

2016 Sand & Gravel General Permit Training

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Water Quality Program
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DEPARTMENT OF
ECOLOGY
State of Washington

Why do I need a Permit?

- Discharge of pollutants to navigable waters is not a right. A permit is required to use public resources for wastewater disposal.
- Chapter 90.48 RCW requires a permit to regulate discharges of pollutants or waste materials to waters of the state.
- The goal is to eliminate the discharge of pollutants and to protect our water.



**Outlet from Sand
& Gravel Facility**

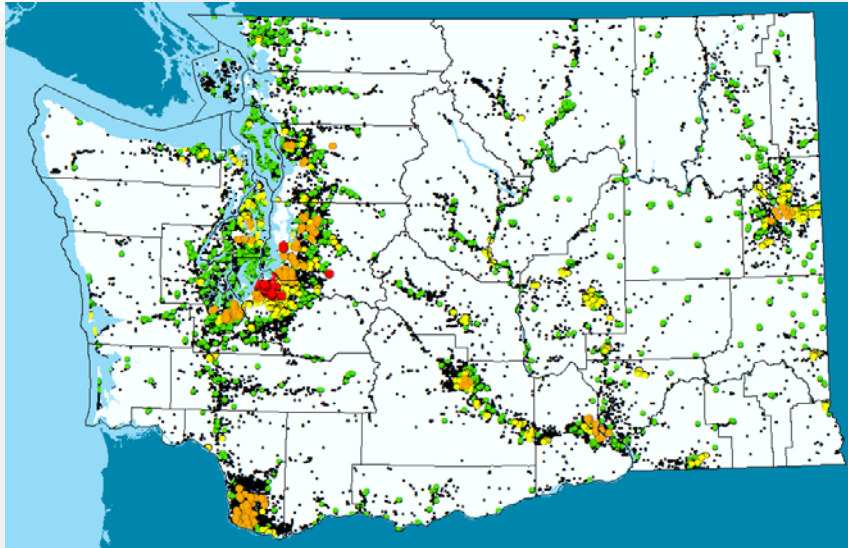




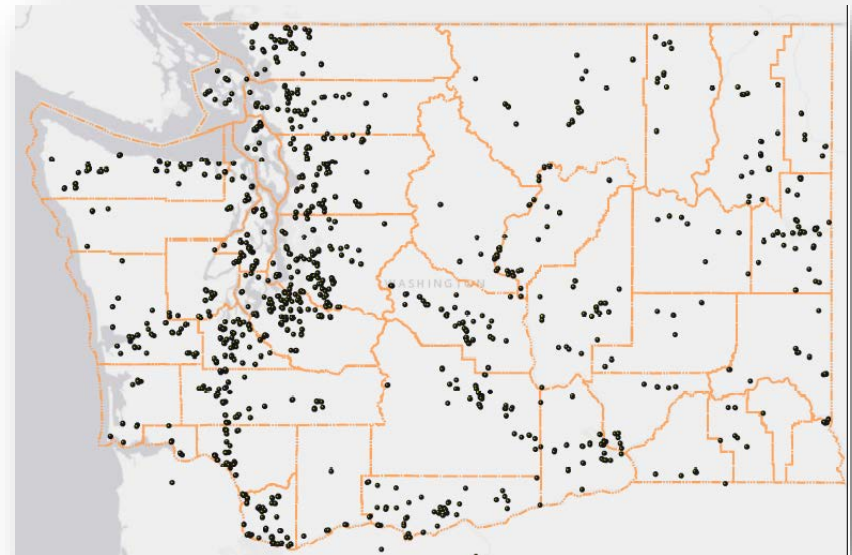
Water Table – Groundwater Drinking Water Source

Compare Groundwater Sources to Sand & Gravel Facility Locations

Public Water Supply System
Groundwater Sources



Locations of Sand & Gravel
Facilities





Permit Coverage



What's the most important document?

The one that your Ecology inspector will ask for?



Site Management Plan (SMP)



Erosion and Sediment Control Plan (ESCP)



Monitoring Plan



Stormwater Pollution Prevention Plan (SWPPP)



Spill Control Plan



When Does my SMP Need to be Updated for the New Permit?

During your annual SMP review (April 2017 at the latest)

Note the date of review

Note the names of the personnel that conducted the review

Most permittees will not need to make significant changes

New BMPs

Recycled Concrete BMPs



Example Site Map



Site Map

Scale

- Or distances between structures and drainage systems

Outfalls & Monitoring Points

- Identifiers used on Discharge Monitoring reports
- Surface Water or groundwater
- Process water or stormwater

Drainage Features

- Drainage direction
- Rivers, lakes, wetlands, etc.
- Ditches & ponds

Industrial Areas

- Storage areas
- Vehicle and equipment cleaning areas
- Processing area



Site Management Plan (SMP)



Erosion and Sediment Control Plan (ESCP)



Monitoring Plan



Stormwater Pollution Prevention Plan (SWPPP)



Spill Control Plan





Erosion and Sediment Control Plan

Types of Stormwater

No Industrial Activities



Type 1

Cleared Areas But No Mining



Type 2

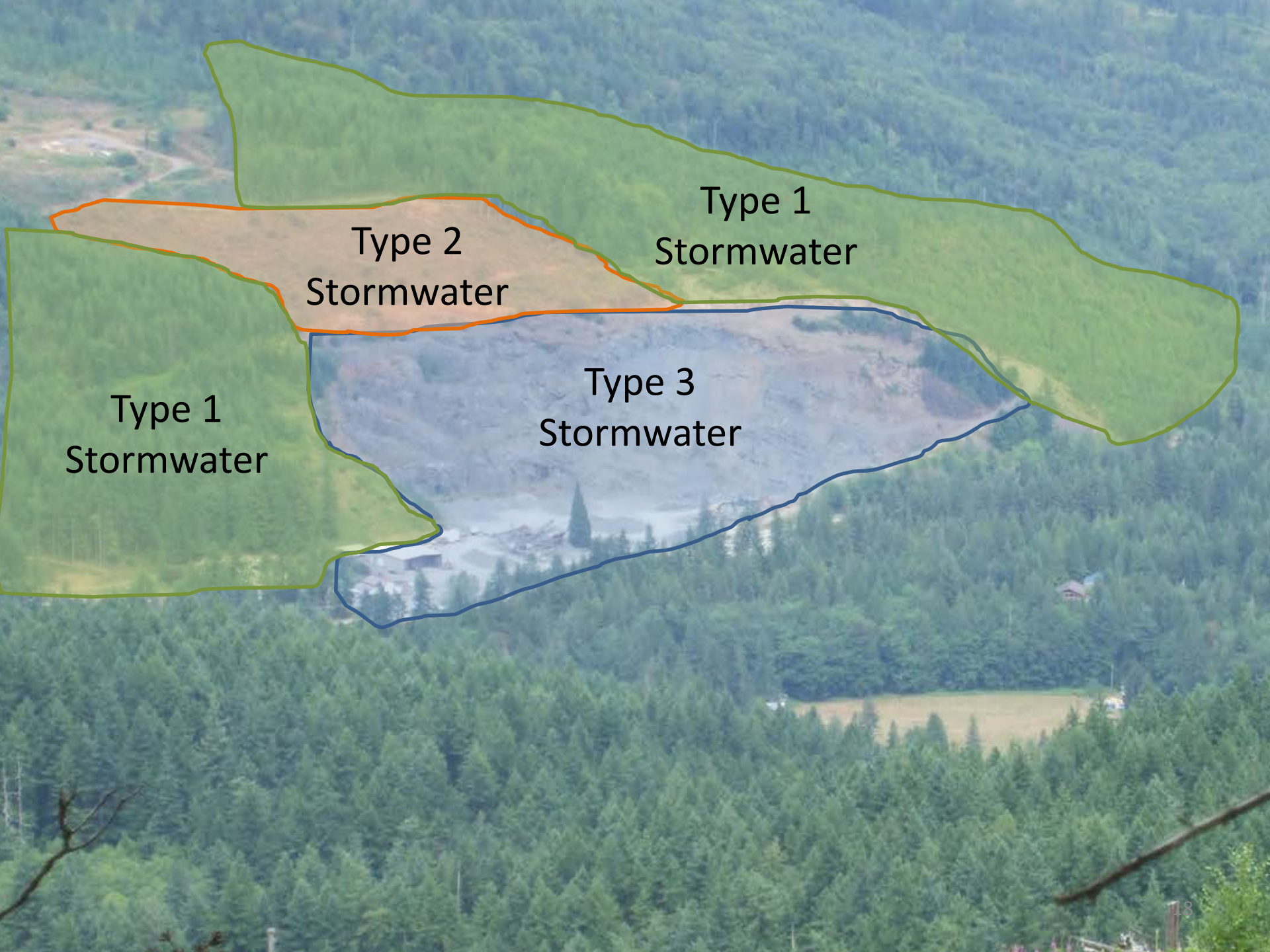
Mining Areas and Industrial Yards



Type 3

Appendix B





Type 1
Stormwater

Type 2
Stormwater

Type 1
Stormwater

Type 3
Stormwater

Stabilization BMPs

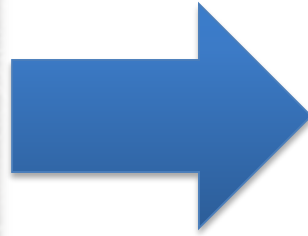


Use if you have temporarily or permanently ceased your mining or reclamation activities



S6.A

Runoff Conveyance and Treatment BMPs



S6.B



Monitoring Plan

NAICS / Ecology Codes

Refer to Appendix A for Descriptions

Crushing:

113110 , 113310,
212311, 212312,
212313, 212321,
212322, 212324,
212325, 212319,
212399, 327999



Asphalt:
324121



Recycling:
ECY001, ECY002

NEW!



Concrete:

327320, 32790,
327332



S7.A.1

**What's the second most
important document?**





Permit No. [Permit Number]
 Coverage Effective Date: April 1, 2016
 Permit Issuance Date: February 17, 2016
 Expiration Date: March 31, 2021

**THE SAND AND GRAVEL GENERAL PERMIT
 COVERAGE PAGE - NON-PORTABLE OPERATIONS**

Name & Mailing Address

[Person Name (Legal Res. Party)]
 [Org Name (Legal Res. Party)]
 [Org Address1 (Legal Res. Party)]
 [Org Address2 (Legal Res. Party)]
 [Org City (Legal Res. Party)], [Org State (Legal Res. Party)] [Org Zipcode (Legal Res. Party)]

Facility/Site Name & Location

[Site Name]
 [Site Address]
 [Site City], [Site State] [Site Zipcode]

Site Contact

[Site Contact Person Name]

Site Contact Phone Number

[Site Contact Phone]

NAICS Codes Representating Activities
 212321, 327320

Facility/Site Status

[Facility Status]

Monitoring Point Information

<u>Monitoring Point Identifier</u>	<u>Monitoring Point Name</u>	<u>Latitude/ Longitude</u>	<u>NACIS Code(s)</u>	<u>Type of Discharge</u>	<u>Outfall Type</u>	<u>Name of Surface Waterbody</u>
P10	Process to Surface (only during float-out events)	46.965456 / -123.834981	327320	Process Water	Surface Water Body	Grays Harbor
P11	Process to Surface (only during float-out events)	46.965900 / -123.833833	327320	Process Water	Surface Water Body	Grays Harbor
P5g	Infiltration trench	46.964000 / -123.830211	212321	Mine Dewatering Water	Ground	

Bill Moore, P.E., Manager
 Program Development Services Section
 Water Quality Program

S1.E,
 S7.1

Table 2: Effluent Limits and Monitoring Requirements for Process Water and Mine Dewatering Water

Type	NAICS Code (see Appendix A)	Discharge to:	pH		Turbidity (NTU)		Total Suspended Solids (TSS)	Oil Sheen ³	Total Dissolved Solids (TDS)	
			Min	Max	Average Monthly	Maximum Daily	Average Quarterly			
Process Water, Mine Dewatering Water	113110, 113310, 212312, 212313, 212319 ⁴ , 212399	Surface	Quarterly ¹		Two/Month ²		Quarterly ¹	Daily when runoff occurs	----	
			6.5	8.5	50	50	40 mg/l	No Discharge	----	
		Ground	Quarterly ¹		----		----	Daily when runoff occurs	----	
			6.5	8.5	----		----	Visible Sheen	----	
	212321	Surface	----		Two/Month ²		Quarterly ¹	Daily when runoff occurs	----	
			----	----	50	50	25 mg/l	No Discharge	----	
		Ground	----		----		----	Daily when runoff occurs	----	
			----		----		----	No Discharge	----	
	212311, 212324, 212325,	Surface	----Surface Water Discharge Not Permitted----							
		Ground	Quarterly ¹		----		----	Daily when runoff occurs	----	
	6.5		8.5		----		----	No Discharge	----	
	212322	Surface	----		Two/Month ²		Quarterly ¹	Daily when runoff occurs	----	
			----	----	50	50	25 mg/l	No Discharge	----	
		Ground	----		----		----	Daily when runoff occurs	----	
			----		----		----	No Discharge	----	
	327320, 327331 327332, 327390, 327999, ECY002	Surface	One/Month		Two/Month ²		Quarterly ¹	Daily when runoff occurs	----	
			6.5	8.5	50	50	40 mg/l	Visible Sheen	----	
		Ground	One/Month		----		----	Daily when runoff occurs	Monthly	
			6.5	8.5	----		----	Visible Sheen	500 mg/l	
	324121 ⁵ , ECY001	Surface	----Surface Water Discharge Not Permitted----							
Ground		One/Month		----		----	Daily when runoff occurs	----		
		6.5	8.5	----		----	Visible Sheen	----		

Table 3: Effluent Limits and Monitoring Requirements for Type 2 and Type 3 Stormwater

Type	NAICS Code (see Appendix A)	Discharge to:	pH		Turbidity (NTU)		Oil Sheen ³
			Min	Max	Average Monthly	Maximum Daily	
Stormwater (Type 2 and 3) Type 2 monitoring only applicable during earth moving activities	327320, 327331, 327332, 327390, 327999, ECY002	Surface	One/Month		Two/Month ²		Daily when runoff occurs
			6.5	8.5	50	50	No Discharge
		Ground	One/Month		---		Daily when runoff occurs
			6.5	8.5	---		No Discharge
	113110, 113310, 212312, 212313, 212319, 212399, 212324, 212325, 324121, ECY001	Surface	Quarterly ¹		Two/Month ²		Daily when runoff occurs
			6.5	8.5	50	50	No Discharge
		Ground	Quarterly ¹		---		Daily when runoff occurs
			6.5	8.5	---		No Discharge
	212311, 212321, 212322	Surface	---		Two/Month ²		Daily when runoff occurs
			---	---	50	50	No Discharge
		Ground	---		---		Daily when runoff occurs
			---	---	---	---	No Discharge

No more Nitrate + Nitrite Monitoring

Notes for Tables 2 and 3:

1. Quarterly means at least one sample in each of the periods of January to March, April to June, July to September, and October to December.
2. When required to sample turbidity twice a month, there must be at least 24 hours between sampling.
3. The discharge of sheen or petroleum products to *waters of the state* is a violation and must be reported as a violation. The presence of a visible sheen at a *discharge point* is not a violation if there is no discharge of sheen or petroleum products to water of the state and if the Permittee corrects the problem in a timely manner, notes the occurrence in their Discharge Monitoring Report (DMR), explains in the DMR the cause, and describes the solution. (Also see conditions [S4.F.2](#), [S5.C](#), [S9.C](#) and [S10.E](#))
4. The discharge of process water associated with bitumens (native mining), bituminous limestone quarrying, bituminous sandstone quarrying to surface water is prohibited.
5. The discharge of process water from wet scrubbers to groundwater is prohibited.

Oil Sheen Reporting Instructions



If no oil sheen was observed enter 0.

If oil sheen was observed enter 1.

- Correct the problem in a timely manner.
- Report on your DMR the cause of the oil sheen.
- Report on your DMR the actions you took in response to observing the sheen.



pH Effluent Limit & Monitoring

- Unchanged from the 2011 Permit
- pH Limit - range of 6.5 to 8.5



Turbidity Limit & Monitoring

- Unchanged from the 2011 Permit
- Turbidity Limit - 50 NTU



0

50

100

500

1000

5000 NTU

TSS & TDS Limits and Monitoring

- Unchanged from the 2011 Permit
- TSS Limits 25 or 40 mg/l
- TDS 500 mg/l



Representative Sampling



- How similar are the contributing conditions?
- How uniform were the values?



Table 4

NEW!

Table 4 Recommended Analytical Methods and Laboratory Quantitation Levels for Monitoring Parameters

Parameter	Units	Analytical Method	Laboratory Quantitation Level	Laboratory Accreditation Required	Preservation ³	Maximum Holding Time	Description
<i>pH</i>	SU	SM4500-H*B	N/A	No / Yes, if testing is performed by an accredited laboratory	None required	Analyze within 15 minutes	Use a calibrated <i>pH</i> meter.
<i>Turbidity</i>	NTU	SM2130-B-2001	0.1	No / Yes, if testing is performed by an accredited laboratory	Cool, ≤ 4 °C	48 hours	Use a calibrated turbidimeter .
<i>Total Suspended Solids (TSS)</i>	mg/l	SM2540-D	5	Yes	Cool, ≤ 6 °C	7 days	The sample is filtered and the residue retained on the filter is dried. The increase in weight of the filter represents the <i>total suspended solids</i> .
Oil Sheen	Yes / No	Observation	N/A	N/A	N/A	N/A	Look for visible sheen
Discharge Flow ⁴	gpm	Calibrated Device	N/A	No	N/A	N/A	Use a calibrated flow meter.
<i>Total Dissolved Solids (TDS)</i>	mg/l	SM2540-C	20	Yes	Cool, ≤ 6 °C	7 days	The sample is filtered and the filtrate is evaporated to dryness and dried. The increase in dish weight represents the <i>total dissolved solids</i> .



S4.D.5,
S7.4

Not Cause or Contribute to a Violation of Standards

Groundwater
Quality
Standards

Surface
Water Quality
Standards

Sediment
Management
Standards

No visible
increase in
turbidity,
objectionable
color, or oil
sheen

S3.B



Monthly Visual Inspection

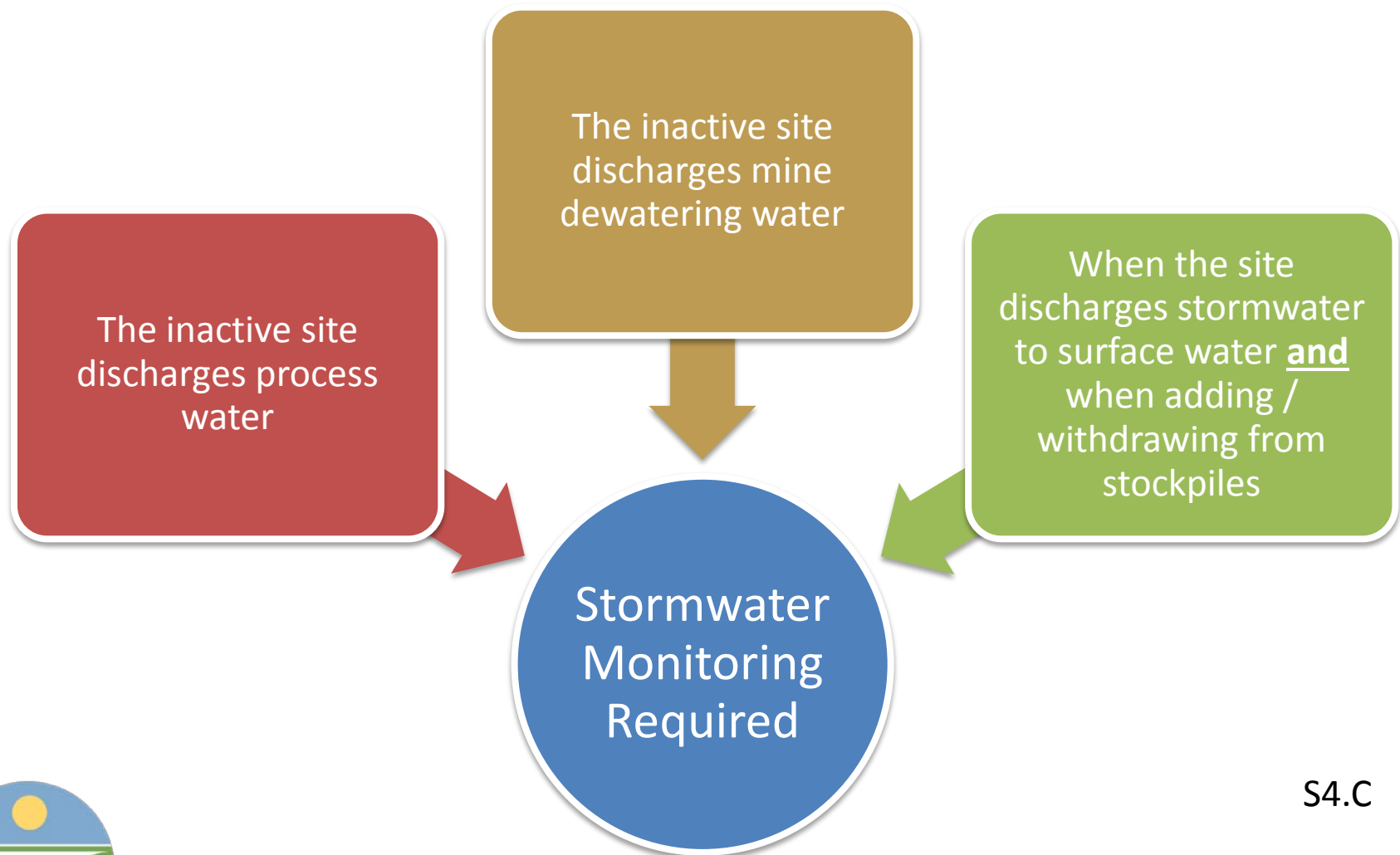
- Each surface water discharge point when discharges occur
- Look for visible changes in the receiving water:
 - Turbidity
 - Color
- Include record of inspection in monitoring plan



S4.F.1



Stormwater Monitoring at Inactive Sites Not Required Unless...



S4.C





Stormwater Pollution Prevention Plan (SWPPP)

Measures to Prevent Commingling



S8.A

Measures to Prevent Commingling



S8.A



Runoff Conveyance and Treatment BMPs



S8.B

Inventory of Materials & Pollutant Sources

- Toxic materials or chemicals
- Cement
- Admixtures
- Fuels
- Lubricants
- Tar
- Release Agents
- Paint



S8.D



Stormwater Pollution Prevention Plan (SWPPP)

SOURCE CONTROL BMPS

Secondary Containment

- Provide roof over secondary containment
- Or, describe how you will dispose of trapped water



NEW!

- Double-walled tanks acceptable for secondary containment



Containers



Fully Drain
and Cap
Empty
Containers

NEW!

Label all
containers



Minimize the
number of
Empty
Containers



S8.E.2-3



Prevent Dumpster Juice



S8.E.4



Spill Kits



S8.E.5

Petroleum Transfer Operations



S8.E.6



Vehicle & Equipment Cleaning



- Clean vehicles / equipment under cover or in a bermed area
- Prevent commingling of washwater and stormwater



S8.E.7

Vehicle & Equipment Cleaning



Do not dump concrete washout water onto the ground



Treat washout water in a lined impoundment



Unhardened Concrete, Returned Asphalt, & Cold Mix Asphalt

- Store on a bermed impervious surface
- Treat stormwater that comes into contact in a lined impoundment



Lead Acid Batteries



S8.E.9

Leaking Equipment

- Remove from service
- Prevent it from leaking onto the ground until repaired
- Repair all leaks before putting it back into service



Paving Equipment



S8.E.11



Sediment Track Out

- Prevent sediment from going to surface water / storm drains
- Turbidity limits apply
- BMPs:
 - Crushed rock at entrance
 - Wheel Wash
 - Tire Baths
 - Street cleaning



S8.E.12



Fueling at Dedicated Stations



S8.E.13.a

Maintenance



Lined Impoundments



Best Management Practices (BMPs)

S3.A.2 and S3.E.4



S8. Stormwater Pollution Prevention Plan

NEW

S8.F CONCRETE RECYCLING BMPS

Concrete Recycling Stockpiles



- Restrictions on the placement of concrete recycling stockpiles only apply to **new sites**
- All existing Sand & Gravel permitted sites are grandfathered

S8.F.1

Materials Acceptance Procedures

Ensure that inbound recycled concrete materials are not a source of:

- Dangerous waste
- Lead paint
- Asbestos
- Joint sealants which contain Polychlorinated Biphenyls (PCBs)





Spill Control Plan

Materials of Concern



- Oil and petroleum products
- Materials designated as Dangerous or Extremely Hazardous Waste
- Other materials which may pollute groundwater and surface water

S9.A



Spill Control Plan

- Who you going to call? Describe your reporting system
- Prevention measures / storage requirements
- Handling procedures / plan for containment and cleanup



S9.B



Spill Response



S9.C



Inspections

When Equipment Operates:

Inspect Oil / Water Separators



- Once per month
October 1 – April 30
- During and
immediately after
large storm events

S4.F.2.a



When Equipment Operates:

Inspect Equipment & Vehicles



- Inspect weekly
- Look for oil, hydraulic fluid, antifreeze, etc.

S4.F.2.b



When Equipment Operates:

Inspect Surface Water & Groundwater Discharge Points



Daily visual monitoring for oil sheen when runoff occurs



S4.F.2.c

Inspections

WET AND DRY SEASON INSPECTIONS

Wet Season Inspection

- While its raining – Do you see suspended solids, oil and grease, discoloration, turbidity in your stormwater runoff?
- Is your list of pollutant sources accurate?
- Are your BMPs working?



- Is the runoff going where you think it's going? (Does your site map match?)

S4.F.3.a



Dry Season Inspection

- When it's been dry for a week – Do you see water / runoff on your site? What is the source?
- Is process water going to the stormwater drainage system?
- Is it possible to eliminate discharges?



Inactive Site Inspections

Two Options:

1. Have a registered Professional Engineer certify every three years that the facility complies with the permit
2. Or, conduct a yearly Wet Season Inspection yourself

NEW!



S3.J.3



Inspection Reports

NEW!

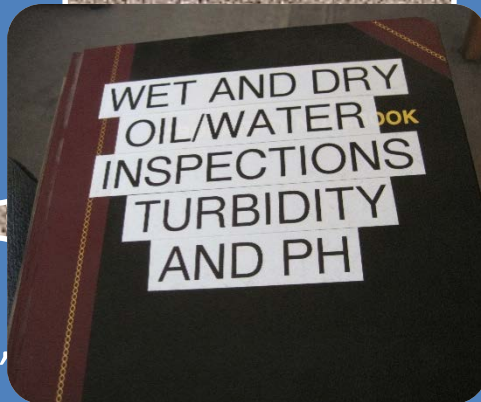
Inspection reports can be in the form of:

- Logbooks
- Checklists
- WSDOT Records
- MSHA Records

Identify maintenance tasks completed during the inspection

Summary of inspection, name of personnel, inspection date, observations related to SMP implementation

Identify any maintenance tasks to be completed after the inspection



S4.G



Reports & Records

NEW!

Electronic Reporting

By July 30, 2016 begin submitting DMRs electronically through Ecology's Water Quality Permitting Portal

- Unless you have been approved for an Electronic Reporting Waiver (then submit via mail)
- Ecology typically only grants waivers to permittees that do not have a computer, printer, or internet connection



S10.A.4

NEW!

Electronic Reporting

Submit an “Electronic Signature Account Form” or
“Electronic Reporting Waiver Request Form”

By May 1, 2016
for Active Sites

2 months before your first Discharge
Monitoring Report (DMR) is due for:

Permittees that have
an electronic signature
account do not need
to resubmit

Inactive Sites

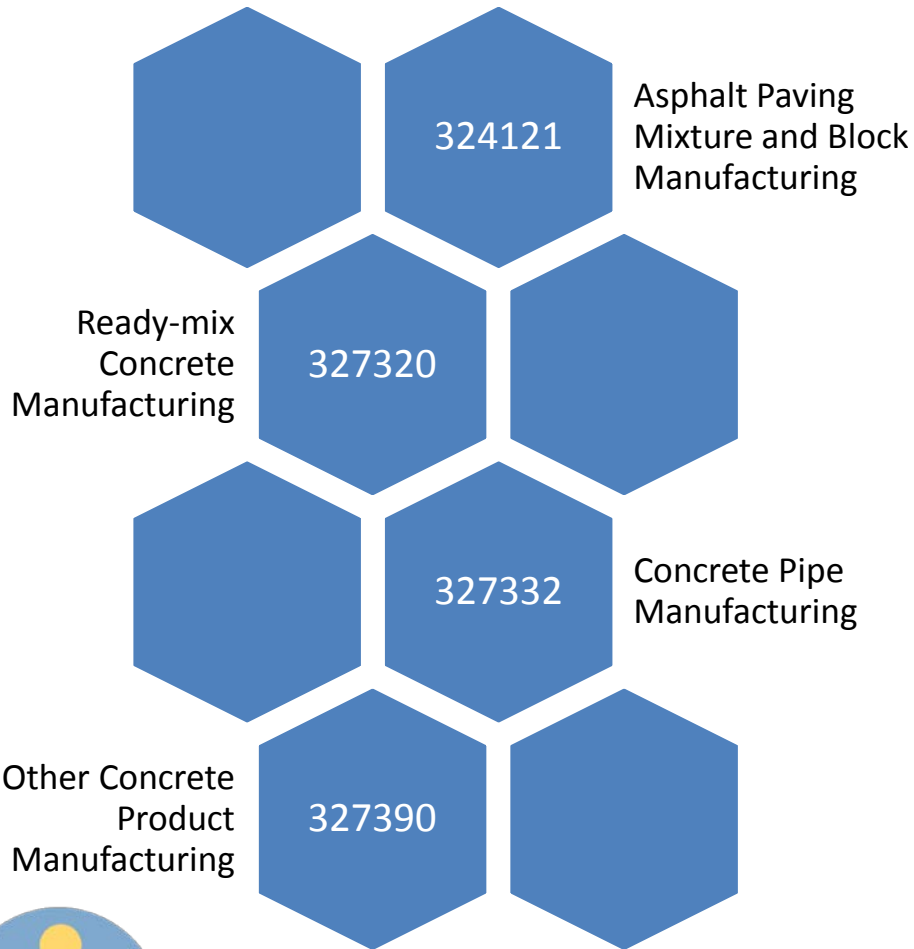
New
permittees



S10.A.5

NEW!

Production Reporting



- Starting in January 30, 2017 report your production range for the previous year
- Ecology uses the information to calculate permit fees
- This will replace the additional forms that the fee unit sends out

S10.B



Permit Violations

Notify Ecology
within 24 hours
of any violation

- If you notify us within 24 hours of the violation we can waive the detailed written report

Submit a
detailed written
report within 5
days



S10.E



Conclusion

Site Management Plan (SMP)



Erosion and Sediment Control Plan (ESCP)



Monitoring Plan



Stormwater Pollution Prevention Plan (SWPPP)



Spill Control Plan



Read Your Permit



Questions



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<http://www.ecy.wa.gov/programs/wq/sand/index.html>