

Best Management Practice (BMP) Guidance Document

Best Management Practice Guidance Document

Table of Contents

Elimination of Non-Allowable Storm Water Discharges	BMP 1
Allowable Non-Storm Water Discharges	BMP 2
Aircraft, Vehicle, and Equipment Maintenance.....	BMP 3
Aircraft, Vehicle, and Equipment Fueling	BMP 4
Aircraft, Vehicle, and Equipment Washing and Degreasing Activities	BMP 5
Aircraft Deicing/Anti-Icing Activities.....	BMP 6
Exterior Chemical and Material Handling	BMP 7
Exterior Chemical and Material Storage	BMP 8
Waste/Garbage Handling and Disposal	BMP 9
Building and Grounds Maintenance	BMP 10
Storm Water Pollution Prevention Education	BMP 11
Building and Grounds Cleaning Operations.....	BMP 12
Potable Water System Flushing	BMP 13
Spill Response and Cleanup Plans.....	BMP 14
Vehicle and Equipment Staging	BMP 15
Preventative Maintenance of Structural Controls	BMP 16
General Mowing and Landscaping.....	BMP 17
Interior Chemical Storage	BMP 18
Street and Parking Lot Cleaning.....	BMP 19

BMP 1

Elimination of Non-Allowable Storm Water Discharges

Application

- All activities with potential to impact storm water

- Sediment
- Solvents/cleaning solutions
- Rubber
- Particles

Pollutants

- Aircraft fire fighting foam
- Antifreeze
- Battery acid
- Chemicals/waste (blue water)
- Fuel
- Garbage and hazardous waste
- Lavatory
- Oil and grease
- Paint
- Pesticides/Herbicides/ Fertilizers
- Potable water system
- Cleaning chemicals

Objectives

- Educate employees, vendors, and contractors on appropriate Best Management Practices (BMPs)
- Educate employees, vendors, contractors, and airport tenants on the distinction between Non-Allowable non-storm water discharges and allowable non-storm water discharges
- Perform inspections routinely of both interior and exterior work areas and discharge points
- Inspect waste containers regularly for leaks

Overview

Purpose

Existing discharges: Eliminate non-allowable non-storm water discharges to the storm water collection system. Non-allowable discharges can be classified as either activity-based (subtle) or overt (hard pipe/illicit connection). Activity-based discharges include: wash water or discharges from spills. Overt non-storm water discharges may include: process wastewater or sanitary sewer being discharged directly to the storm system.

Reduce the quantity of allowable non-storm water discharges that are released to the storm water collection system. Allowable non-storm water discharges are: discharges from fire fighting activities, potable water sources, lawn watering, water from routine external building washing that does not use detergents or other chemicals (and where spills have not occurred), pavement wash waters that do not use detergents or other chemicals (and where spills have not occurred), air conditioner and compressor condensate, uncontaminated groundwater or springs, and uncontaminated water from foundation or footing drains.

Prevention

Prevent improper physical (illicit) connections to the storm water collection system through education, routine inspections, and performing both construction phase and post-construction inspections.

Identify activity-based non-allowable discharges to the storm water collection system by:

- Performing frequent activity inspections (during various shift hours) to identify non-storm water discharges

BMP 1

- Performing visual inspections of outfalls or catch basins to the storm water collection system. Identify any unusual characteristics (e.g. strange colors, odor, foam)
- Reviewing as-built drawings to verify existing sanitary sewer or storm sewer connections
- Perform routine inspections and maintenance on various structural controls to ensure effective operation

Activities to Implement

- Limit the availability of outdoor water usage or supplies
- Post signs at outdoor water sources reinforcing the appropriate use of water sources and prohibiting uses that would introduce pollutants to the storm drain
- Limit exterior maintenance activities. Perform maintenance activities inside or in areas that appropriately discharge to the sanitary sewer system
- Perform aircraft, equipment, and vehicle washing activities in designated wash facilities
- When conducting exterior washing activities, cover or protect nearby storm water inlets and appropriately collect and dispose all generated wash water
- Adequately cover or protect storm water inlets when conducting maintenance activities on nearby sanitary sewer structural controls with the potential to discharge wastewater to surrounding surfaces
- Perform frequent inspections on lavatory trucks
- Do not overfill vehicles or equipment used for the storage or transport of wastewater or chemicals (examples include lavatory vehicles, sweeper trucks, mobile fueling vehicles, or vehicles used to disperse fertilizers or pesticides)
- Maintain an adequate supply of spill response equipment
- Immediately contain and collect spilled material. Remove used absorbent material immediately after each use
- Report spills to the Airport Administration (636) 532-2222

BMP 2

Allowable Non-Storm Water Discharges

Applications

- Lawn watering and similar Irrigation activities
- External washing of building and pavements (without the use of chemicals)
- Water line or fire hydrant flushings

Pollutants

- Potable water system additive chemicals
- Dirt and sediment

- Grass clippings
- Pesticides and fertilizers
- Oil and Grease
- Chlorine

Objectives

- Educate employees, vendors, and contractors on appropriate BMPs
- Monitor the appearance of allowable discharges routinely for evidence of pollutants or contamination

Overview

Purpose

Existing discharges: Eliminate non-allowable non-storm water discharges to the storm water collection system. Non-allowable discharges can be classified as either activity-based (subtle) or overt (hard pipe/illicit connection). Activity-based discharges include: wash water or discharges from spills. Overt non-storm water discharges may include: process wastewater or sanitary sewer being discharged directly to the storm system.

Reduce the quantity of allowable non-storm water discharges that are released to the storm water collection system. Allowable non-storm water discharges are: discharges from potable water sources, lawn watering, water from routine external building washing that does not use detergents or other chemicals (and where spills have not occurred), pavement wash waters that do not use detergents or other chemicals (and where spills have not occurred), air conditioner and compressor condensate, uncontaminated water from foundation or footing drains, springs and other uncontaminated groundwater, fire fighting activities or fire hydrant flushing activities.

Prevention

Implement the following BMPs to prevent or minimize the impact from allowable non-storm water discharges:

- Apply lawn and garden chemicals sparingly
- Discharge potable water systems and/or condensate water overland (grass) whenever possible
- Limit discharge of potable water or condensate water over high vehicle traffic areas
- Sweep pavements to remove dirt and debris prior to conducting pavement washing activities (without the use of chemicals)
- Discharges from interior building fire sprinkler system flushing shall be discharged to the sanitary sewer

Activities to Implement

- Limit the availability of outdoor water usage or supplies
- Post signs at outdoor water sources reinforcing the appropriate use of water sources and prohibiting uses that would introduce pollutants to the storm drain

BMP 3

Aircraft, Vehicle, and Equipment Maintenance

Application

- Aircraft, vehicle, and equipment maintenance activities

Pollutants

- Antifreeze
- Battery acid
- Fuel
- Oil and grease
- Paint
- Solvents/cleaning solutions
- Metals

Objectives

- Provide employees with educational material focused on storm water pollution prevention

- Conduct maintenance activities indoors whenever possible or implement the appropriate BMPs when conducting outdoor activities
- Prevent wash water discharges to the storm drain
- Collect, store, and properly dispose of all fluids and solid waste
- Conduct routine inspections on areas used for vehicle and equipment staging
- Conduct routine maintenance on vehicles and equipment to reduce the occurrence of vehicle leaks

Overview

Purpose

Prevent or reduce the discharge of pollutants to storm water from aircraft, vehicle, and equipment maintenance activities.

Prevention

Implement the following good housekeeping and BMPs to prevent and/or reduce storm water pollution in areas where aircraft, vehicle, and equipment maintenance activities are conducted.

- Use drip pans or containers
- Label storm drain inlets to indicate that they are to receive no wastes
- Do not hose down work areas. Utilize dry cleaning techniques whenever possible, or use mops
- Use biodegradable products and substitute materials with less hazardous properties where feasible
- Cover wrecked or damaged vehicles so they have minimal impact or contact to storm water
- Store used parts, batteries, and tires in covered areas not exposed to storm water
- Store scrap metal in covered areas and recycle scrap metal and salvaged equipment/vehicles frequently
- Store chemicals and waste materials in enclosed areas

BMP 3

Activities to Implement

- Whenever feasible, move maintenance activities indoors or provide cover over work area
- Use absorbent materials and adequately collect and remove absorbent materials from areas after use and dispose appropriately
- Appropriately drain and crush oil cans and oil filters before disposal in solid waste containers
- Drain and properly dispose of all fluids and remove batteries from salvage aircraft, vehicles, and equipment
- Clean equipment, vehicles, or aircraft at their designated cleaning areas
- Maintain clean equipment by eliminating excessive amounts of external oil and grease buildup
- Inspect and maintain sanitary sewer oil/water separators and other structural devices regularly
- Maintain an adequate supply of spill response equipment
- Furnish all maintenance vehicles with an adequate supply of spill response equipment

BMP 4

Aircraft, Vehicle, and Equipment Fueling

Application

- Fueling activities

Pollutants

- Fuel

Objectives

- Provide employees with storm water pollution prevention education
- Install proper monitoring and fuel recovery equipment at fueling locations
- Regularly monitor fueling areas

Overview

Purpose

Prevent or reduce the discharge of pollutants to storm water from aircraft, vehicle, and equipment fueling areas.

Prevention

Implement the following good housekeeping and BMPs to prevent and/or reduce storm water pollution in areas where aircraft, vehicle, and equipment fueling activities are conducted.

- Cover fueling areas whenever possible
- Divert storm water runoff away from fueling areas to avoid storm water contact with contaminated surfaces through the use of berms or curbing
- Design facilities to include secondary containment
- Provide spill kits at fuel dispensing locations

Activities to Implement

- Install and maintain vapor recovery systems where required and/or appropriate
- Existing USTs should be upgraded with leak detection, spill containment, spill and overflow protection
- If storm water runoff is not diverted around fueling areas install the appropriate structural control (e.g. oil/water separators) to minimize discharges of hydrocarbons and oil & grease to storm sewer systems
- Avoid overfilling aircraft, vehicles, or equipment during fueling operations
- Provide secondary containment structures for mobile fueling tanks
- Maintain an adequate supply of spill response equipment
- Furnish all maintenance and fuel handling vehicles with an adequate supply of spill response equipment

BMP 5

Aircraft, Vehicle, and Equipment Washing and Degreasing Activities

Application

- Aircraft, vehicle, and equipment washing and degreasing activities

Pollutants

- Oil and grease
- Solvents/cleaning solutions and detergents
- Vehicle fluids

Objectives

- Provide employees with storm water pollution prevention education

- Conduct dry washing methods whenever feasible
- Conduct washing activities indoors or at designated wash areas only
- Cover or provide adequate protection for storm drain inlets
- Prevent wash water discharges to the storm drain
- All tenants that conduct exterior washing activities must develop a Wash Water Management Plan (WWMP), which accurately describes the activities to be conducted and the BMPs to be implemented

Overview

Purpose

Prevent or reduce the discharge of pollutants to storm water from aircraft, vehicle, and equipment washing and degreasing activities. All washing activities must either be conducted in designated wash areas or all wash water must be collected and properly disposed.

Prevention

Implement the following good housekeeping and BMPs to prevent and/or reduce storm water pollution in areas where aircraft, vehicle, and equipment washing or degreasing activities are conducted.

- Use off-site commercial wash facilities whenever feasible
- Conduct dry washing methods to wash aircraft whenever feasible
- Use designated wash areas with covers or berms to prevent contamination of storm water with wash water
- Use drain blockers (pigs/mats) to control the discharge of wash water
- Keep degreasing activities in fully enclosed areas
- Keep wash areas clean and free of waste or debris
- Use biodegradable phosphate-free detergents (note: the discharge of any detergent in the storm water collection system is prohibited)
- Mark storm drain inlets

BMP 5

Activities to Implement

- Outdoor washing operations should have the following design characteristics:
 - Wash areas should be identified with appropriate signage
 - Conducted on paved sloped areas to facilitate wash water collection
 - All storm drain inlets should be bermed or covered to prevent wash water from entering the storm system
 - Discharge piping serving uncovered wash areas should be equipped with control valves that allow switching between storm and sanitary sewer
- Inspect and maintain oil/water separators and other structural devices regularly
- Maintain an adequate supply of spill response equipment

BMP 6

Aircraft Deicing/Anti-Icing Activities

Application

- Aircraft deicing/anti-icing activities

Pollutants

- Ethylene glycol
- Propylene glycol

Objectives

- Train employees on proper usage of deicing/anti-icing chemicals

- Use only required amounts of deicing/anti-icing chemicals
- Conduct aircraft deicing/anti-icing at designated deicing locations
- Clean deicing pad when activities are completed
- Regularly inspect areas used for storing deicing/anti-icing chemicals and equipment

Overview

Purpose

Prevent or reduce the discharge of pollutants to storm water from aircraft deicing/anti-icing activities.

Prevention

Implement the following good housekeeping and BMPs to prevent and/or reduce storm water pollution in areas where aircraft deicing/anti-icing activities are conducted.

- Use only enough deicing/anti-icing chemicals to ensure safe operation of aircraft. Excess chemicals add to storm water contamination from drip and shear of deicing/anti-icing chemicals.
- Avoid overspray of deicing/anti-icing chemicals
- Perform aircraft deicing/anti-icing only in the approved designated area
- Provide for the immediate clean-up of deicing pads following deicing activity

Activities to Implement

- All tenants conducting deicing/anti-icing activities must do so on the authorized deicing pad
- Deicing Operations form must be correctly completed and faxed or emailed to Airport Administration by noon the following day
- Clean deicing pads and collect (and dispose appropriately) any remaining spent fluids left on deicing pad after each deicing activity
- Close the recovery tank valve after deicing event is complete
- Inspect deicing pads and chemical storage areas regularly
- Park/store deicing/anti-icing equipment in designated/approved areas only
- Inspect areas used for storing/parking vehicles and/or equipment used for aircraft deicing/anti-icing regularly
- Maintain an adequate supply of spill response equipment

BMP 7

Exterior Chemical and Material Handling

Applications

- Aircraft, vehicle, and equipment washing and degreasing activities
- Aircraft, vehicle, and equipment fueling
- Aircraft lavatory service
- Aircraft, vehicle, and equipment maintenance
- Cargo handling
- Deicing/anti-icing activities
- Pavement & Grounds
- Pesticide/herbicide usage

Pollutants

- Deicing chemicals

- Oil and grease
- Automotive fluids
- Fuel
- Lavatory waste
- Solvents/cleaning solutions

Objectives

- Provide employees with appropriate training with regards to storm water pollution prevention, BMPs, and spill response
- Conduct loading and unloading under covered areas
- Place waste and materials in designated storage or disposal locations

Overview

Purpose

Prevent or reduce the discharge of pollutants to storm water from exterior chemical, waste, and/or material handling.

Prevention

Implement the following good housekeeping and BMPs to prevent and/or reduce storm water pollution in areas where materials and/or chemicals are handled.

- Cover loading areas to reduce the exposure of materials to storm water or runoff
- Use seals or door skirts between vehicles and structures to prevent material exposure to rainfall
- Immediately place materials or waste in their designated storage locations
- Transfer and use liquids in paved areas so that in the event of a spill, materials can be easily contained and collected
- Design facilities so that materials which may contribute pollutants to storm water may be stored indoors or under a covered area
- Ensure that spill kits are readily available

Activities to Implement

- Protect all loading/unloading activities and material storage areas from rainfall, run-on, and wind dispersal to the maximum extent possible
- Avoid transferring or using materials in close proximity to storm inlets
- Contain and absorb leaks during transfers and spillage from hoses, valves, connections, etc.
- Maintain an adequate supply of spill response equipment
- Provide contractors or vendors with copies of pertinent BMPs, and require them to adhere to BMPs

BMP 8

Exterior Chemical and Material Storage

Applications

- Aircraft, vehicle, and equipment washing and degreasing activities
- Aircraft, vehicle, and equipment maintenance
- Equipment storage
- Aircraft, vehicle, and equipment fueling
- Aircraft lavatory service
- Fuel/chemical storage

Pollutants

- Deicing chemicals
- Fuel

- Lavatory waste
- Oil and grease
- Automotive fluids
- Solvents/cleaning solutions

Objectives

- Provide employees with appropriate training with regards to storm water pollution prevention, BMPs, and spill response
- Limit outdoor storage of materials and waste
- Inspect storage areas regularly
- Implement appropriate SPCC requirements

Overview

Purpose

Prevent or reduce the discharge of pollutants to storm water from exterior chemical and material storage.

Prevention

Implement the following good housekeeping and BMPs to prevent and/or reduce storm water pollution in areas where materials and/or waste are stored.

- Store drums and containers on spill pallets to prevent contact with storm water
- Ensure that all drums and containers are properly closed or sealed when not in use
- Always provide secondary containment for drums of 55 gallon or greater capacity
- Avoid dispensing from drums positioned horizontally in cradles. Dispensing from upright drums equipped with hand pumps is preferred.

Activities to Implement

- Ensure that all drums or chemical containers are properly labeled (either with drum contents or "empty")
- Store empty drums or containers in their designated locations or appropriately dispose offsite
- Inspect material and chemical storage areas regularly
- Inspect containers for external corrosion or structural failures
- Inspect and clean secondary containment structures regularly
- Implement an SPCC plan if required
- Maintain an adequate supply of spill response equipment
- Maintain a spill response plan near the material or waste storage area
- Provide contractors and haulers with copies of pertinent BMPs, and require contractors/haulers to adhere to BMPs
- Inventory stored materials regularly and appropriately dispose of unwanted materials whenever possible

BMP 9

Waste/Garbage Handling and Disposal

Applications

- Aircraft, vehicle, and equipment washing and degreasing activities
- Aircraft, vehicle, and equipment maintenance
- Aircraft, vehicle, and equipment fueling
- Aircraft lavatory service
- Cargo handling
- Deicing/anti-icing activities
- Pesticide/herbicide usage

Pollutants

- Dumpster waste
- Lavatory waste

- Oil and grease
- Solvents/cleaning solutions
- Vehicle fluids

Objectives

- Provide employees with appropriate training with regards to storm water pollution prevention, BMPs, and spill response
- Recycle materials whenever possible
- Berm waste storage areas to prevent contact with run-on or runoff

Overview

Purpose

Prevent or reduce the discharge of pollutants to storm water from waste and garbage disposal through proper tracking of waste generation, storage, and disposal; reduce waste generation and disposal through source reduction, re-use, and recycling; and preventing run-on and runoff from waste management areas.

Prevention

Implement the following good housekeeping and BMPs to prevent and/or reduce storm water pollution in areas where materials and/or waste are readily handled prior to storage or disposal.

- Use covered dumpsters and keep them closed and locked
- Place waste in plastic garbage bags prior to disposing in solid waste containers
- Do not dispose of liquid wastes such as oils or hazardous materials into dumpsters
- Completely drain liquid waste containers or oil cans prior to disposal
- Design facilities so that materials which may contribute pollutants to storm water may be stored indoors or under covered areas
- Avoid the following characteristics when examining candidates for storage sites
 - Excessive sloping
 - High water table
 - Locations near storm inlets or drainage ditch
 - Locations near public access areas
- Frequently inspect and clean nearby sanitary and storm water inlets

BMP 9

Activities to Implement

- Track waste generation
- Perform regular housekeeping to maintain waste storage areas in clean and orderly condition
- Segregate and separate wastes
- Maintain an adequate supply of spill response equipment
- Supply transport vehicles with the appropriate spill response equipment
- Immediately dispose generated waste material in compactors or solid waste containers

BMP 10

Building and Grounds Maintenance

Applications

- Building maintenance
- Grounds maintenance
- Pesticide/Herbicide use
- Outdoor washdown

- Sediment
- Solvents/cleaning solutions
- Washdown waste

Pollutants

- Building maintenance materials
- Oil and grease
- Pesticide, herbicides, fertilizers

Objectives

- Provide employees with appropriate training with regards to storm water pollution prevention and BMPs
- Clean catch basins regularly
- Responsible use of pesticides, herbicides, and fertilizers

Overview

Purpose

Prevent or reduce the discharge of pollutants to storm water from building and grounds maintenance activities.

Prevention

Implement the following BMPs to prevent and/or reduce storm water pollution from buildings and grounds maintenance.

- Incorporate design considerations such as leaving or planting native vegetation to reduce irrigation, fertilizer, and pesticide need
- Select landscaping plants that require little maintenance and pest control

Activities to Implement

- Minimize the use of pesticides, herbicides, and fertilizers. Seek less harmful/toxic products to replace ones currently used and only use according to directions
- Properly dispose of landscaping waste, wash water, and/or sweepings
- Keep paved surfaces cleaned and swept
- Clean paved areas in high traffic areas regularly
- Regularly collect trash and litter
- Provide landscaping or vegetative covers in areas where erosion is or may becoming a problem
- Maintain an adequate supply of spill response material

BMP 11

Storm Water Pollution Prevention Education

Application

- All activities with potential to impact storm water

- Pesticides, herbicides, and fertilizers
- Sediment
- Solvents/cleaning solutions
- Vehicle fluids

Pollutants

- Battery acid
- Dumpster waste
- Floatables
- Fuel
- Lavatory waste
- Oil and grease
- Other miscellaneous chemicals

Objectives

- Provide employees with appropriate training
- Provide employees with appropriate access to educational materials and Airport policies
- Provide mechanisms for “violations” to be reported that promote amnesty

Overview

Purpose

Prevent or reduce the discharge of pollutants to storm water through the implementation of an education program targeting employees, contractors, vendors, and tenants.

Prevention

Implement the following BMPs to prevent and/or reduce storm water pollution.

- Design storm water education programs to contain the following:
 - Promote the proper storage, use, and disposal of chemicals
 - Promote the use of safer alternative products and waste recycling
 - Promote the use of dry washing techniques
 - Promote source reduction and waste management
 - Increase awareness of environmental regulations

Activities to Implement

- Perform and document in log books inspections of work and storage areas.
- Update employees regularly on progress or needed progress with respect to storm water pollution prevention, BMPs, and housekeeping issues
- Regularly perform and document employee and contractor training activities
- Regularly update pollution prevention training or educational materials
- Educate employees on appropriate spill response procedures and reporting protocols

BMP 12

Building and Grounds Cleaning Operations

Applications

- Pavement/Street cleaning
- Apron cleaning
- Floor wash down
- Building Cleaning

Pollutants

- Deicing/anti-icing chemicals
- Fuel
- Oil and Grease

- Sediment
- Solvents/cleaning solutions

Objectives

- Provide employees with appropriate training with regards to storm water pollution prevention, BMPs, and spill response
- Use “dry” sweeping techniques
- Collect and appropriately dispose of wash water

Overview

Purpose

Eliminate discharges to the storm drain system associated with building and grounds cleaning activities.

Prevention

Implement the following good housekeeping and BMPs to prevent and/or reduce storm water pollution from interior and exterior building and grounds cleaning operations.

- Employ berms around areas to be cleaned to minimize run-on or runoff during building and grounds cleaning operations
- Utilize “dry” sweeping techniques whenever possible
- Consider contracting apron washing and sweeping services to decrease waste handling and disposal responsibilities
- Always collect and appropriately dispose all generated wastewater when conducting pavement cleaning activities with detergents or other chemicals, or when conducting pavement cleaning in areas heavily stained or in areas with a history of past spills

Activities to Implement

- Supply contractors with pertinent BMPs and environmental policies before each job
- Appropriately contain, collect, and dispose all pavement or building wash water utilizing detergents or other cleaning chemicals to the sanitary sewer
- Use biodegradable or less harmful cleaning solutions whenever feasible
- Cover or berm storm drain inlets whenever outdoor washing activities is conducted
- Empty sweeper trucks when full to avoid wastewater overflows
- Maintain an adequate supply of spill response material

BMP 13

Potable Water System Flushing

Applications

- Aircraft potable water system cleaning and flushing
- Water truck cleaning and flushing

Pollutants

- Chlorine Bleach
- Purine

Objectives

- Provide employees with appropriate training with regards to storm water pollution prevention, BMPs, and spill response
- Collect all discharge from aircraft and water truck flushing/cleaning activities and dispose to the sanitary sewer
- Do not discharge water to the ground or storm sewer system

Overview

Purpose

Eliminate discharges to the storm drain system associated with the flushing of aircraft potable water systems.

Prevention

Implement the following good housekeeping and BMPs to prevent and/or reduce storm water pollution from potable water system flushing activities.

- Employ berms to minimize run-on or runoff during water line flushing and cleaning operations
- Do not perform flushing near storm drains
- Monitor flushing operations regularly to ensure the proper collection and disposal of discharge is being executed

Activities to Implement

- Collect all discharges from aircraft or truck flushing operations that contain purine, bleach, or other chemicals and properly dispose to the sanitary sewer
- Maintain an adequate supply of spill response material

BMP 14

Spill Response and Cleanup Plans

Applications

- Aircraft, vehicle, equipment fueling
- Fuel and chemical storage
- Runway deicing
- Aircraft, vehicle, equipment maintenance

Pollutants

- Deicing/anti-icing chemicals
- Jet Fuel
- Diesel Fuel
- Gasoline

- Lavatory waste and chemicals
- Oil and Grease
- Solvents/cleaning solutions

Objectives

- Provide employees with appropriate training with regards to storm water pollution prevention, BMPs, and spill response
- Immediately contain and cleanup all releases
- Maintain spill response equipment

Overview

Purpose

Prevent or reduce the discharge of pollutants to the storm drain system resulting from petroleum products and other hazardous chemicals. Hydrocarbons spilled on ramp areas must be contained and collected, and should not enter a storm water, sanitary sewer, or industrial waste collection system. Persons witnessing spills on airfield areas should contact Airport Administration at (636) 532-2222.

Prevention

Implement the following BMPs to prevent or minimize the impact of spills.

- Designate personnel responsible for spill response and cleanup
- Provide sufficient secondary containment at chemical storage locations
- Inspect chemical storage and fueling locations regularly

Activities to Implement

- Post spill response and notification procedures in locations readily accessible to employees
- Train employees on spill response protocols/procedures
- Cover or berm storm drain inlets to prevent the discharge of spilled materials to the storm system
- Maintain an adequate supply of spill response material
- Make absorbent material readily available at fueling locations
- Utilize dry cleanup methods
- Do not wash down spills in storm or sanitary drains
- Report spills to the Department of Public Safety or the Operations Department

*Owners and operators of facilities that store and/or use petroleum products may be required by federal law to develop and implement a Spill Prevention Control and Countermeasures (SPCC) Plan in order to minimize the environmental impact resulting from oil or fuel releases.

BMP 15

Vehicle and Equipment Staging

Applications

- Vehicle staging
- Solid waste container storage
- Exterior equipment and parts staging

Pollutants

- Litter and/or debris
- Hydraulic oil
- Solvents/cleaning solutions
- Metals

Objectives

- Provide employees with appropriate training with regards to storm water pollution prevention, BMPs, and spill response
- Limit outdoor storage of parts and chemicals

Overview

Purpose

Prevent or reduce the discharge of pollutants to storm water from outdoor storage of equipment, parts, vehicles, and material.

Prevention

Implement the following good housekeeping and BMPs to prevent and/or reduce storm water pollution in areas where vehicles and equipment are stored.

- Ensure equipment is appropriately cleaned of chemical residues, oils and greases before staging in designated storage areas
- Utilize appropriate structural BMPs when storing mechanical equipment, motors or engines. If motors cannot be stored in enclosed areas, motors should be stored on secondary containment, or all liquids shall be drained and appropriately disposed before storing outside.
- Vehicles and equipment awaiting salvage or auction shall be staged away from storm drain inlets whenever possible
- Utilize drip pans or absorbent pads to address leaking vehicles.
- Ensure lids on solid waste containers remain closed when not in use, in order to minimize exposure to storm water
- Wash open top containers in designated wash areas before staging empty containers outdoors and exposed to storm water

Activities to Implement

- Store empty solid waste containers in DFW Solid Waste Container Storage yard when not in use
- Conduct maintenance/repair activities indoors whenever possible
- Inspect vehicle and equipment staging areas regularly
- Inspect material and chemical storage areas regularly
- Inspect parts and equipment storage areas regularly
- Cover areas or containers used for the storage of scrap metal or parts
- Maintain an adequate supply of spill response equipment

BMP 16

Preventative Maintenance of Structural Controls

Applications

- Channel Maintenance
- Cleaning of storm drain inlets, fuel separators, oil/water separators, grease traps and, sand traps
- Unclogging of sanitary sewer lines or clean outs

Pollutants

- Litter and/or debris
- Oil and Grease
- Fuel
- Soaps/Detergents

- Sediment
- Sanitary sewer

Objectives

- Provide employees with appropriate training with regards to storm water pollution prevention, BMPs, and spill response
- Minimize the discharge of environmental pollutants generated during periodic maintenance activities

Overview

Purpose

Eliminate the discharge of wastewater into storm sewer systems during emergency and routine maintenance activities. Ensure effective operation of structural controls utilized to reduce pollutants from entering storm, sanitary, industrial waste water collection systems.

Prevention

Implement the following good housekeeping and BMPs to prevent and/or reduce the discharge of pollutants into storm water and sewer collection systems during maintenance activities.

- Establish a regular schedule for periodic inspections and maintenance of structural controls such as oil/water separators, grease traps, sand traps, and fuel separators
- Inspect surrounding areas prior to beginning maintenance activities and identify all nearby storm drain inlets
- Provide maintenance vehicles with appropriate spill response equipment such as spill mats and curb blockers
- Educate employees on the various sources of pollutants

Activities to Implement

- Implement adequate erosion control when conducting channel maintenance activities or general maintenance activities with the potential for substantial soil disruption
- Replace worn parts and equipment regularly
- Deploy spill mats or drain blockers over nearby storm drains prior to beginning maintenance activities with the potential to generate substantial wastewater
- Immediately report all chemical and sanitary sewer spills to Airport Administration at (636) 532-2222
- Maintain an adequate supply of spill response equipment

BMP 17

General Mowing and Landscaping

Applications

- Grass mowing
- Chemical applications (Pesticides, Fertilizers, Insecticides etc.)
- Soil Tillage (disturbance)
- Mulching
- Tree clipping/removal

Pollutants

- Nutrients
- Pesticide, herbicides, Insecticides, fertilizers

- Sediments/solid materials
- Litter / trash
- Oil and grease

Objectives

- Provide employees with appropriate training with regards to storm water pollution prevention, BMPs, and spill response
- Minimize the discharge of environmental pollutants generated from routine mowing and landscaping activities

Overview

Purpose

Prevent or reduce the discharge of pollutants generated from routine lawn care, tree maintenance and related activities.

Prevention

Implement the following good housekeeping and BMPs to prevent and/or reduce the discharge of pollutants into storm water collection systems during landscaping and mowing activities.

- Consider forecasted weather conditions when scheduling mowing/landscaping activities. Mowing and chemical application activities should not be conducted when wet weather is forecasted within 48 hours
- Inspect surrounding areas prior to beginning maintenance activities and identify all nearby storm drain inlets
- Schedule street sweepers to collect grass clipping or similar debris from streets or parking lots (if clippings are not collected manually)
- Follow manufacturer's instructions during all chemical application processes
- Ensure all chemical containers and generated wastes have been collected from area after maintenance activities conclude

Activities to Implement

- Implement adequate erosion control when conducting lawn care maintenance activities or landscaping maintenance activities with the potential for substantial soil disruption
- Only utilize vehicles or equipments in good operating condition. Do not use leaking equipment/vehicles.
- Deploy spill mats or drain blockers over nearby storm drains prior to chemical application activities
- Maintain an adequate supply of spill response equipment

BMP 18

Interior Chemical Storage

Applications

- Vehicle/equipment maintenance
- Chemical staging
- Warehousing

- Oil and grease
- Automotive fluids
- Solvents/cleaning solutions

Pollutants

- Pesticides, Insecticides, herbicides, fertilizers
- Fuel
- Detergents/cleaners

Objectives

- Provide employees with appropriate training with regards to storm water pollution prevention, BMPs, and spill response
- Inspect storage areas regularly
- Implement appropriate SPCC requirements

Overview

Purpose

Eliminate spills and discharges to the sanitary sewer system associated from interior chemical storage.

Prevention

Implement the following good housekeeping and BMPs to prevent and/or reduce spills in areas where chemicals are stored.

- Secondary containment (spill pallets) should always be used when storing open containers, containers currently in use, or containers in close proximity to floor drains
- Ensure that all drums and containers are properly closed or sealed when not in use.
- Ensure drums and chemical containers are appropriately labeled. Empty containers should be labeled “empty”.
- Avoid dispensing from drums positioned horizontally in cradles. Dispense from upright drums equipped with hand pumps whenever possible.
- Ensure chemicals are stored at the appropriate temperature and only stored next to with other chemicals compatible in character (ex. acidic chemicals should be stored only with other acidic chemicals).
- Regularly inspect the condition of chemical containers/drums for any possible damage (i.e. external corrosion, cracks or structural failures).

Activities to Implement

- Store empty drums or containers in their designated locations
- Inspect and clean secondary containment structures regularly
- Maintain an adequate supply of spill response equipment
- Maintain a spill response plan in the storage area
- Inventory stored materials regularly and appropriately dispose of unwanted materials whenever possible
- Ensure Material Safety Data Sheets (MSDS) are readily available
- Immediately report all chemical and sanitary sewer spills to Airport Admin at (636) 532-2222

BMP 19

Street and Parking Lot Cleaning

Application

- Pavement/Street cleaning/power washing

Pollutants

- Litter and/or debris
- Oil and Grease
- Fuel
- Detergents/cleaners
- Sediment

- Automotive fluids

Objectives

- Provide employees with appropriate training and the applicable regulations with regards to storm water pollution prevention, BMPs, and spill response
- Minimize the discharge of environmental pollutants generated during periodic cleaning activities

Overview

Purpose

Eliminate the discharge of process water into storm sewer system during street and parking lot cleaning activities.

Prevention

Implement the following good housekeeping and BMPs to prevent and/or reduce the discharge of pollutants into storm water collection systems during street and parking lot cleaning activities.

- Inspect surrounding areas prior to beginning cleaning activities and identify all nearby storm drain inlets.
- Employ berms around areas to be cleaned to minimize runoff during cleaning activities
- Utilize “dry” sweeping techniques whenever possible
- Always collect and appropriately dispose all generated wastewater when conducting street and parking lot cleaning activities with detergents or other chemicals, or when conducting pavement cleaning in areas heavily stained or in areas with a history of past spills (if the area has not already been appropriately cleaned)
- Provide maintenance vehicles with appropriate spill response equipment such as spill mats and curb blockers

Activities to Implement

- Supply contractors with pertinent BMPs and environmental policies before each job
- Use biodegradable or less harmful cleaning solutions whenever feasible
- Empty sweeper trucks when full to avoid wastewater overflows
- Maintain an adequate supply of spill response material