

# STORMWATER MANAGEMENT PLAN

PERMIT/FACILITY NO. COR-020411

**SWMP ADMINISTRATOR:** 

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# SWMP REVISION RECORD

Date of Revision	Revision Description					
11/2012-1/2013	New permit update					
2014 Operational changes including airline changes in operations						
2016-2017	New Airport Operations					
2017	Operational changes					
2018	Edit and update outdated text					

**SECTION 1** 

## INTRODUCTION

## 1.1 OVERVIEW AND REGULATORY BACKGROUND

The U.S. Environmental Protection Agency (EPA), in accordance with the Clean Water Act (CWA) [Section 402(p)], issued final regulations regarding stormwater discharges from municipal and industrial activities in November 1990. The stormwater program regulating stormwater discharges is under the National Pollutant Discharge Elimination System (NPDES) section of the Clean Water Act (40 CFR Parts 122-124).

The CWA requires that operators of "discharges associated with industrial activity" obtain a NPDES permit. The NPDES permit program controls water pollution by regulating point sources that discharge pollutants into waters of the United States. The purpose of NPDES is to protect and preserve the quality of the waters of the United States from runoff of residential, commercial, and industrial areas. The regulation mandates that point sources of industrial stormwater discharges be permitted. The NPDES program includes ten categories that require authorization under an industrial stormwater permit for stormwater discharges. Transportation facilities represent one of these categories and outlines requirements for Airports.

The Colorado Springs Airport (COS) falls under the industrial area of transportation facilities as defined by Standard Industrial Classification (SIC) Code 45. Per 40 CFR 122.26 NPDES, SIC 45 industries are regulated by NPDES that have "vehicle maintenance shops, equipment cleaning operations, or airport deicing operations." This includes *only those portions of the facility that are either involved in vehicle maintenance (including vehicle rehabilitation, mechanical repairs, painting, fueling, and lubrication), equipment cleaning operations, and airport deicing operations.* 

EPA authorized the Colorado Department of Public Health & Environment (CDPHE) to implement the NPDES Stormwater Permitting Program for the State. The Water Quality Control Division (WQCD) administers the stormwater permit system through the Colorado Discharge Permit System (CDPS).

The City of Colorado Springs is also regulated under a City municipal separate storm sewer system (MS4) permit. This permit regulates all stormwater discharges for areas within the corporate boundary of the City of Colorado Springs or contributing to discharges to state waters from MS4s owned or operated by the City.

## **1.2 PERMIT COMPLIANCE**

The current Certification to Discharge under CDPS General Permit COR900000 Stormwater Associated with Non-Extractive Industrial Activity was originally issued on June 27, 2012 and became effective on July 1, 2012. The certification was modified and reissued on June 28, 2017 to include stockpiles of concrete and asphalt millings for recycling. The modified certification became effective on June 30, 2017. The CDPS General Permit COR90000 was Administratively Continued on July 1, 2017.

The COS SWMP was prepared in accordance with the CDPS. The State has full authority and responsibility to develop, implement, and enforce these regulations. Failure to comply with any permit condition constitutes a violation of the permit. Violation of the terms and conditions of this permit may be subject to civil and criminal liability.

This permit is for coverage under stormwater discharges only and does not cover discharges of non-stormwater except those listed in Part I.A.1.b of the permit. This permit does not cover stormwater discharges associated with construction activity; discharges currently covered by another permit; discharges currently covered by a Low Risk Guidance document; Stormwater Discharges Subject to Effluent Limitations Guidelines; and Discharges to Waters Designated as Outstanding waters for Antidegradation Purposes.

The Air Transportation Sector of the permit (Sector S, Part III of permit) requires additional monitoring for airports that use glycol-based deicing chemicals. These monitoring requirements are outlined in Section 7.

This SWMP represents COS and its tenants and is prepared pursuant to the requirements as outlined above. The purpose of this SWMP is to provide the operators and tenants direction for minimizing or eliminating pollutants in stormwater discharges from the COS property.

This SWMP identifies control measures to be used or applied at COS to minimize, reduce, or limit the discharge of pollutants to stormwater. Control measures are commonly directed towards particular activities or areas, termed source areas that have significant potential for discharge of pollutants to stormwater.

Permit compliance requires implementation of control measures; site inspections; training; records management; and certification of non-stormwater and of the SWMP. The SWMP is to be periodically reviewed and updated as necessary to assure its accuracy, applicability, and effectiveness in accomplishing its intended purpose.

The permit requires that all dischargers comply with the regulations and requirements of State or local agencies regarding any discharges of stormwater to storm drain systems or other water conveyances under their jurisdiction. This includes providing a copy of the permit application, and/or annual reports to these agencies upon request.

Any permitted facility discharging to a municipal storm sewer (MS4) shall provide the municipality with a copy of the permit application, and/or annual reports, upon request.

## **1.3** AIRPORT OPERATIONS

COS is operated as a department of the City of Colorado Springs (City) and COS property is owned by the City. The Director of Aviation and COS staff performs the day-to-day management activities necessary for operation of COS, with operators ranging from full-service commercial aviation and support operations, such as rental car agencies, to general aviation including fixed base operators (FBOs). Activities associated with COS and its tenants include fueling, deicing/antiicing, maintenance, and hangars for air courier services and private aircraft including scheduled flight services.

## **1.4 PERMIT/SWMP REQUIREMENTS**

COS and each tenant must comply with the permit and SWMP. Requirements may include the following:

- 1. Implement control measures as outlined
- 2. Implement practice-based effluent limitations (minimize exposure, good housekeeping, maintenance of control measures, etc.)
- 3. Participate in quarterly inspections
- 4. Perform periodic inspections of facility
- 5. Resolve any corrective actions within permit specified timeframe
- 6. Noncompliance notification to COS SWMP Administrator
- 7. Complete Tenant Operations form provided in Appendix A and submit to COS SWMP Administrator; retain a copy with SWMP
- 8. Attend or perform annual stormwater employee training and document the training using the form provided in Appendix B
- 9. Complete and sign off on annual non-stormwater certification form and SWMP certification form
- 10. Perform Monitoring of facility outfall if applicable
- 11. Document any spills or leaks using the form provided in Appendix B
- 12. Maintain reports and recordkeeping

## **1.5 TENANT COMPLIANCE**

The following lease language for compliance with the Airport SWMP is included in applicable tenant leases: Any Lessees conducting industrial activities on Airport property are regulated under the Airport's Industrial Stormwater Permit and Stormwater Management Plan (SWMP).

Upon request by the City and within one hundred twenty (120) days of such written request, Lessee shall take actions prescribed by the Airport's Industrial Stormwater Permit and SWMP in accordance with all applicable local, state, and federal rules, regulations, ordinances, and statutes. Lessee will be provided a copy of the Airport SWMP and shall provide contact information and stormwater discharges associated with industrial activity for all Lessee operations on the Leased Premises.

Lessee shall be in compliance with the Permit and SWMP by implementing best management practices, site inspections, training, records management, certification of non-permitted non-stormwater discharges and certification of the SWMP. Lessee shall notify the City within thirty (30) days of any changes in operations or development construction, or modifications of facilities occupied on premises that would amend the SWMP.

The City may inspect Lessee's copy of the SWMP and any facilities covered by it at any reasonable time with or without prior notice to Lessee. Lessee shall demonstrate to the satisfaction of the City that it is in compliance with the Airport Stormwater Permit and SWMP.

## **1.6 CONSISTENCY WITH OTHER PLANS**

The SWMP is consistent with the COS Spill Prevention Control and Countermeasures Plan (SPCC) in identifying and preventing spills from fuel sources as well as spill procedures for oil/petroleum filled equipment transfers.

## **1.7 PERMIT CONDITIONS**

Transfer of Ownership or Control, Modifications, Suspensions, or Revocation of the Permit by the State, Severability and Permit Renewal are addressed in the Stormwater Discharge Permit. Questions regarding any of these issues should be directed to the COS SWMP Administrator.

## **1.8 STORMWATER MANAGEMENT PLAN ADMINISTRATOR**

The COS SWMP Administrator responsible for ensuring compliance with the permit and SWMP:

Kristine Andrews Environmental Health & Project Specialist Colorado Springs Airport 719-550-1915 kandrews@springsgov.com

## **FIGURE 1.0 - COS LOCATION**



SECTION 2

## **FACILITY DESCRIPTION**

### 2.1 DESCRIPTION OF THE AIRPORT

COS is located on approximately 7,355 acres in the southeastern part of Colorado Springs with approximately 1,280 acres under lease to the United States Government (Peterson Air Force Base), who also shares the airfield and runways. Figure 1.0 shows the location of COS within the city limits.

Several other tenants operate facilities at COS. These tenants provide airport-related services including fueling, deicing/anti-icing, maintenance, and hangars for air courier services and private aircraft including scheduled flight services. Flying instruction and car rental services are also provided at COS. The airfield operations area includes a Business Park that is currently being developed on COS land located south of the entry/exit road (Milton E. Proby Parkway). The Business Park consists of: open space areas; stormwater detention facilities; a joint Army/Air Force Arrival/Departure Air Control Group (ADACG) rapid deployment facility operated by Fort Carson military installation; Northrop Grumman; and Aerospace. Future development in the Business Park may include hotels, office buildings, industrial/research development, commercial development, and recreation facilities.

COS facilities include the Air Carrier Terminal Building, East Unit Terminal Building, Air Cargo Building, parking lots, COS Maintenance Facility, tenant facilities, a fuel farm, a lighting vault building, two lined glycol impoundment ponds, and detention basins throughout the property.

The COS Airfield Maintenance Facility is located on the west side of COS. Two underground petroleum storage tank systems (10,000 gallon diesel and 2,500 gallon gasoline) and a fuel island are in the middle of the facility. In Building A, COS Fleet performs maintenance and vehicle washing occurs in the south bay of the facility. There is also a 560 gallon used oil tank behind the building and a generator located outside on the north end of the building. Building B is for vehicle, chemical storage, and sand storage. Outside on the south end of the building are five 5,000 gallon potassium acetate tanks. Building C is used for sand storage, and Building D is used for vehicle, equipment, and material storage. There is a storage yard located on the south end of the facility that includes a tank of magnesium chloride, signage, pallets, and other miscellaneous items.

The fuel farm (owned by COS and operated and maintained by the Colorado jetCenter), is located east of the Air Carrier Terminal Building and was completed in 1995. It consists of four 50,000 gallon Jet-A fuel tanks, one 10,000 gallon motor vehicle fuel tank, and a 7,500 gallon oil/water separator.

## 2.2 FACILITY AND INDUSTRIAL ACTIVITIES DESCRIPTION

The boundary of COS property is delineated by a security fence and includes areas of COS activities and areas leased by tenants. Peterson Air Force Base, located on City property, operates independently of the COS. The area encompassed within the security fence is a regulated industrial activity area. Industrial areas outside the security fence include the rental car service centers located south of the Air Carrier Terminal Building and parking lots. The industrial activity area drains primarily to one outfall (Outfall 001) located just north of the COS Maintenance Facility.

The COS Business Park is bound by Milton E. Proby Parkway on the north, Powers Boulevard on the south and west, and the east runway and open space area on the east. Further to the east of the Business Park is a parcel of land that has been set aside as Open Space. Northrop Grumman and Aerospace do not conduct industrial activities. Fort Carson's ADACG facility is located to the southwest approach to Runway 17L/35R. Colorado jetCenter performs fueling at the ADACG while Integrated Deicing Services performs deicing operations at this facility. Once the Business Park is built out, there is the potential for industrial activities to occur by tenants that could necessitate stormwater sampling at additional outfalls.

## 2.2.1 Industrial Activities Description

The tenants are defined by activities described by Standard Industrial Classification (SIC) Code 45, and includes "establishments engaged in furnishing domestic and foreign transportation by air and also those operating airports and flying fields and furnishing terminal services"; and any facilities with possible sources of stormwater pollution located at COS. This stormwater permit covers all areas with industrial activities and materials, including facilities with aircraft/ground vehicle/equipment maintenance, cleaning, and fueling.

A regulated industrial activity is defined as "servicing, repairing, or maintaining aircraft and ground vehicles, equipment cleaning and maintenance (including vehicle and equipment rehabilitation, mechanical repairs, painting, fueling, lubrication) or deicing/anti-icing operations." Facilities conducting these activities are generally facilities classified as SIC Code 45, although they are not requisite in order to be covered by this permit.

The COS is a public-use airport with commercial airlines, air cargo-courier services, private aircraft facilities, and rental car facilities. The COS operates and maintains the common facilities such as runways, terminals, and surrounding grounds, and provides services such as runway maintenance, snow removal, and infield mowing. To provide these services, the COS maintains a fleet of vehicles and other maintenance equipment.

At the Air Carrier Terminal, the COS operates several facilities: a wash facility for ground service equipment (GSE) and vehicles and a lava tory/triturator facility for lavatory waste from aircraft holding tanks; both of these drain to the sanitary sewer. COS provides and maintains enclosed trash receptacles/compactors that are accessible only from inside the facility, and operates and maintains the deicing fluid collection system at the Air Carrier Terminal.

Table 2.0 outlines primary industrial activities at COS.

### TABLE 2.0 PRIMARY INDUSTRIAL ACTIVITIES PER LOCATION

Industrial Activity					
<ul> <li><u>Terminal and Airfield Operations</u></li> <li>Deicing fluid collection</li> <li>Operation and maintenance of vehicles</li> <li>Operation and maintenance of equipment for sweeping, plowing, snow removal, and related activities of runways, taxiways, aprons, and other COS property</li> <li>Pesticide/Herbicide application</li> <li>Runway/taxiway rubber removal</li> <li>Sanding airport roads</li> <li>Snow plowing</li> <li>Sweeper</li> <li>Erosion Control</li> <li>Mowing</li> </ul>					
<ul> <li><u>Aircraft Operations</u></li> <li>Fueling and maintenance of aircraft and ground service equipment and vehicles</li> <li>Deicing/anti-icing of aircraft,</li> <li>Ground service of aircraft, including lavatory service, hangars, and vehicle and aircraft washing</li> <li>Potable water system flushing</li> <li>Storage of used absorbent</li> <li>Storage of chemicals</li> </ul>					
<ul> <li><u>Rental Car Operations</u></li> <li>Fueling and servicing rental vehicles</li> <li>Maintenance and washing of rental vehicles</li> <li>Outside Storage of tires and other materials</li> <li>Used oil/oil filters</li> <li>Use and storage of Windshield wash fluid</li> </ul>					
<ul> <li><u>General Aviation/West Side Operations</u></li> <li>Maintenance of aircraft, GSE, vehicles, fueling trucks</li> <li>Aircraft Fueling</li> <li>Firefighting foam testing</li> <li>Aircraft cleaning</li> <li>Outside Storage</li> <li>Deicing/Anti-icing</li> </ul>					

Regulated activities occur on the Air Carrier Terminal Ramp and adjoining property where fixed based operators (FBOs) and general aviation tenants operate. Tenant operations occur within the terminal area and around COS where tenants lease buildings or land for operations. Tenants have the responsibility of implementing this SWMP in tenant areas and areas of tenant operation.

#### 2.3 DRAINAGE/STORMWATER CONVEYANCES

### 2.3.1 Description

The stormwater drainage system at COS is primarily surface flow with the exception of culverts and closed conduits that transfer stormwater between runways, taxiways, roads, and detention basins. A series of connected detention basins moderate the flow of runoff from the northeast part of the Industrial Activity Area to the southwest. Stormwater from the Industrial Activity Area is discharged from the COS property by sheet flow and into a concrete-lined open channel located north of the COS Airfield Maintenance Facility. Figure 2.0 shows the COS drainage structure and detention basins. The ultimate receiving water for all five drainage basins is Fountain Creek. Figure 2.1 shows the outfall flow pathway to East Fork Sand Creek and Fountain Creek.

There are five drainage basins within COS property and they include the following:

- Peterson Field draining toward the southwest
- Jimmy Camp Creek draining to the east
- □ Big Johnson draining to the south
- Windmill Gulch draining toward the southwest
- **□** East Sand Creek along the extreme northwestern boundary flowing southwest

#### Peterson Field Basin

The majority of the industrial activities at the COS occur in the Peterson Basin, also called the Peterson/Sand Creek Basin or the Peterson Field Basin. The drainage in the COS portion of the Peterson Basin converges toward the area of the concrete channel leaving the COS to the north of the COS Maintenance Facility. The exception is East Sand Creek at the northwest corner of the Industrial Activities Area.

Along the west side of the COS, the larger scale industrial activities drain to the south across paved and grassy areas into grassy fields toward the concrete channel. Other facilities drain west into roadside ditches and then south into a grassy field. (This area is designated as the Western Sub-Basin.) The COS Maintenance Facility is located south of the concrete channel and drains to the northwest.

The concrete drainage channel was built to divert runoff away from the area north of the channel so that construction could occur in the area. In 2002, significant improvements were made to the drainage structure to eliminate a low-lying area that prevented flows from reaching the concrete channel. Most of the stormwater discharges from the industrial activity area flow to Pond 8 and outfalls directly into the concrete channel via a culvert.

#### East Sand Creek Basin

East Sand Creek is a small stream within the East Sand Creek Basin that runs on the boundary of the Peterson Basin. The East Sand Creek Basin receives runoff from the northwestern corner of Peterson Air Force Base and a small section of primarily undeveloped land with a vehicle service road and runway equipment for Runway 17R/35L.

#### Windmill Gulch and Big Johnson

The Business Park is located within the Windmill Gulch Basin and the Big Johnson Basin. Stormwater from the Windmill Gulch Basin development will flow west to a wetland area offsite. The wetland area is dominated by dense stands of cattails and other vegetative species. The cattail wetland area is approximately 1.5 acres and is located adjacent to Powers Boulevard. Stormwater passing though this cattail wetland will eventually reach Fountain Creek. Stormwater from the Big Johnson Basin development will flow in a southerly direction to an unlined drainage area.

Big Johnson Basin drains the southern part of the COS, most of which is currently undeveloped but will be developed as part of the Business Park. The Windmill Gulch Basin includes the parking lots at the Air Carrier Terminal, the Rental car facilities, the south end of Runway 17L/35R, and a portion of the Business Park. The prevailing drainage direction is toward the southwest. There are a number of detention basins in the Windmill Gulch Basin and some natural sumps. Windmill Gulch leaves the COS property at the wetland area described above.

### Jimmy Camp Creek

The Jimmy Camp Creek Basin located on the east side of the COS and consists of an area approximately 67 square miles. The basin drains to the south and ultimately drains to Fountain Creek. Runoff from the COS includes runoff from part of Runway 17L/35R and Taxiway E. The majority of runoff going to Jimmy Camp Creek from the COS property comes from Peterson AFB.



# FIGURE 2.1 OUTFALL FLOW PATHWAY TO CREEKS



## SECTION 3 FACILITY INVENTORY AND POLLUTANT SOURCE AREAS /POLLUTANT IDENTIFICATION

## 3.1 INVENTORY OF ACTIVITIES AND EQUIPMENT

Major potential sources of stormwater pollution from COS activities are operations involving fuel transfer (including vehicle, aircraft and equipment fueling), outside storage of aircraft/vehicles/equipment, and aircraft/pavement deicing/anti-icing activities (including operation of the deicing fluid collection and impoundment system). Additional operations include aircraft/vehicle/equipment maintenance and cleaning.

The Stormwater permit identifies significant materials including, but not limited to, *raw materials; fuels; materials such as solvents, detergents, and plastic pellets; finished materials such as metallic products; raw materials used in food processing or production; hazardous substances designated under Section 101(14) of CERCLA as amended by SARA (1986); any chemical the facility is required to report pursuant to Section 313 of Title III of SARA (1986); fertilizers; pesticides; and waste products such as ashes, slag and sludge that have the potential to be released with stormwater discharges. See 5 CCR1002-61.2(76).* 

Significant materials used at COS that have the potential to be released with stormwater discharges are outlined in Table 3.0.

## **3.2** Assessment of Potential Pollutant Sources

Figure 3.0 shows COS operations and potential pollutant sources. Operation areas are described in detail below:

### 3.2.1 Fueling

The COS fuel farm is an area for loading and unloading of jet fuel and unleaded fuel. It is located to the east of the terminal and is operated by Colorado jetCenter who is contracted to perform all fueling operations for commercial aircraft and ground equipment located at the terminal. At the fuel farm, if any fuel is discharged into the secondary containment system, fuel drains from the containment area into the oil water/separator. The clean water is discharged via an underground pipe to the field east of the tank farm.

Fueling of aircraft occurs on the terminal air carrier ramp at each gate location where aircraft are parked. Fuel spills tend to occur in these areas when malfunctions of fueling equipment occur. When fuel spills occur, ground service personnel are responsible for containing and cleaning up the spill. All fuel spills are required to be reported to the COS Communications Center for dispatching of fire personnel to assist in potential hazardous material cleanup.

Additional fuel facilities include aircraft fueling for general aviation located on the west side of

COS. There are two aboveground storage tank fuel farms located on the west side in the general aviation area and one underground storage tank fueling area. Vehicle and equipment fueling also occur at the rental car maintenance facilities located just south of the COS public parking area and at the COS airfield maintenance shop.

## 3.2.2 Aircraft/Pavement Deicing and Anti-icing Activities

Aircraft deicing/anti-icing activities at COS are restricted to the air carrier ramp areas (terminal ramp) with permanent containment control. Minimal deicing activities also occur at the FBO facilities on the west side general aviation ramp areas. FedEx has a contained deicing system on their property while the other FBOs that deice use control measures for containment control. Deicing/anti-icing on the air carrier terminal ramp is done in the open, with trucks bringing deicing/anti-icing fluids to aircraft parked on deicing pads. Details of COS deicing/anti-icing are included in Section 5.

Pavement and road deicing includes the use of magnesium chloride or sand and can contribute to pollutants that may come in contact with stormwater. Potassium acetate is used on the airfield for deicing of runways and taxiways.

## 3.2.3 Maintenance

Maintenance of aircraft, ground vehicles and equipment primarily occurs in maintenance garages located on the west side in the general aviation/FBO facilities, rental car service facilities, and airfield maintenance facility. Occasionally maintenance may occur outside of the Air Cargo facility within the Delta and Integrated Deicing Services (IDS) leased areas and on the air carrier ramp. Potential pollutants from maintenance activities include used oils, vehicle/equipment fluids (antifreeze, hydraulic fluid, transmission fluid, oils/grease), fuel, heavy metals, and solvents.

Grounds maintenance includes mowing activities, include drainage area maintenance, and other airfield maintenance items including maintenance of taxiways and runways. A street sweeper is also used for grounds maintenance cleaning.

Various pesticides/herbicides are used to control rodents, noxious weeds and other pests within vegetated areas. All pesticides are used in strict compliance with label requirements. Pesticides are applied in the airfield areas and landside areas by certified personnel.

## 3.2.4 Outside Storage

The COS and tenants utilize outside storage areas to store various materials/items. These materials primarily include drums of used oil/oil filters, fuel tanks, deicing fluid, equipment, flammable cabinets, waste dumpsters, repair parts, scrap metal, spill absorbent materials, tires, windshield washer fluid, and fuel trucks.

## 3.2.5 Vehicle and Equipment Cleaning

Most of the tenants have access to wash bays for washing equipment and vehicles. Those tenants that require aircraft washing or other equipment without access to washing facilities are required to contain and properly dispose of wash water in the sanitary sewer or off site. Other tenant washing operations fall under the low-risk discharge guidelines for Discharges from Surface Cosmetic Power Washing to Land and proper control measures are utilized to ensure compliance with the low risk discharge guideline.

## 3.2.6 Asphalt Milling and Concrete Stockpiles

The COS maintains several stockpile areas around the COS that consists of demolished concrete, concrete treated soil, asphalt millings, and dirt stockpiles from previous airfield rehabilitation projects.

These stockpiles are maintained in order to recycle this material back into COS projects where the material is used as infill.

## 3.3 POTENTIAL STORMWATER POLLUTANTS

The pollutants associated with the facility including the above-identified sources are listed in Table 3.0 below.

	Potential Pollutants														
TABLE 3.0POTENTIALPOLLUTANTSAirport/Tenant Activities	Fuel (Jet A, Avgas, Diesel, Unleaded)	Sediment	Deicing/Anti-icing Chemicals	Trash/Debris	Oil/Grease	Equipment fluids (Hydraulic fluid, antifreeze)	Sand	Detergents	Pesticides/Herbicides	Fire Control Agents	Cleaning products /windshield wiper fluid	Lavatory Chemicals/waste	Waste Tires	Solvents/Cleaners	Rubber Particles
Aircraft Fueling	Х														
Aircraft Deicing			Х												
Rental Car Maintenance and Servicing	х			Х	Х	Х		х			Х		х	х	
Pavement Deicing/Snow			~		Ň	~	Ň								
Removal			X		X	X	Х								
Fuel Tank Storage/Fuel Dispensing	Х														
Airport Fleet Maintenance	Х			Х	Х	Х		Х					Х	Х	
General Aviation Hangar				х	х	Х								х	
Solid Waste/Recycling				х											
collection and disposal Ground Equipment/Vehicle				~											
storage and parking					Х	Х						Х			
Ground Equipment Servicing	Х				Х	Х							Х	Х	
Street Sweeping		Х		Х	Х	Х	Х								
Stormwater Detention pond maintenance		Х		Х											
Tenant Fire suppression										Х					
Airfield/roadway maintenance		x	x	х	x	X									X
Airfield/roadway deicing		~	X	~	~	~									~
Grounds maintenance		Х		Х	Х	Х			Х						
Pretreatment Device															
maintenance – (sand/grease traps)		Х		Х	Х	Х		Х							
Material Stockpiles (sand, gravel, dirt, millings, crushed concrete)		Х		Х	Х		Х								
Construction activities	Х	Х		Х	Х	Х									
Bird Hazard Mitigation									Х						
Emergency Fire Fighting Activities										Х					

### 3.3.1 Non-Stormwater Discharges

Non-stormwater (i.e., waters not having their immediate origin in precipitation) from COS, including areas of tenant operations, cannot be discharged to stormwater conveyances or conveyance system, unless permitted otherwise. Non-permitted or non-exempted non-stormwater discharges are not to be commingled with stormwater discharges.

Peterson AFB has an impoundment adjacent to the COS Stormwater Detention Pond 1. The impoundment is for stormwater runoff, snow/ice melt, and irrigation water runoff that has the potential to overflow or requires draining into Pond 1. Peterson AFB borders COS along the north and northeast.

In the event that prohibited non-stormwater discharges are identified, actions must be taken immediately to eliminate such discharges.

The following methods shall be used to provide an evaluation of non-stormwater conditions:

- Visual inspection of COS activities, and stormwater conveyances, including drainage lines as observed at manholes, inlets, and outfalls.
- Observation or review of activities that occur during various times or at various locations of the COS which have significant potential for discharge of non- storm water.
- Review of drainage plans and engineering drawings of sewer and other utilities.
- Confirmation that appropriate corrective actions have been taken in accordance with the findings and recommendations of a previous inspection and evaluation for nonstormwater discharges.

Facility inspections (discussed in detail in Section 6) provide for detection of non-stormwater discharges and timely implementation of subsequent corrective actions as part of the ongoing implementation of the SWMP. The evaluation of non-stormwater discharges will be made as part of the COS inspection and will be documented on Form 3 in Appendix A. The completed evaluation forms are maintained in Appendix B.

### **3.3.2** Protocol for Report of Evaluation of Non-Stormwater Discharges

Certification that the regulated areas of COS have been evaluated for the potential presence of non-stormwater discharges is a permit requirement. Actions to eliminate non-stormwater discharges identified as a result of the evaluations shall be initiated immediately.

The COS and individual tenants (with the exception of Peterson AFB and the A/DACG Facility) shall provide individual certification of the non-stormwater evaluation. Completed certifications are to be retained in Appendix B.

Tenants shall provide certification for their sites and areas of operation and provide a copy of

certification to the COS SWMP Administrator annually. A copy of the evaluation does not have to be transmitted to a regulatory agency unless specifically requested by the agency.

In addition, if a tenant does not provide a certification of non-stormwater discharge evaluation to the COS SWMP Administrator, the tenant shall provide a statement to the COS SWMP Administrator as to the reason(s) that such certification is not provided.

In the event COS is unable to provide a certification of a non-stormwater discharge evaluation for the COS as a whole, the COS is obligated by the Stormwater Discharge Permit, to notify the State of Colorado of such inability and the reasons for such inability. If one of the reasons that such certification cannot be made is due to non-receipt of tenant certification of non-stormwater discharge evaluation, such reason shall be included in the notice to the State of Colorado of COS's inability to provide certification of non-stormwater discharge evaluation.

## **Figure 3.0 COS Pollution Source Areas**



## **SECTION 4**

## **CONTROL MEASURES**

Per the permit, control measures refer to any best management practice (BMP) or other method (including effluent limitations) used to prevent and/or reduce the discharge of pollutants to waters of the state. These measures include schedules of activities, practices (and prohibitions of practices), structures, vegetation, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants to state waters. Control measures also include treatment requirements, operating procedures, and practices to control site runoff, spillage or leaks, or waste disposal. Control Measures may be structural or non-structural.

## 4.1 STORMWATER CONTROL MEASURES

Stormwater diversion is utilized by implementing control measures or practice-based effluent limitations and ensuring non-stormwater discharges do not occur. Control measures are categorized to include source control, structural, and treatment control measures. Table A-1 in Appendix A details the specific control measures.

General site industrial control measures include:

- Minimize Exposure
- Non-Stormwater Discharges
- Management of Runoff/Structural Controls
- Good Housekeeping
- Preventative Maintenance of Control Measures
- Spill Prevention and Response
- Erosion and Sediment Controls
- Storage and Handling
- Salt Storage Piles or Piles Containing Salt
- Waste Management
- Grounds Maintenance
- Dust Generation and Vehicle Tracking of Industrial Materials
- Training and Recordkeeping

Site specific industrial control measures:

- Aircraft, Ground Vehicle and Equipment Maintenance Areas
- Aircraft, Ground Vehicle and Equipment Cleaning Areas
- Aircraft, Ground Vehicle and Equipment Storage Areas
- Fueling
- Deicing/Anti-icing
- Lavatory Equipment Operation/Servicing
- Firefighting Equipment Testing
- Construction Activities
- Pesticides/Herbicides

- Painting Activities
- Stormwater Treatment Controls

Control measures are to be implemented and utilized by the COS and individual tenants as appropriate to their activities and areas of operations. Table 4.1 lists the control measures.

## 4.2 EXISTING STORMWATER MEASURES AND CONTROLS

Stormwater detention facilities are the primary means of controlling stormwater runoff and pollutants in stormwater. The COS glycol diversion structure also serves as a key measure in effluent limits and preventing stormwater runoff from deicing fluid. Table 4.0 below identifies existing structural controls and maintenance of structural controls used around COS.

#### Table 4.0 Existing Structural Controls

Structural Control	Location	Maintenance of Structural
Glycol Diversion Structure and Containment	Ramp, diversion structure, glycol pond impoundments to west of terminal	Quarterly inspections
Detention Pond	There are 12 detention basins/ponds located throughout the property	Quarterly inspections and maintenance to remove excess debris and repair erosion areas
Oil/Water Separators/Sand Traps	COS maintains three sand traps or oil/water separators located	Scheduled removal of debris
Vegetated Swales	Vegetated swales and drainage areas on COS property.	Scheduled maintenance for mowing, debris removal and erosion repair
Secondary Containment	Secondary containment for fuel tanks – lighting vault, used oil	Monthly inspections to ensure containment integrity

Structural Control	Location	Maintenance of Structural			
		Controls			
Berms	Berms are used around dirt	Quarterly inspections to ensure			
	stockpiles, sand piles,	berm integrity			
	landscaping material				
Inside/Under cover Storage	All maintenance is done	Inspect any equipment			
	inside for all rental car	temporarily stored outside for			
	facilities and west FBOs	leaks			

Table 4.1 identifies the General COS Control Measures.

## Table 4.1 GENERAL CONTROL MEASURES

Minimize Exposure (ME)	
ID	Description
ME-1	Store chemicals indoors or undercover when possible.
ME-2	Chemicals stored outdoors must have a secure cover and on containment;
	containers should be free of festude.
ME-3	Equipment/vehicle maintenance should be done indoors or under cover when
	applicable; outdoor maintenance needs to utilize spill pans.
ME-4	Storage containers should be stored within or on secondary containment. Inspect
	all storage containers for leaks on a routine basis.
ME-5	Use tart or other heavy duty cover over contaminated soil or other material that is
	temporarily stored outside.

Non-Stormwater Discharges (NS)	
ID	Description
NS-1	Contain/berm areas for non-stormwater discharges and properly dispose off-site.
NS-2	Use dry cleaning and surface preparation techniques where feasible.
NS-3	Educate staff on non-stormwater discharges.
NS-4	Routinely inspect areas for non-stormwater discharges.

Management of Runoff/Structural Controls (MR)	
ID	Description
MR-1	Divert, infiltrate, or treat stormwater runoff to minimize pollutants.
MR-2	Use structural controls (silt fence, berms, etc.) to minimize runoff where practicable.
MR-3	Reseed/revegetate bare areas to minimize erosion and sediment runoff.

Good Housekeeping (GH)	
ID	Description
GH-1	Minimize and recycle non-usable equipment and materials.
GH-2	Pick up and properly dispose of loose materials; scrap; trash; wastewater; and old,
	unused or excess drums and containers.
GH-3	Clean fueling, spill and leak areas and other stained paved areas frequently.
GH-4	Store all vehicles and equipment on impervious surfaces (concrete/asphalt).
GH-5	Use dry materials for cleanup of liquids and dispose of properly.
GH-6	Use drip pans or absorbent pads to collect fluid drainage during fluid changes or
	leaking equipment.
GH-7	Conduct routine inspections for leaks and condition of drums and other
	containers.
GH-8	Collect used rags, towels, absorbent materials and properly contain and dispose.
GH-9	Properly dispose of unused product and chemicals.
GH-10	Recover solvents, waste fuels and oils, fuel filters, oil filters and properly contain
	until taken off-site for proper disposal.
GH-11	Keep work areas clean and free of debris.
GH-12	Properly label all products, chemicals, containers, and drums.
GH-13	Keep outdoor equipment and vehicles free of grease and oil buildup.

Preventative Maintenance of Control Measures (PM)	
ID	Description
PM-1	Perform routine inspection and maintenance of stormwater management devices (e.g., cleaning oil/water separators, removing debris from catch basins).
PM-2	Inspect and test equipment and systems to uncover conditions that could cause breakdowns or failure resulting in the discharge of pollutants to surface waters.
PM-3	Ensure appropriate maintenance of equipment and systems.
PM-4	Ensure timely repair or replacement of any control measures.
PM-5	Inspect berms, dikes, curbs, tanks, and other retention devices.
PM-6	Perform preventative and routine maintenance, modification, repair, replacement, or installation of new control measures.

Spill Prevention and Response (SR)	
ID	Description
SR-1	Develop and maintain a spill prevention plan or spill procedure, including training.
SR-2	Provide containment around potential spill sources.
SR-3	Divert spills from stormwater drains/inlets.
SR-4	Keep spills and clean up materials available and properly dispose of after use.
SR-5	Control and prevent spills during fuel and deicing/anti-icing fluid transfers.
SR-6	Perform deicing and anti-icing only in areas designated by COS.
SR-7	Use drip pans or other collection devices in heavily used areas.
SR-8	Use containment methods on liquid storage tanks and containers that contain regulated materials.
SR-9	Post signage with emergency contacts at all fuel and chemical storage locations.

Sediment and Erosion Control (SE)	
ID	Description
SE-1	Reduce erosion in unpaved areas.
SE-2	Reduce erosion in earthen channels.
SE-3	Inspect and repair (if necessary) detention ponds and vegetative swales to assure
	proper function.
SE-4	Maintain vegetation or stone buffers to prevent erosion.
SE-5	Use silt fences, erosion blankets, hay bales and other sediment/erosion
	structural controls during construction.
SE-6	Minimize disturbed areas and protect natural features and soil.

Storage and Handling (SH)	
ID	Description
SH-1	Store flammable and corrosive chemicals/products in flammable cabinets.
SH-2	Store all materials in original containers, properly labeled with lids sealed tight.
SH-3	Ensure SDS is readily available for all products.
SH-4	Protect all material handling activities such as loading/unloading from precipitation.
SH-5	Transfer liquids on paved surfaces and away from stormwater drains.
SH-6	Reduce the amount of storage outside.
SH-7	Store drums and containers on pallets or other structures to keep the container out of contact with stormwater.
SH-8	Inspect storage areas frequently for leaks, trash or debris.

Salt/Sand Storage Piles (SP)	
ID	Description
SP-1	Protect all stockpiles from stormwater run-on using a berms, dikes, fiber rolls, silt fences, sandbag, gravel bags, or straw bale barriers.
SP-2	Locate stockpiles a minimum of 50 ft. away from concentrated flows of stormwater, drainage courses, and inlets.
SP-3	Locate stockpiles indoors or under cover.

Waste Management (WM)	
ID	Description
WM-1	Check waste disposal areas on a regular basis for leaks.
WM-2	Use waste collection containers for non-regulated wastes.
WM-3	Keep all waste/trash containers closed when not in use.
WM-4	Reduce amount of waste generated by recycling whenever possible.
WM-5	Properly dispose of vacuum-swept material.
WM-6	Properly dispose of construction debris and residuals from maintenance of paved
	areas.

Grounds Maintenance (GM)	
ID	Description
GM-1	Outdoor washing of grounds/buildings may only be done if water is contained and reclaimed and does not reach storm drains.
GM-2	Perform regular sweeping of grounds and properly dispose of trash and debris.
GM-3	Properly dispose of landscape waste.
GM-4	Regularly clean paved areas where equipment is used and stored.
GM-5	Ensure proper management and application of any pesticides, herbicides or fertilizers.

Dust Control/Vehicle Tracking (DV)	
ID	Description
DV-1	Utilize vehicle tracking through gravel entryways for construction projects.
DV-2	Utilize water truck on dirt roads to minimize dust.
DV-3	Seed and mulch disturbed areas.
DV-4	Protecting existing vegetation.
DV-5	Minimize generation of dust and off-site tracking of sediment.

Training and Record Keeping (TR)	
ID	Description
TR-1	Ensure all employees have annual SWMP Training.
TR-2	Ensure all employees have annual SPCC or spill training.
TR-3	Educate and ensure contractors on-site are utilizing control measures.
TR-4	Ensure all stormwater inspections, certifications and other stormwater
	documents are kept electronically or with SWMP for at least 3 years after permit
	expires.

Table 4.2 identifies Site Specific Control Measures:

## TABLE 4.2 SITE SPECIFIC CONTROL MEASURES

Aircraft/Ground Vehicle/Equipment Maintenance (EM)	
ID	Description
EM-1	Perform routine inspections: inspect and repair leaks from aircraft, vehicles, machines, tanks, piping, and other equipment that could release pollutants to stormwater.
EM-2	Store materials under cover, when possible.
EM-3	Maintenance activities should be performed indoors or under cover whenever possible.
EM-4	If outdoor maintenance is required, use a means of containment for potential spills or leaks and designate an area away from storm drains.
EM-5	Use drip pan for leaking vehicles and when vehicles are being repaired or maintenance is being performed.
EM-6	Have a designated area for vehicle fluid changes.
EM-7	Ensure vehicle maintenance is not performed near stormwater drains.
EM-8	Liquid wastes cannot be poured into sanitary sewer drains. Need to ensure properly disposed through environmental disposal company or taken to recycling facility.
EM-9	Batteries should be stored under cover and within secondary containment.
EM-10	Drain/crush and recycle and/or properly dispose of used oil filters.
EM-11	Conduct maintenance in areas with runoff controls.

Aircraft/Ground Vehicle/Equipment Cleaning (EC)	
ID	Description
EC-1	Clean aircraft/ground vehicles and equipment in designated areas only.
EC-2	Contain and properly dispose of equipment, vehicle, and aircraft wash water.
EC-3	Airlines should use terminal wash bays for equipment and vehicle cleaning.
EC-4	Cleaning agents and/or detergents are prohibited unless used in wash bays or
	contained and properly disposed.

Aircraft/Ground Vehicle/Equipment Storage (ES)	
ID	Description
ES-1	Store vehicles/equipment on pavement.
ES-2	Use drip pans for leaking equipment.
ES-3	Ensure fuel delivery vehicles are positioned within a secondary containment area.
ES-4	Inspect storage areas frequently for leaks, trash or debris.
ES-5	Maintain Ground Support Equipment/Vehicles to prevent leaks and releases.
ES-6	Maintain and clean pavement stains/leaks on a regular basis.

Fueling (FL)	
ID	Description
FL-1	Contain leaks during transfers.
FL-2	Fuel only in designated locations.
FL-3	Do not fuel during precipitation events.
FL-4	Immediately clean up any leaks or spills.
FL-5	Protect any storm drains located near fueling areas using mats, socks, berms, etc.
FL-6	Inspect fueling tanks for leaks.
FL-7	Do not overfill tanks – "top off."
FL-8	Use drip pans/absorbents under hoses.
FL-9	Maintain good records of fuel.
FL-10	Train employees on proper fueling housekeeping techniques.

Deicing/Anti-icing (DA)	
ID	Description
DA-1	Collect deicing/anti-icing fluids during periods of application to aircraft.
DA-2	Conduct routine inspections of deicing areas and areas where deicing product is stored.
DA-3	Perform training for all personnel involved with deicing operations.
DA-4	Transfer deicing agents only in paved areas.
DA-5	Record quantities of all deicing material used during deicing months.

Lavatory Equipment Operation/Servicing (LE)	
ID	Description
LE-1	Perform regular inspections on lavatory equipment.
LE-2	Perform surfactant/disinfectant mixing and transfers in the lavatory bay facility only
LE-3	If lavatory blue water chemicals are spilled near or gets into a stormwater drain, notify the COS Communication Center immediately.
LE-4	Do not perform any equipment maintenance near stormwater drains.
LE-5	All leaks of blue water from lavatory equipment should immediately be cleaned up and properly disposed.

Fire-fighting Equipment Testing (FE)	
ID	Description
FE-1	Perform testing only in designated areas.
FE-2	Ensure fire control agents are contained and do not reach storm drains.
FE-3	Properly dispose and/or recycle fire control agents.
FE-4	Disposal of fire control agents to sanitary sewer should only be done with prior
	approval of Colorado Springs Utilities.
FE-5	Perform testing only in designated areas.

Construction Activities (CA)	
ID	Description
CA-1	Utilize structural control measures such as silt fencing, berms, hay bales, erosion blankets or other approved structural control measures/BMPs.
CA-2	Install vehicle tracking at construction entrance and exit locations.
CA-3	Conduct street sweeping of sediment tracked onto roadways by construction equipment/vehicles.
CA-4	Ensure construction contractors are maintaining control measures/BMPs.

Pesticide/Herbicide Applications (PH)	
ID	Description
PH-1	Implement schedules for application of pesticides, herbicides and/or fertilizers.
PH-2	Do not apply pesticides, herbicides or fertilizers during storm events.
PH-3	Collect and properly dispose unused pesticides, herbicides, and fertilizers.
PH-4	Schedule irrigation to not occur on days where pesticides, herbicides or fertilizers are applied.
PH-5	Use native vegetation or select landscaping plants that require little maintenance and that reduce the need for use of pesticides and herbicides.
PH-6	Utilize integrated pest management measures.
PH-7	Ensure proper permits and certifications are obtained before applying specific pesticides/herbicides.

Paint and Painting Activities (PA)	
ID	Description
PA-1	Painting activities should be conducted indoors with proper ventilation and emission control.
PA-2	Paint solvents should be recycled and/or properly disposed per local, state, and federal regulations.
PA-3	Aircraft and GSE painting should be performed inside a permitted facility or done off-site.
PA-4	Containers of paints and solvents should be stored indoors or under cover.
PA-5	Empty containers with paint residue should not be stored uncovered outside.

PA-6	When removing paint, collect and dispose of all removed paint and paint waste properly.
PA-7	An SDS must accompany all paint products.

Potable Water System Flushing (PW)				
ID	Description			
The following control measures are required per the CDPHE LOW RISK DISCHARGE				
GUIDANCE: DISCHARGES OF POTABLE WATER, Revised August 2009 WQP-27,				
Low Risk Discharges				
PW-1	The discharge shall be from a potable water distribution system, tank or storage that has been maintained for potable water distribution use			
	has been maintained for potable water distribution ase			
PW-2	If the discharge is directly to a State surface water (any stream, creek, gully, whether			
	dry or flowing), it must not contain any residual chlorine. The operator is responsible			
	for determining what is necessary for removing chlorine from the discharge			
PW-3	The potable water shall not be used in any additional process.			
PW-4	The discharge shall not cause erosion of a land surface.			
PW-5	The discharge shall not contain solid materials in concentrations that can settle to form			
	bottom deposits detrimental to the beneficial uses of the state waters or form floating			
	debris, scum, or other surface materials sufficient to harm existing beneficial uses.			
PW-6	For discharge to the ground, the water should not cause any toxicity to vegetation.			
	When discharging, allow the water to drain slowly so that it soaks into the ground as			
DUL 7	much as possible.			
PW-7	The discharge should be conducted to minimize the potential to pick up additional			
	suspended solids. When possible, a best management practice for filtering of settling			
	debris			
PW-8	The discharge should be conducted to minimize the potential that it will not pick			
1 11 0	up any oil and grease.			
PW-9	Collect all discharge from aircraft potable water flushing or water truck flushing			
	containing Purine, chlorine bleach or other chemicals and properly discharge to a			
	permitted sanitary sewer connection, or recycle the water.			
PW-10	Located away from storm drain inlets or drainage facilities.			
PW-11	When discharging to land, allow the water to drain slowly so that it soaks into the			
	ground as much as possible.			
<b>DII I I</b>				
PW-12	When possible, an absorbent oil pad, boom or similar device should be used to			
	eliminate oil from the discharge.			

Treatment Controls (TC)			
ID	Description		
TC-1	Glycol Diversion Structure inspections and maintenance.		
TC-2	Scheduled maintenance/pumping of oil/water separators and sand traps.		
TC-3	Inspect ditches and vegetated swales on a regular basis and after significant rain events for erosion.		
TC-4	Pavement cleaning to include street sweeper to contain and properly dispose wash wastewater.		
TC-5	Detention ponds should be maintained through regular inspections, removal of debris and sediment buildup and erosion repair.		

Description of Control Measures

### 4.2.1 Minimize Exposure

Minimizing exposure to stormwater is important in preventing stormwater pollution. The primary goal is to keep pollutants away from contact with stormwater. This is done by keeping precipitation from contacting the potential pollutant source by storing under cover or inside.

#### 4.2.2 Non-Stormwater Discharges

Non-stormwater discharges consist of all discharges not made up of stormwater from precipitation events. These types of discharges may consist of wash water, dewatering of footing drains, contaminated groundwater, non-potable water discharges, process waste water, etc. The permit allows for certain non-stormwater discharges. All other non- stormwater discharges are not permitted unless covered under a low-risk discharge or a separate permit.

#### 4.2.3 Good Housekeeping

Good housekeeping practices are intended to maintain overall order and cleanliness, reduce the contact of potential pollutants with precipitation, and reduce the likelihood of release of pollutants to runoff waters. Good housekeeping requires the maintenance of a clean and orderly site or area of operations. Examples of good housekeeping practices include: minimizing unused equipment and materials; conducting routine inspections of site or operating area for leaks; properly labeling all container and ensuring containers remain in good condition; following cleaning and maintenance schedules; implementing trash collection and disposal practices; and grounds maintenance.

Implementation of good housekeeping practices is the responsibility of both COS and individual tenants. These practices are practical and can usually be done at no cost.

To prevent excessive accumulation of oils, greases, and vehicle/equipment fluids (e.g., transmission fluid, antifreeze, fuel) in areas exposed to stormwater, COS and individual tenants will have the responsibility for periodic (at least once per calendar year) cleaning by vacuum sweeping, dry cleaning, wet cleaning (with proper containment of fluids), or similar

removal methods in areas within their site in which equipment, vehicles or aircraft are frequently parked and past or current fluid accumulations are apparent.

Record of cleaning activities shall be made and provided to the COS SWMP Administrator during the inspection of records. Cleanup of leaks/spills and debris is the responsibility of each tenant and their respective areas.

### 4.2.4 Stormwater Structural Control Management Practices

Stormwater management practices appropriate to COS and tenant activities may utilize structural or treatment controls, such as diversion, storage, infiltration, reuse, or treatment.

Detention ponds shall be maintained by COS. Practices to be followed in maintenance of detention ponds include:

- Routine inspection for accumulation in the pond of excessive sediments and other debris which would significantly inhibit the functioning or effectiveness of the effectiveness of the retention pond, with appropriate corrective action being undertaken as necessary.
- Annual inspection of the physical integrity of the pond and its structures to ensure continued, uninterrupted operation of the pond, with appropriate corrective action being undertaken as necessary to provide such operation.
- Do not dispose of any solid or liquid materials, debris, residuals, excess materials, or other wastes of any type in detention ponds.
- Do not discharge any non-stormwater into any stormwater, stormwater inlet, stormwater conveyance, sump, detention pond, or retention pond.

## 4.2.5 Preventive Maintenance of Control Measures

A preventive maintenance program for control measures is necessary for the purpose of uncovering conditions or situations that may result in possible discharges to stormwater or stormwater conveyances from failure of equipment or structural control measures. Preventative maintenance reduces the potential for a runoff event by reducing leaks and other releases from aircraft, vehicles, equipment, storage containers. This program shall involve:

- Timely inspection and maintenance of stormwater management devices (e.g., cleaning oil/water separators, removing debris from catch basins).
- Inspecting and testing equipment and systems to uncover conditions that could cause breakdowns or failure resulting in the discharge of pollutants to surface waters.
- Ensuring appropriate maintenance of equipment and systems.

#### 4.2.6 Spill Prevention and Response

COS has developed and implemented a site-specific Spill Prevention Control and Countermeasures (SPCC) Plan that uses appropriate procedures to respond to a significant release of pollutants and to reduce the likelihood of the release of contaminants to stormwater. The SPCC Plan includes provisions for spill prevention, emergency response, spill notification, and cleanup in the event of a petroleum product or chemical release on COS property.

The SPCC Plan for COS is a separate document, incorporated in this SWMP by reference, and is available from the COS SWMP Administrator. Each tenant shall be knowledgeable as to their responsibilities prescribed by the COS SPCC Plan. Each tenant that falls under the SPCC regulations is required to have their own SPCC Plan and a copy should be provided to the COS SWMP Administrator.

To assist in effective implementation of spill prevention and control at COS, tenants have, at a minimum, the following responsibilities:

- Tenants shall develop their own SPCC plans. If not required by regulation, the tenant must develop a spill procedure in lieu of an SPCC Plan or follow the COS spill procedure (included as Appendix A14).
- A brief narrative of spill procedures and local facility contacts must be posted at each fueling facility in the event of a spill.
- All tenants are required to respond to spills in accordance with the requirements of the COS SPCC Plan, the tenants' SPCC Plans, or the tenants' spill procedures.
- All tenants shall verbally notify the COS SWMP Administrator as soon as possible, and in no more than 24 hours after the occurrence of the incident, of all spills or leaks of 25 or more gallons of petroleum-based products, byproducts, or residuals of any oil or other chemical in excess of RQ amounts or of any spills that reaches a stormwater drain, waterway or spills onto soil regardless of the amount.
- All tenants shall immediately notify the COS Operations/Communications Center if a petroleum product or chemical reaches a stormwater inlet or waterway regardless of the amount.
- All tenants will file a report with the COS SWMP Administrator (Appendix A10) for spills of 25 or more gallons of petroleum-based products, by-products, or residuals of any oil or other chemical in excess of Reportable Quantity amounts.
- No pumping or similar removal of waters or other liquids from beneath the ground surface shall be undertaken for the purpose of removal of non-water liquids, waterdissolved, or water-suspended materials and/or dispose of such materials on the ground without notice to the COS SWMP Administrator.

• Disposal of any and all collected or pumped absorbents or waste spill response material or water containing spill materials shall not be accomplished by release to the environment.

Past spills at COS have been recorded on the Spill Control Log (a copy is maintained in Appendix A10). The Spill Control Log will be updated at least annually from records maintained by the COS SWMP Administrator.

### Significant Spills and Leaks

Significant spills and leaks are defined by the permit as including (but not limited to) releases of oil or hazardous substances in excess of quantities that are reportable under CWA Section 311 (40 CFR 110.6 and 40 CFR 117.21) or Section 102 of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 42 USC §9602. COS is required to report reportable quantities of spills/leaks per reporting requirements of 40 CFR 110 Discharge of Oil; 40 CFR 117 Determination of Reportable Quantities for Hazardous Substance; and 40 CFR 302 Designation, Reportable Quantities and Notification Requirements for Hazardous Substances under CERCLA relating to spills or other releases of oils or hazardous substances.

### 4.2.7 Waste Management Practices

The purpose of waste management control measures is to reduce the potential of stormwater pollution by implementing proper waste handling and disposal practices. These practices include regular inspection of waste disposal areas, using proper waste disposal containers and ensuring the lids always remain closed. Some key Control Measures to utilize for waste management include:

- Keeping trash containers closed when not in use;
- Locating dumpsters away from stormwater drains;
- Picking up any loose trash around dumpsters; and
- Properly disposing waste not suitable for the dumpster

### 4.2.8 Storage and Handling

Proper storage and handling practices focuses on preventing or reducing the discharge of pollutants to stormwater from outdoor storage of significant materials. Some key control measures include reducing the amount of outside storage, inspecting containers and drums on a routine basis for damage and leaks; and storing drums and containers on pallets, secondary containment or other structures to keep from contact with stormwater.

#### 4.2.9 Sediment and Erosion Prevention

Erosion can be a major source of sediments in runoff waters. COS property consists mostly of sandy soils making erosion prevalent. Sediment control and erosion prevention Control Measures selected for COS and tenants are listed in Table 4.0.

#### 4.2.10 Grounds Maintenance

Building and ground maintenance operations may include structural maintenance, mechanical sweeping and cleaning of paved surfaces, pest and weed control, landscaping and irrigation. Since these activities can involve the use of chemicals, control measures need to be followed when performing any of these activities.

### 4.2.11 Dust Control and Vehicle Tracking

Dust control includes managing dust in disturbed areas and during construction and development activities. Dust control includes using water trucks to control dust and vehicle tracking is used to reduce sediment onto paved surfaces.

#### 4.2.12 Salt/Sand Storage Piles

Salt and sand piles need to be enclosed or stored under cover. If stored outside, the piles should be covered and bermed to enclose piles of sand, salt, or piles containing salt.

#### 4.2.13 Management of Runoff

The overall goal of Control Measures is to minimize discharges of pollutants into stormwater. In addition to structural controls identified in Table 4.0, the permit requires runoff be controlled through diversion, infiltration, reuse, containment, or treating stormwater runoff.

## 4.3 ACTIVITY-SPECIFIC CONTROL MEASURES

Activity-specific control measures will apply for those activities conducted by COS or tenants. The following measures apply to COS as a whole but may not apply to each tenant depending on the tenant lease or operating area.

## 4.3.1. Deicing/Anti-Icing

Deicing/anti-icing includes aircraft deicing/anti-icing, runway/taxiway, and pavement deicing. Section 5 details deicing management at COS.

Deicing/anti-icing shall be managed to the extent practical to reduce the potential adverse impacts of a release of deicing/anti-icing fluids to stormwater or stormwater conveyances during or shortly after periods of deicing/anti-icing activities. For those tenants involved in deicing/anti-icing activities for aircraft, runways, taxiways, or ramps, a cooperative effort is needed to maximize the effectiveness of these stormwater management activities.

Tenants authorized to perform minimal deicing activities outside of the terminal ramp must collect accumulations of deicing/anti-icing fluids on the ground surface during deicing/anti-icing operations as soon as practical after completion of deicing/anti-icing activities, with the objective of preventing drainage of fluids to stormwater or stormwater conveyances. All deicing/anti-icing shall be done away from stormwater inlets.

Cooperation and coordination between tenants conducting deicing/anti-icing activities and COS will be required to maximize the effective use of the glycol impoundment system for collection of fluid accumulations on the Air Carrier Terminal Ramp. Pavement deicing by tenants on the terminal ramp shall include notification of chemicals used and a copy of the SDS to the COS SWMP Administrator. West side tenants and FBO's must notify the COS SWMP Administrator whenever there is a change in deicing operations or product. An SDS for deicing products is required to be submitted to the COS SWMP Administrator.

### 4.3.2 Fueling Operations

Fueling operations pose a threat of spills and the potential for stormwater contamination from fueling activities. Fueling operations conducted at COS should follow all COS guidelines and all local, state and federal regulations. The following control measures shall be utilized to prevent stormwater pollution discharge:

- 1. Fuel only in designated locations;
- 2. Do not fuel during precipitation events;
- 3. Immediately clean up any leaks or spills;
- 4. Protect any storm drains located near fueling areas using mats, socks, berms, etc.;

- 5. Inspect fueling tanks for leaks;
- 6. Do not overfill tanks "top off";
- 7. Follow proper spill procedures per facility SPCC Plan

## 4.3.3 Vehicle/Equipment Maintenance

Vehicle, and ground service/support equipment (GSE) maintenance involve activities such as parts cleaning, engine repairs, and replacement of fluids (oil, oil filters, hydraulic fluids, transmission fluids and radiator fluids). Chemicals associated with maintenance include solvents, acids, caustics, glycols, oils, and fuels. Maintenance should always be done in a designated area and the following control measures followed:

- 1. Maintenance activities should be performed indoors or under cover whenever possible.
- 2. If outdoor maintenance is required, use a means of containment for potential spills or leaks and designate an area away from storm drains.
- 3. Use drip pan for leaking vehicles and when vehicles are being repaired or maintenance is being performed.
- 4. Have a designated area for vehicle fluid changes.
- 5. Ensure vehicle maintenance is not performed near stormwater drains.
- 6. Liquid wastes cannot be poured into sanitary sewer drains. Ensure properly disposed through environmental disposal company or taken to recycling facility.
- 7. Batteries should be stored under cover and within secondary containment.
- 8. Drain/crush and recycle and/or properly dispose of used oil filters.
- 9. Conduct maintenance in areas with runoff controls.

## 4.3.4 Lavatory Equipment Operation/Servicing

Lavatory service operations involve servicing aircraft and collecting lavatory waste fluids, refilling of aircraft lavatory fluid reservoirs with new blue water/chemicals, and the transportation of the waste fluids to the lavatory bay to discharge to the sanitary sewer. These operations are performed using lavatory equipment and trucks and/or trailers. Fluid releases to the ground surface or equipment can occur by overfills, hose connection or valve leaks, residue drippage, etc. These releases may occur due to operator errors or equipment failures. Lavatory waste can only be discharged in lavatory bay. The following control measures should be followed to prevent and/or respond to spills from lavatory servicing:

- 1. Practice good housekeeping techniques at lavatory bay facility and clean spills of waste and/or chemicals.
- 2. Perform regular inspections on lavatory equipment.
- 3. Perform surfactant/disinfectant mixing and transfers in the lavatory bay facility only
- 4. If lavatory blue water, chemicals is spilled near or gets into a stormwater drain, notify the COS Communication Center immediately.

- 5. Do not perform any equipment maintenance near stormwater drains.
- 6. All leaks of blue water from lavatory equipment should immediately be cleaned up and properly disposed.

## 4.3.5 Firefighting Equipment Testing

Discharges from firefighting equipment that use fire control agents such as Aqueous Film Forming Foam (AFFF) cannot be discharged to stormwater. The following control measures need to be implemented if this type of testing is conducted on COS property:

- 1. Contact COS SWMP Administrator whenever you are planning to perform fire equipment testing.
- 2. Perform testing only in designated areas.
- 3. Ensure fire control agents are contained and do not reach storm drains.
- 4. Properly dispose and/or recycle fire control agents.
- 5. Disposal of fire control agents to sanitary sewer should only be done with prior approval of Colorado Springs Utilities.

## 4.3.6 Construction Activities

All construction activities including tenant construction activities must have control measures in place prior to construction starting. If the site requires a construction stormwater permit, BMPs must be followed per the permit and accompanying SWMP for the permit. The following control measures represent some key practices to implement during construction:

- 1. Per the State CDPS, obtain stormwater construction permits for all construction activities of one acre or greater.
- 2. Utilize structural control measures/BMPs such as silt fencing, berms, hay bales, erosion blankets or other approved BMPs.
- 3. Install vehicle tracking at construction entrance and exit locations.
- 4. Conduct street sweeping of sediment tracked onto roadways by construction equipment/vehicles.
- 5. Ensure construction contractors are maintaining BMPs.

## 4.3.7 Pesticide, Herbicide and Fertilizer Management

In order to reduce stormwater pollution runoff from pesticides/herbicides and fertilizers, control measures should be implemented whenever these chemicals are applied.

- 1. Implement schedules for application of pesticides, herbicides and/or fertilizers.
- 2. Do not apply pesticides, herbicides or fertilizers during storm events.
- 3. Collect and properly dispose unused pesticides, herbicides, and fertilizers.
- 4. Schedule irrigation to not occur on days where pesticides, herbicides or fertilizers are applied.

- 5. Use native vegetation or select landscaping plants that require little maintenance and that reduce the need for use of pesticides and herbicides.
- 6. Utilize integrated pest management measures.
- 7. Ensure proper permits and certifications are obtained before applying specific pesticides/herbicides.

### **4.3.8** Paint and Painting Activities

Outdoor painting should not be conducted unless the proper permits and Control Measures are in place and the COS SWMP Administrator is notified.

- 1. Any outdoor painting operations must be approved by COS and may require a State air permit.
- 2. Painting activities should be conducted indoors with proper ventilation and emission control.
- 3. Paint solvents should be recycled and/or properly disposed per local, state, and federal regulations.
- 4. Aircraft and GSE painting should be performed inside a permitted facility or done off-site.
- 5. Containers of paints and solvents should be stored indoors or under cover.
- 6. Empty containers with paint residue should not be stored uncovered outside.
- 7. When removing paint, collect and dispose of all removed paint and paint waste properly.
- 8. An MSDS must accompany all paint products.

#### **4.3.9** Stormwater Treatment Controls

#### Oil/water Separators/Sand Traps

- 1. Maintain and clean oil/water separators and sand traps on a regular maintenance schedule.
- 2. Inspect monthly to ensure in working order.
- 3. Report any major issues such as overflows to COS SWMP Administrator.

#### Vegetated Swales

- 1. Mow vegetated swales on a regular basis.
- 2. Inspect and clean swales for sediment buildup and debris.
- 3. Inspect and fix any erosion occurring within the swales.

#### **Detention Ponds**

- 1. Maintain detention ponds with regular mowing.
- 2. Ensure ponds are free of trash, debris and excess sediment
- 3. Inspect and fix any erosion occurring on pond banks.

#### Glycol Diversion Structure

- 1. Regularly inspect drains, diversion structure and ponds for proper operation; ensure activities and inspections meet Glycol Pond O&M Plan.
- 2. Ensure diversion structure is switched to glycol outfall prior to first deicing activity.
- 3. Per Colorado Springs Utility requirements, inspect liners every five years for structural integrity.

## 4.4 NON-STORMWATER DISCHARGE CONTROL

Non-stormwater is water that does not have its immediate and direct source in precipitation. The identification and evaluation of potential non-stormwater discharges to stormwater or stormwater conveyances has been described in Section 3. Unless specific exemption is provided, **non-stormwater is prohibited from discharge to stormwater conveyances**.

Examples of non-stormwater pertinent to COS-related operations include:

- Equipment wash-waters (with or without detergents).
- Vehicle or aircraft wash-waters (with or without detergents).
- Lavatory waste ("Blue") water from aircraft servicing and lavatory carts.
- Waste waters from miscellaneous cleaning activities.
- Fluids drained from equipment or vehicles as part of maintenance (e.g., oil, coolants, fuel).
- Cleaning waters collected as part of or in connection with sump cleanout.
- Excess deicing/anti-icing fluid releases to the ground surface.

## 4.5 MISCELLANEOUS CONTROL MEASURES

Control measures and activities for prevention of the improper discharge of waters consist of several complimentary elements, as follows:

### 4.5.1 Education

As part of training activities by COS and tenants, awareness training must be provided on non-stormwater discharges, including their origin, their prohibition, and means to prevent their occurrence. (Employee training is discussed later in this section in more detail.)

#### 4.5.2 Inspection

As part of periodic inspections (see Section 6), the COS SWMP Administrator will include a specific and focused review of the activities to ascertain to the extent possible that nonstormwater is not being discharged to stormwater or stormwater conveyances. Inspection procedures will be utilized to enhance the likelihood that prohibited non-stormwater discharges, should they occur will be identified and corrective actions taken.

### 4.5.3 Elimination

Non-stormwater discharges are prohibited. If a tenant becomes aware or has knowledge of nonstormwater discharges at the site or in the area of operational responsibility, the tenant will undertake actions to eliminate such non-stormwater discharges immediately. If non-stormwater discharges cannot be eliminated and are the result of activities that can be permitted, the tenant will submit to the COS SWMP Administrator within a 30-day period, or sooner if requested, a plan for properly permitting such non-stormwater discharges. If the non-stormwater discharge cannot be permitted then the discharge must stop immediately.

The COS SWMP Administrator shall have 30 days to approve or disapprove of a submitted plan for permitting of non-stormwater discharges by a tenant. Implementation of the plan must begin immediately upon plan approval. The COS SWMP Administrator will monitor compliance to the approved plan.

### 4.6 **EMPLOYEE TRAINING**

COS staff and tenants are required to conduct and/or participate in annual training on stormwater management. Annual training is required for those Staff and tenants who participate in industrial activities as defined by the stormwater permit. Training may be provided by the COS Stormwater Administrator or an equivalent training may be provided by the tenant to their staff.

The COS SWMP Administrator will be responsible for ensuring that the proper training for COS employees and individual tenant employees has been completed. Individuals requiring annual training include 1) employees overseeing implementation of the SWMP; 2) employees performing installation, inspection, maintenance and repair of control measures; 3) employees working in areas of industrial activity subject to the permit; and 4) employees who conduct stormwater discharge monitoring per Part.I.H and Part I.I of the permit. Training may be conducted by one or more of the following methods, and may be accomplished either individually or collectively, as follows:

- The COS SWMP Administrator provides the training;
- The COS SWMP Administrator may arrange for the training to be conducted by others; or
- The COS SWMP Administrator may arrange for the training to be conducted by the Tenant SWMP Administrator.

Employees will be required to attend stormwater training *at least once per year*. New employees will be required to attend the training or review the SWMP with the COS SWMP Administrator or the Tenant SWMP Administrator as soon as possible after the date of hire. The training provided to employees will address, at a minimum, the following:

- Stormwater pollution and stormwater management concepts and permit requirements.
- The stormwater management plan as appropriate to personnel responsibilities.
- Control measures and their implementation including spill response, good housekeeping, and material management practices.

Training may be accomplished through a combination of classroom training, field exercises, and documented distribution of awareness literature.

Form 4 in Appendix B provides documentation of the training. The tenant may also use and provide their own documentation. All training records shall be retained in Appendix B. Documentation of training performed by tenants must be forwarded to the COS SWMP Administrator.

**SECTION 5** 

## **DEICING MANAGEMENT**

## 5.1 **DEICING ACTIVITIES**

#### 5.1.1 Aircraft Deicing

COS deicing tenants use propylene glycol type I and type IV for deicing and anti-icing of aircraft. Aircraft deicing/anti-icing activities at the COS are restricted to the air carrier terminal ramp areas with permanent containment control. The general aviation ramp areas located on the west side of COS also utilize permanent containment control and control measures for deicing fluid management. Deicing/anti-icing on the air carrier terminal ramp consists of deicing trucks bringing deicing/anti-icing fluids to aircraft parked on designated deicing pads.

Fluid is sprayed onto the aircraft using either hand-held nozzles or mechanically positioned nozzles. Deicing/anti-icing fluid on the air carrier terminal ramp is collected by a system of trench drains that are diverted to lined glycol ponds for treatment and discharge. Deicing/anti-icing of aircraft on the general aviation ramp is limited to a couple of tenants on the west side. Federal Express has a containment system for collecting deicing fluid. Other tenants who conduct deicing/anti-icing activities are required to utilize control measures and follow strict procedures for deicing/anti-icing activities to prevent any non-stormwater discharge.

Integrated Deicing Solutions (IDS) performs most of the deicing of aircraft with the exception of Airport Terminal Services (ATS) that performs deicing for American Airlines, Allegiant, and Frontier Airlines. COS operates the deicing fluid collection system at the air carrier terminal ramp.

#### 5.1.2 Pavement Deicing

COS uses Cyrotech products with potassium acetate and/or sodium acetate as a pavement deicer/anti-icer. These deicers/anti-icers are used on the ramp, runways, and taxiways. The purpose of using anti-icer on airfield surfaces is to prevent the formation of ice. The product is applied as a solution of potassium acetate or sodium acetate and water. Runoff from the runways and taxiways on the north and east side of COS and through the center of the airfield drain into a series of detention basins that slow the flow of stormwater containing the potassium acetate or sodium acetate or sodium acetate long enough for degradation. Runoff from the west side of COS flows south by sheet flow into a detention basin before exiting at the COS Outfall 001.

COS also uses potassium acetate as an anti-icer on the roadways and parking lots in front of the terminal. Sand is used on roadways and parking lots during the winter months for pavement traction.

### 5.1.3 Deicing Management

Glycol from deicing of aircraft on the air carrier terminal ramp is managed by a glycol diversion and containment system. The ramp at the terminal slopes toward the northwest. During the deicing season, runoff on the ramp is collected by a stormwater trench drain system and diverted to a lined 16-acre foot glycol impoundment holding pond. Once the pond is approximately twothirds full, it is transferred to a 4-acre foot pretreatment pond, where the fluid is treated prior to being released to the sanitary sewer.

The glycol diversion structure has slide gates that are manually set to allow routing of drainage to the storm sewer system during the summer and to the glycol holding pond in the winter. At the time of each gate reset, the system will be tested for proper operation, sealing, etc. and the diversion structure will be cleaned on an as-needed basis. Prior to reaching the diversion structure, runoff from the ramp passes through a fuel/oil/water separator. The oil/water separator is cleaned/pumped annually.

At the beginning of the deicing season, usually at the end of September or beginning of October, the diversion valve for the glycol diversion system is switched from stormwater outfall to the glycol pond. Failure to divert glycol contaminated stormwater by way of the diversion valve to the lined impoundment or plugging of the collection system, leakage or overtopping of the impoundment would result in the release of deicing fluid. Snow that has not reached the trench drain system and is plowed and/or blown from the ramp may contain a small amount of deicing fluid.

At the end of the deicing season, the glycol diversion system is switched back to stormwater outfall and precipitation runoff drains to the COS stormwater system. Runoff from the ramp drains to the fuel/oil/water separator and is diverted to a detention basin and then into the drainage system toward the southwest that drains to another detention basin before exiting at COS Outfall 001.

The tenants on the west side of COS, with the exception of one tenant (Federal Express), do not have a drain/collection system for collecting deicing fluid. Federal Express is operating a collection system with an underground storage tank that is pumped and disposed within the glycol diversion structure. The remaining tenants are permitted to conduct minimal deicing/antiicing activities and utilize control measures to prevent glycol from entering stormwater drains or stormwater conveyances.

All tenants are responsible for ensuring that they are utilizing control measures when conducting deicing/anti-icing activities.

### 5.1.4 Control Measures and Recordkeeping

Control Measures used for prevention of release of deicing/anti-icing fluids to stormwater or stormwater conveyances includes the following:

• Perform routine inspections during deicing/anti-icing activities;

- Perform deicing in designated areas only;
- Document deicing/anti-icing fluid use;
- Training on procedures and practices in application of deicing/anti-icing fluids to minimize excessive use of deicing/anti-icing fluids; and
- Training on maintenance of deicing/anti-icing equipment to assure its proper and effective operation.

Monthly inspections are performed by the COS SWMP Administrator during deicing operations using Form 5 (Deicing/Anti-icing Inspection Form). The tenant performing deicing activities should also be conducting routine inspections to ensure control measures are working effectively. Records need to be maintained for deicing/anti-icing fluid use or storage. Data for deicing fluid used for each deicing season will be requested by the COS SWMP Administrator by each tenant performing deicing/anti-icing at the COS at the end of each deicing season. The Administrator will provide a glycol usage reporting form. Tenants are also required to submit deicing/anti-icing product information including a copy of the SDS to the COS SWMP Administrator.

Dumping of collected deicing/anti-icing fluids in an uncontrolled manner in miscellaneous areas of the COS property or in drainage ways is prohibited. Discharge of collected fluids to the sanitary sewer system shall not be done without the appropriate discharge permit or permission from Colorado Springs Utilities.

COS discharges glycol solution from the lined impoundments into the Colorado Springs Utilities wastewater treatment collection system under a discharge authorization. This authorization is conditional upon conformance to the wastewater treatment code, Chapter 12, Article 5, Code of Utilities.

## **SECTION 6**

## **INSPECTION PROCEDURES**

## 6.1 **INSPECTIONS**

#### 6.1.1 Scope

Inspections are done on a quarterly basis and include the following:

- a. Inspect stormwater sampling locations and areas where stormwater associated with industrial activity is discharged off-site, to waters of the state, or to storm sewer system that drains to waters of the state;
- b. Observe for presence of floating materials, visible oil sheen, discoloration, turbidity, odor in stormwater discharges;
- c. Observe conditions around stormwater outfalls including flow dissipation to prevent scouring;
- d. Presence of illicit discharges or other non-permitted discharges including domestic wastewater, noncontact cooling water, or process wastewater;
- e. Verify description of potential pollutant sources under permit are accurate;
- f. Verify site map reflects current conditions; and
- g. Asses all control measures to ensure:
  - i. Effectiveness of control measures
  - ii. Location of control measures that need maintenance/repair
  - iii. Need for maintenance/repair and date maintenance/repair will be made
  - iv. Locations where addition or different control measures are needed

Inspections are conducted by the COS SWMP Administrator. Inspections done for purposes of compliance with this SWMP must be documented. Inspection forms are provided in Appendix A and completed inspection forms (either originals or copies) should be retained in Appendix B.

#### 6.1.2 Quarterly Benchmark Inspections

Quarterly Benchmark inspections are conducted within the following time periods:

- Quarter 1: Jan.-Mar.
- Quarter 2: Apr.-June
- Quarter 3: July-Sept.
- Quarter 4: Oct.-Dec.

Visual Monitoring/Visual assessment are required per the stormwater permit to analyze for color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, and other pollutants.

#### Runoff Event Inspection

Conduct a minimum of one (1) inspection per calendar year during a runoff event:

- Rain event means during or within 24 hours after the end of a measureable storm event; and
- Snowmelt event, means at a time when a measurable discharge occurs from the facility.

#### Deicing Season

During the deicing season (approx. October through May) monthly inspections will be conducted for areas where deicing takes place using Form 5 (Deicing/Anti-icing Inspection form).

Other parties can perform any inspection with the assistance of the COS SWMP Administrator. Use of other parties does not relieve the COS SWMP Administrator of their responsibilities under this SWMP to properly evaluate the results of such inspections.

Form 3 (Appendix A) is to be completed to serve as documentation of inspection activities and retained in Appendix B.

#### 6.1.3 Inspection Process for Quarterly Inspections

The COS SWMP Administrator conducting quarterly inspections will conduct a thorough walkthrough of facilities that have the potential to contribute pollutants to stormwater discharges. Facilities that conduct activities primarily indoors will be inspected via a drive-by unless circumstances arise that require a walk-through of the facility. The inspections will include the following:

- a) Observe and evaluate conformance to the SWMP and the use of SWMPprescribed Control Measures applicable to the area being inspected
- b) Identify areas of non-conformance
- c) Identify recently developed needs for additional Control Measures or improvement in the implementation of the current Control Measures
- d) Assess possible problems in the control of stormwater management at the areas of operation.

Areas to be inspected shall include all source areas identified or other areas. Specific features and conditions to inspect include the following:

- a) Pollutant source areas and the materials and activities present, particular activities that may result in the release of pollutants to stormwater or stormwater conveyances
- b) Evidence of Spills/leaks
- c) Effectiveness of structural control measures
- d) Use or application and effectiveness of control measures and/or practicebased effluent limitations
- e) Drainage conditions, structures, and conveyances, with particular attention to erosive conditions and sediment and/or waste accumulations
- f) Outfalls or points of discharge from the inspection area, with particular attention to evidences of non-stormwater discharges or releases
- g) Spill control devices, procedures, and equipment
- h) Required corrective actions

The COS SWMP Administrator is responsible for ensuring that the operator of the area being inspected is informed of any necessary corrective actions needed, and that such actions shall be undertaken in a timely manner by the appropriate party, but not longer than 30 days after notification of actions needed.

If, during an inspection, a particular need for corrective action is found which was identified and documented in a previous inspection by the COS SWMP Administrator and not corrected prior to the current inspection, such inaction will be considered evidence of noncompliance to the SWMP and documented as such.

If review of records is being done as part of the inspection, the review will assess the completeness and adequacy of the records to demonstrate compliance with the SWMP and applicable permits for discharge of stormwater. Specifically, records should include:

- a) Presence of a SWMP on-site;
- b) Training records;
- c) Records of inspections done for compliance to this SWMP or permits for discharge of stormwater;
- d) Spill report records;
- e) Inspection Reports; and
- f) Site-specific records and data as required for Table A-1 of tenant-specific information, if applicable.

## 6.2 NONCOMPLIANCE

#### 6.2.1 Noncompliance Issues

If COS or a tenant finds a condition or noncompliance to this SWMP as a result of inspection or other activities, the following protocol shall be followed in dealing with such noncompliance:

- The noncompliant conditions shall be eliminated immediately.
- The noncompliance and actions taken to eliminate the noncompliance shall be documented and retained with SWMP inspection records.
- Report to the regulatory agency of noncompliance to the SWMP is not required, except for specific situations as follows:
  - Occurrence of reportable quantity spills
  - Inability to provide certification of non-stormwater discharge evaluation
  - Violations of effluent limits as reported on discharge monitoring reports

#### 6.2.2 Notifications

The COS SWMP Administrator is responsible for notification to the State for noncompliance including the inability to comply with discharge limitations as outlined in the permit includes notification to the Division with the following information:

- A description of the discharge and cause of noncompliance;
- The period of noncompliance, including exact dates and times and/or the anticipated time when the discharge will return to compliance; and
- Steps being taken to reduce, eliminate, and prevent recurrence of the noncom plying discharge.

In addition, notification is required verbally within twenty-four (24) hours from the time the permittee becomes aware of the noncompliance circumstances, and is required to mail a written report to the Division containing the information requested above, within five (5) working days after becoming aware of the following circumstances:

- Circumstances leading to any noncompliance which may endanger health or the environment regardless of the cause of the incident;
- Circumstances leading to any unanticipated bypass which exceeds any effluent limitations in the permit;
- Circumstances leading to any upset which causes an exceedance of any effluent

limitation in the permit; or

• Daily maximum violations for any of the pollutants limited by Part I.D.3 of permit and include any toxic pollutant or hazardous substance or any pollutant specifically identified as the method to control any toxic pollutant or hazardous substance.

Instances of noncompliance that are not required to be reported within 24-hours can be reported with the required Discharge Monitoring Reports when it is required to be submitted. The report needs to include information listed above.

## 6.3 **REPORTING**

## 6.3.1 Corrective Action Reports

Documentation of corrective actions is required when conditions that are observed at facilities require modification of control measures. These conditions include:

- An unauthorized release or discharge (e.g., spill, leak, or discharge of nonstormwater) not authorized under permit;
- A discharge that violates a numeric effluent limit;
- Facility control measures are not stringent enough for discharge to meet water quality standards;
- Modifications to facility control measures are necessary to meet practice-based effluent limits; and
- The permittee finds in a facility inspection that control measures are not properly selected, designed, installed operated or maintained

As outlined in the permit, documentation for corrective actions is required and must be submitted with the annual report. Documentation requirements include:

- 1) 24-hour Documentation: Within 24 hours of discovery of any condition listed above, the permittee must document the following information:
  - a. Identification of the condition triggering the need for corrective action review;
  - b. Description of the problem identified; and
  - c. Date the problem was identified.
- 2) Five (5) day Documentation:
  - a. Summary of corrective action taken or to be taken;
  - b. Notice of whether SWMP modifications are required;
  - c. Date corrective action initiated; and
  - d. Date corrective action completed or expected to be completed

### 6.3.2 Annual Report

An annual report to the State will be prepared by the COS SWMP Administrator regarding the findings of quarterly inspections for COS. This evaluation report and any attachments become a part of the SWMP files and should be retained with the SWMP in Appendix A.

The annual report is submitted to the State on or before March 31 of each year on the overall compliance of COS with the SWMP. All reports including the annual report submitted shall be signed and certified for accuracy in accordance with the criteria outlined in Section 8 of this SWMP.

**SECTION 7** 

## **MONITORING PROCEDURES**

## 7.1 STORMWATER SAMPLING

#### 7.1.1 Stormwater Monitoring Program

Stormwater monitoring is required by all industrial sectors as outlined in the permit. COS falls under Sector S Air Transportation and must comply with the sector requirements for monitoring. The monitoring benchmarks outlined for the Air Transportation sector are for airports where a single permittee, or a combination of permitted facilities use more than 100,000 gallons of glycol based deicing chemicals and/or 100 tons or more of urea on an average annual basis, monitor the first four parameters in ONLY those outfalls that collect runoff from areas where deicing activities occur (SIC 4512-4581).

The COS SWMP Administrator is responsible for maintaining records of deicing/anti-icing fluids to determine whether the use of deicing/anti-icing fluid equals or exceeds 100,000 gallons. In the event that de-icing/anti-icing activities equal or exceed these amounts, it shall be the responsibility of COS to initiate appropriate stormwater sampling within the quarterly time frames and with acceptable methods as defined by the Stormwater Discharge Permit.

### 7.1.2 Climates with Irregular Stormwater Runoff

The permit outlines the following provisions:

- If a facility is located in an area where limited rainfall occurs during parts of the year, or in areas where freezing conditions exist that prevent runoff from occurring for extended periods, consistent with Part I.H.1; or of this permit, the required monitoring events may be distributed during seasons when precipitation occurs, or when snowmelt results in a measurable discharge from the facility.
- The permittee must collect the required number of samples.
- The permittee must maintain the revised monitoring schedule with the facility's SWMP as specified in PartI.F.8.

COS may request a modification of the quarterly schedule based on the above provisions.

## 7.1.3 Types of Monitoring

#### Visual Monitoring

A visual assessment is required quarterly for stormwater discharges. A stormwater sample should be collected in a clean, clear glass or plastic container and examined in a well-lit area. The stormwater sample from each outfall (or substantially identical outfall) shall be inspected for the following characteristics:

- 1. Color;
- 2. Odor;
- 3. Clarity;
- 4. Floating solids;
- 5. Settled solids;
- 6. Suspended solids;
- 7. Foam;
- 8. Oil sheen; and
- 9. Other indicators of stormwater pollution

Documentation requirements for visual assessments are discussed in Section 8.

#### Site-Specific Benchmark Monitoring

Since COS currently uses less than 100,000 gallons of glycol based deicing chemicals and does not use urea, COS is only required to monitor and test for the following effluents and values below:

Effluent Parameter	Benchmark Values	Sample Type
Chemical Oxygen Demand	120 mg/l	Grab
(COD)		
Total Suspended Solids (TSS)	100 mg/l	Grab
_	-	
Ph	6.0 – 9.0 s.u.	Grab

Sampling is done quarterly per the following schedule:

- Quarter 1 January 1 March 31
- Quarter 2 April 1 June 30
- Quarter 3 July 1 September 30
- Quarter 4 October 1 December 31

#### Water Quality Standards Monitoring

Water quality standards monitoring applies to discharges to impaired waters, waters designated as critical habitat for threatened and endangered species, and other discharges that determine compliance with water quality standards. Per the COS Stormwater permit certification, discharges authorized under this permit must be controlled to meet applicable water quality standards.

## 7.1.4 Sampling by Tenants

If stormwater sampling is to be conducted for a tenant pursuant to this SWMP, a stormwater discharge permit, or a directive of any governmental regulatory agency, tenant shall:

- Notify the COS SWMP Administrator that such sampling is to occur prior to initiation of such sampling.
- Coordinate with the COS SWMP Administrator before sampling in order to maximize the value of sampling activities at COS.
- Provide in a timely fashion to the COS SWMP Administrator a copy of the results of the sampling, including, but not limited to, any laboratory results.

## 7.2 SUMMARY OF EXISTING STORMWATER SAMPLING DATA

The Discharge Monitoring Report analyses as well as earlier sampling data are available on file at COS.

The monitoring point (Outfall 001Q-B) for COS will be at the culvert which empties into the concrete channel leaving the west boundary of the property, commonly referred to as the Peterson Basin Runoff; previously described as north of the COS Equipment Maintenance Facility. This is downstream of all potential deicing/anti-icing activities. It is also located downstream of most of the other industrial activities at COS. The sampling point is identified on Figure 2.1.

## 7.3 SAMPLING DATA

If sampling is required, general conditions shall be met prior to obtaining the sample. Samples taken for monitoring purposes shall be taken from the point(s) specified in this SWMP, and before the water reaches or can be diluted by any other wastewater or body of water or substance. The sampling point(s) cannot be changed without prior approval of the State. Additionally, information about the storm event that generated the discharge is required, and includes:

- Date, time of the start of the discharge, time of sampling, duration (in hours) of rainfall event and magnitude (in inches) of the storm event sampled.
- Duration between the storm event samples and the end of the previous measurable storm event that produced a discharge.
- Document the date of sampling for each monitored snowmelt event.

A grab sample shall be taken within 30 minutes of a measurable storm event or, if this is impracticable, a sample can be taken as soon as practicable after the first 30 minutes with a description of why a grab sample during the first 30 minutes was impracticable. Samples taken from snowmelt must be taken during a period with measurable discharge. All discharge samples need to be taken during the same storm event.

If a facility has holding ponds or impoundments, sampling must be performed at the outlet. If no discharge from the pond to surface water occurs, sampling will not be necessary. Additionally, if any process water mixes with stormwater, all of the water is considered process water and must be covered under a CDPS wastewater discharge permit.

In addition to the general sampling requirements listed by industrial activity in the permit, the State reserves the right to request additional sampling at any time, on a case-by-case basis, at any facility covered under this permit in the event there is reason to suspect a noncompliance with the SWMP, or to evaluate the effectiveness of the BMP program at removing pollutants from the effluent. The permittee may petition the State for a sampling waiver and/or the State may waive any sampling requirements, provided there is good cause and the permittee meets the applicable requirements listed in the permit

## 7.3.1 Analytical Methods Used

Samples taken for analysis shall conform to the Colorado Regulations for effluent limitation pursuant to 40 CFR 136, methods approved by EPA pursuant to 40 CFR 136 or methods approved by the Water Quality Control Division. The COS SWMP Administrator shall establish records relating to sampling including:

- The date, type, exact location, and time of sampling or measurements.
- The individual(s) who performed the sampling or measurements.
- The date(s) the analyses were performed and who performed them.
- The analytical techniques or methods used.
- The results of such analyses.
- Any other observations which may result in an impact on the quality of the discharge.

#### RECORDKEEPING

### 8.1 **REPORTS AND RECORDS**

#### 8.1.1 Reports and Records to Maintain

Reports and Records are required to be maintained for a minimum of three (3) years from the date that coverage under the permit expires. These reports and records include the COS SWMP and modifications, monitoring data, sampling records, discharge monitoring reports (DMRs), annual report, corrective action reports, and other correspondence associated with the permit.

#### 8.1.2 Monitoring Data

Monitoring/sampling data identified in the permit must be maintained for the minimum 3-year period. These records include dates, types, locations, and times of sampling or measurements, analytical techniques or methods used and results. Other records may include any other observations that may result in an impact on the quality or quantity of the discharge.

#### 8.1.3 Signatory Authority for Certification Purposes

Certain reports and forms to be executed pursuant to implementation of the SWMP require certification and signature. These particular certifications include the following:

- Initial SWMP certification
- Non-stormwater discharge certification
- Annual certification by a tenant to the COS SWMP Administrator of the correctness of the description of site and activities
- Annual certification by a tenant to the COS SWMP Administrator of compliance to the SWMP
- Quarterly site inspections

Any reports required by the Stormwater Discharge Permit or other information requested by the regulatory agency are required to be signed by an appropriate party with signatory authority. Certified documents become part of this SWMP and should be maintained in Appendix B.

For signatory requirements associated with COS or tenant operations falling into the above categories, the following guidelines are provided for determining signatory requirements:

A certification can be signed by any one of the following:

- Responsible corporate officer
- General partner
- Principal executive officer or ranking elected official
- Duly authorized representative of a principle executive officer or ranking elected official
- An individual or a position having responsibility for the overall operation of the facility or its activities (e.g., manager, superintendent) or an individual having overall responsibility for environmental matters.

## 8.1.4 Operational Report Signatory Authority

Other reports, notes, inspections, records, and similar documents developed in the day-to-day implementation of the SWMP and not requiring a formal certification shall be signed by the person preparing or completing the document.

## 8.1.5 Duty to Provide Information

COS is required upon request of the State to provide any information or records required by the permit for the purpose of evaluation for modifying, revoking, reissuing, or terminating coverage under this permit or determining compliance with this permit.

## 8.2 SWMP MAINTENANCE

## 8.2.1 SWMP Administrator

The COS SWMP Administrator shall be responsible for maintaining an electronic copy of all portions of the SWMP document, including copies of all portions applicable to any and all tenants who are or were participants of this SWMP.

Each tenant shall be responsible for maintaining, at tenant facility, a paper or electronic copy of all portions of this SWMP document applicable to the tenant (including both common portions applicable to all tenants and applicable tenant-specific portions).

Revisions to the SWMP will be made as required by or with the approval of the COS SWMP Administrator only. The SWMP can be revised at any time that it is judged appropriate by the COS SWMP Administrator to meet the stormwater pollution control objectives. Typically, revisions are made:

- As requested by the Water Quality Control Division;
- As a result of quarterly site inspections and finding a corrective action;

- When there is a change in design, construction, operation, or maintenance that may significantly impact the regulated stormwater discharges from COS; or
- When conditions occur or develop which can reasonably be expected to significantly impact stormwater discharges from regulated areas of COS.

Revisions including updates and corrections to the SWMP prepared or approved by the COS SWMP Administrator will be transmitted in a timely fashion to COS staff and tenants to whom such revisions apply.

#### 8.2.2 Tenant-Made Revisions

Any tenant who proposes to modify those portions of the SWMP applicable solely to the tenant-site or operations shall do so only in cooperation with the COS SWMP Administrator.