



Guidance on the Industrial Stormwater Permit for the Air Transportation Sector (Sector S)



What facilities are regulated?

Air transportation facilities primarily engaged in industrial activities within the following Standard Industrial Classification (SIC) code:

- 4512 Air transportation, scheduled
- 4513 Air courier services
- 4522 Air transportation, nonscheduled
- 4581 Airports, flying fields, and airport terminal services

As long as the facilities are also conducting any of these activities:

- Aircraft maintenance or air transportation related vehicle maintenance (including aircraft or vehicle rehabilitation, mechanical repairs, painting, fueling, and lubrication)
- Air transportation equipment cleaning operations
- Deicing operations. "Deicing" means both deicing (removing frost, snow, or ice) and anti-icing (preventing accumulation of frost, snow, or ice) activities. When determining volume or tonnage, calculations should be made before dilution of deicing materials occurs.

Air transportation activities commonly occur on land not owned by the facility conducting the activities. If a facility does not own or lease land at an airport, but is still conducting activities which would require industrial stormwater permit coverage, the facility must apply for an industrial stormwater permit. If smaller airline conglomerates are under common ownership, and the parent company agrees, the smaller airline can be an operator under the larger entity's permit application.

At an airport, all tenants regulated by the industrial stormwater permit are required to obtain separate industrial stormwater permit coverage. "Tenant" means airline carriers, fixed-base operators (e.g. fueling companies and maintenance shops), and others that have leases/agreements with the airport authority to conduct business on airport property. Tenants of the airport that conduct industrial activities as described above, or as described anywhere in 40CFR 122.26(b)(14), are required to apply for authorization under an National Pollutant Discharge Elimination System (Permits Program)(NPDES) stormwater permit.

Total acreage of industrial activities is only the areas of a facility where aircraft or air transportation-related vehicle maintenance, equipment cleaning, or deicing operations occur, not the acreage of the entire airfield.

For more examples of types of activities that are and are not regulated, see pages 3-5 of this document.

Stormwater Pollution Prevention Plan (SWPPP) requirements

Each facility receiving industrial stormwater permit coverage must create a SWPPP. The SWPPP must cover all applicable industrial activities being conducted for or by the facility regardless of whether they are conducted by a third party. If a third party conducts industrial activities, reference the appropriate Best Management Practices (BMPs) or sections of the third party's SWPPP in your SWPPP.

Airport authority and tenant SWPPPs are also required to be cross-referenced within in each other’s SWPPPs. This provides transparency into the activities being conducted by each entity, and prevents the need for more comprehensive SWPPPs.

Inspection requirements

At a minimum, permittees are required to conduct thorough monthly visual inspections, with two of the monthly inspections occurring during runoff events (one rain event, one snowmelt event). During the deicing season, permittees must conduct two inspections per month with no fewer than ten days between inspection events.

Each inspection must evaluate site conditions and assess the accuracy and effectiveness of the SWPPP and BMPs. Problems or new conditions at the site must be followed up with appropriate corrective actions and documented on the inspection report. An industrial stormwater site inspection form can be found on the MPCA stormwater website referenced at the end of this document.

Monitoring requirements

If the permittee is unable to collect a representative sample at its facility boundary due to co-mingled discharge, facilities may choose to conduct group monitoring. All permittees are still required to report sample results individually from this common sample, to ensure all permittees are aware and reacting to, if necessary, the sampling results. If averaged benchmark results from a common sample exceed benchmark values in the permit, all permittees using the same samples would be required to coordinate the modification of their BMPs.

Monitoring requirements are dependent on the facility subsector:

Sector	Parameter	Benchmark value	
S1 Airports that use more than 100,000 gallons of glycol-based deicing/anti-icing chemicals and/or 100 tons or less of urea on an average annual basis.	Total Suspended Solids (TSS)	100 mg/L	
	Biochemical oxygen demand (BOD), Carbonaceous 05 Day (20 Degrees Celsius)	25 mg/L	
	Chemical Oxygen Demand (COD)	120 mg/L	
	Nitrogen, Ammonia, Total (as N)	2.8 mg/L	
	pH	6.0-9.0	
S2 Airports that use less than 100,000 gallons of glycol-based deicing/anti-icing chemicals and/or less than 100 tons of urea on an average annual basis.	Total Suspended Solids (TSS)	100 mg/L	
	Biochemical oxygen demand (BOD), Carbonaceous 05 Day (20 Degrees Celsius)	25 mg/L	
	Chemical Oxygen Demand (COD)	120 mg/L	
	Nitrogen, Ammonia, Total (as N)	2.8 mg/L	
Sector	Parameter	Benchmark value	Effluent limits
S3 Existing and new primary airports with 1,000 or more annual jet departures that discharge wastewater associated with airfield pavement deicing that contains urea commingled with stormwater.	Nitrogen, Ammonia, Total (as N)	Benchmark Monitoring Not Required	14.7 mg/L, daily maximum

Stormwater ponds/infiltration

Permittees that do not conduct deicing activities are authorized to use industrial stormwater ponds or infiltration devices for stormwater management without additional restrictions, with the exception of stormwater discharges from vehicle fueling and maintenance activities.

Permittees that conduct deicing activities are authorized to use industrial stormwater ponds for stormwater management, provided that any industrial stormwater pond constructed after April 5, 2010 meet the following design criteria:

- lined with a synthetic liner that is chemically compatible with materials expected to enter the pond
- ultraviolet (UV) stable
- must be designed to restrict infiltration to less than 500 gallons per acre per day
- designed in accordance with accepted engineering practices

Permittees that conduct deicing activities are authorized to use a designed infiltration device, implemented prior to April 5, 2010, for stormwater management provided the permittee complies with the following requirements:

- The permittee shall conduct benchmark monitoring in accordance with the terms and conditions of Part V of the permit of all industrial stormwater prior to infiltration. Any permittee required to comply with this part that is using a designed infiltration device to manage industrial stormwater is not authorized to utilize the benchmark monitoring waiver described in Part V.B.6.a of the permit.
- If the permittee has a designed infiltration device operating prior to April 5, 2010, the permittee is authorized to continue using that device. However, on or after April 5, 2010, the permittee is not authorized to construct new infiltration devices, expand infiltration activities or practices that result in infiltration, or expand volume of infiltration.

No Exposure exclusion

No Exposure means that all industrial materials and activities are protected by a storm resistant shelter 100% of the time from rain, snow, snowmelt and/or runoff. A facility which can prevent exposure 100% of the time may obtain the No Exposure exclusion. Exposed fueling operations cannot qualify for the No Exposure exclusion regardless if they belong to the facility or are contracted out to a third party; facilities must fill out a permit application. A guidance document specific to the No Exposure exclusion can be found at www.pca.state.mn.us/index.php/view-document.html?qid=11277.

Common scenarios that require/do not require permit coverage

Requiring permit coverage:

1. Alpha Company, an aviation related company, conducts no industrial activity outdoors, and therefore has no exposure for any activities in their control. They taxi their aircraft to a separate entity's leasehold where that entity conducts fueling on Alpha Company's aircraft outdoors. Because Alpha Company has a Primary Air Transportation SIC code and has fueling occurring to their planes outdoors, and the activity of fueling is an outside regulated activity (source of exposure), they are required to obtain industrial stormwater permit coverage. They do not need to own the fuel tanks to be a regulated industrial facility. They are the owner of the activity, despite not being the land/fueling tank owner, and are still regulated by the industrial stormwater permit.
2. Bravo Company flies daily to different airports around Minnesota. They refuel and maintain their aircraft at the other airports. If Bravo Company has a regulated Primary Air Transportation SIC code, does not own or lease land at an airport, but is still conducting activities which would require industrial stormwater permit coverage (fueling/maintenance/deicing), the facility must apply for industrial stormwater permit coverage. If smaller airline conglomerates are under common ownership, and the parent company agrees, the smaller airline can be an operator under the larger entity's permit application, if it applies. Otherwise separate permit coverage is required.

3. Airport Helpers, Inc. provides full service storage, maintenance, fueling, and deicing for various corporations. Corporation X owns a plane and uses it for business purposes. Aircraft Helpers has stated that they applied for and hold a Sector S MSGP and are assuming the responsibilities for the industrial activity that is performed on Corporation X's plane (fueling, maintenance, etc.). In the case of the Air Transportation Sector, all facilities that have a Primary Air Transportation SIC code (Airport Helpers, Inc) and conduct the regulated activity (fueling/maintenance/deicing) are required to be regulated by the industrial stormwater permit. Based on the example above, it is unlikely that Corporation X would need permit coverage.
4. Some customers call a third party mobile re-fueler to refuel their aircraft on the engine repair company's leasehold after an engine repair company has completed their repairs (i.e. after the repairs are completed, the customers drive their plane out of the maintenance hangar 50 yards and meet the re-fueler at that location – no one from the engine repair company is involved with the fueling operation/transaction). The owner/operator of the plane that has their aircraft fueled (and the third party mobile re-fueler company) would be required to obtain permit coverage. If the engine repair company fuels the planes (or their own vehicles) they would be required to obtain permit coverage, or demonstrate that the fueling area meets the conditions of a "storm-resistant shelter" to qualify for No Exposure, an extremely uncommon scenario.

Requiring No Exposure:

1. Bravo Company, an aviation related company, conducts no industrial activity at Airport X. No fueling, no maintenance, no deicing. They only take-off, land, and store their aircraft. They also do not have anyone else fuel, maintain, or deicing their aircraft at Airport X. They have certified for No Exposure because in addition to having a Primary Air Transportation SIC code (4512, 4513, 4522, 4581), the facility has to also be conducting any of these activities to be regulated by the MSGP:
 - aircraft maintenance or air transportation related vehicle maintenance (including aircraft or vehicle rehabilitation, mechanical repairs, painting, fueling, and lubrication)
 - air transportation equipment cleaning operations
 - deicing operations

If 100% inside and within a storm-resistant shelter, then the activity owner can certify for the No Exposure exclusion. If none of these activities/materials are at the facility, then no permit coverage is required. However, there is no mention of where Bravo Company fuels their aircraft. They have to fuel somewhere; they are regulated where the fueling activity occurs. Note that deicing planes indoors does not allow for No Exposure, once those deiced planes go outside, the deicing fluid is likely to drip on the ground.

1. An engine repair company leases space at Airport X. They conduct all their activities indoors on their customers' airplanes. They do not conduct any fueling or deicing and they do not own the aircraft. They can file for No Exposure because an airplane engine repair company would likely have a Primary SIC code of 4581 and if 100% of their activities are indoors.

Not requiring permit coverage

1. A finance company owns a plane. Their Primary SIC Code is not one that requires coverage under the MSGP. Their plane is a requirement of their business to assist with the running of their various operations around the country. A third party operator provides all the fueling, maintenance, and deicing of their aircraft. To determine the regulatory status of off-site facilities (in this case, "off-site" from the finance company's primary location), first determine if that off-site operation can be classified according to its own SIC code. If there is no SIC code that describes the off-site facility independently then it would assume the SIC code of the parent facility it supports. Because the finance company likely classify their air transportation by its own SIC code, they are not regulated by the industrial stormwater permit.
2. A mosquito control company operates from an airport leasehold. Their primary activity (mosquito control) is not a SIC code that requires permit coverage. They fuel and maintain their helicopter at the airport. They do not need permit coverage because their Primary SIC code is not air transportation. They are not required to be regulated by the industrial stormwater permit, even if they fuel/maintain their helicopter at the airport.

These scenarios were created through a partnership between the Metropolitan Airports Commission and the Minnesota Pollution Control Agency.

More information

Visit the industrial stormwater program's website, www.pca.state.mn.us/industrialstormwater, for additional information and guidance materials, sign up to receive email updates, or find staff contact information. For general information, call the Stormwater Hotline at 651-757-2119 or 800-657-3804 (non-metro only).