DEPARTMENT OF ENVIRONMENT QUALITY

DIVISION OF ENERGY, MINERAL, AND LAND RESOURCES

FACT SHEET

GENERAL PERMIT NCG150000
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
PERMIT TO DISCHARGE STORMWATER

2022 – 2027 Permit Term

BACKGROUND

Activities, such as material handling and storage, equipment maintenance and cleaning, industrial processing or other operations that occur at industrial facilities are often exposed to stormwater. The runoff from these areas may discharge pollutants directly into nearby waterbodies or indirectly via storm sewer systems, thereby degrading water quality.

In 1990, the U.S. Environmental Protection Agency (EPA) developed permitting regulations under the National Pollutant Discharge Elimination System (NPDES) to control stormwater discharges associated with eleven categories of industrial activity. NPDES permitting authorities, which may be either EPA or a state environmental agency, issue stormwater permits to control runoff from these industrial facilities.

TYPES OF DISCHARGES COVERED

The requirements in this permit apply to stormwater discharges associated with industrial activity from Air Transportation facilities identified by the SIC Codes in Major Group 45, specifically to those airports that do not routinely perform deicing or anti-icing operations. Types of operations covered include

1. Air transportation, scheduled, and air courier (SIC 4512 and 4513);
2. Air transportation, non-scheduled (SIC 4522);
3. Airports, flying fields, except those maintained by aviation clubs:
4. Airport terminal services including: air traffic control, except government; aircraft storage at airports; aircraft upholstery repair; airfreight handling at airports; airport hangar rental; airport leasing, if operating airport; airport terminal services; and hangar operations; and
5. Airport and aircraft service and maintenance including: aircraft cleaning and janitorial service; aircraft servicing/repairing, except on a factory basis; vehicle maintenance shops (including vehicle and equipment rehabilitation mechanical repairs, painting, fueling, lubrication); and material handling facilities.

Additionally, *Stormwater* point source discharges from like industrial activities deemed by The Division of Energy, Mineral, and Land Resources (the Division) to be similar to these operations in the process, or the discharges, or the exposure of raw materials, intermediate products, by-products, final products, or waste products can also be covered by this General Permit.

Facilities and products in this group fall under the following categories, all of which require coverage under an industrial stormwater permit:

1. Servicing, repairing, or maintaining aircraft and ground vehicles.
2. Equipment cleaning and maintenance (including vehicle and equipment rehabilitation mechanical repairs, painting, fueling, lubrication).
3. Deicing/anti-icing operations which conduct the above described activities.

GEOGRAPHIC AREA(S) COVERED BY THIS GENERAL PERMIT

Discharges covered by this General Permit are located at any place within the political boundary of the State of North Carolina. Discharges located on the Cherokee Indian Tribal Reservation are subject to permitting by the US Environmental Protection Agency and are not covered by this General Permit.

RECEIVING WATERS

Receiving waters include all surface waters of North Carolina or municipal separate storm sewer systems conveying stormwater to surface waters.

CHARACTERISTICS OF DISCHARGED STORMWATER

Pollutants conveyed in stormwater discharges from air transportation facilities will vary. Generally, the concern with the use of ethylene and propylene glycols is that they exert high oxygen demands when released into receiving waters. Additionally, the concentration of nitrogen and possibly ammonia are the concern with the respect to deicing/anti-icing operations where urea is used.

The activities, pollutant sources, and pollutants detailed in Table 1 are commonly found at air transportation facilities.

Table 1. Common Activities, Pollutants Sources, and Associated Pollutants at Air Transportation Facilities

Activity	Pollutant Source	Pollutant
Aircraft deicing/anti-icing	Runoff of spent deicing chemicals (e.g., ethylene glycol or propylene glycol) from aircraft exteriors	Biochemical oxygen demand (BOD)
Runway deicing/anti-icing	Runoff of spent deicing chemicals (e.g., ethylene or propylene glycol, urea, potassium or sodium acetate, potassium or sodium formate) from deicing areas	BOD, nitrogen, ammonia
Aircraft servicing	Spills or leaks during servicing	Engine oil, hydraulic fluid, fuel, lavatory waste
Aircraft fueling	Spills and leaks during fuel transfer, spills due to "topping off'' tanks, runoff from fueling areas, washdown of fueling areas, leaking storage tanks	Jet fuel, fuel additives, oil, lubricants, heavy metals
Aircraft, ground vehicle, and equipment maintenance and washing	Spills and leaks during maintenance	Engine oils, hydraulic fluids, transmission oil, radiator fluids, and chemical solvents
	Disposal of waste parts	Batteries, oil, fuel filters, oily rags
	Spent wash water	TSS, metals, fuel, hydraulic fluid, oil, lavatory waste
Runway maintenance	Materials removed from runway surface	Tire rubber, oil and grease, paint chips, jet fuel
	Chemicals used to clean the runway surface	Chemical solvents

DISCHARGE CONTROLS AND LIMITATIONS

Analytical monitoring is being included in the General Permit for the first time, which includes the introduction of benchmark concentrations. Benchmark concentrations provide facilities a tool with which to assess the effectiveness of best management practices (BMPs). These benchmark concentrations are not effluent limits, but provide guidelines for the facility's Stormwater Pollution Prevention Plan. Exceedances of benchmark values require the permittee to increase monitoring, increase management actions, increase record keeping, and/or install stormwater BMPs in a tiered program.

Additionally, the General Permit requires the development and implementation of a SWPPP. The SWPPP is a written assessment of potential sources of pollutants in stormwater runoff and control measures that will be implemented at the facility to minimize the discharge of these pollutants in runoff from the site. These control measures include site-specific best management practices (BMPs), maintenance plans, inspections, employee training, and reporting. In this renewal cycle, requirements for deicing operations were integrated into the SWPPP.

As with the previous version of the permit, permittees are still required to record annual usage rates of deicing/anti-icing products. The total amount of deicing/anti-icing chemicals used at an airport facility is the cumulative amount used by the airport authority and each commercial tenant of the airport facility. In determining the fluid amounts of deicing/anti-icing chemicals used at a facility, operators should use the pre-dilution volume. The Division may require facilities that conduct aircraft and/or runway (including taxiways and ramps) deicing/anti-icing operations to apply for an individual permit.

MONITORING AND REPORTING REQUIREMENTS

New in the General Permit is the addition of analytical monitoring of stormwater discharges. NC DEQ felt analytical monitoring was necessary due to the nature of the covered activities. Particularly given that some of the common activities (as outlined in Table 1) are similar to activities in other general permits that already have analytical monitoring. As with other recently renewed general permits, the analytical monitoring is required to be conducted quarterly

The new analytical monitoring parameters are: Total Suspended Solids (TSS), pH, Conductivity, Chemical Oxygen Demand (COD), and Non-Polar Oil & Grease.

The parameter benchmarks are as follows:

The standard **Total Suspended Solids (TSS)** benchmark of 100 mg/L is based on the median concentration derived from the National Urban Runoff Program (NURP) study in 1983 and serves as a benchmark in most other industrial stormwater permits with TSS monitoring. The lower TSS benchmark for ORW, HQW, trout, and primary nursery area (PNA) waters of 50 mg/L reflects half that standard value and was set to flag potential problems in discharges to waters with much lower water quality standards for TSS concentrations (20 mg/L for HQW and ORW; 10 mg/L for trout and PNA waters).

The **pH** benchmark range of 6.0 – 9.0 (and 6.8 – 8.5 for saltwater) standard units is based on N.C. Water Quality Standards in 15A NCAC 02B .0211 and is consistent with other renewed general stormwater permits.

Conductivity does not have a benchmark. Conductivity provides insight into the dissolved solids concentration in stormwater runoff by measuring the ability of the runoff to transmit an electrical current. That ability increases with the amount of dissolved ions in the runoff.

The benchmark for **Chemical Oxygen Demand (COD)** remains at 120 mg/L. This benchmark was set using best professional judgement. Generally, COD is found at levels four times the BOD_5 levels in domestic wastewaters.

The benchmark for **Non-Polar Oil and Grease, or TPH, [EPA Method 1664 (SGT-HEM)]** remains at 15 mg/L. The TPH benchmark is consistent with other States' benchmarks and/or limits. We would only expect in discharges associated with significant oil contamination to exceed this benchmark.

In addition to analytical monitoring, the permittee must also perform and document quarterly qualitative monitoring at each stormwater discharge outfall that discharges stormwater associated with industrial activity.

COMPLIANCE SCHEDULE

Permittees covered by this General Permit shall comply with Final Limitations and Controls specified for stormwater discharges in accordance with the following schedule:

(a) Existing Facilities already operating but applying for permit coverage for the first time: The Stormwater Pollution Prevention Plan shall be developed and implemented within 12 months of the effective date of the Certificate of Coverage and updated thereafter on an annual basis. Secondary containment, as specified in B-8 of the General Permit, shall be accomplished within 12 months of the effective date of the issuance of the Certificate of Coverage.

(b) New Facilities applying for coverage for the first time: The Stormwater Pollution Prevention Plan shall be developed and implemented prior to the beginning of discharges from the operation of the industrial activity and be updated thereafter on an annual basis. Secondary containment, as specified in Part B of the General Permit shall be accomplished prior to the beginning of discharges from the operation of the industrial activity.

(c) Existing facilities previously permitted and applying for renewal under this General Permit: All requirements, conditions, limitations, and controls contained in this permit (except new SWPPP elements in this permit renewal) shall become effective immediately upon issuance of the Certificate of Coverage. New elements of the Stormwater Pollution Prevention Plan for this permit renewal shall be developed and implemented within 6 months of the effective date of the General Permit and updated thereafter on an annual basis. Secondary containment, as specified in Part B of the General Permit shall be accomplished prior to the beginning of discharges from the operation of the industrial activity.

SPECIAL CONDITIONS WHICH WILL HAVE A SIGNIFICANT IMPACT ON THE DISCHARGE

There are no special conditions in the general permit. Part F addresses electronic reporting requirements mandated by the federal NPDES Electronic Reporting Rule. When the agency's electronic reporting system is able to accept NPDES stormwater permit monitoring data, the permittee must report discharge monitoring data electronically using NC Division of Water Resources' Electronic Discharge Monitoring Report (eDMR) internet application. NC DEMLR will notify permittees when it is time to register and begin reporting in eDMR.

BASIS FOR CONTROLS AND LIMITATIONS

1. The conditions of this draft general permit have been designed using best professional judgment to achieve water quality protection through compliance with the technology-based standards of the Clean Water Act (Best Available Technology [BAT] and Best Conventional Pollutant Control Technology [BCT]). Where the Director determines that a water quality violation is occurring

and water quality-based controls or effluent limitations are required to protect the receiving waters, coverage under the general permit shall be terminated and an individual permit will be required. Based on a consideration of the appropriate factors for BAT and BCT requirements, and a consideration of the factors discussed below in this fact sheet for controlling pollutants in stormwater discharges associated with the activities as described in Item 1 (Types of Discharge Covered), the draft permit proposes a set of requirements for developing and implementing stormwater pollution prevention plans, and proposes specific requirements for monitoring and reporting on stormwater discharges.

2. The permit conditions reflect the Environmental Protection Agency and the North Carolina pollution prevention approach to stormwater permitting. The quality of the stormwater discharge associated with an industrial activity will depend on the availability of pollutant sources. This draft general permit proposes that implementation of Best Management Practices (BMPs) and traditional stormwater management practices which control the source of pollutants meets the definition of BAT and BCT. The draft permit conditions are not numeric effluent limitations, but rather are designed to be flexible requirements for developing and implementing site specific plans to minimize and control pollutants in the stormwater discharges associated with the industrial activity.

3. Title 40 Code of Federal Regulations (CFR) Part 122.44(k)(2) authorizes the use of BMPs in lieu of numeric effluent limitations in NPDES permits when the agency finds numeric effluent limitations to be infeasible. The agency may also impose BMP requirements which are "reasonably necessary" to carry out the purposes of the Act under the authority of 40 CFR 122.44(k)(3). The conditions of the draft permit are proposed under the authority of both of these regulatory provisions. The pollution prevention requirements (BMP requirements) in this permit operate as limitations on effluent discharges that reflect the application of BAT/BCT. This is because the BMPs identified require the use of source control technologies which, in the context of this general permit, are the best available of the technologies economically achievable (or the equivalent BCT finding).

4. All facilities covered by this stormwater general permit must prepare, retain, implement, and (at a minimum of annually) update a stormwater pollution prevention plan. The term "pollution prevention" distinguishes this source reduction approach from traditional pollution control measures that typically rely on end-of-pipe treatment to remove pollutants in the discharges. The plan requirements are based primarily on traditional stormwater management, pollution prevention and BMP concepts, providing a flexible basis for developing site-specific measures to minimize and control the amounts of pollutants that would otherwise contaminate the stormwater runoff.

5. The pollution prevention approach adopted in the stormwater pollution prevention plans in the draft permit focuses on two major objectives: 1) to identify sources of pollution potentially affecting the quality of stormwater discharges associated with industrial activity from the facility; and 2) to describe and ensure that practices are implemented to minimize and control pollutants in stormwater discharges associated with industrial activity from the facility and to ensure compliance with the terms and conditions of this permit.

6. The Division believes that it is not appropriate to require a single set of effluent limitations or a single design or operational standard for all facilities which discharge stormwater associated with industrial activity. Rather, this permit establishes a framework for the development and implementation of site-specific stormwater pollution prevention plans. This framework provides the necessary flexibility to address the variable risk for pollutants in stormwater discharges associated with the industrial activities that are addressed by this permit, while ensuring procedures to prevent stormwater pollution at a given facility are appropriate given the processes employed, engineering aspects, functions, costs of controls, location, and age of facility (as

discussed in 40 CFR 125.3). This approach allows flexibility to establish controls which can appropriately address different sources of pollutants at different facilities.

REQUESTED VARIANCES OR ALTERNATIVES TO REQUIRED STANDARDS

There are no requested variances or alternatives to required standards. Facilities requesting variances to required standards will not be covered under this General Permit but will instead be required to seek coverage under an individual permit.

THE ADMINISTRATIVE RECORD

The administrative record, including application, draft permit, fact sheet, public notice, comments received, and additional information is available by writing to:

Stormwater Program
Division of Energy, Mineral, and Land Resources (DEMLR)
1612 Mail Service Center
Raleigh, North Carolina 27699-1612

The above documents are available for review and downloading on our public Laserfiche online document repository which can be accessed at:
https://edocs.deq.nc.gov/WaterResources/Browse.aspx?id=265693&repo=WaterResources.

STATE CONTACT

Additional information concerning the General Permit may be obtained between the hours of 8:00 AM and 5:00 PM Monday through Friday by contacting Alaina Morman at (919) 707-9236 or alaina.morman@ncdenr.gov.

PROCEDURE FOR THE FORMULATION OF FINAL DETERMINATIONS

a. Comment Period

The Division of Energy, Mineral, and Land Resources proposes to issue an NPDES General Permit for the above described stormwater discharges subject to the outlined benchmark concentrations, management practices, and special conditions. These determinations are open to comment from the public.

Interested persons are invited to submit written comments on the permit applications or on the Division of Energy, Mineral, and Land Resources' proposed determinations to the following address:

Stormwater Program
Division of Energy, Mineral, and Land Resources
1612 Mail Service Center
Raleigh, North Carolina 27699-1612
Attn: **Alaina Morman**

All comments received within thirty (30) days following the date of public notice are considered in the formulation of final determinations.

b. Public Meeting

The Director of the Division of Energy, Mineral, and Land Resources may hold a public meeting if there is a significant degree of public interest in a proposed permit or group of permits. Public notice of such a meeting will be circulated in newspapers and on the Division's website.

c. Appeal Hearing

An applicant whose permit is denied, or is granted subject to conditions he deems unacceptable, shall have the right to a hearing before the Commission upon making written demand to the Office of Administrative Hearing (OAH) within 30 days following issuance or denial of the permit.

d. Issuance of a Permit When no Hearing is Held

If no public meeting or appeal hearing is held, after review of the comments received, and if the Division of Energy, Mineral, and Land Resources' determinations are substantially unchanged, the permit will be issued and become effective on the first day of the month following the issuance date. This will be the final action of the Division of Energy, Mineral, and Land Resources.

If a public meeting or appeal hearing is not held, but there have been substantial changes, public notice of the Division of Energy, Mineral, and Land Resources' revised determinations will be made. Following a 30-day comment period, the permit will be issued and will become effective on the first day of the month following the issuance date. This will be the final action of the Division of Energy, Mineral, and Land Resources unless a public meeting or appeal hearing is granted.