Life Criteria for Turbidity from Chapter 173-201A WAC

Aquatic Life Turbidity Criteria in Fresh Water	
Category	**NTUs**
Char Spawning and Rearing	Turbidity shall not exceed: • 5 NTU over background when the background is 50 NTU or less; or • A 10 percent increase in turbidity when the background turbidity is more than 50 NTU.
Core Summer Salmonid Habitat	Same as above.
Salmonid Spawning, Rearing, and Migration	Same as above.
Salmonid Rearing and Migration Only	Turbidity shall not exceed: • 10 NTU over background when the background is 50 NTU or less; or • A 20 percent increase in turbidity when the background turbidity is more than 50 NTU.
Non-anadromous Interior Redband Trout	Turbidity shall not exceed: • 5 NTU over background when the background is 50 NTU or less; or • A 10 percent increase in turbidity when the background turbidity is more than 50 NTU.
Indigenous Warm Water Species	Turbidity shall not exceed: • 10 NTU over background when the background is 50 NTU or less; or • A 20 percent increase in turbidity when the background turbidity is more than 50 NTU.

Aquatic Life Turbidity Criteria in Marine Water	
Category	**NTUs**
Extraordinary quality	Turbidity must not exceed: • 5 NTU over background when the background is 50 NTU or less; or • A 10 percent increase in turbidity when the background turbidity is more than 50 NTU.
Excellent quality	Same as above.
Good quality	Turbidity must not exceed: • 10 NTU over background when the background is 50 NTU or less; or • A 20 percent increase in turbidity when the background turbidity is more than 50 NTU.
Fair quality	Same as above.

The water quality-based turbidity allowance for discharges to salmonid waters is less than 5 NTU above background. Allowing a dilution factor of 10 and a background level of 0 NTU in the receiving water, a water quality-based limit of 50 NTU was assigned in the 2010 permit.

Figure 4 shows the reported turbidity values during the 2010 permit cycle. The data collected during the 2010 permit cycle indicates that 99% of samples reported under the permit were less than or equal to the 50 NTU limit.

Figure 4: Reported Turbidity Values[2]

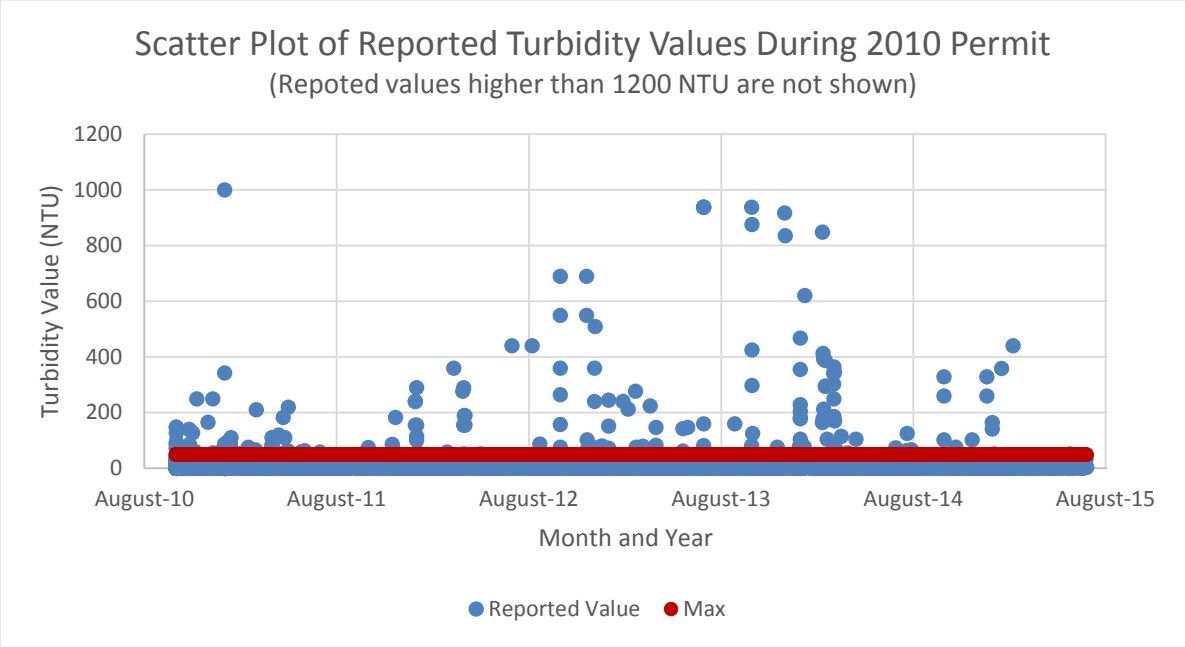


Figure 5 below shows the number of numerical turbidity violations since the first issuance of the Sand and Gravel General Permit. In 2009 there was a large spike in the number of turbidity violations which was significantly reduced with the reissuance of the permit in 2010. Since 2010, the number of turbidity violations have remained fairly constant.

Figure 5: Approximate Number of Turbidity Violations per Year

(Note: In 2004 Ecology transitioned between tracking databases, thus the information for 2004 is incomplete and not reflected in the figure).

Based on this data, Ecology has determined that 50 NTU is economically achievable by dischargers covered by the 2010 permit and therefore constitutes a valid technology-based limit (AKART, BCT). The proposed permit continues a turbidity limit of 50 NTU, which will meet water quality standards in most discharge situations.

Total Suspended Solids (TSS)

Ecology derived the limit on discharges of total suspended solids (TSS) from the requirement to recycle wastewater from the federal effluent guidelines (40 CFR Part 436 and Part 443), the report *Suspended Solids Removal in the Crushed Stone Industry*, and discharge monitoring records.

Industrial sand facilities (NAICS code 212322), in accordance with 40 CFR Part 436, Subpart D, must recycle at least a portion of the wastewater and not exceed the following limits for discharge of process water and mine dewatering: 45 mg/l TSS daily maximum and 25 mg/l TSS for a monthly average. The proposed permit contains a limit of 25 mg/L as a quarterly average.

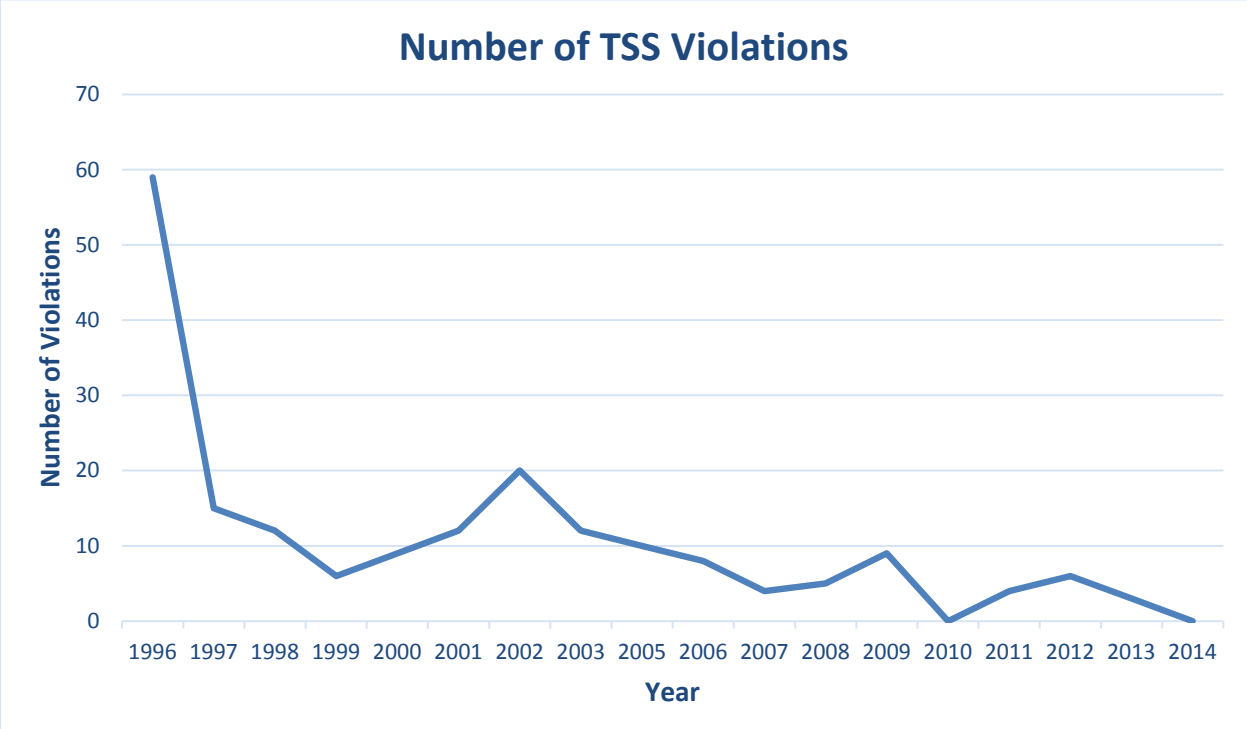
Facilities must direct wastewater to a common area in order to prepare the water for reuse to meet the BPT requirement to recycle wastewater. Treatment removes the solids that might otherwise clog piping, damage pumping equipment, and possibly contaminate the product.

The TSS encountered in the process water rapidly settles resulting in TSS removal efficiencies ranging from 90% with very dilute waste streams to over 99% for the typical process waste streams. Despite the relatively high TSS loadings, the material settles easily, and facilities can

meet the limits of 40 mg/l TSS so long as they maintain adequate settling time and properly design and operate treatment systems.

Figure 6 below shows the number of numerical TSS violations since the first issuance of the Sand and Gravel General Permit. There was a drastic reduction in the number of TSS violations following the first issuance of the permit. Followed by additional reductions over the past 10 years.

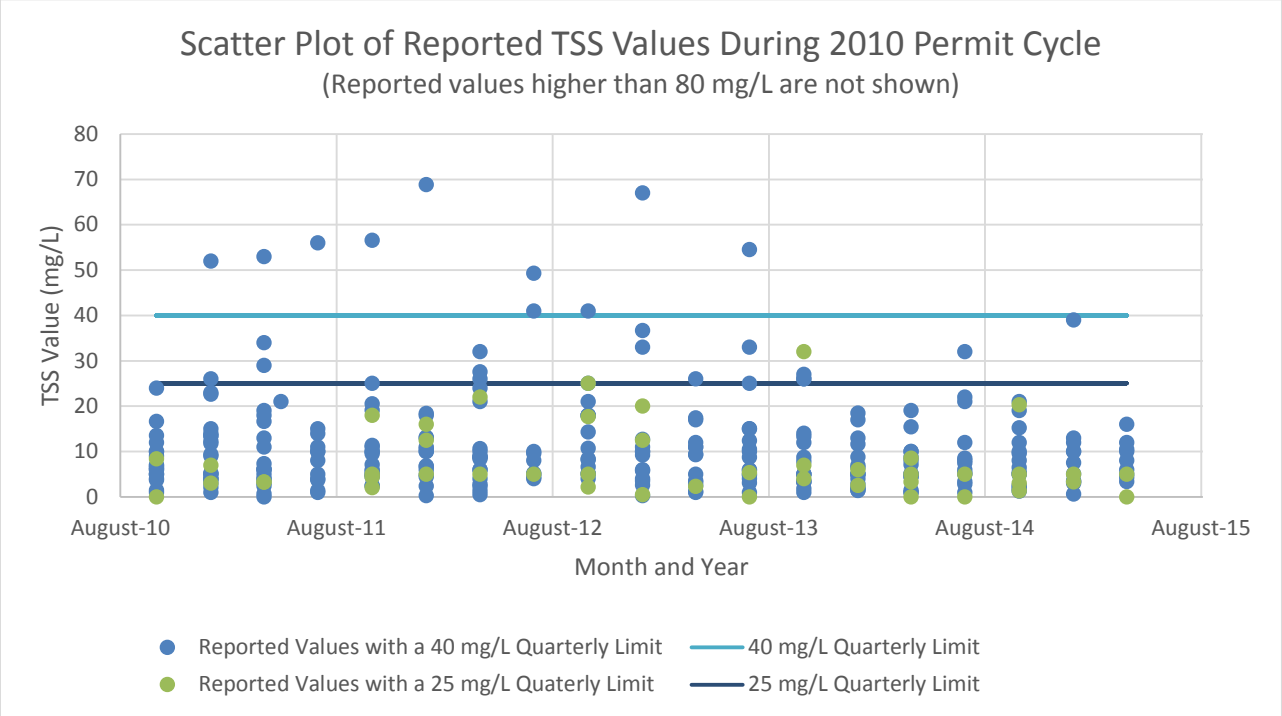
Figure 6: Approximate Number of Total Suspended Solids Violations per Year



(Note: In 2004 Ecology transitioned between tracking databases, thus the information for 2004 is incomplete and not reflected in the figure).

Figure 7 below, shows the reported TSS values for the 2010 permit cycle. The majority of the values were below the 25 mg/L effluent limit even though the majority only required to be below the 40 mg/L effluent limit. The data shows that approximately 96% of the reported values meet the effluent limits.

Figure 7: Reported Total Suspended Solids Values[2]



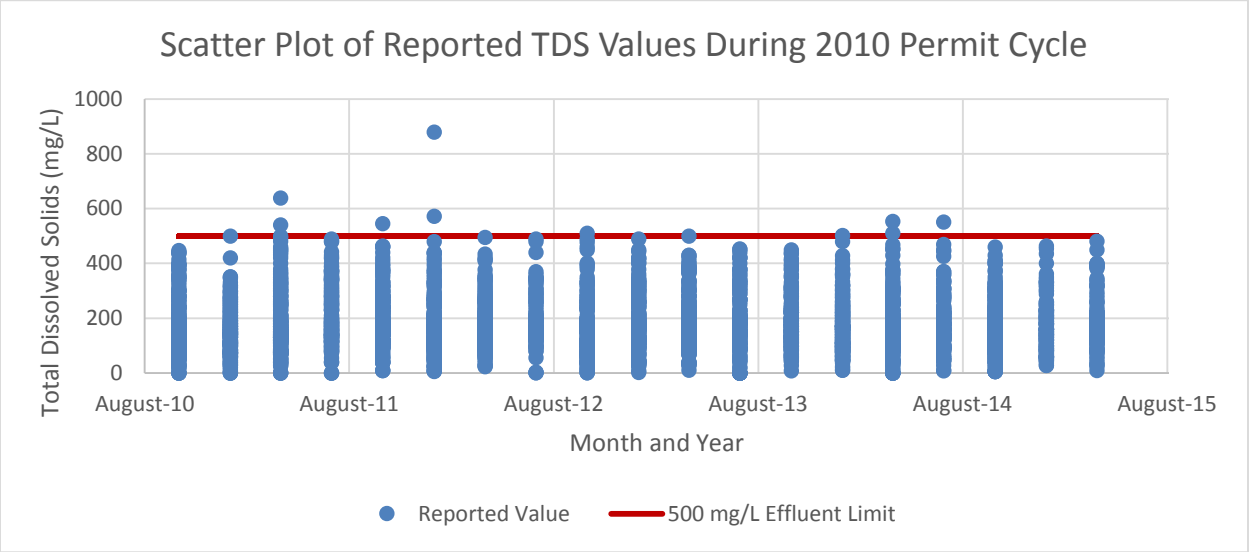
Consistent with federal policy and regulation Ecology has chosen to specify limits that define the limit of performance that can reliably be achieved. The proposed permit retains TSS effluent limits. Ecology believes these limits still represent AKART using source control, reuse, sedimentation and settling agents for pollutant control.

TDS

The 2010 permit requires concrete batch plants and other facilities with similar discharges to measure total dissolved solids (TDS) in process water discharged to ground. These discharges have the potential to violate ground water criteria (Chapter 173-200 WAC), which is 500 mg/l TDS.

During the 2010 permit cycle there were only 10 violations of the 500 mg/L effluent limit, representing a 100% compliance rate. The reported monitoring values for total dissolved solids are show in Figure 8. Ecology proposes to keep the same 500 mg/L effluent limit.

Figure 8: Reported Total Dissolved Solids Values[2]

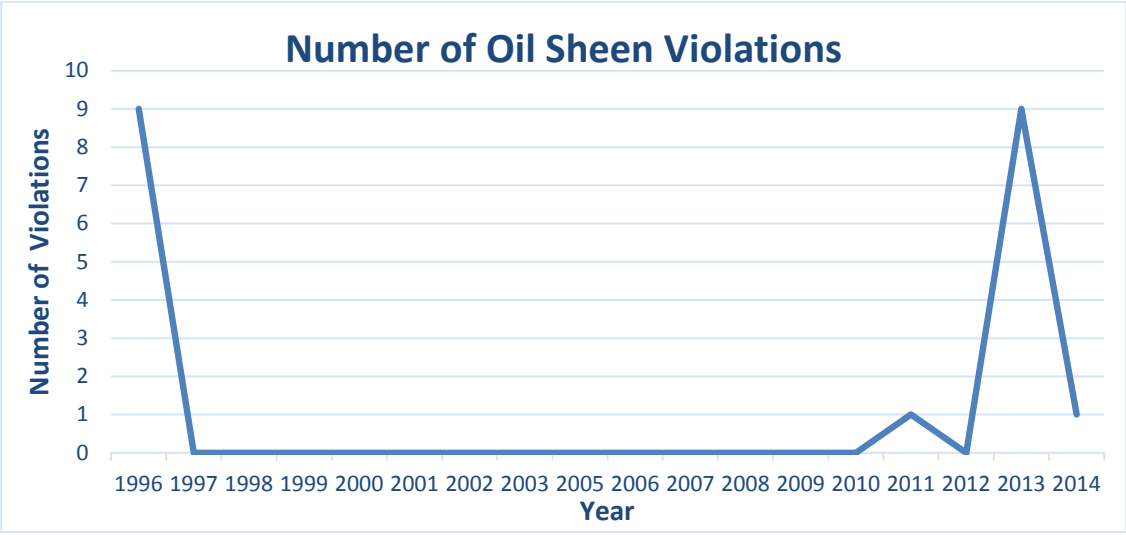


Oil Sheen

The proposed permit continues to prohibit oil sheen, however, Ecology does not consider the presence of an oil sheen as a permit violation if the facility reports the presence of the sheen, explains the cause, remedies the sheen condition when discovered, and has preventative BMPs in place.

Figure 9 shows the approximate number of oil sheen violations per year starting with the first permit issuance. For over ten years there were no oil sheen violations reported to Ecology; but there has been a slight increase of violations during the 2010 permit cycle. Ecology proposes to retain the same requirements for oil sheen as in the 2010 permit.

Figure 9: Approximate Number of Oil Sheen Violations per Year



(Note: In 2004 Ecology transitioned between tracking databases, thus the information for 2004 is incomplete and not reflected in the figure).

Discharge Flow and Temperature

New Permittees that discharge to surface water may be required to monitor temperature during the summer or fall months to determine if there is a potential to violate water quality temperature standards. Specified monitoring frequencies take into account the quantity and variability of the discharge, the treatment method, past compliance by the industry as a whole, significance of pollutants, and the cost of monitoring. Ecology will work with new permittees to determine if monitoring is necessary and to determine an appropriate monitoring schedule.

6.3 S3. Additional Discharge Limits

The purpose of S3 is to describe additional discharge limits beyond the effluent limits in S2 of the permit.

Proposed revisions to Section S3 in the draft permit include:

- Relocating and emphasizing Best Management Practice (BMP) language.
- Correcting references.
- Removing duplicative language.
- Clarifying requirements for inactive sites.

Best Management Practices (BMPs)

When initially reading the text of the Sand and Gravel Permit it is not immediately clear that the permit requires the implementation of Best Management Practices (BMPs). BMPs are a very significant part of complying with the permit conditions. Permittees must implement BMPs to meet effluent limits, AKART requirements, and site management plans. In the draft permit, Ecology proposes to remove this ambiguity by moving the BMP language in the 2010 permit in S5.C.1 to S3.A; and by emphasizing the implementation of BMPs.

Ecology also continues emphasizing the implementation of BMPs by moving the language in S5.C.4 to S3.A. This section requires that BMPs be consistent with Ecology's Stormwater Manuals for Western/Eastern Washington or an approved equivalent.

Ecology does not anticipate these changes to have any effect on existing permittees; since existing permittees are already implementing BMPs. However, these changes should assist new staff and new permittees when they read the permit for the first time.

Facilities must base their BMP selections upon either the *Presumptive Approach* or the *Demonstration Approach.* Each discharger can select BMPs best suited for reducing the pollutants in its stormwater on the basis of site-specific conditions. Facilities choosing the demonstrative approach may select BMPs different than, but functionally equivalent to, the BMPs in an approved SWMM but must document their functional equivalency in the SMP.

For the *Demonstration Approach*, the facility must document the technical basis for all stormwater BMPs within the Site Management Plan (SMP). The SMP must document:

1. How the facility selected the stormwater BMPs.

2. The pollutant removal performance expected from the selected BMP.

3. The technical basis which support the performance claims for the selected BMPs.

4. An assessment of how the selected BMP will comply with state water quality standards, satisfy the state AKART requirements, and the federal technology-based treatment requirements under 40 CFR part 125.3

For the *Presumptive Approach*, facilities which follow the stormwater management practices contained in approved stormwater management manuals (SWMM), including the proper selection, implementation, and maintenance of appropriate best management practices, do not need to document the technical basis for the BMPs being used. However, the SMP must clearly state which approved SWMM was used.

Corrected References

Ecology corrected the reference to the WAC in S3.B and the reference to material safety data sheets in S3.F.

The Chemical Technology Assessment Protocol – Ecology (C-TAPE) program has replaced Ecology's Stormwater Technical Review and the Chemical Technology Review Committee (S3.F.4). For more information on C-TAPE visit: http://www.ecy.wa.gov/programs/wq/stormwater/newtech/index.html.

Removed Duplicative Language

S3.G.1 of the 2010 permit prohibited process water discharges from certain NAICS / SIC codes to waters of the state. Some of these prohibitions were shown within Table 2 (in S2) but the prohibitions for NIACS code 324121 and 212319 were not reflected in Table 2. Ecology has revised Table 2 in S2 of the draft permit to include these prohibitions and has removed this duplicative language from S3.

In the 2010 permit both S3.E.6 and S3.J contained the same requirement to prohibit direct discharges of wastewater from hot mix asphalt plants, concrete batch plants, asphalt release agent application areas, and concrete truck washout areas into a pit or excavation that penetrates the water table. Ecology proposes to retain this language in section S3.E.6 and remove section S3.J.

Inactive Sites

The 2010 permit prohibited excavation at inactive sites. Ecology has clarified that excavation for the purpose of maintaining BMPs is allowable. The permit still prohibits the excavation for mining or material production purposes.

The 2010 permit did not address process water or mine dewatering discharges from inactive sites. These types of discharges from inactive sites are rare but they do occur. Ecology proposes requiring inactive sites that have process water or mine dewatering discharges to monitor their discharges the same as they would if they were an active site. Thus, Ecology has revised the text in S3.J of the draft permit to refer to S2 (which includes both Table 2 and Table 3). The language in S3.J of the draft permit is only applicable to the discharge limits, the monitoring requirements are listed in S4.C.

Ecology proposes to relocate the requirement to have inactive sites certified by a professional engineer every three years from S4.F.3.b in the 2010 permit to S3.J.3 of the draft permit. S3.J.3 of the 2010 permit discusses inactive sites and the certification is necessary to make sure that discharge limits are met. The requirement to have a registered professional engineer certify the site is directly from CFR §122.44(i)(4)(iv).

Water Management

Ecology received comments on this section during the 2014-2015 stakeholder meetings and preliminary comment periods. Ecology carefully considered those comments but is not proposing to make changes to section S3.E, *Water Management*.

The lined impoundment requirements in S3.E.2 allow asphalt batch plants to discharge process water to a lined impoundment. However, even after treatment the permittee must meet the limits within S2 and S3 of the permit. Thus, permittees are still prohibited from discharging process water from asphalt batch plants even after treatment in a lined impoundment.

Ecology received comments that it is impractical for continuous removal systems to draw down their impoundments periodically for inspection. Ecology disagrees that this requirement is impracticable. Facilities must use lined impoundments where the process water discharge has a significant potential to contaminate ground water and must construct and maintain these impoundments to prevent leakage. Permittees should inspect their impoundments periodically (typically once every 5 years) to ensure that their impoundments are functioning correctly. Lined impoundments may develop cracks and holes over time that may not result in noticeable visual conditions.

6.4 S4. Monitoring Requirements

The purpose of section S4 in the permit is to describe the monitoring and inspection requirements. Ecology proposes to group the monitoring, sampling and analytical procedures, laboratory accreditation, and inspection requirements from throughout the permit into S4. This reorganization will help readers find all of the monitoring and inspection requirements in this one section of the permit instead of having to look in multiple sections in the permit.

Requirements that addressed record retention and new permittees were moved from S4 to the appropriate sections within S10 and S12.

Additional proposed revisions to this section include:

- Using the term monitoring points instead of sampling locations.
- Addressing process water and mine dewatering water at inactive sites.
- Adding recommended monitoring methods, quantitation levels, and additional information in a new table within the permit.
- Matching the laboratory accreditation section with WAC 173-226-090(5).
- Requiring permittees to identify any corrective actions or maintenance tasks needed within their inspection reports.
- Asking permittees to provide the latitude and longitude of the monitoring points for which they request a visual exemption.

Ecology proposes using the term monitoring points consistently throughout the permit. The electronic reporting applications also use the term monitoring points.

Discharges to Groundwater

Ecology proposes to remove some unnecessary wording from section S4.B of the draft permit. Sampling of only one discharge type (such as mine dewatering water), when other discharge types are present (such as process water), is not considered representative and doesn't meet the requirements of S4.B.1.

Monitoring is intended to verify how well control measures are working to assure compliance with discharge limits. The permit requires facilities to collect samples that represent the operating conditions at a site and the nature of discharges that occur.

Permittees should sample all of the types of discharges they have. Permittees should consider the similarities of the contributing site conditions when choosing representative sampling points. If the different sample points are all from stockpile runoff of the same material, one sample point may be sufficient. If some sample points are located around stockpiles and others around a concrete batch plant, then two sample points will likely be required. If the sample points are from mine dewatering water and process water, then two sample points would likely be required.

Representative sampling of discharges to ground water does not mean that facilities must sample all ponds and puddles onsite. It does mean that the facility must identify the number of samples necessary to accurately represent discharge conditions.

Permittees' monitoring plans should include documentation of the testing conducted by the facility to determine representative sampling for their site. Permittees should do this for their stormwater, process water, and mine dewatering water sampling. The facility should periodically conduct additional sampling to assure that its monitoring plan provides representative sampling.

Monitoring at Inactive Sites

The 2010 permit did not address process water or mine dewatering discharges from inactive sites. These types of discharges from inactive sites are rare but they do occur. For example, process water ponds may still discharge even though processing activities on-site have ceased. Or, mine dewatering is still necessary even though mining activities have ceased.

Ecology proposes requiring inactive sites that have process water or mine dewatering discharges to monitor their discharges the same as they would if they were an active site. Thus, Ecology has revised the text in S4.C of the draft permit.

Stormwater monitoring at inactive sites is **not** required, except when either or both of the cases below occur:

1. There is a process water and / or mine dewatering water discharge from the inactive site.
2. The permittee adds or withdraws raw materials or finished products from stockpiles during the calendar quarter **and** the site has a discharge of stormwater to surface waters of the state.

Sampling and Analytical Procedures

In the 2010 permit the Monitoring Plan section (S5.B) and the Recording of Results section (S6.D) contained detailed requirements regarding sampling procedures. Ecology proposes to relocate these requirements in the permit to section S4.D Sampling and Analytical Procedures.

Ecology proposes moving the requirements in S4.D.7 which discusses recording information for each sample from S6.D in the 2010 permit (Records and Record Keeping Section). The origin of this language is WAC 173-226-090(2)(c) and CFR122.41(j)(3). Ecology proposes to move this language here since permittees need to record this information as part of their sampling procedures.

In 2014, EPA published a final rule titled: National Pollutant Discharge Elimination System (NPDES): Use of Sufficiently Sensitive Test Methods for Permit Applications and Reporting (79 FR 49001). The rule became effective on September 18, 2014, modifying portions of 40 CFR Parts 122 and 136. The rule provides criteria for determining that a method is "sufficiently sensitive".

In order to address this rule, Ecology has added in this permit language (S4.D.6) and specified quantitation levels for the monitoring parameters in S2 within the new Table 4. Ecology has also listed additional monitoring information in Table 4. Ecology hopes that the new table will help permittees understand the methods, equipment types, and holding times associated with the monitoring requirements.

S4.D.6 and Table 4, in the draft permit, use the term *quantitation level*; which is the lowest concentration of an analyte that can be measured with a defined level of confidence. This may also be called the reporting level by some laboratories.

Laboratory Accreditation

If a permittee obtains laboratory accreditation for total suspended solids (TSS) or total dissolved solids (TDS) then they must also obtain laboratory accreditation for conductivity, turbidity, and pH. This is a requirement of chapter 173-226-090 WAC.

The 2010 permit neglected to include turbidity in the list of additional parameters that permittees would need to obtain accreditation for if they receive accreditation for total suspended solids or total dissolved solids. Ecology includes it in the formal draft permit.

Permittees may conduct their own turbidity and pH sampling and analysis without accreditation as long as they send their TSS and TDS samples to an accredited laboratory for analysis.

Information on how to obtain accreditation is available from Ecology's lab accreditation program at: http://www.ecy.wa.gov/programs/eap/labs/index.html, or by calling (360) 871-8840.

Inspections

Ecology maintained the inspection requirements from the 2010 permit in the draft permit.

Site inspections provide timely feedback to the operator on the effectiveness of BMPs. Inspections provide information on when BMP repair, maintenance, or staff training is necessary to improve the quality of wastewater discharged offsite, or when additional BMPs may be required. Site changes over time may necessitate the relocation or addition of BMPs. Rainfall and other natural or environmental forces may cause BMPs to fail. Sites that are inspected regularly typically tend to cause fewer water quality violations. Ecology considers site inspections a requirement of AKART.

Ecology proposes to limit oil/water separator inspections to when permittees operate equipment. This will reduce the burden of oil/water separator inspections for inactive sites that do not have equipment operating.

Inspection Reports

The permit includes a variety of inspections (oil/water, oil sheen, semi-annual, erosion etc.) for which inspection reports are required. During the preliminary comment period, Ecology heard from permittees that there was some confusion regarding the intention of the inspection report requirements in the permit. Some permittees thought that the term "report" required a fully written accounting of the inspection. This is not Ecology's intent. Completed inspection forms, logs, checklists, or records used to meet Washington State Department of Transportation or Mine Safety and Health Administration requirements may also be acceptable as inspection reports provided they address the items in S4.G.1.a-f of the permit.

S4.G.1.a of the permit requires permittees to include a summary of the inspection within their inspection reports. The purpose of this requirement is to identify within the inspection report the areas of the facility that the permittee inspected and any major observations. This summary does not have to be written in paragraph form. As long as the permittee's records identify the items inspected and the observations observed this summary can be in any format.

In S4.G.1.d Ecology proposes referring to the Site Management Plan (SMP) instead of the Stormwater Pollution Prevention Plan (SWPPP). The permit requires a variety of inspections not all of them relate to the SWPPP. Observations should also be made related to the Erosion and Sediment Control Plan, Monitoring Plan, and Spill Plan.

If permittees perform maintenance actions at the time of the inspection they should include this information in the inspection report per S4.G.1.e.

Ecology proposes that, during the required inspections conducted by facility personnel, the designated inspector shall identify any additional corrective actions or maintenance tasks during the inspection which cannot be corrected immediately. The inspector should note these items in their inspection reports per S4.G.1.f of the permit. For example, an inspector may note that their discharge pond requires dredging and their outlet structure requires a new grate which has to be ordered. Another example is noting that within a week a pumper truck is scheduled to clean out the oil water separator.

The 2010 permit requires permittees to retain inspection, maintenance, and servicing records for their oil/water separator, equipment, and vehicle inspections (S4.A of the 2010 permit). In order to simplify the inspection and record retention requirements, Ecology proposes to remove this requirement to retain servicing records. Ecology has added a requirement in S4.G.1.f that address identifying corrective actions / maintenance tasks to ensure that permittees still identify and complete maintence items.

Although, the permit no longer requires permittees to develop a training plan. The permit does require permittees to comply with its terms and conditions. This responsibility includes hiring and training staff so that they have the capability to properly conduct water quality inspections and complete the necessary inspection reports.

Exemption from Visual Monitoring

Ecology proposes to elevate the exemption for visual monitoring permit language to a new subsection (S4.H). This change will make referencing the permit easier.

For tracking and reporting purposes, Ecology needs the specific latitude and longitude (expressed in decimal degrees) of any outfalls for which permittees request an exemption from visual monitoring. Permittees may keep the visual monitoring exemption within any section of their site management plan; these exemptions do not necessarily need to be within the SWPPP.

6.5 S5. Site Management Plan (SMP)

Special Condition S5 requires all facilities to have a Site Management Plan (SMP). The SMP is a consolidated plan consisting of an Erosion and Sediment Control Plan (ESCP), a Monitoring Plan, a Stormwater Pollution Prevention Plan (SWPPP), and a Spill Prevention Plan.

The SMP must be developed and implemented to identify and control pollution by industrial activities. The SMP objectives include: elimination of commingling of process water and stormwater, implementation of best management practices (BMPs), and the prevention of water quality standard violations.

Proposed revisions to section S5 in the draft permit include:

- Splitting this section into main sections for the ESCP, Monitoring Plan, SWPPP, and Spill Control Plan. These sections will still be considered as part of the SMP.
- Requiring permittees to note the date and staff that conducted the yearly SMP review.
- Consolidating the SMP modification and site mapping language into this section.
- Requiring site maps to be to scale or show relative distances.
- Removing some of the site mapping requirements.

SMP Sections

Ecology proposes adding S5.A, a new subsection, which will clarify that the SMP still contains the ESCP, Monitoring Plan, SWPPP, and Spill Control Plan; even though these sections have been elevated a level in the table of contents.

SMP Requirements

S5.B of the permit will clarify that permittees must have and fully implement a site specific Site Management Plan (SMP). Generic SMPs can be used as templates but permittees must have plans that are specific and include the applicable BMPs located at the specific site.

Permittees must review their SMP at least once a year. Ecology proposes that permittees should note in their SMP the date of their annual review and the names of the personnel that conducted the review.

Ecology proposes to consolidate the language about retaining and providing the SMP in the records retention section of the permit (S10.C). This makes this section of the permit shorter and helps to remove duplicative language from the SWPPP and monitoring plan sections.

When does my SMP need to be updated for the new permit?

With the exception of changes for recycled concrete and release agents, most permittees will not need to make significant changes to their site management plans due to this permit reissuance.

Permittees should update their SMPs for the permit reissuance during their annual SMP review. Thus, if the permit becomes effective on January 1, 2016 all permittees should have their SMPs updated by January 2, 2017. Permittees that need additional time should contact their regional Ecology office.

Modifications of the SMP

Previously, permittees were required to modify their SWPPPs whenever they had a permit violation or were found in non-compliance. Ecology proposes that this modification language should include not just modifying the SWPPP but all applicable sections of the SMP. Not all permit violations, or even effluent violations, are specific to the SWPPP. For example, a permittee may have a violation of oil sheen and may need to modify their spill control plan as well as provide additional secondary containment; therefore, it would be appropriate for them to modify both their SWPPP and Spill Plan sections in their SMP.

Ecology also proposes that permittees update their SMP as necessary to respond to changes in their facility and site conditions. For example, if site re-grading shifts drainage patterns and necessitates the relocation of BMPs the permittee should update their SMP. Or, if the permittee adds an additional component to their operation, such as an asphalt plant, then the permittee should also update their SMP.

Site Map

Ecology proposes to consolidate the site map requirements from S5.C.5.a and portions of S5.B.1 in the 2010 permit into S5.D. Sand and Gravel permit managers and personnel will no longer have to read multiple permit sections to determine if their site maps meet the permit requirements. All the site mapping requirements will now be located in one specific section of the permit. If they choose to, permittees may still have two, or more, site maps.

Ecology proposes that permittees make their maps to scale or include relative, or approximate, distances between significant structures and drainage systems. This can help permittees and Ecology track spills and determine their discharge quantities. Ecology does not intend for permittees to necessarily hire surveyors to determine distances or to create a scaled map. Paced out distances, and distances provided by online mapping tools, are adequate enough to provide a general sense of site sizes.

Ecology proposes using the term monitoring points consistently throughout the permit. The electronic reporting applications also use the term monitoring points. This term is used instead of sampling points or sampling locations. Permittees must report their monitoring information on Discharge Monitoring Report (DMRs) forms. These forms require unique identifiers, up to four characters in length, for each monitoring point for tracking and reporting purposes. Ecology proposes that permittees include these unique identifiers on their site maps.

Ecology proposes to remove the requirements to map:

- Process that generate dust and particles
- Roofs or others surfaces exposed to air emissions from process areas

Permittees can still show these areas on their maps but are not required to do so. These areas are probably captured under another mapping requirement. And, in the case of process that generate dust and particles, could apply to the entire sand and gravel facility.

6.6 S6. SMP Section 1: Erosion and Sediment Control Plan (ESCP)

All facilities must have a completed an Erosion and Sediment Control Plan (ESCP). Facilities must select, install, and maintain appropriate erosion and sediment control BMPs.

Ecology proposes requiring permittees to stabilize their BMPs if they begin reclaiming a site and cease reclamation, without beginning mining operations again.

6.7 S7. SMP Section 2: Monitoring Plan

S7 of the permit requires permittees to develop a plan for how and where they will conduct the monitoring required by the permit. The monitoring plan must identify and provide basic information about each monitoring point. Through the plan, permittees must ensure that they collect samples that represent the operating conditions at a site and the nature of discharges that occur. The plan should include documentation of the testing conducted by the facility to determine representative sampling for their site. The facility should periodically conduct additional sampling to assure that its monitoring plan provides representative sampling.

Representative sampling of discharges to ground water does not mean that facilities must sample all ponds and puddles onsite. It does mean that the facility must identify the number of samples necessary to accurately represent discharge conditions. If all the ponds and puddles onsite have the same pH, one sample will typically represent site conditions. If pH at ponds and puddles in one area of a site are typically higher or lower than the rest of the site, a facility must collect more than one sample.

Stormwater discharges to surface water pose another problem for representative sampling. Since storm events are not under the control of the facility, discharges may occur at any time of day or night and with varying intensity. The intent of monitoring is to determine if control measures are adequate. Therefore, some sampling must be conducted during a major storm events when control measures are most stressed. Since storm events cannot be predicted far in advance, the proposed permit requires two samples a month, increasing the odds that facilities will take some samples during the most significant storm events of a month.

Proposed revisions to the Monitoring Plan section in the draft permit include:

- Requiring monitoring plans for inactive sites that have process water or mine dewatering water discharges.
- Requiring permittees to provide the NAICS codes associated with each monitoring point.
- Relocating language in this section to the Sampling and Analytical Procedures (S4.D), Site Map (S5.D), and Records Retention (S10.C) permit sections.
- Removing repetitious language regarding signature of the monitoring plan.

- Requiring permittees to edit their monitoring points in WQWebDMR (unless they receive a waiver).

The 2010 permit did not address process water or mine dewatering discharges from inactive sites. These types of discharges from inactive sites are rare but they do occur. Ecology proposes requiring inactive sites that have process water or mine dewatering discharges to develop, maintain, and comply with a monitoring plan. Ecology also proposes that inactive sites that are adding or withdrawing from stockpiles and have a surface water discharge must also develop, maintain, and comply with a monitoring plan.

Since the monitoring plan is part of the Site Management Plan, it is only necessary to state once in the permit that the SMP and all of its modifications need to be signed by the legal responsible party. Ecology retained this requirement in S5.B.4 and eliminated this duplicative language from the monitoring plan section.

The permit bases monitoring requirements and effluent limits in the permit on NAICS or Ecology code. In order for permittees to know which parameters they need to monitor for, and if they are in compliance with the permit effluent limits, permittees must determine which limits apply to their monitoring points. Ecology proposes that permittees document this determination within their monitoring plans.

Ecology proposes relocating some of the language in this section to the Sampling and Analytical Procedures (S4.D), Site Map (S5.D), and Records Retention (S10.C) permit sections to organize the permit requirements more effectively and to increase permit readability.

Ecology proposes using the term monitoring points consistently throughout the permit. The electronic reporting applications also use the term monitoring points. This term is used instead of sampling points or sampling locations.

In the 2010 permit, Ecology required permittees to notify Ecology in writing of the addition or deletion of monitoring points. Ecology proposes that permittees should complete these changes, and modifications to their monitoring points, themselves directly in Ecology's online Water Quality Discharge Monitoring Reporting System (WQWebDMR). This helps to ensure accuracy of the monitoring points, takes Ecology less time and resources for processing, and allows permittees to have more time to make this change before completing their DMRs.

Permittees that receive a waiver from electronic reporting must notify Ecology about changes to their monitoring points before the end of the quarter in which the change will occur. Permittees that receive a waiver will need to provide the latitude and longitude coordinates in decimal degrees and the corresponding monitoring point identifier (up to 4 characters) for all added, deleted, or modified monitoring points.

Examples of modifications to monitoring points include changes due to maintenance conditions (eg. a permittee reshaped their pond so that their discharge location has been moved) or identifier name changes.

6.8 S8. SMP Section 3: Stormwater Pollution Prevention Plan (SWPPP)

The permit requires permittees to identify and control pollution sources that may affect stormwater by developing and implementing a SWPPP. The SWPPP must contain information on all of the operational practices and structures that the site uses to control and prevent stormwater pollution.

Proposed revisions to the SWPPP section (S8) in the draft permit include:

- Reformatting the section to add appropriate subheadings to make the permit easier to read and reference.
- Eliminating duplicative commingling language.
- Relocating language in this section to the Modifications of the SMP (S5.C), Best Management Practices (S3.A), and Site Map (S5.D) permit sections.
- Combining the Inventory of Materials and Other Materials sections.
- Revising the Source Control (S8.D) section in the permit:
  - Adding exceptions for bitumen and double walled tanks for secondary containment.
  - Requiring permittees to label their containers.
  - Removing the BMP regarding drip pans and absorbents under leaky vehicles / equipment.
  - Requiring used oil storage / transfer stations to have a spill kit.
  - Adding a new BMP regarding the spraying of asphalt release agents.
  - Updating the vehicle and equipment cleaning operations language to match Ecology's updated guidance on this topic.
  - Removing the phrase "uncured asphalt paving materials" from the storing of uncured materials BMP.
  - Correcting the typo in S5.C.5.f.9 in the 2010 permit which incorrectly refers to S5.C.5.f.7 when it should have referred to S5.C.5.f.8.
  - Revising the sediment track out language to include offsite roads that may be private.
  - Allowing permittees to discharge wheel wash and tire bate wastewater after treatment per the effluent limits in the permit.
  - Clarifying that wheel washwater is considered process wastewater and is subject to the effluent limits in the permit.
- Adding a new section containing concrete recycling BMPs.

6.8.1 Measures to Prevent Commingling

Both the 2010 permit and the draft permit require permittees to include measures to prevent the addition of process water or mine dewatering water into stormwater, unless the facility is designed for reuse of process water.

Here is the language for the 2010 permit and draft permit side-by-side:

2010 Permit Language	Formal Draft Permit Language
Unless the facility is designed for reuse of *process water,* the *SWPPP* must include measures to prevent the addition of *process water* or *mine dewatering water* into *stormwater* and measures to verify that non-stormwater discharges do not enter the *stormwater* treatment system.	The SWPPP must contain, at a minimum, measures to prevent the commingling of *stormwater* with *process water* or *mine dewatering water*, **unless the facility is designed to reuse *process water*.**

There is no difference for the commingling requirement between the 2010 and formal draft permit for permittees to include measures to prevent the commingling of stormwater with process water or mine dewatering water.

The 2010 permit also contained additional, unnecessary language, requiring permittees to include measures to verify that non-stormwater discharges do not enter the stormwater treatment system. Permittees are already required to prevent the addition of process water and mine dewatering water into stormwater. Also, permittees must conduct dry season inspections to verify that non-stormwater discharges do not enter the stormwater treatment system. Plus, permittees must have a Spill Control Plan as part of their SMP which includes the requirement to provide a description of preventative measures and facilities to prevent spills. Ecology proposes to remove the requirement for permittees to include in their SWPPP measures to verify that non-stormwater discharges do not enter the stormwater treatment system.

6.8.2 Source Control BMPs

Ecology has determined the source control BMPs included in the permit will be appropriate for most facilities covered under this permit. Permittees may omit individual BMPs if site conditions render the BMP unnecessary, infeasible, or if the permittee provides an alternative and equally effective BMP. Permittees must not the rational for omission or substitution in the SWPPP.

Secondary Containment

Ecology proposes to exempt bitumen from the secondary containment requirements. Ecology believes that spills of bitumen present an extremely low risk to water quality. In almost all cases, spilled bitumen solidifies and stays where it falls. In the extremely rare case that a permittee discovers a sheen or spill from a bitumen tank, that could present a risk to water quality, the permittee should implement their spill control plan and consider providing secondary containment.

In the Stormwater Management Manual for Western Washington, Ecology states that "Double-walled tanks do not require additional secondary containment." Ecology proposes to add similar language to the secondary containment source control BMP in the permit.

How do I handle stormwater in secondary containment areas?

Secondary containment areas should be sloped to drain into a dead-end sump for the collection of leaks and small spills. In some cases the sump might be connected to the sanitary sewer, if approved by the local Sewer Authority, or to appropriate treatment such as an oil/water separator. The sump outlet should have a valve that is normally closed to prevent the release of spilled or leaked liquids. Another option for the discharge of contaminated stormwater is to pump it from a dead-end sump or catchment to a tank or appropriate vehicle for off-site treatment, recycling, or disposal.

Labeling Containers

Ecology proposes to require permittees to label all of their containers. Knowing what is in containers is critical for Permittees to rapidly respond to spills and leaks. Permittees also need to know what is in their containers so they can ensure proper handling.

Leaky Vehicles and Equipment

The permit prevents the discharge of petroleum products per sections S2, S4.F.2.b, S8.D, and S9 in the permit. Having a variation of this requirement repeated in the source control section of the permit is unnecessary. Permittees can prevent these types of discharges using numerous different methods – drip pans, absorbents, and indoor storage are only three. Ecology proposes removing these specific methods from the permit requirements. Permittees will most likely need to implement these management practices anyways to comply with the other sections of the permit.

Spill Kits

Ecology proposes that spill kits should be located at used oil storage and transfer stations as well.

Vehicle and Equipment Cleaning Operations

Ecology reorganized the source control BMP section related to vehicle and equipment cleaning operations for readability and to emphasis that the permit prohibits direct discharges from truck wash-out areas at Concrete Batch Plants and Asphalt Batch Plants to surface water or ground.

Ecology proposes restating that prohibition of direct discharges to ground or surface water from concrete truck washout in S8.E.7.b because Ecology estimates that this is one of the more common compliance issues.

Ecology proposes to provide examples in the permit of on-site sediment treatment structures. These examples include, but aren't limited to, sediment traps, catch basins with gravity separators, and treatment ponds.

Ecology also specified that when permittees are using emulsifiers or detergents during vehicle and equipment cleaning operations the wash water must drain to a proper collection system.

Ecology considered adding language to clarify what the permit means by "proper collection system" but decided against it. Permittees should refer to the following sources for additional guidance:

- S431 BMPs for Washing and Steam Cleaning Vehicles/ Equipment / Building Structures in Volume II of the Stormwater Management Manual for Western Washington.
- Section 2 of Ecology's *Vehicle and Equipment Washwater Discharges Best Management Practices Manual*
- BMPs for Washing and Steam Cleaning Vehicles/ Equipment / Building Structures in Chapter 8 of the Stormwater Management Manual for Eastern Washington

Release Agents

At hot mix asphalt plants, delivery trucks are not typically washed on site but do receive a release agent applied to the bed of the truck before loading with asphalt. Most plants have application areas with a raised platform and spray nozzles.

Manufactures of concrete products use release agents to prevent the concrete from sticking to their forms – this is typically referred to as form oil. Permittees also use release agents for stamping concrete and concrete overlays, and for cleaning of tools, forms, and molds.

Traditionally diesel was used, and it is still in use at some facilities. But typically, permittees now use non-petroleum based release agents such as recycled vegetable oil, non-stick coating, and powder release agents. Most facilities already have BMPs in place to control and collect spillage of release agents. However, some still allow the discharge or release agents directly to ground.

The use of non-petroleum based release agents, while much preferred over traditional diesel based release agents, does not constitute an alternative equally effective BMP all by themselves. The non-petroleum based agents can still pollute surface and ground water which can lead to water quality degradation and harm to aquatic life. Permittees need to collect and treat non-petroleum based release agents in the same manner as petroleum based release agents.

Ecology proposes to require permittees to prevent the discharge of release agents to ground. Permittees may accomplish this through a variety of different methods such as paving the release agent application area. Or, permittees may place a plastic liner with gravel material within it, then any discharges to the liner and material can be removed and disposed of properly. Permittees can also collect the release agents in drip pans and either reuse or dispose of properly.

If wastewater (includes stormwater, process water, or mine dewatering water) comes into contact with release agents, permittees should treat this water with an oil water separator. Oil water separators should meet the design criteria in an approved Stormwater Management Manual.

Storage of uncured concrete solids and cold mix asphalt

The 2010 permit required permittees to store uncured concrete, any type of concrete solids, uncured asphalt paving materials, and cold mix asphalt on a bermed impervious surface.

Ecology consulted permittees, the Federal Highway Administration, and the Washington Center for Asphalt Technology regarding the use of the "uncured asphalt" within in the permit. Based on those discussions, and best professional judgment, Ecology has concluded that the use of the term "uncured asphalt" is incorrect and inappropriate. The term "uncured asphalt" has been historically and incorrectly applied to the time between initial laydown and the use of the material for its intended function. Asphalt materials do not cure, though they may harden with age.

Ecology proposes to remove the term "uncured asphalt" from the permit. Ecology has also determined that hardened ambient temperature plant-mix asphalt poses a low risk to water quality. In the extremely rare case that a permittee discovers a sheen related to ambient temperature plant-mix asphalt, the Permittee should consider the storage of the material on a bermed impervious surface to meet the other requirements within this permit.

The 2010 permit also included a list of specific uncured concrete solids that permittees had to store on a bermed impervious surface. Ecology proposes to add comeback concrete to this list. Comeback concrete is also referred to returned concrete. High pH values are often associated with process water and stormwater that contacts uncured concrete solids. Permittees must treat stormwater that contacts uncured concrete solids and cold mix asphalt materials in a lined impoundment.

Sediment Track Out

The 2010 permit requires permittees to manage sediment track out to paved public roads. Ecology proposes to revise this BMP to refer to all off-site roads not just public roads. The intent of this BMP is to protect surface waters from discharges of highly turbid water. Off-site roads, regardless of public or private status, and their corresponding drainage systems, can be pathways for turbid water discharges.

The 2010 permit required permittees to discharge wheel wash or tire bath wastewater to an on-site treatment system or to a sanitary sewer. Ecology has revised the permit to eliminate the ambiguity regarding the term "on-site treatment system" and to address the unlikelihood of permittees having access to sanitary sewer for these types of discharges.

Ecology does not feel it is necessary for permittees to use upland dispersion or full dispersion in order to treat wheel wash and tire bath washwater. Permittees' treatment systems to meet the

permit conditions in S2 are most likely adequate enough to treat the wastewater from wheel washes and tire baths. Additionally, most permittees do not have access to the sanitary sewer and sanitary sewers are unlikely to accept discharges of wastewater from wheel washes and tire baths. Permittees that do discharge this water to sanitary sewer can continue to do so.

6.8.3 Concrete Recycling BMPs

Ecology is committed to supporting concrete recycling that is done in a manner that is protective of the environment and water quality. Recycling concrete reduces the need for mining virgin aggregate and conserves these scarce natural resources. Recycling concrete also reduces landfill space, stockpiles of waste concrete, and illegal dumping. The 3.7 million tons of construction and demolition debris (which includes concrete wasted) diverted from landfills in Washington in 2011 prevented over 200,000 tons of greenhouse gas emissions – about 60 pounds per person. This is similar to keeping more than 40,000 cars off the road each year.

Washington State also has a unique advantage when it comes to recycled concrete. According to the Washington State Department of Transportation, Washington pavements contain some of the highest quality aggregates in the world; which allows our state to see excellent performance results from both our concrete pavements and our hot mix asphalt pavements.

The major source of concrete for recycling is from the demolition of concrete pavements and structures. Ecology's Waste 2 Resources Program estimates that Washingtonians generated 1,007,851 tons of concrete waste in 2012. Of this amount, approximately 87.7%, or 883,799 tons of waste concrete was diverted for recycling. The amount of recycled concrete has increased significantly since 2000.

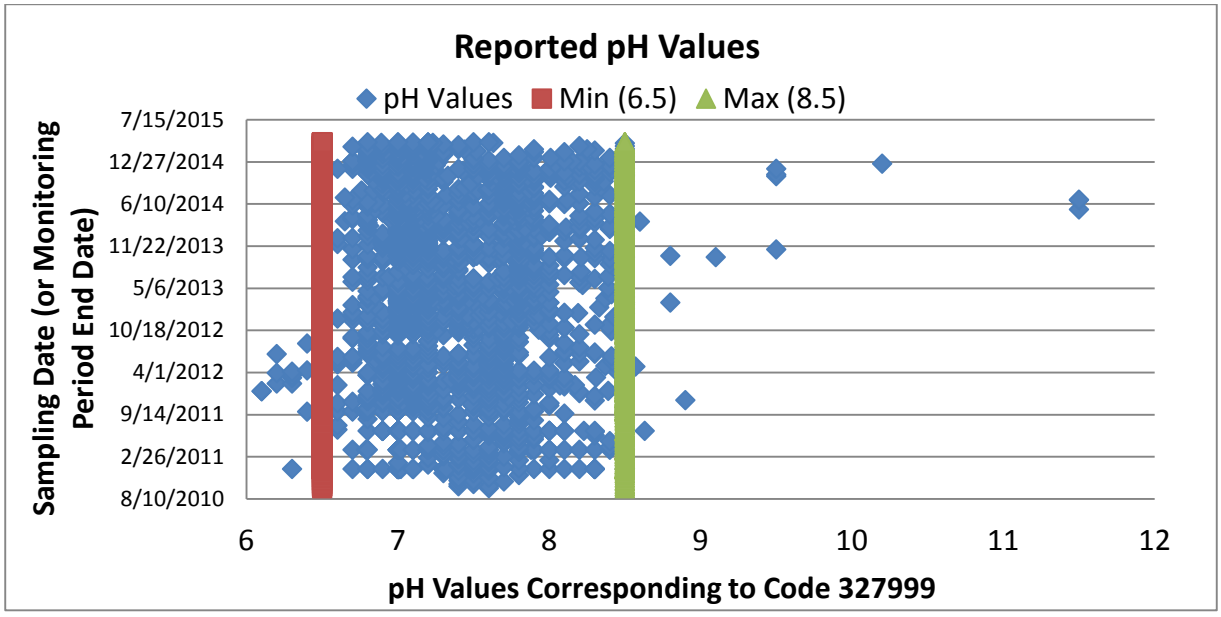
Water Quality Concerns

Crushing or fracturing hardened concrete during recycling processes exposes unreacted quicklime or cement. When water contacts the unreacted quicklime or cement chemical reactions occur that result in high pH. Stormwater, erosion, and movement within the stockpile can continuously expose new potential reaction sites.

The American Concrete Pavement Association noted in their 2009 Engineering Bulletin on Recycling Concrete Pavements that engineers should be aware of the highly alkaline nature of recycled concrete aggregates, the relatively high degree of solubility of the hydroxide-bearing components of the material, and the potential increases in pH that could occur in water percolating through recycled concrete (ACPA 2009).

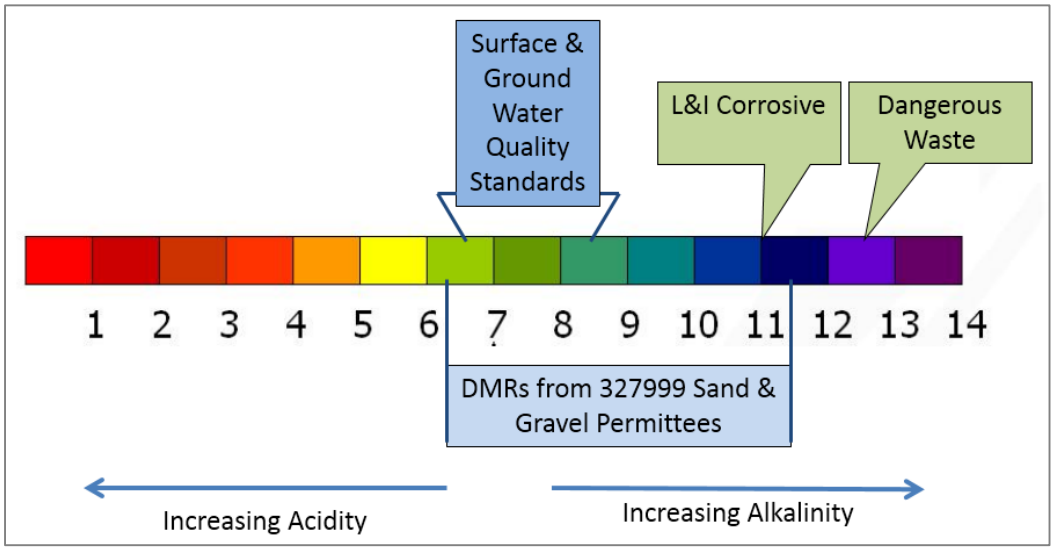
In the 2010 permit, concrete recycling activities were associated with NAICS code 327999. Other activities associated with this code include dry mix concrete manufacturing and mica products manufacturing. Figure 10 shows the pH values associated with NAICS Code 327999 reported by permittees during the 2010 permit cycle. The solid lines in the figure are the effluent limits set in the permit which correspond to water quality standards.

Figure 10: NAICS Code 327999 Reported pH Values during the 2010 Permit Cycle



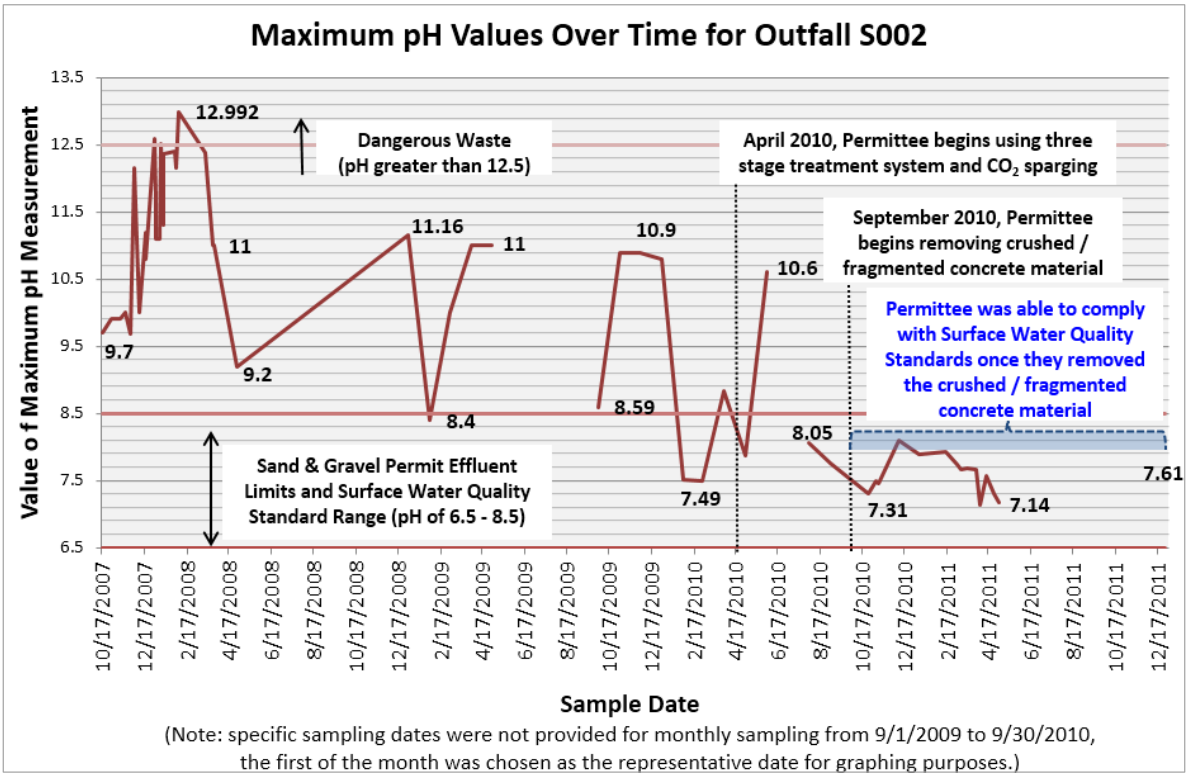
The pH values reported by permittees ranged from 6.3 to 11.5. This range is shown on the pH scale in Figure 11. The Department of Labor and Industries classifies corrosives at a pH of 11 and dangerous waste is classified at 12.5.

Figure 11: pH Scale with NAICS Code 327999 Reported pH Values



Ecology has observed levels of high pH runoff higher than a pH of 12.5 at sand and gravel facilities located in Washington State. One of the most notable cases was at a facility in southwest Washington from 2007 to 2010. The permittee had stockpiles of recycled concrete material and was using recycled concrete material along their access ways. Figure 12 shows high pH runoff values associated with runoff from recycled concrete at the permittee's facility from 2007 to 2010. At one point a pH of 12.992 was recorded.

Figure 12: Maximum pH Values over time at one Sand & Gravel Facility



During a site visit to the permittee's facility, Ecology inspectors observed a creek bottom that was completely covered with dead worms. High pH runoff from the facility likely caused the worm deaths.

The American Concrete Pavement Association (ACPA) noted in their 2009 Engineering bulletin on Recycling Concrete Pavements that "it is not uncommon, however, to see very small regions of vegetation kill in the immediate areas of the drain outlet" associated with effluent from recycled concrete aggregates.

The University of Wisconsin conducted a field leaching study on freshly crushed recycled concrete aggregate, previously stockpiled recycled concrete aggregate, and natural aggregate (Chen 2012, Report). They observed that freshly crushed recycled concrete aggregate started with a high leachate pH of 12.6 that remained constant throughout the testing period. Stockpiled recycled concrete aggregate started at a lower pH of 7.3, but gradually increased to pH of 12.1 during the same testing period.

They also conducted laboratory column tests on five recycled concrete materials, which all came from different states (California, Colorado, Minnesota, Texas, and Wisconsin,), the high alkaline leachate was consistent, ranging from 10.8 to 12.5, and there was no pH decline during the long testing period.

In summary, the reported values from permittees, Ecology observations, industry reports, and research indicates that process water and stormwater runoff from concrete recycling stockpiles has the potential to exceed the Water Quality Standards for Ground Waters (Chapter 173-200 WAC) and the Water Quality Standards for Surface Waters (Chapter 173-201A WAC) of the State of Washington.

Materials Acceptance Procedures

The ACPA recommends in their 2009 Engineering bulletin that quality control plans should be developed for aggregate production. This includes methods to ensure that reclaimed concrete source materials are not contaminated with unacceptable amounts of deleterious materials. ACPA recommends that these methods should be established prior to using recycled concrete aggregates.

Deleterious material may include the presence of oil, grease, lead paint, rebar, asbestos, and joint sealants (which can contain Polychlorinated Biphenyls, PCBs). Recyclers need to ensure that the waste concrete material that they accept does not contain this deleterious material; or they need to sort out and remove of this deleterious material and dispose of it properly themselves.

Ecology proposes that permittees establish materials acceptance procedures within their SWPPP to ensure that inbound recycled concrete materials are not a source of dangerous waste. Examples of material acceptance procedures include, but aren't limited to: approving incoming material sources, conducting visual inspections to look for painted surfaces, writing material acceptance lists, or getting certification from suppliers for source materials. Ecology does not intend for Permittees to sample / test inbound materials.

New Concrete Recycling Stockpiles

The ACPA noted in their 2009 Engineering bulletin on Recycling Concrete Pavements that "depending on the sensitivity of local soils, surface waters and groundwater to the presence of alkaline material, the engineer should set appropriate limits on the proximity of placement of recycled concrete aggregates relative to groundwater and surface waters."

Ecology proposes that permittees prevent pollution associated with recycled concrete stockpiles by including BMPs for the placement of new concrete recycling stockpiles within their SWPPP. In S8.F.1 of the draft permit Ecology has listed the BMPs that permittees should include.

Permittees may omit these BMPs if their site conditions render the BMP unnecessary or if the permittee provides an alternative and equally effective BMP. Permittees could also show that site conditions render the BMPs unnecessary through a documentation that the hydrogeology of the site prevents exceedance of the groundwater quality or surface water standards or by conducting groundwater monitoring. One example of an alternative and equally effective BMP is to install an impervious liner and collect and treat the wastewater runoff.

6.9 S9. SMP Section 4: Spill Control Plan

Ecology has not proposed changes to the spill control plan section of the permit.

It is typical for the industrial activities covered under this permit to include storage of chemicals that have the potential to cause water pollution if accidentally released. Fuel, hydraulic fluid and other petroleum products are commonly stored onsite and heavy equipment and trucks contain significant quantities of these materials. Spills can and do happen at sites covered under this permit. Facilities must develop, implement, and maintain a spill plan to prevent the accidental release of pollutants to state waters and to respond quickly to clean up spills that may occur.

6.10 S10. Reporting and Record Keeping Requirements

Section S10 is based on the authority to specify any appropriate reporting and recordkeeping requirements to prevent and control waste discharges (WAC 173-226-090).

Proposed revisions to Section S10 in the draft permit include:

- Requiring electronic reporting.
- Requiring permittees to yearly report their production range from asphalt and / or concrete.
- Clarifying the reporting requirements for new permittees.
- Revising to match requirements in the Code of Federal Regulations (CFR).
- Relocating the monitoring language in S6.D of the 2010 permit to S4 in the draft permit.
- Requiring that permittee keep their coverage pages onsite or within reasonable access to the site.
- Allowing permittees more time to respond to multiple requests for SMPs.

Discharge Monitoring Reports (DMRs)

Ecology proposes to remove the language in the permit concerning no discharges. Permittees must still submit their discharge monitoring reports regardless of if they had a discharge or not. The DMRs contain the instructions on reporting no discharges.

The 2010 permit did not address process water or mine dewatering discharges from inactive sites. Ecology proposes requiring inactive sites that have process water or mine dewatering discharges to monitor and submit DMRs.

Production Number Reporting

Ecology proposes that permittees who produce concrete or asphalt report their production amount range on a yearly basis. Ecology uses this information to calculate fees based on WAC 173-224-040. This will replace the need for Ecology's Fees Unit to send out additional forms asking for this information in the middle of the permit cycle.

Ecology proposes to have permittees report these numbers in January, on the same timeline as the discharge monitoring reports (DMRs). The first time permittees will report these numbers is January 30, 2017; since permittees just reported this information in their renewal applications.

Electronic Reporting

Ecology proposes that permittees submit their DMRs electronically (beginning with the DMR due April 30, 2016) using Ecology's online Water Quality Permitting Portal system. Unless Ecology grants the permittee a waiver from electronic reporting.

Permittees need to get themselves set up for electronic reporting and Ecology needs time to set up signature accounts. Thus, permittees need to submit an "Electronic Signature Account Form" or an "Electronic Reporting Waiver Request" form to Ecology by March 1, 2016. Ecology anticipates the permit becoming effective January 1, 2016 which means the first DMR due date will be April 30. This gives Ecology one month to set up the signature accounts before permittees will begin accessing them to report their data. Permittees that already have a signature account do not need to resubmit an electronic signature form.

This proposed electronic DMR requirement is expected to save time and resources for permittees and Ecology (e.g., eliminating paperwork, data entry workload, database errors) while improving compliance and protection of water quality. It will also enhance transparency and public accountability.

The electronic DMR waiver provisions are intended to allow a paper DMR option for small business that may not have the ability to use the WQWebDMR system (e.g. they do not have broadband internet or a business computer). The permit does not contain mailing instructions for permittees who receive a waiver. Permittees that receive a waiver must mail their DMRs to the appropriate regional Ecology office. Permittees are responsible for ensuring that their DMRs are received on time.

The requirement for electronic DMRs makes progress with Ecology's obligation to comply with EPA's proposed NPDES Electronic Reporting Rule (40 CFR Parts 122, 123, 127, 403, 501 and 503). RCW 43.17.095 also requires Ecology to offer electronic reporting options.

Clarifying Reporting Timelines for New Permittees

Ecology proposes giving new permittees that receive coverage after the permit effective date more time (varies from 1 day to 3 months) before they are required to begin monitoring and before they need to submit their first DMR.

For example, if a new permittee receive permit coverage on May 16, 2016 they must begin monitoring by July 1, 2016; and their first DMR is due by October 30, 2016.

Although, some permittees may only get a few days this extra time should give new permittees time to set up their *Water Quality* Permitting Portal – Discharge Monitoring Report (DMR)

accounts or filling out and submitting an *Electronic Reporting Waiver* form. It will also provide them additional time to purchase monitoring equipment and to prepare for monitoring.

S10.C Records Retention

In the 2010 permit there are record retention requirements throughout the SMP sections (S5.3 in the 2010 permit). Ecology proposes to consolidate the records retention sections of the permit into this section. This should assist in removing duplicative language.

Ecology proposes that permittees retain a copy of their permit coverage page on site or within reasonable access to the site. This new requirement goes with the new authorization section Ecology is proposing. The permit coverage page states what types of discharges the permittee has coverage for. Having this onsite helps permittees and Ecology determine effluent limits and permit requirements during operations and inspections. Most permittees have this documentation on site anyways.

Ecology proposes additional revisions to S10.C.1 to more closely match the requirements in CFR 122.41(j)(2) and WAC 173-226-090. This should result in permittees have to retain less records on site for a shorter period of time. WAC 173-226-090 requires the retention of any records of monitoring activities. Discharge Monitoring Reports fall into this category. Permittees may retain either paper or electronic copies.

Ecology proposes relocating the language regarding providing the SMP to the public from S5.4 and S5.B of the 2010 permit to section S10.C.4 of the formal draft permit. This consolidates the record retention requirements into one permit section.

Permittees requested that Ecology provide additional time for responding to public Site Management Plan requests for more than one facility owned or operated by the permittee. Ecology has added in the language to provide permittees up to an additional 10 days per SMP request.

Ecology proposes that section S10 focus on reporting, record keeping, and record retention. The monitoring requirements in the recording of results subsection (S6.D of the 2010 permit) have been moved to the Sampling and Analytical Procedures section (S4.D.7). With this move will help permittees realize that this information needs to be recorded when they complete their sampling procedures.

S10.D Reporting Permit Violations

The Code of Federal Regulations 40 CFR 122.41(l)(6), Conditions Applicable to All Permits, specifies the 5 day written reporting timeline for any noncompliance which may endanger health or the environment. Ecology made S6.E.4 consistent with these requirements.

Ecology has added language which allows Ecology to waive the written report on case by case basis, if the immediate notification is received within 24 hours. This added waiver language is

based on 40 CFR 122.41(l)(6)(iii). Permittees that don't notify Ecology within 24 hours must submit a written report.

S10.E Spill Reporting

The language in the Reporting Permit Violations section was not adequate to address spills of a serious nature. RCW 90.56.280 and chapter 173-303-145 WAC require permittees to report spills of oil or hazardous materials. The phone numbers for the Washington Emergency Management Division and National Response Center are now provided.

6.11 S11. Solid Waste Disposal

Ecology does not propose any significant changes to the Solid Waste Disposal section of the permit.

Improper solid waste disposal has a potential to cause water pollution. The proposed permit has three sections dealing with solid waste: Solid Waste Handling, Leachate and Recycle Material.

The facility must properly dispose of solid wastes and comply with the applicable solid and hazardous waste regulations (Chapters 173-303 and 173-304 WAC). The solid waste from the activities covered under this permit will most often contain no hazardous waste materials and generally may be used as soil or fill material. However, it is the facility's responsibility to properly designate, handle and dispose of the solid waste. Solid waste from concrete truck washout for instance, may have a high pH and leachate from stockpiles of this material may pollute waters of the state. The small particulate matter (fines) removed from air emissions during the production of asphalt may contain pollutants of concern and should be evaluated for toxic substances to determine appropriate disposal options.

The proposed permit prohibits leachate from solid waste causing violations of surface or groundwater standards.

Sand and gravel facilities sometimes use gravel pits for composting yard debris, storing piles of solid waste, or other activities that can discharge leachate. Discharge from these activities has potential to pollute ground water and the permit does not authorize or regulate these discharges. Chapter 173-350 WAC provides the appropriate regulatory requirements to control these potential discharges. Depending on the activity, that regulation sets requirements for those activities including health department permits, structural, and operational controls. These activities may require an individual or another general wastewater discharge permit. Preventing ground water pollution depends on compliance with solid waste rules to protect groundwater when these operations are located within a gravel pit.

Settling process water and stormwater to remove solids often produces large amounts of solid waste. When the solids are composed of silts and sands, it typically classifies as non-hazardous. These solid waste materials are easily disposed of since mineral mining properties are often large and space for land disposal is readily available. Inert materials may also be used for backfill at

mines. These “wastes” may in fact be a marketable by-product. Since these industries have sufficient space and earth moving capabilities, they manage it with greater ease than most other industries.

Sludges that form in settling ponds used for pH control, however, may require special attention to disposal options. Reuse of the sludge is the preferred option but where that is not practical, it may be acceptable to spread these solids over a large area. Storing the sludge in a pile that allows leachate to infiltrate to ground or discharge to surface water is unacceptable. Facilities must properly designate these solid wastes to ensure the wastes are not hazardous prior to disposal.

6.12 S12. Permit Application

Special Condition S12 describes how to obtain coverage for the permit as authorized under WAC 173-226-200. This permit condition also describes public notice requirements, SEPA compliance and the effective date of coverage.

Proposed revisions to Section S10 in the draft permit include:

- Require permittees to apply and reapply electronically or submit a waiver.
- Relocating language requiring new facilities to conduct receiving water monitoring to this section.
- Removing duplicative language.
- Removing the onsite time limit for portable.
- Clarifying the requirements for portables.
- Including information on operating fees.

Ecology proposes requiring permittees to apply electronically using Ecology’s online Water Quality Permitting Portal system (unless Ecology grants them a waiver from electronic reporting). Ecology proposes that the application will contain the same content as the electronic application used for permit renewals in 2014 but will also request information regarding NAICS code 212319. Refer to page 53 in this fact sheet for more information regarding electronic reporting.

Ecology proposes to move the language from S4.B.4 and S4.B.5 in the 2010 permit that addresses receiving water monitoring for new permittees. Since, these requirements need to be completed when applying for the permit. Ecology also proposes to revise the requirements to refer to the recycling water study plans and Quality Assurance Project Plans instead of a monitoring plans. This should help clarify the difference between the monitoring plans required per the SMP and this additional monitoring.

Portables

This proposed permit allows portable operations to obtain coverage under the general permit. Ecology proposes to relocate the language in S9.B of the permit to define “Portable facility” in the definitions section of the permit. Portable coverage is not intended to provide an alternative

to site coverage for ongoing activities. As an example, a site that has more or less continuous asphalt batch activities, even though these activities are by different portables, is expected to have asphalt batch as a part of site coverage. Or, a concrete batch portable that returns to the same site year after consecutive year is not considered short-term and coverage should be for a permanent concrete batch site.

Coverage for a portable is not required when the site already has coverage for that activity. For example, a site may include asphalt batch operation as a part of the site permit even though the owner does not maintain an asphalt batch plant at the site. When the site has included coverage of the activity, the permittee must notify Ecology that the batch operation will occur but separate coverage by the portable is not required. Coverage for portable rock crushers is not intended to be a substitute for permit coverage of a mining site.

Ecology proposes to revise this section to remove duplicative language that is already in S12.A. Ecology proposes requiring permittees to apply electronically using Ecology's online Water Quality Permitting Portal system (unless Ecology grants them a waiver from electronic reporting). Refer to the Electronic Reporting section of this Fact Sheet on 53 for more information / justification. Coverage only applies to the specific portable equipment identified in the application but will provide coverage at all sites where the portable operates. Portable facilities must operate at each site under the same permit conditions and requirements as a permanent operation.

Ecology proposes to remove the three year time limit for portable facilities to stay on a site. In the last six years at has become more common for portables to stay at the same location for longer times. It can also be costly for portable plants to mobilize and setup at new locations. It typically takes 2 years for portables to recoup the cost of mobilization and setup.

In order to implement the permit, Ecology needs to be able to track the location of portable operations. Portable facilities are frequently moving on to the next site without restoring sites or submitting Notices of Completion. Ecology proposes adding permit language to clarify that Portable Facilities only have coverage to operate at one site at a time and that they must complete operations and submit a Notice of Completion before they begin crushing, or producing concrete, or asphalt at a new site.

Fees

Ecology proposes adding language from WAC 173-224-050 to reduce permittees' confusion regarding inactive and active status for monitoring purposes versus fee purposes. Permittees may be inactive and have reduced monitoring requirements but may still have to pay fees unless they commit to being nonoperating for a minimum period of time.

Ecology permit managers must determine that the site(s) have been returned to an appropriate condition before granting termination. Permittees much comply with all conditions of this permit including payment of any assessed fees until Ecology terminates permit coverage. When

requesting termination, the permit cancellation date cannot be earlier than the date Ecology receives the permittee's Change Request Form.

6.13 General Conditions

- G1Signatory Requirements
- G7 Engineering Plan Review Required
- G8 Notification of Change in Covered Activities
- Added language regarding a partial transfer.
- Require permittees to reapply online unless granted a waiver request form.
- Added language for penalties for tampering to match the CFR.

G1. Signatory Requirements

G1.A was intended to apply only to applications. G1.B was intended to apply to reports and other information. Ecology proposes clarifying this requirement so that permittees may delegate their signatory authority for reports and other information. Signatory authority cannot be delegated for applications.

G7. Engineering Plan Review Required

In the 2010 permit, Ecology added the requirement for permittees to submit engineering reports, detailed plans, and specifications to Ecology for approval in accordance with Chapter 173-240 WAC. Ecology conditioned this requirement for wastewater control facilities. Ecology did not define wastewater control facilities.

Neither Chapter 173-240 WAC or the Sand and Gravel General Permit defines the term "wastewater control facilities". However, the WAC defines "Industrial wastewater facility" as all structures, equipment, or processes required to collect, carry away, treat, reclaim or dispose of industrial wastewater. The definition for industrial wastewater includes "contaminated stormwater". Thus, the term "wastewater control facility" could apply to wide variety of structural BMPs, ditches, collection facilities including those used for either process water or contaminated stormwater. Even impervious surfaces that prevent disposal of wastewater to ground could fall under this definition.

On May 28, 2013 the Pollution Control Hearings Board (PCHB) issued Summary Judgment on the Industrial Stormwater General Permit (ISGP). In the Summary Judgment the PCHB determined that Chapter 173-240 does not apply to stormwater treatment BMPs. They also determined that Ecology had the authority to condition the ISGP with the submittal of an engineering report for the installation of structures and equipment for treatment BMPs. And that it was lawful and reasonable for the permittee to be required, where necessary, to have an engineering report for site-specific design or sizing of structures, equipment or process to address the implementation of treatment BMPs.

Based on this PCHB decision, Ecology proposes to revise the permit to no longer refer to the undefined term of "wastewater control facilities" and to include the standards and criteria Ecology will apply in the review and approval of engineering reports for the installation of both process water, mine dewatering water, and type 3 stormwater treatment BMPs or facilities that require site specific design.

Ecology proposes to list the items that the engineering reports must include. This list varies from the ISGP list because permittees covered by the Sand and Gravel General Permit may also discharge process wastewater and mine dewatering water. Additionally, permittees under the Sand and Gravel General Permit are much more likely to discharge to ground than permittees under the ISGP.

Ecology intends G7 to only apply to new treatment BMPs /facilities and treatment BMPs /facilities where a modification requires the site-specific design or sizing of:

- Structures
- Equipment
- Process to:
    - Collect
    - Convey
    - Treat
    - Reclaim
    - Dispose of *wastewater*

Thus, typical maintenance tasks would not require an engineering plan. Also, unless being modified as stated above, existing treatment BMPs / facilities do not require engineering plans.

G8. Notification of Change in Covered Activities

In order to implement the permit, Ecology needs to be aware of the types of discharges at the facility. Ecology proposes revising G8 to match the language in 40 CFR 122.41(l)(1) to refer to facility alterations which would include expansions as well as contractions that result in new or substantially changed discharges of pollutants. Thus, if permittees eliminate a type of discharge but still want to retain permit coverage they should submit an application marked as a modification. This change correlates with the requirements in S12.B and G19.

G19. Permit Transfer

Ecology proposes adding new language for partial transfers. If a permittee sells or transfers coverage of a portion of their site Ecology needs to know changes to monitoring points, NAICS codes, size of the site, etc. Thus, the permittee who is purchasing or receiving a portion of the site and intends to have Sand and Gravel permit coverage should apply as a new permittee. While, the existing permittee should notify Ecology regarding the change of covered activities by submitting an application for modification.

For example, an existing permittee has a mining operation and a hot mix asphalt operation. The permittee sells the hot mix asphalt operation. The new owner of the hot mix asphalt operation applies as a new permittee. The existing permittee submits an application marking it as a modification and notes the removal of the hot mix asphalt operations and monitoring points associated with the hot mix asphalt operation.

G20. Duty to Reapply

Ecology proposes requiring permittees to reapply electronically using Ecology's online Water Quality Permitting Portal system (unless Ecology grants them a waiver from electronic reporting). Refer to the Electronic Reporting section of this Fact Sheet on 53 for more information/justification.

G27. Penalties for Tampering

Ecology proposes to add the language from 40 CFR 122.41(k)(2) to this section new permittees of their responsibilities and potential penalties.

6.14 Appendix A – NAICS codes, Ecology codes, SIC numbers, and Descriptions for Facilities Covered under this Permit

Ecology proposes putting the information in Appendix A into table format. This should make the information easier to read and reference. Ecology updated the descriptions based on the 2012 North American Industry Classification System (NAICS) descriptions and added descriptions for NAICS codes which previously weren't described in Appendix A. Ecology added descriptions for the two new Ecology codes.

The new definition for concrete recycling helps to determine code classifications related to comeback concrete. Comeback concrete that is unhardened does not require a separate code and is an accessory use under 327320. Hardened comeback concrete that will be disposed does not meet the concrete recycling definition for reusable concrete product and is an accessory use under 327320. Hardened comeback concrete that will be crushed and reused as a recyclable concrete product does fall under the definition for concrete recycling and the new Ecology Code ECY002 should apply to those activities; this is true regardless of if the comeback concrete is only from the original ready-mix plant or if it is also coming from other sources.

Unhardened comeback concrete used to make Ecology blocks is also not considered concrete recycling and is an accessory use under 327320; however, if the permittee is also making blocks or other products with un-returned concrete they should consider also adding the appropriate NAICS code (327331 or 327390) for these activities.

Stockpiling of hardened structural concrete or hardened asphalt without the intention of producing a reusable product does not meet the definition of recycling or the intent of ECY001 and ECY002. Thus, ECY001 and ECY002 should not be interpreted as applying to solid waste disposal activities.

6.15 Appendix B – Definitions

Ecology lists the proposed revised terms below according to the type of change.

1. Addition of terms and definitions new to the permit:
   - *Application* is added to clarify that the application for permit coverage can have an electronic or paper format. The application form is the same form that is used for applying for permit coverage and for modifying permit coverage due to a significant process change or as otherwise required by the permit.

   - *Concrete Recycling* – added for clarity. This definition uses the term "hardened" as opposed to "cured" because curing times vary between products and curing is an ongoing process without a clearly defined end point.

     This definition uses the term "structural" because structural concrete is often the best source and least contaminated source for concrete recycling. Webster's New World College Dictionary, Fourth Edition, defines structural as "used in or suitable for construction, as of buildings." Thus, both concrete that was used in, or was suitable for construction use, falls under the definition of concrete recycling in the permit.

     The definition uses the term "reusable concrete product" by which Ecology means reusing the hardened structural concrete either in a new concrete mixture or as a standalone product (eg. backfill, base course, etc.).

     Stockpiling of hardened structural concrete without the intention of producing a reusable concrete product does not meet the definition of concrete recycling; but most likely would be considered as solid waste disposal.

   - *Discharge point* – added for clarity in the monitoring and mapping requirements within the permit.
   - *Electronic Reporting Waiver* – added to clarify electronic reporting and application requirements. Permittees only need to submit one waiver for an exemption from submitting electronic application, submittals, and DMRs. If permittees are submitting an exemption for multiple permit facilities they should list all of their permit numbers on the waiver request form.
   - *Impoundment* – added to reduce confusion and interpretation during compliance inspections.
   - *Nonoperating* – added to clarify the difference between inactive for monitoring purposes versus inactive for fee purposes.
   - *Outfall* – added to clarify the monitoring requirements within the permit.

- *Portable facility* – added to remove some duplicative language within the Permit Application section of the permit. This definition was taken from the text in S9.B of the 2010 permit.
- *Reclamation* – added to provide clarity.

2. Ecology deleted the term *Monitoring Benchmark* which is not used in the permit.

3. Clarifications and simplifications to improve the understanding of terms
   - *Active Site, Closed Site, Inactive Site,* and *Process Water* – Ecology proposes to delete the cross-references between terms because it has caused some confusion and is unnecessary.
   - *Stormwater Management Manuals* – Ecology proposes to add footnotes to clarify which version of the Stormwater Management Manuals permittees must comply with. Ecology cannot require permittees to comply with Stormwater Management Manuals that may be developed in the future. Permittees must have a chance to review the documents at the time of permit issuance. Ecology added the proper names and abbreviations for both manuals.
   - *Wastewater* – Ecology proposes to clarify that the term wastewater, as used in the Sand and Gravel General Permit, refers to process water, mine dewatering water, and type 2 and 3 stormwater.

6.16 Appendix C – Pollution Prevention Schedule for pH

Ecology proposes adding a Pollution Prevention Schedule for concrete recycling discharges to groundwater that have a pH higher than 8.5. Ecology modeled the Pollution Prevention Schedule in Appendix C after the one in the 2005 Sand and Gravel General Permit for Total Dissolved Solids (TDS).

Per the 2010 permit, permittees that had a discharge of pH higher than 8.5 associated with concrete recycling activities (NAICS 2327999) were in violation with the permit and Ecology could take enforcement actions such as penalties or compliance orders. The proposed permit has modified this approach by outlining a defined response in the rare case that a permittee has a discharge with a pH higher than 8.5.

This new approach keeps permittees in compliance with the permit as they seek to solve their high pH values and / or determine if their high pH discharges exceed groundwater quality standards at the point of compliance within the groundwater aquifer. Additionally, this new approach establishes consistency across the state and sets the expectations for permittees.

The new Pollution Prevention Schedule uses the phrasing “pollution prevention opportunities”. Pollution prevention opportunities may include traditional BMPs (such as sweeping to collect fines, treating the stormwater runoff), material handling improvements (grading piles to collect and treat the water from stockpiles less than 5/8”), or other actions such as limiting stockpile sizes or selling materials.

7.0 References

Documents prepared after June 12, 2014 also identify information sources by the following 11 categories:

1. Peer review is overseen by an independent third party.

2. Review is by staff internal to Department of Ecology.

3. Review is by persons that are external to and selected by the Department of Ecology.

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

5. Federal and state statutes.

6. Court and hearings board decisions.

7. Federal and state administrative rules and regulations.

8. Policy and regulatory documents adopted by local governments.

9. Data from primary research, monitoring activities, or other sources, but that has not been incorporated as part of documents reviewed under other processes.

10. Records of best professional judgment of Department of Ecology employees or other individuals.

11. Sources of information that do not fit into one of the other categories listed.

American Concrete Pavement Association. 2009. "Recycling Concrete Pavements." *Engineering Bulletin EB043P*. Skokie, IL: American Concrete Pavement Association. [11]

Anderson, Keith W. 2009. "Use of Recycled Concrete Aggregate in PCCP: Literature Search." WA-RD 726.1. Washington State Department of Transportation, June. [11]

Bailey, Gary, comp. 2010. "Fact Sheet for the Sand and Gravel General Permit." Washington State Department of Ecology, August. [4]

2013. “BNSF vs. Ecology, PCHB Order on Motions For Partial Summary Judgment.” *12-062c*. Environmental and Land Hearings Office, May 28. [6]

Chen, Jiannan. 2012. "Leaching Characteristics of Recycled Aggregate used as Road Base." *Solid Waste Research Program Student Project Report*. The University of Wisconsin Madison, May. [9, 11]

—. 2012. "Leaching of Alkaline Substances and Heavy Metals from Recycled Concrete Aggregate Used as Unbound Base Course." *Presentation*. The University of Wisconsin Madison, September 11. [9, 11]

2004. "Concrete Recycling and Disposal Fact Sheet." *Publication WA 605*. Wisconsin Department of Natural Resources, Bureau of Waste Management. [11]

2015. "Engrossed Substitute House Bill 1695: Transportation Construction Materials -- Recycling." *Chapter 142, Laws of 2015*. State of Washington, April 29. [5]

1999. "Fact Sheet for the Sand and Gravel General Permit." Washington State Department of Ecology, June 25. [4]

Funke, Dolores M.,. 1982. "Suspended Solids Removal in the Crushed Stone Industry." Washington D.C.: United States Environmental Protection Agency, August 6. [11]

Global Chem-Source, Corp. 2014. "Material Safety Data Sheet: Maxi KREME." February 1. [11]

Graul, Carrie, comp. 2011. "Fact Sheet for the Phase 1 Municipal Stormwater Permit." Washington State Department of Ecology, November 4. [4]

Harman, Tom. 2015. "RE: Uncured Asphalt Paving Materials." E-*mail message.* April 30. [10]

Kimsey, Melanie B., comp. 2005. "Implementation Guidance for the Ground Water Quality Standards." Washington State Department of Ecology, October. https://fortress.wa.gov/ecy/publications/SummaryPages/9602.html. [2]

2008. "Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity." United States Environmental Protection Agency, September 29. [11]

Newman, Gretchen. 2013. "Benefits of C&D Debris Recycling and Diversion." Washington State Department of Ecology, December. https://fortress.wa.gov/ecy/publications/SummaryPages/1307060.html. [2]

—. 2015. "Benefits of Recycling: Metals, Paper, Construction Debris and Organics." Washington State Department of Ecology, February. https://fortress.wa.gov/ecy/publications/SummaryPages/1307059.html. [2]

—. 2014. "RE: Recycled Concrete Data." *E-mail message.* March 19. [11]

2015. *North American Industry Classification System*. United States Census Bureau. August 4. http://www.census.gov/eos/www/naics/. [11]

2013. "NPDES Electronic Reporting Rule." Proposed Rule. Federal Register, July 30. [7]

Pacifico, Marc, interview by Carrie A. Graul. 2014. March 6. [10, 11]

1995-2015. "Permitting and Reporting Information System (PARIS)." Washington State Department of Ecology. Accessed July - September 2015. [9, 11]

1983. "Results of the Nationwide Urban Runoff Program." *PB84-185552*. Vols. I - Final Report. Washington D.C.: Water Planning Division, U.S. Environmental Protection Agency. [11]

Shira, Jason. 2008. "Recommendation for Enforcement Action - Hanson Pipe and Precast, Inc." Washington State Department of Ecology, November 20. [10, 11]

SIC Division Structure. Occupational Safety & Health Administration. n.d. https://www.osha.gov/pls/imis/sic_manual.html. [11]

Solheim, Marni. 2009. "Acceptable Uses for Recycling Asphalt Roofing in Washington State." Washington State Department of Ecology, November. [2]

SPECTRA Laboratories. 2009. "Snoqualmie Wheel Wash Water Analysis." *CalPortland Comments on 2010 Draft Sand and Gravel Permit*. Tacoma, WA: Cal Portland, September 14. [10, 11]

2004. "Stormwater Management Manual for Eastern Washington." Washington State Department of Ecology, September. [2, 3, 4, 8, 10, 11]

2014. "Stormwater Management Manual for Western Washington." Washington State Department of Ecology, December. [1, 2, 3, 4, 8, 10, 11]

2002. "Structural." *Webster's New World College Dictionary*, edited by Michael Agnes. Cleveland, OH: Wiley Publishing. [11]

1994. "The Sand and Gravel General Permit." Washington State Department of Ecology, July 6. [11]

Turney, Julia, comp. 2006. "King County Department of Transportation Guideline for Use of Recycled Concrete Material as Fill." Environmental Unit, King County Department of Transportation, Road Services Division, Engineering Services Section, August 14. [8]

2012. "Vehicle and Equipment Washwater Discharges: Best Management Practices Manual." Washington State Department of Ecology, November. https://fortress.wa.gov/ecy/publications/documents/95056.pdf. [2, 3]

2010. "Wellhead Protection Program Guidance Document." *DOH 331-018*. Washington State Department of Health, June. [2]

Wen, Haifang. 2015. "RE: Uncured Asphalt Paving Materials." *E-mail Message.* April 29. [10]

Winters, Nancy L. 2014. "Roofing Materials Assessment: Investigation of Toxic Chemicals in Roof Runoff from Constructed Panels in 2013 and 2014." Washington State Department

of Ecology, September. https://fortress.wa.gov/ecy/publications/SummaryPages/1403033.html. [2]

Wolf, Katy. 2013. "Alternative Low-VOC Release Agents and Mold Cleaners for Industrial Molding, Concrete Stamping, and Asphalt Applications." South Coast Air Quality Management District and the United States Environmental Protection Agency, Region IX, October. [11]

Code of Federal Regulations

40 CFR 122: EPA Administered Permit Programs: the National Pollutant Discharge Elimination System. (n.d.). [7]

40 CFR 123: State Program Requirements. (n.d.). [7]

40 CFR 125.3: Technology-based Treatment Requirements in Permits. (n.d.). [7]

40 CFR 131.12: Antidegradation Policy and Impelemntation Methods. (2015, August 21). [7]

40 CFR 131.36: Toxics Criteria for Those States Not Complying with Clean Water Act section 303(c)(2)(B). (1992, December 22). [7]

40 CFR 411: Cement Manufacturing Point Source Category. (n.d.). [7]

40 CFR 436: Mineral Mining and Processing Point Source Categrory. (n.d.). [7]

40 CFR 443: EPA Effluent Limitations Guidelines For Existing Sources And Standards Of Performance And Pretreatment Standards For New Sources For The Paving And Roofing Materials (Tars And Asphalt) Point Source Category. (n.d.). [7]

Revised Code of Washington

Chapter 43.17.095: Option to Submit Document, Form, or Payment Electronically – Requirements. (n.d.). [7]

Chapter 90.56.280: Duty to Notify Coast Guard and Division of Emergency Management of Discharge. (n.d.). [7]

Washington Administrative Code

Chapter 173-200: Water Quality Standards for Groundwater of the State of Washington. (1990, October 31). [5]

Chapter 173-201A: Water Quality Standards for Surface Waters of the State of Washington. (2011, May 9). [5]

Chapter 173-204: Sediment Management Standards. (2013, February 25). [5]

Chapter 173-205: Whole Effluent Toxicity Testing and Limits. (1993, October 6). [5]

Chapter 173-220: National Pollutant Discharge Elimination System Permit Program. (2002, February 15). [5]

Chapter 173-224: Wastewater Discharge Permit Fees. (2013, November 1). [5]

Chapter 173-226: Waste Discharge General Permit Program. (2002. February 15). [5]

Chapter 173-303: Dangerous Waste Regulations. (2014, December 18). [5]

Chapter 173-304: Minimum Functional Standards for Solid Waste Handling. (1988, October 4). [5]

Chapter 173-350: Solid Waste Handling Standards. (2013, March 25). [5]

Appendix A – Response to Comments

Ecology will amend this Fact Sheet with a Response to Comments on the Draft Permit.