WPDES PERMIT

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES

PERMIT TO DISCHARGE UNDER THE WISCONSIN POLLUTANT DISCHARGE ELIMINATION SYSTEM

Dane County Regional Airport

is permitted, under the authority of Chapter 283, Wisconsin Statutes, to discharge from a facility located at
4000 International Lane
Madison, Wisconsin 53704-3120
to
West Branch of Starkweather Creek

in accordance with the effluent limitations, monitoring requirements and other conditions set forth in this permit.

The permittee shall not discharge after the date of expiration. If the permittee wishes to continue to discharge after this expiration date an application shall be filed for reissuance of this permit, according to Chapter NR 200, Wis. Adm. Code, at least 180 days prior to the expiration date given below.

State of Wisconsin Department of Natural Resources
For the Secretary

By _____
Susan Sylvester
Director, Bureau of Water Quality

_____
Date Permit Signed/Issued

PERMIT TERM: EFFECTIVE DATE - January 01, 2015 **EXPIRATION DATE - December 31, 2019**

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1 Airport Co-Permittees

1.1 Tenant Coverage

Airport tenants with industrial activities associated with commercial air transportation at Dane County Regional Airport, may be co-permittees with Dane County, and be regulated under this permit. The airport co-permittee list is subject to change according to subsection 1.3.

A tenant must be permitted if they meet the following two permitting criteria:

1. The owner or operator is in the air transportation business with a Standard Industrial Classification code of 4512, 4513, 4522, 4581, or 9711; and
2. The tenant is involved in maintenance, fueling, cleaning, or de-icing.

1.2 Co-Permittee List

The following airport tenants have filed a reissuance application to continue inclusion as a co-permittee, or filed a certification with the Department to become a co-permittee under this permit if they are a new tenant that meets the permitting criteria:

CARGO CARRIERS:
Federal Express Corporation

COMMERCIAL AIRLINES:
United Airlines
American Eagle Airlines
Delta Airlines
Frontier Airlines

OTHER:
Wisconsin Air National Guard 115th Fighter Wing
Wisconsin Army National Guard
Wisconsin Aviation

Note: Dane County and the airport tenants identified in the above list will be referred to as the co-permittees. Reference in the permit to permittee means co-permittee.

1.3 Change in Airport Tenant Status

Dane County shall promptly notify the Department when it becomes aware of a change in tenant status which could require a tenant to become a co-permittee (or otherwise obtain an individual permit) or to be deleted from the co-permittee list, by submitting information about the change to the Department. If the tenant desires to become a co-permittee instead of obtaining an individual permit, the Department shall modify the permit (without a notice as allowed under s. 283.53(2d)(d), Wis. Stats) by issuing a new airport co-permittee list which identifies the tenants covered under the Dane County Regional Airport WPDES permit. Tenants required to be permitted under (a) or (b) below shall submit to the Department, through Dane County, a written agreement that specifies the date the new co-permittee assumes responsibility for compliance with the permit and liability for violations of the permit.

The following situations require a revision to the airport tenant list:

(a) A new tenant who begins operating at the airport, and meets the permitting criteria, shall be added to the airport co-permittee list unless the tenant elects to obtain an individual permit.

(b) An existing tenant not previously identified on the airport co-permittee list, who meets the permitting criteria, shall be added to the airport co-permittee list unless the tenant elects to obtain an individual permit.

(c) A co-permittee, who changes their name from what is currently on the airport co-permittee list, shall have their name corrected on the airport co-permittee list.

(d) A co-permittee, who discontinues their activities and no longer operates at the airport, shall be removed from the airport co-permittee list.

(e) A tenant identified on the airport co-permittee list, who no longer meets the permitting criteria, shall be removed from the airport co-permittee list.

Note: Refer to subsection 1.1 for the criteria that requires a tenant to be permitted.

2 Applicability

2.1 Permitted Area

This permit covers areas at Dane County Regional Airport within the jurisdiction of Dane County, contributing to discharges from the airport's separate storm sewer system. Separate storm sewer system means a conveyance or system of conveyances including storm sewers, roads with drainage systems, roadways, catch basins, curbs, gutters, ditches, constructed channels or storm drains. The permitted area consists of the area delineated within the regulated activity boundary shown on airport drainage area base map (Attachment D of the WPDES permit reissuance application). Upstream and off site flows into the separate storm sewer system from outside the permitted area are excluded from coverage under this permit and are not the responsibility of the co-permittees. Refer to subsection 3.4 for exclusions from coverage under this permit.

2.2 Authorized Discharges

This permit authorizes storm water point source discharges to waters of the State from the separate storm sewer system in the permitted area. This permit also authorizes the discharge of storm water commingled with flows contributed by process wastewater, non-process wastewater, and storm water associated with industrial activity, provided such discharges are regulated under this or other WPDES permits or are not significant sources of pollutants.

2.3 Water Quality Standards

This permit specifies the conditions under which storm water may be discharged to waters of the state for the purpose of achieving water quality standards contained in chs. NR 102 through 105, and NR 140, Wis. Adm. Code. For the term of this permit, compliance with water quality standards will be addressed by adherence to general narrative-type storm water discharge limitations described in subsection 6.2.8, and implementation of the storm water pollution prevention plan and best management practice described in section 4. This permit does not authorize wastewater discharges that the department determines will cause or have reasonable potential to cause or contribute to an excursion above any applicable water quality standards.

2.4 Program Resources

Permittees shall provide adequate finances, staff, equipment, and support capabilities to implement their storm water pollution prevention plan.

2.5 Individual Responsibilities

Dane County, as the owner and airport authority, shall act as the airport representative and shall coordinate co-permittee efforts to achieve permit compliance. Dane County and each airport tenant identified as a co-permittee are individually responsible for:

(a) Compliance with permit conditions relating to discharges from the separate storm sewer system where it is the operator.

(b) Storm water pollution prevention plan implementation on portions of the separate storm sewer system where it is the operator.

(c) Collection of monitoring data required in sections 5 and 6. Agreements may be established between co-permittees to consolidate monitoring responsibilities.

(d) Compliance with annual reporting requirements as specified in subsection 4.4, relating to the portions of the airport's separate storm sewer system for which they are responsible.

2.6 Joint Responsibilities

Co-permittees are jointly responsible for permit compliance on those shared portions of the separate storm sewer system where one or more co-permittees jointly discharge to or operates a portion of the separate storm sewer system.

2.7 Non Co-Permittees

Discharges by non-co-permittee tenants may not cause any of the Dane County Regional Airport permittees to be in violation of the terms of this permit. If a discharge by a non-co-permittee causes a violation of Wisconsin law or regulation, Dane County will examine the legal obligation of the non-co-permittee under the tenant lease agreement with the County, and will take whatever action, if any, it deems appropriate.

3 Authorized Discharges

3.1 Storm Water Discharges

This permit regulates storm water point source discharges to waters of the State from the permitted area upstream from the outfalls listed below:

Outfall	Receiving Water	Location
001	Starkweather Creek	Influent pump station bypass of glycol recovery system storage tanks.
002	Sanitary Sewer	Effluent pump station discharge into 36 inch sanitary interceptor sewer.
034	Starkweather Creek	Effluent pump station discharge into 4 inch discharge pipe.
003 - 038	Starkweather Creek	Perimeter of the Airport Property.

There are several drainage areas at the airport, with 38 storm sewer outfalls into Starkweather Creek. Outfall 003 and 032 are monitoring locations selected as representative of airport runoff. Outfall 001 is the discharge point for the bypass into Starkweather Creek of uncontaminated runoff. Outfall 002 is the sanitary sewer discharge from the glycol recovery system storage tanks that collect contaminated runoff from glycol management area during the deicing season. Outfall 034 is a discharge from the glycol recovery system storage tanks to Starkweather Creek if the runoff collected is determined to be uncontaminated.
Dane County Regional Airport shall not be held responsible for discharges tributary to the airport drainage system or Starkweather Creek not under its authority.

Note: Uncontaminated runoff is defined as having water quality that complies with the effluent limitations in table 6.2.1 and paragraph 6.2.4.4.

Note: There may be other minor outfalls or discharge points where runoff may leave the permitted area, such as intermittent channelized flow. These discharges are also authorized.

3.2 Process and Non-Process Wastewater Discharges

This permit also regulates wastewater discharges to the airport's separate storm sewer system. These discharges include the following:

- Deicing and anti-icing activities
- Contaminated groundwater
- Oil and water separators

3.3 Non-Storm Water Discharges

Non-storm water discharges to the separate storm sewer system are prohibited, unless the discharge is innocuous or allowed under a WPDES permit. Permittees shall evaluate all storm water outfalls for non-storm water contributions and illicit connections. Methods may include a review of as-built schematics or drainage plans of the storm water collection system, end of pipe screening during dry weather, dye testing, physical inspection of the storm water collection system, or other appropriate monitoring. Dane County conducted this evaluation in during the first annual inspection in 1996 and submitted results with the storm water pollution prevention plan. Continued inspections for non-storm water discharges shall continue as appropriate, with a repeat evaluation at least every 5 years, to achieve and maintain compliance with this condition. If an evaluation isn't feasible due to lack of access, include a statement explaining why.

3.4 Exclusions

Excluded from coverage under this permit are the following:

(a) Areas located on Dane County Regional Airport property, which are segregated from the industrial activities associated with the airport, such as office building, parking lots, and undeveloped areas, may not need to be permitted. The exclusion status shall be revoked if storm water runoff from areas normally excluded mix or commingle with storm water drainage from pollution sources covered under the storm water pollution prevention plan, prior to discharging from the permitted area.

(b) Areas off site or upstream from the permitted area which discharge into the separate storm sewer system.

(c) Airport tenants who do not meet the permitting criteria. Note: Refer to the airport tenant list for the criteria that requires a tenant to be permitted.

(d) Non-storm water discharges that are not considered illicit discharges, unless identified by either the permittee or the Department as a significant source of pollutants to waters of the State. Innocuous non-storm water discharges, as listed below, may enter the separate storm sewer system. However, the permittee shall incorporate appropriate control measures in the storm water pollution prevention plan if any of these discharges are identified as significant sources of pollutants.

- Water line flushing
- Landscape irrigation
- Diverted stream flows
- Uncontaminated ground water infiltration
- Uncontaminated pumped ground water
- Discharges from potable water sources
- Foundation drains
- Air conditioning condensate
- Irrigation water
- Lawn watering
- Individual private vehicle or aircraft washing
- Flows from riparian habitats and wetlands
- Pavement wash water
- Fire fighting

4 Storm Water Pollution Prevention Plan

4.1 Implementation

Dane County Regional Airport shall follow the "Storm Water Pollution Prevention Plan" dated December 1996, and any subsequent revisions. Implementation of the plan shall be a continuing activity. The plan shall be amended where necessary to minimize the discharge of pollutants to the maximum extent practicable.

4.2 Glycol Management

The permittee shall evaluate glycol collection and storage systems including the use of deicing pads, discharge or recycling options, and any emerging technologies in glycol management controls. When conditions warrant the construction of permanent infrastructure for glycol management, the airport shall incorporate them into the design during the airport expansion plans.

A new glycol recovery system was completed in 2009 to replace the glycol retention pond when it was taken out of service in 2010 because the airport's west terminal apron expansion necessitated abandonment of the glycol retention pond. This system consists of the collection of aircraft deicing runoff from the glycol management area that includes the west ramp and main terminal area where the majority of aircraft deicing occurs. Contaminated runoff is collected from this approximately 40 acres of impervious area and is conveyed by storm sewers to three storage tanks with a combined capacity 1.1 million gallons. In addition, two deicing pads at the south ramp to serve the air cargo area and general aviation from the east ramp area will be pumped to the existing glycol management system in the future (construction scheduled in 2015).

The following conditions apply to glycol management activities:

(a) The glycol management area shall consist of all locations where glycol is applied to aircraft at the airport terminal and all ramps where deicing occurs.

(b) Minimize to the maximum extent practicable the size of glycol management areas to minimize the volume of storm water runoff that must be captured and discharged into the sanitary sewer.

(c) Areas that the airport evaluates where deicing and anti-icing activities occur, but where the quantity of glycol is insignificant or necessary for the safe movement of aircraft may be exempt.

(d) Bypassing contaminated runoff into Starkweather Creek during the deicing season is prohibited, in accordance with Standard Requirements 8.2.2 and 8.2.3. During the deicing season (October through May when glycol is applied to deice or anti-ice aircraft and potassium acetate is used for pavement deicing) contaminated runoff collected in the storm sewer system shall be conveyed into the glycol recovery system for storage and discharge into the sanitary sewer. Bypassing during the deicing season is permitted if the criteria described in paragraph 6.2.4.2 are met.

(e) Facilities for glycol management may require a Department plan approval if they fall under the description of a reviewable wastewater treatment system project, in accordance with ch. NR 108, Wis. Adm. Code. Submit plans for any wastewater storage structures, sewer system modifications, or any other runoff management facilities that would be reviewable. Allow 90 days for Department approval of the plans prior to construction.

(f) As new formulations of glycol and other deicing or anti-icing chemicals are available that exhibit reductions in aquatic toxicity or other environmental benefits, without compromises to their intended purpose or aircraft safety, conversion to those products shall be made as soon as practicable.

(g) Glycol conservation efforts or other appropriate management practices shall be utilized to the extent practicable when aircraft deicing or anti-icing occurs outside the glycol management area or away from a deicing pad.

4.3 Annual Inspection

Perform and document a comprehensive annual airport site inspection. The inspection shall verify that the site drainage conditions and potential pollution sources identified in the storm water pollution prevention plan remain accurate, that the best management practices prescribed in the plan are being implemented, and properly operated and maintained. Document the date of inspection, inspector, summary of observations, and if any amendments are needed to the storm water pollution prevention plan. The annual inspection shall be conducted during the deicing season when deicing and anti-icing activities are occurring to observe the management practices.

4.4 End of Season Annual Summary

The permittee shall prepare an end of season annual summary consisting of items (a) through (g) listed below, and any other information in support of documenting permit compliance. The end of season annual report shall include one deicing season that consists of a 12-month period from July 1 through June 30. The summary shall consist of a written report, submitted no later than three months after the completed deicing season (by September 30th). The end of season annual summary shall include the following items:

(a) An update on the glycol management including information on glycol collection, storage, disposal, usage amounts, pollutant loadings, fugitive amount, recovery efficiency, conservation practices, weather conditions, and operational issues.

(b) Provide a table showing a summary of long term trends for the amount of glycol and pavement deicers used each deicing season, estimated amount of glycol collected by the glycol recovery system, reduction from baseline usage due to conservation practices in areas that do not drain to the glycol recovery system, inches of snowfall, and number of commercial aircraft operations.

Note: The use of conservation practices is only applicable to areas outside the glycol recovery system drainage area. The baseline data for the conservation practices may be based on best professional judgment when there is no historical data.

(c) Site map revisions where necessary to identify of any new outfalls, sampling points, structural controls, or other noteworthy changes in the storm water pollution prevention plan.

(d) Assessment of the effectiveness of best management practices, and whether any amendments are proposed to the storm water pollution prevention plan to address operational issues.

(e) Describe what follow-up was taken in response to any issues identified in the annual inspection, visual quarterly inspections, and non-storm water discharge inspection (if conducted that year).

(f) A summary of the monitoring data collected from Sampling Points 101, 102, 001, 002, 003, 032, 601, 602, and 603. The quarterly visual inspection notes do not have to be submitted (retain them on site), but in instances where unusual or unexpected observations were noted, summarize what was observed and the suspected cause.

(g) Observations on receiving water quality improvements or degradation resulting from airport activities.

(h) A general fiscal summary of the deicing season expenditures for the airport's storm water prevention plan, which includes the following:

1. The expenditures for the deicing season with a breakdown of expenses for the major components.
2. The budget for the upcoming deicing season with a breakdown of expenses for the major components.

4.5 Urea Prohibition

The permittee shall certify annually the airport does not use airfield deicing products that contain urea, in accordance with 40 CRF Part 449.10. This certification may be included with the end of season annual summary under subsection 4.4.

5 In-Plant Requirements

5.1 Sampling Point(s)

Sampling Point Designation	
Sampling Point Number	**Sampling Point Location, WasteType/Sample Contents and Treatment Description (as applicable)**
101	Wisconsin Air National Guard 115th Fighter Wing fuel farm oil and water separator effluent discharge to an 18-inch storm sewer, Outfall 020.
102	Wisconsin Army National Guard fueling facility oil and water separator effluent discharge to a 42-inch storm sewer, Outfall 036.

5.2 Monitoring Requirements and Limitations

The permittee shall comply with the following monitoring requirements and limitations.

5.2.1 Sampling Point 101 - Air National Guard and 102 - Army National Guard

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Flow Rate		gpd	Quarterly	Estimated	5.2.1.2
Oil & Grease (Hexane)	Daily Max	15 mg/L	Quarterly	Grab	5.2.1.3
Suspended Solids, Total	Daily Max	40 mg/L	Quarterly	Grab	5.2.1.3
BOD_5, Total	Monthly Avg	20 mg/L	Annual	Grab	5.2.1.3
BETX, Total	Monthly Avg	750 µg/L	Annual	Grab	5.2.1.3, 5.2.1.4
PAHs	Monthly Avg	0.1 µg/L	Annual	Grab	5.2.1.3, 5.2.1.5
Benzo(a)pyrene	Monthly Avg	0.1 µg/L	Annual	Grab	5.2.1.3, 5.2.1.6
Naphthalene	Monthly Avg	70 µg/L	Annual	Grab	5.2.1.3, 5.2.1.7

5.2.1.1 Applicability

Permittees may discharge into the separate storm sewer system treated contaminated storm water discharged from oil and water separators, in accordance with the conditions in this section. The following are operators of oil and water separators at Dane Country Regional Airport:

- Dane County owned facilities operate 5 oil and water separators, all discharge into a Madison Metropolitan Sewerage District sanitary sewer.
- Wisconsin Air National Guard and Wisconsin Arm National Guard operate a total of 8 oil and water separators, 6 discharge to a Madison Metropolitan Sewerage District sanitary sewer and 2 discharge into Starkweather Creek that are regulated at Sampling Points 101 and 102 respectively.
- Any other co-permittee with an oil and water separator.

5.2.1.2 Flow Estimate

Estimate means a reasonable approximation of the average daily flow based on a water balance, an uncalibrated weir, calculations from the velocity and cross section of the discharge, intake water meter readings, discharge water meter readings, or any other method approved by the Department.

5.2.1.3 Grab Sample

A grab Sample means a single sample taken at one moment of time or a combination of several smaller samples of equal volume taken in less than a two-minute period. Samples shall be collected from oil and water separator effluent prior to discharge to the separate storm sewer system, from each of the oil and water separators at the airport (except those connected to the sanitary sewer).

5.2.1.4 Total BETX

Total BETX shall include a summation of the following individual compounds: Benzene, ethylbenzene, toluene and total xylenes.

5.2.1.5 PAH Group of Ten

Polycyclic aromatic hydrocarbons (PAH's) shall include a summation of the following ten individual compounds: benzo(a)anthracene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, fluoranthene, indeno(1,2,3-cd)pyrene, phenanthrene, and pyrene. Compliance with the monthly average PAH limit can be demonstrated by reporting a no detect of all of these PAH compounds, or by reporting the sum of the PAH individual compounds equal to or less than 0.1 µg/L. If a PAH compound is detected between the level of detection (LOD) and level of quantitation (LOQ) the value shall be reported on the DMR, but it is not considered an exceedance if the LOQ is greater than 0.1 µg/L.

In determining compliance with the 0.1 µg/L limit, the permittee may use the toxicity equivalent factors shown below. For calculating the concentration for the PAH group of 10, multiply the concentration of each PAH compound by the corresponding TEF value and then sum the results. For results <LOD a zero may be used for the concentration. Refer to Standard Requirement 8.1.4.

	PAH Compounds	TEF - Toxicity Equivalent Factor
1	Benzo(a)anthracene	0.1
2	Benzo(b)fluoranthene	0.1
3	Benzo(g,h,i)perylene	0.01
4	Benzo(k)fluoranthene	0.01
5	Chrysene	0.001
6	Dibenzo(a,h)anthracene	1
7	Fluoranthene	0.001
8	Indeno(1,2,3-cd)pyrene	0.1
9	Phenanthrene	0.001
10	Pyrene	0.001

5.2.1.6 Benzo(a)pyrene

The PAH compound benzo(a)pyrene is regulated separately. Compliance can be demonstrated by reporting no detect, or by reporting a detected amount equal to or less than 0.1 µg/L.

5.2.1.7 Naphthalene

The PAH compound naphthalene is regulated separately. Compliance can be demonstrated by reporting no detect, or by reporting a detected amount equal to or less than 70 µg/L.

5.2.1.8 Design Requirements

The oil and water separator shall have sufficient capacity to contain all wastewater discharges and any precipitation resulting from a 10-year, 24-hour storm event, which falls within or flows into the area of disposal or treatment. Plans and specifications for any new oil and water separator shall be submitted to the Department prior to construction in accordance with ch. NR 108, Wis. Adm. Code.

5.2.1.9 Operating Requirements

Permittees shall comply with the following:

(a) The oil/water separator treatment controls for petroleum contaminated storm water runoff shall be adequately sized, designed, operated and maintained.

(b) Oil/water separators shall only be used to treat petroleum contaminated storm water runoff. No material (e.g., waste oil or petroleum products contaminated with minor amounts of water) shall be intentionally placed into the system for treatment or storage. All product spills shall be removed from the oil/water separator as soon as is practicable.

(c) Accumulated solids, oil and grease shall be removed on a periodic basis to maintain the hydraulic capacity of the oil and water separator and prevent the carryover of the oil and grease. The water discharge side of the separator (effluent chamber) shall be maintained; there shall be no oil sheen or scum on the water or oil accumulation on the equipment. All removed substances shall be properly disposed of (paragraph 5.2.1.10).

(d) There shall be no leakage form any containment berms, dikes or tanks.

(e) The oil and water separator shall be inspected at least quarterly for proper operation.

(f) Document the volume of waste oil recovered, date of removal, who removed it, and the ultimate fate of the waste oil.

(g) For all petroleum storage tanks, submit in the end of season annual summary (subsection 4.4) the following information:

1. Method used to handle and dispose of petroleum storage tank condensate, the volume of condensate discharged, and the frequency of the discharge.
2. If petroleum storage tank condensate is discharged, the condensate shall be analyzed for benzene, ethylbenzene, lead (if lead additives are used), total phenols, toluene, and xylene. Detection of any of the above parameters in the condensate may result in a determination by the Department that the discharge is not allowable if it is a significant source of pollutants.

5.2.1.10 Disposal of Waste Oil and Solids

Waste oil and solids removed from the oil/water separator shall be disposed of at a site or operation licensed by the Department under chs. NR 500 to 522, Wis. Adm. Code (solid waste regulations), or chs. NR 600 to 685, Wis. Adm. Code (hazardous waste regulations). The following documentation shall be maintained on-site regarding the removal and disposal of these wastes: (a) the amount removed, (b) date of removal, (c) person or company who hauled the waste, and (d) disposal site for the waste. A summary of each year's waste removal and disposal shall be submitted with the end of season annual summary (subsection 4.4).

5.2.1.11 Secondary Containment Water

Water that has collected in secondary containment structures at fuel farm storage facilities that consists solely of storm water that has not been mixed with other waste streams, is clean fire suppression water, or other uncontaminated water, can be discharged to groundwater or surface water without treatment provided the following conditions are met:

- Upon visual inspection, the wastewater contains no visible oil sheen or film.

- The bypass valve is normally sealed close.
- The bypass valve is opened after the visual inspection and resealed following drainage of the containment structure.
- Records of all discharges of this wastewater and the results of the visual inspections and chemical monitoring are maintained on-site for Department inspection.
- A representative discharge is monitored once during the first year after coverage under the permit is granted, for oil and grease, total BETX, PAH, benzo(a)pyrene, and naphthalene, (plus BOD_5. if a surface water discharge). If the concentrations are less than the effluent limits in table 5.2.1, the discharge of secondary containment water is allowed and additional chemical monitoring is unnecessary for the term of the permit.

Wastewater that has collected in secondary containment structures at fuel farm storage facilities that does not meet the uncontaminated conditions described above, shall be treated and monitored in accordance with table 5.2.1.

Note: If the secondary containment water meets the conditions for a discharge that doesn't require treatment, but is conveyed through the oil/water separator and/or discharged from the sampling point for the oil/water separator, the monitoring requirements and limitations in table 5.2.1 do not apply.

6 Surface Water Requirements

6.1 Sampling Point(s)

The discharge(s) shall be limited to the waste type(s) designated for the listed sampling point(s).

Sampling Point Designation	
Sampling Point Number	**Sampling Point Location, WasteType/Sample Contents and Treatment Description (as applicable)**
001	Starkweather Creek discharge consisting of the bypassing of storm water runoff around the glycol recovery system storage tanks if the water quality complies with effluent limits.
034	Discharge from the glycol recovery system storage tanks to Starkweather Creek if the water quality complies with effluent limits.
002	Sanitary sewer discharge consisting of contaminated runoff from the glycol management area that is diverted to the glycol recovery system storage tanks.
601	Stream Monitoring required prior to bypassing, to satisfy discharge conditions. Starkweather Creek is monitored 1400 feet downstream from Outfall 001where Starkweather Creek flows through 4 culvert pipes.
003	66-inch storm sewer outfall that discharges into the relocated Starkweather Creek west of the airport. The monitoring location is approximately 1800 feet north of the outfall at Starkweather Creek so other discharges downstream in the storm sewer, which are not regulated under this permit, are excluded.
032	60-inch storm sewer outfall south of terminal that discharges into Starkweather Creek.
602	Starkweather Creek upstream from the Airport at Highway 51 crossing.
603	Starkweather Creek downstream from the Airport at the Anderson Street crossing.

6.2 Monitoring Requirements and Effluent Limitations

The permittee shall comply with the following monitoring requirements and limitations.

6.2.1 Sampling Point (Outfall) 001 - Storage Tank Bypass and 034 - Storage Tank Uncontaminated

Monitoring Requirements and Effluent Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Flow Rate		MGD	Daily	Total Daily	
BOD_5, Total		mg/L	Weekly	Grab	6.2.4.4 (d)
BOD_5, Total	Weekly Avg	lbs/day	Weekly	Calculated	6.2.4.4
BOD_5, Variable Limit	Weekly Avg	lbs/day	Weekly	Calculated	6.2.4.4 (e)
COD			Weekly	Grab	6.2.4.5
Suspended Solids, Total	Daily Max	50 mg/L	Weekly	Grab	
pH Field	Daily Max	9.0 su	Weekly	Grab	
pH Field	Daily Min	6.0 su	Weekly	Grab	
Carbon, Total Organic		mg/L	Daily	Continuous	Operational Parameter Report Daily Average
Phosphorus, Total		µg/L	Weekly	Grab	
Propylene Glycol		mg/L	Weekly	Grab	

6.2.2 Sampling Point (Outfall) 002 - Sanitary Sewer

Monitoring Requirements and Effluent Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Flow Rate		MGD	Daily	Total Daily	

6.2.3 Sampling Point 601 - Stream Monitoring

Monitoring Requirements and Discharge Criteria					
Parameter	**Criteria Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Flow River	Daily Min	1.0 cfs	Daily	Gauge Station	
Dissolved Oxygen	Daily Min	7.0 mg/L	Daily	Grab	
Temperature		deg C	Daily	Grab	

6.2.4 Glycol Recovery System

6.2.4.1 Operating Requirements

The permittee shall operate the glycol recovery system that serves the glycol management area in accordance with the following conditions:

(a) The glycol management plan of operation shall be followed.

(b) A stream flow rating curve shall be used to provide a means of accurately measuring background stream flow in Starkweather Creek. The gauging station data must be representative of the airport's discharge location at Outfalls 001 and 034. Flow data is necessary for determining compliance with the mass limitation as described in paragraph 6.2.4.4 (e).

(c) The permittee shall monitor Starkweather Creek prior to discharging from Outfall 001and 034 to assure compliance with the limitations for Sampling Point 601 shown in the table 6.2.3. The discharge shall be stopped if a minimum flow of 1 cubic foot per second (cfs) and dissolved oxygen of 7 mg/L are not maintained in Starkweather Creek. Stream monitoring is only required during periods of discharge during the deicing season.

(d) When the deicing season operations begin, the glycol recovery system shall be placed in operation. The deicing operation mode typically occurs from October 1st through May 31st. Contaminated runoff containing glycol shall be collected for storage and discharged to a City of Madison sanitary interceptor sewer at Outfall 002 for treatment at the Madison Metropolitan Sewerage District.

(e) During the deicing season the wastewater may not be discharged into Starkweather Creek at Outfalls 001 or 034 unless the conditions in paragraph 6.2.4.2, 6.2.4.3, or 6.2.4.4 are met.

(f) After the deicing season, when glycol is no longer detectable in the runoff, the glycol recovery system may operate in the bypass mode and discharge directly to Starkweather Creek. The bypass discharge is not subject to the limitations in table 6.2.1. This mode of operation is typically from June1st until September 30th.

6.2.4.2 Bypassing the Storage Tanks

The permittee may bypass the glycol recovery system storage tanks and discharge from Outfall 001 storm water runoff from the glycol management area under the following situations:

(a) Periods outside the deicing season when aircraft deicing fluids and pavement deicers are not in use, and when glycol is no longer present in the runoff. This would typically include the period from June 1st through September 30th, when the storm water runoff is considered uncontaminated.

(b) Storm water runoff during the deicing season, typically from October 1st through May 30th, when it's determined to be uncontaminated. The runoff bypassed is subject to the monitoring requirements and limitations in table 6.2.1 and paragraph 6.2.4.4. Samples shall be collected weekly during dry weather bypassing, and at the start of wet weather bypassing. For bypassing at Outfall 001 to be allowable the wastewater must comply with the following:

1. During dry weather, any base flow in the storm sewer (groundwater infiltration) may be bypassed if at least 24 hours has elapsed since deicing activities last occurred.
2. During wet weather, after the first 0.5 inch of rainfall is collected and discharged into the sanitary sewer, runoff from additional rainfall may be bypassed until deicing activities are resumed.
3. If the effluent monitoring in table 6.2.1 shows that limits were exceeded, the operational criteria for bypassing in 1 and 2 above shall be revised and submitted to the Department for approval.
4. As an alternative to the bypassing criteria in 1 and 2, the permittee may conduct testing to confirm the runoff contains insignificant concentrations of glycol, potassium acetate, or other deicing and anti-icing chemicals to demonstrate compliance with the applicable limitations in table 6.2.1. The test may consist of a representative indicator parameter that can provide timely results. Total organic carbon (TOC) analysis is an acceptable indicator provided a good correlation exists between TOC:BOD_5.

(c) Overflows or bypassing of the glycol recovery system storage tanks containing contaminated runoff that exceeds the effluent limits in table 6.2.1 are not permitted, unless due to unusual circumstances or storm events which exceed the design capacity of the tanks or pumps. This is not a permitted discharged, but may occur as an emergency alternative discharge. Bypassing may only occur at the influent pump station overflow structure after the storage tank capacity is reached. If the capacity of the glycol recovery system storage tanks approaches capacity during the deicing season, a sufficient volume shall be pumped into the sanitary sewer to provide capacity to prevent the occurrence of an overflow or bypass.

6.2.4.3 Uncontaminated Runoff in the Storage tanks

If it's suspected the glycol recovery system storage tanks collected uncontaminated runoff, and monitoring indicates it's uncontaminated by complying with the effluent limitations in table 6.2.1, the tanks may discharge into Starkweather Creek at Outfall 034.

6.2.4.4 Effluent Limits

The discharge from Outfalls 001 and 034 shall be limited and monitored by the permittee as follows:

(a) The discharge is subject to the general storm water discharge limitations in paragraph 6.2.8.1.

(b) Representative effluent samples of the runoff from the glycol management area or the contents of the glycol storage tanks shall be collected and analyzed as specified in table 6.2.1. Prior to discharging from either Outfall 001 or 034, a sample shall be analyzed to determine if the limitations can be met. Effluent monitoring is only required during periods of discharge. A minimum of one sample per week shall be collected during periods when the glycol storage tank is bypassed or discharged to Outfall 034.

(c) BOD_5 shall be used for the trigger point for determining the water quality of the runoff from the glycol management area that is considered contaminated and must be directed to the glycol storage tanks. Concentrations below the BOD_5 trigger point may discharge directly to Starkweather Creek provided the BOD_5 mass limits in (e) are met.

(d) TOC (total organic carbon) monitoring may be used as an operational parameter to monitor water quality as a BOD_5 surrogate in order to provide an immediate determination of whether the runoff from the glycol management area is contaminated. Monitoring of TOC during the deicing season shall be continuous at a frequency typically at once per hour. A correlation between BOD_5 and TOC was established in the August 2009 glycol management system plan of operation that uses an equation to translate the TOC concentration to the BOD_5. An actual BOD5 analysis shall be conducted weekly to confirm and refine the correlation. The correlation equation shown below in (f) is subject to change pending any refinements that improve the translation from TOC to BOD_5.

(e) The allowable BOD_5 effluent mass limits vary depending on the time of year (temperature factor) and stream flow. At higher stream flows, the effluent mass limits will increase proportionally. The BOD_5 and TOC correlation may be used to estimate the BOD_5 for determining compliance with the allowable BOD_5 mass limits. The table below lists the applicable BOD_5 mass limit per 1 cfs of stream flow for each time period, and the allowable BOD_5 concentration with correlating TOC concentration:

Time Period	Mass Load lbs/day BOD_5 per cfs	Calculated Allowable BOD_5 mg/L	Calculated Allowable TOC mg/L
September 1- November 30	11.7	281	152
December 1- February 28	16.4	393	216
March 1 - May 31	13.9	333	182
June 1 - August 31	8.4	201	108

Note: The minimum practical discharge flow for initiating a discharge to Starkweather Creek is 0.005 MGD, which represents one pump cycle of 25 minutes at a flow rate of 200 gpm from the wet well. Using the stream flow, effluent flow, and the TOC monitoring the allowable discharge volume is calculated that will comply with the mass limit.

(f) The allowable BOD_5 concentration is calculated by the following equation:

$$\text{mg/L } BOD_5 = \frac{(\text{lbs/day } BOD_5 \text{ Limit}) \times (\text{cfs Stream Flow})}{(\text{MGD Effluent Flow}) \times (8.34)}$$

Correlation Equation: $BOD_5 = TOC \times 1.778 + 9.8$

(g) The BOD_5 effluent mass limitations in (e) represent 1/3 the assimilative capacity of Starkweather Creek to prevent the significant lowering of water quality, and are based on 1/3 of 26 pounds of BOD_5 per day per cfs of stream flow adjusted for temperature.

Note: The Dane County Regional Airport believes there could be an error in the BOD_5 mass limits that were included in May 18, 1994 water quality based effluent limitations memo, and each of the previous WPDES permits. The Department has included four limits in the permit that were adjusted with a temperature multiplier in three month increments. It's suspected the equation used to characterize the decay process at the low temperatures typical of deicing season discharges was not appropriate, and correcting this error could result in significantly higher mass load limits that are fully protective of water quality (based on the report "Waste Water Deoxygenation at Different Temperatures" by A. E. Zanoni, July 1967). If the Dane County Regional Airport provides scientific evidence and calculations for revised BOD_5 mass limits, and demonstrates that the initial permit limits do not reflect the best available scientific information, the mass limits in 6.2.4.4 (e) may be revised accordingly. Revised limits would become effective upon modification of the permit.

6.2.4.5 COD

The COD sample shall be filtered to be representative of the soluble COD concentration in accordance with the procedures in Appendix A of 40 CFR Part 449. A change to an unfiltered sample may be approved by the Department if it's found necessary to maintain a data set consistent with historical unfiltered samples.

Note: The Department approves Dane County Regional Airport's request for the use of unfiltered samples.

6.2.5 Sampling Point (Outfall) 003 and 032 - Storm Sewer Outfalls

Monitoring Requirements and Effluent Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Flow Rate		MG/yr	Annual	Estimated	
BOD_5, Total		mg/L	Annual	Composite	
COD		mg/L	Annual	Composite	6.2.4.5
Suspended Solids, Total		mg/L	Annual	Composite	
Oil & Grease (Hexane)		mg/L	Annual	Grab	
Dissolved Oxygen		mg/L	Annual	Grab	
pH Field		su	Annual	Composite	
Phosphorus, Total		µg/L	Annual	Composite	
Propylene glycol		mg/L	Annual	Composite	

6.2.6 Sampling Point 602 - Starkweather Creek Upstream and 603 - Starkweather Creek Downstream

Monitoring Requirements and Effluent Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
BOD_5, Total		mg/L	2/Year	Grab	
COD		mg/L	2/Year	Grab	6.2.4.5
Suspended Solids, Total		mg/L	2/Year	Grab	
Dissolved Oxygen		mg/L	2/Year	Grab	
pH Field		su	2/Year	Grab	
Phosphorus, Total		µg/L	2/Year	Grab	
Propylene glycol		mg/L	2/Year	Grab	

6.2.7 Monitoring - Storm Sewers and Starkweather Creek

6.2.7.1 Purpose

Visual inspections would look for obvious problems, and the chemical analysis would provide specific water quality data, both tools for evaluation of the best management practices. The airport shall monitor two representative storm sewer discharges from the airport at Outfalls 003 and 032 for use in evaluating the effectiveness of the storm water pollution prevention plan in controlling the discharge of pollutants that are outside the glycol recovery system. In addition, it's recommended the airport conduct instream monitoring at Sampling Points 602 and 603 for evaluating an instream impact (instream is not a permit requirement).

6.2.7.2 Monitoring Locations

The visual inspections and sample collections shall be taken at storm sewer Outfalls 003 and 032, and Starkweather Creek Sampling Points 602, and 603. The Sampling Point location numbers are as indicated on the airport's site map (Attachment E of the WPDES permit reissuance application). Sampling Point 602 is an upstream location on the east side of the Highway 51 crossing. Sampling Point 603 is a downstream location on the south side of Anderson Street crossing.

6.2.7.3 Visual Inspections

Visually inspect the Sampling Points 003, 032, 602, and 603 to characterize the quality of storm sewer outfalls and receiving water discharged during the "first flush" of storm water runoff from representative storms or snow melts. Within the first 30 minutes of when runoff first appears at the monitoring location, or as soon thereafter as practicable, observations of the discharge shall be made. Characterization of runoff quality shall include observations for color, odor, turbidity, floating solids, foam, oil sheen, or other obvious indicators of storm water pollution. Documentation shall include the inspection date, inspector, summary of observations, and probable sources of observed storm water pollution.

6.2.7.4 Chemical Analysis

Monitor Sampling Points 003, 032, 602, and 603 with a chemical analysis to quantify pollutants of concern. The parameters listed in tables 6.2.5, and 6.2.6 above represents the Department's minimum required chemical analysis that shall be conducted.

6.2.7.5 Sampling Procedure

The following requirements apply to Sampling Points 003, 032, 602, and 603 when collecting samples for chemical analysis:

(a) Samples shall be collected from storms which are preferably at least 50% of the monthly average precipitation event amount, but no less than 0.1 inch rain. The runoff event sampled shall be at least 72 hours from the previously measurable precipitation event greater than 0.1 inch.

(b) The storm water sample shall be representative of the "first flush" of storm water runoff. When runoff first appears in the outfall or as soon thereafter as practicable, a sample shall be collected during a 30 minute period. A minimum of 3 sample portions, evenly spaced throughout the 30 minute sampling period, shall be collected for a composite sample. As an alternative, a “flow weighted composite” sample for the entire storm water event may be collected in place of the “first flush” composite. In addition, a grab sample shall be collected within the first 30 minutes of the runoff for those parameters being analyzed that require a grab sample. If the storm water discharge is from a storage facility with at least 24 hours holding time, a representative grab shall be collected from the storage facility for analysis of all parameters.

(c) When sampling snow melt and deicing or anti-icing events, best professional judgment shall be used for when to collect a representative sample.

(d) A narrative description shall be provided of each storm event which is sampled, including the date and duration of the storm, precipitation amount (if snowfall include inches of snow and rainfall equivalent), the duration between the storm event sampled and the end of the previous measurable storm of greater than 0.1 inch rainfall, and an estimate of the total volume of storm water discharged.

(e) Approved analytical methods shall be used in accordance with ch. NR 219, Wis. Adm. Code "Analytical Test Methods and Procedures", or guidance on storm water sampling procedures developed by the Department. When no analytical method is approved, a suitable method may be used provided a description of the method is submitted to the department for concurrence prior to sampling.

6.2.7.6 Monitoring Frequency

The permittee shall conduct monitoring during each reporting period of July 1 to June 30, which includes one contiguous deicing season. When a chemical sample is collected, a visual inspection shall be done concurrently. Chemical monitoring samples shall be collected during a deicing or anti-icing event. Additional samples may be collected as necessary for data collection. All monitoring locations shall be sampled during the same storm or snow melt event if possible.

(a) Visual inspections shall be made quarterly every year. At least 2 of the quarterly monitoring dates shall be during a deicing or anti-icing event.

(b) Samples collected for chemical analysis for Sampling Points 003 and 032 shall be collected once each deicing season and monitored according to table 6.2.5.

(c) Samples collected for chemical analysis for Sampling Points 602 and 603 shall be collected twice each deicing season and monitored according to table 6.2.6. Samples shall consist of the following:

1. A sample shall be collected according to the sampling procedure n paragraph 6.2.7.5.
2. A sample shall be collected when there is a representative discharge from Outfall 001 when the glycol recovery system storage tanks are bypassed during the deicing season (sampling procedures in paragraph 6.2.7.5 do not apply).

6.2.7.7 Pollutant Loading

The permittee shall estimate the annual pollutant loading from spent deicing and anti-icing chemicals discharged from the permitted area into the storm sewer system each deicing season. Data shall be maintained on the following and reported in the end of season annual report under subsection 4.4:

(a) The amount and type of deicer or anti-icer each deicing season reporting period (100% product).

(b) The estimated amount of glycol collected by the glycol recovery system (100% product).

(c) The estimated amount of glycol discharged in runoff to the separate storm sewer system, with a brief description on the how the estimate was calculated (100% product).

(d) The estimated volume of storm water discharged from Outfalls 001, 034, 002, and storm water runoff discharged from storm sewer Outfalls 003 through 033, with a brief description on how the estimate was calculated.

(e) The weather conditions that required deicing or anti-icing, to determine the correlation between the weather and amount of deicer and anti-icer used.

(f) The air traffic, to determine the correlation between air traffic and amount of deicer and anti-icer used. The permittee may determine what the relevant air traffic data is. This is intended to be data that is currently readily available, not some new monitoring requirement on detailed air traffic accounting.

6.2.7.8 Sampling Exemption

If the permittee is unable to collect samples due to adverse climatic conditions, the permittee shall describe why samples could not be collected in the end of season annual summary under subsection 4.4. An exemption from the monitoring requirements shall be given for just cause, however, this does not relieve the permittee of complying with the monitoring requirements when weather conditions allow sampling.

6.2.8 Discharge Requirements

6.2.8.1 General Discharge Limitations

Permittees may not discharge from the separate storm sewer system the following substances in amounts that may adversely affect receiving water quality or aquatic life:

(a) Deicing and anti-icing chemicals, including ethylene glycol, propylene glycol, urea, potassium acetate, sodium acetate, and any substitute chemicals.

(b) Solids and sand that may settle to form putrescent or otherwise objectionable sludge or sediment deposits.

(c) Oil, grease, fuel and other floating material that form noticeable accumulations of debris, scum, foam, or sheen.

(d) Color or odor that is unnatural and to such a degree as to create a nuisance.

(e) Toxic substances in toxic amounts to aquatic life, wildlife, or humans.

(f) Nutrients conductive to the excessive growth of aquatic plants and algae to the extent that such growths are detrimental to desirable forms of aquatic life, create conditions that are unsightly, or are a nuisance.

(g) Any other substances that may impair beneficial uses of the receiving water.

6.2.8.2 Glycol Reduction

The design and sizing of the deicing and anti-icing controls for the glycol management area shall be based on cost-effective management controls to reduce glycol discharges to the maximum extent practicable. The permittee shall compare the amount of glycol applied for deicing and anti-icing with the estimated amount of glycol runoff discharging into the separate storm sewer system, and the amount captured by the glycol recovery system, using the data collected for pollutant loading described in paragraph 6.2.7.7.

Note: For the purposes of this permit, the glycol management area is defined as the airport terminal area where the majority of the aircraft deicing and anti-icing occurs, and the new south ramp deicing pads when they are constructed.

6.2.8.3 Fugitive Glycol

The percent of glycol captured and percent discharged will only apply to the glycol draining onto the glycol management area. It is assumed 50% of the total glycol in Type I aircraft deicing fluids (ADFs) and 15% of the glycol in Type IV aircraft anti-icing fluids (AAFs) used on ramps and applied to aircraft will drain to the glycol management area. The other 50% of the glycol in Type I ADF and 85% of glycol in AAF is considered fugitive and cannot be cost effectively captured. Fugitive glycol includes glycol that shears off aircraft upon take-off, glycol that dissipates as vapor into the atmosphere, and glycol used outside the glycol management area. Any reduction in the amount glycol discharged represents the reduction that may result from a maximum of 50% of the total amount of glycol in Type I ADF and 15% of the glycol in Type IV AAF used.

Note: If future data indicates a different value for the fugitive percentage is more accurate, that shall be used. The 50% and 85% numbers are on based upon current findings at several airports and represents the best estimate available.

6.2.8.4 Compliance

The permittee shall be considered in compliance with the discharge requirements of subsection 6.2.8 as long as the permittee is proceeding with the activities required by this permit.

7 Schedules

7.1 Airport Site Inspections

Required Action	Due Date
Annual Inspection: Perform and document a comprehensive annual facility site inspection, in accordance with subsection 4.3.	Annually, between November and April
End of Season Annual Summary: The permittee shall maintain a compilation of information for each deicing season, in accordance with subsection 4.4 of the permit. An end of season report shall be submitted to provide a summary of the previous year's deicing season and documentation of compliance with permit requirements.	Annually, by September 30
Non-Storm Water Discharges: The permittee shall evaluate all storm water outfalls for non-storm water contributions and illicit connections, in accordance with subsection 3.3 of the permit.	12/31/2016

7.2 Update to Storm Water Pollution Prevention Plan

Required Action	Due Date
Rock River TMDL: The Dane County Regional Airport shall take the necessary steps to implement the Rock River Basin TMDL (total daily maximum load) by amending the storm water pollution prevention plan to address the airport's contribution of total suspended solids (TSS) and phosphorus. This plan should reduce as much TSS and phosphorus pollution as practicable to help conform to the requirements of the Rock River Basin TMDL. Keep the Department informed on the progress addressing the TMDL in the end of season annual report. *Note: The TMDL specifies percent reduction for TSS and phosphorus, but the airport isn't a good fit into any of the source categories. Using ch. NR 151, Wis. Adm. Code, a reduction of 40% in TSS and a 27% in phosphorus, which is the calculated phosphorus reduction associated with the 40% TSS, will be set as the goals for reducing TSS and phosphorus below the baseline load conditions.*	12/31/2015
Deicing Pads for South and East Ramps: The Dane County Regional Airport shall amend their storm water pollution prevention plan to include the two new deicing pads serving the south ramp for air cargo the east ramp for general aviation. The proposed deicing pads will collect glycol contaminated runoff and pump it to glycol recovery system storage tanks. Keep the Department informed on the deicing pad construction in the end of season annual report. *Note: Based on preliminary information a plan approval under ch. NR 108, Wis. Adm. Code is unnecessary. Approval of the existing glycol recovery system and storage tanks was made September 11, 2008 (approval No. S-2008-0573). The addition of the deicing pads is not reviewable, and the new piping to convey the wastewater is a minor addition to the previous plan approval. Should any new wastewater storage tanks be added, that would be a reviewable project.*	12/31/2015

8 Standard Requirements

NR 205, Wisconsin Administrative Code (Conditions for Industrial Dischargers): The conditions in ss. NR 205.07(1) and NR 205.07(3), Wis. Adm. Code, are included by reference in this permit. The permittee shall comply with all of these requirements. Some of these requirements are outlined in the Standard Requirements section of this permit. Requirements not specifically outlined in the Standard Requirement section of this permit can be found in ss. NR 205.07(1) and NR 205.07(3).

8.1 Reporting and Monitoring Requirements

8.1.1 Monitoring Results

Monitoring results obtained during the previous month shall be summarized and reported on a Department Wastewater Discharge Monitoring Report. The report may require reporting of any or all of the information specified below under 'Recording of Results'. This report is to be returned to the Department no later than the date indicated on the form. A copy of the Wastewater Discharge Monitoring Report Form or an electronic file of the report shall be retained by the permittee.

Monitoring results shall be reported on an electronic discharge monitoring report (eDMR). The eDMR shall be certified electronically by a principal executive officer, a ranking elected official or other duly authorized representative. The 'eReport Certify' page certifies that the electronic report form is true, accurate and complete.

If the permittee monitors any pollutant more frequently than required by this permit, the results of such monitoring shall be included on the Wastewater Discharge Monitoring Report.

The permittee shall comply with all limits for each parameter regardless of monitoring frequency. For example, monthly, weekly, and/or daily limits shall be met even with monthly monitoring. The permittee may monitor more frequently than required for any parameter.

8.1.2 Sampling and Testing Procedures

Sampling and laboratory testing procedures shall be performed in accordance with Chapters NR 218 and NR 219, Wis. Adm. Code and shall be performed by a laboratory certified or registered in accordance with the requirements of ch. NR 149, Wis. Adm. Code. Groundwater sample collection and analysis shall be performed in accordance with ch. NR 140, Wis. Adm. Code. The analytical methodologies used shall enable the laboratory to quantitate all substances for which monitoring is required at levels below the effluent limitation. If the required level cannot be met by any of the methods available in NR 219, Wis. Adm. Code, then the method with the lowest limit of detection shall be selected. Additional test procedures may be specified in this permit.

8.1.3 Recording of Results

The permittee shall maintain records which provide the following information for each effluent measurement or sample taken:

- the date, exact place, method and time of sampling or measurements;
- the individual who performed the sampling or measurements;
- the date the analysis was performed;
- the individual who performed the analysis;
- the analytical techniques or methods used; and
- the results of the analysis.

8.1.4 Reporting of Monitoring Results

The permittee shall use the following conventions when reporting effluent monitoring results:

- Pollutant concentrations less than the limit of detection shall be reported as < (less than) the value of the limit of detection. For example, if a substance is not detected at a detection limit of 0.1 mg/L, report the pollutant concentration as < 0.1 mg/L.
- Pollutant concentrations equal to or greater than the limit of detection, but less than the limit of quantitation, shall be reported and the limit of quantitation shall be specified.
- For purposes of calculating NR 101 fees, the 2 mg/l lower reporting limits for BOD_5 and Total Suspended Solids shall be considered to be limits of quantitation.
- For the purposes of reporting a calculated result, average or a mass discharge value, the permittee may substitute a 0 (zero) for any pollutant concentration that is less than the limit of detection. However, if the effluent limitation is less than the limit of detection, the department may substitute a value other than zero for results less than the limit of detection, after considering the number of monitoring results that are greater than the limit of detection and if warranted when applying appropriate statistical techniques.

8.1.5 Records Retention

The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by the permit, and records of all data used to complete the application for the permit for a period of at least 3 years from the date of the sample, measurement, report or application, except for sludge management forms and records, which shall be kept for a period of at least 5 years.

8.1.6 Other Information

Where the permittee becomes aware that it failed to submit any relevant facts in a permit application or submitted incorrect information in a permit application or in any report to the Department, it shall promptly submit such facts or correct information to the Department.

8.2 System Operating Requirements

8.2.1 Noncompliance Reporting

The permittee shall report the following types of noncompliance by a telephone call to the Department's regional office within 24 hours after becoming aware of the noncompliance:

- any noncompliance which may endanger health or the environment;
- any violation of an effluent limitation resulting from an unscheduled bypass;
- any violation of an effluent limitation resulting from an upset; and
- any violation of a maximum discharge limitation for any of the pollutants listed by the Department in the permit, either for effluent or sludge.

A written report describing the noncompliance shall also be submitted to the Department as directed at the end of this permit within 5 days after the permittee becomes aware of the noncompliance. On a case-by-case basis, the Department may waive the requirement for submittal of a written report within 5 days and instruct the permittee to submit the written report with the next regularly scheduled monitoring report. In either case, the written report shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and

times; the steps taken or planned to reduce, eliminate and prevent reoccurrence of the noncompliance; and if the noncompliance has not been corrected, the length of time it is expected to continue.

A scheduled bypass approved by the Department under the 'Scheduled Bypass' section of this permit shall not be subject to the reporting required under this section.

NOTE: Section 292.11(2)(a), Wisconsin Statutes, requires any person who possesses or controls a hazardous substance or who causes the discharge of a hazardous substance to notify the Department of Natural Resources **immediately** of any discharge not authorized by the permit. **The discharge of a hazardous substance that is not authorized by this permit or that violates this permit may be a hazardous substance spill. To report a hazardous substance spill, call DNR's 24-hour HOTLINE at 1-800-943-0003**.

8.2.2 Bypass

Except for a controlled diversion as provided in the 'Controlled Diversions' section of this permit, or situations covered under paragraph 6.2.4.2, any bypass is prohibited and the Department may take enforcement action against a permittee for such occurrences under s. 283.89, Wis. Stats. The Department may approve an unscheduled bypass provided all the following conditions are met:

- The bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
- There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities or adequate back-up equipment, retention of untreated wastes, reduction of inflow and infiltration, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance. When evaluating feasibility of alternatives, the department may consider factors such as technical achievability, costs and affordability of implementation and risks to public health, the environment and, where the permittee is a municipality, the welfare of the community served; and
- The bypass was reported in accordance with the 'Noncompliance Reporting' section of this permit.

8.2.3 Scheduled Bypass

Whenever the permittee anticipates the need to bypass for purposes of efficient operations and maintenance and the permittee may not meet the conditions for controlled diversions in the 'Controlled Diversions' section of this permit, the permittee shall obtain prior written approval from the Department for the scheduled bypass. A permittee's written request for Department approval of a scheduled bypass shall demonstrate that the conditions for unscheduled bypassing are met and include the proposed date and reason for the bypass, estimated volume and duration of the bypass, alternatives to bypassing and measures to mitigate environmental harm caused by the bypass. The department may require the permittee to provide public notification for a scheduled bypass if it is determined there is significant public interest in the proposed action and may recommend mitigation measures to minimize the impact of such bypass.

8.2.4 Controlled Diversions

Controlled diversions are allowed only when necessary for essential maintenance to assure efficient operation provided the following requirements are met:

- Effluent from the wastewater treatment facility shall meet the effluent limitations established in the permit. Wastewater that is diverted around a treatment unit or treatment process during a controlled diversion shall be recombined with wastewater that is not diverted prior to the effluent sampling location and prior to effluent discharge;
- A controlled diversion may not occur during periods of excessive flow or other abnormal wastewater characteristics;

- A controlled diversion may not result in a wastewater treatment facility overflow; and
- All instances of controlled diversions shall be documented in wastewater treatment facility records and such records shall be available to the department on request.

8.2.5 Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control which are installed or used by the permittee to achieve compliance with the conditions of this permit. The wastewater treatment facility shall be under the direct supervision of a state certified operator as required in s. NR 108.06(2), Wis. Adm. Code. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training as required in ch. NR 114, Wis. Adm. Code, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.

8.2.6 Spill Reporting

The permittee shall notify the Department in accordance with ch. NR 706 (formerly NR 158), Wis. Adm. Code, in the event that a spill or accidental release of any material or substance results in the discharge of pollutants to the waters of the state at a rate or concentration greater than the effluent limitations established in this permit, or the spill or accidental release of the material is unregulated in this permit, unless the spill or release of pollutants has been reported to the Department in accordance with s. NR 205.07 (1)(s), Wis. Adm. Code.

8.2.7 Planned Changes

In accordance with ss. 283.31(4)(b) and 283.59, Stats., the permittee shall report to the Department any facility expansion, production increase or process modifications which will result in new, different or increased discharges of pollutants. The report shall either be a new permit application, or if the new discharge will not violate the effluent limitations of this permit, a written notice of the new, different or increased discharge. The notice shall contain a description of the new activities, an estimate of the new, different or increased discharge of pollutants and a description of the effect of the new or increased discharge on existing waste treatment facilities. Following receipt of this report, the Department may modify this permit to specify and limit any pollutants not previously regulated in the permit.

8.2.8 Duty to Halt or Reduce Activity

Upon failure or impairment of treatment facility operation, the permittee shall, to the extent necessary to maintain compliance with its permit, curtail production or wastewater discharges or both until the treatment facility operations are restored or an alternative method of treatment is provided.

8.3 Surface Water Requirements

8.3.1 Permittee-Determined Limit of Quantitation Incorporated into this Permit

For pollutants with water quality-based effluent limits below the Limit of Quantitation (LOQ) in this permit, the LOQ calculated by the permittee and reported on the Discharge Monitoring Reports (DMRs) is incorporated by reference into this permit. The LOQ shall be reported on the DMRs, shall be the lowest quantifiable level practicable, and shall be no greater than the minimum level (ML) specified in or approved under 40 CFR Part 136 for the pollutant at the time this permit was issued, unless this permit specifies a higher LOQ.

8.3.2 Appropriate Formulas for Effluent Calculations

The permittee shall use the following formulas for calculating effluent results to determine compliance with average concentration limits and mass limits and total load limits:

Weekly/Monthly/Six-Month/Annual Average Concentration = the sum of all daily results for that week/month/six-month/year, divided by the number of results during that time period. [Note: When a six-month average effluent limit is specified for Total Phosphorus the applicable periods are May through October and November through April.]

Weekly Average Mass Discharge (lbs/day): Daily mass = daily concentration (mg/L) x daily flow (MGD) x 8.34, then average the daily mass values for the week.

Monthly Average Mass Discharge (lbs/day): Daily mass = daily concentration (mg/L) x daily flow (MGD) x 8.34, then average the daily mass values for the month.

Six-Month Average Mass Discharge (lbs/day): Daily mass = daily concentration (mg/L) x daily flow (MGD) x 8.34, then average the daily mass values for the six-month period. [Note: When a six-month average effluent limit is specified for Total Phosphorus the applicable periods are May through October and November through April.]

Annual Average Mass Discharge (lbs/day): Daily mass = daily concentration (mg/L) x daily flow (MGD) x 8.34, then average the daily mass values for the entire year.

Total Monthly Discharge: = monthly average concentration (mg/L) x total flow for the month (MG/month) x 8.34.

Total Annual Discharge: = sum of total monthly discharges for the calendar year.

12-Month Rolling Sum of Total Monthly Discharge: = the sum of the most recent 12 consecutive months of Total Monthly Discharges.

8.3.3 Effluent Temperature Requirements

Weekly Average Temperature – The permittee shall use the following formula for calculating effluent results to determine compliance with the weekly average temperature limit (as applicable): Weekly Average Temperature = the sum of all daily maximum results for that week divided by the number of daily maximum results during that time period.

Cold Shock Standard – Water temperatures of the discharge shall be controlled in a manner as to protect fish and aquatic life uses from the deleterious effects of cold shock. 'Cold Shock' means exposure of aquatic organisms to a rapid decrease in temperature and a sustained exposure to low temperature that induces abnormal behavior or physiological performance and may lead to death.

Rate of Temperature Change Standard – Temperature of a water of the state or discharge to a water of the state may not be artificially raised or lowered at such a rate that it causes detrimental health or reproductive effects to fish or aquatic life of the water of the state.

8.3.4 Visible Foam or Floating Solids

There shall be no discharge of floating solids or visible foam in other than trace amounts.

8.3.5 Surface Water Uses and Criteria

In accordance with NR 102.04, Wis. Adm. Code, surface water uses and criteria are established to govern water management decisions. Practices attributable to municipal, industrial, commercial, domestic, agricultural, land development or other activities shall be controlled so that all surface waters including the mixing zone meet the following conditions at all times and under all flow and water level conditions:

a) Substances that will cause objectionable deposits on the shore or in the bed of a body of water, shall not be present in such amounts as to interfere with public rights in waters of the state.

b) Floating or submerged debris, oil, scum or other material shall not be present in such amounts as to interfere with public rights in waters of the state.

c) Materials producing color, odor, taste or unsightliness shall not be present in such amounts as to interfere with public rights in waters of the state.

d) Substances in concentrations or in combinations which are toxic or harmful to humans shall not be present in amounts found to be of public health significance, nor shall substances be present in amounts which are acutely harmful to animal, plant or aquatic life.

9 Summary of Reports Due

FOR INFORMATIONAL PURPOSES ONLY

Description	Date	Page
Airport Site Inspections -Annual Inspection	See Permit	21
Airport Site Inspections -End of Season Annual Summary	See Permit	21
Airport Site Inspections -Non-Storm Water Discharges	December 31, 2016	21
Update to Storm Water Pollution Prevention Plan -Rock River TMDL	December 31, 2015	21
Update to Storm Water Pollution Prevention Plan -Deicing Pads for South and East Ramps	December 31, 2015	21
Wastewater Discharge Monitoring Report	no later than the date indicated on the form	22

Report forms shall be submitted electronically in accordance with the reporting requirements herein. Any facility plans or plans and specifications for municipal, industrial, industrial pretreatment and non industrial wastewater systems shall be submitted to the Bureau of Water Quality, P.O. Box 7921, Madison, WI 53707-7921. All other submittals required by this permit shall be submitted to:

South Central Region, 3911 Fish Hatchery Road, Fitchburg, WI 53711-5397