Session #9
Industrial Storm Water Permitting Process

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NPDES Industrial Stormwater Permit

How these requirements affect your airport

Why are We Here?

- The National Pollutant Discharge Elimination System (NPDES) was established by the Clean Water Act in 1972 to reduce pollutants.
  - **Industrial Activity (IGP) - GAR050000** Permit is one part of many that maintain compliance with the Clean Water Act

- Industrial Activities (Such as Airports) falls under GAR050000
  - Airports are under Sector 8.S

- Requires continuous coverage
    - Unlike a construction permit, coverage under the IGP is required as long as the facility is operational

- General Permit
    - This is a general permit meaning that each facility does not get its own “permit.” Instead, each facility files an NOI to gain coverage under the general permit.

Changes since 2017 Permit

- **Monitoring Requirements:**
  - New indicator monitoring requirements
  - Focus on pollutants like oil & grease, pH, TSS, and COD
  - Monitoring must be conducted in the first two quarters of the year

- Net DMR Results are required to be submitted quarterly, even if no samples have been taken that quarter

- Online (digital) reporting and recordkeeping is allowed

Applicability & Industrial Activities

- Only drainage basins with industrial activities occurring **outside** require monitoring.
- Tenants with industrial activities require NOI or NEE submittal.
- NEE applies when ALL industrial activities conducted by a tenant occur inside and/or under cover with water going to a floor drain that does not tie to the stormwater system.

INDUSTRIAL ACTIVITIES

Vehicle Maintenance – Including Aircraft
- Vehicle Rehabilitation
- Mechanical Repair
- Painting/Stripping
- Fueling
- Lubrication

Equipment Cleaning

Aircraft Deicing
- Includes Anti-icing

Apron Washdown

Aircraft Lavatory Services

Cargo Loading/Unloading

Pesticide/Herbicide Use

Equipment Storage

Fire-fighting Foam Discharge

Fuel Storage

Chemical Storage/Chemical Waste Storage

Bulk Chemical Loading/Unloading

Runway Rubber Removal

Implications for Airport

Allowable Discharges:

- Fire fighting activities, fire hydrant flushing
- Irrigation, landscaping
- Pavement washing (no detergents)
- Routing external building washing (no detergents)
- Many more…

Limitations

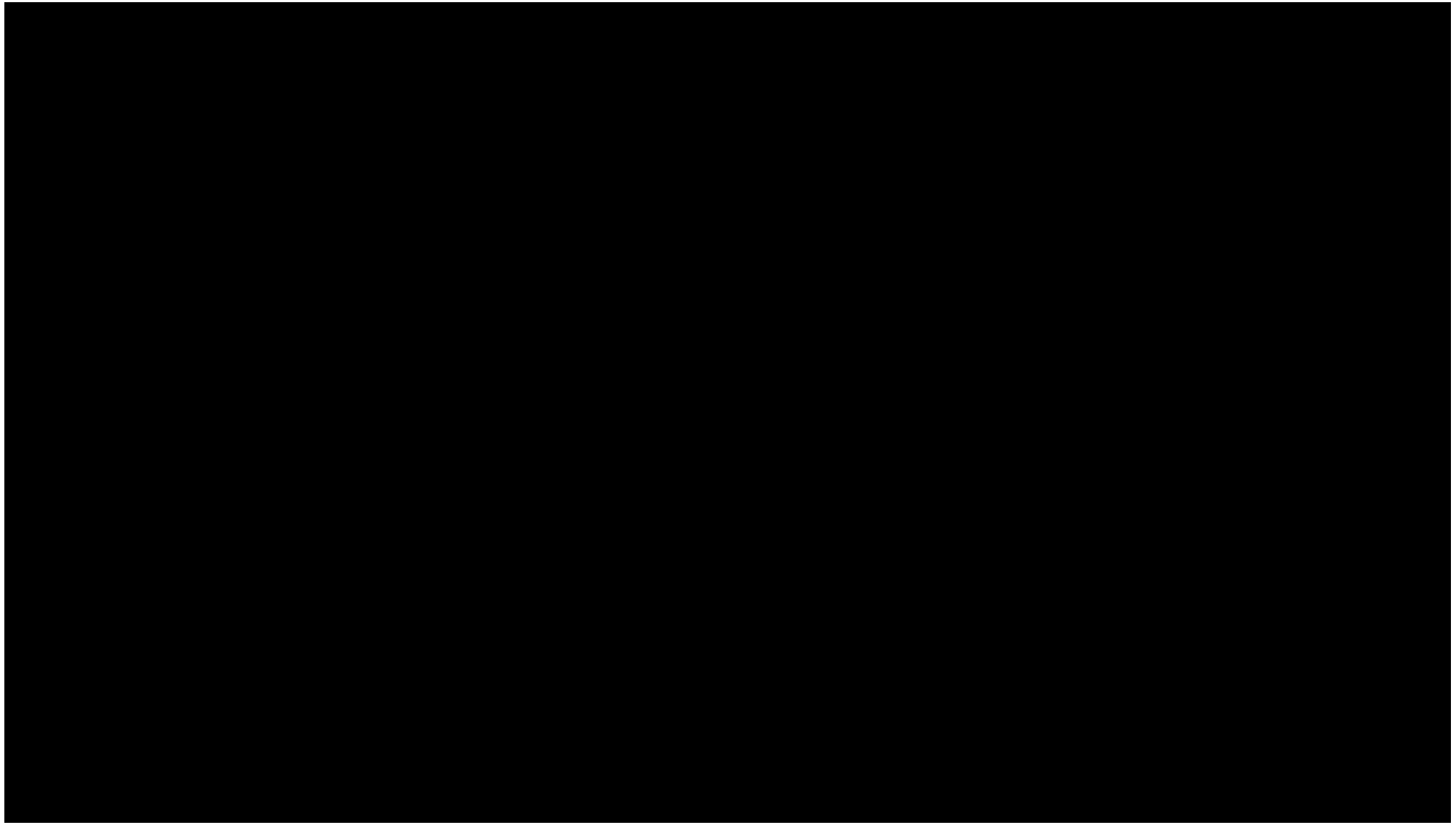
- MS4 may have more strict rules
- Vehicle and equipment wash water
- Stormwater discharge with construction over one acre

Implications for Airport

Targeted Activities:

- Vehicle & Aircraft Maintenance:
  - Managing pollutants from fuel, oil, and grease.
- Deicing Operations:
  - Specific BMPs to handle stormwater contamination from glycol.
  - 50,000 flights/yr **OR** 100,000 gallons of glycol-based deicing chemicals **OR** 100 tons of urea **OR** primary airports with 1,000+ non-propeller aircraft departures/yr
- Material Storage Areas:
  - Procedures for containment and spill response.

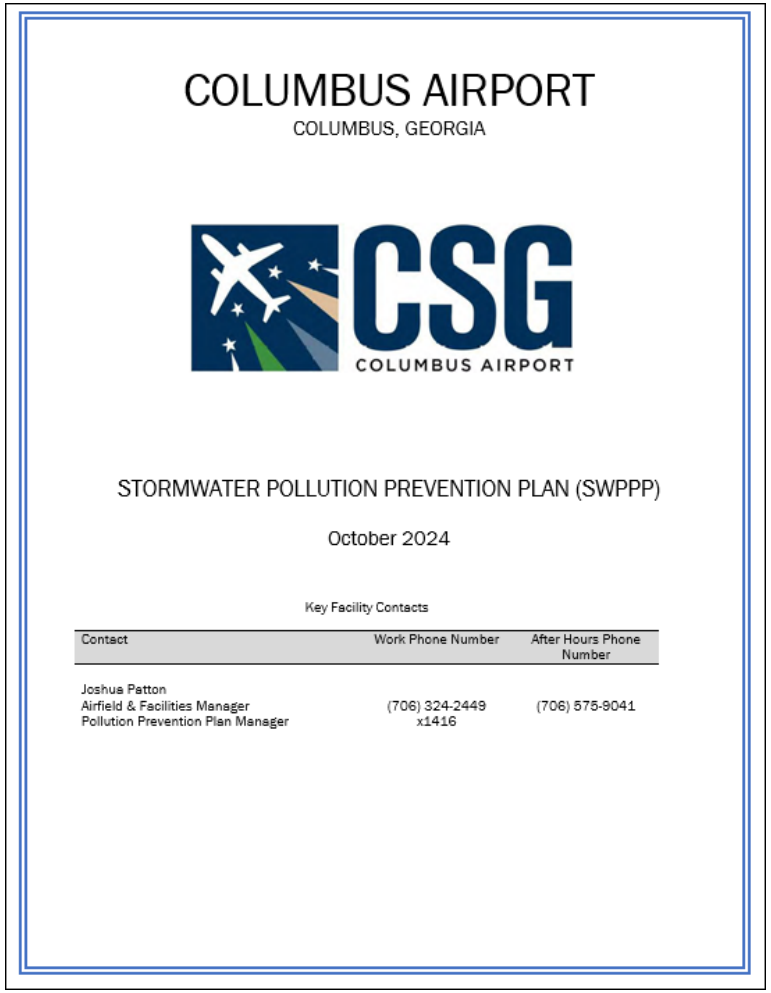
Implications for Airport



SWPPP Process

What is a SWPPP?

- A Stormwater Pollution Prevention Plan (SWPPP) outlines how an airport minimizes pollution from industrial activities.
- Required by GAR050000 for every permitted facility.
- Identifies any actions or conditions at a site that may produce water pollution.
- Includes a detailed plan to prevent the discharge of polluted waters.
- Identifies Stormwater Pollution Prevention Team Members and responsibilities.
- Refer to Section 5 of IGP for all required components.



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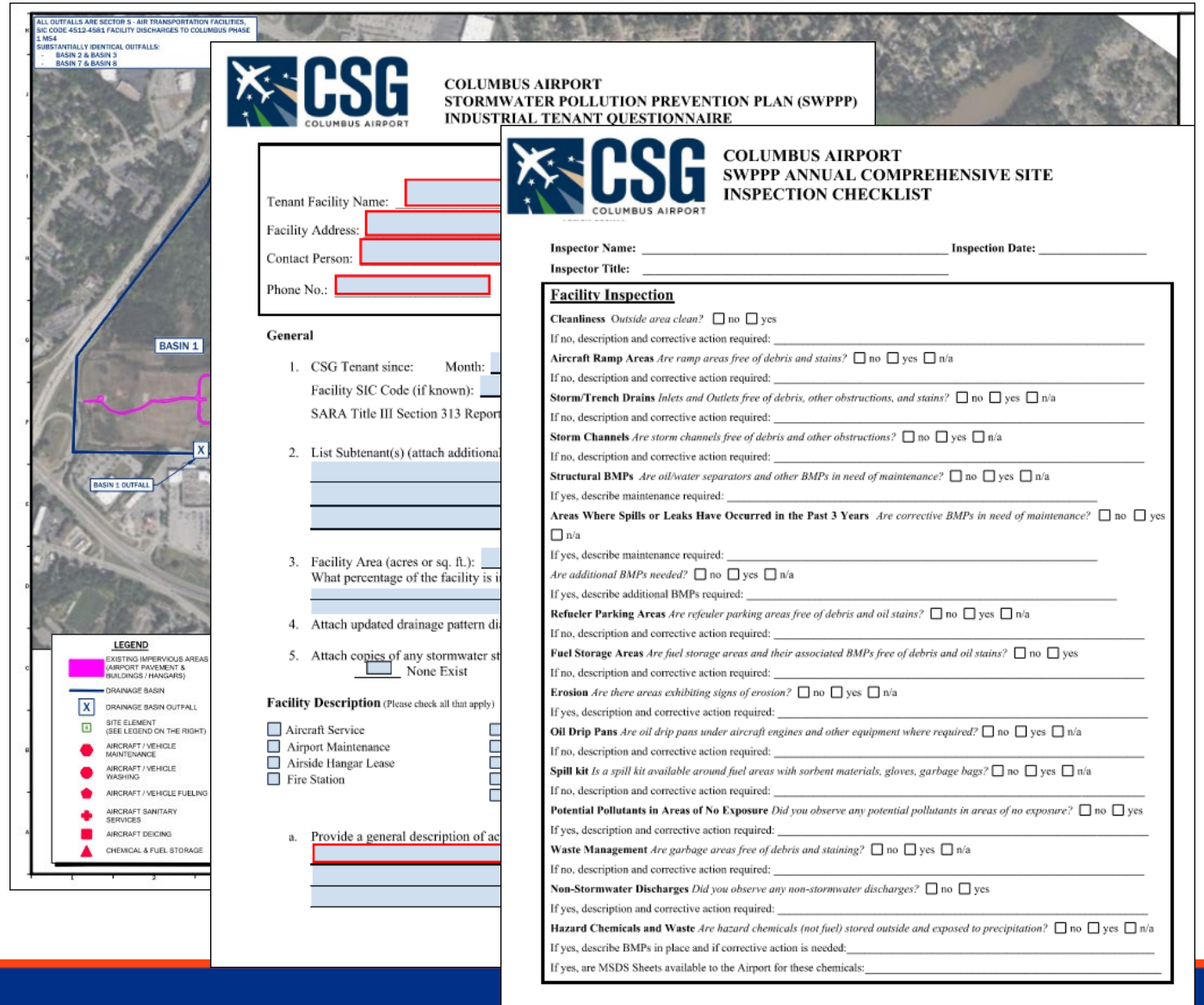
STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

October 2024

Key Facility Contacts

Contact	Work Phone Number	After Hours Phone Number
Joshua Patton Airfield & Facilities Manager Pollution Prevention Plan Manager	(706) 324-2449 x1416	(706) 575-9041

Steps to Develop and Implement SWPPP



1. Site Assessment: Delineate drainage areas and identify outfalls (where stormwater leaves Airport property)

2. Pollutant Source Identification: Identify potential contaminants and areas where industrial activities occur.

3. Control Measures/BMPs: Structural and procedural BMPs.

4. Monitoring & Inspections: Regular stormwater discharge sampling and site inspections.

Tenant Responsibilities

Tenants conducting industrial activities must also gain coverage under the Permit by:

Filing an electronic NOI or NEE in the GEOS portal

- Flow chart on next slide
- Most tenants elect to become a “co-permittee” with the Airport meaning they don’t have to conduct their own monitoring and other activities
- If a tenant elects **not** to be a co-permittee they must develop their own SWPPP, conduct their own monitoring and fulfill all the other requirements of the Permit

Ensuring Best Management Practice (BMP) Implementation

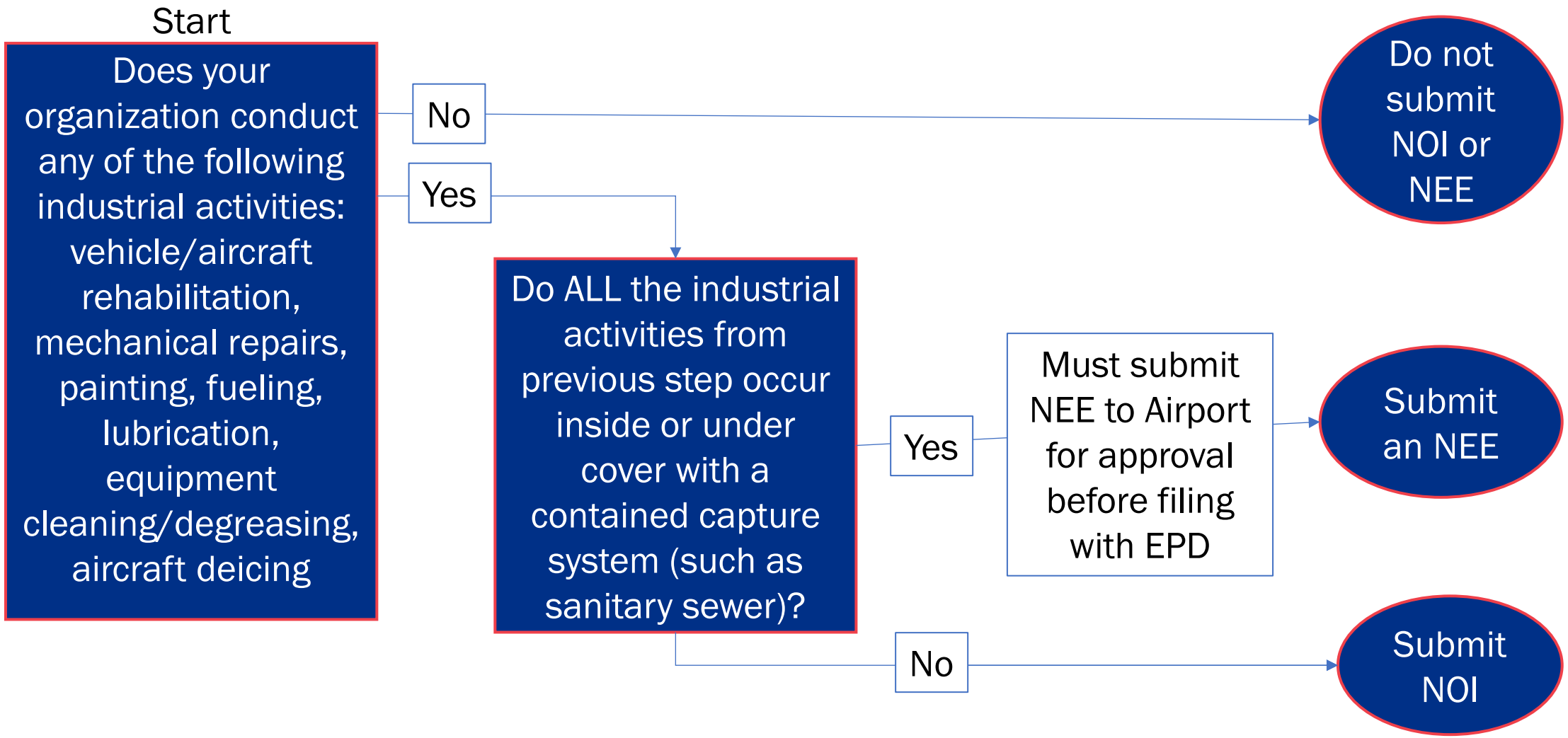
- Inspections
- Training of new hires who perform industrial activities outside

Notifying Airport Director of…

- New personnel who perform industrial activities outside
- Spills (if quantity is reportable)
- New industrial activities
- Deicing chemical usage/change in deicing chemical

.

Tenant NOI/NEE Flowchart



Specific BMPs for Airport Maintenance

Diversion or Containment

- Install berms or curbs to divert or contain

Fuel and Oil Management:

- Clean up spills immediately
- Use absorbents and drip pans
- Maintain emergency spill kits
- Oil/Water Separators

Aircraft and Vehicle Washing:

- Designate wash areas with closed drainage system that does not tie to stormwater
- Install wash water treatment systems

Storage Area Management:

- Store chemicals in weatherproof containers
- Keep dumpster lids closed

CONDUCT ACTIVITIES INDOORS AND AWAY FROM RAINWATER WHENEVER POSSIBLE

Deicing Operations and SWPPP

Winter Deicing Best Practices:

- Limit deicing to designated areas.
- Track glycol usage and establish recovery systems.
- Use alternative deicing chemicals where feasible
- Certain thresholds must be met before sampling is required

Monitoring, Inspections, and Visual Assessments

<u>Facility Inspections</u>
Routine Facility Inspection (4.1) – conducted quarterly, assesses control measures

Annual Comprehensive Site Inspection (4.3) – a more robust Routine Facility Inspection. Includes document review.

<u>Outfalls</u>
Quarterly Visual Assessment (4.2) –collect sample in a jar, no laboratory processing

Monitoring (6, 8.S) – samples are sent to a laboratory and results are submitted to EPD via NetDMR

Routine Facility Inspection

SECTION 4.1 of IGP

- Routine facility inspections answer three questions:
  - Are BMPs being implemented and maintained in areas where industrial activity is known to take place?
  - Are these BMPs sufficient or is there evidence of pollutant exposure to stormwater?
  - Are industrial activities taking place in an area that is not reflected in the SWPPP?

Routine/Quarterly Inspection Form- Part 1 Facility Inspections

Building/Facility	**Identification of Discharges from Site** (yes/no, if yes describe)	**Existing Control Measures and Condition** (i.e. spill kits, OW separators, etc.)	**Quality of Stored Materials** (*Good/Fair/Poor*)	**Deficiencies in Control Measures**	**Incidents of Noncompliance and Corrective Action Required** (should also be documented in corrective action documentation)

Quarterly Visual Outfall Assessment

SECTION 4.2 of IGP

- Must be conducted quarterly for outfalls downstream of industrial activities
  - Make note of sheen, foam, smell, or any other notable conditions present at the outfall
- Must be conducted for **all** outfalls at least once annually.
- Must be conducted after a rain event that results in actual discharge from the site
  - 72 hours from the previous rain event
  - Sample should be collected within first 30 minutes of an actual discharge from a storm event.
- Sample collected in a clear, glass container
  - Does not require lab analysis
- Photo documentation is recommended but not required.
- Documentation is kept with SWPPP and is not submitted to EPD unless requested.

Monitoring – General

SECTION 6 of IGP

- Must be conducted after a qualifying rain event:
  - 0.1” or greater
  - 72 hours from the previous rain event
- Samples must be sent to accredited lab
  - Put samples on ice
  - Big brown bottle is Oil & Grease
  - Smaller, plastic bottles are TSS and PAHs
- Conduct and document visual outfall assessment as well
- Report monitoring results quarterly via NetDMR
  - Reports must be submitted even on quarters in which monitoring was not conducted
- Some of the testing parameters (such as TSS) overlap across several monitoring categories – only monitor to the highest frequency category

Monitoring – Benchmark & Indicator

SECTION 6.2 of IGP

- Must be conducted quarterly for outfalls downstream of industrial activities
- Must be conducted after a rain event that results in actual discharge from the site
  - 72 hours from the previous rain event
  - Sample should be collected within first 30 minutes of an actual discharge from a storm event.

Parameter	Frequency	Benchmark
Oil & Grease	Annually	15 mg/L
TSS	Annually	100 mg/L
PAHs	Annually	Report Only
Chemical Oxygen Demand	Annually	Report Only
pH	Annually	Report Only

Monitoring – Benchmark & Effluent (Deicing)

Table 8.S-2

Subsector (Permittees may be subject to requirements for more than one sector/subsector)	**Parameter**	**Benchmark Monitoring Concentration**
Usage Threshold. For airports where a single permittee or a combination of permitted facilities use more than 100,000 gallons of glycol-based deicing chemicals and/or 100 tons or more of urea on an average annual basis, monitor in ONLY those outfalls that collect runoff from areas where deicing activities occur (SIC 4512-4581).	Chemical Oxygen Demand (COD)[1]	120 mg/L
	Ammonia[1]	2.14 mg/L
	Total Suspended Solids (TSS)	100 mg/L
	pH[1]	6.0 – 9.0 s.u.
	Oil & Grease	15 mg/L
Flight Threshold. For airports with over 50,000 flight operations per year, facilities with stormwater discharges from areas where aircraft or airport deicing operations occur (including runways, taxiways, ramps, and dedicated airport deicing stations) are required to sample such stormwater that is discharged from the facility when deicing activities are occurring.	Chemical Oxygen Demand (COD)[1]	120 mg/L
	And primary ingredient used in the deicing materials used (e.g. ethylene glycol, urea, etc.)[1]	Measure
	Total Suspended Solids (TSS)	100 mg/L
	pH[1]	6.0 – 9.0 s.u.
	Oil & Grease	15 mg/L

SECTION 8.S of IGP

- Applies <u>only</u> to facilities that meet the usage or flight thresholds
- Must be conducted immediately following deicing activity at the outfalls downstream
- Notice that many of these parameters are the same as benchmark and indicator parameters. Therefore, effluent monitoring satisfies the parameters that overlap.

Table 8.S-3

Industrial Activity	**Parameter**	**Effluent Limit**
Runoff containing urea from airfield pavement deicing at existing and new primary airports with 1,000 or more annual non-propeller aircraft departures	Ammonia as Nitrogen	14.7 mg/L Daily Maximum

Monitoring – Impaired Streams

Appendix C of IGP

- Applies only to outfalls downstream of industrial activities that discharge into, or within one linear mile upstream of, and in the same watershed as, any portion of an impaired stream segment.
- The monitoring parameters are dependent on the Pollutant of Concern
- Impaired Streams monitoring is required biannually but may be required more frequently depending on results. See Appendix C for more details.
- Checking the most recent Impaired Streams list (known as 305(b)/303(d)) is required as part of the Annual Comprehensive Site Inspection.
  - http://epd.georgia.gov/georgia-305b303d-list-documents

Requirements - Summary

BEGINNING OF EACH PERMIT CYCLE

- Update SWPPP to reflect new Permit requirements, if applicable.
- File NOI

ANNUALLY

Activity	Q1	Q2	Q3	Q4
Visual Outfall Assessment	X	X	X	X
Routine Facility Inspection	X	X	X	X
Benchmark Monitoring*	X	X		
Effluent Monitoring (only if deicing)*	X	X		
Impaired Waters Monitoring**	X		X	
Indicator Monitoring*	X	X		
Submit Monitoring Results to netDMR	X	X	X	X
Annual Comprehensive Site Inspection				X
Annual Training Refresher				X
Annual Report (Jan 31st)	X			

NEW TENANT

Assuming Industrial Activities

- Training
- Update SWPPP
- File NOI

NEW INDUSTRIAL ACTIVITY

- Update SWPPP
  - Update monitoring locations, if applicable

*Only needs to be conducted once annually but must be conducted in first half of the year (Q1 or Q2).
Refer to Appendix C. Required biannually – Q1 & Q3 **OR Q2 & Q4 (assuming no exceedance)

Reporting

Online NOI & Annual Reporting to EPD

- GEOS (Georgia EPD Online System)
  - https://geos.epd.georgia.gov/ga/geos/public/govent/shared/pages/main/login.aspx
- Annual Reporting filed online by 1/31 of subsequent year

NetDMR – Quarterly monitoring results

Submit a copy of NOI and Annual Reports to local MS4, if applicable

- https://epd.georgia.gov/forms-permits/watershed-protection-branch-forms-permits/storm-water-forms/npdes-industrial-storm

Spill Prevention, Control and Countermeasure (SPCC) Plan

- If a fueling facility is located on-site at the airport, a SPCC Plan shall also be prepared.
- SPCC Plan addresses:
  - operating procedures that prevent oil spills
  - control measures installed that can prevent a spill from reaching navigable waters
  - countermeasures to contain, clean up, and mitigate the effects of an oil spill that impacts waterways
- Plan shall be maintained at the airport facility. Submittal to EPA is only required when requested.

Key Takeaways for Airport Managers

2022 Permit Update:

- Enhanced monitoring and reporting

SWPPP

- Keep it updated
- Digital or physical copies of reporting & recordkeeping

Deicing & Maintenance:

- Focus on deicing chemical management and containment

Training

- Ensure ongoing training for proactive stormwater management

Tenants Conducting Industrial Activities

- Must submit an NOI or NEE through the GEOS portal

Questions?

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