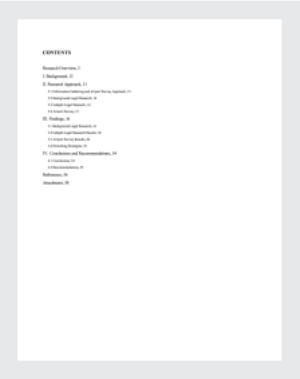

Analysis of Federal Laws, Regulations, Case Law, and Survey of Existing Airport NPDES Permits Regarding Tenant-Operator Responsibilities under NPDES and Stormwater Management BMPS under Owner/Airport's Operating Permits

DETAILS

82 pages | 8.5 x 11 | PAPERBACK
ISBN 978-0-309-30877-9 | DOI 10.17226/22101

AUTHORS

CDM Smith, Barg Coffin Lewis, and Trapp LLP; Airport Cooperative Research Program; Airport Cooperative Research Program Legal Program; Transportation Research Board; National Academies of Sciences, Engineering, and Medicine

CONTENTS

ANALYSIS OF FEDERAL LAWS, REGULATIONS, CASE LAW, AND SURVEY OF EXISTING AIRPORT NPDES PERMITS REGARDING TENANT–OPERATOR RESPONSIBILITIES UNDER NPDES AND STORMWATER MANAGEMENT BMPS UNDER OWNER/AIRPORT'S OPERATING PERMITS

By CDM Smith in collaboration with Barg Coffin Lewis and Trapp, LLP

RESEARCH OVERVIEW

The objective of this research project is to clarify and document responsibility for implementation, and liability for enforcement of alleged violations, in connection with maintaining and executing National Pollutant Discharge Elimination System (NPDES) stormwater permit requirements, practices, and reporting at airports.

If the airport owner alone is identified as the discharger/responsible party on the permit, the implication is the federal or state regulatory authorities expect that the owner has tenant compliance assurances for general stormwater management and implementation, operation, and maintenance of best management practices (BMPs) and also for stormwater permit compliance associated with on-property airport construction projects that may be covered under a state's general permit.

As established by the Clean Water Act (CWA), the NPDES permit program controls water pollution by regulating point sources that discharge pollutants into waters of the United States. Most states are authorized to implement the NPDES permit program including permitting for stormwater discharges. The U.S. Environmental Protection Agency (EPA) remains the permitting authority in a few states and territories and on most tribal lands. For these areas, EPA provides oversight and issues stormwater permits.

EPA's regulations allow authorized states to issue general permits or individual permits to regulate stormwater discharges, which implement the regulatory standards promulgated by the EPA and any independent state laws or regulations governing water quality. EPA's Multi-Sector General Permit (MSGP) and Construction General Permit (CGP) apply only in areas where EPA is the permitting authority.

Under EPA's industrial storm water permit program, 11 categories of industrial operations are covered by the MSGP. These categories are denoted by narrative descriptions and industrial classification codes, including Sector S "transportation facilities" that conduct vehicle or aircraft maintenance, equipment cleaning, or airport deicing operations.

This project summarizes state and federal stormwater regulations and jurisdictional authority for taking enforcement action against and imposing liability directly on airport owners related to tenant noncompliance issues and to develop guidance for airport operators regarding effective BMPs and permitting arrangements for enforcing tenant compliance with stormwater permit requirements.

INDUSTRIAL STORMWATER GENERAL PERMITS

Legal research was conducted regarding the complexities of jurisdictional authority and laws and regulations regarding the stormwater permitting programs implemented by EPA and the states of California, New York, Washington, Illinois, and Texas. The research focused on the following issues:

- Any independent state legal authority for regulating stormwater discharges associated with industrial activity.
- Provisions that distinguish between the obligations of a facility owner and a facility operator.
- Limitations on the scope of stormwater permit coverage at air transportation facilities.
- Benchmarks or numerical limitations for effluent monitoring parameters applicable to air transportation facilities, and any associated corrective action requirements.
- BMPs applicable to air transportation facilities in an industrial stormwater general permit.
- Any administrative or judicial decisions interpreting EPA's stormwater regulations, EPA's industrial stormwater general permit, or any industrial stormwater general permit issued by the selected states.

State Legal Authority for Regulating Stormwater Discharges Associated with Industrial Activity

Each of the states reviewed has the authority to implement the provisions of the Clean Water Act. The independent state legal authorities related to industrial stormwater discharges are as follows:

- In California, the regulation of water quality and the implementation of the Clean Water Act, including the issuance of discharge permits, is governed by the Porter-Cologne Water Quality Control Act.[1]
- New York's general state law governing water quality control is the New York Environmental Conservation Law (NY ECL), Article 17 (Water Pollution Control). Title 8 of Article 17 governs the State Pollution Discharge Elimination System (SPDES) program.[2] In addition, the New York State Department of Environmental Conservation (NYSDEC) is expressly authorized by regulation to issue general permits for stormwater discharges associated with industrial activity.[3]
- Washington's general state law governing water quality control is its Water Pollution Control Law.[4] The Washington Department of Ecology (Ecology) is authorized to establish and administer a SPDES permit program.[5]
- The Illinois EPA (IEPA) issues state NPDES permits pursuant to Illinois Environmental Protection Act, Illinois Compiled Statutes, Title III (Water Pollution), Section 11.[6]
- The Texas Commission on Environmental Quality (TCEQ) is authorized to issue NPDES permits pursuant to Texas Water Code Section 26.027, and Texas Water Code Section 26.040 specifically authorizes TCEQ to issue general NPDES permits.[7]

Provisions that Distinguish Between the Obligations of a Facility Owner and a Facility Operator

Under EPA's MSGP, the operator of the facility is responsible for obtaining coverage. EPA's regulation does not define the terms "owner" or "operator" or distinguish between the obligations of owners and operators. Rather, the regulatory provisions addressing application requirements for stormwater discharges associated with industrial activity apply to "dischargers" of such stormwater.[8]

EPA has promulgated regulatory definitions applicable to the entire NPDES permit program, including stormwater discharges associated with industrial activity.[9] The term "owner or operator" is defined to mean "the owner or operator of any 'facility or activity' subject to regulation under the NPDES permit program."[10]

This definition suggests that the regulated entity is the owner of the stormwater collection and conveyance systems (i.e., drainage pipes, culverts, stormwater collection ponds, outfalls) and those portions of the airport involved in vehicle maintenance, equipment cleaning, or deicing operations. In many cases this would likely be the same entity that owns the land on which the airport is located, but in other cases a tenant could be an "owner," particularly if the tenant constructed or owns portions of the stormwater collection or conveyance system as part of its leasehold.

With respect to who may be deemed an operator, EPA has clarified that what is important is who operates a facility or engages in activity that generates stormwater discharges associated with industrial activity. In its Notice of the Final 1995 MSGP for Industrial Activities, EPA acknowledged that airports typically operate under the management of an airport "authority," with airline carrier and other fixed base operator "tenants." Specifically, the Notice states: "Where an airport has multiple operators (airport authority and tenants) that have storm water discharges associated with industrial activity…, each operator is required to apply for coverage under an NPDES storm water permit." Thus, any tenant that engages in vehicle maintenance, equipment

[1] Cal. Water Code §§ 13000–13365 (2014); Cal. Water Code §§ 13370–13389 (2014); California Water Code § 13372 provides that state law "shall be construed to ensure consistency with the requirements for state programs implementing" the CWA. California Water Code § 13377 provides that the California Water Board or regional boards are authorized to issue discharge permits.

[2] N.Y. ENVTL. CONSERV. LAW §§ 17-0801 to 17-0831 (2014).

[3] N.Y. COMP. CODES R. & REGS. tit. 6, § 750-1.21(b)(3) (2014).

[4] WASH. REV. CODE §§ 90.48.010 to 90.48.605 (2014).

[5] *Id.* § 90.48.260.

[6] 415 ILL. COMP. STAT. ANN. 5/11 (2014).

[7] TEX. WATER CODE ANN. §§ 26.027, 26.040 (2013).

[8] 40 C.F.R. § 122.26(c) (2014).

[9] *Id.* § 122.2.

[10] *Id.*

cleaning operations, or deicing operations, where such activities are likely to generate pollutants that could be or are discharged with stormwater, would be considered an operator.

EPA's regulations governing applications for individual permits contain a provision recognizing that there may be a distinction between a facility owner and operator. Specifically, though the requirement to submit an application for an individual permit applies to "[a]ny person who discharges or proposes to discharge pollutants,"[11] the regulations further provide that "[w]hen a facility or activity is owned by one person but is operated by another person, it is the operator's duty to obtain a permit."[12]

Although EPA's regulation governing stormwater discharges does not distinguish between an owner or operator, the regulation does define the term "co-permittee" to mean "a permittee to a NPDES permit that is only responsible for permit conditions relating to the discharges for which it is an operator."[13] Thus, the regulation envisions that more than one party may be covered under a permit and that each co-permittee may have responsibilities that are limited to the discharge for which it is an operator. Indeed, EPA has made clear that "each individual party, whether a co-permittee or a separate permittee, must submit a NOI to be covered under [a MSGP]." An airport authority is not responsible for ensuring compliance with conditions of the permit for tenants that are separate permittees, rather than co-permittees with the airport authority.

Legal research did not locate any statutory, regulatory, or administrative provisions that discuss permittee or co-permittee status, or that otherwise distinguish between facility owners, operators, or tenants in the general permits or governing regulations for the states of California, Washington, Illinois, or Texas.

NYSDEC regulations state: "When a facility or activity is owned by one person but is operated by another person, it is the operator's duty to obtain a permit."[14]

The 1997 California Water Board general permit for industrial stormwater discharges (CA GP) stated:

> The facility operator must submit an NOI [notice of intent] for each industrial facility that is required by U.S. Environmental Protection Agency (U.S. EPA) regulations to obtain a storm water permit.… The facility operator is typically the owner of the business or operation where the industrial activities requiring a storm water permit occur. The facility operator is responsible for all permit-related activities at the facility.[15]

The Washington Industrial Stormwater General Permit (WA ISGP) defines "discharger" as "an owner or operator of any facility or activity subject to regulation under Chapter 90.48 [of Revised Codes of Washington] or the Federal Clean Water Act."[16]

Limitations on the Scope of Stormwater Permit Coverage at Air Transportation Facilities

EPA's 2008 and 2013 Draft MSGP apply to stormwater discharges from only those portions of the air transportation facility that are involved in vehicle maintenance, equipment cleaning operations, or deicing operations.

The 2015 CA GP and NY MSGP do not specifically address the scope of permit coverage at air transportation facilities or at any other category of industrial activity. However, applicable to air transportation facilities, the NY MSGP specifically prohibits dry weather discharges of deicing and anti-icing chemicals.[17]

The WA ISGP applies to air transportation facilities that have vehicle maintenance activity, equipment cleaning operations, or airport deicing operations.[18] Once a transportation facility has permit coverage, the permit applies to the entire footprint of the industrial facility.

Similarly, for air transportation facilities, the scope of coverage under the Illinois general permit (Ill. GP) and Texas general permit (TX GP) is

---

[11] *Id.* § 122.21(a).

[12] *Id.* § 122.21(b) (emphasis added).

[13] *Id.* 122.26(b)(1).

[14] N.Y. COMP. CODES R. & REGS. tit. 6, § 750-1.6.

[15] *Waste Discharge Requirements (WDRS) for Discharges of Storm Water Associtated with Indus. Activities Excluding Constr. Activities,* CAL. WATER BDS., Attachment 3, http://www.waterboards.ca.gov/water_issues/programs/stormwater/docs/induspmt.pdf.

The recently adopted 2015 CA GP does not have an attachment containing "NOI Instructions," and similar language does not appear in the 2015 CA GP.

[16] *Wash. Indus. Stormwater Gen. Permit*, WASH. DEP'T OF ECOLOGY, at 53, http://www.ecy.wa.gov/programs/wq/stormwater/industrial/permitdocs/iswgpfinal051612.pdf; WASH. REV. CODE §§ 90.48.010 to 90.48.605 (2014).

[17] *SPDES Multi Sector Gen. Permit for Stormwater Discharges from Indus. Activity*, N.Y. DEP'T OF ENVTL. CONSERVATION, at 153, http://www.dec.ny.gov/docs/water_pdf_gp12001.pdf.

[18] *Wash. Indus. Stormwater Gen. Permit*, *supra* note 16, at 7.

limited to discharges from vehicle maintenance, equipment cleaning, and airport deicing.[19] The TX GP prohibits the discharge of wastewater associated with washing aircraft, ground vehicles, runways, or equipment, and dry weather discharge of deicing chemicals.[20]

Monitoring Benchmarks or Effluent Limitations at Air Transportation Facilities and Any Associated Corrective Action Requirements

Monitoring Benchmarks

For airports that use more than 100,000 gallons of glycol-based deicing chemicals or 100 tons or more of urea on an average annual basis:

Permit	pH	5-day Biochemical Oxygen Demand (BOD5)	Chemical Oxygen Demand (COD)	Ammonia	Total Nitrogen	Nitrate/Nitrite
EPA MSGP[1]	6.0-9.0	30 mg/L	120 mg/L	2.14 mg/L	NA	NA
CA GP[2]	6.0-9.0	30 mg/L	120 mg/L	2.14 mg/L	NA	NA
NYMSGP[3]	6.0-9.0	30 mg/L	120 mg/L	NA	6 mg/L	NA
WA ISGP[4]	5.0-9.0	30 mg/L	120 mg/L	2.1 mg/L	NA	0.68 mg/L
IL GP[5]	NA	NA	NA	NA	NA	NA
TX GP[6]	6.0-9.0	NA	60 mg/L	2.5 mg/L	NA	NA

1. Part 8, Subpart S, § 8.S.6.[21]
2. Numeric Action Levels (NALs).
3. *SPDES Multi Sector Gen. Permit for Stormwater Discharges from Indus. Activity*, *supra* note 17, at 158.
4. *Wash. Indus. Stormwater Gen. Permit*, *supra* note 16, at 26–27.
5. Requires monitoring during the permit application phase only. Section D (Application Requirements).
6. *Gen. Permit to Discharge Under the Tex. Pollutant Elimination Sys.*, *supra* note 20, at 131–32.

[19] *Gen. NPDES Permit for Storm Water Discharges from Industrial Activities,* ILL. ENVTL. PROTECTION AGENCY DIV. OF WATER POLLUTION CONTROL, at 2–3, http://www.epa.state.il.us/water/permits/storm-water/general-construction-permit.pdf.

[20] *Gen. Permit to Discharge Under the Tex. Pollutant Elimination Sys.*, TEX. COMM'N ON ENVTL. QUALITY, at 128–29, http://www.tceq.texas.gov/assets/public/permitting/stormwater/txr050000.pdf.

[21] *Multi-Sector Gen. Permit for Stormwater Discharges Associated with Indus. Activity*, EPA NPDES § 8.S.6, http://water.epa.gov/polwaste/npdes/stormwater/upload/msgp2008_finalpermit.pdf.

Effluent Limitations

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:

Permit	Ammonia as Nitrogen Daily Maximum
EPA 2013 MSGP[1]	14.7 mg/L
CA 2015 GP[2]	14.7 mg/L

1. Part 8, Subpart S, § 8.S.7.1.[22]
2. 40 C.F.R. §§ 449.1–449.20 (2014).[23]

Airports meeting the definition of a new source ("new airports") with 10,000 annual departures must collect 60 percent of aircraft deicing fluid after deicing and meet the following numerical effluent limitations for chemical oxygen demand (COD) at the location where the effluent leaves the onsite treatment system utilized for meeting these requirements and before commingling with any nondeicing discharge:

Permit	COD	
	Daily Maximum	Weekly Average
EPA 2013 MSGP[1]	271 mg/L	154 mg/L
CA 2015 GP[2]	271 mg/L	154 mg/L

1. *Multi-Sector Gen. Permit for Stormwater Discharges Associated with Indus. Activity* § 8.S.7.1, *supra* note 22.
2. 40 C.F.R. §§ 449.1–449.20 (2014).[24]

[22] *Multi-Sector Gen. Permit for Stormwater Discharges Associated with Indus. Activity*, EPA NPDES § 8.S.7.1, http://water.epa.gov/polwaste/npdes/stormwater/upload/msgp2013_proposedpermit8.pdf.

[23] *See Gen. Permit for Stormwater Discharges Associated with Indus. Activity*, CAL. WATER BDS., Attachment F, http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2014/wqo2014_0057_dwq.pdf.

[24] *Id*.

Corrective Action Requirements

Pollutant benchmark concentrations are not effluent limitations. A benchmark exceedance is not a permit violation but an indication of the overall effectiveness of BMPs and indicates that BMPs for that pollutant should be reviewed to determine if modifications are necessary. Follow-up monitoring is typically required to evaluate the effectiveness of modifications.

Part 3 of EPA's MSGP states generally applicable corrective action requirements (i.e., these requirements are not specific to air transportation facilities).[25] If any of the following conditions occur, the permittee must immediately review and revise the selection, design, installation, and implementation of control measures to ensure that the condition is eliminated and will not be repeated in the future:

- An unauthorized release or discharge.
- A discharge violates a numeric effluent limit.
- Control measures are determined to be not stringent enough for the discharge to meet applicable water quality standards or nonnumerical effluent limits of the permit, or control measures are not being properly operated and maintained.

The 2015 CA GP states that exceedances of NALs trigger specific response actions (referred to as "Exceedance Response Actions").[26] These include evaluation of potential pollutant sources, reporting, and BMP implementation based on the number and frequency of detections of parameters above limits.

Per the NY MSGP, if "significantly or deleteriously large quantities of deicing chemicals are being spilled or discharged, or if water quality impacts have been reported," inspections must be conducted weekly until discharges or impacts are reduced to acceptable levels.[27]

The WA ISGP establishes three levels of corrective action requirements based on the frequency of benchmark value exceedances requiring pollutant source identification, BMP inspection and reviews, Stormwater Pollution Prevention Plan (SWPPP) review, reporting, and additional monitoring and treatment BMP implementation.[28]

The Ill. GP for industrial stormwater discharges does not contain specific effluent standards or limitations, specific corrective action requirements or compliance schedules. However, the general permit does require reporting within 24 hours "any noncompliance which may endanger health or the environment."[29]

The TX GP for stormwater discharges associated with industrial activities contains various corrective action requirements, including reporting and SWPPP/BMP review.[30]

Required or Recommended BMPs at Air Transportation Facilities

Each of the stormwater general permits require that standard BMPs be selected and implemented to address the following:

- Good housekeeping practices.
- Minimizing exposure of potential pollutant sources to precipitation.
- Erosion and sediment control.
- Management of runoff.
- Preventative maintenance records or logbooks.
- Regular facility inspections.
- Spill prevention and response.
- Employee training.

Sector-specific BMPs are set forth in a series of industrial fact sheets published by EPA. The Fact Sheet for Air Transportation Facilities explains that appropriate measures will be site-specific.[31]

In addition to the standard BMPs, the NY MSGP identifies various BMPs specific to air transportation facilities, including good housekeeping BMPs and source reduction BMPs applicable to:

[25] *Multi-Sector Gen. Permit for Stormwater Discharges Associated with Indus. Activity* §§ 3.1-3.6, *supra* note 21.

[26] *Gen. Permit for Stormwater Discharges Associated with Indus. Activity*, *supra* note 23, at 48–55.

[27] *SPDES Multi Sector Gen. Permit for Stormwater Discharges from Indus. Activity*, *supra* note 17, at 157.

[28] *Wash. Indus. Stormwater Gen. Permit*, *supra* note 16, at 35–37.

[29] *Gen. NPDES Permit for Storm Water Discharges from Constr. Site Activities*, Attachment H, *supra* note 19.

[30] *Gen. Permit to Discharge Under the Tex. Pollutant Elimination Sys.*, *supra* note 20, at 66–67.

[31] U.S. ENVTL. PROTECTION AGENCY, FACT SHEET SERIES SECTOR S: VEHICLE MAINTENANCE AREAS, EQUIPMENT CLEANING AREAS, OR DEICING AREAS LOCATED AT AIR TRANSPORTATION FACILITIES, EPA 833-F-06-034 (DEC. 2006).

- Aircraft, ground vehicle, and equipment maintenance, cleaning, and storage areas.
- Material storage areas.
- Airport fuel system and fueling areas.
- Deicing and anti-icing chemical product selection.
- Runway deicing operations.
- Aircraft deicing and anti-icing operations.
- Management of runoff.
- Inspections frequency.[32]

The Illinois industrial stormwater general permit requires the standard stormwater BMPs but also requires air transportation facilities' salt storage piles used for deicing to be covered to prevent exposure to precipitation, unless there are no stormwater discharges from the pile.[33]

The Texas industrial stormwater general permit does not require or recommend specific BMPs for air transportation facilities. However, the general permit specifies sector-specific SWPPP requirements for air transportation facilities that relate to consideration of BMPs for deicing product storage and application and the management of runoff containing spent deicing fluid.[34]

Administrative or Judicial Decisions Interpreting EPA's Regulations, MSGP Industrial Stormwater Permits, or State-Specific Industrial Stormwater General Permits

EPA.—Legal research identified several cases addressing the applicability of EPA's stormwater discharge permitting requirements to various categories of industrial activity, although none that specifically addressed air transportation facilities.

California.—While not an aviation facility, *Santa Monica Baykeeper v. Kramer Metals, Inc.*,[35] was a CWA citizen suit brought to enforce alleged violations at two scrap metal facilities related to exceedance of the California Water Board's general permit for industrial stormwater dischargers.

One of the issues in the case concerned the CA GP's technology-based effluent limitation that requires facility operators to reduce or prevent pollution associated with industrial activity through 1) implementation of best available technology economically achievable (BAT) for toxic and nonconventional pollutants, and 2) the best conventional pollution control technology (BCT) for conventional pollutants. As the court noted, under the permit, an operator can comply with this requirement by developing and implementing an SWPPP that 1) complies with requirements in the permit, and 2) includes BMPs that achieve BAT/BCT.[36]

The environmental group plaintiff claimed that the defendant was in violation of this technology-based effluent limitation by referencing the benchmark levels set out in EPA's MSGP for industrial stormwater discharges and arguing that those benchmarks provide an objective standard to determine if a permittee has implemented BAT/BCT. The court noted that the CA GP does not incorporate the EPA MSGP's benchmark levels, and that under the EPA MSGP, benchmark levels are distinct from effluent limitations. The court held that the EPA benchmarks are relevant guidelines that should be used to evaluate the efficacy of a facility's BMPs, but that samples in excess of those benchmarks do not necessarily constitute a violation of the CA GP; instead, a more comprehensive approach is necessary to assess compliance.[37]

New York.—In 2006, in the context of renewing the individual SPDES stormwater permit for John F. Kennedy International Airport (JFK), NYSDEC determined that the permit required modification and made the draft modified permit available for public review. Comments were submitted by various parties, including the operator of the airport—the Port Authority of New York and New Jersey (Port Authority)—certain airlines who are tenants at the airport, and two environmental groups. NYSDEC subsequently referred the modification proceeding for a public hearing and issues conference before an administrative law judge (ALJ).

The ALJ's report notes that stormwater containing anti-icing and deicing materials is discharged from JFK into Jamaica Bay, which is part of the federally protected Gateway National Recreation Area and designated as a wildlife refuge.

[32] *SPDES Multi Sector Gen. Permit for Stormwater Discharges from Indus. Activity*, *supra* note 17, at 154–57.

[33] *Gen. NPDES Permit for Storm Water Discharges from Constr. Site Activities*, *supra* note 19, at 4.

[34] *Gen. Permit to Discharge Under the Tex. Pollutant Elimination Sys.*, *supra* note 20, at 129–31.

[35] 619 F. Supp. 2d 914 (C.D. Cal. 2009).

[36] *Id.* at 920.

[37] *Id*. at 924–25.

A Port Authority representative discussed the BMPs and other steps taken to reduce impacts of deicing on Jamaica Bay.

Two of the issues in dispute were that 1) the Port Authority desired to add the airlines as co-permittees, and 2) the airlines objected to permit language requiring tenants to comply with aspects of the permit (referred to as "tenants shall" language).[38] The Port Authority representative stated that it would be a "logical implication of Clean Water Act requirements to include airlines that engage in deicing operations as co-permittees because the airlines had control over these actions." However, the Port Authority ultimately agreed to drop this issue, acknowledging that the issue of co-permittees may not have been properly part of the proceeding because NYSDEC did not include it as part of the proposed permit modification. On the other hand, the Port Authority and the airlines agreed to accept the so-called "tenants shall" language, although the airlines insisted that their agreement to this language did not constitute an admission regarding the enforceability of those provisions.

An issue raised by one of the environmental groups was whether a permittee is subject to an enforcement action for violations of both the permit and the underlying law or regulations when there is a violation of a water quality standard in instances where there is no specific standard set forth in the permit. In response, NYSDEC staff stated their position that narrative water quality standards are incorporated into the SPDES permit for JFK, and the ALJ confirmed that "any violation by the permittee of water quality standards is a violation of both the permit and the applicable statutes and regulations."[39]

Washington.—Multiple parties, including a number of regulated companies and various environmental groups, filed administrative appeals with the Washington Pollution Control Hearings Board (PCHB) of the WA ISGP issued by Ecology in October 2009. The PCHB identified 71 legal issues that governed the proceedings and controlled the issues on appeal. The PCHB ultimately issued seven orders on summary judgment addressing many of the issues raised by the parties, while requiring other issues to proceed to hearing. The following is a summary of the PCHB's resolution of four issues that appear to be most relevant to the scope of work of this project for the Airport Cooperative Research Program.

- Whether Ecology's post-permit issuance of an errata sheet eliminating permit coverage requirements for transportation facilities that have material handling facilities was invalid.[40]
- PCHB found the errata sheet change made the terms of the permit consistent with the applicable definition for transportation facilities in 40 C.F.R. § 122.26(b)(14)(viii) and granted summary judgment to Ecology on this issue.
- Whether the WA ISGP requires facilities to install BMPs that are not described in either the Western Washington or Eastern Washington Stormwater Management Manuals; and if so, whether the requirement is vague, unreasonable, and unlawful.[41]
- PCHB found that the WA ISGP lawfully and validly requires permittees to install BMPs beyond those required in the Stormwater Management Manuals. Furthermore, according to the PCHB, the WA ISGP term requiring permittees taking Level 3 corrective action response to implement BMPs beyond those in the Stormwater Management Manuals "is a necessary and reasonable part of the adaptive management response required of [the] permit."[42] The PCHB granted summary judgment to Ecology and denied Boeing's motion to reconsider this issue.[43]

[38] It is not clear from the ALJ's report what permit conditions were included or were subject to the "tenants shall" language, but it appears from the report that those conditions to monitoring and BMPs, as well as perhaps other issues.

[39] *Port Authority of New York (JFK) Summary Hearing Report and Order of Deposition*, NEW YORK DEP'T OF ENVT'L CONSERVATION (Sept. 19, 2007).

[40] Copper Dev. Assoc., Inc., et al. v. Wash. Dep't of Ecology, Wash. Pollution Control Hearings Board, PCHB Nos. 09-135 through 09-141, *Order on Summary Judgment (Legal Issues No. 15, 24–25, 31, 44, 46–48, 56, 61–62, and 65–67)*, Jan. 5, 2011 (SJ Order) at 7–8. (Available on the Washington Pollution Control Hearings Board Web site: http://www.eluho.wa.gov/Board /PCHB.)

[41] *Id.* at 12–14.

[42] *Id.* at 14.

[43] Copper Dev. Assoc., Inc., et al. v. Wash. Dep't of Ecology, Wash. Pollution Control Hearings Board, PCHB Nos. 09-135 through 09-141, *Findings of Fact, Conclusions of Law, and Order,* Apr. 25, 2011 (Findings of Fact, Conclusions of Law, and Order), at 73. (Available on the Washington Pollution Control Hearings Board Web site: http://www.eluho.wa.gov/Board/PCHB.)

• Whether the permit's failure to establish numeric water quality-based effluent limitations is invalid.[44]

• PCHB found that Ecology reasonably determined that application of BMPs would be effective in achieving compliance with water quality standards after performing a generalized reasonable potential analysis on industrial stormwater discharges. Having made this determination, PCHB found that Ecology was not required to develop numeric effluent limitations, except for discharges to impaired water bodies, as required under Washington Revised Code Section 90.48.555(7). PCHB granted summary judgment to Ecology, except as to the development of numeric effluent limitations for certain discharges to impaired water bodies.

• Whether requiring source control and treatment BMPs "with the goal of achieving the applicable benchmark" without defining specific BMPs or the level of adaptive management necessary to meet the state goal is valid.[45]

• PCHB found that "[t]here is no legal requirement for Ecology to define in the [WA] ISGP the precise BMPs a permittee must install under any given set of circumstances." PCHB also found that the WA ISGP "correctly places the burden on the permittee to meet [applicable] benchmarks through implementation of [] adaptive management response."[46] PCHB granted summary judgment to Ecology and denied Boeing's motion to reconsider this issue.[47]

The research did not find any Illinois or Texas administrative decisions or case law interpreting the Illinois General Permit for Stormwater Discharges from Industrial Activities, the Texas general permit for stormwater discharges associated with industrial activities, or EPA regulations regarding stormwater discharges associated with industrial activities at air transportation facilities.

Airport Survey

Telephone interviews were conducted with airport representatives of San Francisco International Airport (SFO), JFK, Seattle–Tacoma International Airport (Sea-Tac), Chicago O'Hare International Airport (O'Hare), and Dallas/Fort Worth International Airport (DFW) regarding permitting strategies employed to encourage tenant compliance with the airport's stormwater discharge permits. Some of the strategies employed at the airports surveyed include:

- Tenants obtain individual permit coverage.
- Tenants named as co-permittees on airport permit.
- Tenant compliance with airport SWPPP.
- Preparation of tenant SWPPPs.
- Pollution prevention teams comprised of tenant and airport authority representatives.
- Airport-issued permits for deicing operations.
- Airport inspections of tenant leaseholds.
- Monthly reporting of volumes of deicer applied by tenants.
- Lease agreements requiring compliance with applicable laws and regulations.
- Violations for noncompliance with lease agreements.
- Sharing or assigning of costs associated with corrective actions and fines.

A formal airport survey was conducted to ascertain the variability in permitting arrangements between airport owners and tenant operators/service providers and to collect and organize information on the BMPs currently being implemented at airports. The survey was intended to elicit specific feedback on NPDES permit compliance and strategies used to enforce tenant compliance at large- and medium-sized airports.

Of the airports surveyed, approximately half of the airport authorities indicated they were the sole permittees on stormwater permits for the airport. In only one case were airport tenants named as co-permittees and in some situations, tenants are required to obtain their own permits for their specific activities. All of the airports have mechanisms in place to assist with tenant compliance with the applicable stormwater regulations; the most common being language in the lease agreements that reference stormwater regulation compliance.

All respondents indicated that the stormwater permits require the airport authorities to have an SWPPP. There was clear indication that the responsibility for SWPPP implementation lies with the airport authority, as the majority of the respondents expressed that they were responsible for preparing the SWPPP, with tenants covered under it and the airport overseeing compliance.

[44] SJ Order at 16–17.

[45] *Id.* at 18–20.

[46] *Id.* at 19.

[47] Findings of Fact, Conclusions of Law, and Order, at 73.

Some of the strategies employed by airport authorities for tenant implementation of SWPPPs include:

- Airport authority prepares the SWPPP, and all tenants must comply with its provisions.
- Airport authority prepares an SWPPP, and all tenants must comply with its provisions or they are allowed to prepare their own, provided it meets the minimum requirements of the airport's plan.
- Airport and tenants jointly implement the SWPPP.
- Airport authority reviews the SWPPP of tenants required to have their own permit and SWPPP.
- Tenants prepare and implement their own SWPPP.

All respondents indicated that the airport authority conducts inspections of tenant facilities. Approximately one-half of the respondents have tenant reporting requirements, and one-third of the respondents require tenants to submit their self-inspections to the airport.

Most of the respondents indicated the use of some form of enforcement mechanisms. The majority use warnings or notices of violation or demands for corrective actions to comply with lease obligations. Half of respondents use lease termination, while one-third use fines. One respondent reported the use of water quality investigators who are licensed special police officers by the city and county and have the authority to issue citations. The offending party is then required to address the citation in court.

Many airport authorities have also implemented a variety of initiatives to promote tenant compliance with stormwater permit requirements or the SWPPP. Almost all of the airports use training and other initiatives, including awareness programs and meetings.

Some of the challenges cited regarding tenant compliance with the stormwater permits include:

- Tenant turnover.
- Pursuit of enforcement action over third-party contractors or subtenants.
- Oversight and following up on noncompliance issues.
- Lease language that requires tenants to comply with federal, state, and local environmental regulations but does not specify what happens if there is noncompliance.

When notices of alleged violations have been issued, all of the respondents indicated the notice was issued to the airport authority, and to a lesser degree, the notice was issued to tenants. From the exceptions noted, in one case the airport authority negotiated with the state's environmental authority to issue the notice to the airport authority, rather than the airport and all its tenants. The airport authority paid the penalty and costs were passed to tenants in the form of rates and charges.

In the cases where the alleged violation was resolved via corrective action, the majority of the respondents indicated that the airport authority was responsible for implementing the corrective action. In a few cases, either the tenants implemented the action, or the solution was jointly implemented.

I. BACKGROUND

This digest is intended to clarify and document responsibility for implementation, and liability for enforcement, in connection with maintaining and executing NPDES stormwater permit requirements, practices, and reporting at airports. If the airport owner alone is identified as the discharger/responsible party on the permit, the implication is that the federal or state regulatory authorities expect that the owner has tenant compliance assurances for general stormwater management and implementation, operation, and maintenance of BMPs and also for stormwater permit compliance associated with on-property airport construction projects that may be covered under a state's general permit.

As established by the Clean Water Act, the NPDES permit program controls water pollution by regulating point sources that discharge pollutants into waters of the United States. Most states are authorized to implement the NPDES permit program, including permitting for stormwater discharges. The EPA remains the permitting authority in a few states and territories and on most tribal lands. For these areas, EPA provides oversight and issues stormwater permits.

EPA's regulations allow authorized states to issue general permits or individual permits to regulate stormwater discharges, which implement the regulatory standards promulgated by the EPA and any independent state laws or regulations governing water quality. EPA's MSGP and CGP apply only in areas where EPA is the permitting authority.

Under EPA's industrial storm water permit program, 11 categories of industrial operations are covered by the MSGP. These categories are denoted by narrative descriptions and industrial classification codes, including Sector S "transportation facilities" that conduct vehicle or aircraft maintenance, equipment cleaning, or airport deicing operations.

To address these airport/tenant legal responsibility/liability issues and requirements, some airport owners currently manage overall stormwater program permitting and implementation at their airports, enforce the permit requirements at tenant facilities, and transfer the legal responsibility for compliance with stormwater regulations at the individual tenant-operated facilities to the tenants/operators through lease agreements or airport operating permits.

However, with the increasing and dynamic nature of regulatory enforcement efforts (Effluent Limitation Guidelines [ELGs], Total Maximum Daily Load [TMDLs], etc.), it is important to understand if this practice or other methods of liability transfer are successful and defensible for airport owners/operators and to provide airport owners with additional information, including:

- A better understanding of the various types of permitting arrangements/relationships between airport owners and tenant operators/service providers.
- A summary of BMPs that airports currently implement, and require their tenants to implement, to assist with and enforce tenant compliance with stormwater permit requirements.
- A comparison of individual state general permits and laws, rules, and regulations relative to state jurisdictional authority for imposing enforcement action and liability directly on airport owners, related to tenant noncompliance issues.
- A summary of current NPDES, water quality, TMDL, and industrial stormwater management requirements that to some degree may impact airport operations, administration, and management activities.

II. RESEARCH APPROACH

The overall objective of the project is to summarize state and federal stormwater regulations and jurisdictional authority for imposing enforcement action and liability directly on airport owners related to tenant noncompliance issues and develop guidance for airport operators regarding effective BMPs and permitting arrangements for enforcing tenant compliance with stormwater permit requirements.

2.1 Information Gathering and Airport Survey Approach

The project was completed in two Phases. Phase I consisted of background legal research related to federal and state regulations regarding stormwater permitting and jurisdictional authority. The research focused on a review of MSGPs issued by EPA and the states of California, New York, Washington, Illinois, and Texas. One airport in each of the five states was also identified for telephone interviews regarding the stormwater discharge permits for their facility. During Phase II, additional indepth legal research was conducted to understand the complexities of jurisdictional authority and state laws and regulations regarding the stormwater permitting programs implemented by EPA and individual states. Finally, data was collected via an airport survey to ascertain the variability in permitting arrange-

ments between airport owners and tenant operators/service providers and collect and organize information on the BMPs currently being implemented at airports.

2.2 Background Legal Research

Current arrangements between airport owners and tenant operators/service providers related to stormwater, management, permitting, and compliance tend to vary greatly from state to state based on geographic location, state water quality issues, weather conditions, seasonal weather variations, size of airport, ownership and management authority at airports, permitting authority, varying degrees of regulatory scrutiny, and variables that may include but are not limited to:

- Compliance history associated with previous pollutant releases.
- Proximity to receiving waters and/or high quality waters.
- Discharges to combined sewer systems within urban systems that need to address existing consent decrees associated with combined sewer systems overflows to receiving waters.
- Disposal issues related to operating and maintaining structural BMPs and the material removed during maintenance operation.

Limited background research was conducted related to federal and state regulations regarding stormwater permitting and jurisdictional authority in five select states. The states were selected to represent different geographic areas of the country, with different climatic and hydrological characteristics. In addition, each of the five states has adopted its own general permits governing industrial stormwater discharges, pursuant to an EPA-approved NPDES permitting program, and in some cases independent state authority. EPA's MSGP and stormwater permits for the states of California, New York, Washington, Illinois, and Texas were reviewed. In addition, telephone interviews were conducted with airport personnel from one large hub airport from each of the states, including SFO, JFK, Sea-Tac, O'Hare, and DFW.

The background legal research focused on jurisdictional authority, distinctions between owner/tenant obligations, permit requirements specific to air transportation facilities, and permit-required BMPs. Airport interviews focused on permittee/co-permittee status, the airport's approach to SWPPP and BMP implementation and stormwater monitoring, the airport's approach for managing tenant compliance with airport or individual SWPPPs, any mechanisms for managing risk associated with stormwater violations by tenants, and any enforcement actions related to permit conditions.

2.3 Indepth Legal Research

During Phase II, additional indepth legal research was conducted to understand the complexities of jurisdictional authority and state laws and regulations regarding the stormwater permitting programs implemented by EPA and individual states. The indepth legal research approach built upon the background research conducted in Phase I to encompass more extensive and indepth legal research regarding the stormwater permitting programs implemented by EPA and states to regulate stormwater discharges associated with industrial activity, with a particular focus on air transportation facilities. The scope of the legal research included identifying, reviewing, and summarizing federal and any state stormwater regulations, federal and state permit requirements for stormwater discharges associated with industrial activity, and administrative decisions and case law interpreting stormwater permitting requirements.

At the federal level, the research included a thorough review of EPA's stormwater permitting regulations and its multisector general permit for stormwater discharges associated with industrial activity. The background research conducted during Phase I focused on a review of the permit provisions. The Phase II research built upon that foundation, focusing on a review of the federal regulations to identify and summarize any provisions that distinguish between the obligations of the facility owner and operator, describe any limitations on the scope of permit coverage at air transportation facilities, and identify any required or recommended structural or nonstructural BMPs at such facilities. The research also identified benchmarks for effluent monitoring parameters and applicable effluent limitations at air transportation facilities and associated corrective action requirements.[48]

[48] Based on the results of the background legal research, further research was not conducted regarding EPA or state general permits for stormwater discharges from construction sites or from municipal stormwater systems. The general stormwater permits for discharges from construction sites apply to site-specific development activities on a temporary basis and are not broadly applicable to activities at air transportation facilities. Similarly, it appears that stormwater discharges from air transportation activities are typically

In addition to reviewing EPA's regulations and MSGP, the research included identifying, reviewing, and summarizing any decisions of EPA's Environmental Appeals Board and federal case law interpreting EPA's stormwater regulations or general stormwater permits.

At the state level, further research was conducted on the five states considered in Phase I to identify and describe any independent state legal authority for regulating stormwater discharges associated with industrial activity. The orginal scope indicated that an additional five states would be identified for research; however, due to budgetary constraints, the research was limited to the five Phase I states.

> The research evaluated whether, in addition to general state laws governing water quality control or state laws or regulations governing wastewater discharge permitting, the subject states have laws or regulations that establish specific substantive or procedural requirements applicable to permitting discharges of stormwater associated with industrial activity.

As with the research at the federal level, independent state legal authority and the state general permits for stormwater discharges associated with industrial activity were reviewed. This research built upon the foundation established during Phase I to identify and summarize any regulations that distinguish between the obligations of facility owner and operator, describe any limitations on the scope of permit coverage at air transportation facilities, and identify any required or recommended structural or nonstructural BMPs at such facilities. The research also identified benchmarks for effluent monitoring parameters and applicable effluent limitations at air transportation facilities and associated corrective action requirements.

The state level research also included identifying, reviewing, and summarizing any state administrative decisions and case law interpreting the state's stormwater general permits, EPA's stormwater regulations, and any independent state legal authorities relied on by the state in regulating stormwater discharges.

2.4 Airport Survey

A survey of select airports was conducted to collect information regarding airport permits, tenant agreements, and BMPs for permit compliance. The survey built upon the telephone surveys conducted during Phase I to obtain more detailed information and expand the survey population. The survey was comprised of questions on the following subjects:

Airport Information
Respondent information
Operator information
Key stormwater permitting issues

Tenant Information
Number
Types
Operations

Permit Information
General versus individual
Permitting authority
Co-permittee status
Recordkeeping requirements
SWPPP requirements
Effluent monitoring and reporting requirements
Corrective action requirements

BMPs
Nonstructural
Structural
Effectiveness
Issues and challenges
Initiatives

Enforcement
Airport/External authority
Orders/Violations
Litigation
Settlement

Airport Agreements with Tenants
Lease agreements
Operating agreements
Airport permits
Enforcement mechanisms
Effectiveness
Issues and challenges
Initiatives

The Phase II survey expanded upon the telephone calls conducted during Phase I and included questions in a variety of formats to gather responses that were consistent and comparable. The survey consisted of 37 questions and was designed with a completion time of no more than 20 minutes.

---

regulated under general or individual permits for stormwater discharges associated with industrial activity and are not also covered under permits regulating stormwater discharges from municipal stormwater systems.

The survey population was established by downloading the list of airports with stormwater discharge permits from EPA's Permit Compliance System (PCS) database. Medium and large hub airports were sorted by type of permit into three categories: 1) general permit, 2) individual permit with the airport operator as the sole permittee, and 3) individual permit with the airport operator and other entities as co-permittees.

The survey sample size was established based on the following considerations: 1) total number of airports in each of the permit categories, 2) need to balance the accuracy of the survey with the project objectives and the available budget and schedule to complete the survey, and (3) limit of a total of 20 airports. The survey was distributed to 20 airports identified in Table 1 (see Attachment).

The surveys were developed using a Web-based tool and distributed via email with a cover letter providing background on the ACRP program and the importance of this project. A response rate of 80 percent was targeted.

After data was collected and compiled in a database for analysis, basic frequency counts and cross-tabulation were performed. More sophisticated statistical analyses were not performed due to the varied nature of the responses.

No issues were encountered during survey development or launch.

III. FINDINGS

3.1 Background Legal Research

The background legal research reviewed the requirements of the MSGPs issued by EPA and the individual states, focusing on those requirements specific to Sector S Air Transportation Facilities where applicable and on the following issues:

- Jurisdictional authority. Do the state-issued general permits cite any state-law authority or are such permits issued solely pursuant to the CWA?
- Do the permit application forms (including notices of intent), reporting requirements, or terms of the permits make distinctions between the obligations imposed on or responsibilities of the owner of the property from which stormwater associated with industrial activity is discharged and the operator of the industrial activity from which there is a stormwater discharge covered by the permit?
- What specific permit requirements apply to air transportation facilities (Sector S under EPA's MSGP for Stormwater Discharges Associated with Industrial Activity)? What specific activities or operational areas at air transportation facilities are subject to regulation under the general permit?
- Does the permit mandate specific BMPs or is the development of BMPs left up to the discretion of the permittee in preparing an SWPPP for its facility?

A summary of the federal and state stormwater permit review findings is provided in Table 2 (see Attachment) and discussed below. Detailed summaries of the state laws and regulations regarding the stormwater permitting programs implemented by EPA and individual states are provided in Section 3.2.

3.1.1 Jurisdictional Authority

As established by the Clean Water Act, the NPDES permit program controls water pollution by regulating point sources that discharge pollutants into waters of the United States. EPA's regulations allow authorized states to issue general or individual permits to regulate stormwater discharges that implement the regulatory standards promulgated by EPA and any independent state laws or regulations governing water quality.

3.1.2 Owner Versus Tenant Obligations

Industrial Stormwater General Permits

Under EPA's MSGP and the states surveyed as part of the background legal research (California, New York, Washington, Illinois, and Texas), the operator of the facility is responsible for obtaining coverage under both industrial general permits. EPA and New York's MSGPs contain specific language that when a facility or activity is owned by one person but operated by another person, it is the operator's duty to obtain a permit. The terms "owner" and "operator" are often used in conjunction, separated by an "or" or "/" through permit language, and EPA Form 1 is the only industrial permit application form that distinguishes the owner/operator relationship. California's industrial permit indicates that the owner is typically the operator.

EPA, New York, and Texas's MSGPs state that airport management and tenants of the airport are encouraged to apply as co-permittees and work in partnership to implement the SWPPP. EPA and New York's MSGPs require airport and tenant's SWPPPs to be coordinated with and inte-

grated with the SWPPP for the entire airport. The Texas MSGP recommends implementation of a shared SWPPP, but states that even if the airport authority and tenants share an SWPPP, tenants that meet applicability requirements must obtain coverage. Further, if the airport authority, tenants, and other Fixed Base Operators (FBOs) share an SWPPP, the tenants and FBOs that conduct deicing operations must provide monthly deicing records to the airport authority. The New York MSGP also requires tenants and FBOs to provide monthly records of deicers used to the airport authority for incorporation into the airport SWPPP.

The Washington and Illinois MSGPs refer to the permittee as the "owner" or "operator" and do not contain specific language regarding tenant responsibilities.

Construction General Permits

The operator of the construction site is responsible for obtaining permit coverage under EPA, Washington, and Texas's CGPs.

California's CGP states that compliance with a construction permit is the responsibility of the Legally Responsible Person (LRP), who is typically the property owner. The Notice of Intent (NOI) requires both owner and contractor/developer information and the applicant must identify a qualified person who has been assigned responsibility to ensure full compliance with the permit and to implement all elements of the SWPPP.

The New York CGP defines owner or operator as "the person, persons or legal entity which owns or leases the property on which the construction activity is occurring; and/or an entity that has operational control over the construction plans and specifications, including the ability to make modifications to the plans and specifications." The NOI is completed by the "owner/operator" and the application does not distinguish the separate entities.

Illinois requires permit coverage to be obtained by the owner. All contractors and subcontractors identified in the SWPPP must sign a copy of the following certification statement before conducting any professional service at the site identified in the SWPPP: "I certify under penalty of law that I understand the terms and conditions of the general [NPDES] permit (ILR10) that authorizes the storm water discharges associated with industrial activity from the construction site identified as part of this certification."[49]

3.1.3 Scope of Permit

Industrial Stormwater General Permits

Each of the permits has similar requirements for the development and implementation of a SWPPP and some level of monitoring and inspections. Requirements specific to Sector S are summarized below.

Each of the MSGPs authorizes stormwater discharges from those portions of the air transportation facility that are involved in vehicle maintenance (including vehicle rehabilitation, mechanical repairs, painting, fueling, and lubrication); equipment cleaning operations; or deicing/anticing operations. EPA, New York, and Washington's MSGPs require air transportation facilities that apply greater than 100,000 gallons of glycol and/or 100 tons of urea annually to conduct benchmark monitoring of deicer-related compounds. The Texas MSGP requires benchmark monitoring only if greater than 100,000 gallons of *ethylene* glycol and/or 100 tons of urea are applied annually. California requires all air transportation facilities to conduct monitoring for deicing-related compounds but does not impose benchmarks for deicer-related compounds. Illinois requires all air transportation facilities that conduct deicing to conduct monitoring for deicer-related compounds during the permit application phase but does not require additional benchmark monitoring throughout the permit term. In addition, California and Washington require benchmark monitoring for various pollutants at all industrial facilities, including air transportation facilities.

While each of the permits requires regular inspections, EPA and New York's MSGP require inspections to be conducted once per month during the deicing season and the annual inspection to be conducted during a period of actual deicing.

The Texas MSGP requires weekly inspections during the deicing season and specifically requires permittees to maintain records of the types and monthly quantities of deicing chemicals used.

[49] *Gen. NPDES Permit for Storm Water Discharges from Construction Site,* ILL. ENVTL. PROTECTION AGENCY DIV. OF WATER POLLUTION CONTROL, at 8.

Construction General Permits

None of the CGPs contain specific requirements for air transportation facilities, with the exception of New York, which includes airports on the list of construction activities that require an SWPPP that includes postconstruction stormwater management practices.

3.1.4 Best Management Practices

Industrial Stormwater General Permits

The EPA and state MSGPs detail standard BMPs that must be implemented as part of an SWPPP, including, but not limited to, good housekeeping, minimizing exposure, preventative maintenance, spill prevention and response, and structural and nonstructural controls. The MSGPs for EPA, New York, and Texas detail specific BMPs to be implemented by air transportation facilities. Texas also requires an annual evaluation of practices that reduce the amount of chemical used or otherwise lesson environmental impact. Washington and California do not require additional BMPs specific to air transportation facilities.

Construction General Permits

None of the CGPs require specific BMPs to be implemented at air transportation facilities.

3.2 Indepth Legal Research Results

Indepth legal research was conducted on the complexities of jurisdictional authority and laws and regulations regarding the stormwater permitting programs implemented by EPA and the states of California, New York, Washington, Illinois, and Texas. The research focused on the following issues:

- Identify any provisions of EPA's regulations, EPA's multi-sector industrial stormwater general permit, or any industrial stormwater general permit issued by the selected states that distinguish between the obligations of a facility owner and a facility operator.
- Identify any independent state legal authority for regulating stormwater discharges associated with industrial activity.
- Identify and describe any limitations on the scope of stormwater permit coverage at air transportation facilities.
- Identify any benchmarks for effluent monitoring parameters, or any numerical effluent limitations, in industrial stormwater general permits applicable to air transportation facilities and any associated corrective action requirements.
- Identify any required or recommended BMPs applicable to air transportation facilities in an industrial stormwater general permit.
- Summarize any administrative or judicial decisions interpreting EPA's stormwater regulations, EPA's industrial stormwater general permit, or any industrial stormwater general permit issued by the selected states.

3.2.1 Clean Water Act Industrial Stormwater Permit Requirement

Section 402(p) of the CWA, 33 U.S.C. § 1342(p), requires EPA, or states with an EPA-approved NPDES permit program, to issue permits for stormwater discharges, including stormwater discharges associated with industrial activity. In 1990, EPA issued regulations, which are codified at 40 C.F.R. § 122.26, implementing Clean Water Act Section 402(p) and establishing permit requirements for stormwater discharges. The regulations provide that "[d]ischargers of stormwater associated with industrial activity…are required to apply for an individual permit or seek coverage under a promulgated stormwater general permit."[50]

EPA first issued an MSGP for stormwater discharges associated with industrial activity in 1995; EPA reissued that MSGP in 2000 and 2008.[51] EPA's MSGP applies in areas of the country where EPA remains the NPDES permitting authority, which includes four states (Idaho, Massachusetts, New Hampshire, and New Mexico); the District of Columbia; Indian country; and certain U.S. territories.

In September 2013, EPA proposed its 2013 MSGP for stormwater discharges associated with industrial activity.[52] The comment period on the 2013 Draft MSGP closed on December 6, 2013. EPA has not yet adopted the 2013 MSGP.

EPA's stormwater regulations define the term "stormwater discharges associated with industrial activity" to mean "the discharge from any conveyance that is used for collecting and conveying

[50] 40 C.F.R. § 122.26(c) (2014).

[51] Availability of the 2008 MSGP was announced in 73 Fed. Reg. 56,572-56,578 (Sept. 29, 2008). EPA also published a general Fact Sheet for the 2008 MSGP. A sector-specific Fact Sheet for air transportation facilities was published by EPA in Dec. 2006.

[52] Notice of the 2013 Draft Permit was announced in 78 Fed. Reg. 59,672-59,677 (Sept. 27, 2013).

storm water and that is directly related to manufacturing, processing or raw materials storage areas at an industrial plant."[53]

The regulatory definition also includes descriptions of a number of categories of facilities that are considered to be engaging in "industrial activity," including air transportation facilities:

> which have vehicle maintenance shops, equipment cleaning operations, or airport deicing operations. Only those portions of the facility that are either involved in vehicle maintenance[54] (including vehicle rehabilitation, mechanical repairs, painting, fueling, and lubrication), equipment cleaning operations, airport deicing operations, or which are otherwise identified [as a category of industrial activity in the regulatory definition] are associated with industrial activity.[55]

In issuing the 2000 MSGP, EPA clarified the types of activities that air transportation facility permittees primarily engage in to include:

- Scheduled and nonscheduled air transportation and air courier.
- Airports and flying fields, except those maintained by aviation clubs.
- Airport terminal services, including nongovernment air traffic control, aircraft storage at airports, aircraft upholstery repair, air freight handling at airports, airport hangar rental, airport leasing, and hangar operations.
- Airport and aircraft service and maintenance, including aircraft cleaning and janitorial service, aircraft servicing and repairing, vehicle maintenance shops, material handling facilities, equipment clearing operations, and airport and aircraft deicing and anti-icing.[56]

[53] 40 C.F.R.§ 122.26(b)(14) (2014).

[54] In the comments/response section of the initial rulemaking for stormwater regulations, one commentator asked for clarification of the term "vehicle maintenance" as it applies to transportation facilities. EPA's response was that the phrase refers to: "the rehabilitation, mechanical repairing, painting, fueling, and lubricating of instrumentalities of transportation located at the described facilities." 55 Fed. Reg. 47,990, 48.013 (Nov. 16, 1990) (Notice of Final Rulemaking). However, EPA declined to write a specific definition into the regulation, because it stated the phrase "should not cause confusion as a descriptive term." *Id.*

[55] 40 C.F.R. § 122.26(b)(14)(viii) (2014).

[56] 65 Fed. Reg. 64,746, 64,844 (Oct. 30, 2000) (Notice of Final NPDES MSGP for Industrial Activities, Part 6.S "Sector S–Air Transportation").

3.2.2 EPA Regulations and Industrial General Permits

Identify Any Provisions Distinguishing Between the Obligations of a Facility Owner and Operator

EPA's regulation governing stormwater discharges does not define the terms "owner" or "operator" or distinguish between the obligations of owners and operators. Rather, as noted above, the regulatory provisions addressing application requirements for stormwater discharges associated with industrial activity apply to "dischargers" of such stormwater.[57] However, the term "dischargers" also is not defined in the regulation.

EPA has promulgated regulatory definitions applicable to the entire NPDES permit program, including stormwater discharges associated with industrial activity.[58] Although those general NPDES regulations also do not define "discharger," the term "owner or operator" is defined to mean "the owner or operator of any 'facility or activity' subject to regulation under the NPDES permit program."[59]

This definition suggests that it is not important, for regulatory purpose, who owns the land on which the airport is located or who operates the air terminals or even the aircraft. With respect to who may be deemed an owner, what is important is who owns the stormwater collection and conveyance systems (i.e., drainage pipes, culverts, stormwater collection ponds, outfalls) and those portions of the airport involved in vehicle maintenance, equipment cleaning, or deicing operations. In many cases this would likely be the same entity that owns the land on which the airport is located, but in other cases a tenant could be an "owner," particularly if the tenant constructed or owns portions of the stormwater collection or conveyance system as part of its leasehold.

With respect to who may be deemed an operator, EPA has clarified that what is important is who operates a facility or engages in activity that generates stormwater discharges associated with industrial activity. In its Notice of the Final 1995 MSGP for Industrial Activities, EPA acknowledged that airports typically operate under the management of an airport "authority," with airline carrier and other fixed base operator "ten-

[57] 40 C.F.R. § 122.26(c) (2014).

[58] *Id.* § 122.2.

[59] *Id.*

ants."[60] Specifically, the Notice states: "Where an airport has multiple operators (airport authority and tenants) that have storm water discharges associated with industrial activity…, each operator is required to apply for coverage under an NPDES storm water permit."[61] Thus, any tenant that engages in vehicle maintenance, equipment cleaning operations, or deicing operations, where such activities are likely to generate pollutants that could be or are discharged with stormwater, would be considered an operator.

As noted above, dischargers of stormwater associated with industrial activity are required to either apply for an individual permit or seek coverage under a stormwater general permit.[62] Though this research has focused on the requirements contained in EPA's multi-sector general permits for stormwater discharges associated with industrial activity and the industrial general permits issued by selected states, EPA's regulations governing applications for individual permits contain a provision recognizing that there may be a distinction between a facility owner and operator. Specifically, though the requirement to submit an application for an individual permit applies to "[a]ny person who discharges or proposes to discharge pollutants,"[63] the regulations further provide that "[w]hen a facility or activity is owned by one person but is operated by another person, *it is the operator's duty to obtain a permit*."[64]

Although EPA's regulation governing stormwater discharges does not distinguish between an owner or operator, the regulation does define the term "co-permittee" to mean "a permittee to a NPDES permit that is only responsible for permit conditions relating to the discharges for which it is an operator."[65] Thus, the regulation envisions that more than one party may be covered under a permit and that each co-permittee may have responsibilities that are limited to the discharge for which it is an operator. Indeed, EPA has made clear that "each individual party, whether a co-permittee or a separate permittee, must submit a NOI to be covered under [a MSGP]."[66] An airport authority is not responsible for ensuring compliance with conditions of the permit for tenants that are separate permittees, rather than co-permittees with the airport authority.[67]

EPA "encourages co-permittee status because this approach to permit coverage promotes better coordination of the pollution prevention plan measures and possibly better control of the storm water discharges."[68] In 2000, EPA added a requirement that "[i]f an airport's tenant has a SWPPP for discharges from their [sic] own areas of the airport, that SWPPP must be integrated with the plan for the entire airport."[69]

Describe Any Limitations on Scope of Permit Coverage at Air Transportation Facilities

EPA's 2008 MSGP applies to stormwater discharges from only those portions of the air transportation facility that are involved in vehicle maintenance (including vehicle rehabilitation, mechanical repairs, painting, fueling, and lubrication); equipment cleaning operations; or deicing operations (including removal and prevention of accumulation unless otherwise noted). The permit does not authorize discharges of aircraft, ground vehicle, runway, and equipment washwaters or dry weather discharge of deicing chemicals.[70]

[60] 60 Fed. Reg. 50,804, 50,998 (Sept. 29, 1995) (Notice of Final NPDES MSGP for Industrial Activities, Part VIII.S "Storm Water Discharges Associated With Industrial Activity From Vehicle Maintenance Areas, Equipment Cleaning Areas, or Deicing Areas Located at Air Transportation Facilities").

[61] *Id.*

[62] 40 C.F.R. § 122.26(c) (2014).

[63] *Id.* § 122.21(a).

[64] *Id.* § 122.21(b) (emphasis added).

[65] 40 C.F.R. § 122.26(b)(1) (2014).

[66] 60 Fed. Reg. 50,804, 50,998 (Description of Comments and Responses Regarding Air Transportation Facilities).

[67] 60 Fed. Reg. at 51,103 (2014).

[68] *Id.*; *see also Multi-Sector Gen. Permit for Stormwater Discharges Associated with Indus. Activity* § 8.S.4, *supra* note 21; *Multi-Sector Gen. Permit for Stormwater Discharges Associated with Indus. Activity* § 8.S.4, *supra* note 22.

[69] 65 Fed. Reg. 64746, 64844 (Oct. 30, 2000) (Notice of Final NPDES MSGP for Industrial Activities, Part 6.S "Sector S–Air Transportation"); *see also Multi-Sector Gen. Permit for Stormwater Discharges Associated with Indus. Activity* § 8.S.4, *supra* note 21; *Multi-Sector Gen. Permit for Stormwater Discharges Associated with Indus. Activity* § 8.S.4, *supra* note 22.

[70] Discharge resulting from snowmelt is not a dry weather discharge. (EPA considers snowmelt a stormwater discharge. *See Ready Mixed, Crushed Stone and Sand and Gravel Non-Storm Water Discharges Quick Reference Guide*, at 1 (July 2009), *available at* http://www.epa.gov/compliance/resources/publications/assistance/sectors/readymix/nonswreferenceguide.pdf.

Such discharges must be covered by a separate NPDES permit.[71]

EPA's 2013 Draft MSGP is comparable in scope of coverage to the 2008 MSGP, but adds the following limitation: The proposed permit does not authorize discharges of collected airport deicing fluid directly to waters of the United States.[72]

EPA's 2008 MSGP[73] requires air transportation sector permittees to comply with "sector-specific requirements associated with [their] primary industrial activity and any co-located industrial activities."[74] "Co-located industrial activities" are "any industrial activities, excluding [] primary industrial activity(ies), located on-site that are defined by the stormwater regulations at 122.26(b)(14)(i)-(ix) and (xi)."[75] "An activity at a facility is not considered co-located if the activity, when considered separately, does not meet the description of a category of industrial activity covered by the stormwater regulations."[76]

Monitoring Benchmarks or Effluent Limitations at Air Transportation Facilities, and Any Associated Corrective Action Requirements

EPA's 2008 MSGP

Sector-specific benchmarks applicable to air transportation facilities:[77]

- Deicing-related parameters and benchmark monitoring concentrations:
  - Biochemical Oxygen Demand—30 mg/L.
  - Chemical Oxygen Demand—120 mg/L.
  - Ammonia—2.14 mg/L.
  - pH—6.0-9.0 standard units (s.u.).

Corrective Action Requirements

Part 3 of the MSGP states the following generally applicable corrective action requirements (i.e., these requirements are not specific to air transportation facilities):[78]

- Conditions requiring the permittee to review and revise the selection, design, installation, and implementation of control measures to ensure elimination of condition in the future:
  - Unauthorized release or discharge at the facility.
  - Discharge in violation of numeric effluent limits.[79]
  - Permittee becomes aware, or EPA determines, that control measures are not stringent enough for discharge to meet applicable water quality standards.
  - Facility inspection or evaluation determines that modifications to control measures are necessary to meet non-numeric effluent limits in the permit.
  - Improper operation and maintenance of control measures.

- Conditions requiring the permittee to review the selection, design, installation, and implementation of control measures to determine if modifications are necessary to meet effluent limits in the permit:
  - Construction or change in design, operation, or maintenance at facility significantly increases quantity of pollutants discharged.
  - Average of four quarterly sampling results exceeds an applicable benchmark.

- Corrective action deadlines:
  - Permittee must document discovery of any condition triggering corrective action requirement within 24 hours of discovery. Report must include: 1) identification of condition triggering need for corrective action review, 2) description of problem, and 3) date that the problem was identified.
  - Permittee must document corrective action (or basis for determination of no corrective action) within 14 days of discovery of condition. Report must include: 1) summary of corrective

[71] *See Multi-Sector Gen. Permit for Stormwater Discharges Associated with Indus. Activity* § 8.S.2, *supra* note 21.

[72] *See Multi-Sector Gen. Permit for Stormwater Discharges Associated with Indus. Activity* § 8.S.7.2, *supra* note 22.

[73] No change to this provision was proposed in the 2013 Draft MSGP.

[74] *Multi-Sector Gen. Permit for Stormwater Discharges Associated with Indus. Activity* § 8.S.4, *supra* note 21 (emphasis in original).

[75] *Id.* at A-2.

[76] *Id.*

[77] *Multi-Sector Gen. Permit for Stormwater Discharges Associated with Indus. Activity* § 8.S.6, *supra* note 21.

[78] *Id.* §§ 3.1-3.6.

[79] Table 2.1 refers to applicable effluent limitations contained in regulations; industrial activities associated with air transportation facilities are not identified in Table 2.1.

action taken or to be taken (or basis for determination of no corrective action); 2) notice of whether SWPPP modifications are required as a result of discovery or corrective action; 3) date corrective action was initiated; and 4) date corrective action was completed or is expected to be completed.

- If permittee determines that changes are necessary following review, modifications to control measures must be made before the next storm event if possible, or as soon as practicable following that storm event.

• Corrective action documentation must be included in the annual report with a copy retained onsite with the SWPPP.

• Failure to take corrective action when required is considered a permit violation; corrective action taken does not remove a permit violation that was the event triggering a review.

• If triggering corrective action is linked to an outfall that represents other substantially identical outfalls, the review must assess the need for corrective action for each outfall represented by the outfall that triggered the review; necessary changes to control measures must be made before next storm event if possible.

EPA's 2013 Draft MSGP

Sector-specific benchmarks applicable to air transportation facilities:

EPA's 2013 Draft MSGP includes the 2008 MSGP deicing-related parameters and benchmark monitoring concentrations and adds the following:[80]

• Existing and new primary airports with 1,000 or more annual jet departures that discharge wastewater associated with airfield pavement deicing commingled with stormwater must either use non-urea-containing deicers or meet a 14.7 mg/L daily maximum effluent limit for ammonia as nitrogen.[81]

• Airports meeting the definition of a new source with 1,000 annual nonpropeller aircraft departures located in cold climate zones (except Alaska) must collect 60 percent of aircraft deicing fluid after deicing and meet the following numerical effluent limitations for Chemical Oxygen Demand (COD) at the location where the effluent leaves the onsite treatment system utilized for meeting these requirements and before commingling with any nondeicing discharge: 271 mg/L as a daily maximum and 154 mg/L as a weekly average.[82]

Corrective Action Requirements[83]

• When the permittee becomes aware that any of the following conditions have occurred, the permittee must review SWPPP to determine if and where revisions may need to be made to eliminate the condition, prevent its reoccurrence, and ensure that effluent limits are met:

- Unauthorized release or discharge at the facility.

- Discharge in violation of numeric effluent limit.[84]

- Control measures are not stringent enough for discharge to meet applicable water quality standards or nonnumeric effluent limits in the permit.

- Required control measure was never installed, was installed incorrectly, or is not being properly operated or maintained.

- Visual assessments indicate obvious signs of stormwater pollution.

- Construction or change in design, operation, or maintenance at facility significantly changes the nature of pollutants discharged in stormwater from the facility or significantly increases quantity of pollutants discharged.

- Average of four quarterly sampling results exceeds an applicable benchmark.

• Corrective action deadlines:

[80] *See Multi-Sector Gen. Permit for Stormwater Discharges Associated with Indus. Activity* § 8.S.7, *supra* note 22.

[81] *See* 40 C.F.R. § 449.10(a) (2014) (effluent limitations representing best available technology economically achievable from deicing operations at airports); *Multi-Sector Gen. Permit for Stormwater Discharges Associated with Indus. Activity* § 8.S.7.1, *supra* note 22.

[82] *See* 40 C.F.R. § 449.11(a)(2) (2014) (new source performance standards for deicing operations at airports); *Multi-Sector Gen. Permit for Stormwater Discharges Associated with Indus. Activity* § 8.S.7.2, *supra* note 22.

[83] *Id.* §§ 4.1-4.5.

[84] Table 2-1 refers to applicable effluent limitations contained in regulations, including in 40 C.F.R. §§ 449.1–449.20 for 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.

- In all circumstances, permittee must immediately (same work day, if possible; otherwise on the following work day) take all reasonable steps necessary to minimize or prevent discharge of pollutants until permanent solution is installed and made operational.

- Must document existence of any condition triggering corrective action requirement within 24 hours of discovery; not required to submit documentation to EPA unless requested to do so. The documentation must include: 1) identification and description of condition triggering need for corrective action review, 2) date problem was identified, and 3) discussion of whether triggering condition requires corrective action. For spills and leaks, documentation must include response actions, date and time cleanup was completed, notifications made, and staff involved. Any measures taken to prevent reoccurrence of such releases must also be included.

- Must document corrective action (or basis for determination of no corrective action) within 14 days of discovery of condition. Documentation must include: 1) dates when each corrective action was initiated and completed (or expected to be completed), and (2) if applicable, why it is infeasible to complete necessary installations or repairs within the 14-day timeframe and documented schedule for installing operational controls as soon as practicable after 14-day timeframe.

- Failure to take corrective action when required is considered a permit violation; taking corrective action does not remove a permit violation that was the event triggering a review.

- If triggering corrective action is linked to an outfall that represents other substantially identical outfalls, review must assess the need for corrective action for each outfall represented by the outfall that triggered the review. Necessary changes to control measures must be made before the next storm event if possible.

Identify Any Required or Recommended BMPs at Air Transportation Facilities

Sector-specific BMPs are set forth in a series of industrial fact sheets published by EPA. The Fact Sheet for Air Transportation Facilities explains that appropriate measures will be site-specific. However, the 2006 Fact Sheet does specify that first consideration should be given for pollution prevention BMPs, including:[85]

- Regular cleanup, collection, and containment of debris in storage areas.
- Other housekeeping practices.
- Spill control.
- Employee training.
- Engineered structures intended to treat stormwater runoff or mitigate the effects of increased stormwater runoff peak rate, volume, and velocity.

BMPs must be selected and implemented to address the following:[86]

- Good housekeeping practices:
  - Establishing protocols to reduce the possibility of mishandling materials or equipment.
  - Training employees in good housekeeping.
  - Schedule for regular pickup and disposal of garbage and waste materials.
  - Routine inspection of drums, tanks, and containers for leaks and structural conditions.
  - Containing and covering garbage, waste materials, and debris.

- Minimizing exposure of potential pollutant sources to precipitation:
  - Covering materials or activities with temporary structures (e.g., tarps) when wet weather is expected.
  - Moving materials or activities to existing or permanent structures.
  - Keeping dumpster lids closed.

- Erosion and sediment control:
  - Erosion control—seeding, mulching, and Sodding.
  - Sediment control should be used to back up erosion control BMPs—silt fences, sediment ponds, and stabilized entrances.

- Management of runoff—SWPPP must contain narrative evaluation of appropriateness of stormwater management practices that divert, infiltrate, reuse, or otherwise manage stormwater runoff so as to reduce the discharge of pollutants. Measures are highly site-specific but may include:
  - Vegetative swales.
  - Collection and reuse of stormwater.
  - Inlet controls.
  - Snow management.
  - Infiltration devices.
  - Wet retention measures.

[85] FACT SHEET SERIES SECTOR S, at 3-8, *supra* note 31.

[86] *Id*.

- Preventative maintenance records or logbooks.
- Regular facility inspections.
- Spill prevention and response.
- Employee training.

The 2008 MSGP and the Draft 2013 MSGP also suggest qualitative technology-based effluent limits to implement the following "Good Housekeeping Measures:"[87]

• Aircraft, Ground Vehicle, and Equipment Maintenance, Cleaning, and Storage Areas; suggestions include:
- Performing maintenance activities indoors.
- Maintaining organized inventory of material used in maintenance areas.
- Draining all parts of fluids prior to disposal.
- Prohibiting practice of hosing down apron or hangar floor.
- Using dry cleanup methods.
- Collecting stormwater runoff from maintenance area and providing treatment or recycling.
- Demarcation of cleaning areas on the ground using signage or other means.
- Storage of aircraft and ground vehicles indoors.
- Use of drip pans for collection of fluid leaks.
- Use of perimeter drains, dikes, or berms surrounding storage areas.

• Material Storage Areas; suggestions include:
- Storing materials indoors.
- Storing waste materials in a centralized location.
- Installing berms or dikes around storage areas.

• Airport Fuel System and Fueling Areas; suggestions include:
- Implementing spill and overflow practices, such as placing absorptive materials beneath aircraft during fueling operations.
- Using only dry cleanup methods.
- Collecting stormwater runoff.

• Source Reduction (for runway or aircraft deicing); suggestions include:
- Use of potassium acetate, magnesium acetate, calcium acetate, or anhydrous sodium acetate to replace ethylene glycol, propylene glycol, and urea.
- Metered application of chemicals.
- Pre-wetting dry chemical constituents prior to application.
- Installing a runway ice detection system.
- Implementing anti-icing operations as a preventative measure against ice buildup.
- Reducing deicing fluid use through forced-air deicing systems, computer-controlled fixed-gantry systems, infrared technology, use of hot water, varying glycol content to air temperature, use of enclosed-basket deicing trucks, mechanical methods, solar radiation, hangar storage, and use of aircraft covers and thermal blankets for MD-80s and DC-9s.
- Use of ice-detection systems and airport traffic flow strategies and departure slot allocation systems.

• Management of Runoff; suggestions include:
- Dedicated deicing facility with a runoff collection and recovery system.
- Use of vacuum/collection trucks.
- Storing contaminated stormwater/deicing fluids in tanks and releasing controlled amounts to a publicly owned treatment works.
- Collecting contaminated runoff in a wet pond for biochemical decomposition.
- Directing runoff into vegetative swales or other infiltration measures.
- Recovering deicing materials when applied during nonprecipitation events.
- Recycling used deicing fluid.

The 2008 MSGP and the Draft 2013 MSGP also include the following inspection requirements specific to air transportation facilities:[88]

• Routine facility inspections must be conducted at least monthly during the deicing season (October–April for most mid-latitude airports); they should be expanded, as needed, to include all

[87] *Multi-Sector Gen. Permit for Stormwater Discharges Associated with Indus. Activity* § 8.S.3, *supra* note 21; *Multi-Sector Gen. Permit for Stormwater Discharges Associated with Indus. Activity* § 8.S.3, *supra* note 22.

[88] *Multi-Sector Gen. Permit for Stormwater Discharges Associated with Indus. Activity* § 8.S.5, *supra* note 21; *Multi-Sector Gen. Permit for Stormwater Discharges Associated with Indus. Activity* § 8.S.5, *supra* note 22.

months during which deicing chemicals may be used.

- Comprehensive annual inspections should be conducted during period of actual deicing operations, if possible; otherwise, during the season when deicing takes place and deicing materials and equipment are in place.[89]

Summarize Any Administrative or Judicial Decisions Interpreting EPA's Regulations or MSGP Industrial Stormwater Permits

The legal research identified several cases addressing the applicability of EPA's stormwater discharge permitting requirements to various categories of industrial activity, although none that specifically addressed air transportation facilities. For example, the Ninth Circuit has at least twice invalidated EPA rules exempting specific categories from permitting requirements.[90]

More recently, two cases have addressed EPA's regulatory definition of "associated with industrial activity" and interpreted the term narrowly. In *Decker v. Northwest Enviornmental Defense Center*,[91] the Supreme Court held that discharges of channeled stormwater from logging roads were not "associated with industrial activity," as defined in EPA's stormwater regulations, 40 C.F.R. § 122.26(b)(14). Therefore, such discharges are not subject to Clean Water Act permit requirements. The Court focused on that portion of the regulatory definition of "associated with industrial activity" referring to discharges "from any conveyance that is used for collecting and conveying stormwater and that is directly related to manufacturing, processing or raw materials storage areas at an industrial plant."[92] The Court found that EPA could reasonably conclude that this regulation "extends only to traditional industrial buildings such as factories and associated sites, as well as other relatively fixed facilities," and not to temporary logging installations that are directly related to harvesting raw materials, rather than to "manufacturing," "processing," or "raw materials storage areas."[93]

A similarly narrow view of the regulatory definition of "associated with industrial activity" was adopted in *Ecological Rights Foundation v. Pacific Gas & Electric Co.*[94] in which the Ninth Circuit rejected the argument that a Clean Water Act permit was required for stormwater discharges from utility poles. The court noted, among other things, that utility poles do not fit within EPA's definition of "discharge associated with industrial activity," and that "[a] utility pole is not a 'conveyance…used for collecting and conveying storm water,' nor is it 'directly related to manufacturing, processing or raw materials storage at an industrial plant.'"[95]

The decisions in *Decker* and *Ecological Rights Foundation* support a narrow reading of the term "associated with industrial activity," including limiting the scope of coverage of a stormwater permit at air transportation facilities only to those portions of the facility involved in vehicle maintenance, equipment cleaning operations, or deicing operations (rather than applying the permit requirement to the entire airport).

3.2.3 California

In 1997, California's State Water Resources Control Board (California Water Board) issued a general permit for stormwater discharges associated with industrial activity, including stormwater discharges from air transportation facilities.[96] The 1997 General Permit will remain effective until July 1, 2015, at which time it will be replaced by a new general permit for stormwater discharges associated with industrial activity, adopted April 1, 2014.[97]

Given that the 2015 general permit for industrial stormwater discharges (2015 CA GP) has been adopted, and will take effect July 1, 2015, our analysis has focused on the 2015 CA GP, rather than the current permit issued in 1997.

[89] This additional SWPPP requirement for comprehensive annual inspections does not appear in the 2013 Draft MSGP.

[90] *See, e.g.,* NRDC v. U.S. EPA, 526 F.3d 591 (9th Cir. 2008) (vacating rule exempting stormwater discharge of sediment from oil and gas construction activities from permitting requirement); NRDC v. U.S. EPA, 966 F.2d 1292 (9th Cir. 1992) (invalidating rule exempting construction sites of five acres or less from permitting requirements).

[91] 133 S. Ct. 1326 (2013).

[92] *Id*. at 1337.

[93] *Id*.

[94] 713 F.3d 502 (9th Cir. 2013).

[95] *Id.* at 511–12 (citing 40 C.F.R. § 122.26(b)(14) (2014)).

[96] *Waste Discharge Requirements (WDRS) for Discharges of Storm Water Associated with Indus. Activities Excluding Constr. Activities*, *supra* note 15.

[97] *Gen. Permit for Stormwater Discharges Associated with Indus. Activity*, *supra* note 23 ("2015 CA GP").

Identify Any Independent State Legal Authority for Regulating Stormwater Discharges Associated with Industrial Activity

In California, the regulation of water quality, including the issuance of discharge permits, is governed by the Porter–Cologne Water Quality Control Act.[98] One chapter of that state Act contains numerous provisions specifically intended to ensure that the California Water Board and the nine Regional Water Quality Control Boards (Regional Boards) throughout the state have the authority to implement the CWA.[99]

With respect to stormwater permitting, Water Code Section 13383.5(c) requires the California Water Board to develop, prior to January 1, 2003, minimum monitoring requirements that must be included in stormwater discharge permits for regulated industries. The program is required to include standardized methods for collection and analysis of stormwater samples; a requirement that samples be analyzed by a state-certified laboratory or by the regulated industry in the field in accordance with established quality assurance and quality control protocols; and a standardized reporting format. Water Code Section 13383.5(d) further provides that the monitoring requirements prescribed pursuant to the statute shall be included in all stormwater permits for regulated industries that are reissued following development of the requirements described in subdivision (c). The minimum monitoring requirements contained in Water Code Section 13383.5 are incorporated into 2015 CA GP at Attachment H, titled "Sample Collection and Handling Instructions."

In addition, Water Code Section 13383.8 requires the California Water Board to appoint a stormwater management task force to provide advice to the board on its stormwater management program, which may include program priorities, funding criteria, project selection, and interagency coordination of state programs that address stormwater management. In February 2008, the California Water Board approved a Storm Water Advisory Task Force (SWATF) to provide input on the development of funding guidelines for a stormwater grant program and a comprehensive guidance document for evaluating and measuring the effectiveness of municipal stormwater management programs.[100] In November 2008, the SWATF recommended to the State Department of Water Resources that a "Low Impact Development" approach to stormwater management be given funding preference and program priority over a conventional "collect and convey" approach, which diverts stormwater runoff to local waterways.[101] According to the SWATF, Low Impact Development is designed to "infiltrate, filter, store, evaporate and reuse stormwater runoff on-site as much as possible."[102] While it is not clear to what extent the California Water Board relied on the SWATF's recommendation, the 2015 CA GP requires dischargers to implement, to the extent feasible, BMPs "that divert, infiltrate, reuse, contain, retain, or reduce the volume of storm water runoff."[103] The term of the SWATF expired on June 30, 2009.

Identify Any Provisions Distinguishing Between the Obligations of a Facility Owner and Operator

The legal research did not locate any statutory, regulatory, or administrative provisions that discuss permittee or co-permittee status or that otherwise distinguish between facility owners, operators, or tenants.

The current California Water Board general permit for industrial stormwater discharges states:

> The facility operator must submit an NOI [notice of intent] for each industrial facility that is required by U.S. Environmental Protection Agency (U.S. EPA) regulations to obtain a storm water permit…The facility operator is typically the owner of the business or operation where the industrial activities requiring a storm water permit occur. The facility operator is responsible for all permit-related activities at the facility.[104]

[98] CAL. WATER CODE §§ 13000–13365 (2014).

[99] *Id.* §§ 13370–13389; California Water Code § 13372 provides that state law "shall be construed to ensure consistency with the requirements for state programs implementing" the CWA. California Water Code § 13377 provides that the California Water Board or Regional Boards are authorized to issue discharge permits.

[100] *See* CALIFORNIA WATER BOARD, http://www.swrcb.ca.gov/water_issues/programs/grants_loans/prop84/prop84_taskforce.shtml.

[101] Storm Water Advisory Task Force Members, *Letter from Storm Water Advisory Task Force to Lester Snow, Director for Department of Water Resources* (Nov. 5, 2008), http://www.swrcb.ca.gov/water_issues/programs/grants_loans/prop84/docs/taskforce/dwr_letter.pdf.

[102] *Id.*

[103] *Gen. Permit for Stormwater Discharges Associated with Indus. Activity*, at 33–34, *supra* note 23.

[104] Waste Discharge Requirements (WDRS) for Discharges of Storm Water Associated with Indus. Activities Excluding Constr. Activities, Attachment 3, *supra*

The 2015 CA GP defines "Dischargers" as "operators of facilities subject to stormwater permitting."[105]

Under the 2015 CA GP, dischargers may form optional Compliance Groups consisting of dischargers operating facilities with similar types of industrial activities, pollutant sources, and pollutant characteristics.[106]

- Each Compliance Group must have a Group Leader. The Group Leader:
  - Must register with Storm Water Multi-Application Reporting and Tracking System (SMARTS).
  - Must be a Qualified Industrial Storm Water Practitioner (QISP).
  - Must assist group participants with all compliance activities required by the permit.
  - Prepares Consolidated Level 1 Exceedance Response Action (ERA) Report for all group participants with Level 1 status for the same parameter.
  - Prepares Level 2 ERA Action Plan and Level 2 ERA Technical Report specific to each group participant with Level 2 status.
  - Inspects all facilities of group participants at least once per reporting year.

- The responsibilities of Compliance Group participants include:
  - Must register with SMARTS.
  - Responsible for permit compliance for group participant's facility and for ensuring that Group Leader's activities related to group participant's facility comply with permit.
  - Group participants with Level 1 status must certify and submit via SMARTS the Consolidated Level 1 ERA Report but may submit individual Level 1 ERA Report.
  - Group participants with Level 2 status must certify and submit via SMARTS individual Level 2 ERA Action Plan and Technical Report prepared by Group Leader.
  - Group participants may discontinue participation in Compliance Group at any time.

Describe Any Limitations on Scope of Permit Coverage at Air Transportation Facilities

The 2015 CA GP does not specifically address the scope of permit coverage at air transportation facilities or at any other category of industrial activity. More generally, the permit will not apply to the following:[107]

- Stormwater discharges from areas on tribal lands.
- Stormwater discharges regulated under another individual or general NPDES permit.
- Stormwater discharges to combined sewer systems.
- Conveyances that discharge stormwater runoff combined with municipal sewage.
- Stormwater discharges identified in CWA § 402(l) (agricultural return flows and stormwater runoff from oil, gas, and mining operations).
- Facilities for which a Notice of Non-Applicability (NONA) has been certified and submitted.
- Discharges of dredged or fill material regulated by the U.S. Army Corps of Engineers.

Monitoring Benchmarks or Effluent Limitations at Air Transportation Facilities and Any Associated Corrective Action Requirements

The 2014 CA GP includes both incorporation of federal stormwater effluent limitations and state-specific receiving water limitations and corrective action requirements.

Airport deicing operations are subject to the effluent limitations found in 40 C.F.R. §§ 449.1–449.20:[108]

- Existing and new primary airports with 1,000 or more annual jet departures that discharge wastewater associated with airfield pavement deicing commingled with stormwater must either use non-urea-containing deicers or meet a 14.7 mg/L daily maximum effluent limit for ammonia as nitrogen.[109]
- Airports meeting the definition of a new source with 10,000 annual departures located in cold climate zones must collect 60 percent of aircraft deicing fluid after deicing, and meet the fol-

note 2. The 2015 CA GP does not currently have an attachment containing "NOI Instructions," and similar language does not appear in the 2015 CA GP.

[105] *Gen. Permit for Stormwater Discharges Associated with Indus. Activity* § I.A.2, *supra* note 23.

[106] *Id.* at 57–59.

[107] *See id.* at 3–4.

[108] *See Gen. Permit for Stormwater Discharges Associated with Indus. Activity*, Attachment F, *supra* note 23.

[109] *See* 40 C.F.R. 449.10, 449.11(b) (2014).

lowing numerical effluent limitations for COD at the location where the effluent leaves the onsite treatment system utilized for meeting these requirements and before commingling with any nondeicing discharge: 1) daily maximum COD: 271 mg/L; and 2) weekly average COD: 154 mg/L.[110]

Dischargers located within a watershed for which a TMDL has been approved by EPA must comply with TMDL-specific permit requirements.[111]

The 2015 CA GP contains the following Receiving Water Limitations.[112] Dischargers shall ensure that:

- Industrial stormwater discharges shall not cause or contribute to an excedance of any applicable water quality standard in any affected receiving water.
- Industrial stormwater discharges shall not adversely affect human health or the environment.
- Industrial stormwater discharges do not contain pollutants in quantities that threaten to cause pollution or a public nuisance.

The 2015 CA GP contains the following corrective action requirements (referred to as "Exceedance Response Actions"):[113]

- NALs are established for various parameters, including pH, COD, and ammonia (as nitrogen), as follows:[114]
  - pH—less than 6.0, greater than 9.0 (instantaneous maximum NAL).
  - COD—120 mg/L (annual NAL).
  - Ammonia (as N)—2.14 mg/L (annual NAL)
  - Table 2 also identifies NALs for suspended solids, oil and grease, biochemical oxygen demand (BOD), and several metals.

- Level 1. Sampling results indicate an NAL exceedance (which may be annual or instantaneous) for a given parameter in any reporting year. Level 1 status commences on July 1 following the reporting year during which the exceedance occurred.
  - Within 60 days, discharger must complete evaluation of industrial pollutant sources at facility that are or may be related to NAL exceedance and corresponding BMPs and implementation measures in the SWPPP.
  - Discharger must submit Level 1 ERA Report, including summary of evaluation and implementation schedule for additional BMPs and SWPPP revisions.
  - Status will return to baseline once report has been completed, all identified additional BMPs have been implemented, and results from four subsequent and consecutive Qualifying Storm Events (QSEs) indicate no additional exceedances for that parameter.

- Level 2. Sampling results for Level 1 discharger indicate NAL exceedance for the same parameter. Level 2 status commences on July 1 following the reporting year during which the NAL exceedance occurred.
  - Discharger must submit Level 2 ERA Action Plan addressing each new Level 2 NAL exceedance, including: 1) addressing drainage areas with corresponding Level 2 exceedances, and 2) a schedule and detailed description of tasks required to complete selected demonstrations.
  - Discharger must also submit Level 2 ERA Technical Report, including one or more of the following demonstrations: 1) Industrial Activity BMP Demonstration, 2) Non-Industrial Pollutant Source Demonstration, and 3) Natural Background Pollutant Source Demonstration.
  - Level 2 ERA Technical Report must be updated annually based on facility operational changes, pollutant source(s) changes, or information obtained from compliance activities.
  - Dischargers with Level 2 status are eligible to return to baseline status if they do all of the following: 1) submit Industrial Activity BMP Demonstration, 2) have implemented BMPs to prevent future NAL exceedances, 3) achieve results from four subsequent consecutive QSEs sampled that indicate no additional NAL exceedances for the parameters.

[110] *Id.* § 449.11(a).

[111] *See Gen. Permit for Stormwater Discharges Associated with Indus. Activity*, Attachment E, *supra* note 23.

[112] *Gen. Permit for Stormwater Discharges Associated with Indus. Activity*, at 21, *supra* note 23.

[113] *Id.* at 48–55.

[114] *Id.* at 45, Table 2.

Identify Any Required or Recommended BMPs

The 2015 CA GP specifies the following required BMPs:[115]

- Good housekeeping (observations, coverage, containment, prevention, etc.).
- Preventive maintenance.
- Spill and leak prevention and response (protocols, procedures, equipment, training, etc.).
- Material handling and waste management.
- Erosion and sediment controls.
- Employee training.
- Quality assurance and record keeping.

In addition, the 2015 CA GP requires the following BMPs, to the extent feasible:[116]

- Exposure minimization (e.g., storm resistant shelters).
- Stormwater containment and discharge reduction (e.g., to divert, infiltrate, reuse, contain, retain, or reduce volume of stormwater runoff).
- Treatment control (e.g., mechanical, chemical, biological, or other technology that will meet treatment design standard; may be volume-based or flow-based).
- Other advanced BMPs, which include anything not listed in the permit but necessary to meet effluent limitations.

Summarize Any Administrative or Judicial Decisions Interpreting California's Industrial Stormwater General Permit

Santa Monica Baykeeper v. Kramer Metals, Inc.,[117] was a CWA citizen suit brought to enforce alleged violations at two scrap metal facilities of the California Water Board's general permit for industrial stormwater dischargers.

One of the issues in the case concerned the California general permit's technology-based effluent limitation that requires facility operators to reduce or prevent pollution associated with industrial activity through 1) implementation of BAT for toxic and nonconventional pollutants, and 2) BCT for conventional pollutants. As the court noted, under the permit, an operator can comply with this requirement by developing and implementing an SWPPP that 1) complies with requirements in the permit and 2) includes BMPs that achieve BAT/BCT.[118]

The environmental group plaintiff claimed that the defendant was in violation of this technology-based effluent limitation by referencing the benchmark levels set out in EPA's MSGP for industrial stormwater discharges and arguing that those benchmarks provide an objective standard to determine if a permittee has implemented BAT/BCT. The court noted that the California general permit does not incorporate the EPA MSGP's benchmark levels and that under the EPA MSGP, benchmark levels are distinct from effluent limitations. The court held that the EPA benchmarks are relevant guidelines that should be used to evaluate the efficacy of a facility's BMPs, but that samples in excess of those benchmarks do not necessarily constitute a violation of the California general permit; instead, a more comprehensive approach is necessary.[119] Finding disputed issues of fact, and the need for a more comprehensive discussion of the BAT/BCT issue, the court denied the plaintiff's motion for summary judgment as to the alleged violations of the California general permit's technology-based effluent limit.

Another issue in the case concerned alleged violations of a receiving water limitation in the permit providing that stormwater discharges shall not cause or contribute to an exceedance of any applicable water quality standard. The court held that the California Toxics Rule (CTR), 40 C.F.R. § 131.38, which EPA had promulgated to fill a gap in California's water quality standards, is a water quality standard that applies to the defendant's facilities. Moreover, the court found that there was at least one violation of the CTR, and therefore the California general permit's receiving water limitation, at each facility, and granted plaintiffs' motion for summary judgment as to liability on that ground.[120]

3.2.4 New York

The New York State Department of Environmental Conservation (NYSDEC) administers New York's SPDES program. New York's current Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity became effective October 1, 2012, and will expire on September 30, 2017 (NY MSGP).

[115] *Gen. Permit for Stormwater Discharges Associated with Indus. Activity*, at 30–33, *supra* note 23.

[116] *Id.* at 33–34.

[117] 619 F. Supp. 2d 914 (C.D. Cal. 2009).

[118] *Id.* at 920.

[119] *Id*. at 924–25.

[120] *Id*. at 926–29.

Identify Any Independent State Legal Authority for Regulating Stormwater Discharges Associated with Industrial Activity

New York's general state law governing water quality control is the New York Environmental Conservation Law (NY ECL), Article 17 (Water Pollution Control). Title 8 of Article 17 governs the SPDES program.[121] In particular, NY ECL Section 17-803 makes it unlawful to discharge pollutants to state waters from any outlet or point source without an SPDES permit or in a manner other than as prescribed by such a permit. NY ECL Section 17-808 provides that October 1, 1992, is the effective date of the state law requiring a permit for storm water discharges associated with industrial activity.

NY ECL Section 17-0811 requires that SPDES permits include provisions requiring compliance with: 1) effluent limitation, 2) standards of performance for new sources, 3) toxic and pretreatment effluent standards, 4) ocean discharge criteria adopted by the federal government, and 5) any further limitations necessary to ensure compliance with state water quality standards. Under NY ECL Section 17-0813, SPDES permits may contain compliance schedules.

NYSDEC has promulgated regulations requiring that SPDES permits ensure compliance with 1) BPT effluent limitations under CWA Section 301; 2) BCT new source performance standards under CWA Section 306; 3) BAT effluent limitations guidelines, effluent prohibitions, and pretreatment standards for existing sources under CWA Section 307; 4) ocean discharge criteria under CWA Section 403; and 5) any more stringent limitations required under CWA Section 510, CWA Section 303(d) (TMDL), or any other state or federal law or regulation.[122]

In addition, NYSDEC is expressly authorized by regulation to issue general permits for stormwater discharges associated with industrial activity.[123]

Identify Any Provisions Distinguishing Between the Obligations of a Facility Owner and Operator

NYSDEC regulations state: "When a facility or activity is owned by one person but is operated by another person, it is the operator's duty to obtain a permit."[124]

An SWPPP developed for areas of the facility occupied by tenants of the airport shall be integrated with the plan for the entire airport. Tenants include airline passenger or cargo companies, fixed base owners or operators, and other parties who have contracts with the airport authority to conduct business operations on airport property and whose operations result in stormwater discharges associated with industrial activity.[125]

"Co-located industrial activity." "If more than one industrial activity occurs at the facility, those industrial activities are considered to be co-located. Stormwater discharges from co-located industrial activities are authorized by this permit, provided that the owner or operator complies with any and all additional sector specific requirements…applicable to each industrial activity at the facility."[126]

Describe Any Limitations on Scope of Permit Coverage at Air Transportation Facilities

Discharges of vehicle and equipment wash water are not authorized by the NY MSGP. Such wastewaters must be covered under a separate SPDES permit, discharged to a sanitary sewer in accordance with applicable industrial pretreatment requirements, or disposed of otherwise in accordance with applicable law.[127]

Discharges from industrial activity that are mixed with sources of nonstormwater other than those expressly authorized by the NY MSGP or another SPDES permit are not authorized.[128]

Discharges from industrial activities that have the potential to adversely affect a listed or proposed-to-be-listed endangered or threatened species or its critical habitat are not authorized (absent a documented agreement with NYSDEC).[129]

Discharges of hazardous substances or petroleum are not authorized. SWPPP should address how discharges of hazardous substances and petroleum in stormwater are prevented or minimized.[130]

[121] N.Y. ENVTL. CONSERV. LAW §§ 17-0801 to 17-0831 (2014).

[122] N.Y. COMP. CODES R. & REGS. tit. 6, § 750-1.11 (2014).

[123] *Id.* § 750-1.21(b)(3).

[124] *Id.* § 750-1.6.

[125] *SPDES Multi Sector Gen. Permit for Stormwater Discharges from Indus. Activity*, at 153, *supra* note 17.

[126] *Id.* at 12.

[127] *Id.* at 9.

[128] *Id.* at 14.

[129] *Id.*

[130] *Id.* at 17.

Dry weather discharges of deicing and anti-icing chemicals are not authorized.[131]

Monitoring Benchmarks or Effluent Limitations at Air Transportation Facilities and Any Associated Corrective Action Requirements

The NY MSGP does not specify numeric effluent limits for air transportation facilities.[132]

Benchmark Monitoring Requirements are applicable to airports that use more than 100,000 gallons of glycol-based deicing/anti-icing chemicals and/or 100 tons or more of urea on an average annual basis:[133]

- BOD5—30 mg/L.
- COD—120 mg/L.
- Total nitrogen—6 mg/L.
- pH—within range of 6.0 to 9.0 s.u.
- Note: Only those outfalls from the airport facility that collect runoff from areas where deicing/anti-icing activities occur must be monitored.

Water Quality Standards[134]

"It shall be a violation of the *Environmental Conservation Law (ECL)* for any *discharge* authorized by [NY MSGP] to either cause or contribute to a violation of water quality standards," (emphasis in original), including:

- No increase in turbidity that will cause a substantial visible contrast to natural conditions.
- No suspended, colloidal, and settleable solids from sewage, industrial wastes, or other wastes that will cause deposition or impair the waters for their best usages.
- No residue from oil and floating substances attributable to sewage, industrial wastes, or other wastes, nor visible oil film nor globules of grease.
- *Corrective action requirements*. If "significantly or deleteriously large quantities of deicing chemicals are being spilled or discharged, or if water quality impacts have been reported," inspections must be conducted weekly until discharges or impacts are reduced to acceptable levels.[135]

Identify Any Required or Recommended BMPs

The NY MSGP identifies a number of generally applicable BMPs:[136]

- Minimize exposure of operations and storage to rain, snow, snowmelt, and runoff.
- Good housekeeping.
- Maintenance through regular testing, inspection, and repair.
- Spill prevention and response procedures.
- Erosion and sediment controls.
- Management of runoff.
- Enclosure of salt piles used for deicing and other purposes (unless no discharge from the piles or they are authorized under another permit).
- Employee training.
- Elimination of nonstormwater discharges not authorized by the NY MSGP.
- Prevention of waste, garbage, and floatable debris discharge.
- Minimize generation of dust and off-site tracking of raw, final, or waste materials

The NY MSGP identifies various BMPs specific to air transportation facilities, including good housekeeping BMPs and source reduction BMPs:[137]

- For aircraft, ground vehicle, and equipment maintenance areas, the SWPPP must document consideration of:
  - Performing maintenance activities indoors.
  - Maintaining an organized inventory of materials used in the maintenance areas.
  - Draining all parts of fluids prior to disposal.
  - Preventing the practice of hosing down the apron or hangar floor.
  - Using dry cleanup methods.
  - Collecting the stormwater runoff from the maintenance area.
  - Providing treatment or recycling.

- For aircraft, ground vehicle, and equipment cleaning areas, the SWPPP must include provisions that ensure that cleaning of equipment is conducted in designated areas only.
- For aircraft, ground vehicle, and equipment storage areas, the SWPPP must document consideration of:

[131] *SPDES Multi Sector Gen. Permit for Stormwater Discharges from Indus. Activity*, at 153, *supra* note 17.

[132] *Id.* at 158.

[133] *Id.*

[134] *Id.* at 11.

[135] *Id.* at 157.

[136] *Id.* at 24–30.

[137] *Id.* at 154–57.

- Indoor storage of aircraft and ground vehicles.
- Use of drip pans for the collection of fluid leaks.
- Perimeter drains, dikes, or berms surrounding storage areas.

• For material storage areas, the SWPPP must document consideration of:
- Indoor storage.
- Centralized storage for waste materials.
- Installation of berms or dikes around storage areas.

• For airport fuel system and fueling areas, the SWPPP must document consideration of:
- Implementing spill and overflow practices.
- Using dry cleanup methods.
- Collecting stormwater runoff.
- Consider alternatives to use of urea and glycol-based deicing/anti-icing chemicals, such as potassium acetate, magnesium acetate, calcium acetate, and anhydrous sodium acetate.

• For runway deicing operations, the SWPPP must document consideration of:
- Metered application of chemicals.
- Pre-wetting dry chemical constituents prior to application.
- Installation of runway ice detection systems.
- Implementing anti-icing operations as a preventative measure against ice buildup.

• For aircraft deicing and anti-icing operations, the SWPPP must document consideration of:
- Forced-air deicing systems.
- Computer-controlled fixed gantry systems.
- Infrared technology.
- Hot water.
- Varying glycol content to air temperature.
- Enclosed-basket deicing trucks.
- Mechanical methods.
- Solar radiation.
- Hangar storage.
- Aircraft covers.
- Thermal blankets for MD-80s and DC-9s.
- Ice-detection systems.
- Airport traffic flow strategies.
- Departure slot allocation systems.

• For management of runoff, the SWPPP must document consideration of:
- Establishing a dedicated deicing facility with a runoff collection and recovery system.
- Use of vacuum/collection trucks.
- Storage of contaminated stormwater deicing fluids in tanks and release of controlled amounts to a Publicly Owned Treatment Works (POTW) in accordance with pretreatment program requirements.
- Collection of contaminated runoff in a wet pond for biochemical decomposition.
- Directing of runoff into vegetative swales or other infiltration measures.
- Recovering deicing/anti-icing materials when these materials are applied during nonprecipitation events.
- Recycling used deicing fluid whenever possible.

• For inspections:
- Minimum of monthly inspections during deicing and anti-icing season (usually October to April 1).
- Annual comprehensive site compliance inspection shall be conducted during period of actual deicing operations, if possible.

Summarize Any Administrative or Judicial Decisions Interpreting New York's MSGP Industrial Stormwater Permit

In 2006, in the context of renewing the individual SPDES stormwater permit for JFK, NYSDEC determined that the permit required modification and made the draft modified permit available for public review. Comments were submitted by various parties, including the operator of the airport—the Port Authority—certain airlines who are tenants at the airport, and two environmental groups. NYSDEC subsequently referred the modification proceeding for a public hearing and issues conference before an ALJ. The parties then worked cooperatively over several months to resolve their varied concerns with respect to the proposed permit modifications, and, as a result of these efforts, there was no adjudicatory hearing. The ALJ issued a report that discussed the issues that had been resolved by the parties concerning the permit modification.[138]

[138] *Port Authority of New York (JFK) Summary Hearing Report and Order of Deposition*, NEW YORK DEP'T OF ENVT'L CONSERVATION (Sept. 19, 2007).

The ALJ's report notes that stormwater containing anti-icing and deicing materials is discharged from JFK into Jamaica Bay, which is part of the federally protected Gateway National Recreation Area and designated as a wildlife refuge. A Port Authority representative discussed the BMPs and other steps taken to reduce impacts of deicing on Jamaica Bay, including:

- Banning use of urea in 2000.
- Use of "relatively nontoxic" propylene glycol, sodium acetate, and potassium acetate.
- Training for individuals who apply deicing chemicals.
- Largest airline tenant uses dual nozzle for air and deicing fluid, resulting in reduction in volume of fluid used.
- Coordination between pilots and control tower to time takeoffs so reapplication of deicing fluids is not required.
- Establishment of radiant facility at the airport where planes can be brought in for deicing faster than using traditional techniques, which reduces chemicals used by 90 percent.

Two of the issues in dispute were that: 1) the Port Authority desired to add the airlines as co-permittees, and 2) the airlines objected to permit language requiring tenants to comply with aspects of the permit (referred to as "tenants shall" language).[139] The Port Authority representative stated that it would be a "logical implication of Clean Water Act requirements to include airlines that engage in deicing operations as co-permittees because the airlines had control over these actions." The Port Authority ultimately agreed to drop this issue, however, acknowledging that the issue of co-permittees may not have been properly part of the proceeding because NYSDEC did not include it as part of the proposed permit modification. The Port Authority and the airlines did agree to accept the so-called "tenants shall" language, although the airlines insisted that their agreement to this language did not constitute an admission regarding the enforceability of those provisions.

An issue raised by one of the environmental groups was whether a permittee is subject to an enforcement action for violations of both the permit and the underlying law/regulations when there is a violation of a water quality standard in instances where there is no specific standard set forth in the permit. In response, NYDEC staff stated its position that narrative water quality standards are incorporated into the SPDES permit for JFK, and the ALJ confirmed that "any violation by the permittee of water quality standards is a violation of both the permit and the applicable statutes and regulations."[140]

3.2.5 Washington

The WA ISGP is administered by the Washington Department of Ecology (Ecology). The current WA ISGP was issued on October 21, 2009; became effective in January 2010; and was modified effective July 1, 2012. The current WA ISGP expires on January 1, 2015.

Ecology plans to publish a draft industrial stormwater general permit to replace the current WA ISGP on April 16, 2014, with a public comment period scheduled to end on June 2, 2014. Ecology plans to issue its new, final WA ISGP on October 15, 2014, with an effective date of January 1, 2015. Permittees covered by the current WA ISGP must reapply for coverage by July 1, 2014. Ecology's Web site does not provide information regarding the reapplication deadline and the status of coverage for current permittees in the event a new WA ISGP is not issued according to the agency's planned schedule. (NOTE: Since the drafting of this digest, Ecology reissued the WA ISGP on December 3, 2014.)

Identify Any Independent State Legal Authority for Regulating Stormwater Discharges Associated with Industrial Activity

Washington's general state law governing water quality control is its Water Pollution Control Law.[141] Ecology is authorized to establish and administer a state pollution discharge elimination permit program by Washington Revised Code Section 90.48.260. The authorized permit program elements include:

- Effluent treatment and limitation requirements, together with timing requirements related thereto.

[139] It is not clear from the ALJ's report what permit conditions were included or were subject to the "tenants shall" language, but it appears from the report that those conditions to monitoring and BMPs, as well as perhaps other issues.

[140] *Port Authority of New York (JFK) Summary Hearing Report and Order of Deposition*, NEW YORK DEP'T OF ENVT'L CONSERVATION (Sept. 19, 2007).

[141] WASH. REV. CODE §§ 90.48.010 to 90.48.605 (2014).

- Applicable receiving water quality standards requirements.
- Requirements of standards of performance for new sources.
- Pretreatment requirements.
- Termination and modification of permits for cause.
- Requirements for public notices and opportunities for public hearings.
- Requirements for inspection, monitoring, entry, and reporting.

Washington has enacted specific substantive requirements applicable to industrial (and construction) stormwater general permits issued by Ecology pursuant to the CWA. In particular, Washington Revised Code Section 90.48.555 provides:

- Effluent limitations shall be included in industrial stormwater general permits as required under the CWA and its implementing regulations; pollutant-specific, water quality-based effluent limits shall be included if there is a reasonable potential to cause or contribute to an excursion of a state water quality standard.
- Both technology and water quality-based effluent limitations may be expressed as: 1) numeric effluent limitations, 2) narrative effluent limitations, or 3) a combination of numeric and narrative effluent discharge limitations.
- Compliance with water quality standards shall be presumed, unless discharge monitoring data or other site-specific information demonstrate that a discharge causes or contributes to a violation of such standards, when the permittee is: 1) in full compliance with all permit conditions, and 2) fully implementing stormwater BMPs contained in stormwater technical manuals approved by Ecology or practices that are demonstrably equivalent to practices contained in approved stormwater technical manuals.
- By November 1, 2009, Ecology was required to modify or reissue the WA ISGP to require compliance with appropriately derived numeric water quality-based effluent limitations for existing discharges to water bodies listed as impaired according to CWA Section 303(d), except for water bodies impaired by bacteria.
- For pollutants other than bacteria, the WA ISGP must require permittees to comply with appropriately derived numeric water quality-based effluent limitations by no later than 6 months after the effective date of the modified or reissued WA ISGP.
- By July 1, 2012, the ISGP must require permittees with discharges to water bodies listed as impaired for bacteria to comply with nonnumeric, narrative effluent limitations.
- The WA ISGP is required to include an enforceable adaptive management mechanism that includes appropriate monitoring, evaluation, and reporting.
- The WA ISGP is required to include timing and mechanisms for implementation of treatment BMPs.
- Receiving water sampling shall not be a requirement of an industrial stormwater general permit except to the extent that it can be conducted without endangering the health and safety of persons conducting the sampling.

Washington Revised Code Section 90.48.560 required Ecology, by January 1, 2005, to have initiated an inspection and compliance program for all permittees covered under the WA ISGP.

Washington Revised Code Section 90.48.545 requires Ecology to create, as funding to do so becomes available, a stormwater technical resource center to provide tools for stormwater management. The technical resource center may:

- Review and evaluate emerging stormwater technologies.
- Research and develop innovative and cost-effective technical solutions to remove pollutants from runoff and to reduce or eliminate stormwater discharges.
- Conduct pilot projects to test technical solutions.
- Serve as a clearinghouse and outreach center for information on stormwater technology.
- Assist in the development of stormwater control methods to better protect water quality, including source control, product substitution, pollution prevention, and stormwater treatment.
- Coordinate with federal, state, and local agencies and private organizations in administering programs related to stormwater control measures.
- Collaborate with existing stormwater outreach programs.

Pursuant to this statute, the Washington Stormwater Center was established on December 9, 2010, and operates a Web site available at http://www.wastormwatercenter.org.

Identify Any Provisions Distinguishing Between the Obligations of a Facility Owner and Operator

The research found no provision in the Washington Water Pollution Control Law that distinguishes between the obligations of a facility owner and operator. The WA ISGP defines "discharger" as "an owner or operator of any facility or activity subject to regulation under Chapter 90.48 [of Revised Codes of Washington] or the Federal Clean Water Act."[142]

During the 2012 WA ISGP modification process, in response to a comment by BNSF Railway Company regarding the owner–operator distinction, Ecology stated:

> [U]nder 40 CFR section 122.21(b), when a facility is owned by one person but operated by another, it is the operator's duty to obtain a permit. Ecology considers the permitting requirements to be fulfilled if the operator has sole permit coverage at a facility. Nothing in the permit precludes multiple entities from holding permit coverage at a facility. If that is necessary, each entity should submit a separate notice of intent (NOI) to apply for permit coverage.[143]

Describe Any Limitations on Scope of Permit Coverage at Air Transportation Facilities

The WA ISGP applies to facilities conducting industrial activities that discharge stormwater to a surface water body or to a storm sewer that drains to a surface water body.[144] The WA ISGP does not apply to:[145]

- Industrial facilities that discharge stormwater only to a municipal combined sewer or sanitary sewer.
- Industrial facilities that discharge stormwater only to groundwater with no discharge to surface waters of the state under any condition.
- Office buildings or administrative parking lots from which stormwater does not commingle with stormwater from areas associated with industrial activity.
- Facilities located on tribal lands or facilities that discharge stormwater to receiving waters subject to water quality standards of Indian tribes.
- Any facility authorized to discharge stormwater associated with industrial activity under an existing NPDES permit.
- Construction activities.
- Facilities that discharge to a water body with a control plan, unless the WA ISGP adequately provides the level of protection required by the control plan.

The WA ISGP conditionally authorizes certain nonstormwater discharges:[146]

- Discharges from firefighting activities.
- Fire protection system flushing, testing, and maintenance.
- Discharges of potable water, including water line flushing, provided that water line flushing must be dechlorinated prior to discharge.
- Uncontaminated air conditioning or compressor condensate.
- Landscape watering and irrigation drainage.
- Uncontaminated ground water or spring water.
- Discharges associated with dewatering of foundations, footing drains, or utility vaults where flows are not contaminated with process materials such as solvents.
- Incidental windblown mist from cooling towers that collects on rooftops or areas adjacent to the cooling tower.

The WA ISGP applies to air transportation facilities that have vehicle maintenance activity, equipment cleaning operations, or airport deicing operations.[147]

- Ecology defines "vehicle maintenance" as "the rehabilitation, mechanical repairing, painting, fueling, and/or lubricating of a motor-driven conveyance that transports people or freight, such as an automobile, truck, train, or airplane."[148]
- "Vehicle maintenance" includes mobile fueling.[149]

---

[142] *Wash. Indus. Stormwater Gen. Permit*, *supra* note 16, at 53.

[143] Modification Addendum to Fact Sheet: Appx. E Response to Public Comments on the Draft Permit Modification, at 8–9, WA ISGP (May 16, 2012), http://www.ecy.wa.gov/programs/wq/stormwater/industrial/permitdocs/iswgprtc051612.pdf.

[144] *Wash. Indus. Stormwater Gen. Permit*, *supra* note 16, at 6.

[145] *Id.* at 8–10.

[146] *Id.* at 29.

[147] *Id.* at 7.

[148] *Industrial Stormwater General Permit Frequently Asked Questions*, WASH. STATE DEP'T OF ECOLOGY, at 5, *available at* http://www.ecy.wa.gov/programs/wq/stormwater/industrial/ISGP%20FAQ%202013.pdf.

[149] *Id.*

- The 2012 WA ISGP modifications included: 1) changing the phrase "vehicle maintenance shops" to "vehicle maintenance activity," and 2) removing "material handling facilities" from the list of transportation facilities required to seek coverage under the WA ISGP.

Once a transportation facility has permit coverage, the permit applies to the entire footprint of the industrial facility. As stated by Ecology: "Once a transportation facility has permit coverage, the permit conditions for sampling, inspection and stormwater management practices are required in all areas of industrial activity—rather than only those areas where vehicle maintenance, equipment cleaning and airport de-icing occur."[150]

Monitoring Benchmarks or Effluent Limitations at Air Transportation Facilities and Any Associated Corrective Action Requirements

The WA ISGP establishes the following benchmark values that apply to all industrial facilities[151] (with a quarterly minimum sampling frequency):[152]

- Turbidity—25 NTU.
- pH—between 5.0 and 9.0.
- Oil sheen—no visible oil sheen.
- Copper, total:
- Western WA—14 ug/L.
- Eastern WA—32 ug/L.
- Zinc, total—117 ug/L.

The WA ISGP establishes the following benchmark values that apply to air transportation facilities[153] (quarterly minimum sampling frequency):[154]

- Ammonia—2.1 mg/L.
- BOD5—30 mg/L.
- COD—120 mg/L.
- Nitrate/Nitrite, as N—0.68 mg/L.

For airports where a single permittee uses, or a combination of permitted facilities use, more than 100,000 gallons of glycol-based deicing chemicals or 100 tons or more of urea on an average annual basis, monitoring is required for the additional four parameters (Ammonia, BOD5, COD, and Nitrate/Nitrite) in those outfalls that collect runoff from areas where deicing activities occur.[155]

The WA ISGP establishes three levels of corrective action requirements based on the frequency of benchmark value exceedances:[156]

- Level 1—Operational Source Control BMPs—for permittees that exceed any applicable benchmark value:

- Within 14 days of receipt of sampling results that indicate a benchmark exceedance, the permittee must: 1) conduct an inspection to investigate the cause of the exceedance, 2) review the facility's SWPPP and ensure that it fully complies with the WA ISGP SWPPP requirements and contains the correct BMPs from the applicable Stormwater Management Manual, and 3) make appropriate revisions to the SWPPP to include additional Operational Source Control BMPs with the goal of achieving the applicable benchmark values in future discharges.

- Summarize the Level 1 Corrective Actions in the annual report.

- Level 1 deadline: The permittee shall fully implement revised SWPPP as soon as possible but no later than the due date for the Discharge Monitoring Report (DMR) for the quarter in which the benchmark was exceeded.[157]

- Level 2—Structural Source Control BMPs—for permittees that exceed an applicable benchmark value for a single parameter for any two quarters during a calendar year:[158]

- Review the facility's SWPPP and ensure that it fully complies with the WA ISGP SWPPP requirements.

- Make appropriate revisions to the SWPPP, to include additional Structural Source Control BMPs, with the goal of achieving the applicable benchmark values in future discharges.

[150] *Id.*

[151] *Wash. Indus. Stormwater Gen. Permit*, *supra* note 16, at 25.

[152] *Id.* at 24 (explaining that permittees sampling more than once per quarter are required to average the sample results for each parameter and compare the average value to the benchmark to determine if the discharge has exceeded a benchmark value).

[153] *Id.* at 26.

[154] *Wash. Indus. Stormwater Gen. Permit*, *supra* note 16, at 25 n.12.

[155] *Id.* at 27.

[156] *Id.* at 33–37.

[157] *Id.* at 38. Quarterly DMR due dates are May 15 (Jan.–Mar. reporting period), Aug. 14 (Apr.–June reporting period), Nov. 14 (July–Sept. reporting period), and Feb. 14 (Oct.–Dec. reporting period).

[158] Alternatively, the permittee may skip Level 2 and complete a Level 3 Corrective Action.

- Summarize the Level 2 Corrective Actions planned or taken in the annual report.

- Level 2 deadline: The permittee shall fully implement the revised SWPPP as soon as possible, but no later than August 31 of the following year.

- For the year following the calendar year in which the permittee triggered a Level 2 Corrective Action, benchmark exceedances for the same parameter do not count toward additional Levels 2 or 3 Corrective Actions.

• Level 3—Treatment BMPs—for permittees that exceed an applicable benchmark value for a single parameter for any three quarters during a calendar year:

- Review the SWPPP and ensure that it fully complies with WA ISGP SWPPP requirements.

- Make appropriate revisions to the SWPPP, to include additional Treatment BMPs, with the goal of achieving the applicable benchmark values in future discharges. SWPPP revisions shall include additional operational or structural source control BMPs if necessary for proper performance and maintenance of Treatment BMPs. A licensed professional engineer, geologist, hydrogeologist, or Certified Professional in Storm Water Quality (CPSWQ) must design and stamp the portion of the SWPPP that addresses stormwater treatment structures or processes. In addition, the permittee must submit an engineering report, plans and specifications, and an operations and maintenance manual to Ecology for review before installing treatment BMPs that require site-specific design or sizing of structures, equipment, or processes to collect, convey, treat, reclaim, or dispose of industrial stormwater.

- Summarize Level 3 Corrective Actions planned or taken in the annual report; summary must include information on how monitoring, assessment, or evaluation information was or will be used to determine whether existing Treatment BMPs will be modified or enhanced, or if new or additional treatment BMPs will be installed.

- Level 3 deadline: The permittee shall fully implement the revised SWPPP as soon as possible but no later than September 30 of the following year.

- For the year following the calendar year in which the permittee triggered a Level 3 Corrective Action, benchmark exceedances for the same parameter do not count toward additional Level 2 or 3 Corrective Actions.

Identify Any Required or Recommended BMPs

A facility's SWPPP must specify BMPs necessary to:[159]

• Provide all known, available, and reasonable methods of prevention, control, and treatment of stormwater pollution.

• Ensure that a stormwater discharge does not cause or contribute to a violation of the water quality standards.

• Comply with applicable federal technology-based treatment requirements under 40 C.F.R. § 125.3 (2014).

Operational Source Control BMPs[160]

• Good Housekeeping:

- Vacuum paved surfaces with a vacuum sweeper to remove accumulated pollutants at least once per quarter.

- Identify and control all on-site sources of dust to minimize stormwater contamination from the deposition of dust on areas exposed to precipitation.

- Inspect and maintain bag houses monthly to prevent the escape of dust from the system; immediately remove any accumulated dust at the base of exterior bag houses.

- Keep all dumpsters under cover or fit with a lid that must remain closed when not in use.

• Preventative Maintenance:

- Clean catch basins when the depth of debris reaches 60 percent of the sump depth; in addition, the permittee must keep the debris surface at least 6 in. below the outlet pipe.

- Inspect all equipment and vehicles during monthly site inspections for leaking fluids such as oil, antifreeze, etc.; take leaking equipment and vehicles out of service or prevent leaks from spilling on the ground until repaired.

- Immediately clean up spills and leaks.

Spill Prevention and Emergency Cleanup Plan (SPECP)

- Store all chemical liquids, fluids, and petroleum products on an impervious surface that is surrounded with a containment berm or dike that is capable of containing 10 percent of the total

[159] *Wash. Indus. Stormwater Gen. Permit*, supra note 16, at 13.

[160] *Id.* at 16–19.

enclosed tank volume or 110 percent of the volume contained in the largest tank, whichever is greater.

- Prevent precipitation from accumulating in containment areas with a roof or equivalent structure, or include a plan on how the permittee will manage and dispose of accumulated water if a containment area cover is not practical.
- Locate spill kits within 25 ft of all stationary fueling stations, fuel transfer stations, and mobile fueling units.
- Do not lock shut-off fueling nozzles in the open position; do not top off tanks being refueled.
- During fueling activities, block, plug, or cover storm drains that receive runoff from areas where fueling occurs.
- Use drip pans or equivalent containment measures during all petroleum transfer operations.
- Locate materials, equipment, and activities so that leaks are contained in existing containment and diversion systems.
- Use drip pans and absorbents under or around leaky vehicles and equipment or store vehicles and equipment indoors where feasible; drain fluids from equipment and vehicles prior to on-site storage or disposal.
- Maintain a spill log that includes the following information for chemical and petroleum spills: date, time, amount, location, reason for spill, date and time cleanup was completed, notifications made, and staff involved.

Structural Source Control BMPs[161]

- A facility's SWPPP shall include Structural Source Control BMPs listed as "applicable" in Ecology's Stormwater Management Manual or other guidance documents or approved manuals.
- Minimize exposure of manufacturing, processing, and material storage areas to rain, snow, snowmelt, and runoff either by locating them inside or protecting them with storm resistant coverings.
- Use grading, berming or curbing to prevent runoff of contaminated stormwater flows and divert run-on away from areas with industrial materials or activities.
- Perform all cleaning operations indoors, under cover, or in bermed areas that prevent stormwater runoff and run-on and that also capture any overspray.
- Ensure that all washwater drains to a collection system that directs the washwater to further treatment or storage and not to a stormwater drainage system.

Treatment BMPs[162]

- Employ oil and water separators, booms, skimmers, or other methods to eliminate or minimize oil and grease contamination of stormwater discharges.
- Obtain Ecology approval before beginning construction or installation of all treatment BMPs that include the addition of chemicals to provide treatment.

Stormwater Peak Runoff Rate and Volume Control BMPs[163]

- Facilities with new development or redevelopment shall evaluate whether flow control BMPs are necessary to satisfy the state's requirement to provide all known, available, and reasonable methods of prevention, control, and treatment of stormwater pollution and to prevent violations of water quality standards.

Erosion and Sediment Control BMPs[164]

- Implement and maintain detention or retention ponds or traps, vegetated filter strips, bioswales, or other permanent sediment control BMPs to minimize sediment loads in stormwater discharges.
- Implement and maintain filtration BMPs to remove solids from catch basins, sumps, or other stormwater collection and conveyance system components (i.e., filter socks, modular canisters, sand filtration, centrifugal separators, etc.).

Summarize Any Administrative or Judicial Decisions Interpreting Washington's Industrial Stormwater General Permit

Multiple parties, including a number of regulated companies and various environmental groups, filed administrative appeals with PCHB of the WA ISGP issued by Ecology in October 2009. PCHB identified 71 legal issues that governed the proceedings and controlled the issues on appeal. PCHB ultimately issued seven orders on

[161] *Id.* at 19.

[162] *Id.* at 20.

[163] *Id.*

[164] *Id.*

summary judgment addressing many of the issues raised by the parties, while requiring other issues to proceed to hearing.[165] Following is a summary of PCHB's resolution of four issues that appear to be most relevant to the scope of work of this project for ACRP.

• Whether Ecology's post-permit issuance of an errata sheet eliminating permit coverage requirements for transportation facilities that have material handling facilities was invalid.[166]

• PCHB found the errata sheet change made the terms of the permit consistent with the applicable definition for transportation facilities in 40 C.F.R. § 122.26(b)(14)(viii) and granted summary judgment to Ecology on this issue.

• Whether the WA ISGP requires facilities to install BMPs that are not described in either the Western Washington or Eastern Washington Stormwater Management Manuals, and if so, whether the requirement is vague, unreasonable, and unlawful.[167]

- PCHB found that the WA ISGP lawfully and validly requires permittees to install BMPs beyond those required in the Stormwater Management Manuals. Furthermore, according to PCHB, the WA ISGP term requiring permittees taking Level 3 corrective action response to implement BMPs beyond those in the Stormwater Management Manuals "is a necessary and reasonable part of the adaptive management response required of [the] permit." [168] PCHB granted summary judgment to Ecology and denied Boeing's motion to reconsider this issue.[169]

• Whether the permit's failure to establish numeric water quality-based effluent limitations is invalid.[170]

- PCHB found that Ecology reasonably determined that application of BMPs would be effective in achieving compliance with water quality standards after performing a generalized reasonable potential analysis on industrial stormwater discharges. Having made this determination, PCHB found that Ecology was not required to develop numeric effluent limitations, except for discharges to impaired water bodies, as required under Washington Revised Code Section 90.48.555(7). PCHB granted summary judgment to Ecology, except as to the development of numeric effluent limitations for certain discharges to impaired water bodies.

• Whether requiring source control and treatment BMPs "with the goal of achieving the applicable benchmark" without defining specific BMPs or the level of adaptive management necessary to meet the state goal is valid.[171]

- PCHB found that "[t]here is no legal requirement for Ecology to define in the [WA] ISGP the precise BMPs a permittee must install under any given set of circumstances." PCHB also found that the WA ISGP "correctly places the burden on the permittee to meet [applicable] benchmarks through implementation of [] adaptive management response."[172] PCHB granted summary judgment to Ecology and denied Boeing's motion to reconsider this issue.[173]

3.2.6 Illinois

The Illinois Environmental Protection Agency (IEPA) administers the Ill. GP. The current general permit became effective May 1, 2009, and expired on April 30, 2014. IEPA's Web site does not contain information regarding renewal of the current general permit or issuance of a new permit. However, the IEPA Web site contains several links to EPA's Web site (e.g., for guidance on developing SWPPPs and BMPs), and it is possible that renewal of the Illinois general permit may be triggered by renewal of EPA's MSGP for stormwater discharges associated with industrial activity.

---

[165] *See generally* Copper Dev. Assoc., Inc., et al. v. Wash. Dep'. of Ecology, Wash. Pollution Control Hearings Board, PCHB Nos. 09-135 through 09-141, *Findings of Fact, Conclusions of Law, and Order,* Apr. 25, 2011 (Findings of Fact, Conclusions of Law, and Order), at 2. (Available on the Washington Pollution Control Hearings Board Web site: http://www.eluho.wa.gov/Board/PCHB.)

[166] Copper Dev. Assoc., Inc., et al. v. Wash. Dep't of Ecology, Wash. Pollution Control Hearings Board, PCHB Nos. 09-135 through 09-141, *Order on Summary Judgment (Legal Issues No. 15, 24–25, 31, 44, 46–48, 56, 61–62, and 65–67)*, Jan. 5, 2011 (SJ Order) at 7–8. (Available on the Washington Pollution Control Hearings Board Web site: http://www.eluho.wa.gov/Board/PCHB.)

[167] *Id.* at 12–14.

[168] *Id.* at 14.

[169] Findings of Fact, Conclusions of Law, and Order, at 73.

[170] SJ Order at 16–17.

[171] *Id.* at 18–20.

[172] *Id.* at 19.

[173] Findings of Fact, Conclusions of Law, and Order, at 73.

Identify Any Independent State Legal Authority for Regulating Stormwater Discharges Associated with Industrial Activity

IEPA issues state NPDES permits pursuant to the Illinois Environmental Protection Act.[174]

The Illinois NPDES regulations are contained in the Illinois Administrative Code.[175] The regulations authorize IEPA to ensure compliance with federal standards, unless more stringent limitations are applicable.[176] The regulations also set forth water quality standards for waters of the state.[177]

Identify Any Provisions Distinguishing Between the Obligations of a Facility Owner and Operator

The research found no provisions distinguishing between the obligations of a facility owner and operator in Illinois statutes or regulations, or in the Ill. GP.

Describe Any Limitations on Scope of Permit Coverage at Air Transportation Facilities

The Illinois general industrial stormwater permit contains a number of general limitations on the scope of permit coverage. The general permit does not apply to:

- Process wastewater or cooling water.
- Stormwater discharges associated with industrial activity from access roads or rail lines.
- Hazardous waste treatment, storage, or disposal facilities.
- Construction site activity.
- Discharge of hazardous substances or oil resulting from an on-site spill.
- Nonstormwater discharges, except that the following may be authorized:
  - Discharges from fire-fighting activities.
  - Fire hydrant flushing.
  - Waters used to wash vehicles without detergents.
  - Waters used to control dust.
  - Potable water sources.
  - Irrigation drainage and lawn watering.
  - Routine external building wash-down without detergents.
  - Pavement washwaters where toxic or hazardous material spills or leaks have not occurred and where no detergents are used.
  - Air conditioning and refrigerant condensate.

For air transportation facilities, the scope of coverage under the Illinois general permit is limited to discharges from the following operations: 1) vehicle maintenance, including rehabilitation, mechanical repairs, painting, fueling, and lubrication; 2) equipment cleaning; and 3) airport deicing.[178]

Monitoring Benchmarks or Effluent Limitations at Air Transportation Facilities and Any Associated Corrective Action Requirements

The Illinois NPDES regulations provide: "No person to whom an NPDES Permit has been issued may discharge any contaminant in his effluent in excess of the standards and limitations for that contaminant which are set forth in his permit."[179] The regulations also establish effluent standards of general applicability that address:[180]

- Deoxygenating wastes.
- Bacteria.
- Total ammonia nitrogen (ammonia standards are further addressed in Title 35, Part 355).
- Phosphorous.
- pH.
- Mercury.
- Additional specified metals, oils, and phenols.[181]

However, the Illinois general permit for industrial stormwater discharges does not contain specific effluent standards or limitations.

The Illinois industrial stormwater general permit also does not contain specific corrective action requirements or specify compliance schedules. However, the general permit does require reporting within 24 hours "any noncompliance which may endanger health or the environment."[182]

---

[174] 415 ILL. COMP. STAT. 5/11 to 5/13.7 (2014).

[175] ILL. ADMIN. CODE tit. 35, §§ 309.101 to 309.191 (2014).

[176] *Id.* § 309.141(a)–(g).

[177] *Id.* §§ 302.201 to 302.213.

[178] *Gen. NPDES Permit for Storm Water Discharges from Industrial Activities*, *supra* note 19, at 2–3.

[179] ILL. ADMIN. CODE tit. 35, § 304.141(a) (2014).

[180] *Id.* §§ 304.101 to 304.142.

[181] *Id.* § 304.124.

[182] *Gen. NPDES Permit for Storm Water Discharges from Constr. Site Activities*, Attachment H, *supra* note 19.

Identify Any Required or Recommended BMPs

The Illinois industrial stormwater general permit defines BMPs as "schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the State…includ[ing] treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage."[183]

The only BMP specified in the Illinois industrial stormwater general permit for air transportation facilities is that if storage piles of salt are used for deicing, such piles must be enclosed or covered to prevent exposure to precipitation, unless there are no stormwater discharges from the pile.[184]

The Illinois industrial stormwater general permit requires BMPs to be taken into account in preparing an SWPPP for a facility. SWPPP requirements for BMPs include the following:[185]

- Describe and ensure implementation of practices that are to be used to reduce pollutants in stormwater discharges.
- Provide narrative descriptions of the following:
  - Nature of industrial activities conducted at site.
  - Materials, equipment, and vehicle management practices employed to minimize contact of significant materials with the stormwater discharges.
  - Existing or future structural and nonstructural control measures and practices to reduce pollutants in stormwater discharges.
  - Industrial stormwater discharge treatment facilities.
  - Methods of onsite storage and disposal of "significant materials."[186]
  - Describe stormwater management controls to be implemented, including:
  - Stormwater pollution prevention personnel.
  - Preventive maintenance procedures and frequencies.
  - Good housekeeping.
  - Spill prevention and response.
- Stormwater management practices, including consideration of the following:
  - Containment.
  - Oil and grease separation.
  - Debris and sediment control.
  - Waste chemical disposal.
  - Stormwater diversion.
  - Covered storage or manufacturing areas.
  - Mercury switch removal and recycling.
  - Stormwater reduction.
  - Sediment erosion prevention.
  - Employee training.
  - Inspection procedures.
- Describe appropriate elements of other program requirements, including: 1) Spill Prevention Control and Countermeasures Plans required under CWA Section 311 and implementing regulations, and 2) Best Management Programs under 40 C.F.R. § 125.100.

Summarize Any Administrative or Judicial Decisions Interpreting Illinois' General Industrial Stormwater Permit

The research did not find any Illinois administrative decisions or case law interpreting the Ill. GP or EPA regulations regarding stormwater discharges associated with industrial activities at air transportation facilities.

3.2.7 Texas

The TCEQ administers the NPDES permit program in Texas. The current Texas Pollutant Discharge Elimination System (TPDES) General Permit for Stormwater Discharges Associated with Industrial Activiy (Tx. GP) was issued effective August 13, 2011, and expires on August 13, 2016.

Identify Any Independent State Legal Authority for Regulating Stormwater Discharges Associated with Industrial Activity

TCEQ is authorized to issue NPDES permits pursuant to Texas Water Code Section 26.027, and Texas Water Code Section 26.040 specifically authorizes TCEQ to issue general NPDES permits. Texas Water Code Section 26.029 provides that permit conditions shall include permit duration, location of point of discharge, the maximum quantity of waste allowed to be discharged, and monitoring and reporting requirements.

TCEQ's regulations governing the state's NPDES permit program are set forth in Title 30

[183] *Id.*

[184] *Id.* at 4.

[185] *Id.* at 6–9.

[186] *Id.* at 11.

of the Texas Administrative Code. The regulations provide a 5-year term for general permits, and further provide that if a general permit is not renewed, the discharger must apply for an individual permit.[187] TCEQ has adopted the effluent guidelines and standards in EPA's regulations at 40 C.F.R., unless such federal guidelines and standards are less stringent than those established by the Texas Water Code or the TCEQ regulations.[188] TCEQ has also adopted the 40 C.F.R. criteria and standards for imposing technology-based treatment requirements under CWA Section 301(b) and Section 402, as well as the 40 C.F.R. effluent standards and prohibitions for toxic pollutants.[189]

Identify Any Provisions Distinguishing Between the Obligations of a Facility Owner and Operator

The research found no provisions distinguishing between the obligations of a facility owner and operator in the Texas Water Code or the TCEQ regulations. With respect to air transportation facilities, the Tx. GP provides:

> Airport authorities and airport tenants are encouraged to work in partnership to develop and implement a [SWPPP]. Tenants of the airport facility include air passenger or cargo companies, fixed based operators, and other parties who have contracts with the airport authority to conduct business operations on airport property and whose operations result in storm water discharges associated with industrial activity. *Even with a shared [SWPPP], each entity at an airport that meets the applicability requirements of this permit is required to obtain permit coverage*.[190]

The Texas industrial stormwater general permit further provides that if the airport authority, tenants, and other FBOs share an SWPPP, then the tenants and FBOs that conduct deicing operations must provide the airport authority with a record of the types and monthly quantities of deicing chemicals that the permittee uses (including MSDS); the permit states that this requirement applies to all deicing chemicals, in addition to glycols and urea (e.g., potassium acetate).[191]

Limitations on Scope of Permit Coverage at Air Transportation Facilities

The Tx. GP sets forth a number of general limitations on the scope of permit coverage.[192] Specifically, the general permit is not applicable to:

- Return flows from irrigated agriculture or agricultural stormwater runoff.[193]
- Discharges authorized by another TPDES permit, unless:
  - The discharge meets requirements for coverage under the general permit.
  - The other permit does not contain numeric water quality-based effluent limitations for the discharge.
  - BMP requirements of the other permit are continued as part of SWPPP.
  - Continued coverage under the other permit is not required, as determined by the Executive Director of TCEQ.
  - A previous application or permit was not denied, terminated, or revoked as a result of enforcement or water quality-related concerns.

- Stormwater discharges from construction activity, unless the combined stormwater discharges from industrial activity and construction site runoff meet one of the following criteria: 1) authorized under a separate TDPES permit, 2) authorized under a separate NPDES permit, or 3) TPDES or NPDES permit coverage is not required.
- Stormwater discharges for salt storage piles.
- Stormwater discharges mixed with nonstormwater ones, unless:
  - The nonstormwater source is authorized under a separate TPDES permit, or
  - The nonstormwater source is one of the following: 1) emergency firefighting activities and uncontaminated fire hydrant flushings; 2) potable water sources; 3) lawn watering and similar irrigation drainage; 4) routine external washing of buildings (without use of detergents or other chemicals); 5) uncontaminated air conditioning, compressor, and steam condensate, and condensate from outside storage of refrigerated gases or liquids; 6) foundations or footing drains where flows are not contaminated with pollutants; 7) uncontaminated water used for dust suppression; 8) springs and other uncontaminated ground wa-

[187] 30 TEX. ADMIN. CODE § 205.5 (2014).

[188] *Id.* § 305.541.

[189] *Id.* §§ 308.1, 314.1.

[190] *Gen. Permit to Discharge Under the Tex. Pollutant Elimination Sys.*, *supra* note 20, at 131.

[191] *Id.* at 130.

[192] *Id.* at 26–29.

[193] *See id.* at 17 (introductory paragraph).

ter; and 9) incidental windblown mist from cooling towers.

- Discharges that would cause or contribute to a violation of water quality standards, or that would fail to protect and maintain existing designated uses of receiving waters.
- Discharges of constituents of concern to impaired water bodies for which there is a TMDL, unless the discharges are consistent with the approved TMDL.

In addition, the general permit does not authorize discharges that would adversely affect a listed endangered or threatened species or its critical habitat. The general permit provides that additional limitations may apply to discharges to the Edwards Aquifer Recharge Zone or to specific watersheds and water quality areas.[194]

The Tx. GP contains certain limitations specific to air transportation facilities.[195]

- The general permit applies to stormwater discharges from the following activities:
  - Air Transportation, Scheduled (SIC Code 4512).
  - Air Courier Services (SIC Code 4513).
  - Air Transportation, Nonscheduled (SIC Code 4522).
  - Airports, Flying Fields, and Airport Terminal Services, including aircraft maintenance and fueling (SIC Code 4581).

- Permit coverage is required only for stormwater discharges from areas where the following activities are performed:
  - Vehicle maintenance, including rehabilitation, mechanical repairs, painting, fueling, and lubrication.
  - Equipment cleaning operations.
  - Deicing operations (including anti-icing, unless otherwise indicated).

- Applies to runoff from materials storage or handling areas but does not authorize discharge of process wastewater from material storage or handling areas, including contaminated stormwater.
- Does not authorize discharge of wastewater associated with washing aircraft, ground vehicles, runways, or equipment
- Does not authorize dry weather discharge of deicing chemicals (discharge resulting from snowmelt is not dry weather discharge).

Monitoring Benchmarks or Effluent Limitations at Air Transportation Facilities, and Any Associated Corrective Action Requirements

The Texas general permit for stormwater discharges associated with industrial activities contains daily maximum numeric effluent limitations for "hazardous metals" that are applicable to all industry sectors.[196] The numeric effluent limitations for the following metals, in mg/L, apply to discharges to inland and tidal waters, unless otherwise indicated:

- Arsenic: 0.3.
- Barium: 4.0.
- Cadmium: 0.2 (inland); 0.3 (tidal).
- Chromium: 5.0.
- Copper: 2.0.
- Lead: 1.5.
- Manganese: 3.0.
- Mercury: 0.01.
- Nickel: 3.0.
- Selenium: 0.2 (inland); 0.3 (tidal).
- Silver: 0.2.
- Zinc: 6.0.

Annual monitoring is required for these metals, prior to December 31 for each annual monitoring period, and the results must be recorded on a Discharge Monitoring Report (DMR). A copy of the DMR must be retained at the facility or made readily available for review at the request of the TCEQ or local pollution control agency, by March 31 following the annual monitoring period, except that the DMR must be submitted to the TCEQ if the results indicate a violation of one or more numeric effluent limitations.

A permittee may qualify for a waiver from the monitoring requirement for one or more of the above metals by certifying that the facility does not use a raw material or produce an intermediate or final product that contains the metals, or that raw materials, intermediate products, or final products containing a hazardous metal are never exposed to stormwater or runoff.

The Tx. GP contains sector-specific benchmark monitoring requirements for air transportation facilities.[197]

[194] *Id.* at 31.

[195] *Id.* at 128–29.

[196] *Id.* at 55–58.

[197] *Id.* at 131–32.

• Benchmark monitoring is required only for permittees conducting deicing activities that have used more than 100 tons of urea, or more than 100,000 gallons of ethylene glycol, in any calendar year in the 3 years prior to submittal of a notice of intent for general permit. Applicable volumes of deicing materials refer to the combined activities and usage at the airport as a whole, not independently to each carrier or operator.
• Sampling is not required of a permittee who does not use the listed chemicals, even if the airport meets volume criteria triggering monitoring.
• Sampling is required at all outfalls that discharge runoff from areas where deicing with urea or ethylene glycol is performed at an airport.
• Permittees required to conduct monitoring must collect total number of benchmark samples required for the year during the deicing season, when deicing activities are occurring.
• Benchmark values:
  - COD—60mg/L.
  - Ammonia-Nitrogen—2.5 mg/L.
  - pH—6.0-9.0

The Tx. GP contains the following corrective action requirements.[198]

• Within 24 hours of becoming aware of noncompliance with any effluent limit that may endanger human health or safety or the environment, the permittee must report the noncompliance to the TCEQ orally or by fax.
• Within 5 working days of becoming aware of noncompliance, permittee must submit a written report to the TCEQ containing:
  - Description of the noncompliance and its cause.
  - Potential danger to human health or safety or the environment.
  - Period of noncompliance, including exact dates and times.
  - Anticipated time the noncompliance is expected to continue, and
  - Steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance, and to mitigate its adverse effects.

• Any violation that deviates from the permitted effluent limitation by more than 40 percent must be reported in writing to TCEQ within 5 working days. Other noncompliance must be reported in writing to the TCEQ as follows:
  - Noncompliance with the effluent limitation for a discharge subject to federal numeric effluent limitations guidelines[199] must be recorded on a DMR and submitted to the TCEQ by March 31 of the following year
  - Noncompliance with the effluent limit for hazardous metals identified in the general permit must be recorded in a DMR and reported at least once per year.
  - Any other noncompliance with the general permit must be reported to the TCEQ by March 31 following the calendar year in which the noncompliance occurred.

• For exceedances of benchmark values, the facility's Pollution Prevention Team must investigate the cause and document the results of its investigation in the SWPPP within 90 days of the sampling event where the exceedance was discovered.[200] The investigation must identify:
  - Any additional sources of pollution, such as spills, that may have occurred.
  - Necessary revisions to the "Good Housekeeping Measures" section of the SWPPP.
  - Additional BMPs, including a schedule to install or implement the BMPs.
  - Other parts of the SWPPP for which revisions are appropriate.

The Texas industrial stormwater general permit does not contain additional corrective action requirements for exceedances of the permit's numeric effluent limitations for "hazardous metals" or for exceedances of its monitoring benchmark values specifically applicable to air transportation facilities.

Identify Any Required or Recommended BMPs

The Texas industrial stormwater general permit recommends the following BMPs common to all covered industrial activities:

• Grading, berming, and curbing to prevent runoff of contaminated flows and divert run-on away from these areas.
• Locate materials, equipment, and activities in such a way that leaks are contained in existing containment and diversion systems.
• Clean up leaks and spills promptly using dry methods.

[198] *Id.* at 66–67.

[199] 40 C.F.R. §§ 400-471 (2014).

[200] *Gen. Permit to Discharge Under the Tex. Pollutant Elimination Sys.*, *supra* note 20, at 71.

• Use drip pans and absorbents under or around leaky vehicles and equipment or store indoors where feasible.

• Use spill/overflow protection equipment.

• Drain fluids from equipment and vehicles prior to on-site storage or disposal.

• Perform cleaning operations indoors, within storm resistant shelters, or within bermed areas that prevent runoff and run-on and capture overspray.

• Ensure waste, garbage, and debris are not discharged to receiving waters.

• Minimize generation of dust and off-site tracking of raw materials, intermediate products, final products, or waste materials.

• Divert, infiltrate, reuse, contain, or otherwise reduce stormwater runoff.

The Texas industrial stormwater general permit does not require or recommend specific BMPs for air transportation facilities. However, the general permit specifies sector-specific SWPPP requirements, which contain narrative description of certain BMP requirements.

The Texas industrial stormwater general permit contains SWPPP requirements common to all covered industrial activities, as well as sector-specific SWPPP requirements. The common SWPPP requirements that related to consideration of BMPs include the following.[201]

• Establish practices and control measures to prevent or reduce pollution in stormwater discharges and ensure compliance wither the terms of the general permit:

- Ensure that areas of the facility that contribute or potentially contribute pollutants to stormwater discharges are maintained in a clean and orderly manner

- Good housekeeping measures: 1) must include measures to eliminate or reduce exposure of garbage and refuse materials to precipitation or runoff prior to disposal; 2) typical measures include activities performed on a daily basis during course of normal work activities, and 3) must be incorporated as part of the employee training program.

• Address soil erosion and sedimentation by evaluating, at a minimum, use of the following: 1) soil stabilization through vegetative cover, 2) contouring slopes, 3) paving, and 4) installation of structural controls.

• Establish a maintenance program for stormwater structural controls, including velocity dissipation devices. Structural controls must be inspected regularly, and maintenance frequencies must be established for each of the structural controls.

• Spill prevention and response measures:

- Identify areas where spills could contribute pollutants to stormwater discharges.

- Develop and implement procedures to minimize or prevent contamination of stormwater from spills.

- Require drums, tanks, and other containers to be clearly labeled.

- Clearly mark hazardous waste containers that require special handling, storage, use, and disposal.

- Develop and implement specific spill prevention, detection, and clean-up procedures and techniques.

- Develop procedures to notify appropriate facility personnel, emergency response agencies, public health or drinking water supply agencies, and other regulatory agencies of a reportable quantity spill or other release of oil or a hazardous substance.

- Make available to facility personnel materials and equipment necessary for spill clean up.

- Develop and maintain an inventory of spill clean-up materials and equipment.

- Incorporate the above measures as part of the employee training program.

The Texas industrial stormwater general permit contains the following additional SWPPP requirements for air transportation facilities that relate to consideration of BMPs.[202]

• Site Map, which must include the following information:

- Aircraft and runway deicing operations.

- Fueling stations.

- Aircraft, ground vehicle, and equipment maintenance and cleaning areas.

- Storage areas for aircraft, ground vehicles, and equipment awaiting maintenance.

- Location of each tenant at the site that conducts industrial activity subject to coverage under this section of the general permit.

• Potential pollutant sources, including:

- Maintenance and cleaning of aircraft, runways, ground vehicles, and equipment.

[201] *Id.* at 42–49.

[202] *Id.* at 129–31.

- Deicing of aircraft and runways.
- Record of types and monthly quantities of deicing chemicals used by permittee.

• Good housekeeping measures, including:
- Minimize potential for stormwater contamination from areas used for maintenance of aircraft, ground vehicles, and equipment.
- Clearly demarcate aircraft, ground vehicle, and equipment cleaning areas on the ground using signage or other appropriate means, and minimize the potential for contamination of stormwater runoff from these areas.
- Store all aircraft, ground vehicles, and equipment awaiting maintenance in designated areas only, and minimize the potential for contamination of stormwater runoff from these areas.
- Minimize the potential for stormwater contamination from materials storage areas, and maintain in good condition and plainly label any containers of stored materials.
- Minimize, and where feasible eliminate, the use of urea and glycol-based deicing chemicals, in order to reduce the aggregate amount of deicing chemicals used or lessen the environmental impact of such chemicals.
- Minimize the potential for stormwater contamination from runways as a result of deicing operations by evaluating and adjusting as necessary the application rates of deicing materials, consistent with considerations of flight safety.
- Evaluate the application rates for deicing chemicals, and adjust as necessary, consistent with considerations of flight safety, to help minimize contamination of stormwater runoff from aircraft deicing operations.
- Identify the deicing season by determining the seasonal timeframe during which deicing activities typically occur at the facility:
- Implementation of control measures, including any BMPs, facility inspections, and monitoring must be conducted with particular emphasis throughout the defined deicing season.
- If the deicing chemical usage thresholds of 100,000 gallons of glycol or 100 tons of urea are met, the identified deicing season is the timeframe during which the required benchmark monitoring must be conducted.

• Consider structural controls, including:
- Capturing and containing chemicals used in deicing or anti-icing activities.
- Containing activities to specific areas where runoff may be captured and either treated, hauled away for disposal, or disposed of to the sanitary sewer.
- Narrative description of control measures considered, including rationale for selecting or rejecting alternatives.

• Facilities that conduct deicing or anti-icing operations must evaluate operating procedures on an annual basis to consider alternative practices that may reduce the overall amount of chemicals used, or otherwise lessen the environmental impact of the pollutant. Annual review must include consideration of alternative chemicals used for deicing and anti-icing. The SWPPP must include narrative discussion of the annual alternative practices review that includes a rationale for changes in practices or the decision to retain existing practices. BMPs must be developed and implemented to ensure against over-application of chemicals used as a part of deicing and anti-icing operations.
• Inspection Requirements:
- Routine facility inspection must occur at least once per week during deicing or anti-icing activities in areas where these operations take place, and records of these inspections must be maintained.
- Comprehensive site inspection must be conducted annually using only qualified personnel, during periods of actual deicing operations, if possible. If this is not practicable during active deicing because of the weather, inspection should occur during deicing season and when deicing materials and equipment are in place.

Summarize Any Administrative or Judicial Decisions Interpreting Texas's MSGP Industrial Stormwater Permit

The research did not find any TCEQ administrative decisions or case law interpreting EPA's stormwater regulations or the Tx. GP.[203]

3.3 Airport Survey Results

3.3.1 Telephone Interviews

Five airports—SFO, JFK, Sea-Tac, O'Hare, and DFW—were selected for telephone interviews. SFO declined to participate in an interview.

Phone interviews were conducted using the following questions:

[203] The TCEQ administrative decisions are not available on the agency's Web site.

- Please identify the permittee under the state's general permit governing stormwater discharges associated with industrial activity with respect to stormwater discharges at or from the airport. That is, identify the entity that applied for the permit (or completed the notice of intent) and obtained coverage under the permit.
- Please identify any co-permittees (i.e., any other parties listed as operators or discharges on the permit application or notice of intent or designated as a responsible party under the terms of the permit).
- Does the airport authority retain a consultant to prepare and update its SWPPP, to conduct required sampling, to prepare required reports, and to recommend and/or implement BMPs as may be necessary in response to any exceedance of permit benchmarks for specified water quality parameters? If not, is the airport authority staff responsible for ensuring that the airport complies with stormwater permit requirements, including preparation and implementation of the SWPPP?
- Are individual airport tenants (i.e., airlines and air cargo companies) responsible for preparing or implementing components of the SWPPP, including BMPs, for the specific areas of the airport occupied or used by the tenant?
- How does the airport ensure that airport tenants comply with stormwater permit requirements or the applicable provisions of the SWPPP, including implementation of BMPs? Are airport tenants required to comply with such requirements by the terms of their leases (i.e., by contract)? What remedies does the airport authority have if a tenant fails to perform its stormwater management responsibilities?
- Has any regulatory agency issued a notice of violation or taken any other enforcement action for any alleged failure to comply with the terms of the general permit for stormwater discharges at or from the airport? If so, did the agency issue such a notice to or take such an action against only the airport authority, or did the agency also name any tenants of the airport?
- Has the airport authority or any of its tenants (to the extent known) ever applied for coverage (i.e., completed a notice of intent) under the state's general permit for stormwater discharges from construction sites with respect to site development activities at the airport? If so, has the state's general permit governing stormwater discharges from construction sites imposed any additional stormwater management requirements on stormwater discharges from the airport, or has it been sufficient for the airport to meet the requirements of the state's general permit governing stormwater discharges associated with industrial activity?
- Has the airport authority been notified by the municipality in which the airport is located that stormwater discharges at or from the airport are regulated under a stormwater permit governing discharges from the municipality's stormwater system? If so, has the municipality imposed any additional stormwater management requirements on stormwater discharges at or from the airport, or has it been sufficient for the airport to meet the requirements of the state's general permit governing stormwater discharges associated with industrial activity?

Summaries of interviews conducted with airport personnel from JFK, Sea-Tac, O'Hare, and DFW follow and are also summarized in Table 3 (see Attachment).

John F. Kennedy International Airport

The Port Authority is authorized to discharge stormwater at JFK in accordance with NYSDEC Permit No. 2-6308-0001/00016, SPDES No. NY-0008109. The Port Authority had requested that the state consider tenants as co-permittees; however, NYSDEC declined and the Port Authority is the sole permittee.

The Port Authority hires a consultant to assist the airport in complying with the SPDES permit, including SWPPP preparation and implementation. Each tenant or other entity that applies deicing chemicals is required by the permit to participate in the development of the SWPPP for the airport. The Port Authority requires each tenant to prepare their own SWPPP for its review. The permit requires tenants to provide the Port Authority with monthly summaries of deicing chemicals used and quantities applied. The Port Authority requires tenants that perform deicing operations to obtain an operating permit with the Port Authority, which details the procedures for conducting operations at the airport, including complying with all applicable laws and regulations. The Port Authority also works closely with the tenants in the preparation of the permit-required annual deicing report.

Tenant lease agreements with the Port Authority outline the rules for operation at the airport and require compliance with applicable laws and regulations. The Port Authority issues internal breach of rules violations to tenants for noncompliance with agreements. Currently, the Authority

does not have a fee structure in place for imposing fines on tenants for violations.

NYSDEC requires the Port Authority to apply as the permittee for construction projects at JFK. The Authority requires the contractor to prepare the Notice of Intent for the CGP, and the application is submitted jointly.

Seattle-Tacoma International Airport

The Port of Seattle is authorized to discharge stormwater at Sea–Tac in accordance with NPDES Waste Discharge Permit No. WA-002465-1. The Port of Seattle is named as the permittee.

The airport's permit consists of three parts: 1) industrial activities, 2) other activities, and 3) construction activities. The discharge requirements (constituents and limitations) for each of these parts are different.

Consultant support was used to develop the original SWPPP for the airport; however updates are made by the Port of Seattle. Consultants conduct the stormwater sampling and analysis and the Port of Seattle prepares and submits the Discharge Monitoring Reports (DMRs). BMPs are updated by the airport with consultant support when performance requirements dictate.

Airport tenants are responsible for implementing components of the SWPPP. Using industry standards, the Port of Seattle provides Water Pollution Prevention Plan (WPPP) guidance manuals (which are considered to be "mini-SWPPPs") to the tenants. These WPPPs are geared toward good housekeeping and operational and source controls.

The Port of Seattle manages risk associated with stormwater violations through terms and conditions of leases with tenants and contracts for construction projects. Airport leases contain conditions that allow the airport to inspect leaseholds at any time. Contract and lease language requires the tenants to abide by the airport rules and regulations. The Port of Seattle issues Corrective Action Reports to address violations and coordinates activities through the Lease Manager.

The Port of Seattle must report all deicing and anti-icing events of either aircraft or runways on an annual basis and must include the volumes of each type of deicing and anti-icing material used each day by each airline and the Permittee.

Permit violations occur in generally two types: 1) construction related turbidity and 2) pH variations at the outfalls. Other source-specific releases also occur occasionally. Tenants are not typically named by the regulator. The Port of Seattle is named and passes down corrective action costs and fines, if warranted, to the tenant or contractor responsible for a specific violation. However, there is one example of an agency going directly to a construction contractor for repeated violations and lack of response to airport corrective actions.

Part 3 of the NPDES Permit covers construction activities at the airport. The permit requires the Port of Seattle as the permittee to implement a programmatic SWPPP detailing all components of the airport's construction management program. The erosion and sediment control component must be attached to bid packages when seeking contractors to allow the contractor sufficient time to plan implementation. At construction sites for which a lease, easement, or other use agreement has been obtained from the permittee, the Port of Seattle as the permittee must be responsible for the implementation of an SWPPP. The permit requires the Port of Seattle to implement procedures for reviewing the SWPPP with contractors and subcontractors prior to initiating construction activities. While the Port of Seattle as the permittee is ultimately responsible for implementation of the SWPPP, both the permittee and the contractor/subcontractor may be held liable for violations of the permit conditions or the water quality standards.

The airport is a co-permittee (or secondary permittee) on a Phase 2 municipal stormwater permit. The Phase 2 permit area is the community bordering the airport, with some possible overlap. In addition, the airport occasionally has projects (e.g., consolidated rental car facility and off-site parking) that are negotiated with the regulators to be outside of the industrial activity of the airport. In these cases, a separate permit is issued.

Chicago O'Hare International Airport

The City of Chicago, Department of Aviation (CDA) is authorized to discharge stormwater at O'Hare in accordance with NPDES Permit IL00022S3. CDA is named as the permittee.

A consultant prepares the SWPPP and the BMPs for the airport. Stormwater monitoring is conducted by the airport and CDA prepares and submits monthly DMRs for each applicable outfall to IEPA. The CDA also provides IEPA with information on the deicing season including, but not limited to, the amount of deicers used, dates and location of deicer use, and the rain and snowfall amount. The deicing information is submitted with the quarterly compliance status report.

Individual airport tenants are responsible for implementing the BMPs developed for the airport. A few airport tenants have developed their own SWPPP and have obtained coverage under their own NPDES permit. CDA is required to facilitate independent inspections and monitoring procedures of airport tenants at least once per year to evaluate compliance with the SWPPP and NPDES Permit.

Airport Group International, which is the primary fueler at the airport, and the U.S. Postal Service hold individual NPDES Permits for their operations at the airport.

Construction projects at the airport are authorized in accordance with the Illinios General NPDES Permit for Storm Water Discharges from Construction Site Activities. CDA applies as the permittee for coverage under the CGP.

Dallas/Fort Worth International Airport

DFW and airport tenants are authorized to discharge stormwater under the TPDES MSGP. DFW is also authorized to discharge first flush stormwater and other permitted flows from seven individually permitted outfalls under TPDES Individual Permit No. WQ0001441 000. Those outfalls authorized under the Individual Permit are located downstream of many of the major stormwater outfalls supporting DFW's Central Terminal Area. Stormwater discharges at outfalls identified in the Individual Permit are authorized only under the Individual Permit and not the general permit for DFW. The airport is not subject to the stormwater monitoring and sampling requirements identified in the TPDES MSGP for outfalls covered under the Individual Permit. However, the airport is required to implement and maintain an SWPPP.

The airport is responsible for compliance with the Individual Permit, including reports, certifications, sampling, and updates to the SWPPP that are required to satisfy the permit requirements performed by the airport. Quarterly inspections and visual monitoring are also conducted by the airport to ensure good housekeeping is in place and BMPs are working effectively.

Airport tenants discharging stormwater associated with an industrial activity are required to obtain coverage under the MSGP, develop and implement an SWPPPP specific to their respective operation on their leasehold and operational area, or operate under the provisions established in the airport's SWPPP. Tenants operating under the terms of the airport's SWPPP are required to designate on-site company representatives to be included on the pollution prevention team. Copies of the tenant's SWPPP and NOI must be sent to the Environmental Affairs Department (EAD) to be incorporated into the airport's stormwater records. Tenant SWPPPs must be updated as needed by the tenant. It is the tenant's responsibility to inform EAD of any changes to the SWPPP and to provide EAD with a copy of the current updated plan. Stormwater discharges from airport tenants are not covered under the Individual Permit and are subject to the requirements identified in the TPDES MSGP.

Tenants subject to NPDES or TPDES regulations are responsible for conducting regular inspections and preventative maintenance for all tenant specific stormwater structural controls located on their leasehold area. The respective tenant is required to maintain records of the inspections and make these records available to the appropriate jurisdictional authority. Airport tenants operating under the airport's SWPPP are required to complete a nonstormwater discharge certification for their leasehold.

DFW conducts annual Comprehensive Site Compliance Evaluations to ensure upkeep with TPDES permit requirements. Tenant leases contain provisions pertaining to environmental rules and regulations. Additionally, the Chapter 6A Storm Water Rules and Regulations were just added to the DFW Airport Board of Rules and Regulations.

EAD has prepared a document to educate all airport tenants on which nonstormwater discharges are allowed by the TPDES permit and which are not allowed. EAD requests that each tenant complete and sign the Non-Stormwater Discharge Assessment and Certification.

The operator of construction projects is responsible for obtaining coverage for stormwater discharges under the CGP. DFW approves construction SWPPPs and conducts inspections at tenant sites. DFW sometimes imposes additional stormwater management requirements on discharges from construction sites. For example, the operator may be required to meet specific limits for pH as detailed in the Individual Permit that differ from those included in the CGP.

3.3.2 Airport Survey

During Phase II, an airport survey was conducted to ascertain the variability in permitting arrangements between airport owners and tenant operators and service providers and collect and

organize information on the BMPs currently being implemented at airports.

The survey was intended to elicit specific feedback on NPDES permit compliance and strategies used to enforce tenant compliance at large- and medium-sized airports. The questionnaire was distributed to 20 airports, and 13 were completed by the end of March 2014, which represents a response rate of 65 percent. Table 4 (see Attachment) summarizes the number of surveys sent, number of responses received, and the response rate as percentage organized by hub size and co-permittee status.

Types and Number of Tenants and Operations

The survey revealed that nearly all of the respondents (92 percent) have more than 20 tenants that have the potential to impact the stormwater, with 69 percent having 30 or more tenants, as shown in Figure 1. Figures are contained in the Attachment.

In relation to the type of tenants that conduct operations at these airports with the potential to impact stormwater (Figure 2), 100 percent of respondents identified tenants in the commercial aviation and charter categories, 92 percent in the air freight category, and approximately 77 percent in the maintenance, repair, and overhaul (MRO) category. Less than half of the respondents (38 percent) have military type tenants. Aside from these main categories, 69 percent of respondents identified other type of tenants, including: food service providers, ground service providers, fuel consortium airport manufacturers, rental cars operations, shuttle bus operations, and general aviation, as the most listed.

As for the types of operations conducted by these tenants (Table 5 in Attachment), all of the respondents identified vehicle/equipment fueling and maintenance, aircraft fueling and maintenance, vehicle/equipment washing, aircraft deicing, cargo loading/unloading, construction, and solid waste handling and storage. The majority of the respondents, 92 percent, also identified landscaping, pesticides/herbicides applications, and chemical handling and storage, while more than half identified painting and striping, fire fighter training, aircraft washing, pavement deicing, snow removal, and rubber removal.

Permit Information

As far as the number of stormwater permits that each of the airports hold, nearly half of the respondents have five permits or more, while the other half has two or less, as illustrated in Figure 3.

Industrial stormwater general permits and individual NPDES permits were the most common permits identified by respondents, with 69 and 53 percent respectively (Figure 4). Nearly half of respondents also hold municipal stormwater permits, while 39 percent of respondents identified other types of permits, including construction general permits (identified by four out of five), pesticide general permits (two out of five), and washwater land applications permit (one out of five). Figure 4 presents this information.

For the most part (61 percent) respondents indicated that the permits held by the airport authority do not differentiate between airside and landside operations (Figure 5), with a few exceptions, where a specific activity is linked either to airside or landside (e.g. deicing is linked to airside requirements, while landscape pertains to landside).

As for the authority issuing the permit (Figure 6), the vast majority, 92 percent, of the respondents identified the state; while 23 and 15 percent of respondents also identified the federal or local authority, respectively.

Forty-six percent of the respondents indicated the airport authority is the sole permittees (Figure 7). Almost 31 percent indicated that both the airport authority and tenants are the permittees, while roughly 8 percent indicated the tenants to be the permittees. Few exceptions were specified. In one of these cases, the tenants and airport are co-permittees, while in another, the airport—which is the permittee—requires the contracted operator of the fuel farm and two geographically separate operations to obtain their own permits to cover their operations.

Regarding the recognition of co-permittees by the permit authority (Figure 8), responses were almost equally distributed. Approximately 38 percent of the respondents indicated that the permit authority recognizes co-permittees, nearly 31 percent have permits where no co-permittees are recognized, and 23 percent specified other variations including:

- The airport authority is a co-permittee on a permit issued to tenants, and they all follow the same SWPPP, managed by the airport authority.
- Tenant and airport authority all have separate permits but share the same SWPPP, managed by the airport authority.

• The tenants are not co-permittees, but the airport authority identifies them in an annual management plan that is then submitted to the environmental authority.

Nevertheless, only 25 percent of the respondents indicated that the permit includes co-permittees (Figure 9), while approximately 59 percent of respondents indicated that the permit does not include co-permittees. The few exceptions noted, roughly 17 percent, were similar to the ones described in the previous paragraph.

Stormwater Pollution Prevention Plan (SWPPP)

All respondents indicated that the stormwater permits require the airport authorities to have an SWPPP. There was clear indication that the responsibility for SWPPP implementation lies with the airport authority, as the majority of the respondents, almost 77 percent, expressed they were responsible for SWPPP, with tenants covered under it and the airport overseeing compliance (Figure 10). Fifteen percent of the respondents indicated that the airport authority and tenants are responsible for implementing their own separate SWPPPs, and about 8 percent indicated that the SWPPP is jointly implemented. Few respondents (23 percent) indicated slight modifications to these statements including:

• Airport authority reviews the SWPPP of tenants required to have their own permit and SWPPP.
• Airport authority prepares the SWPPP and tenants are responsible for developing their own spill plan to meet permit requirements.

With respect to the responsibility to prepare and update the SWPPP, there was a clear indication that this responsibility lies with the airport authority, with more than half of the respondents either preparing or updating the SWPPP directly or hiring a consultant to do it. Only 8 percent indicated that the tenants retain their own consultant, different from the airport authority, to do it (Figure 11). The exception noted specifies that the airport authority reviews and provides comments to the tenants' SWPPPs regardless of whether they are prepared by the tenant or a hired consultant.

In relation to SWPPP and its components (Figure 12), all respondents indicated the SWPPP is a written plan that incorporates BMPs and annual training. While 92 and 85 percent, respectively, indicated the plan incorporates a section on water quality monitoring and quarterly inspections, more than half of the respondents (69 percent) agreed the plan incorporates the creation and existence of an SWPPP team. The sections included to a lesser degree in the SWPPP are tenant-specific SWPPPs or standard operating procedures and annual site inspections certified by a professional engineer.

In addition, all respondents agreed to have a Spill Prevention Control and Countermeasure (SPCC) Plan (Figure 13). Approximately 54 percent have a Spill Prevention Response (SPR) Plan and a few respondents indicated they have a Preparedness, Prevention, and Control (PPC) plan. Almost 31 percent have other types of plans including:

• Integrated contingency plan (ICP) that incorporates SWPPP, SPR, and Hazardous Waste Contingency Plan.
• Stormwater Management Plan.
• Airport SRP.

Record Keeping Requirements

In connection with the type of records airport authorities are required to keep (Figure 14), all or nearly all respondents have inspection and visual monitoring requirements. Approximately, 77 percent of respondents are required to keep records of aircraft and airside deicer/anti-icer application, while less than half are required to keep records of aircraft and airside deicer/anti-icer collection. Most of the other record requirements identified by respondents described more specifically the type of monitoring including:

• Land disturbance activities.
• Fueling operations.
• Spill inventory.
• Releases and changes to control measures due to releases.
• Analytical sampling data.
• Annual mass balance for aircraft deicing fluid (pavement not included) that details how much deicer is applied, collected, recycled, and discharged to wastewater treatment plant.

Effluent Monitoring and Reporting Requirements

In understanding the different types of effluent monitoring the permits require (Figure 15), there was an indication that the types of monitoring

more frequently used are visual inspections and sample collection and lab analysis, with approximately 92 and 84 percent of the respondents respectively, selecting these. The other options were almost negligible, with the exception of one respondent indicating the permit requires no effluent monitoring at all.

In the cases where effluent monitoring is required, the regulatory threshold by which results are compared was almost equally distributed (Figure 16). Approximately 42 percent of respondents must comply with a benchmark/action level or numerical individual permit limit or standard, while 33 percent must comply with a numerical effluent limit.

The frequency by which effluent monitoring occurs varies widely among respondents (Figure 17). Approximately 42 percent of respondents monitor on a monthly basis, 33 percent do so quarterly, and less than one-third of respondents require monitoring on an annual, weekly, or daily basis. A few exceptions were noted where the frequency will change after a specific discharge event or during the deicing season.

In terms of reporting threshold exceedances (Figure 18), 75 percent of respondents are required to report to the permit authority, while 33 percent are only required to keep the records. Some of the exceptions specified included implementing a corrective action, while in others there is a requirement to report to the permitting authority quarterly regardless of threshold exceedances.

When exceedances occur, approximately 55 percent of respondents are required to review BMPs (Figure 19). Less than a third of the respondents also indicated that they are required to perform follow-up monitoring or toxicity source evaluations. One of the exceptions described discussed the enforcement implications on the permit, where once the deicing limit is exceeded four times, a civil penalty is incurred and potentially an administrative order and schedule to achieve compliance are put in place.

One-hundred percent of respondents are responsible for conducting monitoring (Figure 20). However, about 18 percent indicated that tenants are also responsible for this activity. The few exceptions referred to hiring a consultant to conduct monitoring, and giving tenants the option of using airport authority test results related to their areas of operation.

BMPs

This section covers the use and effectiveness of nonstructural and structural BMPS, as well as enforcement mechanisms.

In relation to the use of nonstructural BMPs (Figure 21), all respondents include language in the lease agreement that references stormwater regulation compliance and airport inspections of tenant facilities, while 58 percent indicated they have tenant reporting requirements. One-third of the respondents also require tenants to submit their self-inspections to the airport. The variation specified requires tenants to submit a document certifying compliance with the permit once a year.

Overall, respondents consider these measures to be effective. The majority of these, roughly 64 percent, agree that nonstructural BMP measures are effective, while approximately 27 percent agree they are modestly effective (Figure 25).

As for structural BMPs, approximately 92 percent of respondents use spill kits and oil-water separators. Two-thirds use containment, 58 percent use treatment for deicing effluent and designated wash facilities, and 50 percent use wet retention. Other structural BMPs were selected by respondents less than a third of the times (Figure 22).

Airport authorities use a variety of mechanisms to enforce tenant compliance with stormwater permits. The majority of the respondents, about 83 percent, use warnings (Figure 23). Approximately 67 percent use notices of violation or demands for corrective actions to comply with lease obligations. Half of respondents use lease termination, while one-third use fines. Fifty percent of respondents identified other mechanisms, including:

- Slight variations of notifications.
- The use of all mechanisms in a progressive approach.
- The use of Water Quality Investigators who are licensed Special Police Officers by the City and County and have the authority to issue citations. The offending party is then required to address the citation in court.
- Airport authority does not enforce, as that is the responsibility of the regulatory agency.

Approximately 64 percent of respondents agree that these enforcing mechanisms are effective, while nearly 37 percent agree they are moderately effective (Figure 25).

Along with these mechanisms—BMPs and enforcement—airport authorities have also implemented a variety of other initiatives to promote tenant compliance with stormwater permit requirements or SWPPP. Approximately 92 percent of the respondents use training, while almost 67 percent use awareness programs. The other programs are used less frequently by respondents. The exception noted quarterly meetings as an alternative initiative (Figure 24).

However, most respondents, approximately 64 percent, agree that other initiatives are only moderately effective, while almost 37 percent consider them effective (Figure 25). From this perspective, airport authorities consider nonstructural BMPs and noncompliance enforcement mechanisms to be more effective than the alternative initiatives.

There are several challenges in trying to enforce tenant compliance with the permit. Among the most cited by respondents are:

- Tenant turnover, whether it be new tenants or a changing workforce within tenant groups.
- Pursuing enforcement action over third party contractors or subtenants.
- Oversight and following up on noncompliance issues, especially when there are several programs being implemented at the same time.
- Having lease language that requires tenants to comply with federal, state, and local environmental regulations, but not specifying what happens if there is noncompliance.

Permit Enforcement and Violation Resolution

In relation to the enforcement authority, the majority of the respondents—approximately 92 percent—indicated that the state is ultimately the authority issuing permit violations. One third of the respondents received permit violation notifications from the federal authority, while almost 17 percent received notifications from the local authority. The exception noted describes a coordinated effort between state and local authorities to perform follow-up inspections (Figure 26).

More than half of respondents, nearly 59 percent, have received notices of alleged violations of stormwater permit requirements, while almost 42 percent have not (Figure 27).

When notices of alleged violations have been issued, all the respondents indicated that the notice has been issued to the airport authority, while approximately 29 percent indicated the notice had been issued to tenants (Figure 28). From the exceptions noted, in one case the airport authority negotiated with the state's environmental authority to issue the notice to the airport authority, rather that the airport and all its tenants. The airport authority paid the penalty, and costs were passed to tenants in the form of rates and charges.

Approximately 72 percent of respondents indicated the alleged violations were resolved through corrective action, while nearly 29 percent resolved them via administrative order, and 14 percent have not resolved them yet (Figure 29). The other resolutions specified include: 1) settlement and stipulated order and 2) the use of the water quality and airport studies as an educational tool to reflect the actual conditions of the stormwater systems.

In the cases where the alleged violation was resolved via corrective action, approximately 84 percent of the respondents indicated that the airport authority was responsible for implementing the corrective action, while almost 17 percent indicated that either tenants implemented it or that it was not applicable to their case. The exception noted describes a variation to the airport authority implementing the corrective action, with tenants being very involved in the selection of the solution (Figure 30).

As for which parties were involved in the resolution of the alleged violation via administrative order or litigation, 57 percent of the respondents indicated that this was not applicable to their specific case. Approximately 43 percent indicated the airport authority was involved, while 14 percent indicated tenants were also part of the resolution (Figure 31).

3.4 Permitting Strategies

Of the airports surveyed, approximately half of the airport authorities indicated they were the sole permittees on stormwater permits for the airport. In only one case were airport tenants named as co-permittees, and in some situations, tenants are required to obtain their own permits for their specific activities. All of the airports have mechanisms in place to assist with tenant compliance with the applicable stormwater regulations; the most common is language in the lease agreements that references stormwater regulation compliance.

All respondents indicated that the stormwater permits require the airport authorities to have an SWPPP. There was clear indication that the responsibility for SWPPP implementation lies with the airport authority, as the majority of the respondents expressed they were responsible for

preparing the SWPPP, with tenants covered under it and the airport overseeing compliance.

Some of the strategies employed by airport authorities for tenant implementation of SWPPPs include:

- Airport authority prepares the SWPPP and all tenants must comply with its provisions.
- Airport authority prepares an SWPPP and all tenants must comply with its provisions or allow tenants to prepare their own, provided it meets the minimum requirements of the airport's plan.
- Airport and tenants jointly implement the SWPPP.
- Airport authority reviews the SWPPP of tenants required to have their own permit and SWPPP.
- Tenants prepare and implement their own SWPPP.

All respondents indicated that the airport authority conducts inspections of tenant facilities. Approximately one-half of the respondents have tenant reporting requirements, and one-third of the respondents require tenants to submit their self-inspections to the airport.

Most of the respondents indicated the use of some form of enforcement mechanisms. The majority use warnings or notices of violation or demands for corrective actions to comply with lease obligations. Half of respondents use lease termination, while one-third use fines. One respondent reported the use of Water Quality Investigators who are licensed Special Police Officers by the city and county and have the authority to issue citations. The offending party is then required to address the citation in court.

Many airport authorities have also implemented a variety of initiatives to promote tenant compliance with stormwater permit requirements or SWPPP. Almost all of the airports use training and other initiatives, including awareness programs and meetings.

Some of the challenges cited regarding tenant compliance with the stormwater permits include:

- Tenant turnover.
- Pursuing enforcement action over third party contractors or subtenants.
- Oversight and following up on noncompliance issues.
- Having lease language that requires tenants to comply with federal, state, and local environmental regulations, but not specifying what happens if there is noncompliance.

When notices of alleged violations have been issued, all of the respondents indicated the notice has been issued to the airport authority, and to a lesser degree, the notice has been issued to tenants. From the exceptions noted, in one case the airport authority negotiated with the state's environmental authority to issue the notice to the airport authority, rather than the airport and all its tenants. The airport authority paid the penalty, and costs were passed to tenants in the form of rates and charges.

In the cases where the alleged violation was resolved via corrective action, the majority of the respondents indicated that the airport authority was responsible for implementing the corrective action. In a few cases, either the tenants implemented the action, or the solution was jointly implemented.

IV. CONCLUSIONS AND RECOMMENDATIONS

4.1 Conclusions

Legal research conducted as part of this project suggests that the onus for permit compliance and potential violations by tenants is typically on the airport authority. The airport is therefore left to develop operating agreements and BMPs to enforce tenant compliance.

Because general permits are issued for specific groups of regulated entities, their conditions tend to be fairly general to ensure that they are applicable to as many of those entities as possible. Airports fall under Sector S "transportation facilities" that conduct vehicle or aircraft maintenance, equipment cleaning, or airport deicing operations. Tenant requirements are typically not a large component of general permits. Even so, the airport is often responsible for overall permit compliance.

Individual permits are tailored to the actual physical and operational characteristics at the permittee's facility, require a thorough analysis of site-specific conditions, and therefore contain specific requirements based on the airport's actual operations.

The legal research identified several cases addressing the applicability of EPA's stormwater discharge permitting requirements to various categories of industrial activity, although none that specifically address air transportation facilities. On the state level, the only case referencing an air transportation facility was in New York. The renewal of JFK's SPDES Permit went before an ALJ. Comments on the draft permit were sub-

mitted to NYSDEC, which subsequently referred the modification proceeding and issues conference before the ALJ. The parties worked cooperatively over several months to resolve their respective concerns, and as a result there was no adjudicatory hearing, and NYDEC issued a modified permit. The Port Authority desired to add the airlines to the permit as co-permittees but was ultimately unsuccessful.

Common BMPs that the surveyed airport representatives consider to be effective include lease language referencing compliance with stormwater regulations, preparation of an SWPPP by the airport authority with mandatory compliance by tenants, inspections of tenant facilities by the airport authority, and warnings or fines for noncompliance.

4.2 Recommendations

The goal of this research is to provide valuable information to assist airports in implementing a defensible approach to airport and tenant NPDES permit compliance. BMPs or other compliance mechanisms deemed to be effective by airport authorities have been identified and could be developed into a guidebook providing practical solutions for enforcing tenant compliance with stormwater discharge permits at airports. The guidebook would provide a basic overview of stormwater regulations and practices that can be easily understood, example BMPs that could be applied to a variety of airport settings, and types of effective enforcement mechanisms. An easy-to-use guidebook would provide defensible, consistent, and implementable approaches to airport and tenant NPDES permit compliance.

REFERENCES

EPA Sources

Draft NPDES General Permit for Stormwater Discharges From Industrial Activities, available at http://www.epa.gov/npdes/pubs/msgp2013_proposedpermit1-7.pdf and http://www.epa.gov/npdes/pubs/msgp2013_proposedpermit8.pdf; see also 78 Fed. Reg. 59,672 (Sept. 27, 2013).

NPDES General Permit for Stormwater Discharges from Construction Activities, February 16, 2012. See Final NPDES General Permit for Stormwater Discharges from Construction Activities. 77 Fed. Reg. 12,286 (Feb. 29, 2012).

Ready Mixed, Crushed Stone and Sand and Gravel Non-Storm Water Discharges Quick Reference Guide, July 2009, available at http://www.epa.gov/compliance/resources/publications/assistance/sectors/readymix/nonswreferenceguide.pdf.

Multisector General Permit for Stormwater Discharges Associated With Industrial Activity. Final 2008 MSGP, as modified May 27, 2009, available at http://www.epa.gov/npdes/pubs/msgp2008_finalpermit.pdf; see also 73 Fed. Reg. 56,572 (Sept. 28, 2008).

Industrial Stormwater Fact Sheet, Sector S, Air Transportation Facilities (Dec. 2006).

Final Reissuance of NPDES Storm Water Multi-Sector General Permit for Industrial Activities. 65 Fed. Reg. 64,746 (Oct. 30, 2000).

Final NPDES Storm Water Multi-Sector General Permit for Industrial Activities. 60 Fed. Reg. 50,804 (Sept. 29, 1995).

NPDES Application Regulations for Stormwater Discharges, Final Rule. 55 Fed. Reg. 47,990 (Nov. 16, 1990).

NPDES Permitting Regulations. 40 C.F.R. Part 122. (See in particular 40 C.F.R. §§ 122.2, 122.21, 122.22, 122.26, and 122.28).

Form 2F, Application for Permit to Discharge Stormwater.

http://cfpub1.epa.gov/npdes/home.cfm?program_id=6.

Decker v. Northwest Envt'l Def. Ctr., __ U.S. __ 133 S. Ct. 1326 (2013).

Ecological Rights Foundation v. Pacific Gas & Elec. Co., 713 F.3d 502 (9th Cir. 2013).

Natural Resources Defense Council v. U.S. EPA, 526 F.3d 591 (9th Cir. 2008).

Natural Resources Defense Council v. U.S. EPA, 966 F.2d 1292 (9th Cir. 1992).

California Sources

SWRCB, Order NPDES No. CAS000001, NPDES General Permit for Storm Water Discharges Associated with Industrial Activities (Apr. 1, 2014).

SWRCB, Water Quality Order No. 2009-0009-DWQ, NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Sept. 2, 2009). See Fact Sheet and Permit.

SWRCB, Water Quality Order No. 97-03-DWQ, NPDES General Permit CAS000001 and Waste Discharge Requirements for Discharges of Stormwater Associated with Industrial Activities (1997). See Fact Sheet and Permit.

http://www.swrcb.ca.gov/water_issues/programs/stormwater/industrial.shtml.

http://www.waterboards.ca.gov/water_issues/programs/stormwater/constpermits.shtmland.

http://www.swrcb.ca.gov/water_issues/programs/grants_loans/prop84/prop84_taskforce.shtml.

Santa Monica Baykeeper v. Kramer Metals, Inc., 619 F. Supp. 2d 914 (C.D. Cal. 2009).

Illinois Sources

IEPA, General Permit No. ILR00, NPDES General NPDES Permit for Storm Water Discharges from Industrial Activities (Apr. 3, 2009).
IEPA, General Permit No. ILR10, NPDES General NPDES Permit for Storm Water Discharges from Construction Site Activities (Aug. 11, 2008).
http://www.epa.state.il.us/water/permits/storm-water/industrial.html.

New York Sources

NYSDEC, SPDES Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity, Permit No. GP-0-11-009 (Mar. 28, 2012).
NYSDEC, SPDES General Permit for Stormwater Discharges from Construction Activity, Permit No. GP-0-10-001 (January 29, 2010).
http://www.dec.ny.gov/chemical/9009.html.
http://www.dec.ny.gov/chemical/43133.html.
NYSDEC, Port Authority of New York (JFK)—Summary Hearing Report and Order of Disposition, Sept. 19, 2007.

Texas Sources

TCEQ, General Permit to Discharge Under Texas Pollutant Discharge Elimination System, Multi Sector General Permit, TPDES General Permit No. TXR050000 (July 22, 2011).
Fact Sheet and Executive Director's Preliminary Decision, TPDES General Permit TXR050000—Multi Sector General Permit (June 17, 2011).
TCEQ, General Permit to Discharge Wastes, TPDES General Permit Number TXR150000 Relating to Storm Water Discharges Associated with Construction Activities (Feb. 15, 2008).
TCEQ General Permit No. TXR050000, Executive Director's Response to Public Comments.
http://www.tceq.texas.gov/permitting/stormwater/TXR05_steps.html.

Washington Sources

WDE, Industrial Stormwater General Permit (Issued Oct. 21, 2009, as modified May 16, 2012, and effective July 1, 2012).
WDE, Industrial Stormwater General Permit Modification, Addendum to Fact Sheet: Appendix E, Response to Public Comments on the Draft Permit Modification (May 16, 2012).
WDE, Construction Stormwater General Permit (Issued December 1, 2010, effective January 1, 2011).
WDE, Industrial Stormwater General Permit—Fact Sheet (June 3, 2009, Public Comment Draft).
Fact Sheet for the State of Washington Draft 2010 Construction Stormwater General Permit.
http://www.ecy.wa.gov/programs/wq/stormwater/industrial/index.html.
http://www.wastormwatercenter.org.
Copper Dev. Assoc., Inc., et al. v. State of Washington, et al., Pollution Control Hearings Board, Nos. 09-135 through 09-141 (2011).

ATTACHMENT

Table 1.
ACRP Project 11-01 Survey
Respondent Information

Airport	State	Permit Type	Co-Permittee Status
1. Dallas Love Field	TX	TPDES MSGP	Yes
2. Phoenix Sky Harbor International	AZ	AZPDES MSGP	Yes
3. Los Angeles International	CA	CA MSGP	Yes
4. Austin-Bergstrom International	TX	TPDES MSGP	No
5. Charlotte/Douglas International	NC	NC MSGP	No
6. Bradley International	CT	CT MSGP	No
7. Jacksonville International	FL	FL MSGP	No
8. Manchester Boston	NH	EPA MSGP	No
9. Kahului Airport	HI	HI MSGP	No
10. Boston Logan International	MA	Individual NPDES	Yes
11. Anchorage International	AK	Individual NPDES	Yes
12. Portland International	OR	Individual NPDES	Yes
13. Minneapolis-St. Paul	MN	Individual NPDES/SDS	Yes
14. Washington Dulles International	DC	Individual VPDES	Yes
15. Pittsburgh International	PA	Individual NPDES	No
16. Laguardia International	NY	Individual SPDES	No
17. Denver International	CO	Individual CDPS	No
18. Lambert-St. Louis International	MO	Individual NPDES	No
19. Port Columbus International	OH	Individual NPDES	No
20. Gerald Ford International	MI	Individual NPDES	No

Table 2.
ACRP Project 11-01
Matrix Summary of Federal and State Stormwater Permit Provisions

Jurisdictional Authority		Owner vs. Tenant Obligations	Scope of Permit	Best Management Practices
United States Environmental Protection Agency				
EPA Form 1	EPA CWA	Operator completes permit application. Form does distinguish owner/operator relationship.	NA	NA
EPA Form 2F	EPA CWA	Operator completes permit application.	NA	NA
MSGP for Industrial Activity	EPA CWA	Permit conditions apply to operators of stormwater discharges associated with industrial activity. The NOI only requires operator information; does not distinguish owner information. Airport tenant's SWPPPs must be coordinated with and integrated with the SWPPP for the entire airport.	Authorizes stormwater discharges from those portions of the air transportation facility that are involved in vehicle/aircraft/equipment fueling, maintenance, cleaning and storage; or deicing operation. Monitoring of BOD, COD, ammonia, and pH with benchmark concentrations[1] for each pollutant is required at airports using greater than 100,000 gallons of glycol and/or 100 tons of urea annually. Certain airports are required to meet numerical effluent limits for ammonia (as nitrogen) and COD. Inspections must be conducted once per month during deicing season; annual inspection to be conducted during period of actual deicing.	Specific BMPs for air transportation facilities detailed in Part 8.S.3 Additional Technology-Based Effluent Limits.
Industrial Stormwater Fact Sheet, Sector S	EPA CWA	The operator and the tenants of the airport must apply for coverage for discharges from their areas of operation. Airport management and tenants of the airport are encouraged to apply as co-permittees and work in partnership in implementation of SWPPP.	NA	Specific BMPs detailed in Table 2 of the fact sheet.
Construction General Permit	EPA	Operator of construction project must obtain coverage.	No specific requirements for air transportation facilities.	Certain BMPs are mandated; no specific requirements for air transportation facilities.
California				
California NPDES General Permit for Industrial Activities	California State Water Resources Control Board pursuant to the CWA and the state Porter-Cologne Water Quality Control Act	The operator of the facility is required to obtain coverage. NOI does not distinguish between owner and operator. Permit language related to assumptions that the owner is typically the operator. The facility operator is responsible for all permit related activities at the facility. SWPPP certification must be by individual with overall responsibilities for day to day operations of facility or overall responsibility for environmental matters.	Authorizes discharges from those portions of the facility involved in vehicle maintenance (including fueling, cleaning, repairing etc.) or other industrial operations defined in the General Permit. All facilities are required to collect and analyze samples for pH, total suspended solids, total organic carbon, specific conductance, toxic chemicals; Numeric action levels established for various parameters including pH, COD, and ammonia (as nitrogen). Certain airports are required to meet numerical effluent limits for ammonia (as nitrogen) and COD. No benchmark concentrations or effluent limits. No additional specific SWPPP or inspection requirements for air transportation facilities.	Standard BMPs[2] are suggested; none specific to air transportation facilities.
California NPDES General Permit for Construction Activities	California State Water Resources Control Board pursuant to the CWA and the state Porter-Cologne Water Quality Control Act	Compliance with a construction permit is the responsibility of the Legally Responsible Person (LRP), who is typically the property owner. NOI does distinguish between property owner and contractor/developer.	No specific requirements for air transportation facilities.	Standard BMPs[2] are suggested; none specific to air transportation facilities.

Notes:

1. Pollutant benchmark concentrations are not effluent limitations. Exceedance of a benchmark is not a permit violation but an indication of inadequate source control and/or of the overall effectiveness of BMPs. An exceedance of a benchmark concentration indicates that BMPs for that pollutant should be reviewed to determine if modifications are necessary or additional BMPs are required. Follow-up monitoring is typically required to evaluate effectiveness of modifications.
2. Standard BMPs typically include:
   non-structural BMPs: good housekeeping, preventative maintenance, spill response, employee training, waste handling, recordkeeping, erosion control, material handling and storage, inspections; structural BMPs: overhead cover, retention ponds, control devices, secondary containment, treatment.

Table 2.
ACRP Project 11-01
Matrix Summary of Federal and State Stormwater Permit Provisions

	Jurisdictional Authority	Owner vs. Tenant Obligations	Scope of Permit	Best Management Practices
New York				
NYSDEC SPDES MSGP for Stormwater Discharges Associated with Industrial Activity	NYSDEC SPDES pursuant to the CWA	When a facility or activity is owned by one person but is operated by another person, it is the operator's duty to obtain a permit. NOI requests "owner/operator" information and does not distinguish entities. Airport tenant's SWPPPs must be coordinated with and integrated with the SWPPP for the entire airport. Tenants and (fixed-base operators) FBOs must provide monthly records of deicers used to airport authority for incorporation into airport SWPPP.	Authorizes stormwater discharges from those portions of the air transportation facility that are involved in vehicle/aircraft/equipment fueling, maintenance, cleaning or deicing operations. Permit does not cover aircraft, ground vehicle, runway and equipment washwaters, and dry weather discharges of deicing/anti-icing chemicals. Monitoring of BOD, COD, nitrogen and pH with benchmark concentrations[1] for each pollutant is required at airports using greater than 100,000 gallons of glycol and/or 100 tons of urea annually. Inspections must be conducted once per month during deicing season; annual inspection to be conducted during period of actual deicing.	Certain standard BMPs[2] are mandated. Specific BMPs for air transportation facilities detailed in Part VIII Sector S.
NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activity	NYSDEC SPDES pursuant to the CWA and NY Environmental Conservation Law	Owner or operator is defined as, "the person, persons or legal entity which owns or leases the property on which the construction activity is occurring; and/or an entity that has operational control over the construction plans and specifications, including the ability to make modifications to the plans and specifications." NOI requests "owner/operator" information does not distinguish entities.	Airports are on the list of construction activities that require an SWPP that includes post-construction stormwater management practices.	SWPPP requirements reference practices designed in conformance with the most current version of the technical standard, New York State Stormwater Management Design Manual.
Washington				
WDE Industrial Stormwater General Permit	State of Washington Department of Ecology pursuant to the CWA and The State of Washington Water Pollution Control Law	The operator of the facility is required to obtain coverage. Permit language references permittee as "owner or operator." NOI requests "permittee" information. SWPPP certification must be by individual with overall responsibilities for day to day operations of facility and overall responsibility for environmental matters.	Authorizes stormwater discharges from those portions of the air transportation facility that are involved in vehicle/aircraft/equipment fueling, maintenance, cleaning or deicing operations. All facilities are required to collect and analyze samples for turbidity, pH, copper, and zinc with benchmark concentrations[1] for each pollutant, and visual assessment of oil sheen. For airports using more than 100,000 gallons of glycol and/or 100 tons of urea annually, quarterly monitoring is required for BOD, COD, ammonia, and nitrate/nitrite with benchmarks for each pollutant. No additional specific SWPPP or inspection requirements for air transportation facilities.	Standard BMPs[2] are suggested; none specific to air transportation facilities.
WDE Construction Stormwater General Permit	State of Washington Department of Ecology pursuant to the CWA and The State of Washington Water Pollution Control Law	Operator of construction project must obtain coverage. NOI does differentiate between "operator/permittee" and owner.	No specific requirements for air transportation facilities.	No BMPs are mandated, no specific requirements for air transportation facilities.

Notes:

1. Pollutant benchmark concentrations are not effluent limitations. Exceedance of a benchmark is not a permit violation but an indication of inadequate source control and/or of the overall effectiveness of BMPs. An exceedance of a benchmark concentration indicates that BMPs for that pollutant should be reviewed to determine if modifications are necessary or additional BMPs are required. Follow-up monitoring is typically required to evaluate effectiveness of modifications.
2. Standard BMPs typically include:
   non-structural BMPs: good housekeeping, preventative maintenance, spill response, employee training, waste handling, recordkeeping, erosion control, material handling and storage, inspections; structural BMPs: overhead cover, retention ponds, control devices, secondary containment, treatment.

Table 2.
ACRP Project 11-01
Matrix Summary of Federal and State Stormwater Permit Provisions

	Jurisdictional Authority	Owner vs. Tenant Obligations	Scope of Permit	Best Management Practices
Illinois				
IEPA NPDES General Permit for Storm Water Discharges from Industrial Activities	Illinois Environmental Protection Agency pursuant to the CWA and the Illinois Environmental Protection Act	No distinctions are made between owner vs. tenant. Permittee is defined as owner or operator throughout permit. NOI requests "owner/operator information." EPA Forms 1 and 2F also required for airports with over 50,000 flight operations per year: storm water discharges from aircraft or airport deicing areas.	Authorizes stormwater discharges from those portions of the air transportation facility that are involved in vehicle/aircraft/equipment fueling, maintenance, cleaning or deicing operations. Application required from airports with over 50,000 flight operations per year: storm water discharges from aircraft or airport deicing areas to conduct analyses per EPA form 2F part a. for Oil and Grease, BOD5, COD, TSS, Total Nitrogen, Total Phosphorus and pH. No benchmark monitoring or specific SWPPP inspection requirements for air transportation facilities.	Standard BMPs[2] are suggested; none specific to air transportation facilities.
IEPA NPDES General Permit for Storm Water Discharges from Construction Site Activities	Illinois Environmental Protection Agency pursuant to the CWA and the Illinois Environmental Protection Act	NOI must be submitted by owner. NOI requests owner and contractor information. All contractors and subcontractors identified in the SWPPP must sign a copy of the following certification statement before conducting any professional service at the site identified in the SWPPP: "I certify under penalty of law that I understand the terms and conditions of the general National Pollutant Discharge Elimination System (NPDES) permit (ILR10) that authorizes the storm water discharges associated with industrial activity from the construction site identified as part of this certification."	No specific requirements for air transportation facilities.	Standard BMPs[2] are suggested; none specific to air transportation facilities.
Texas				
TCEQ Fact Sheet and Executive Director's Preliminary Decision, TPDES MSGP	Texas Commission on Environmental Quality pursuant to the CWA and Chapter 26 of the Texas Water Code	NOI must be submitted by operator. NOI does not distinguish regulated entity. Each tenant that meets applicability requirements must obtain coverage. Airport authorities and airport tenants are encouraged to work in partnership to develop and implement a shared SWPPP. Even with a shared SWPPP, each entity at an airport that meets the applicability requirements of this permit is required to obtain permit coverage. If the airport authority, tenants, and other FBOs share an SWPPP, the tenants and FBOs that conduct deicing operations must provide monthly deicing records to the airport authority.	Authorizes stormwater discharges from those portions of the air transportation facility that are involved in vehicle/aircraft/equipment fueling, maintenance, cleaning or deicing operations. Monitoring is required for airports using greater than 100,000 gallons of ethylene glycol and/or 100 tons of urea annually for COD, ammonia-nitrogen and pH with benchmark concentrations[1] for each pollutant. SWPPP must include a record of the types and monthly quantities of deicing chemicals that the permittee uses and the monthly quantities. Permit includes numerical effluent limits for certain metals applicable to all industry sectors. Conduct inspections at least once per week during deicing or antiicing activities. Conduct the annual site inspection during periods of actual deicing operations.	Standard BMPs[2] are suggested. Specific BMPs for air transportation facilities detailed in Part V, Sector S of the permit. Facilities that conduct deicing must evaluate operating procedures on an annual basis to consider practices that reduce the amount of chemical used or otherwise lessen environmental impact.
TCEQ TPDES GP for Storm Water Discharges from Construction Site Activities	Texas Commission on Environmental Quality pursuant to the CWA and Chapter 26 of the Texas Water Code	Operator of construction project must obtain coverage.	No specific requirements for air transportation facilities.	Standard BMPs[2] are suggested; none specific to air transportation facilities.

Notes:

1. Pollutant benchmark concentrations are not effluent limitations. Exceedance of a benchmark is not a permit violation but an indication of inadequate source control and/or of the overall effectiveness of BMPs. An exceedance of a benchmark concentration indicates that BMPs for that pollutant should be reviewed to determine if modifications are necessary or additional BMPs are required. Follow-up monitoring is typically required to evaluate effectiveness of modifications.
2. Standard BMPs typically include:
   non-structural BMPs: good housekeeping, preventative maintenance, spill response, employee training, waste handling, recordkeeping, erosion control, material handling and storage, inspections; structural BMPs: overhead cover, retention ponds, control devices, secondary containment, treatment.

Table 3.
ACRP Project 11-01
Matrix Summary of Telephone Interviews with Airport Personnel

	JFK	Sea-Tac	O'Hare	DFW
Permittee	Port Authority of NY and NJ (PANYNJ). PANYNJ requested co-permittee status, NYSDEC prefers to keep authority as single permittee.	Port of Seattle.	City of Chicago, Department of Aviation (CDA).	Dallas/Fort Worth International Airport for the Individual Permit, which authorizes discharge from specific outfalls. The airport and tenants are also covered under the MSGP for the remainder of the airport and tenant facilities.
Co-Permittees	None.	None.	None.	None.
SWPPP Preparation and Implementation	Consultant prepares and implements SWPPP. PANYNJ interacts with tenants and conducts meetings and trainings on requirements of permit.	Consultant prepared original SWPPP, but the airport updates it in-house. Consultants conduct the sampling. Airport prepares and submits the DMRs. BMPs are updated by the airport with consultant support when performance requirements dictate.	Consultant prepares the SWPPP and the BMPs. The sampling is conducted by the airport. CDA prepares and submits DMRs. CDA also provides annual deicing information to the Illinois EPA. The deicing information is submitted with the quarterly compliance status report.	DFW is responsible for ensuring Individual Permit compliance and prepares reports, certifications, and updates to SWPPP to satisfy the permit requirements. Quarterly inspections and visual monitoring are also conducted in-house to ensure good housekeeping is in place and BMPs are working effectively.
Tenant SWPPP Responsibilities	Each tenant is responsible for developing and implementing SWPPP, which PANYNJ reviews.	Airport tenants are responsible for implementing components of the SWPPP. Using industry standards, SEA provides "Water Pollution Prevention Plans (WPPPS)" guidance manuals (which are considered to be "mini-SWPPPs") to the tenants. These WPPPs are geared toward operational, source control requirements and housekeeping.	Individual airport tenants are responsible for implementing the BMPs developed by the airport. A few airport tenants have developed their own SWPPP and have obtained coverage under their own NPDES permit.	Tenants maintain their own TPDES MSGPs and implement their own SWPPPs or may utilize the DFW Airport SWPPP as a shared SWPPP participant if they choose to do so.
Tenant Compliance Mechanisms	Entities that conduct deicing activities must obtain permit from PANYNJ. Permits have conditions for meeting applicable law and regulations. Tenant lease agreements outlines rules for operation at the airport and require compliance with applicable laws and regulations. PANYNJ issues internal breach of rules violation to tenants for noncompliance. No fee structure in place.	The airport manages the risk associated with stormwater through terms and conditions with tenants and contracts for construction projects. In leases, there is the condition that the airport can conduct an inspection at any time. General language in contracts and leases are also used that indicate tenants must abide by the airport rules and regulations. They use Corrective Action Reports to address violations and coordinate activities through the Lease Manager.	The CDA is required to facilitate independent inspections and monitoring procedures at least once per year of airport tenants.	DFW Airport conducts annual Comprehensive Site Compliance Evaluations to ensure upkeep with TPDES permit requirements. There are lease provisions pertaining to environmental rules and regulations. Additionally, the Chapter 6A Storm Water Rules and Regulations were just added to the DFW Airport Board of Rules and Regulations.

Table 3.
ACRP Project 11-01
Matrix Summary of Telephone Interviews with Airport Personnel

	JFK	Sea-Tac	O'Hare	DFW
Notice of Violations	None.	Yes, exceedances occur in generally two types: 1) Construction related turbidity and 2) pH variations at the outfalls. Other source-specific releases also occur occasionally. Tenants are not typically named by the regulator. The Port is named and passes down corrective action costs and possibly fines to the tenant or contractor responsible for a specific problem. However, there is one example of an agency going directly to a construction contractor for repeated violations and lack of response to airport corrective actions.	None.	No
Construction General Permits	State requested that PANYNJ file the applications for CGPs. Authority and contractors file jointly. Contract prepares application and PANYNJ files NOI.	The airport's permit consists of three parts: 1) Industrial activities, 2) Other activities and 3) construction activities. The discharge requirements (constituents and limitations) for each of these parts are different.	CDA files for coverage as the permittee under the CGP.	The operator of construction projects is responsible for obtaining coverage for stormwater discharges under the CGP. DFW approves construction SWPPPs and conducts inspections at tenant sites. DFW sometimes imposes additional stormwater management requirement on discharges from construction sites. For example, the operator may be required to meet specific limits for pH as detailed in the Individual Permit that differ from those included in the CGP.
MS4 regulation of Stormwater	None. Stormwater discharges are totally separate.	The airport is a co-permittee (or secondary permittee) on a Phase 2 permit. The Phase 2 permit area is the community bordering the airport, with some possible overlap. In addition, the airport occasionally has projects (e.g., ConRAC and off-site parking) that are negotiated with the regulators to be outside of the industrial activity of the airport. In these cases, a separate permit is issued. If the city issues the building permit for these projects, then they can be involved in the SW permit.	None.	DFW Airport is considered a Phase II Municipal Separate Storm Sewer System (MS4) and maintains a Storm Water Management Plan. Additionally, DFW Airport maintains an SWPPP as a permittee under the MSGP.

Table 4. Survey Response Rate

Airport Size	Surveys Sent	Number of Responses	Percentage
Large Hubs with Co-Permittee Status	5	3	60%
Large Hubs without Co-Permittee Status	5	3	60%
Medium Hubs with Co-Permittee Status	3	2	67%
Medium Hubs without Co-Permittee Status	7	5	71%
Total	20	13	65%

Table 5. Type of Operations that have Potential to Impact Stormwater

Q4. Which of the following operations do your tenants conduct that have the potential to impact stormwater? (select all that apply)		
Options	**Frequency**	**Percent**
Vehicle/Equipment Fueling	13	100.00%
Aircraft Fueling	13	100.00%
Vehicle/Equipment Maintenance	13	100.00%
Aircraft Maintenance	13	100.00%
Vehicle/Equipment Washing	13	100.00%
Aircraft Deicing	13	100.00%
Cargo Loading/Unloading	13	100.00%
Construction	13	100.00%
Solid Waste Handling/Storage	13	100.00%
Landscaping	12	92.31%
Pesticide/Herbicide Applications	12	92.31%
Lavatory Waste Handling	12	92.31%
Chemical Handling/Storage	12	92.31%
Painting/Striping	11	84.62%
Fire Fighter Training	10	76.92%
Aircraft Washing	9	69.23%
Pavement Deicing	9	69.23%
Snow Removal	9	69.23%
Rubber Removal	9	69.23%
Other (please specify)	2	15.38%

FIGURES BASED ON SURVEY RESPONSES

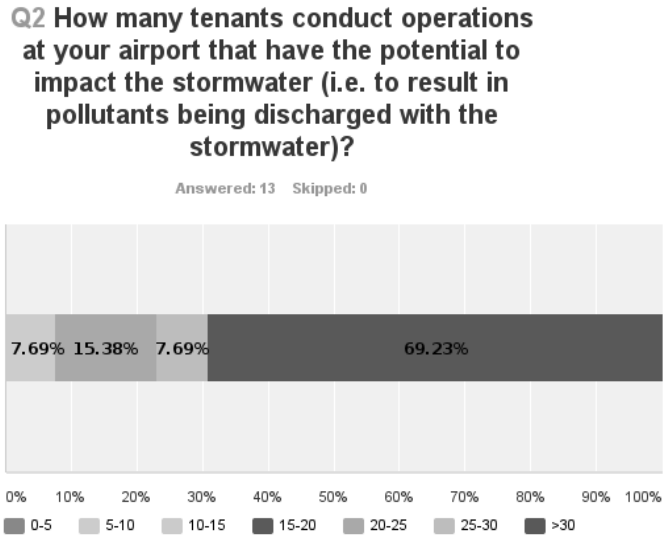

Fig. 1. Number of Tenants with Potential to Impact Stormwater.

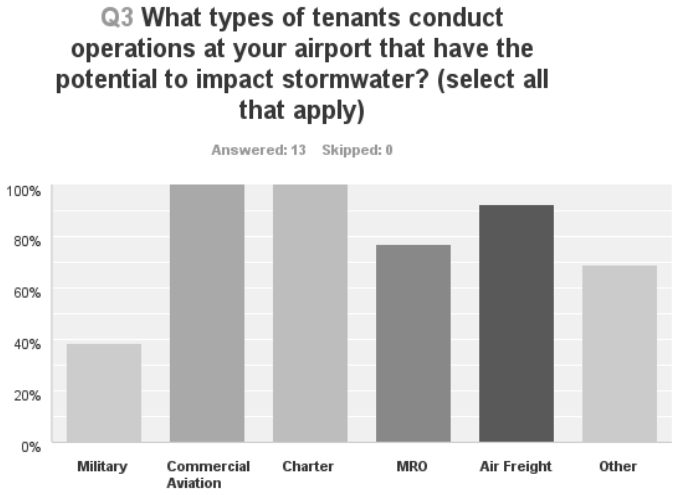

Fig. 2. Types of Tenants with Potential to Impact Stormwater.

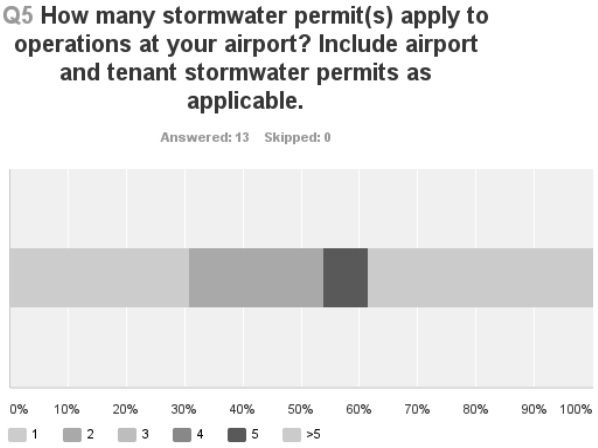

Fig. 3. Number of Stormwater Permits by Airport.

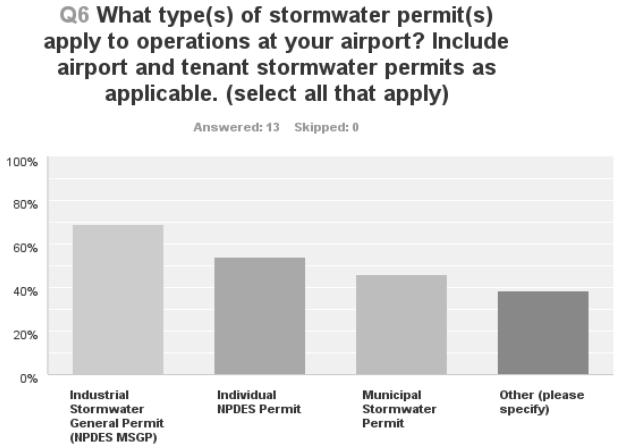

Fig. 4. Types of Stormwater Permits.

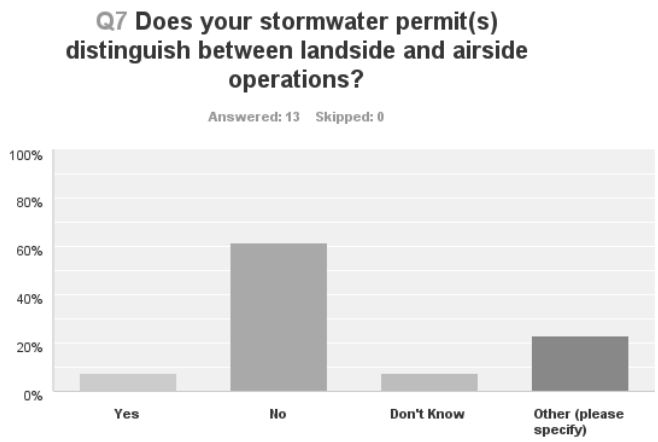

Fig. 5. Airside and Landside Distinctions in Stormwater Permits.

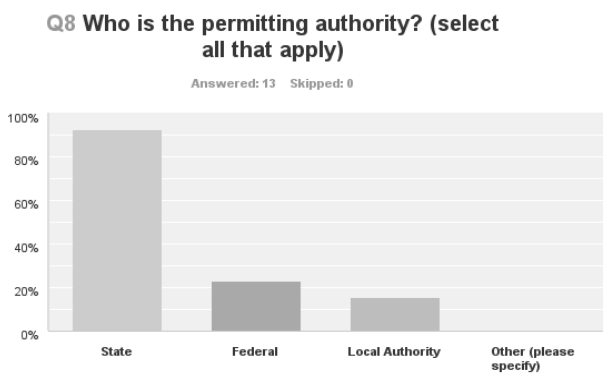

Fig. 6. Permitting Authority.

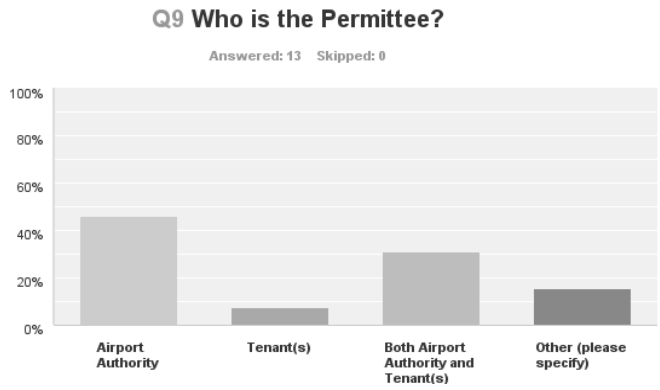

Fig. 7. Permittee.

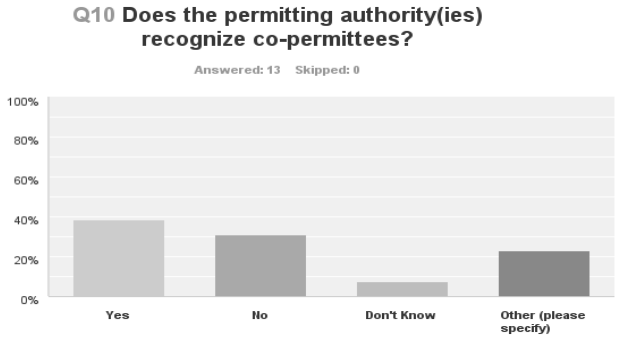

Fig. 8. Co-permittee Recognition by Permitting Authority.

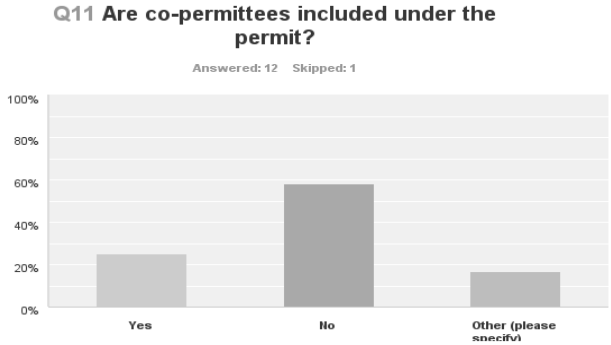

Fig. 9. Co-permittee Inclusion Under Permit.

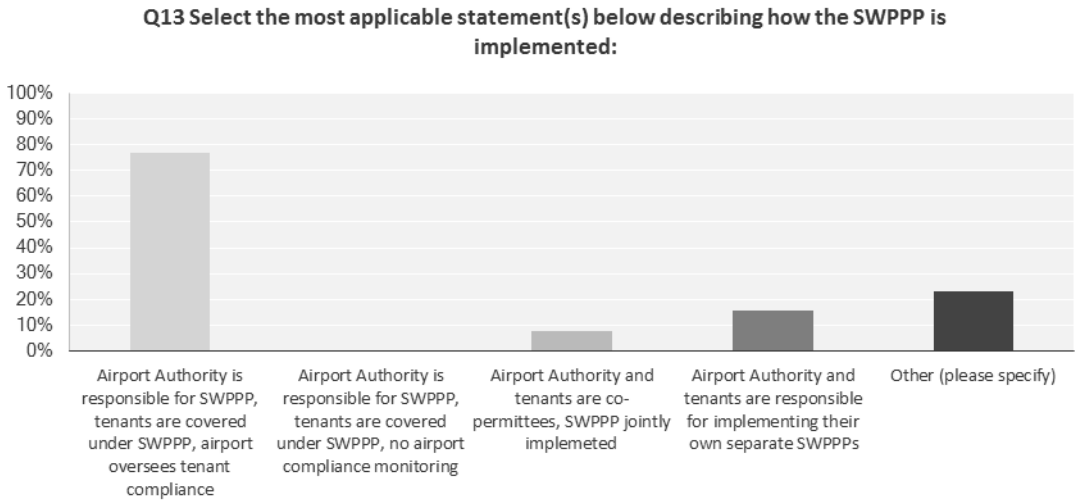

Fig. 10. SWPPP Implementation.

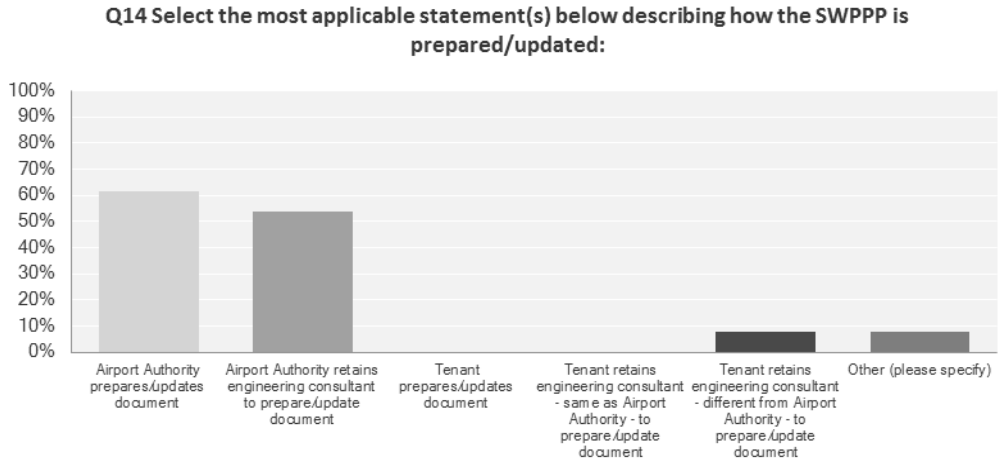

Fig. 11. SWPPP Preparation/Update Responsibility.

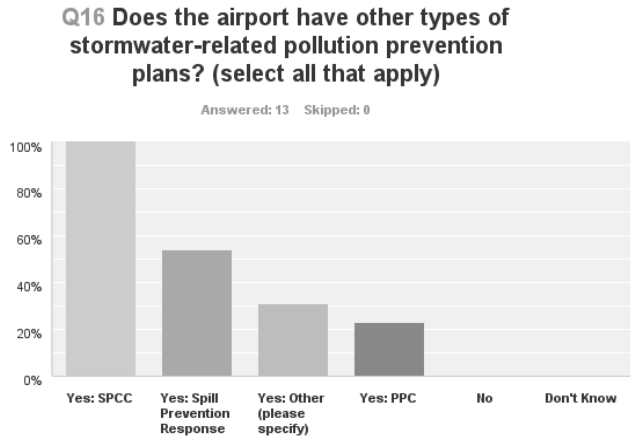

Fig. 12. SWPPP Components.

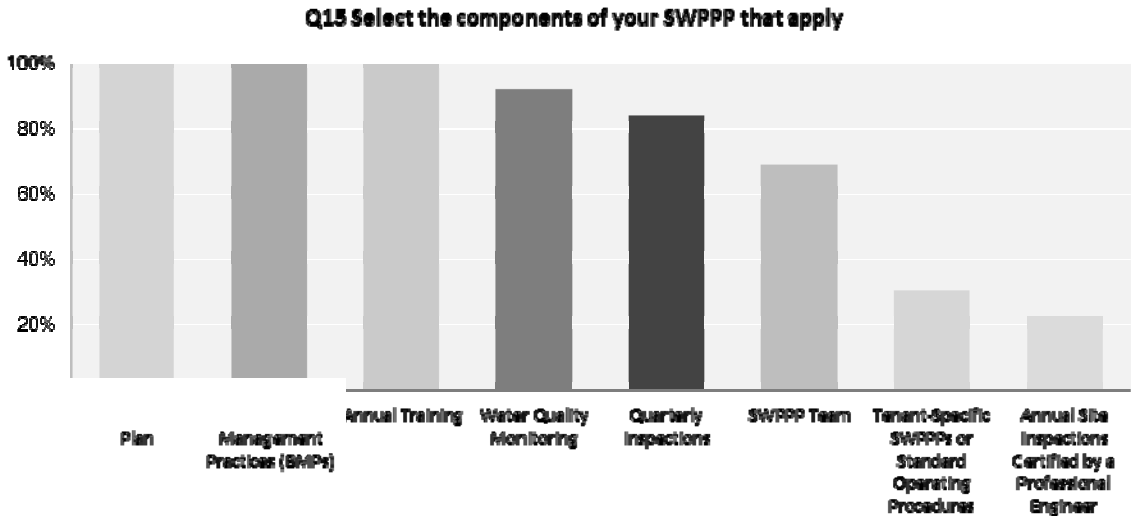

Fig. 13. Additional Stormwater-Related Pollution Prevention Plans.

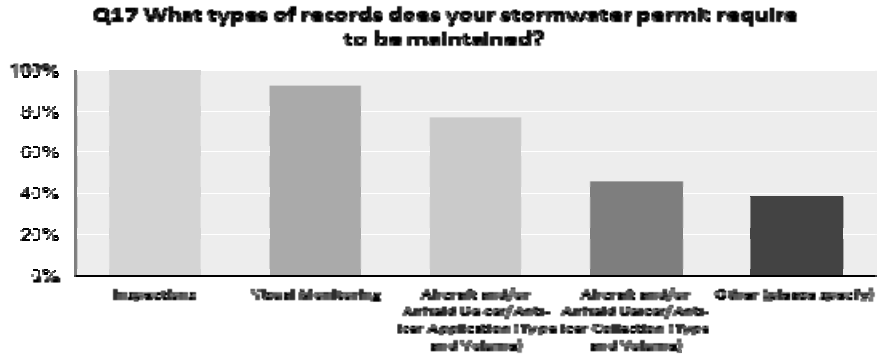

Fig. 14. Record Keeping Requirements.

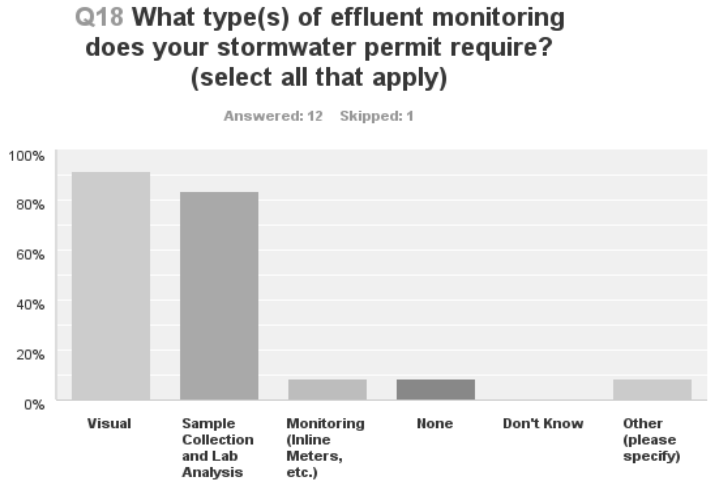

Fig. 15. Effluent Monitoring Requirements.

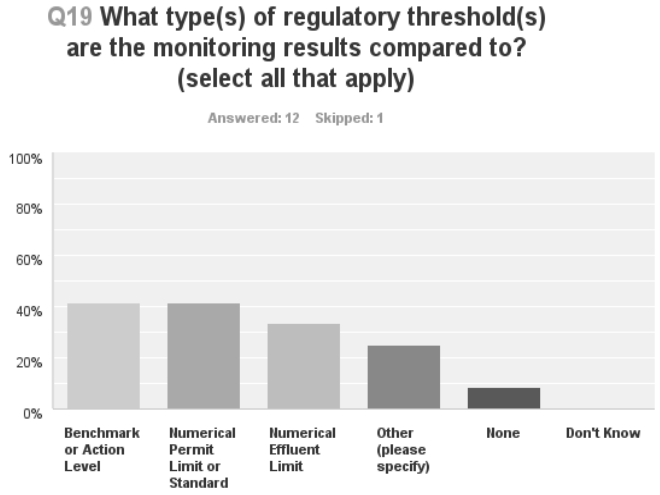

Fig. 16. Regulatory Thresholds.

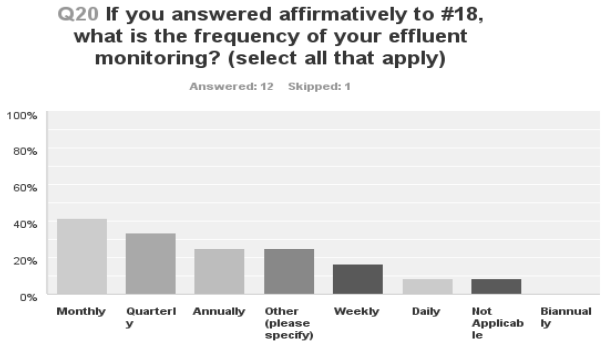

Fig. 17. Effluent Monitoring Frequency Requirements.

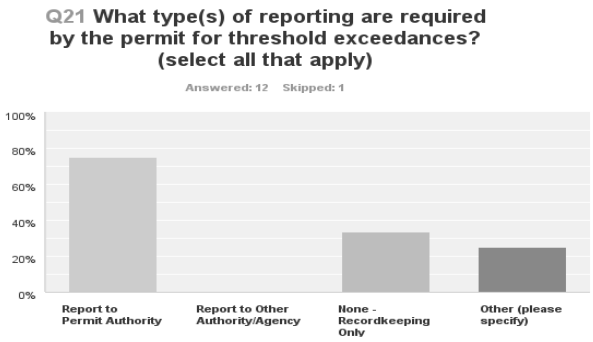

Fig. 18. Threshold Exceedances Reporting Requirements.

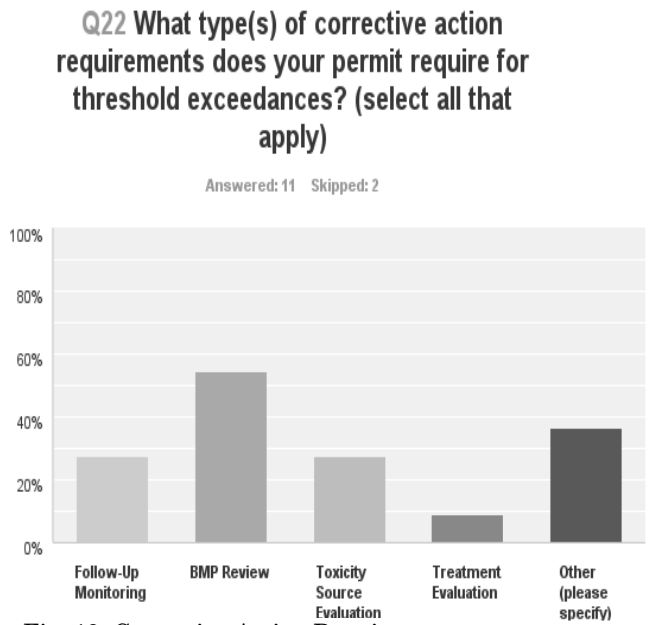

Fig. 19. Corrective Action Requirements.

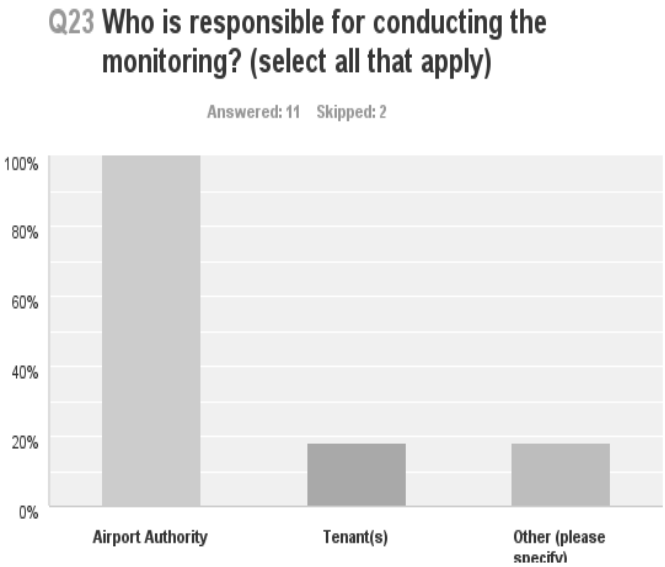

Fig. 20. Responsibility for Monitoring.

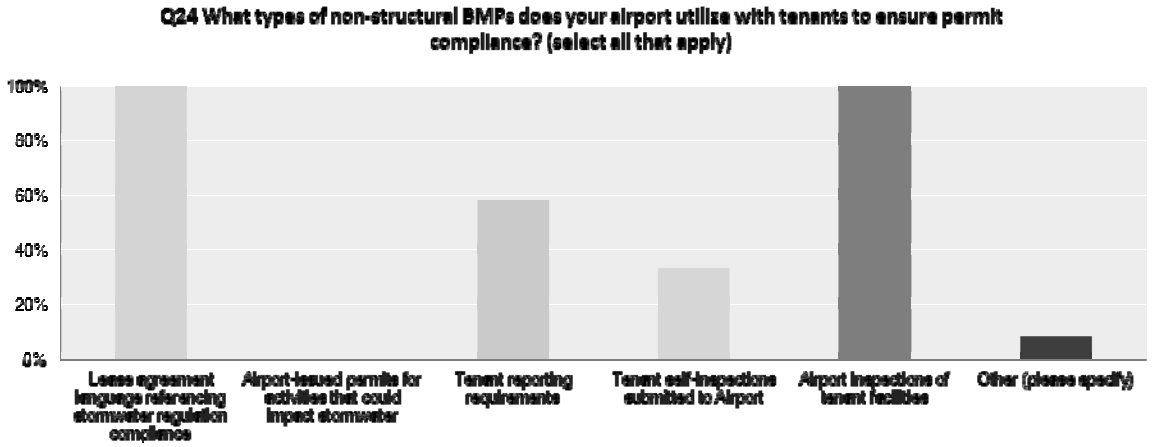

Fig. 21. Nonstructural BMPs Used.

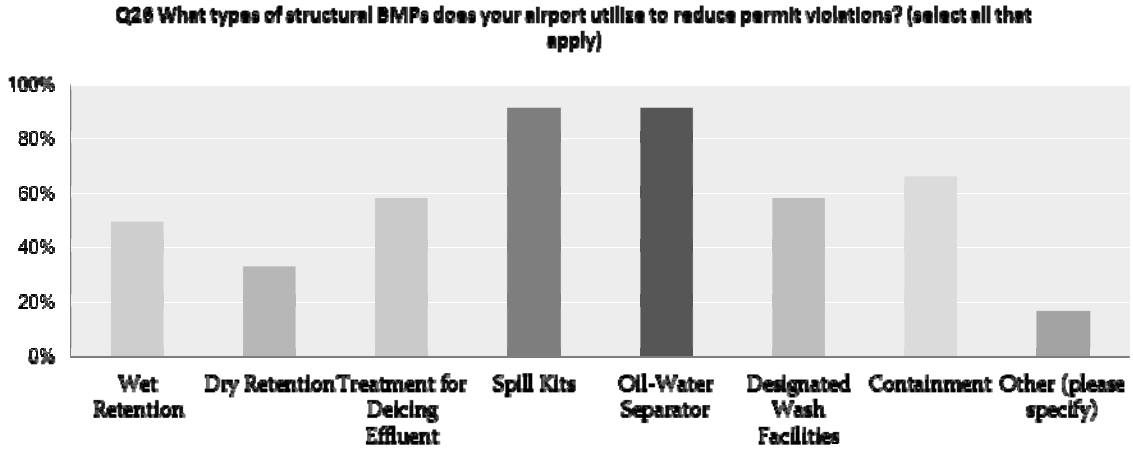

Fig. 22. Structural BMPs Used.

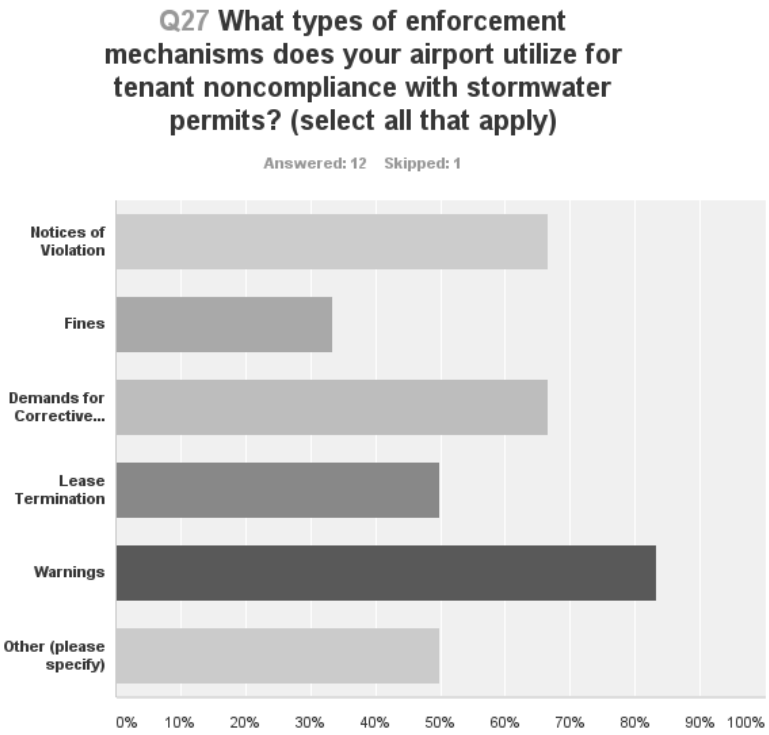

Fig. 23. Types of Enforcement Mechanisms for Tenant Compliance.

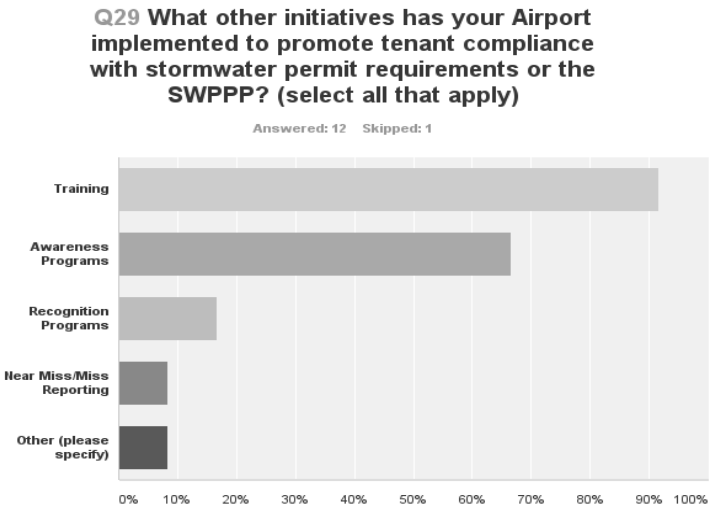

Fig. 24. Other Initiatives Undertaken to Promote Tenant Compliance

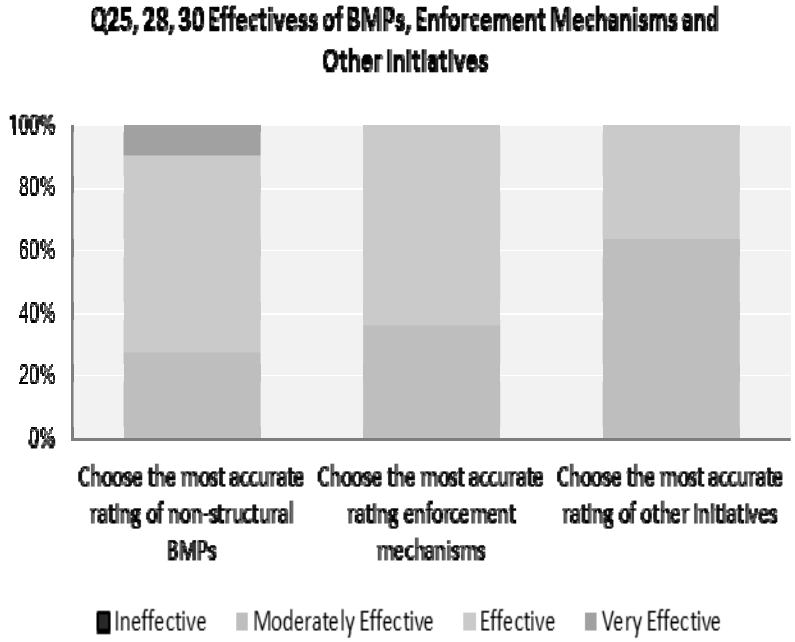

Fig. 25. Comparison of the Effectiveness of BMPs, Enforcement Mechanisms, and Other Initiatives to Achieve and Promote Tenant Compliance with Stormwater Permits and SWPPP.

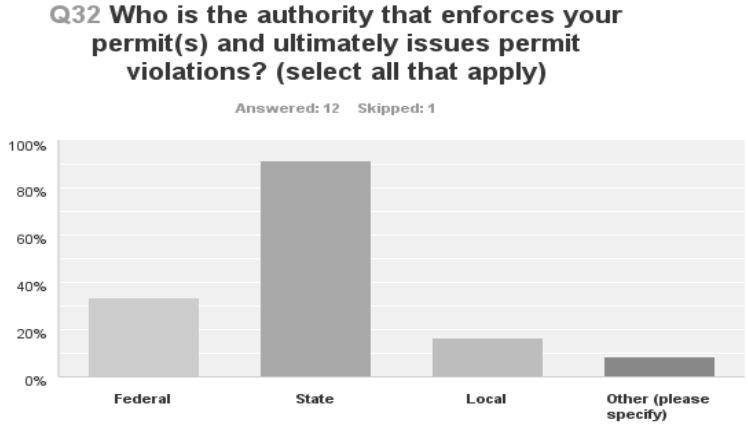

Fig. 26. Authority Responsible for Enforcing Permit Compliance.

Fig. 27. Notices of Alleged Violation of Stormwater Permit Requirement.

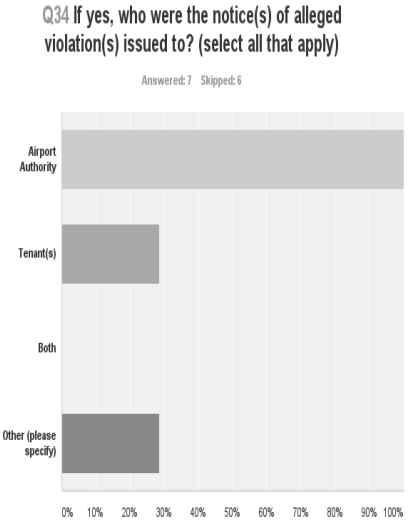

Fig. 28. Party Receiving the Alleged Notice of Violation.

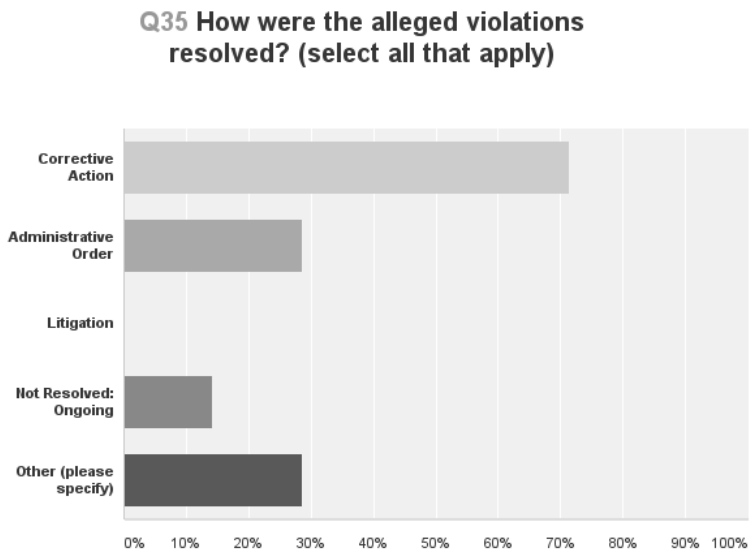

Fig. 29. Alleged Violations Resolution.

Fig. 30. Responsible Party for Implementing Corrective Action.

Fig. 31. Parties Involved in Alleged Violation via Administrative Order or Litigation.

ACRONYMS

ACRP	Airport Cooperative Research Program
ALJ	Administrative Law Judge
BAT	Best Available Technology
BCT	Best Conventional Technology
BOD	Biochemical Oxygen Demand
BMP	Best Management Practice
BPT	Best Practicable Control Technology Currently Available
CA GP	California Water Board General Permit
CDA	City of Chicago Department of Aviation
CGP	Construction General Permit
COD	Chemical Oxygen Demand
CPSWQ	Certified Professional in Storm Water Quality
CWA	Clean Water Act
DFW	Dallas/Fort Worth International Airport
DMR	Discharge Monitoring Report
EAD	Environmental Affairs Department
ELGs	Effluent Limitation Guidelines
ECOLOGY	Washington Department of Ecology
EPA	United States Environmental Protection Agency
ERA	Exceedance Response Action
FBO	Fixed Base Operator
ICP	Integrated Contingency Plan
IEPA	Illinois Environmental Protection Agency
JFK	John F. Kennedy International Airport
LRP	Legally Responsible Person
MRO	Maintenance Repair and Overhaul
MSDS	Material Safety Data Sheet
MSGP	Multi-Sector General Permit
N	Nitrogen
NALs	Numeric Action Levels
NOI	Notice of Intent
NONA	Notice of Non-Applicability
NPDES	National Pollutant Discharge Elimination System
NY ECL	New York Environmental Conservation Law
NYSDEC	New York State Department of Environmental Conservation
NY MSGP	New York Multi-Sector General Permit
O'HARE	Chicago O'Hare International Airport
PANYNJ	Port Authority of New York and New Jersey
PCHB	Pollution Control Hearings Board
PCS	Permit Compliance System
PPC	Preparedness, Prevention, and Control
QISP	Qualified Industrial Storm Water Practitioner
QSE	Qualifying Storm Event
REGIONAL BOARDS	Regional Water Quality Control Boards
SEA-TAC	Seattle–Tacoma International Airport
SFO	San Francisco International Airport
SMARTS	Storm Water Multi-Application Reporting and Tracking System
SPDES	State Pollution Discharge Elimination System
SPECP	Spill Prevention and Emergency Cleanup Plan
SPR	Spill Response Plan
SWATF	Storm Water Advisory Task Force
SWPPP	Stormwater Pollution Prevention Plan

TCEQ	Texas Commission on Environmental Quality
TMDL	Total Maximum Daily Load
TPDES	Texas Pollutant Discharge Elimination System
WA ISGP	Washington State Industrial Stormwater General Permit
WPC	Water Pollution Control
WPPP	Water Pollution Prevention Plan

AUTHOR ACKNOWLEDGMENTS

The ACRP 11-01 Project Team consists of CDM Smith and Barg Coffin Lewis and Trapp, LLP. The project team would like to thank the members of the project panel for providing the opportunity to conduct this research. Any use of trade, product, or firm names is for descriptive purposes only and does not imply endorsement by the U.S. Government.

ACKNOWLEDGMENTS

This study was performed under the overall guidance of the ACRP Project Committee 11-01. The Committee was chaired by TIMOTHY KARASKIEWICZ, General Mitchell International Airport, Milwaukee, Wisconsin. Members are THOMAS W. ANDERSON, Metropolitan Airports Commission, Minneapolis, Minnesota; MARCO B. KUNZ, Salt Lake City Department of Airports, Salt Lake City, Utah; ELAINE ROBERTS, Columbus Regional Airport Authority, Columbus, Ohio; E. LEE THOMSON, Clark County, Las Vegas, Nevada; and KATHLEEN YODICE, Yodice Associates, Aircraft Owners and Pilots Association, Washington, DC.

DAPHNE A. FULLER provides liaison with the Federal Aviation Administration, FRANK SANMARTIN provides liaison with the Federal Aviation Administration, and MARCI A. GREENBERGER represents the ACRP staff.

Transportation Research Board
500 Fifth Street, NW
Washington, DC 20001

ISBN 978-0-309-30877-9
90000
9 780309 308779

Subscriber Categories: Aviation • Environment • Law