

Permit Section	PDF page	Topic	Comments / Proposed Edits (pseudo track-changes formatting)
S1.C.3	10	Facilities Not Required to Obtain Coverage	<del>Industrial facilities that discharge stormwater only to groundwater (e.g., on-site infiltration) with no discharge to surface waters of the State under any condition, provided the facility doesn't meet the requirements of S1.B.1.</del>  S1.C.3 should be deleted. Groundwater should be afforded no less protection than surface water.
S1.E.1	12-13	Discharges to Ground	The terms and conditions of this permit apply to sites with a discharge point to ground <del>water</del> . For sites with a discharge point to ground <del>water</del> , the terms and conditions of this permit shall apply. However, permittees are not required to sample on-site discharges to ground (e.g., infiltration), <a href="#">providing all requirements in Ecology's SWMMWW section V-5.6 Site Suitability Criteria (SSC) for infiltration are met</a> , unless 1) the facility is subject to PFAS sampling per condition S5B, 2) is specifically required by Ecology (Condition G12), or 3) a discharge point to groundwater is deemed by Ecology to constitute a functional equivalent to a point source discharge to surface waters.  <i>Re: groundwater change to ground. That this is a conduit to groundwater is implicit.</i>
S1.E.2	13-Jan	Discharges to Ground	Facilities with a discharge point to groundwater through an Underground Injection Control well shall comply with any applicable requirements of the Underground Injection Control (UIC) regulations, Chapter 173-218 WAC, <a href="#">and must meet all requirements in Ecology's SWMMWW section V-5.6 Site Suitability Criteria (SSC), or provide applicable water quality treatment prior to discharge to the UIC.</a>
S4.B.1.a	30	Sampling Requirements Representativeness	Quarterly sampling is not representative of variability inherent in stormwater in general. It allows long periods between sampling events when high pollutant content discharge events may be occurring but are not caught. The requirement should be monthly. Might consider a small business accommodation, i.e., a business size threshold below which quarterly sampling is required, and above which monthly is required. Might also consider environmental risk of type of business.
S4.B.1.c	30	Sampling Requirements Representativeness	Per following commentary on grab sampling and need for multiple grabs sampling point per event, the first of the grabs should be attempted within the first hour and no later than the first three hours. Intent is to catch first flush in the first sample.
S4.B.1.d	30	Sampling Requirements Representativeness	Grab, time-proportional, and flow-proportional samples are not equally representative. Representativeness from least to most is grab < time-proportioned < flow-proportioned with single grabs being representative solely of a moment in time, and not representative of a storm event overall. Single grab samples are not representative of variability over the course of any given storm event. Many more grabs per event are needed to approximate event mean concentration. See Ma, Jiun-Shiu, Joo-Hyon Kang, Masoud Kayhanian, and Michael K Stenstrom. 2009. Sampling Issues in Urban Runoff Monitoring Programs: Composite versus Grab. Journal of Environmental Engineering 135 (3):118-127.  While recognizing that flow-weighted event mean concentration (EMC) sampling is not feasible for some pollutants (e.g., pathogens, oil/grease), If Ecology does not require EMC sampling, it should consider at requiring least multiple grab composites with no less than three grabs per sampling point per event, spread over the course of each event, with at least one sample representing first flush (see prior comment re: S4.B.1.c). Ecology should not allow post-hoc <i>unscheduled</i> additional subsequent sampling in an attempt to dilute benchmark exceedances for the reporting period.  As with the comment on S4.B.1.a; might consider a small business accommodation, i.e., a business size threshold below which multiple grabs are not required, but should also consider environmental risk of type of business.
Probably S4.B.1.f	30	Sampling Requirements	Comment: Sampling frequency should be pre-planned. While averaging reporting period samples is stipulated, permittees should not be allowed to re-sample subsequent to an analytical result exceeding a benchmark in the hope of getting a lower value to average with the first, in order to try to get below the benchmark; i.e., post-hoc sampling for which dilution by averaging is a goal should be explicitly not allowed.
S4.B.2.b	31	Sampling Locations	For assigning or waiving monitoring requirements for discharges to ground, Ecology should do a G12 reasonable potential assessment of each individual business just as it does for NPDES point source permits. That Ecology will do a G12 assessment should be stated in the umbrella ISGP.
S5.D.1.b.vi	41	Conditionally Authorized Non-Stormwater Discharges	"Identify <a href="#">and implement</a> appropriate BMPs for each discharge to control pollutants and or flow volumes."  <i>Note that there is some overlap with S5.D.1.b.iv, even as written without the suggested modification. Consider making one about control of pollutants, and the other about flow control.</i>
S5.D.2.a.	42	Conditionally Authorized Non-Stormwater Discharges	Discharges from emergency firefighting activities <a href="#">that do not involve PFAS-containing aqueous film-forming foams (AFFFs). After the emergency has ceased, non-stormwater discharges (e.g., discharges associated with cleanup) to the stormwater drainage system are prohibited. Determination of cessation of the emergency is at the discretion of the emergency on-scene coordinator.</a>
S5.D.2.b.	42	Conditionally Authorized Non-Stormwater Discharges	Fire protection system flushing, testing and maintenance <a href="#">of systems that do not utilize PFAS-containing aqueous film-forming foam (AFFFs).</a>

Permit Section	PDF page	Topic	Comments / Proposed Edits (pseudo track-changes formatting)
S5.B Table 3	36-39	Anywhere arsenic monitoring is required	Stated as Arsenic for one industry and Arsenic, Total for another. Recommend Arsenic, Total in all cases. Allow Analytical Method SM 3125B as well as EPA 200.8 (equivalent methods). For stormwater, specify Laboratory Quantitation Level $\leq 0.4 \mu\text{g/L}$ , and Method Detection Limit Target $\leq 0.074 \mu\text{g/L}$ -- with a requirement to report both the LQL and the MDL values.
S5.B Table 3	36-39	Additional industry category	Composting should be listed as a categorical industry in the table. Analytes should be those listed in existing individual facility ISGPs, using those benchmarks; with the addition of arsenic and any chemicals used in effluent treatment. See prior comment re: 'Anywhere arsenic monitoring is required' for specifics on that analyte. Chemical treatment BMPs should have the same monitoring requirements as stipulated under SWMMWW BMP C251 Construction Stormwater Filtration utilizing chemical treatment -- whether discharging to surface water or to ground.
S5.B Table 3	36-39	Additional Benchmarks and Sampling Requirements Applicable to Specific Industries - broadly	Many industries use hydraulic motors, lifts, and press systems, all of which are subject to leaks during operation and spills during maintenance. Recommend stipulating that any industry that uses hydraulics for any rotational or linear power system be required to sample for hydraulic fluid -- likely NWTPH Diesel fraction, but you should check with Manchester Lab on the appropriate method.
S5.D.2.c.	42	Conditionally Authorized Non-Stormwater Discharges	Re: "Discharges of potable water including water line flushing, provided that water line flushing must be de-chlorinated prior to discharge."  <i>Add requirement to follow SWMMWW S441 BMPs for potable water line flushing, etc.</i>
S5.D.2.d.	42	Conditionally Authorized Non-Stormwater Discharges AC Condensate	"Uncontaminated air conditioning or compressor condensate" is too vague, and because of lack of knowledge on the part of permittees as to what constitutes condensate contamination - or how condensate in a business is being managed - is likely to result in contaminated discharges. AC, heat pump, dehumidifier, and refrigeration systems often use copper tubing/coils on which the condensation occurs - resulting in high levels of copper in the condensate; copper drainage tubing can add to the problem; and lead and/or silver may be present from contact with solder. Condensate drip pans may be galvanized steel, contributing zinc to the discharge. Not part of infrastructure design, so unlikely to be caught in a Technical Information Report, biocide blocks may be placed in condensate drip pans. Recommend simply not allowing condensate as a conditionally authorized discharge to the stormwater drainage system. May consider some de minimis volume discharge directly to ground surface, e.g., from window AC and office ductless heat pumps to landscape soils - not to paved areas. If the discharge is allowed more broadly, recommend requiring monitoring for Cu, Zn, Pb, Ag, and biocides, with a requirement to treat Cu and Zn down to TAPE 'typical stormwater' influent levels, and biocide removal by TBD treatment prior to discharge to the stormwater collection and treatment system.
S5.D.2.d.	42	Conditionally Authorized Non-Stormwater Discharges Compressors	Assuming this is a reference to air compressors. Condensate from oil-lubricated compressors should not be conditionally allowed unless provided with oil/water separators that bring the effluent level down to 10 mg/L or less. Condensate from oil-free compressors may be considered a conditionally authorized non-stormwater discharge.
S5.D.2.f	42	Conditionally Authorized Non-Stormwater Discharges	"Incidental windblown mist from cooling towers that collects on rooftops or areas adjacent to the cooling tower <u>when collected and treated to neutralize or remove cooling tower chemicals prior to discharge to the stormwater collection and treatment system.</u> Per the SWMMWW definition of PGIS, roofs that are subject to venting significant amounts of dusts, mists, or fumes from manufacturing, commercial, or other indoor activities" are considered PGIS. Cooling tower water is highly likely to contain substantial concentrations of biocides (algae and biofilm control) and corrosion and scale inhibitors. Areas subject to cooling tower mist, droplets, and splash -- whether roofing or pavement-- should be designated as PGIS even if they would not be absent the aerial deposition. Having worked in an industry that used cooling towers, and having worked around them, it's hard to envision source control - the chemicals used are needed for asset protection. Some of the chemicals used may have no state WQ standards, but are toxic to aquatic biota.
N/A	N/A	Groundwater protection broadly	A couple of my preceding comments refer to Ecology's SWMMWW section V-5.6 Site Suitability Criteria (SSC) for infiltration. I have yet to see a defense of those criteria engendering any certainty that they are actually broadly protective of groundwater when infiltrating stormwater. I suggest/recommend that Ecology undertake a deep dive literature search, plus engage Ecology's Environmental Assessment Program to run some monitoring studies to evaluate those criteria.