Stormwater Quality Manuals

Maintenance Facility Stormwater Best Management Practices (BMPs) Manual

July 2015

Nevada Department of Transportation

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Notice

Comments and questions relating to the NDOT's Maintenance Facility Stormwater Best Management Practices (BMPs) Manual and the Department's Stormwater Management Program should be directed to:

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Acronyms

BMP	Best Management Practices
BWPC	Bureau of Water Pollution Control
CFR	Code of Federal Regulations
FPPP	Facility Pollution Prevention Plans
HMMP	Hazardous Materials Management Plan
IDDE	Illicit Discharge Detection and Elimination
SDS	Safety Data Sheet
MS4	Municipal Separate Storm Sewer System
NDEP	Nevada Division of Environmental Protection
NDOT	Nevada Department of Transportation
NPDES	National Pollutant Discharge Elimination System
RCRA	Resource Conservation and Recovery Act
SDWA	Safe Drinking Water Act
SPCC	Spill Prevention, Control and Counter Measure
USEPA	United States Environmental Protection Agency
WQS	Water Quality Specialist

Table of Contents

Section 1 – Introduction

This document provides information regarding the proper use and application of maintenance facility best management practices (BMPs) which are designed to reduce the potential for the discharge of stormwater pollutants. This document is primarily intended to be a resource for Nevada Department of Transportation's (NDOT) maintenance facility personnel responsible for implementing those BMPs. While this document was primarily developed to address stormwater pollution at maintenance facilities, some of the practices described may also apply to other field activities and construction sites. The term "maintenance facilities" used throughout this document is a catchall term that includes storage yards, maintenance shops, borrow pits, field offices, and parking or storage areas.

1.1 Regulatory Background

Stormwater runoff from the NDOT's maintenance facilities is regulated under the National Pollutant Discharge Elimination System (NPDES) permit (NV0023329) issued by the Nevada Division of Environmental Protection (NDEP) (hereafter referred to as the "Permit"). The Permit requires NDOT to describe best management practices used or implemented to minimize pollutants in stormwater discharges from NDOT roadways, right-of-ways and maintenance facilities to the maximum extent practicable (MEP). A copy of the Permit is included as Appendix A to this manual.

The Permit defines BMPs as any "schedule of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States". BMPs also include treatment requirements, operating procedures, and practices to control runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage" (Part VI.B of the Permit). BMPs may be categorized in a variety of ways, including temporary (construction), permanent (post-construction structural control-type BMPs) and source control (both permanent and temporary). Additionally, BMPs may be required to address special circumstances, such as discharges to impaired waters.

1.2 NDOT's Stormwater Management Program

NDOT's Stormwater Management Program (SWMP) was developed to describe and document how the requirements of the Permit will be met and includes specific program elements that are to be implemented. The SWMP document addresses the unique linear nature of NDOT's permit area and its geographical challenges. Presented in the SWMP document are BMPs, priorities, approaches, guidance and schedules for programs, activities, and measurable goals for the term of the current Permit. The SWMP is a "living document" that is updated periodically to ensure that the program objectives and practices are current and reflect the best technologies and approaches to achieve the program goals.

The overall goal of NDOT's SWMP is to reduce pollution associated with stormwater discharged from NDOT's facilities and roadways to the MEP. Additional SWMP goals include:

- Protect surface and groundwater resources within the MS4 Permit area;
- Minimize erosion and sedimentation through appropriate controls and practices;
- Develop programs and practices that are efficient and cost-effective;
- Maintain and coordinate stormwater activities and implementation within all Districts, Divisions and Sections of the Department.

1.3 Handbook Purpose and Scope

This Maintenance Facility Stormwater BMP Manual is intended to provide guidance on performing stormwater best practices applicable to NDOT's maintenance facilities. The practices described herein cover subjects such as training, good housekeeping, materials management, and vehicle storage and maintenance. Not all practices described in this manual will pertain to every facility. Additionally, unusual site-specific conditions may require modification of the BMPs presented herein to be effective in that specific circumstance.

The purpose of this manual is four-fold, to:

- Describe stormwater BMPs developed for NDOT maintenance facilities;
- Educate and provide guidance to NDOT staff;
- Assist in compliance with NDOT's stormwater permit; and
- Improve discharge water quality from NDOT maintenance facilities through proper actions and implementation.

1.4 Users of this Handbook

The BMPs provided in this document address a broad range of activities anticipated to exist or occur at any of the NDOT maintenance facilities. Because the range of activities occurring at each maintenance facility varies from season to season and over time, it is important to recognize that new BMPs may be needed to address new activities, or existing BMPs may be modified.

The responsibility for implementing BMPs, including inspection, will vary depending upon job classification. However, it is everyone's responsibility to be aware of stormwater pollution issues, recognize the potential for pollutants to be discharged, and to take action to correct an improper situation. Inquiries pertaining to BMP implementation can be directed to the Water Quality Section.

1.5 Maintenance Activities and Requirements Listed in the Permit

This document was developed to ensure that the requirements in NDOT's stormwater Permit are adequately addressed. For an understanding of these requirements, a summary of the maintenance-related Permit requirements are presented below. The Permit specifies that NDOT must describe, address, implement, or perform the following at each maintenance facility:

- Implement BMPs to reduce or eliminate the discharge of pollutants from maintenance and storage yards, waste transfer stations, fleet or maintenance shops that have outdoor storage areas, salt and sand storage locations, and snow disposal areas;
- Prevent litter, debris, and chemicals that could be exposed to stormwater from becoming a pollutant source in stormwater discharges; and
- Implement good housekeeping and material management BMPs for operating and maintaining all NDOT facilities.
- Shall describe and implement BMPs that prevent or minimize contamination of stormwater from all areas used for vehicle or equipment storage.

Further, the Permit specifies BMPs be described and fully implemented for:

- Vehicle or Equipment Storage
    - Confine the storage of leaking or leak-prone vehicles to designated areas;
    - Utilize drip pans under vehicles and equipment;
    - Store vehicles and equipment indoors or under a covered storage area;
    - Berm or dike around vehicle or equipment storage areas;
    - Use absorbents or other appropriate measures to clean spilled materials; and
    - Practice good housekeeping and pavement cleaning.
- Vehicle or Equipment Maintenance
    - Perform maintenance activities indoors whenever practicable;
    - Use drip pans under vehicles and equipment;
    - Keep an organized inventory of materials used in the shop;
    - Drain all used parts of fluids prior to disposal;
    - Use dry cleanup methods;
    - Prohibit wet cleanup practices if they would result in pollutant discharges to the stormwater drainage system;
    - Treat, recycle, or properly dispose of collected stormwater runoff; and
    - Minimize run-on/runoff of stormwater to and from maintenance areas.
- Material Storage
    - Maintain all outdoor material storage vessels in proper working condition;

- Plainly label all storage vessels (e.g., "Used Oil," "Spent Solvents");
- Store material indoors whenever practical;
- Install berms / dikes around the storage areas;
- Minimize run-on of stormwater to the storage areas;
- Use cleanup methods that do not discharge to the drainage system;
- Treat, recycle, or properly dispose of collected stormwater runoff; and
- Prohibit the discharge of vehicle and equipment wash-water, including tank washing operations, into the MS4.

In addition to the above-listed items, additional requirements pertaining to maintenance facilities can be found in the following Permit sections:

1. SWMP Revision (III.A);
2. Stormwater Discharges from NDOT Maintenance Facilities (III.L);
3. Comprehensive Maintenance Facility Inspections (III.M);
4. Scope of Inspections (III.N); and
5. NDOT Maintenance Yards Management Program (III.S).

Collectively, the SWMP document, the FPPPs, and this document address the above listed permit requirements. Readers are encouraged to review the Permit (Appendix A of this document) for a full understanding of the stormwater requirements.

It is the responsibility of all maintenance facility supervisors to ensure that proper pollution prevention and waste handling/disposal measures, policies, and procedures (including those described in this manual) are implemented appropriately and consistently by their respective staff at all maintenance facilities.

Section 2 – Maintenance Facility Pollutants and Practices

Presented in this section is a brief description and discussion of contaminants common to stormwater runoff to assist the reader in developing a better understanding of potential pollutant sources and their relationship to BMPs and the facility FPPPs.

2.1 Stormwater Pollutants and Impacts on Water Quality

Based on typical activities conducted at NDOT maintenance facilities, there is significant potential to impact stormwater quality. BMPs listed in this manual are intended to mitigate these potential impacts. To enhance understanding of stormwater-related pollutants and BMPs, some of the common potential pollutants likely to originate from maintenance yards are summarized below. Potential pollutants of concern specific to each maintenance facility's activities are discussed in the FPPPs. The FPPP discussions include a rating (very low, low, moderate or high) of the potential for the pollutants to be discharged to stormwater.

Sediment

Sediment is, by definition, a naturally occurring material (like soil) that is broken down by erosional forces. Sediments originating from a maintenance facility are typically caused by human activity, but transported by natural activity such as wind and/or water. Excess sediment in waterways can render the water unsuitable for aquatic life, human consumption, or other beneficial uses. The main sources of sediment from maintenance facilities include unprotected soils, trackout, and material stockpile areas.

Nutrients

Living organisms need nutrients to grow. A "nutrient" is generally considered to be an elemental or available primary substance (building block) that can be assimilated by a living organism to promote growth. Nutrients of concern in waterways are typically nitrogen and phosphorus. Excessive nutrient levels in waterways stimulate the growth of plants and algae which can ultimately lead to reduced dissolved oxygen levels and harm fish and other aquatic life. Likely sources of nutrients (nitrogen and phosphorus) at maintenance facilities are stockpiled materials (such as sand and salt) and fertilizers.

Metals

Dissolved and suspended metals, such as iron, copper, chromium, nickel, lead, zinc, cadmium, cobalt, and mercury, are potentially found in roadway and maintenance facility stormwater discharges. Metal discharges originate from obvious sources such as material stockpiles, vehicle exhaust, brake linings, engine fluids, and tire and engine wear. Other less obvious sources include metal roofs, broken light bulbs, and painted or galvanized rain gutters. Dissolved metals can be extremely toxic to aquatic life. Often, metals are attached to sediment particles.

Litter and Debris

Typical examples of litter and debris include plastic bottles, bags, cans, packaging materials, rags, cardboard, and glass. Litter and debris can also include natural materials such as wood, leaves, and tumbleweeds. Litter and debris discharged into waterways can lead to obstruction of storm drain facilities and impair water conveyance. Debris residuals can impart toxins into aquatic environments, and can result in aesthetic issues and complaints from the public. The main sources of litter and debris from maintenance facilities are poor housekeeping practices and windblown trash from unprotected areas.

Petroleum Products

The use of petroleum products at NDOT maintenance facilities is both necessary and widespread. Typical products used include fuel, engine oils, transmission and hydraulic fluids, lubricants, solvents, and road surface-related products. Even small amounts of petroleum products can cause a sheen over a waterway and slow the reaeration rate (the process in which life-sustaining oxygen is transferred from the atmosphere into the water), posing a threat to aquatic life. Potential sources of petroleum product discharges at maintenance facilities include leaky fuel pumps, leaky equipment, and fluid spills.

Pesticides and Herbicides

Chemical agents such and pesticides and herbicides are used to control insects and weeds. Careful storage, handling, and application of pesticides and herbicides must be practiced to prevent them from entering the stormwater and impacting the aquatic life and natural ecosystems. When released to a waterway, pesticides and herbicides have the potential to kill aquatic life or disrupt aquatic life's normal life-cycle patterns.

Pathogens

Pathogens are living microorganisms (e.g. viruses, bacteria, protozoans, fungi) that have the potential to be infectious and spread disease in humans and other species. The most common pathogens found in stormwater are Escherichia coli (*E. coli)*, fecal coliform*, Giardia*, and *Cryptosporidium*. Pathogens in water impair the beneficial use of surface waters for human (potable) use and for livestock consumption. The main potential sources of pathogens originating from maintenance facilities are illicit sewer connections (i.e. sewer pipes directly connected to the storm drain system), poorly functioning septic systems, and spillage from portable toilets.

pH

A low pH (<6) indicates that a substance is acidic, while a high pH (>8) indicates that a substance is alkaline (caustic). A pH of seven (7) indicates that the substance is neutral. A chemical with either a high or low pH can have a detrimental effects on aquatic life if discharged to a waterway, and can influence the mobilization of toxins and metals. Products used or stored at maintenance facilities that could impact the pH of stormwater include acids in vehicle batteries, cleaning products (e.g., muriatic acid, sodium or potassium hydroxide), deicing compounds, spill neutralizer compounds, and Portland cement.

2.2 Facility Pollution Prevention Plans

The Maintenance Yards Management section of the Permit (Part III.S) requires the development and implementation of Stormwater Pollution Prevention Plans (SWPPPs) for all of NDOT's maintenance yards, storage areas, batch plants and facilities. NDOT has chosen to identify these plans as FPPPs for consistency and differentiation from transitory construction sites.

The primary objective of each FPPP is to provide guidance and establish procedures to prevent or reduce to the MEP stormwater pollutant discharges into receiving waterways associated with NDOT activities at each maintenance facility. This manual is a referenced component of all FPPPs.

2.3 NDOT Stormwater Resources

NDOT has prepared additional documents related to stormwater management practices that may be useful to its employees and the general public in understanding their role protecting the waterways and the steps they can take to minimize potential for discharging pollutants. These documents include:

- Construction Site Best Management Practices Manual;
- Planning and Design Guide; and
- Field Guide for Illicit Discharge Detection and Elimination (IDDE).

These documents are available for download at http://nevadadot.com/stormwater/

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Section 3 – Maintenance Facility BMP Fact Sheets

This section of the manual contains the BMP fact sheets developed to address the common activities conducted at maintenance facilities that have a potential to discharge pollutants to stormwater. Each fact sheet includes a description of the activity that may discharge pollutants, where/when the BMP is applied, specific instruction on the implementation of the BMP, BMP maintenance and inspection requirements, and recordkeeping requirements.

The fact sheets are organized into six general categories based on activity. Each fact sheet has a unique identifier in the upper corner pertinent to the category. The general categories are:

GP	General Facility Practices
MS	Material Storage
SP	Spill Prevention, Detection and Maintenance
SW	Stormwater Controls
VM	Vehicle and Equipment Maintenance
VS	Vehicle and Equipment Storage

The fact sheets included are listed below

General Facility Practices (GP)

GP-1	Employee Training
GP-2	Maintenance Facility Inspections
GP-3	Facility Layout and Drainage
GP-4	Good Housekeeping
GP-5	Site Sweeping
GP-6	Landscape Maintenance
GP-7	Hydraulic Facility Cleaning
GP-8	Septic Systems
GP-9	Material Testing Laboratories

Material Storage (MS)

MS-1	Product Labeling
MS-2	Used Oil Handling and Storage

MS-3 Chemical Storage

MS-4 Materials Storage

MS-5 Material Stockpiles

MS-6 Anti-Icing Liquid Storage and Handling

MS-7 Scrap Metal and Construction Debris

MS-8 Vacuum Truck and Sweeper Spoils

MS-9 Tires

MS-10 Battery Storage and Recycling

MS-11 Light Bulb Management

MS-12 Fertilizer and Pesticide Management

MS-13 Roadway Paint and Glass Bead Storage

Spill Prevention and Response (SP)

SP-1 Spill Prevention and Response

Stormwater Controls (SW)

SW-1 Inlet Protection

SW-2 Perimeter Control

SW-3 Decant Basins

SW-4 Buffer Zones

SW-5 Stormwater Manufactured Treatment Device

SW-6 Track-Out Controls

Vehicle and Equipment Maintenance (VM)

VM-1 Fluid Drip and Spill Control

VM-2 Vehicle Washing

VM-3 Equipment Repair

VM-4 Fueling Stations

VM-5 Vehicle and Equipment Painting

VM-6 Equipment Steam Cleaning

VM-7 Paint Truck Cleaning

VM-8 Distributor Truck Cleaning

Vehicle and Equipment Storage (VS)

VS-1 Automobile Parking Areas

VS-2 Vehicle and Equipment Storage

VS-3 Loading/Unloading Activities

VS-4 Portable Toilets

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General Facility Practices (GP)

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Employee Training

GP-1

Educating employees on the issues associated with stormwater quality management is the first step to achieving permit compliance.

Description: District personnel are trained in how to prevent, recognize, and eliminate potential sources of pollutants. This training includes topics on why stormwater pollution prevention is important, the stormwater program and permits, potential pollutants, how to implement and maintain appropriate stormwater BMPs, how to recognize and eliminate potential illicit discharges, and how to report problems and concerns. In accordance with the MS4 Permit, the training is to include:

- The requirements of BMPs, FPPPs, SWPPPs, and the conditions of the permit that relate to on-site activities.
- Procedures for sediment control, used oil and spent solvent management, fueling, good housekeeping, painting, used battery management, and illicit discharge detection and elimination.

NDOT's stormwater training program provides training regarding the above practices. NDOT personnel completing the training are responsible for preventing stormwater pollution through the implementation and maintenance of BMPs, recognizing illicit discharges, knowing how to eliminate illicit discharges, and knowing how to report suspected problems if unable to address them directly.

All NDOT employees working or based at a maintenance facility must complete the training program.

Implementation: All personnel working or based at a maintenance facility shall complete the maintenance stormwater training course, and complete a refresher course every three (3) years thereafter.

Each employee shall complete the training course within twelve months of their initial hire date. Existing employees who transfer in from another NDOT Section not previously required to take the maintenance facility training course shall complete the training course within twelve months of their transfer.

Employee Training

Each employee completing a training course shall receive a certification card with a unique identifier number, and the date of completion.

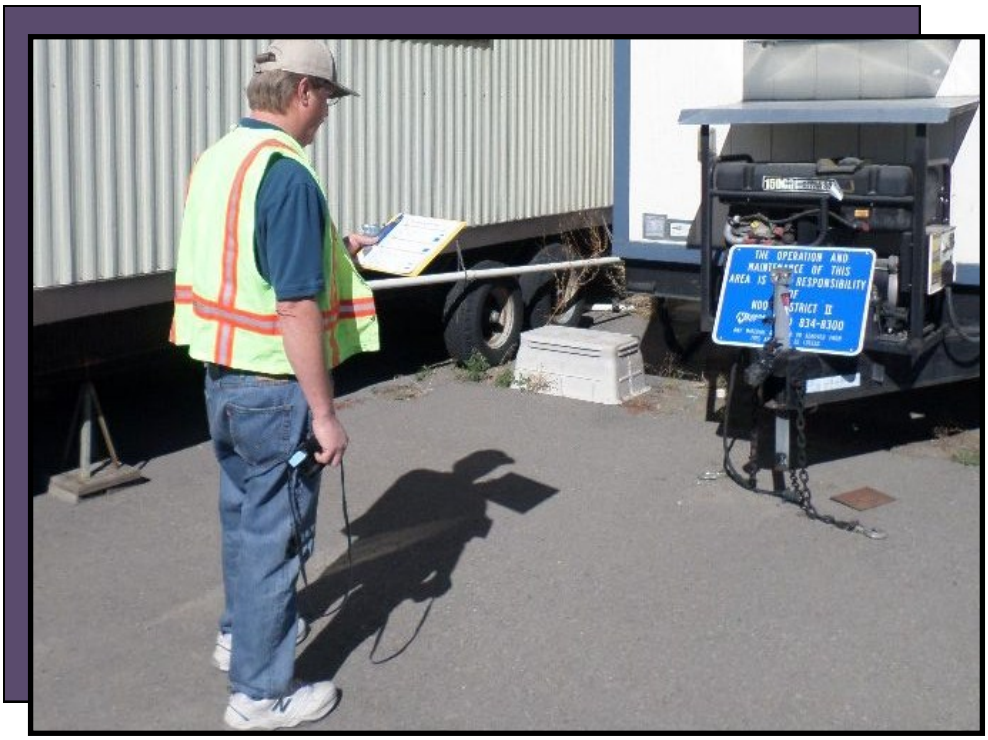
District Water Quality staff coordinates stormwater training efforts with their respective District Administrative staff. Stormwater training sessions are scheduled in all three Districts throughout the year and announced to all District employees, including new hires and inter-Department transfers. Stormwater training records, including documentation of employees who have received training and those who are in need of training, are maintained at the District and Headquarters levels.

Recordkeeping:

- The Water Quality Section will maintain records showing the names of personnel completing the training, the date of the employees' initial training, and the date of the employees' most recent refresher course.

Maintenance Facility Inspections

GP-2



Routine and annual inspections are critical in ensuring proper BMPs are being implemented and deficiencies recognized.

Description: Annual and routine inspections are an important and required element of the NDOT stormwater program for reducing pollutant discharges from NDOT maintenance facilities. Inspections provide the opportunity to assess proper BMP implementation and whether additional or revised BPMs are needed to address changes in the facility's operations.

Annual inspections are performed by Water Quality Section staff and (preferably) in the company of the designated FPPP Administrator. The inspections will confirm that FPPP elements are properly implemented. The inspection will also assess whether new BMPs are necessary to address ineffective BMPs or new site activities.

Additional self-inspections are performed every three months at designated major facilities and twice a year at designated minor stations and yards. These inspections are to be performed by the FPPP Administrator or his qualified designee (i.e., who has completed the maintenance stormwater training course).

Informal visual inspections are conducted by facility supervisors and the FPPP Administrator on a regular basis.

Implementation: Maintenance facility inspections will examine, at a minimum, the following areas/activities:

- Areas of the site exposed to precipitation
- Areas where spills and leaks have occurred
- Evidence of, or the potential for, pollutants entering the drainage system
- Storage areas for vehicles and equipment awaiting maintenance (i.e., "downline areas")
- Parking areas for vehicles and equipment
- Fueling areas

- Indoor and outdoor vehicle/equipment maintenance areas
- Material storage areas
- Material source stockpiles and evidence of run-on, run-off, or material migration
- Vehicle/equipment cleaning areas
- Vehicle loading and unloading areas
- Onsite waste storage and disposal areas
- All BMPs identified in the FPPP and the conditions of the BMP
- All site stormwater discharge locations
- Downstream locations (in the event that inspection of the exact stormwater discharge locations are not immediately accessible)
- Locations where vehicles enter or exit the site (evidence of off-site sediment tracking)

An Inspection Form is to be completed during each annual inspection. The Inspection Form to be used is included as an appendix to the FPPP and includes blanks for descriptions of any deficiencies. Following the inspection, an inter-department memorandum is to be prepared by the Water Quality Section inspector that summarizes non-compliance findings, recommendations for compliance, and timelines for achieving compliance that will be submitted to the FPPP Administrator. Copies of the inspection documentation shall be retained by the Water Quality Section and the FPPP Administrator for a minimum of three years from the permit termination date.

Based on the results of the routine and annual inspections, FPPPs shall be modified as necessary to include additional or revised BMPs designed to correct any problems identified. NDOT shall complete any revisions to the FPPPs and modify or add BMPs as necessary within thirty (30) calendar days following an inspection. District and/or Maintenance personnel will be required to follow up on all inspection deficiencies and new BMPs to ensure that appropriate action was taken in response to issues noted.

In the event that sediment or other materials leave the site, NDOT shall remove the off-site accumulations of sediment or other materials at a frequency sufficient to minimize off-site impacts. Any off-site accumulations shall be removed within seven (7) days of discovery (unless precluded by legal, regulatory, or physical access constraints). NDOT shall make all reasonable efforts to obtain access, and in such instances, removal and stabilization shall occur within seven (7) days of obtaining access.

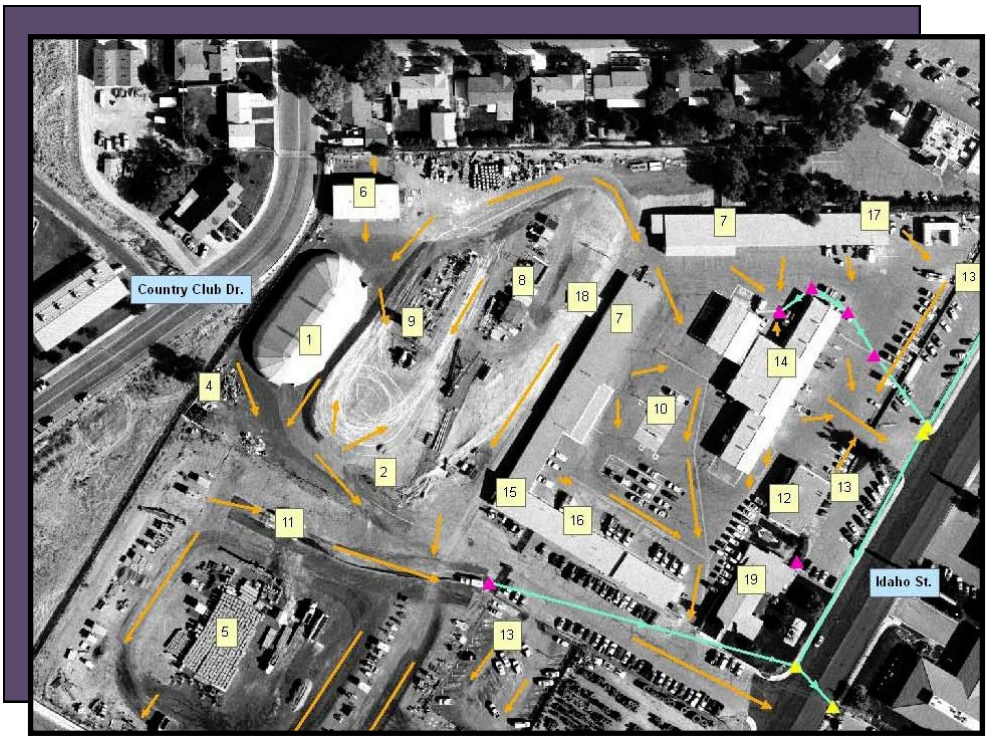
FPPP Modification: FPPPs are intended to be "living documents", in that they may need to be revised to address changes in site activities or ineffective BMPs. When an inspection identifies a deficiency requiring a new or revised BMP be implemented, the FPPP is to be modified to incorporate the new or revised BMP. Failure to modify the FPPP could result in a violation of the MS4 permit.

Recordkeeping:

- Copies of completed Inspection Forms for annual inspections and self-inspections are to be retained for at least three years from the permit termination date.
- Copies of completed self-inspection forms are to be submitted to the Water Quality Section annually.

Facility Layout and Drainage

GP-3



Map of Elko NDOT maintenance facility with depiction of stormwater flow directions, catch basins, and storm drain piping.

Description: To prevent stormwater from contacting potential pollutants, maintenance activities should be conducted away from stormwater drainage facilities to the extent possible. Before conducting such activities, consider the site layout and avoid areas near the stormwater drainage system or that might receive concentration runoff. If possible, use designated storage or loading areas.

Implementation: Before storing materials outside, performing maintenance activities, or otherwise handling materials containing potential stormwater contaminants, the following should be performed:

- Review the site map provided in the FPPP to identify stormwater drainage facilities on the site.
- Select an area suitable for the considered activity and away from drainage ditches, catch basins, and outfalls. Use designated areas if possible.
- Install appropriate BMPs.

Maintenance and Inspections: There are no specific maintenance requirements associated with this BMP. Inspectors should consider whether specific maintenance activities are being conducted at the most appropriate location (site activities may change over time).

Recordkeeping:

- Each FPPP site map is to be updated accordingly to reflect current stormwater drainage conditions and infrastructure.

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Good Housekeeping

GP-4

Good housekeeping practices are effective at preventing pollution through limiting the source and exposure of contaminants.

Description: Keeping the facility neat, organized, and clean enhances safety and improves efficiency, while reducing the potential for the discharge of contaminants. These good housekeeping practices should be employed throughout and in every aspect of the maintenance facility.

Implementation:

- Use approved protective inserts, covers, or other inlet protection measures when working near storm drainage catch basins and other drainage facilities around the site.
- Keep work areas clean by dry-sweeping and picking up garbage and waste material at the end of each work shift.
- Clean spills upon discovery.
- Lids and covers shall be used on all trash receptacles to keep out precipitation and to prevent wastes from blowing out. Holes in waste receptacles shall be repaired or the receptacle replaced to prevent materials, e.g. "dumpster juice," from leaking onto the ground. When placing waste into a receptacle, ensure that none is spilled on the ground.
- Establish storage areas for all materials and store only the designated items in them. Store packaged materials with their labels facing outward, making them easy to find.
- Properly store all cleaning products in clearly labeled cabinets or closets.
- Store and handle chemicals according to the manufacturer's specifications.
- Do not wash accumulated surface debris into the storm drains.
- Keep an updated inventory list of critical supplies and keep them stocked. Do not over-order and stockpile more supplies than necessary.
- Anticipate seasonal changes and change storage areas as necessary; install appropriate BMPs.

Good Housekeeping

- Keep parking lots and outside areas swept and clear of debris.
- Designate areas for fueling, servicing, and maintenance of vehicles and equipment.
- Store vehicles and equipment prone to leaks in designated areas. Place drip pans or appropriate drip control under leaking equipment.
- Use approved waste fluid collection containers and have them emptied regularly. Refer to MS-2: Used Oil Handling and Storage.
- Collect and remove landscape clippings. Do not wash materials into the storm drain system.
- Use mulch or other erosion control measures on areas of exposed soil.
- Keep an updated inventory of all cleaning chemicals and supplies onsite at each facility.
- Order BMP supplies well in advance of any scheduled projects around the maintenance facility.
- Whenever possible, use non-toxic chemicals for cleaning or maintenance.
- Dispose all non-hazardous mopping and cleaning water into the sanitary sewer.
- Install and maintain spill kits around the site.
- Allow paint in open top containers to fully dry before proper disposal
- Use funnels and pumps to minimize spills during mixing and refilling activities
- Utilize stormwater inlet protection BMPs for stormwater facilities in the vicinity during any mixing and refilling activities

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Maintenance and Inspection: There are no specific maintenance requirements related to Good Housekeeping practices. Routine and annual inspections should review and assess the level of housekeeping.

Recordkeeping:

- There are no specific record keeping requirements associated with this BMP.

Site Sweeping

GP-5

Sweepers are a key tool in reducing accumulated sediment and other pollutants from paved parking and equipment storage areas.

Description: Paved surfaces accumulate dirt, sediments, spills, and drips. When it rains, these surfaces are potential sources of stormwater runoff pollutants. Sweeping can reduce these accumulations, thereby minimizing their discharge to the stormwater drainage system and watercourses. Maintenance facility have various types of paved surfaces (e.g. travel ways, employee parking areas, vehicle storage areas, equipment storage areas, etc.) that should be swept to reduce accumulations of sediments and other pollutants that might otherwise be discharged to the storm drain system.

Implementation:

- Site sweeping (mechanical or broom sweeping) of paved areas is a good practice that should be performed at an appropriate frequency based on site-specific conditions and equipment availability.
- Sweep in advance of a storm event, if possible.
- Avoid performing sweeping activities during inclement weather events.
- Do not use water to wash down paved areas to the storm drain.
- All temporary sweeping spoil storage areas shall be contained and located away from any stormwater drainages and/or natural watercourses. Refer to MS-9: Vactor Truck and Sweeper Spoils.
- Use absorbents to clean wet spills.
- Sweeping shall be conducted at the frequency specified in the FPPP.

Site Sweeping

Maintenance and Inspection:

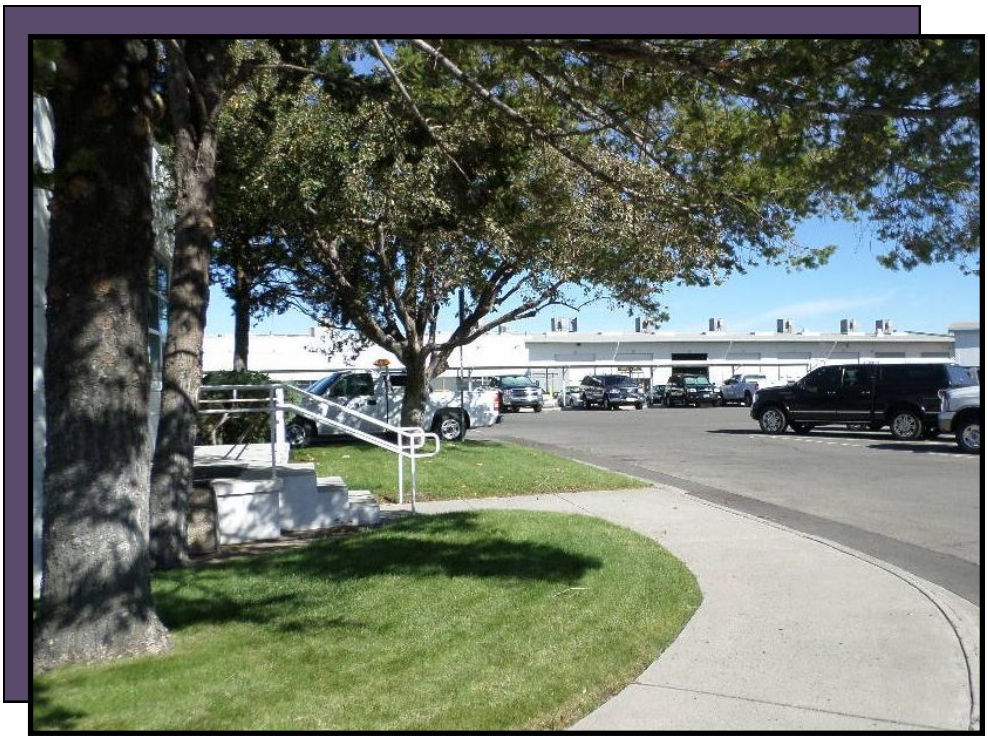
- Maintain mechanical sweeper condition in accordance with manufacturer and NDOT protocol.
- Dispose of sweeper spoils in accordance with MS-9: Vactor Truck and Sweeper Spoils.
- Wastewater generated or collected during sweeping must be discharged appropriately.
- Inspect paved areas weekly to identify areas of accumulated sediments and other pollutants.
- Inspect facility exits and unpaved to paved transitions for accumulations of vehicle-tracked sediments. Refer to SW-6: Track-Out Controls.
- Sweep more frequently if needed to prevent off-site tracking.
- Rinse debris hoppers in accordance with VM-2: Vehicle Washing.

Recordkeeping:

- The volume of sweeper waste collected and the date of sweeping is to be documented and reported to Water Quality Section annually.

Landscape Maintenance

GP-6



Well-maintained irrigation systems reduce the potential for irrigation runoff that may contain fertilizers or other pollutants to the storm drains.

Description: Irrigated landscaped areas are potential sources of pollutants. Runoff from over-watering may transport fertilizers or lawn chemicals into the storm drain. Proper maintenance and operation practices of landscaping and irrigation systems will reduce the discharge of runoff that may contain pollutants. Additionally, fertilizers and pesticides should be applied carefully to avoid drift and in accordance with the manufacturer's recommended application rates.

Implementation:

- Apply fertilizers and pesticides in accordance with manufacturers' recommended methods and applications rates. Avoid over-application. Sweep up fertilizer that may fall onto impervious surfaces.
- Maintain landscaping as needed to stabilize soil and improve appearance.
- Remove and dispose of weeds using chemical-free techniques.
- Do not sweep or wash materials in to the storm drain system.
- Collect and properly dispose of leaves and other vegetative debris as needed to prevent it from collecting in the storm drain system.
- Irrigation systems are to be properly maintained and operated in accordance with seasonal watering needs and per the manufacturers' recommendations.

Landscape Maintenance

Maintenance and Inspection:

- Winterize irrigation systems as necessary to prevent breaks.
- Repair broken or malfunctioning emitters and sprinklers promptly upon discovery.
- Adjust sprinkler heads and control valves as needed to ensure proper sprinkler coverage and limit over-spray.
- Adjust irrigation controller (irrigation time) to match seasonal watering needs.
- Do not apply fertilizer or pesticide during wet weather.
- Routine inspections should be performed to confirm proper irrigation system operation and to check for broken lines and over-spray.

Recordkeeping:

- There are no specific recordkeeping requirements associated with this BMP.

Hydraulic Facility Cleaning

GP-7

Storm drain inlets require periodic cleaning to remove the sediments and other pollutants that tend to accumulate in the bottom.

Description: Hydraulic facilities (e.g., storm drain inlets, culverts, manufactured stormwater treatment devices, etc.) require cleaning and maintenance to ensure proper function and to remove potential pollutants that accumulate at these devices.

Implementation:

- Facility supervisors are to provide employee training on proper maintenance and cleaning procedures for hydraulic facilities.
- Locate all hydraulic facilities on a site map.
- Remove accumulated sediments form hydraulic facilities when it appears sediments might wash through or out of the facility or, for engineered treatment systems, when the facility reaches 75% of its capacity.
- Sediments and other debris removed from hydraulic facilities shall be properly disposed. If the material is to be dried onsite, the material is to be placed at a properly contained designated location where the drainage will not enter the storm drain system or a water course.
- Sediments shall be properly disposed, which may entail disposal at a permitted landfill. Depending upon the landfill requirements,, analytical testing may be required.

Inspection:

- Inspect all hydraulic facilities annually and clean and maintain as needed.

Hydraulic Facility Cleaning

Recordkeeping:

- The volume of material removed from the hydraulic facilities is to be reported to the Hazardous Materials and Water Quality Sections annually.
- Document and maintain tracking logs, invoices, and manifests associated with material disposal.

Septic Systems

GP-8

Septic systems are one potential source of contamination if not properly installed and maintained .

Description: Septic systems are used for the on-site treatment and disposal of sewage and other wastewater. Maintaining a properly functioning septic system reduces the risk of sewage backups and surcharging. Surcharges are discharges to the ground surface of untreated or partially treated sewage which occur when the leach field or septic tank fail. These discharges can potentially flow into the storm drain system and contaminate waterways. Each maintenance facility with a septic system will implement the procedures provided below.

Implementation:

- Retain the services of a licensed septage hauler for regular and emergency waste collection.
- Use cleanouts as necessary to avoid plugged pipes.
- Avoid compacting the soil of the leach field. Do not drive vehicles or equipment over the leach field. Do not store vehicles, equipment or materials on the leach field. Do not build on top of or pave over the leach field.
- Take appropriate caution while pumping tanks to avoid spills.
- Do not connect surface drains (like downspouts) to the septic system.
- The number of connections (e.g. sinks, toilets) should be based on the septic system design and not increased without evaluating septic system design capacity.
- Do not pour oils, chemicals, paints or other potentially hazardous materials into sinks, floor drains, toilets, showers, or other drains connected to septic system. Chemicals may damage the biological activity in the septic tank and may pass through the system and seep into the soil and contaminate the groundwater.

Septic Systems

Maintenance and Inspection:

- Have the septic tanks emptied every three years or more frequently, as necessary.
- Roots of trees and shrubbery can clog and damage the leach lines. Remove trees and shrubbery that sprout within the leach field.
- Rehabilitate the leach field when soils become clogged and drainage capacity cannot keep up with effluent flows.
- Perform annual inspections of the septic system to verify it is functioning properly. As a rule of thumb each annual inspection should incorporate the following items:
    - ◊ Uncover the manhole and inspect all ports.
    - ◊ Measure the scum and sludge layers through the inspection port. If the sludge depth is equal to 1/3 or more of the liquid depth, the tank should be emptied by a licensed septage hauler.
    - ◊ Check the leach field annually for leaks, ponding, wet spots, surfacing effluent, or obvious conditions of surcharging.

Recordkeeping:

- Retain records of all inspections and septic tank pumping.
- Pumping records are to include volume, date, disposal location, and licensed hauler information (name, license number, contact information).

Material Testing Laboratories

GP-9

Material testing laboratories, either fixed or portable, are a potential source of chemicals and wastes.

Description: Maintenance facilities may have portable or permanent on-site material testing laboratories. These laboratories commonly use and store materials like acids, caustics, solvents, oils, cleaning compounds. On occasion, materials and samples may be temporarily stored outside. It is important that chemicals and materials used and handled at these facilities be managed in a manner that is protective of surface water quality.

Implementation:

- Where possible, store and use materials indoors.
- Outdoor storage should be covered and consist of only inert materials (e.g. sands, aggregates, plastic forms).
- Outdoor storage areas should be located away from the yard perimeter, any surface waters and storm drain inlets.
- Sweep up spilled dry materials (e.g., sands, aggregates, etc.) and properly dispose.
- Never wash down paved areas to a storm drain.
- Do not wash material sieves or other equipment in a manner that might cause the wash water to flow into the storm drain system.
- Maintain an inventory of hazardous materials (product and quantity) in the lab.
- Dispose of unwanted materials and wastes (limit the accumulation of hazardous materials). Have a covered waste bin for spent materials in close proximity of the lab. Avoid mixing waste streams.
- Materials may require waste characterization to identify disposal requirements.
- Establish waste disposal protocols, where appropriate.

Material Testing Laboratories

- Label and store chemicals appropriately (see MS-3: Materials Storage - Chemicals).
- Store liquids with any potential threat to surface water quality inside or on impervious surfaces with secondary containment.
- Store flammable or combustible liquids in a fire-safe cabinet with appropriate secondary containment.
- Protect floor drains from accidental chemical spills. This is of primary importance in portable labs since any drains may empty to the natural environment. Prepare for this event by blocking or sealing drains (floor or otherwise) or providing for full containment and capture.
- Use "environmentally friendly" products where possible.
- Clean up spills immediately using dry methods. Prohibit wet clean up practices if these practices result in discharges.
- Handle open containers and product transfers in a manner to prevent spills by using tarps, drip control, pans or other containment. Fluid transfers should be performed over an impervious surface, if possible.
- Practice good housekeeping. Appropriately store, cover and organize materials and testing samples (specimens awaiting testing or spent) in an organized and contained manner.

Maintenance and Inspection:

- In general, maintain a clean and debris-free materials testing lab area, primarily focusing on outside storage areas of supplies and any excess accumulations of materials and/or spent specimens, waste, trash and debris.
- On a weekly basis, materials storage and testing areas should be inspected for any accumulation of unusable materials (stored outside), noting the nature of the materials (those having a potential threat to surface water quality from a runoff perspective), and if the materials are stored properly.
- Routinely evaluate the proximity of nearby stormwater inlets with respect to the activities being conducted.

Recordkeeping:

- Have laboratory staff maintain a material inventories and appropriately manage stock on hand to minimize the potential risk of release to the environment.
- Maintain and keep updated the Safety Data Sheets (SDSs) for all chemicals.
- Hazardous waste disposal records are to be maintained by the appropriate facility supervisor.

Material Storage (MS)

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Product Labeling

MS-1

The labeling on these containers indicates the contents as well as the health and environmental hazards.

Description: Proper product labeling is essential for personnel safety and to prevent chemical misapplications. Proper labeling also helps prevent the use of inadequate or improper storage containers. In addition, proper product labeling is critical for quicker response when performing spill response and cleanup. All containers storing chemicals, hazardous materials, or potential pollutants, including waste products such as used motor oil and antifreeze, are to be properly labeled. Labels are to be readily visible and clearly identify the container's contents.

Implementation:

- Clearly label all containers. Labels should include chemical or product names and health hazards, as appropriate.
- In some instances, labeling of secondary containment pallets or structures may also be necessary.
- Be sure labels are facing outward and readily visible.
- Use all chemicals and supplies according to the manufacturer's recommendations.
- Never mix or store chemicals or liquids together that may result in a unsafe reaction.

Maintenance and Inspection:

- Routinely inspect all containers for proper labels that are readily visible.

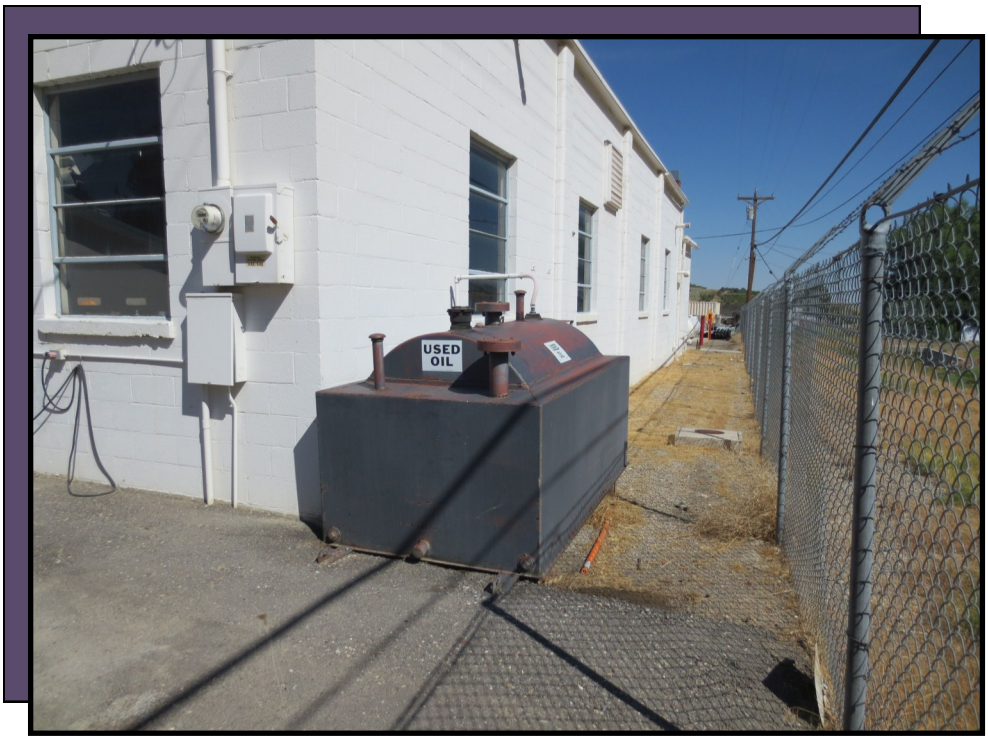
Product Labeling

Recordkeeping:

- Maintain Safety Data Sheets (SDSs) for all stored chemicals and supplies at each maintenance facility.

Used Oil Handling and Storage

MS-2



This used oil tank with its secondary containment is clearly labeled.

Description: Routine vehicle and equipment maintenance activities commonly generate waste oils. Used oil must be properly collected, stored, and disposed of to prevent contact with stormwater runoff or accidental discharge to the storm drain system. Used oil must be managed in accordance with Nevada Division of Environmental Protection requirements and properly disposed of by an approved oil recycler.

Implementation:

- Provide operators with an emergency call list in the event of accidental release. The list shall include the facility supervisor's phone number as well as local fire department, city and state emergency response and environmental control agencies and spill response contractors.
- Used or waste oil containers shall have labels with the words "Used Oil". The containers shell be free of rust, dents, bulges or other structural defects. Secondary containment for the container should also be provided. Provide and use appropriate equipment to transfer oil into the storage container to prevent spills.
- Keep all storage containers closed except when adding used oil.
- Observe the volume of used oil in the container and if it has reached the maximum allowable volume, label the container as full.
- Place a drip pan, absorbent pads, and/or a tarp or ground cloth under any area where the handling of oil will occur.
- Place used oil storage containers inside or in a location protected from precipitation.
- Locate used oil storage containers away from floor and storm drains. Refer to GP-3: Facility Layout and Drainage.
- Store all oily contaminated garments, filters, and cloths in a fire-resistant canister away from floor drains and storm drainage facilities.

Used Oil Handling and Storage

- Provide spill clean-up kits and adsorbents in the immediate vicinity of the used oil storage container and oil handling areas. Clearly label the kit(s). At a minimum, spill kits should include the following items:
    - ◊ Oil absorbents
    - ◊ Oil absorbent booms
    - ◊ Storm drain plugs or covers
    - ◊ Broom & dust pan
    - ◊ Non-metallic shovels
- Immediately clean up oil spills using "dry-sweeping" methods. Refer to SP-1: Spill Prevention and Response.
- Never mix used oil with other chemicals or substances.

Maintenance and Inspection:

- Used oil is to be collected by a waste oil hauler with an EPA Transporter Identification Number for proper disposal.
- Check and resupply spill kits and absorbents after use.
- Regularly confirm remaining volume in used oil storage containers. Schedule a pick up with oil recycler when storage container is nearing its capacity.
- Weekly inspect oil storage containers and associated plumbing for corrosion, leaks, structural defects, or other problems.

Recordkeeping:

- The appropriate facility manager or supervisor is to document and maintain a tracking log, invoices, and manifests associated with used oil removed from the facility.

Chemical Storage

MS-3

A labeled, secured fire cabinet is the proper storage practice for flammable chemicals.

Description: Many different types of chemical products are used at maintenance facilities. These materials include petroleum products, antifreeze, solvents, paints (both in cans and spray), cleaners, lubricants, adhesives, etc. Chemicals must be properly used and stored to minimize the likelihood of contaminating stormwater.

Implementation:

- Use of these products should be performed in a manner that is protective of surface waters and avoids any off-site migration.
- All product use should be consistent with product labeling. All possible cautions cannot be outlined in this practice.
- Locate storage areas away from floor drains, stormwater facilities, and watercourses.
- Provide spill kits with adsorbents to dry sweep spills.
- Properly dispose of used adsorbents.
- Designate secure, indoor or covered storage areas.
- Store flammable and combustible products in approved, fireproof storage cabinets.
- Store products in original containers or in other compatible containers that are clearly labeled with name of chemical, handling instructions, and health or environmental hazards.
- Use up all product in aerosol spray cans and other containers before proper disposal.
- All product storage and use shall be in accordance with the NDOT's Hazardous Materials Management Program.

Chemical Storage

Maintenance and Inspection:

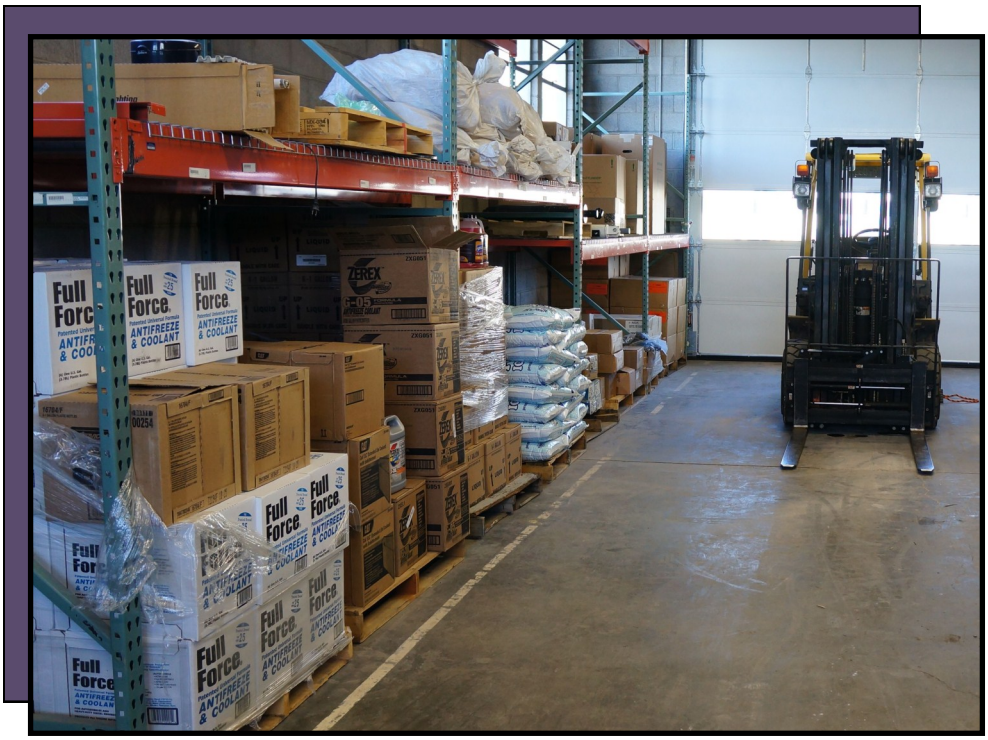
- Routinely inspect chemical storage areas for leaks, spills, or other problems.
- Maintain spill clean-up kits in chemical storage areas.

Recordkeeping:

- Maintain Safety Data Sheets (SDSs) for all stored chemicals and supplies at each maintenance facility.

Materials Storage

MS-4



A well-organized, clean material storage area is more efficient and less prone to spills.

Description: Many types of solid materials are stored and used at maintenance facilities. These may include bagged materials (e.g., concrete and asphalt patch mix), metals (e.g., beams, culverts, guardrails), sacked fertilizers, herbicides, treated lumber, construction debris, glass beads, and many others. These products must be stored and used in a manner that prevents or minimizes their contact with stormwater.

Implementation:

- Develop and maintain an inventory of stored material to identify unwanted or unneeded materials that can be eliminated.
- Whenever possible, store materials indoors. Materials stored outdoors should be under cover and off the ground whenever possible.
- Outdoor material storage should be located away from concentrated flows of stormwater, watercourses, and storm drains.
- Do not store materials in areas subject to ponding or standing water.
- Refer to GP-3: Facility Layout, Drainage and Material Handling.
- Provide run-on controls (asphalt or concrete curbs, earth berms, etc.) to prevent stormwater entering storage areas.
- Store materials in original containers or other compatible weather proof containers or bags.
- Segregate materials by type for hazard management and cleanup.
- Reuse and recycle construction materials when possible and as often as possible to minimize exposure.

Materials Storage

- Minimize the potential for spillage by using up open bags or containers.
- Clean up spills immediately using dry methods such as sweeping. Prohibit wet clean up practices if these practices would result in the discharge of pollutants to stormwater drainage systems.

Maintenance and Inspection:

- Maintain a clean and debris-free materials storage area.
- On a routine basis, all materials storage areas should be inspected for accumulation of unusable materials, waste materials, and storage container integrity.
- Routinely inspect and maintain inlet protection BMPs. Repair or replace the protection as needed.
- Before and after storm events, inspect the surrounding storm drain system for evidence of materials mobilization and inspect BMPs to determine if maintenance or replacement is needed.

Recordkeeping:

- Maintain Safety Data Sheets (SDSs) for all stored chemicals and supplies at each maintenance facility.

Material Stockpiles

MS-5

Sediment logs are placed and staked around a sand stockpile to trap sediment that might be mobilized by stormwater runoff.

Description: Various types of materials are regularly stockpiled at maintenance facilities. Stockpiled materials may include sand, salt, aggregate base, asphalt mix, etc. Proper storage and management practices will reduce the potential for stockpiled materials to discharge into waterways.

Implementation:

- Protect stockpiles from stormwater run-on using berms, dikes, gravel/sand bags, etc.
- Outdoor stockpiles with the potential to discharge into the storm drain system shall have appropriate perimeter controls measures to minimize material migration. Perimeter controls should be used to help exclude foot and vehicle traffic that might spread the material.
- Bulk dry salt should be stored in indoors or covered with plastic sheeting, tarps or other suitable protection whenever possible.
- Locate stockpiles away from concentrated flows of stormwater, drainage facilities, and inlets wherever possible.
- Do not store materials in areas subject to ponding or standing water.
- Salt and sand stockpiles should be located on paved impermeable surfaces whenever possible.
- Bagged or containerized deicing materials shall be stored in covered areas or covered with plastic sheeting and up off of the ground.
- If unused for extended periods, cover the stock pile with plastic sheeting, tarps, or other suitable materials. Secure the sheeting with weights (used tires, sand bags, etc.) to prevent it from blowing away.
- Deicing materials, sand, aggregates, etc. should be ordered in quantities that minimize, to the extent practical, the amount stored onsite.

Material Stockpiles

- Use care to minimize material spillage when loading spreader trucks, during material deliveries, and during mixing operations.
- Sweep up any material that migrates outside of the containment area or spilled during loading/ mixing operations and return it to its respective stockpile (if possible).
- Minimize track-out of stockpile materials to other areas of the site using careful loading techniques and sweeping.
- Never spray or wash materials into the storm drain system and avoid over application.

Maintenance and Inspection:

- Stockpiles with the potential to discharge into the storm drain system should be covered to the extent practical, stabilized, and protected with a temporary perimeter barrier prior to the onset of precipitation.
- Check all facility stockpile areas before and after storm events for any evidence of off-site migration and sweep areas as needed.
- Maintain and/or replace perimeter controls and covers as needed to keep them functioning properly.
- Maintain supplies of perimeter controls, plastic sheeting, and other containment products near outside stockpiles.

Recordkeeping:

- There are no specific recordkeeping requirements.

Anti-Icing Liquid Storage and Handling

MS-6

These brine storage tanks are located within a secondary containment area to contain accidental spills and leaks.

Description: Some maintenance facilities make and store anti-icing solution comprised of a solid deicer (typically sodium or magnesium chloride) and water. Once prepared, the solution is stored in tanks until transferred to trucks and plows for roadway application. Aside from the salt component, anti-icing liquid may contain potential pollutant such as nitrogen and phosphorus. Consequently, discharge to the storm drain system and waterways must be minimized.

Implementation:

- Refer to MS-5: Material Stockpiles for specific procedures on storing/handling dry salt.
- Facility supervisors shall train maintenance personnel in the proper storing, handling, mixing and cleanup procedures.
- An NDOT employee should be present at all times anti-icing liquid is being mixed or transferred to shut off mixing or pumping equipment in the event of a failure.
- Locate storage and mixing facilities away from the storm drain system.
- Install secondary containment around storage tanks.
- All anti-icing liquid activities (storing, mixing, and transfer) should be completed on impervious surfaces only.
- The rinsing of storage tanks where the rinse water may flow into the storm drain system or waterway is prohibited.
- Never empty anti-icing solutions into a storm drain or septic system.
- Limited amounts of unused anti-icing solutions and rinse waters can be sprayed onto sand/salt stockpiles.

- Observe tanks as they are filled to prevent overfilling.
- Utilize containment measures (e.g., buckets, drip pans, etc.) to capture minor leaks and spills when filling storage or truck-mounted tanks.
- Prevent spills from flowing into the storm drain system by applying catch basin covers (or other drain inlet protection) and by utilizing booms, berms or equivalent to, contain and absorb the spill.
- Consider the use of polymer absorbents designed for aqueous fluid spill response. After containing a spill with booms or berms, a vacuum truck may also be used to collect spilled liquid.
- Immediately clean up any salt and liquid solution spills. Always dry sweep salt spills. Absorbents can be used for liquid spill cleanup.
- Reuse collected salt and anti-icing solutions whenever possible. Free product that cannot be reused is to be placed in 55-gallon drum for disposal at an appropriate waste disposal facility.
- Disposal of anti-icing liquids to the municipal sanitary sewer is permissible upon written approval from the POTW facility.
- Disposal of anti-icing liquids to any sanitary system shall require approval from NDOT's Hazardous Materials Section.
- Use only permitted and registered waste haulers for disposal of waste materials associated with routine maintenance activities.
- Magnesium chloride rinse water may be used for dust control associated with routine maintenance activities. Use care when applying the rinse water and avoid discharges to the storm drain system and waterways.

Maintenance and Inspection:

- Maintain and repair anti-icing mixing equipment and storage tanks per the manufacturer's recommendations.
- Routinely inspect anti-icing liquid transfer equipment (hoses, valves, couplings). Promptly repair or replace defective or leaking components.
- Inspect and maintain storage and transfer equipment and facilities during routine inspections.

Recordkeeping:

- Document and maintain tracking logs, invoices, and manifests associated with free product removed from the facility.

Scrap Metal and Construction Debris

MS-7

Use of designated scrap metal storage areas maintains a neat and orderly facility and helps reduce the potential for discharge

Description: New and used maintenance-related construction materials, including scrap metal, are routinely stored until a use can be found or it is sent off for disposal or recycling. Scrap materials may include guard rail, pressure treated wood, corrugated metal pipe, cables, posts, and old highway signs. These materials have the potential to leach metals into stormwater runoff.

Implementation:

- Confine scrap materials to designated storage areas.
- Do not locate storage areas adjacent to storm drain inlets, watercourses or in areas subject to excess ponding.
- Frequently dispose of or recycle materials to minimize material accumulations.
- Provide bins, racks, pallets, pickets, or other devices to help organize the stored materials and to keep the material off the ground where contact with soil can accelerate corrosion or decomposition and to minimize contact with stormwater runoff.
- Before storing materials, be sure there are no fluids or hazardous materials contained in the material to be stored. Properly drain and dispose of any fluids or materials, if found.
- Keep stored materials well organized and consolidated. This will help keep items readily visible and locatable, facilitating recycling or repurposing.

Scrap Metal and Construction Debris

Maintenance and Inspection:

- Routinely inspect the scrap metal and construction debris stockpiles to ensure materials are properly stored and contained. Look for staining or other evidence of off-site migration of potential pollutants.

Recordkeeping:

- There are no specific recordkeeping requirements associated with this BMP.

Vacuum Truck and Sweeper Spoils

MS-8

Vacuum truck and sweeper spoils must be properly managed to prevent the discharge of sediments and other contaminants to stormwater.

Description: Vacuum trucks and sweepers are regularly used and stored at maintenance facilities. Sweepers typically collect sediment and debris before it ends up in the stormwater system, and vacuum trucks are used to clean debris from vaults and the stormwater conveyance system. The waste collected during these activities must be appropriately disposed of.

Implementation: Facility supervisors shall train facility staff in the proper practices for spoils management and handling.

Vacuum Trucks

- Vacuum truck liquid fractions are to disposed of into the municipal sanitary sewer. Written approval from the POTW must be obtained.
- Vacuum truck solid fractions are to be disposed of at a permitted landfill facility. Depending upon the requirements of the facility, analytical waste characterization may be required.
- The dumping of vacuum truck spoils at any location with a potential for discharge into the storm drain system is prohibited.
- Vacuum truck waste temporarily stored at a maintenance facility shall be completely contained and within a lined facility.
- Additional measures shall be implemented to prevent/limit stormwater run-on from entering the temporary containment area.

Sweeper Trucks

- Sweeper spoils temporarily stored onsite shall be protected from precipitation and wind.

- Perimeter control measures shall be utilized in to prevent discharge of the spoils to the storm drain system.
- Sweeper spoils shall be are to be disposed of at a permitted landfill facility. Depending upon the requirements of the facility, analytical waste characterization may be required.

Maintenance and Inspection:

- Maintain perimeter control measures on all temporary spoil piles.
- Perform routine inspections of vacuum or sweeper spoil piles staging facilities.
- Inspect spoil areas before and after precipitation events to ensure proper containment of the waste.

Recordkeeping:

- Document and maintain tracking logs, invoices, and manifests associated with material disposal. The volume of waste collected is to be reported to the Water Quality Section on an annual basis.

Tires

MS-9

Tires are to be stored in a designated location protected from precipitation and recycled regularly.

Description: New and used tires are temporarily stored at most maintenance facilities. Tire rubber contains trace pollutants like zinc that can be discharged in stormwater runoff.

Implementation:

- Designate a tire storage area that is located away from storm drainage facilities and waterways.
  - ◊ Never store tires near flammable or electric motor sources that could potentially catch fire or be a source of ignition.
  - ◊ Never store tires in areas that are wet, oily, or greasy.
- If temporally stored outside, prevent stormwater run-on into the tire storage area by storing the tires off the ground surface.
- Keep inventory of tires (new and used) to minimize the number on-site and better schedule recycling and disposal efforts.
- Minimize the amount of time used tires are stored onsite.
- Store tires inside or under suitable cover whenever possible.
- Used tires are to be disposed of at a waste tire management facility whenever possible.

Maintenance and Inspection:

- Maintain tire storage areas.
- Inspect exterior tire storage and staging areas before and after rain events for evidence of any off-site migration of rubber or rust.

Recordkeeping:

- Keep and maintain records pertaining to tire disposal and recycling activities.

Battery Storage and Recycling

MS-10

Used batteries should be stored with secondary containment and protected from precipitation (cover not visible) and removed weekly.

Description: Batteries subject to this practice are those removed from vehicles and equipment when their service life is expended. These batteries are commonly lead-acid type, wet cell, and contain lead plates with sulfuric acid as the electrolyte. They can be open cell (with caps for refilling) or closed cell (sealed). Cracks in the casing and leaks are not uncommon. To protect stormwater runoff quality, it is important to prevent their exposure to precipitation and provide capture of any potential leaks.

Implementation:

- Used batteries are to be managed as an EPA regulated "Universal Waste" (see 40 CFR Part 273)
- Should the battery casing be compromised, the battery must be managed as a hazardous waste.
- Be aware of proper battery usage, storage, and NDOT's recycling protocol.
- Know drip control and acid spill neutralization procedures.
- The following storage best practices should be implemented:
    - ◊ Use extra care when removing batteries known to be cracked from vehicles.
    - ◊ Do not leave a used battery on the floor/ground.
    - ◊ Store batteries inside or under covered areas to avoid exposure to precipitation; used batteries shall be stored with secondary containment.
    - ◊ Use secondary battery storage containers made out of plastic (non-conductive) and acid resistant.

- ◊ Secondary storage containers should be situated on impervious surfaces.
- ◊ Protect battery terminals to prevent short-circuits that may generate heat or sparking.
- ◊ Situate the storage away from vehicles or heavy foot traffic.
- ◊ Place spill kits designed to neutralize acid compounds nearby so that they can be deployed immediately to contain any discharges, leaks, or spills.

- Minimize the time spent batteries are stored before they are disposed of or recycled.
- Each facility should use the services of an approved provider for battery recycling.
- Best practice is the removal of used batteries from the site on a weekly basis.

Maintenance and Inspection:

- Routinely inspect each battery storage area for leaks, the integrity of the secondary containment, or the presence of standing water.
- Keep battery storage areas clearly labeled and free of obstructions and debris.
- Inspect the storage area before and after precipitation events.

Recordkeeping:

- Keep and maintain records pertaining to battery disposal and recycling activities.

Light Bulb Management

MS-11

NDOT generates many spent light bulbs every year. Spent bulbs contain pollutants and require special handling.

Description: Incandescent, fluorescent, metal halide, sodium-vapor, mercury-vapor and light emitting diode (LED) light bulbs could be stored onsite. Light bulbs are fragile and readily broken. When broken, light bulbs may release a number of different pollutants, such as mercury, that can impact stormwater. Careful light bulb storage and recycling/disposal practices are necessary to prevent the possible discharge of pollutants.

Implementation:

- Designate a compatible covered container to store spent florescent, sodium-vapor, and mercury -vapor lamps (and any other type of light bulb that may contain hazardous materials or pollutants). Store new and spent bulbs indoors or under a roof and protected from the weather.
- Avoid breaking spent bulbs.
- In the event a bulb breaks, if mercury is present, put on plastic gloves. Carefully pick up glass shards, then gently sweep or scoop up (use stiff paper or cardboard) the smaller pieces of glass, liquid mercury, and/or powder. The powder may contain mercury or other pollutants and every effort should be taken to prevent the powder from becoming airborne. Do not vacuum the glass, liquid mercury, or powder, which may cause the mercury to become airborne. Sticky tape or a damp paper towel can be used to collect any remaining powder. Glass shards, powder, glass shards, and the cleaning items should be placed in a sealed plastic bag for proper disposal.
- Containers used to store spent light bulbs shall be labeled to clearly indicate its contents and be dated.
- Do not store spent light bulbs in the back of vehicles or outside.
- Routinely coordinate proper disposal and recycling of spent light bulbs with a permitted and registered disposal or recycling firm. Minimize the amount of spent bulbs stored onsite. All spent fluorescent lamps should be recycled.

- Implement good housekeeping practices in the light bulb storage area.
- Minimize the inventory of new bulbs and order only what is needed.

Maintenance and Inspection:

- Routinely inspect storage areas for good housekeeping practices, and note any evidence of broken bulbs.

Recordkeeping:

- Retain records of spent light bulb disposal and recycling that includes name of recycler (disposal firm or hauler), location and name of disposal or recycling facility, date, and number and type of materials disposed or recycled.

Fertilizer and Pesticide Management

MS-12

Pesticides, herbicides, and fertilizers should be stored in a designated, weather-tight location with proper hazard signage.

Description: Small quantities of fertilizers and pesticides may be stored at some maintenance facilities. However, because the environment is particularly sensitive to even low levels of fertilizers and pesticides, every effort must be made to prevent their discharge to the storm drain system and waterways.

Special Training Requirements for Pesticide Applications:

- Crew supervisors that work with pesticides must attend training by the Nevada Department of Agriculture and be certified chemical applicators.
    - ◊ Employees must be recertified every two years.
    - ◊ Employees may use only products for which they are certified.

Implementation:

- Designate specific areas for storage and mixing of the chemicals away from storm drains and waterways.
- To the extent practical, do not apply fertilizers or pesticides near stormwater conveyances or water courses.
- Fertilizer container rinsate can be re-applied at targeted areas at or below the recommended application rates.
- Storage areas must be indoors and protected from precipitation. Liquids should be stored in heated room areas to prevent freezing and possible rupture of the container.
- Store fertilizers separately from pesticides.

- Only use Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) approved chemicals and apply at the manufacturer's recommended rates.
- Refer to the manufacturer's recommendations before mixing any chemicals.
- To ensure applicator safety and to prevent over application, only apply chemicals using approved, calibrated application equipment. Consult the following references before applying any of the chemicals:
    - ◊ Safety Data Sheets (SDSs),
    - ◊ Chemical label, including manufacturer's cautions,
    - ◊ Filling and washing directions, and
    - ◊ Protective clothing and equipment.
- Perform an annual review of product appropriateness for both new and existing products.
- Consider storing all products in a secure area under a roof or protective cover. Use a sealed containment floor or spill containment pallets.
- Each facility should have the most recent SDS for each pesticide, and have it in a location that is accessible to employees and emergency response personnel.
- Avoid having excess fertilizer, herbicide, or pesticide at the completion of an application and mix or take only the amount needed.
- Rinse containers either by pressure washing or triple hand-rinsing. Once rinsed, containers can be disposed of as a non-hazardous solid waste.
- Properly dispose of residues and container rinsate if it cannot be saved for future applications. Do not dispose of rinsate into the storm drain system.
- Each facility shall use an NDOT-approved service provider to dispose of and exchange any surplus chemicals.
- Use absorbents to clean spilled materials, and appropriately dispose of used absorbents. Use dry cleanup methods; or, if water is used, capture and properly dispose of the cleaning water.
- Application at maintenance facilities shall not occur within 24 hours of a forecasted precipitation event or when wind gusts exceed 10 miles per hour.
- Dispose of old or unwanted pesticides/herbicides per local, state, and federal guidelines. Do not dispose into the storm drain system.

Maintenance and Inspection:

- Perform routine inspections of the pesticide and/or fertilizer storage areas, looking in particular for spills and leaks.
- Maintain the spill kits.

Recordkeeping:

- Maintain records of all pesticide-related chemical applications, name of applicator, date and time of application, location, equipment, chemical, application rate, target species, weather conditions, and equipment breakdowns.
- Maintain Safety Data Sheets (SDSs) for all stored chemicals and supplies at each maintenance facility.
- Document and maintain tracking logs, invoices, and manifests associated with material disposal.

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Roadway Paint & Glass Bead Storage

MS-13

Roadway striping paint and glass beads should be stored in a designated location and well labeled.

Description: Some facilities may store, stage or use appreciable amounts of roadway striping paint. This paint is typically contained in large (300 gallon), skid-mounted, reusable, steel containers and inherently very safe. However, large amounts of any materials (like paints) with some component of volatile hydrocarbons is a potential concern with respect to off-site migration upon spills or other catastrophic release.

Implementation:

- Locate paint storage areas away from floor drains, stormwater facilities, and watercourses.
- Prevent paint carboys with wet paint from being exposed to precipitation.
- Maintain an updated paint inventory so that the overall bulk paint storage volume (and empty container storage) can be minimized.
- Do not apply paint, including nozzle calibration activities, during precipitation events. Allow sufficient drying time to avoid exposing wet paint to rainfall and runoff.
- Allow paint containers to fully dry before disposal. Paint containers may be dried outside during dry weather.
- Immediately clean up any paint spills using dry cleanup methods.
- Maintain appropriately-sized spill kits in close proximity to paint handling and storage areas.
- Protect glass bead packages from damage or tears.
- Glass bead spills should be swept up and disposed of as general refuse.
- Store glass beads away from floor drains, stormwater drainage facilities, and water courses.

- Ensure used paint carboys are picked up by the appropriate vendor at the appropriate frequencies.

Maintenance and Inspection:

- Maintain current Safety Data Sheets (SDSs) in close proximity to paint storage areas and accessible to employees.
- Routinely inspect spill kits to ensure sufficient spill response materials.

Recordkeeping:

- Maintain Safety Data Sheets (SDSs) for all stored chemicals and supplies at each maintenance facility.

Spill Prevention, Detection and Maintenance (SP)

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Spill Prevention and Response

SP-1

Proper use of secondary containment is a an effective spill prevention practice.

Description: Spill Prevention, detection, and response procedures must be implemented at each NDOT maintenance facility to prevent and contain spills of fuels, lubricants, vehicle fluids, paints, solvents, and other products that might result in a discharge of contaminants to the storm drain system and watercourses.

Implementation:

- Facility supervisors should hold regular meetings to discuss and reinforce appropriate spill control measures and disposal of cleaned up materials (incorporate into regular safety meetings).
- To the extent that the work can be accomplished safely, spills of oil, petroleum products, substances listed under 40 CFR (Code of Federal Regulations) parts 110, 117, and 302, and sanitary and septic wastes must be contained and cleaned up immediately either by staff (dependent on level of training), local agencies (e.g. fire department), or by engaging a trained and licensed service provider.
- To the extent that it does not compromise cleanup activities, spills should be covered and protected from stormwater run-on or runoff during rain events.
- Spills should not be buried or washed with water, unless it is part of emergency response activities.
- Used clean-up materials and recovered product that is no longer suitable for the intended purpose must be stored and properly disposed of.
- Water used for cleaning and decontamination is not allowed to enter storm drains or watercourses and must be collected and properly disposed of.
- Proper storage, clean-up, and spill reporting instructions for hazardous materials stored or used on the facility's site must be posted near the materials.

- Waste storage areas must be kept clean, well-organized and equipped with ample clean-up supplies as appropriate for the materials being stored. Perimeter controls, containment structures, covers and liners must be inspected daily and repaired or replaced as needed to maintain proper function.

Preventative Spill Measures: Below is a summary and explanation of common and effective structural spill prevention BMPs typically utilized at maintenance facilities. It is necessary that facility supervisors evaluate the maintenance activities at their own sites and determine which spill prevention measures are most applicable.

- **Product Labeling -** Plainly label all containers with appropriate names of chemicals or supplies in the container. In some instances, labeling of secondary containment pallets or structures may also be beneficial.
- **Signage** - Install conspicuous signage at all storm drainage facilities, including stormwater grates and drainage inlets, that denote no dumping is allowed.
- **Double Containment -** Place all used oil in labeled containers and provide approved secondary containment for oil storage containers greater than 55 gallons. Use a self-closing funnel when adding used oil to an existing storage container to prevent spills.
- **Containment Dikes / Curbing -** Consider installing containment dikes and/or curbing at locations where hazardous materials or substances are handled and transferred on a regular basis.
- **Drip Pans - Use** a drip pan, absorbent pads, or a tarp or ground cloth under any area where the handling of oil will occur.
- **Emergency Pump Shut Offs** - Nozzles used in vehicle and equipment fueling shall be equipped with an automatic shut-off to control drips. Each fueling station shall have a well-marked and accessible emergency shutoff valve with clear operation instructions.
- **Tank Overflow Equipment** - Storage tanks shall be equipped with overflow protection accessories and appurtenances.
- **Protective Bollards -** Install protective bollards in front of or around sensitive storage tanks and facilities that experience high equipment or vehicle traffic.

Spill Cleanup and Storage Procedures:

- Non-Reportable Spills
  - ◊ Non-reportable spills may be controlled by the first appropriately-trained individual to arrive on the scene of the spill.
  - ◊ Use absorbent materials on small spills.
  - ◊ Remove the absorbent materials promptly and dispose of properly.
  - ◊ The practice commonly followed for a non-reportable spill is:
    - ♦ Stop the source of the spill, if it is continuing,
    - ♦ Contain the spread of the spill,
    - ♦ Recover spilled materials,
    - ♦ Clean the impacted area and properly dispose of affected materials.

- Non-Hazardous Reportable Spills

  Clean up and respond upon discovery:

  - ◊ Stop the source of the spill, if it is continuing.
  - ◊ Contain spread of the spill using absorbents or other appropriate containment measures.
  - ◊ Block the flow to any storm drains or watercourses.
  - ◊ If the spill occurs on paved or impermeable surfaces, clean up using "dry" methods (absorbent materials, floor dry and/or rags). Contain the spill by encircling with absorbent materials and do not let the spill spread widely.
  - ◊ If the spill occurs in dirt areas, immediately contain the spill by constructing an earthen dike.
  - ◊ If the spill occurs during rain, immediately cover spill with tarps or other material to prevent further contact with stormwater.
  - ◊ Notify the appropriate NDOT supervisor immediately. The supervisor is then responsible for notifying NDEP via the Spill Reporting Hotline (1-888-331-6337) as well as the Department's Hazardous Materials and Water Quality Sections.

- Hazardous Material Reportable Spills

  For hazardous material reportable spills that cannot be controlled by appropriately trained personnel in the immediate vicinity, the following steps shall be taken:

  - ◊ Notify the appropriate NDOT supervisor immediately. The supervisor is then responsible for notifying NDEP via the Spill Reporting Hotline (1-888-331-6337) as well as the Department's Hazardous Materials and Water Quality Sections.
  - ◊ Facility employees shall not attempt to clean up any materials, hazardous or otherwise, without being appropriately trained in the associated hazardous material and personnel protection requirements.
  - ◊ The services of a spill contractor, NDOT's current on-call spill response contractor, or HazMat team may be engaged if needed.
  - ◊ Other agencies which may need to be consulted include, but are not limited to, the Fire Department, the Public Works Department, law enforcement, the City or County Police, etc.

Maintenance and Inspection:

- Frequently inspect areas having a higher likelihood of spills (e.g. petroleum product and chemical storage areas) for threats, defective equipment, and spill cleanup supplies.
- Verify weekly that spill clean up materials are properly identified and are located in areas of higher potential for spills and leaks (storage, loading, and use) in sufficient quantities.
- Update spill prevention and control plans and regularly check the supply of clean-up and prevention materials whenever changes occur in the types of chemicals and products on site.
- Keep areas having a higher likelihood of spills (e.g. petroleum product and chemical storage areas) clean, organized and free of hazards.

Reportable and Non-Reportable Spills: A "spill" can be described as any pollutant, hazardous waste, or contaminate that has been spilled, leaked, pumped, poured, emitted, emptied, discharged, injected, escaped, leached, dumped, or disposed into the environment.

The reportable quantity for petroleum products such as oil, diesel, gasoline, and hydraulic fluid is 25 gallons, or 3 cubic yards of impacted material.

The reportable quantity for hazardous waste is based upon USEPA guidelines established under Title III List of Lists (40CFR Part 302). *A spill of any quantity that affects a waterway or storm drain system within the State of Nevada must be reported to NDEP, regardless of the quantity*.

Contact NDEP at 1-888-331-NDEP (6337) to report a Reportable Spill (or suspected Reportable Spill) and NDOT's Environmental Division at (775) 888-7013 as soon as possible.

Recordkeeping:

- All spill incidents and associated corrective actions must be reported to the Hazardous Materials and Water Quality Sections.

Stormwater Controls (SW)

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Inlet Protection

SW-1

An example of gravel bags being used to protect an inlet from sediment by creating a pool of water that allows particles to settle out prior to entering the storm drain system.

Description: Inlet protection is used to control or minimize pollutants that might otherwise enter the storm drain system. Inlet protection is typically deployed at drop inlets, but can be used within ditches or at other types of inlets. Inlet protection is most commonly used to reduce the amount of sediments entering the storm drain with gravel bags, or inlet filter fabric inserts, trash capture bags. Sometimes, a temporary blockage of an inlet is necessary to prevent liquid spills from entering a storm drain inlet. Common inlet protection measures include gravel bags, sediment logs, filter fabrics, etc.

Implementation:

- Identify any facility drop inlets, grates and stormwater conveyance channels.
- Check inlet and outlet structures for any damage or impairment to proper functioning. Repair any damage or remove obstructions as needed.
- Check inlet and outlet structures for accumulations of sediments or other materials that would suggest inlet protection is needed.
- Evaluate upstream watershed areas for inlets that may need protection to exclude sediments or other materials from stockpiles, disturbed soils areas, or other material sources. Install inlet protection as appropriate.
- Evaluate the driving and public safety component of inlet protection devices (e.g., gravel bags) in the roadway. In high traffic areas and on corners, sand or gravel bags may be a road hazard. Consider the safety related issues before placement.
- Sediment logs are inappropriate for inlet protection on impervious surfaces unless properly staked or weighted down.
- Perform appropriate housekeeping measures to ensure trash and other material does not end up in the storm drains. See BMP GP-4: Good Housekeeping.

- Refer to NDOT's Construction Site Best Management Practices (BMP) Manual for guidance on BMP selection, installation and maintenance.

Maintenance and Inspection:

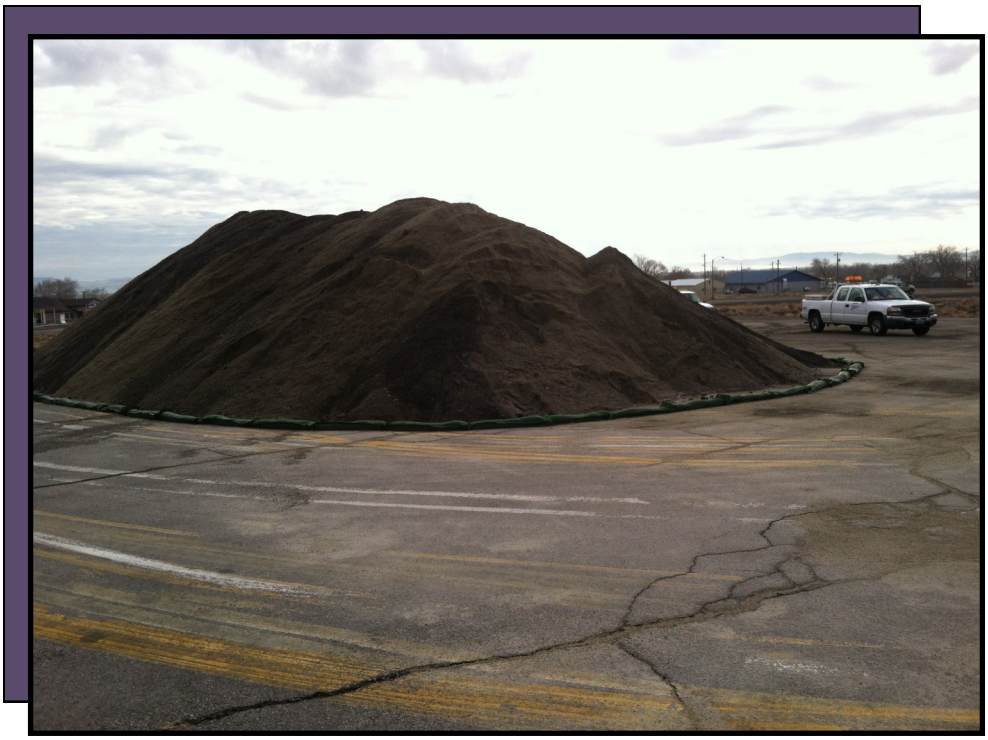
- Inlet protection requires frequent inspection and maintenance. Materials degrade over time and require on-going maintenance and eventually will require replacement. Gravel bags get run over by vehicles and commonly need to be repositioned. Inlet filters need to be inspected for integrity. Torn or split filters are completely ineffectual.
- To be effectual, remove accumulated sediment and debris on a regular basis (weekly during the wet months).
- Inspect all inlet protection devices before and after every stormwater event. During extended rainfall events, inspect inlet protection devices more frequently, as necessary. A good practice is to inspect inlet protection every 24 hours during extended rainfall events.

Recordkeeping:

- There are no specific recordkeeping requirements associated with this BMP.

Perimeter Controls

SW-2



Sediment logs (or "Straw Wattles") are effective tools in controlling sediments.

Description: Perimeter controls are installed around stockpiles, cut slopes, disturbed soils areas, etc, and used to intercept and slow runoff and allow sediments to settle out before the runoff leaves the contained area. Perimeter controls also help to visually define an area to exclude vehicle and pedestrian traffic.

Implementation: Perimeter controls can be used at maintenance facilities in a variety of ways to assist with the control and retention of sediments. Unlike guidance for construction sites, there are no hard and fast rules for usage, since the uses at maintenance facilities are so diverse. Perimeter control devices include sediment logs, sandbags, gravel bags, and silt fences.

Considerations include:

- When used on paved surfaces, use weights (bricks, rocks, tires, etc.) to anchor the logs and form good contact with the ground and prevent under-flow. Use a double layer/row of logs if possible.
- Deflect run-on and divert the flow away from the are to be protected.
- Perimeter controls around stockpiles must be re-deployed after accessing the stockpile.
- Control devices need to be overlapped a minimum of 18 inches — do not the abut ends.
- Sediment logs may not be appropriate for inlet protection. Refer to SW-1: Inlet Protection.
- High flow events may scour and flush any sediments trapped by a perimeter control device. Consider alternative BMPs if intense or long duration rain events are forecast.
- Sediment logs, sandbags, gravel bags, and silt fences are barriers and not filters. Fine particles will move through them.

- Sediment logs are minimally effective in retaining road salt or any material that can dissolve in water. Do not use sediment logs to protect salt stockpiles (move salt inside or cover with plastic sheeting and prevent run-on and runoff).
- Refer to NDOT's Construction Site Best Management Practices (BMP) Manual for guidance on BMP selection, installation, and maintenance.

Maintenance and Inspection:

- Inspect for proper placement, anchoring, gaps, flow paths, sediment leakage and depth of retained sediment.
- Inspect placement and use prior to rain events. If possible, move stockpiles or use other BMPs to protect sensitive areas and materials prior to rain events.
- Trapped sediments must be removed periodically to maintain proper function. Generally, sediment should be removed when the accumulation reaches three-quarters (3/4) of the barrier height.
- Repair or replace split, torn, unraveling, or slumping devices.
- Re-stake or anchor as necessary to prevent flow breakthrough.

Recordkeeping:

- There are no specific recordkeeping requirements associated with this BMP.

Decant Basins

SW-3

Detention facilities are used to capture sediments.

Description: Decant basins can be concrete or earthen ponds used to capture sediments through settling in runoff or process water before being discharged. Decant basins can be designed to fit many different site configurations and with many different inlet and outlet configurations.

Implementation:

- Decant basins may be constructed as a temporary cleaning or dewatering device to contain the wash water and sediment and prevent its discharge to the storm drain system or water courses.
- Decant basins can be concrete structures or plastic-lined basins with earthen sides.
- Decant basis need to be appropriate sized for the application and amount of water and sediment to be captured. Permanent basins or those constructed from an earthen berm more than 2 feet high must be designed by a licensed engineer.
- Perform appropriate housekeeping measures at each maintenance facility to ensure trash does not collect in decant basins. Refer to BMP GP-4: Good Housekeeping.
- Discharges from a decant basin must be covered by an NPDES permit or be discharged to the sanitary sewer. Discharges to the sanitary sewer must have written approval from the POTW.
- Accumulated sediment shall be removed prior to each use or before dismantling of the decant basin. Sediments should be dried and located in a manner that prevents discharge to the storm drain system.
- Dispose of accumulated sediment at an approved site.
- Conduct all cleaning activities during dry periods when possible.

Decant Basins

Maintenance and Inspection:

- Promptly repair any deterioration threatening the structural integrity of embankments or bottoms of any decant basin.
- Routinely inspect the decant facility before and after every rainfall event and weekly during its use.
- Accumulated sediment should be removed when 75% of the basin capacity is reached.

Recordkeeping:

- The volume of the sediment removed from facility decant basins shall be reported to the water quality section annually.

Buffer Zones

SW-4

A vegetated buffer zone can be used to remove and capture pollutants from stormwater runoff.

Description: Buffer zones are manmade or natural strips of vegetation that form a "buffer" between roadways, parking lots or other facilities and waterways. Buffer zones are used to protect waterways from contaminants in stormwater runoff by trapping sediment, slowing the flow of water, providing the opportunity for infiltration, allowing plants to uptake any nutrients, and providing an opportunity for biological breakdown of contaminants. At some maintenance facilities, an intentional strip of natural or managed vegetation may be used to protect surface water and improve runoff water quality. In some cases, existing vegetation strips can be managed as buffer zones and become an identified stormwater BMP. Other sites may have future opportunities for engineered buffer strips.

Implementation:

- Identify all existing buffer strips that may receive site runoff.
- Direct stormwater runoff from areas of sheet runoff to vegetative buffers, if feasible.
- The buffer strip should be at least 25 feet wide, but not more than 40 feet wide. Do not use on slopes over 6%.
- Buffers are best for smaller drainage basins of five acres or less in size.
- Vegetative buffers should not be used for concentrated flow discharges, as their effectiveness is limited and the zone is subject to erosion.
- Buffer strips should be planted with appropriate vegetation. Use native plants that do not require supplemental irrigation. Landscaping grasses and shrubs can be used in areas that are irrigated.
- Minimize to the extent possible, the use of fertilizers and pesticides.
- Use mulch or other erosion control methods on areas of the buffer zone soil with exposed soil.

- Use of existing vegetation requires planning, and may limit the area available for maintenance activities.

Maintenance and Inspection:

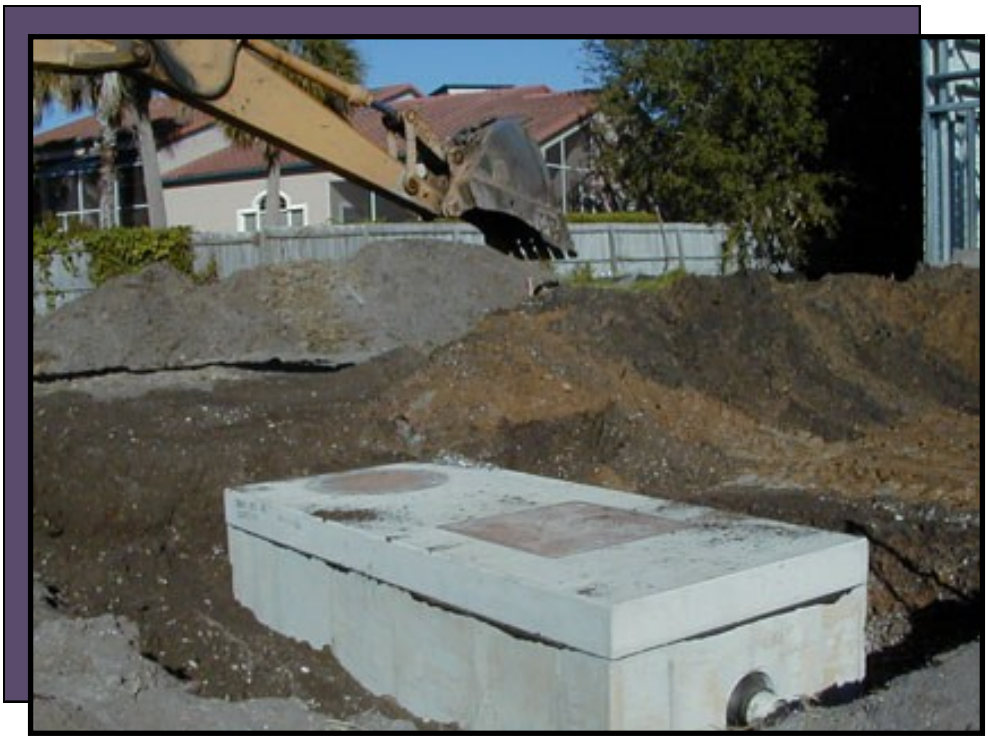
- Inspect buffer zones after storm events for evidence of erosion and repair erosion damage as necessary.
- Inspect buffer strips at least annually for damage, blockage, dead and dying plants, trash, and sediment accumulations.
- Collect trash, vegetation clippings, and accumulated sediment, and properly dispose of them. Do not allow these materials to reach the waterways or any storm drainage systems.
- Minimize vehicle and pedestrian use and soil disturbing activities in buffer areas. Vehicles and pedestrian traffic will compact the soil and may prevent growth.
- If buffer zones are irrigated, inspect irrigation system regularly for proper function and overspray.

Recordkeeping:

- There are no specific recordkeeping requirements associated with this BMP.

Stormwater Manufactured Treatment Device

SW-5



Sand/oil interceptors are installed below grade as a pre-treatment method to remove sediment and oil from stormwater or process wastewater.

Description: Stormwater manufactured treatment devices (SMTDs) are engineered, pre-manufactured treatment systems for removing particulates, oils, and other contaminants from stormwater runoff. These devices typically remove contaminants within one or more chambers that promote settling (grit and sand particles) and floatation of less dense materials and liquids (oils, greases, and scum). These devices may be installed as a pre-treatment device to remove sand, oil, and other contaminants from a stormwater runoff. Additionally, SMTDs can be installed in areas where there is the possibility of a significant spill, such as the paved area in front of equipment maintenance bays. Examples of SMTDs include sand/oil interceptors and medic filtration devices, e.g. "Jellyfish".

Implementation:

- Evaluations assessing the need to install SMTDs will continue to occur for all maintenance facilities.
- The location of each SMTD will be identified and included on the facility map. Refer to BMP GP-3: Facility Layout and Drainage.
- Facility supervisors shall provide training on maintenance requirements of all SMTDs. Training will emphasize that SMTDs are not primary treatment options to collect or treat spills or concentrated wastes, but are rather a "last line of defense" of treatment.
- Follow all manufacturers' recommendations for installation and maintenance.
- For most systems, it is important to maintain a certain standing water level in the unit to prevent oils and other debris from passing or detaching. If possible, verify the installation and function with manufacturer's recommendations.
- Use Department approved oil recovery haulers to service interceptors and removed oily accumulations.

- Sediment removed from the interceptor shall be properly disposed, which may entail disposal at a permitted landfill facility. Depending upon the requirements of the landfill, analytical testing of the material may be required.

Maintenance and Inspection:

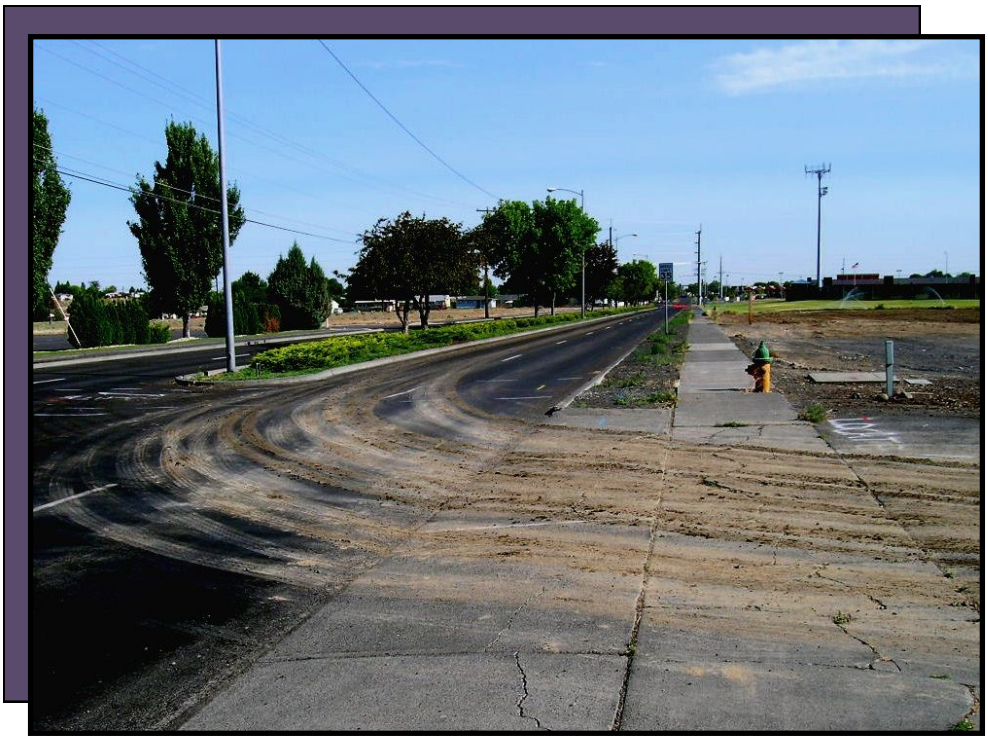
- Where the device allows, routine inspections should include lifting lids and obtaining an estimate of the accumulated material.
- All SMTDs are to be inspected annually and cleaned regularly .
- Any water pumped out, or any residues from cleaning, must be properly disposed.

Recordkeeping:

- Documentation of the maintenance and cleaning of SMTDs must be reported to the Hazardous Materials and Water Quality Sections annually. Document the dates of cleaning and volumes of wastes removed.
- Document and maintain tracking logs, invoices, and manifests associated with material disposal.

Track-Out Controls

SW-6



Sediment controls are needed at this site to prevent sediments from being tracked on to the roadway.

Description: Tracked materials and vehicle-related deposits may result in sediment, turbidity, and nutrient laden runoff entering the storm drain system and waterways. The purpose of this BMP is to provide guidance on the implementation of track-out controls at NDOT maintenance facilities, particularly unpaved storage or stockpile areas.

Implementation:

- Route onsite runoff from unpaved areas through sediment-trapping devices before discharge.
- Install signs directing traffic use at the designated point of ingress/egress to unpaved areas.
- Require all employees use the designated entrances.
- Install tracking controls at ingress/egress points to unpaved areas.
- Refer to the NDOT Construction Best Management Practices (BMP) Manual for more information on installation, maintenance, and inspection requirements of tracking control measures.

Maintenance and Inspection:

- Inspect track-out control systems regularly for damage and performance. Remove and properly dispose sediment accumulations when the system becomes clogged or as needed.
- Maintain dust control during working hours and clean paved surfaces of sediments at the end of each work shift or day. Track-out must be cleaned daily.
- Implement GP-5: Site Sweeping as needed to maintain dust control and prevent sediment from leaving the site.

Track-Out Controls

Recordkeeping:

- There are no specific recordkeeping requirements for this BMP.

Vehicle and Equipment Maintenance (VM)

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Fluid Drip and Spill Control

VM-1

Hydraulic lines are connected to the spreader rack to prevent fluid drips on the ground.

Description: Fluids are used in equipment and vehicles that can pose a risk to water quality if released to the environment. Proper storage, drip prevention, and disposal of these fluids is critical in ensuring these contaminants do not reach the storm drain system and the waterways.

Implementation:

- Install drip pans or adsorbent pads under vehicles and equipment before draining and replacing fluids to protect against inadvertent spills.
- Install drip pans or absorbent pads under leaking vehicles and equipment.
- When connecting/disconnecting equipment hydraulic lines, keep rags or absorbent pads at hand to clean drips or leaks. Wrap the ends of hydraulic line with rags and store with the ends up-turned to prevents leaks and drips; couple hydraulic lines to reservoirs attached to the spreader racks (where available); place hydraulic lines in the sander beds; etc.
- Install drain inlet protection over any nearby storm drains before draining and replacing any fluids. Refer to BMP SW-1: Inlet Protection.
- When possible, drain and replace vehicle fluids inside or in designated maintenance areas that have proper containment to protect against potential leaks and spills. Refer to VM-3: Equipment Repair.
- Immediately after completing the required fluid service, transfer all spent vehicle and equipment fluids from portable storage containers to the designated final storage waste container.
- All final waste storage containers must be watertight, have the ability to be sealed, and be clearly labeled with its contents.

- All spent fluids, including used oil, shall be recycled in a timely manner to the extent practical.
- Clean up any spilled vehicle fluids on the paved surfaces with dry absorbents or rags, or "dry-sweeping". Properly dispose of cleanup materials. Refer to BMP SP-1: Spill Prevention and Response.
- Saturated absorbents used to clean minor equipment leaks is to be swept up and disposed of as general refuse.

Maintenance and Inspection:

- Maintain and keep clean all storage areas that contain fresh and spent fluids.
- Maintain a reserve of drip pans, absorbent pads, rags, and spill containment and clean up supplies.
- Place supplies of drip pans, rags, and absorbent pads at various locations about the maintenance facility so that quick and easy access encourages their use.
- Routinely inspect the immediate area around all stored vehicles and equipment for evidence of leaks.
- Examine parking areas, work areas, and vehicle and equipment storage areas for evidence of drips and leaks (stains, puddles, pools, etc.). Determine if possible the source of any leaks and have the equipment serviced or provide proper storage measures.

Recordkeeping:

- There are no specific recordkeeping requirements associated with this BMP.

Vehicle Washing

VM-2

Vehicle washing performed properly at a wash pad to contain wash water and discharge it to the sanitary sewer.

Description: NDOT equipment and vehicles are routinely washed and cleaned to maintain their integrity and functionality. The sediment, salt, brine, oils, and other potential pollutants removed during washing pose a threat to the waterways if the wash water enters the storm drain system. Consequently, all NDOT equipment and vehicles shall be washed or cleaned in a manner that prevents the wash water and pollutants from entering the storm drain system and water courses.

Implementation: Below are several specific practices that should be followed to ensure each NDOT vehicle washing area is in compliance with the MS4 Permit.

- Clean equipment and vehicles only on properly functioning and designated wash pads.
- Prominently display signage identifying designated wash pads and prohibiting vehicle maintenance.
- Remove accumulated sediment and debris from the wash pad by sweeping or rinsing into the wash pad settling pond.
- Do not use detergents, hot water, or other chemicals that may emulsify (dissolve) oils and greases and cause them to pass through the sand/oil interceptor. Use of any detergent or other chemical must be approved in advance by the Hazardous Materials Section and the POTW.
- Use care when washing vehicles and equipment to prevent overspray.
- Should wash water inadvertently escape the wash pad area, deploy appropriate inlet protection and perimeter control measures (e.g. gravel bags, inlet filters) to prevent materials from entering the storm drain system.

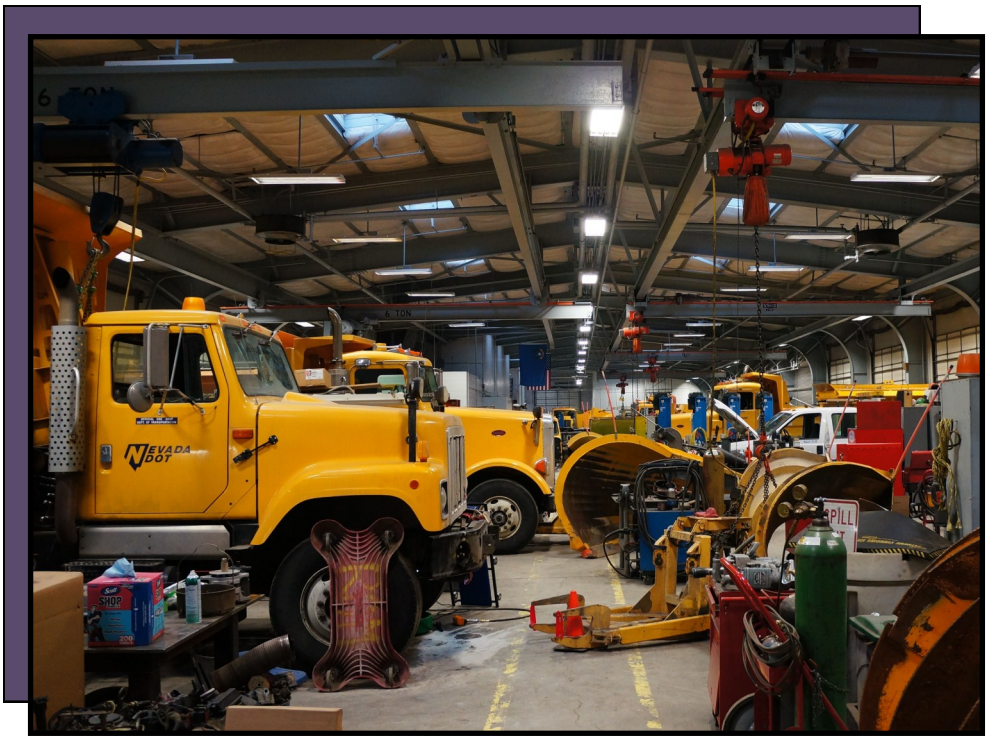
- All drains and laterals from the designated wash pads must be maintained and periodically cleaned to prevent clogging by fines, gravel, or other materials.
- Routinely inspect each wash pad to make sure no water is discharging into the stormwater facilities.
- Wash pad sediment settling ponds shall be routinely inspected and maintained as necessary to ensure proper function. Accumulated sediment shall be removed prior to reaching 75% of settling pond capacity.
- When wash pad sediments are to be transferred and dried onsite prior to disposal, the sediments shall be placed in a designated area where drainage from the stockpile cannot enter the storm sewer system and has complete perimeter containment.

Recordkeeping:

- Volume of material removed from wash pads settling basins and oil/water separators is to be reported to the Hazardous Materials and Water Quality Sections annually.
- Document and maintain tracking logs, invoices, and manifests associated with material disposal.

Equipment Repair

VM-3



Performing vehicle maintenance indoors is a practice that will minimize the potential to discharge pollutants.

Description: Vehicle and equipment maintenance and repair activities are routinely performed at NDOT maintenance facilities. These activities often include the use or handling of petroleum fluids, antifreeze, brine, solvents, and/or lubricants. The purpose of this BMP is to mitigate the potential for pollutants associated with these activities from entering the stormwater system.

Implementation:

- Maintenance activities should be performed indoors or under overhead cover whenever possible to prevent or reduce the exposure to precipitation.
- Utilize drop inlet protection BMPs, as appropriate. Refer to SW-1: Inlet Protection.
- Drip pans or other containment measures should be placed under vehicles and equipment when performing maintenance or repair activities outside.
- Fluid spills shall be cleaned up immediately upon discovery using appropriate means (e.g. floor dry, absorbent pads) with the resultant waste material disposed of properly. The use of wet cleanup methods that could result in a discharge to the stormwater system is prohibited. Refer to BMP SP-1: Spill Prevention and Response.
- Absorbent spill clean-up materials should be readily available and clearly identified in maintenance areas. Used absorbents should be disposed of promptly and properly.
- Drain vehicle and equipment fluids before working the item. Before draining, be sure the collection pan has adequate capacity to hold all the fluid to be drained.
- Before refilling, ensure the drain plug has been installed and tightened. Do not over fill the equipment.
- Waste fluids shall be properly collected, stored and disposed or recycled.

Equipment Repair

- Used equipment fluid filters shall be completely drained, to the extent possible, before disposal. Drained oil shall be collected and properly stored and disposed. Drained oil and fuel filters shall be disposed in waste containers with lids and protected from precipitation.
- Clean parts with aqueous detergent based solutions or non-chlorinated solvents such as kerosene or high flash mineral spirits, and/or use wire brushing or sand blasting whenever practicable. Choose cleaning agents that can be recycled. Self-contained parts-washers should be used whenever possible.
- Properly dispose of or recycle tires, batteries, used filters, petroleum products, and spill cleanup materials. Refer to MS-2 Used Oil Handling and Storage, MS-10: Tires, and MS-11 Battery Storage and Recycling.
- Provide impermeable spill containment dikes or secondary containment around stored petroleum product and chemical drums.
- Drip pans or other containment measures are to be placed under leaky equipment waiting for repair.
- Avoid parking equipment waiting for repair (i.e., down-line areas) near storm drain inlet and conveyances.
- Rinsing or washing of equipment repair bays, or staging areas where the resultant water has the potential to discharge pollutants in the storm drain is prohibited.

Maintenance and Inspection:

- On a routine basis, all vehicle and equipment maintenance areas shall be inspected for potential pollutants from service and equipment vehicles.
- Routinely inspect and clean or replace inlet protection BMPs as necessary.
- Maintain clean, orderly, and debris-free vehicle and equipment maintenance areas.
- Maintain spill kits in vehicle and equipment maintenance areas.

Record Keeping

- There are no specific recordkeeping requirements associated with this BMP.

Fueling Stations

VM-4

Good example of a fueling station with proper signage, fire extinguisher and spill kit.

Description: Fueling stations are common at many maintenance facilities. Fueling facilities are inherently at higher risk for accidental spills and leaks that can lead to stormwater pollution. Rigorous observance of BMPs by employees are necessary to prevent accidents and spills from occurring.

Implementation:

General Fueling Facility Design Guidelines:

- Each fueling station should have an impervious surface graded in a manner that prevents ponding and that directs runoff to a sump or approved collection device. Avoid directing stormwater runoff from fueling areas to the storm drain system.
- All storage tanks shall be equipped with overflow protection accessories and appurtenances.
- Each fueling station shall have a well-marked and accessible emergency shutoff switch.
- Nozzles used in vehicle and equipment fueling shall be equipped with an automatic shut-off to control drips.
- Provide a canopy that protects the fueling area from precipitation.
- Provide enough lighting to allow users to see drips or spills at night.

Training, Spill Prevention and Cleanup

- Facility supervisors are to train employees on the appropriate procedures for spill containment and cleanup. Refer to SP-1 Spill Prevention and Response.
- Facility supervisors are to train employees on proper vehicle and equipment fueling operations.

- A qualified NDOT employee shall observe refueling operations when receiving deliveries. This includes confirming fill caps are installed correctly and checking for spills. Fueling operations shall never be left unattended.
- Each NDOT fuel station shall have the appropriate spill kits available. Spill kits shall be labeled, visibly signed, and stored in areas that are conducive for immediate spill response.
- All small fuel spills (less than five gallons) must be immediately cleaned up. All spills in excess of five gallons must be reported to NDOT's Hazardous Materials and Water Quality Sections at (775) 888-7013 for a post-event evaluation.
- Fueling stations shall be cleaned using dry methods. Saturated absorbents shall be properly disposed.
- Fuel spills of any quantity entering the storm drain system shall be reported to NDEP via the Spill Response Reporting Hotline at (888) 331-6337 as well as NDOT's Hazardous Materials and Water Quality sections.
- Leaking fuel pumps shall be reported to the appropriate District Office for immediate repair.

User Guidelines

- Turn off the motor when fueling.
- Do not smoke.
- Never top off fuel tanks, and stop filling when dispensing nozzle shuts off the first time.
- Remain at the vehicle throughout fueling operations.

Inspection and Maintenance:

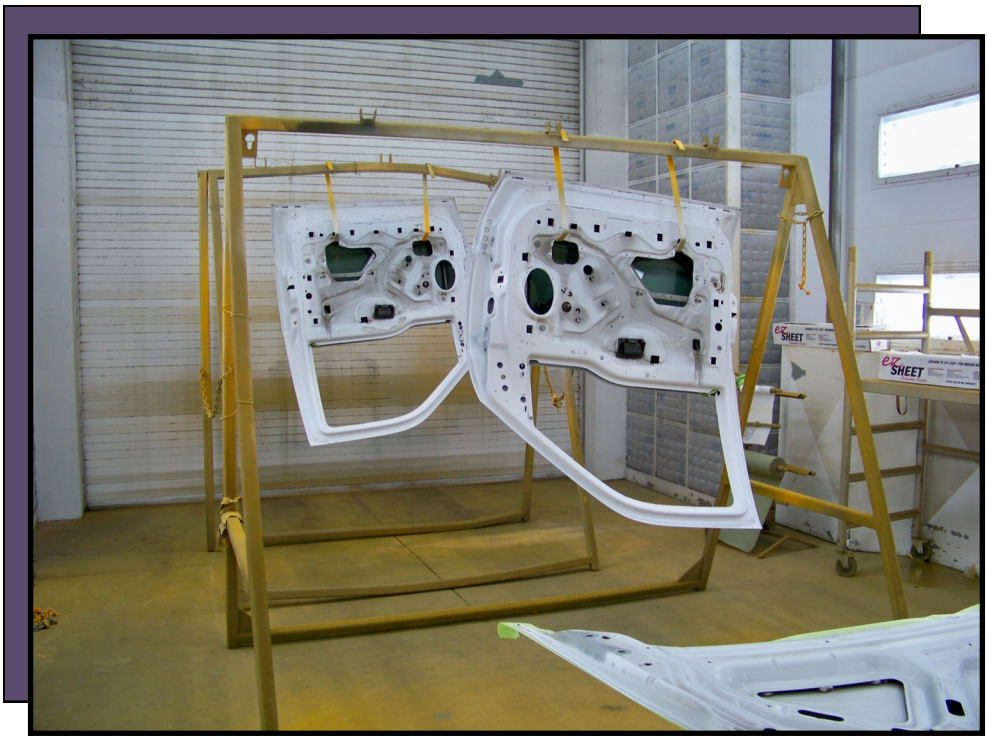
- Regularly check that the overfill nozzle protection is in working order.
- Routinely test emergency shutoff systems. Belowground tank systems are to be checked every 30 days; above ground systems are to be checked visually every 7 days.
- Fueling areas, fuel tanks, and adjacent drainage areas shall be inspected daily for evidence of fuel leaks.
- Fueling equipment should be routinely inspected for proper operation and function.
- Maintain spill cleanup kits at each site.

Recordkeeping:

- All fuel spills shall be recorded and property reported. Refer to SP-1: Spill Prevention and Response.

Vehicle and Equipment Painting

VM-5



Good example of a clean, designated indoor vehicle and equipment painting area.

Description: Vehicle and equipment painting is a multifaceted process that may include preparation (cleaning, sandblasting, grinding, patching, repair, etc.) and coating. All painting activities have the potential to generate pollutants that can be discharged to the storm drain system or waterways. This BMP fact sheet describes the practices needed to mitigate the discharge of stormwater pollutants.

Implementation:

- Utilize stormwater inlet protection BMPs (see SW-1: Inlet Protection) for stormwater facilities in the vicinity during any blasting, painting, mixing, or refilling activities.
- Allow sufficient drying time to avoid exposing wet paint to precipitation and runoff.
- Store all paint, process chemicals, and cleaning chemicals under cover or indoors, and away from floor drains, stormwater facilities and watercourses.
- Store paint in original containers or in other compatible containers that are clearly labeled with name of chemical, handling instructions, and health or environmental hazards.
- Sandblasting and other painting activities should be performed indoors whenever possible.
- Dust-less blasting is encouraged.
- Sandblast waste is to be promptly cleaned up and properly disposed.
- Outdoor painting activities should not occur during or within 24 hours of a forecasted precipitation event.
- Use funnels and pumps to minimize spills during mixing and refilling activities.
- Maintain spill clean-up materials on site at all times.

Vehicle and Equipment Painting

- Immediately clean up any spill. Use dry cleanup methods. Refer to SP1: Spill Prevention and Response.
- Clean water-based paint from brushes and equipment in sinks connected to the sanitary sewer or in portable containers that can be emptied into the sanitary sewer.
- Clean oil-based paint from brushes and equipment within contained equipment and where thinners and solvents can be collected in designated containers for re-use, recycling and/or proper disposal.
- Waste paint should be disposed of immediately to avoid waste accumulation.
- Do not clean any equipment in areas where runoff will enter the sanitary sewer or storm drain systems.
- Allow empty paint container to thoroughly dry (harden) before disposal.
- Unused or waste paint should be properly recycled or disposed by a waste hauler. Do not dispose waste paint in the sanitary sewer or storm drains.
- Store used or waste paint containers inside or in areas protected from precipitation.

Maintenance and Inspection:

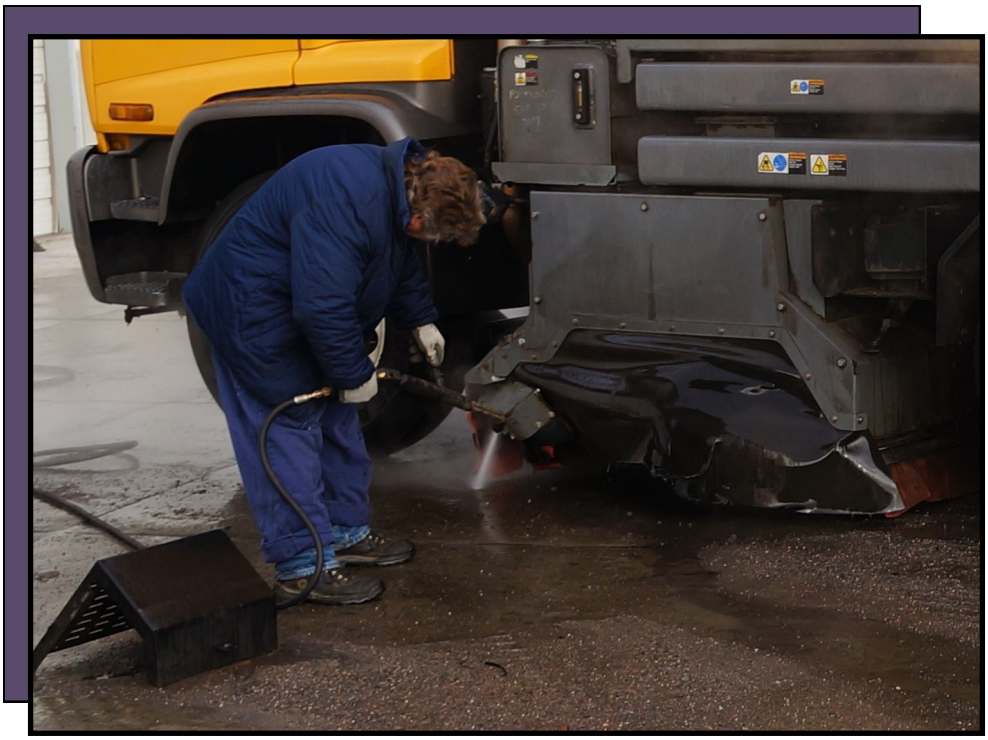
- Inspect paint storage and use areas regularly for evidence of leaks, spills, or signs of container deterioration.
- Maintain spill kits in close proximity to paint storage and use areas.
- Review and update the paint storage inventory on a regular basis.

Record Keeping

- Maintain current Safety Data Sheets (SDSs) in close proximity to paint storage and use areas and accessible to employees.

Equipment Steam Cleaning

VM-6



Steam cleaning equipment must be performed at designated locations.

Description: Occasionally, equipment must be steam cleaned before repairs can be made or to maintain proper functionality. The sediment, salt, brine, oils, and other potential pollutants removed during steam cleaning can pose a threat to the waterways. Consequently, all NDOT equipment steam cleaning must be performed at designated steam cleaning pads that discharge to the sanitary sewer through an approved pretreatment device.

Implementation:

- Steam clean equipment only on properly functioning and designated pads.
- Prominently display signage identifying designated steam cleaning pads.
- Steam cleaning pads shall be equipped with an oil/water separated that discharges to the sanitary sewer. They shall not discharge to the storm drain system.
- Sweep or vacuum the steam cleaning pad to remove sediments and debris. Sediments may also be washed down to the settling pond (if present).
- Do not use detergents, solvents, or other chemicals that may emulsify (dissolve) oils and greases and cause them to pass through the sand/oil interceptor. Use of any detergent or other chemical must be approved in advance by the Hazardous Materials Section and the POTW.
- Use care when cleaning oversized equipment to prevent overspray.
- Should wash water inadvertently escape the steam cleaning pad area, deploy appropriate inlet protection and perimeter control measures (e.g. gravel bags, inlet filters) to prevent it from reaching the storm drain system.

Equipment Steam Cleaning

- All drains and laterals from the designated steam cleaning pad must be maintained and periodically cleaned to prevent clogging by fines, gravel, or other materials.
- Routinely inspect each steam cleaning pad to make sure no water is discharging into the stormwater facilities.

Maintenance and Inspection:

- On a routine basis, steam cleaning areas shall be inspected for potential pollutant migration outside of the control area.
- Routinely inspect, clean or replace and nearby BMPs as necessary.
- Maintain clean, orderly, and debris-free cleaning areas.
- Maintain a supply of appropriate spill or oil clean-up supplies.

Recordkeeping:

- Document and maintain tracking logs, invoices, and manifests associated with material disposal.
- Volume of material removed from the oil/water separators is to be reported to the Hazardous Materials Section annually.

Paint Truck Cleaning

VM-7

Paint trucks need to be cleaned in a manner that prevents the discharge of paints or cleaners to the storm drain system.

Description: Paint trucks must be cleaned and maintained in a manner that ensures potential contaminants do not reach the storm drain system or water courses.

Implementation:

- Park paint trucks in designated areas, away from storm drains and waterways. Paint truck storage areas should be paved, where possible, to facilitate clean up of drips or leaks. Otherwise utilize plastic sheeting or other adequate means to collect drips, spills, and leaks.
- Maintain an adequate amount of sorbents, rags, spill control pigs, booms, plastic sheeting onsite to contain and clean up any accidental release of liquid product.
- Clean up any spilled fluids immediately using dry clean methods. Properly dispose of clean up materials. Refer to SP-1 Spill Prevention and Response.
- Where possible, load and remove paint carboys inside or in designated areas with proper containment.
- When possible, drain paint lines/hoses and nozzle systems inside or in designated areas with proper containment.
- Do not calibrate spray patterns within 24 hours of a forecasted storm event.
- Do not calibrate spray patterns near storm drain inlets.
- Perform paint truck maintenance activities indoors or under overhead cover whenever possible to prevent or reduce the exposure to precipitation.
- When cleaning, use water and avoid the use of solvents.

Paint Truck Cleaning

- Collect, store and properly dispose of all residues generated while cleaning, empting or servicing paint trucks.
- Do not dispose cleaning residues into the storm drain.
- Cleaning residues may be disposed to the sanitary sewer system with written consent from the Hazardous Materials Section and the POTW, or displaced offsite by a licensed waste hauler.

Maintenance and Inspection:

- Maintain an adequate supply of absorbents and clean up supplies at all times.
- Routinely inspect the immediate area around paint truck parking and cleaning areas for evidence of spills or leaks (stains, puddles, pools, etc.). Determine if possible the source of any leaks and have the equipment serviced or provide proper control measures.

Recordkeeping

- Document and maintain tracking logs, invoices, and manifests associated with materials disposal.

Distributor Truck Cleaning

VM-8

Distributor trucks need to be cleaned in a manner that does not discharge oils and grit to the storm drain system. (Photo Bear Cat)

Description: Distributor trucks are used in chip seal operations for the application of the tack coat (liquid asphalt, emulsified or polymer emulsified binder). These fluids along with grit accumulations products used to clean the equipment pose a risk to water quality if released to the environment. Proper storage, maintenance, drip prevention, and cleaning of distributor trucks is critical in ensuring these potential contaminants do not reach the storm drain system and the waterways.

Implementation:

- Park trucks inside or under overhead cover whenever possible.
- Park trucks in designated areas, away from storm drains and waterways. Distributor truck storage areas should be paved, where possible, to facilitate clean up of drips or leaks. Otherwise utilize plastic sheeting or other appropriate means to avoid soil contamination.
- Maintain an adequate amount of sorbents, rags, spill control pigs, booms, plastic sheeting on-site to contain and clean up and accidental release of liquid product.
- Clean up any spilled fluids immediately. Properly dispose of clean up materials. Refer to SP-1 Spill Prevention and Response.
- Use absorbent pads, drip pans, or other appropriate containment measures where possible to protect against inadvertent product release.
- Where possible, fill and drain tack coat inside or in a designated area that has proper containment to protect against spills.
- Calibrate the spray pattern in the field on the roadway to be sealed. Do not calibrate, test or adjust the spray in the yard.

Distributor Truck Cleaning

- Perform distributor truck maintenance activities indoors or under overhead cover whenever possible to prevent or reduce the exposure to precipitation.
- When cleaning, use detergents and avoid the use of solvents when possible.
- Collect, store and properly dispose of all residues generated while cleaning, empting or servicing distributor trucks.
- Do not dispose of cleaning residues into the storm drain.
- Cleaning residues may be disposed to the sanitary sewer system only with written consent from the Hazardous Materials Section and the POTW.
- All spent fluids, including residual tack coat shall be recycled or properly disposed in a timely manner and to the extent practical.

Maintenance and Inspection:

- Maintain an adequate supply of absorbents and clean up supplies at all times.
- Maintain and keep clean distributor truck areas.
- Routinely inspect the immediate area around distributor truck parking and filling areas for evidence of spills or leaks (stains, puddles, pools, etc.). Determine the source of any leaks, if possible, and have the equipment serviced or provide proper control measures.

Recordkeeping

- There are no specific record keeping associated with this BMP. However, refer to SP-1: Spill Prevention and Response for recordkeeping requirements for spills.

Vehicle and Equipment Storage (VS)

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Automobile Parking Areas

VS-1

Maintaining a clean parking area will mitigate the potential for pollutants, such as sediment, to degrade stormwater.

Description: Asphalt or impervious employee vehicle parking areas are common at maintenance facilities. Over time, these surfaces have a tendency to accumulate sediment and debris that can negatively impact the water quality of the surrounding natural watercourses. This BMP provides guidance on keeping these areas clean and improving stormwater runoff quality.

Implementation:

- Setup a regular schedule to have all employee parking areas mechanically swept.
- Install and maintain inlet protection (see SW-1: Inlet Protection) to capture sediment and prevent debris from entering the stormwater system.
- Immediately clean noticeable vehicle fluids, drips, or spills using dry cleanup methods.
- When possible, divert stormwater runoff from parking lots to sediment basins or stormwater swales.
- Install signage at storm drains and grates that has a "No Dumping—Drains to the Waterway" type message.
- When possible, install manufactured stormwater treatment devices to treat stormwater runoff from automobile parking areas. Refer to SW-5: Manufactured Stormwater Treatment Devices.

Maintenance & Inspection:

- Refer to SW-1 Inlet Protection for specific information on maintenance and inspection requirements of inlet protection BMPs.

- Maintain a clean and debris-free parking area.
- Patch or replace failing pavement.
- Routinely inspect all parking areas for sediment or debris accumulations and vehicle fluid leaks.
- Include employee parking areas when performing routine facility sweeping. Refer to GP-5 Site Sweeping.

Recordkeeping:

- There are no specific recordkeeping requirements associated with this BMP.

Vehicle and Equipment Storage

VS-2

Vehicle and heavy equipment stored orderly on an impervious surface.

Description: Vehicles and heavy equipment are generally located outside. These areas have a potential to accumulate sediment, debris, and vehicle fluids that can potentially lead to stormwater pollution if not maintained, inspected, and cleaned on a regular basis. This BMP provides guidance on the proper practices for vehicle and equipment storage from a stormwater runoff perspective.

Implementation:

- Install signage at storm drainage facilities including storm drain inlets.
- Locate outdoor equipment storage areas away from storm drain inlets and waterways. Refer to GP-3: Facility Layout and Drainage.
- All outdoor vehicle and equipment storage areas should be located on impervious surfaces such as asphalt. When possible, avoid storing vehicles and equipment on gravel or bare soil.
- Consider draining vehicles and equipment of fluids if long-term storage is expected (i.e. multiple months).
- Utilize drop inlet protection BMPs at outdoor storage areas. Refer to SW-1 Inlet Protection.
- Store vehicles and equipment indoors or under overhead cover whenever possible.
- When possible, use berms or curbs to limit run-on into vehicle and equipment storage areas.
- Consider using BMPs (like oil/water separators, basins, swales, etc.) to treat stormwater runoff from these storage areas. Refer to SW-5: Manufactured Stormwater Treatment.
- Use drip pans or other containment measures under leaking vehicles and equipment.

Vehicle and Equipment Storage

- Vehicles and equipment shall be monitored for fluid leaks as part of day-to-day operations; upon their discovery, proper containment measures shall be deployed (e.g. drip pans, floor dry, berm) to prevent migration into the stormwater system. Promptly correct the situation to prevent further discharges.
- Fluid leaks shall be cleaned up immediately upon discovery using appropriate means (e.g. floor dry, absorbent pads) with the resultant waste material disposed of properly. The use of wet cleanup methods that could result in a discharge to the storm drain system is prohibited.
- Sand/salt spreader beds and snow plow hydraulic hoses shall be stored in a fashion that prevents hydraulic fluid leaking onto the ground. Refer to VM-1: Fluid Drip and Spill Control.
- Sand, salt, and anti-icing liquid spilled within the spreader rack areas shall be cleaned up upon discovery. Hydraulic fluid-saturated soil shall be removed and disposed of appropriately.
- Hydraulic fluid leaks shall be cleaned up upon discovery using dry clean-up methods (e.g. floor dry) with the saturated material disposed appropriately.

Maintenance & Inspection:

- Maintain spill kits in storage areas or within close proximity.
- Maintain clean and debris-free storage areas.
- Conduct preventive maintenance on all vehicles and equipment to prevent fluid leaks.

Recordkeeping:

- There are no specific recordkeeping requirements associated with this BMP.

Loading/Unloading Activities

VS-3

Maintaining a clean loading dock is a practice that can mitigate stormwater degradation from pollutants that may spill or leak during loading/unloading.

Description: Accidental spills and leaks are common occurrences during loading and unloading activities. Such accidents are a potential source of stormwater contaminants and loading/unloading activities should employ certain practices and operational guidelines to help minimize the potential for pollutants to be discharged to the storm drain system.

Implementation:

- Make certain that good housekeeping procedures are being followed. Refer to GP-4: Good Housekeeping.
- When possible, limit loading and unloading activities to designated locations and away from storm drain inlets and conveyances.
- If loading or unloading must occur near a storm drain inlet , install inlet protection measures as appropriate. Install covers on storm drains if loading/unloading liquids near storm drains. Refer to SW-1 Inlet Protection.
- Inspect each delivery for damage before unloading it. Reject all damaged or leaking materials or supplies.
- Immediately clean up spills and properly dispose of any excess packing material (pallets, storage containers, cardboard, plastics). Refer to SP-1: Spill Prevention and Response.
- Do not wash spills or debris into the storm drains or inlets. Use dry cleanup methods when possible to clean liquid spills.

Loading/Unloading Activities

Maintenance & Inspection:

- Provide spill kits within close proximity to all loading and unloading areas.
- Maintain and keep the areas around the loading/unloading areas clean by dry sweeping and picking up debris.

Recordkeeping:

- There are no specific record keeping requirements for this practice.

Portable Toilets

VS-4

Well maintained and emptied portable toilets.

Description: Spills or improper portable toilet waste management practices may lead to the release of nutrients, bacteria, viruses, and oxygen-demanding pollutants that could impact stormwater quality. This BMP identifies procedures and practices to minimize or eliminate the discharge of portable toilet waste to storm drainage systems or to watercourses.

Implementation:

- Hold regular meetings to discuss and reinforce proper septage disposal procedures (incorporate into regular safety meetings).
- Portable toilets should be stored and serviced away from drainage facilities (Refer to GP-3: Facility Layout and Drainage.
- Store portable toilets in a clean and empty condition.
- Immediately contain and clean up any spills or overflows, and properly dispose of septic waste and spill response materials. Refer to SP-1: Spill Prevention and Response.
- If using an onsite disposal system, such as a septic system, comply with local health agency requirements.
- Ensure that sanitary/septic facilities are maintained in good working order. Damaged toilets shall be repaired/replaced immediately.
- Use licensed sanitary/septic waste haulers. Immediately report contractor septic waste spills and ensure appropriate contractor spill response efforts.
- Temporary sanitary facilities shall be secured to prevent overturning.
- When deployed on the ground, select a flat level area and anchor the portable toilet.

Portable Toilets

Maintenance & Inspection:

- Maintain and repair portable toilets as required.
- Inspect for leaks or other repair issues after each day of use.

Recordkeeping:

- There are no recordkeeping requirements for this practice.

Appendix A – NDOT's MS4 Permit

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Permit NV0023329

National Pollutant Discharge Elimination System

Permit for Discharges from Nevada Department of Transportation

Municipal Separate Storm Sewer Systems

Authorization to Discharge under the National Pollutant Discharge Elimination System in compliance with the provisions of the Clean Water Act, as amended, (33 U.S.C. 1251 et. seq.), except as provided in Part I.C of this permit, and Chapter 445A of the Nevada Revised Statutes, the Nevada Department of Transportation is authorized to discharge municipal stormwater runoff to waters of the United States in accordance with the conditions and requirements set forth herein:

Nevada Department of Transportation
1263 South Stewart Street
Carson City, NV 89712

This permit shall become effective on July 7, 2010, and the authorization to discharge shall expire at midnight July 6, 2015.

Signed this 7th day of July, 2010.

Steve McGoff. P.E.
Staff Engineer III
Bureau of Water Pollution Control

Part I. Permit Coverage and Authorized Discharges under this Permit

I.A. Permit Area

I.A.1. This permit covers state and interstate highways and their right-of-ways within the jurisdictional boundary of the Nevada Department of Transportation ("NDOT" or "Permittee") served by, or otherwise contributing to discharges into receiving waters of the United States from municipal separate storm sewer systems ("MS4s") owned or operated by NDOT.

I.B. Authorized Discharges

I.B.1. This permit authorizes new or existing discharges composed entirely of stormwater (and allowable non-stormwater discharges) into NDOT's MS4 (excluding Indian Lands), as defined in 40 Code of Federal Regulations ("CFR") §122.26. NDOT is authorized to discharge in accordance with its approved Stormwater Management Program ("SWMP"), and other terms and conditions of this permit.

I.B.2. The following are authorized discharges:

I.B.2.a **Stormwater discharges.** This permit authorizes stormwater discharges to waters of the United States from NDOT's MS4 identified in Part I.B.2.b, except discharges excluded in Part I.C.

I.B.2.b **Non-stormwater discharges.** NDOT is authorized to discharge the following non-stormwater sources provided that the Nevada Division of Environmental Protection ("NDEP") has not determined these sources to be substantial contributors of pollutants to NDOT's MS4:

I.B.2.b.i Potable water line flushing during testing or fire hydrant testing;
I.B.2.b.ii Diverted stream flows not requiring a separate permit;
I.B.2.b.iii Springs or rising ground waters;
I.B.2.b.iv Uncontaminated groundwater infiltration (infiltration is defined as water other than wastewater that enters a storm sewer system, including sewer service connections and foundation drains, from the ground through such means as defective pipes, pipe joints, connections, or manholes. Infiltration does not include, and is distinguished from, inflow.);
I.B.2.b.v Discharges from potable water sources not requiring a separate permit;
I.B.2.b.vi Residential foundation and/or footing drains;
I.B.2.b.vii Air conditioning condensate;
I.B.2.b.viii Irrigation water from lawns and landscaping;
I.B.2.b.ix Water from residential crawl space pumps;
I.B.2.b.x Flows from natural riparian habitats and wetlands not requiring a separate permit;

I.B.2.b.xi De-chlorinated swimming pool discharges;
I.B.2.b.xii Individual residential car washing;
I.B.2.b.xiii Water incidental to street sweeping (including associated side walks and medians) and that is not associated with construction activities;
I.B.2.b.xiv Discharges or flows from fire fighting activities; and
I.B.2.b.xv Dewatering activities not requiring a separate permit.

I.C. Non-Authorized Discharges

I.C.1. This permit does not authorize the following:

I.C.1.a Discharges of non-stormwater, whether or not mixed with stormwater, unless such non-stormwater discharges are:

I.C.1.a.i Currently covered under a separate National Pollution Discharge Elimination System ("NPDES") permit, or

I.C.1.a.ii Included in Part I.B. 2 of this permit, or

I.C.1.a.iii Determined not to be a substantial contributor of pollutants to waters of the U.S. by NDEP.

I.C.1.b Stormwater discharges currently covered under a separate NPDES permit.

I.C.1.c Discharges that do not comply with the Nevada's anti-degradation policy for water quality standards.

I.C.2. Stormwater discharges associated with industrial activity as defined in 40 CFR§122.26(b)(14)(i)-(ix) and (xi) are identified and permitted through a separate NPDES General Industrial Activity permit. These discharges are authorized under NDEP's General Permit NVR050000.

I.C.3. Stormwater discharges associated with construction activity as defined in 40 CFR§122.26(b)(14)(x) or 40 CFR§122.26(b)(15) are identified and permitted through a separate NPDES General Construction Activity permit. These discharges are authorized under NDEP's General Permit NVR100000.

I.C.4. If it is determined that NDOT's discharges cause or contribute to an instream exceedance of water quality standards, NDEP may require corrective action or an application for a separate individual permit or alternative.

I.C.5. NDOT shall comply with all applicable Federal, State, or local laws, regulations, or ordinances.

Part II. Discharges to Water Quality Impaired Waters

II.A. Impaired Waters Listing on 303(d) List

II.A.1. NDOT must evaluate whether stormwater discharges from any part of the MS4 contributes directly or indirectly to the listing of a waterbody on the most current 303(d) list (i.e. impaired waterbody). Information concerning the most current 303(d) list can be found on NDEP's website. If NDOT has discharges meeting this criterion, or if there is a Total Maximum Daily Load ("TMDL") on receiving waters, NDOT must comply with Part II.B. Part II does not apply if NDOT does not have discharges meeting this criterion.

II.B. Total Maximum Daily Load

II.B.1. NDOT must determine whether the MS4 discharges to a waterbody for which a TMDL has been developed and approved by NDEP. If there is a TMDL, NDOT must comply with Part II.B.2. If there is no TMDL, NDOT must comply with Part II.B.3.

II.B.2. If a TMDL is approved for any waterbody into which NDOT discharges, NDOT shall:

II.B.2.a Determine and report whether the approved TMDL is for a pollutant likely to be found in stormwater discharges from NDOT's MS4;

II.B.2.b Determine and report whether the TMDL includes a pollutant wasteload allocation ("WLA") or other performance requirements specifically for stormwater discharge from NDOT's MS4;

II.B.2.c Determine and report whether the TMDL addresses a flow regime likely to occur during periods of stormwater discharge;

II.B.2.d Assess whether the WLAs are being met through implementation of existing stormwater control measures or if additional control measures are necessary;

II.B.2.e Document all control measures that are currently being implemented or planned to be implemented and are consistent with the WLA. These measures shall be reported in the Annual Report. A schedule of implementation for all planned controls shall be included in the revised SWMP as described in Part III of this permit.

II.B.2.f Estimate reductions of pollutants through established and accepted BMP performance studies (such as referenced in the Truckee Meadows Structural Controls Design Manual, Appendix A), calculations, models or other evidence that shows that the WLA will be addressed through the implementation of the approved SWMP, and shall be reported in the Annual Report;

II.B.2.g The monitoring program required by Section IV.A of this permit shall be customized to determine whether the stormwater controls are adequate to meet the WLA to the Maximum Extent Practicable ("MEP"); and,

II.B.2.h If no WLA currently exists, but is developed during the term of this permit, then NDOT's BMPs outlined in the approved, updated SWMP are expected to be sufficient for the duration of the existing permit period; and

II.B.2.i The need for an iterative approach to control pollutants in stormwater discharges is recognized. If NDOT determines that additional or modified controls are necessary, the SWMP will be updated pursuant to Part III.U.2 of this permit and will describe the type and schedule for the control additions and/or revisions, and an analysis that demonstrates the overall effectiveness.

II.B.3. NDOT must determine whether the MS4 discharges to a water on the current State of Nevada 303(d) List of Impaired Waters. If a waterbody is listed, NDOT shall include a section in the Annual Report describing the conditions(s) for which the water(s) was listed, evaluating possible BMPs that might practicably be implemented, examining whether these BMPs would make a substantial improvement on water quality, and identifying any BMPs that are selected for implementation.

II.C. Discharges to Lake Tahoe and Tributaries to Lake Tahoe

II.C.1. The Lake Tahoe TMDL, scheduled to be adopted by EPA in 2011, identifies urban stormwater as the primary source of fine sediment particles and phosphorous that impairs the clarity of Lake Tahoe. The TMDL Implementation Plan identifies NDOT as a responsible party that will be required to implement controls to reduce fine sediment particle and nutrient loads consistent with specified TMDL WLAs for stormwater.

II.C.2. Within one year of NDEP's approval of the Lake Tahoe TMDL, NDOT shall enter into a Memorandum of Agreement ("MOA") with NDEP for the implementation of the Lake Tahoe TMDL. The MOA shall establish programmatic activities and responsibilities to which NDOT shall commit for implementation of the TMDL. Anticipated elements for inclusion in the MOA include, but are not limited to: a method for calculating and establishing baseline WLAs for stormwater; pollutant load reduction milestone schedule based on TMDL allocations; a Stormwater Load Reduction Plan that describes the strategies and actions that will be implemented to achieve TMDL pollutant reduction milestones; and participation in the Lake Clarity Crediting Program and Regional Stormwater Monitoring Program.

II.C.3. Part II.C of this permit may be reopened for modification by NDEP in order to

incorporate WLAs for stormwater or to amend provisions requiring consistency with changes to the Lake Tahoe TMDL or the MOA.

Part III. Stormwater Management Program

III.A. SWMP Revision

III.A.1. NDOT shall review its existing SWMP to determine whether its current programs need revising to meet the requirements of this permit. NDOT shall implement and enforce its revised SWMP to reduce the discharge of pollutants from NDOT's MS4 to the maximum extent practicable ("MEP") to protect water quality, and to satisfy the appropriate water quality requirements of the Clean Water Act ("CWA").

III.A.2. NDOT shall review, revise as necessary and submit an updated SWMP to NDEP for its review and approval within eighteen (18) months of the effective date of this permit and shall implement the revised SWMP no later than two (2) years after receiving NDEP's approval;

III.A.2.a Before the updated SWMP is submitted to NDEP for its review, it shall be made available for public comment at a meeting noticed in accordance with the Nevada open meeting law;

III.A.2.b The Permittees shall compile any comments received as part of the process in III.A.2, describe the actions taken concerning the public comments and include this information in the revised SWMP;

III.A.3. Within thirty (30) days after the revised SWMP has been approved by NDEP, NDOT shall make the revised SWMP available to the public on its Web page or at another public location (i.e. NDOT office(s)).

III.A.4. The revised SWMP shall include, at a minimum, information about the following programs:

III.A.4.a NDOT's Legal Authority;

III.A.4.b NDOT's Stormwater Education Program;

III.A.4.c NDOT's MS4 Maps and Outfalls;

III.A.4.d Discharges to Water Quality Impaired Waters and Sanitary Sewers;

III.A.4.e Construction Site Best Management Practices ("BMPs") Program;

III.A.4.f New Development and Redevelopment Planning Program;

III.A.4.g NDOT's Illicit Discharge Detection and Elimination ("IDDE") Program;

III.A.4.h Industrial Facility Monitoring and Control;

III.A.4.i Stormwater Discharges from NDOT Maintenance Facilities;

III.A.4.j Public Street Maintenance Program; and

III.A.4.k Herbicide, Pesticide and Fertilizer Application Program.

III.A.5. NDOT shall fully implement all program elements outlined in the revised SWMP before the expiration date of this permit, unless other dates are specified;

III.A.6. NDOT shall provide a list of narrative and/or numerical measurable goals for each program listed in Part III.A.4. At a minimum, the revised SWMP shall include any measurable goals indentified in this permit. NDOT may also identify additional measurable goals, as appropriate, priorities, frequencies, amounts, time-frames, or steps toward development of a program;

III.A.7. NDOT shall provide the dates, including the month and year in which NDOT will achieve each measurable goal;

III.A.8. NDOT shall provide the rationale for how and why NDOT selected each of the program elements and any measurable goals associated with the program;

III.A.9. NDOT shall provide the title(s) of the person(s) responsible for implementing and coordinating each program element;

III.A.10. NDOT shall describe any proposed programs, if applicable, that it may implement during the life of this permit to require additional controls on a system wide basis, a watershed basis, a jurisdictional basis, or on individual outfalls;

III.A.11. NDOT may partner with other permitted MS4s to develop and implement all or part of NDOT's SWMP.

III.A.12. NDOT's SWMP shall clearly describe which Permittee is responsible for implementing each of the control measures; and

III.A.13. Pending submittal of the SWMP, NDOT shall continue to implement and maintain current BMPs detailed in NDOT's current SWMP.

III.B. Legal Authority

III.B.1. The revised SWMP shall describe NDOT's' legal authority that has been established by statute, regulation, or contract documents which authorizes or enables NDOT to:

III.B.1.a Prohibit illicit discharges to the MS4;

III.B.1.b Control discharges to NDOT's MS4 from spills, dumping or disposal of materials other than stormwater;

III.B.1.c Require compliance with conditions in regulation, ordinances, permits, contracts or orders; and

III.B.1.d Carry out all inspection, surveillance, and monitoring procedures necessary to determine compliance and noncompliance with the prohibition of illicit discharges to the MS4s.

III.B.2. NDOT shall provide written notice to NDEP of any formal proposal to modify the regulation or ordinances regulating stormwater discharges into the MS4. Before any regulation or ordinance is modified, NDEP shall at least thirty (30) days to review and comment on the proposed modification.

III.C. MS4 Maps and Outfalls

III.C.1. The revised SWMP shall include, at a minimum, maps of NDOT's MS4 for different sections of Nevada, including the location of any major outfall that discharges to waters of the United States. An outfall is defined in Part VI of this permit.

III.D. Discharges to the Clear Creek Watershed

III.D.1. NDOT shall include a separate Clear Creek Master Stormwater Management Program ("CCSWMP") in its revised SWMP. The CCSWMP shall be implemented and enforced to reduce the discharge of pollutants to the Clear Creek watershed to the MEP, to protect water quality, and to satisfy the appropriate water quality requirements of the CWA. The revised CCSWMP shall include the following information:

III.D.1.a A detailed description of BMPs that have been, or will be, implemented on NDOT construction projects located in the Clear Creek watershed;

III.D.1.b A detailed description of sediment controls for all down-slope boundaries (and for those side-slope boundaries deemed appropriate as dictated by individual site conditions) that have been, or will be, used by NDOT on NDOT construction areas located in the Clear Creek watershed;

III.D.1.c A detailed description of control techniques that have been or will be used

by NDOT to the MEP to ensure no illicit discharge of pollutants into Clear Creek;

III.D.1.d A detailed description of system design and engineering methods NDOT has used, or plans to use, to protect Clear Creek from illicit discharges of pollutants;

III.D.1.e A schedule of implementation for all future short-term and long-term activities describing program development, implementation and maintenance;

III.D.1.f An annual monitoring program to ensure the overall quality and health of Clear Creek;

III.D.1.g An inventory and tracking program for all industrial facilities or maintenance yards that have the potential to discharge pollutants into Clear Creek;

III.D.1.h NDOT's inspection program on its MS4 or construction sites to ensure that no illicit discharges of pollutants enter Clear Creek; and

III.D.1.i Other provisions as NDEP determines appropriate for the control of such pollutants.

III.D.2. NDOT may partner with other MS4s to develop and implement the CCSWMP.

III.E. Discharges into Sanitary Sewer Systems

III.E.1. For discharges into facilities treating domestic sewage, used in the storage, treatment, recycling, and reclamation of municipal or domestic sewage, that are not owned or operated by NDOT, the following shall be provided by NDOT:

III.E.1.a Written and signed confirmation from each facility authorizing the discharge of pollutants into the facility's sanitary sewer system; and,

III.E.1.b All authorizations obtained by NDOT shall be included with the revised SWMP.

III.F. Stormwater Education Program

III.F.1. NDOT shall implement a stormwater education program that includes training, public education and outreach, public participation and involvement, and intra- and inter-governmental coordination. The goal of this program is to reduce or eliminate behaviors and practices that cause or contribute to adverse

stormwater quality impacts.

III.F.2. NDOT shall implement an Employee Stormwater Training Program and shall outline the program in the SWMP. The program shall provide for NDOT's employees identified in this permit to receive initial training within twelve (12) months of the effective date of this permit and refresher training at least once every three (3) years thereafter. NDOT shall also provide training to new staff within the first year of hire, and to existing staff when job responsibilities change to newly incorporate stormwater duties.

III.F.3. NDOT shall keep records of all employees who receive stormwater training.

III.F.4. NDOT shall provide stormwater awareness training to educate personnel at all levels of responsibility who are involved in activities that may impact stormwater quality and those staff who may come into contact with, or otherwise observe, an illicit discharge or illicit connection to the storm sewer system.

III.F.5. NDOT shall provide specific stormwater training to educate personnel who are directly involved in activities that may impact stormwater quality or that may generate or manage non-stormwater discharges. For each topic, the number of trainings offered, the number of employees trained, and other appropriate measurable goals shall be presented in the Annual Report. The employee training program shall address:

III.F.5.a NDOT shall train all staff whose responsibilities may include responding to illicit discharges or illicit connections to the storm sewer system. Training shall include:

III.F.5.a.i The procedures for detection, investigation, (i.e. field screening procedures, sampling methods, field measurements) identification, clean-up, and reporting of illicit discharges and connections, and improper disposal/dumping; and

III.F.5.a.ii The procedures for outfall screening and investigation;

III.F.5.b NDOT shall train all staff directly involved in managing non-stormwater discharges. The training shall include:

III.F.5.b.i The types of discharges allowed under this permit and those that are prohibited;

III.F.5.b.ii The distinction between non-stormwater discharges and potential pollutant sources;

III.F.5.b.iii The pollutants of concern that may be in non-stormwater discharges;

and

III.F.5.b.iv The BMPs that shall be employed to minimize the discharge of pollutants;

III.F.5.c NDOT shall train all staff directly involved in performing construction site inspections. Training shall include:

III.F.5.c.i The requirements of this permit and the NDEP's General Permit NVR100000 for Construction Activities for structural and non-structural BMPs on construction sites, such as erosion and sediment control, waste control and Stormwater Pollution Prevention Plans ("SWPPPs");

III.F.5.c.ii The NDOT Contractors' requirements to obtain coverage under and comply with the NDEP's General Permit NVR100000 for Construction Activities and the requirements of that permit; and

III.F.5.c.iii NDOT's compliance, enforcement, and contractual processes to minimize stormwater discharges.

III.F.5.d NDOT shall train all staff directly involved in controlling stormwater runoff from new development or redevelopment, including those with responsibilities for preliminary design, design, and design review. Training shall include:

III.F.5.d.i Post-construction stormwater BMPs to prevent or minimize water quality impacts; and

III.F.5.d.ii Design standards, maintenance requirements and planning as related to stormwater;

III.F.5.e NDOT shall train all staff directly involved in storm sewer system maintenance, street repair, and road improvement. Training shall include:

III.F.5.e.i Potential sources of contaminants related to repair and maintenance activities; and

III.F.5.e.ii Proper maintenance, housekeeping, and repair BMPs to prevent discharges to the storm sewer system and waters of the U.S.

III.F.5.f NDOT shall train all staff who may be involved in waste disposal, spill prevention and response. Training shall include:

III.F.5.f.i Procedures to prevent, contain, and respond to spills; and

III.F.5.f.ii Proper handling, storage, transportation, and disposal of toxic and hazardous materials, including used oil and batteries, to prevent or minimize spills or discharges to the storm sewer system.

III.F.5.g NDOT shall train all staff directly involved in the application of pesticides, herbicides, and fertilizers. Training shall include:

III.F.5.g.i The potential for stormwater contamination resulting from misapplication or over-application of chemicals; and

III.F.5.g.ii Proper application procedures and BMPs;

III.F.5.h NDOT shall train all staff working at industrial sites (excluding material source sites). Training shall include:

III.F.5.h.i The requirements of BMPs, SWPPPs, and the conditions of this permit that relate to on-site activities; and

III.F.5.h.ii As applicable, used oil and spent solvent management; fueling procedures; general good housekeeping practices; proper painting procedures; and used battery management.

III.F.5.i NDOT shall provide information in the revised SWMP that discusses how NDOT will ensure that NDOT construction contractors have been adequately trained in BMP installation and maintenance, the ability to recognize activities that may impact stormwater quality, and the procedures in place to prevent or report an illicit discharge or illicit connection to the MS4.

III.F.5.j NDOT shall continue to implement a Public Education/Outreach Program to provide information to the general public about actions individuals can take to reduce transportation related pollutants and improve water quality. NDOT shall implement or participate in a stormwater education program that uses different types of media and targets a wide range of audiences. The program shall include a description of:

III.F.5.j.i The methods for disseminating information;

III.F.5.j.ii The target audiences and how they were selected; and

III.F.5.j.iii The target pollutants and sources and how they were selected.

III.F.5.k NDOT shall continue to implement educational and public information activities to distribute education materials on stormwater quality;

III.F.5.l NDOT shall implement a Public Involvement/Participation Program to

encourage public involvement and participation and to promote, publicize, and facilitate public reporting of illicit discharges and illegal dumping to or from NDOT's storm sewer system.

III.F.5.m NDOT shall implement a reporting system to facilitate and track public reports of spills, discharges, and dumping to its storm sewer system or receiving waters. NDOT shall develop procedures for receiving and investigating public complaints. NDOT shall post or advertise telephone numbers or other information to direct the public in reporting illicit discharges and illegal dumping. NDOT shall evaluate and where appropriate, NDOT shall post these numbers in places where illicit discharges and illegal dumping are found to be a recurring problem;

III.F.5.n NDOT shall record and report the number of reports received from the public and investigated in the Annual Report;

III.F.5.o NDOT shall continue to implement the Adopt-a-Highway program;

III.F.5.p NDOT shall report the number of volunteer groups participating in the Adopt-a-Highway program, number of miles cleaned, and the amount of trash collected in the Annual Report; and

III.F.5.q NDOT shall implement a program that includes coordination mechanisms and program enforcement procedures among divisions, groups, sections, and districts within NDOT to ensure compliance with the terms of this permit. NDOT shall also have mechanisms to coordinate with other government agencies and MS4 communities when necessary to address issues of common concern related to implementation of this permit. The revised SWMP shall include the following BMPs:

III.F.5.q.i NDOT shall continue implementation of intra-governmental (internal) coordination procedures to ensure compliance with the terms of this permit and to ensure implementation of SWMP activities. NDOT shall describe these procedures in the SWMP; and

III.F.5.q.ii NDOT shall develop partnerships and cooperative outreach programs, where feasible, with other regulated MS4s and jurisdictions and shall describe these partnerships and programs in the SWMP.

III.G. Construction Site BMP Program

III.G.1. The revised SWMP shall include a description of NDOT's program to implement and maintain structural and non-structural BMPs to reduce pollutants to the MEP in stormwater runoff from construction sites to the MS4. The program shall include:

III.G.1.a A plan to control all construction in the rights-of-way. This includes both construction by NDOT, construction done under contract for NDOT, and construction done by local government agencies or other third parties on NDOT or non-NDOT projects. The plan shall include:

III.G.1.a.i Review of construction site plans;

III.G.1.a.ii Implementation and maintenance of structural and non-structural BMPs;

III.G.1.a.iii Site inspections and enforcement;

III.G.1.a.iv A description of non-structural and structural BMPs for construction sites;

III.G.1.a.v A description of procedures for identifying priorities for inspecting sites and enforcing control measures which consider the nature of the construction activity, topography, and the characteristics of soils and receiving water quality; and

III.G.1.a.vi A description of the BMPs that NDOT or its contractors selected, implemented, maintained and updated on NDOT's construction projects to minimize the discharge of pollutants to the MEP;

III.G.1.b The program shall be implemented year-round on all construction projects in all parts of Nevada that discharge to waters of the U.S. The SWMP shall be revised to address these requirements and have a program and a schedule for inspections; and

III.G.1.c The program shall be in compliance with requirements of the NDEP's General Permit NVR100000 for Construction Activities.

III.H. NDOT Contractors Performing Construction Activities

III.H.1. NDOT shall, at a minimum, require its contractors to comply with NDEP's General Permit NVR100000 for Construction Activities for regulated construction projects, including the contractor's requirement to file a Notice of Intent ("NOI") and obtain authorization under NDEP's General Permit NVR100000 for Construction Activities for each construction project or site that disturbs more than one (1) acre, or less than one (1) if it is part of a larger project. The contractor shall also file a Notice of Termination ("NOT") for each construction project or site, either terminating their responsibility if final stabilization has been achieved, or transferring it to NDOT for completion.

III.H.2. NDOT shall ensure that the contractor's NOI references the construction site

as an NDOT project and shall keep a copy of the NDEP authorization certificate in the SWPPP.

III.H.3. NDOT shall ensure that all applicable provisions of NDEP's General Permit NVR100000 for Construction Activities and this permit are implemented for NDOT projects and shall implement a system to enforce these provisions. NDOT is responsible for inspection oversight.

III.H.4. When contractors complete their work at a site and interim stabilization is in place, they may file an NOT to terminate their responsibility for site activities. In this instance, NDOT shall assume responsibility for the site until final stabilization has been achieved for the entire project. NDOT is responsible for removing all temporary sediment control BMPs that may impede stormwater flow as soon as practicable after final stabilization.

III.H.5. NDOT shall include a list of all construction projects in the Annual Report, including the name of the project and its associated NDEP construction stormwater permit number(s) (e.g. CSW-xxxx), that have achieved final stabilization and that NDOT considers to be complete.

III.H.6. NDOT shall provide in the Annual Report, a list and description of all violations and their resolution, including any enforcement actions taken against its contractors.

III.I. Discharges from New Development and Redevelopment

III.I.1. NDOT shall develop and implement comprehensive planning procedures and BMPs to prevent or minimize water quality impacts from areas of new highway development and redevelopment within the MS4 permitted areas. This applies to projects that result in land disturbance of greater than or equal to one (1) acre including projects less than one (1) acre that are part of a larger common plan of development or sale. The revised SWMP shall include a post-construction stormwater pollution control program including maintenance of post-construction stormwater pollution control BMPs. For the purposes of this permit, post-construction stormwater pollution control BMPs include, but are not limited to: stormwater retention/detention basins; constructed wetlands for water quality purposes; media filtration systems; oil/water separators; check dams, grassy swales or other similar BMPs. NDOT shall describe the program in the revised SWMP;

III.I.2. NDOT shall promote source reduction approaches such as Low Impact Development ("LID") techniques, where applicable, in its discussion of the program;

III.I.3. NDOT shall describe the BMPs that will protect water quality and reduce the discharge of pollutants to the MEP;

III.I.4. NDOT shall install controls for all newly developed or redeveloped roadways that discharge stormwater runoff to impaired or unique waters. For other areas within the MS4 Compliance Areas, NDOT shall evaluate the need for permanent post-construction stormwater pollution control BMPs;

III.I.5. NDOT shall also install post-construction controls for all newly developed or redeveloped roadways within the MS4 compliance areas where appropriate. Runoff from these roadways and the storm sewer system shall be treated by a post-construction stormwater pollution control BMP(s) prior to the runoff leaving NDOT's MS4 and/or entering waters of the U.S.;

III.I.6. All stormwater shall be discharged in a manner that does not cause nuisance conditions, erosion in receiving channels or on down-slope properties; and

III.I.7. NDOT shall inventory, inspect, and maintain all post-construction stormwater pollution control BMPs. A program summary shall be included in the Annual Report.

III.J. Illicit Discharge Detection and Elimination Program

III.J.1. The revised SWMP shall include a description of NDOT's Illicit Discharge Detection and Elimination ("IDDE") Program, including a schedule, to detect and remove illicit discharges and improper disposal into the MS4. The proposed program shall include:

III.J.1.a A description of a program, including inspections, to implement and enforce statutes, regulations, ordinances, orders or similar means to prevent illicit discharges to the MS4. This program description shall address all types of illicit discharges; however, non-stormwater discharges or flows listed in Part I.B.2 of this permit shall only be addressed where such discharges are identified by NDOT as sources of pollutants to waters of the United States;

III.J.1.b A description of procedures to conduct on-going field screening activities during the life of the permit, including areas or locations that will be evaluated by such field screens;

III.J.1.c A description of procedures to be followed to investigate portions of the MS4 that, based on the results of the field screen, or other appropriate information, indicate a reasonable potential of containing illicit discharges or other sources of non-stormwater;

III.J.1.d A description of procedures to prevent, contain, and respond to spills that may discharge into the MS4;

III.J.1.e A description of a program to facilitate public reporting of the presence of illicit discharges or water quality impacts associated with discharges from MS4s;

III.J.1.f A description of educational activities, public information activities, and other appropriate activities to facilitate the proper management and disposal of used oil and toxic materials; and

III.J.1.g An assessment of whether the procedures otherwise implemented in response to this paragraph are sufficient to identify instances of exfiltration from the sanitary sewer to the storm sewers, and if not a description of additional activities to be undertaken to control exfiltration.

III.K. Industrial Facility Monitoring and Control

III.K.1. The revised SWMP shall describe NDOT's program to monitor and control pollutants in stormwater discharges to municipal systems from municipal landfills, hazardous waste treatment, disposal and recovery facilities, industrial facilities that are subject to Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986, and industrial facilities that NDOT determines are contributing a substantial pollutant loading to the MS4. The program shall:

III.K.1.a Identify priorities and procedures for inspections and establishing and implementing control measures for such discharges; and,

III.K.1.b Describe a monitoring program for stormwater discharges associated with the industrial facilities identified in this section, to be implemented during the term of the permit in accordance with the monitoring programs defined in Part IV.A of this permit.

III.L. Stormwater Discharges from NDOT Maintenance Facilities

III.L.1. The revised SWMP shall describe the measures NDOT uses to control discharges from NDOT Maintenance Facilities. The following measures shall apply to NDOT maintenance facilities statewide:

III.L.1.a NDOT shall continue to implement its maintenance facility program to reduce pollutants in discharges to the MEP;

III.L.1.b NDOT shall describe its statewide maintenance facility program in the revised SWMP. The program shall include policies and procedures to prevent or reduce stormwater impacts from any maintenance facility that may discharge to waters of the U.S. or to the storm sewer system;

III.L.1.c NDOT shall properly select, install, and maintain all BMPs in accordance with any relevant manufacturer specifications and good engineering

practices; and

III.L.1.d NDOT shall implement BMPs to reduce or eliminate the discharge of pollutants from maintenance and storage yards, waste transfer stations, fleet or maintenance shops with outdoor storage areas, and salt and sand storage locations and snow disposal areas.

III.L.2. NDOT shall implement the following BMPs at its maintenance facilities:

III.L.2.a NDOT shall prevent litter, debris, and chemicals that could be exposed to stormwater from becoming a pollutant source in stormwater discharges; and

III.L.2.b NDOT shall implement good housekeeping and material management BMPs for operating and maintaining all NDOT maintenance facilities and each of the following maintenance facility areas:

III.L.2.c NDOT shall describe and implement BMPs that prevent or minimize contamination of stormwater runoff from all areas used for vehicle or equipment storage. NDOT shall implement the following BMPs, or alternatives that will provide equivalent protection:

III.L.2.c.i Confine the storage of leaky or leak-prone vehicles and equipment awaiting maintenance to designated areas;

III.L.2.c.ii Use drip pans under vehicles and equipment;

III.L.2.c.iii Store vehicles and equipment indoors whenever practicable;

III.L.2.c.iv Install berms or dikes around the areas;

III.L.2.c.v Use absorbents to clean spilled materials;

III.L.2.c.vi Roof or cover storage areas whenever practicable; and

III.L.2.c.vii Clean pavement surfaces to remove oil and grease. Use dry cleanup methods, or, if water is used, capture and properly dispose of the cleaning water.

III.L.2.d NDOT shall describe and implement BMPs that prevent or minimize contamination of stormwater runoff from all areas used for vehicle or equipment maintenance. NDOT shall implement the following BMPs, or alternatives that will provide equivalent protection:

III.L.2.d.i Perform maintenance activities indoors whenever practicable;

III.L.2.d.ii Use drip pans under vehicles and equipment;

III.L.2.d.iii Keep an organized inventory of materials used in the shop;

III.L.2.d.iv Drain all parts of fluid prior to disposal;

III.L.2.d.v Use dry cleanup methods. Prohibit wet clean up practices if these practices would result in the discharge of pollutants to stormwater drainage systems; and

III.L.2.d.vi Treat, recycle, or properly dispose of collected stormwater runoff and minimize run-on/runoff of stormwater to and from maintenance areas.

III.L.2.e NDOT shall describe and implement BMPs that prevent or minimize contamination of stormwater runoff from all areas used for material storage. NDOT shall implement the following BMPs, or alternatives that will provide equivalent protection:

III.L.2.e.i Maintain all material storage vessels that are kept outdoors (e.g., for used oil/oil filters, spent solvents, paint wastes, hydraulic fluids) to prevent contamination of stormwater and plainly label them (e.g., "Used Oil," "Spent Solvents," etc.);

III.L.2.e.ii Move storage indoors whenever practical;

III.L.2.e.iii Install berms/dikes around the areas;

III.L.2.e.iv Minimize run-on of stormwater to the areas;

III.L.2.e.v Use dry cleanup methods; and

III.L.2.e.vi Treat, recycle, or properly dispose of collected stormwater runoff. ***Note:*** *The discharge of vehicle and equipment washwater, including tank washing operations, is not authorized by this permit and shall be covered under a separate NPDES permit; discharged to a sanitary sewer in accordance with applicable industrial pretreatment requirements; or otherwise appropriately managed or recycled on-site. NDOT shall not discharge any washwater from washing vehicles, tanks, containers, and/or equipment under this permit.*

III.L.2.f NDOT shall implement practices and procedures to prevent, contain, and respond to spills from maintenance facilities using the following practices:

III.L.2.f.i NDOT shall implement management practices and procedures for handling toxic and hazardous materials by NDOT staff at NDOT maintenance facilities to prevent spills;

III.L.2.f.ii NDOT shall implement practices and procedures for handling spills of toxic materials by NDOT staff at NDOT maintenance facilities to prevent or minimize discharges to the storm sewer system or receiving waters;

III.L.2.f.iii NDOT shall immediately respond to spills by NDOT staff at NDOT maintenance facilities to prevent toxic materials or pollutants from entering the storm sewer system and receiving waters;

III.L.2.f.iv NDOT shall continue to track and record spills and other releases by NDOT staff at NDOT maintenance facilities, including information on the number, type, and amount of materials released, the location and extent of the spill, the circumstances of the release (e.g. spilled to storm sewer), and the name of the parties involved; and

III.L.2.f.v NDOT shall maintain records of spills to the storm sewer system or receiving waters and include the records in the Annual Report.

III.M. Comprehensive Maintenance Facility Inspection

III.M.1. NDOT shall conduct a Comprehensive Maintenance Facility Inspection at least once each year. NDOT shall also conduct routine visual inspections to ensure that the SWPPP addresses any significant changes to the facility's operations or BMP implementation procedures.

III.M.2. NDOT shall complete an inspection report for all maintenance facility inspections. At a minimum the report shall include:

III.M.2.a The inspection date;

III.M.2.b The name(s), title(s) and qualifications of the person(s) making the inspection. The list of qualified personnel shall either be on or attached to the report or alternatively, if the SWPPP documents the qualifications of the inspectors by name, that portion of the SWPPP may be referenced;

III.M.2.c Weather information and a description of any discharges occurring at the time of the inspection;

III.M.2.d The location(s) of discharges of sediment or other pollutants from the site, if any;

III.M.2.e The location(s) of BMPs that need to be maintained, that failed to operate as designed, or proved inadequate for a particular location;

III.M.2.f The location(s) where additional BMPs are needed that did not exist at the time of inspection;

III.M.2.g The corrective action(s) required, including any changes to the SWPPP and implementation dates;

III.M.2.h The identification of all sources of non-stormwater discharges, if any, and the associated BMPs;

III.M.2.i Where applicable, the identification of material storage areas, and evidence of or potential for pollutant discharges from these areas;

III.M.3. Inspection reports shall identify any incidents of non-compliance with the permit conditions. Where a report does not identify any incidents of non-compliance, the report shall contain a certification that the activities are in compliance with the SWPPP and this permit; and

III.M.4. The report shall be signed and certified in accordance with Part V.G of this permit and copies included in the SWPPP and the Annual Report.

III.N. Scope of Inspections

III.N.1. NDOT shall inspect all areas of the site exposed to precipitation, as well as areas where spills and leaks have occurred. Inspectors shall look for evidence of, or the potential for, pollutants entering the drainage system;

III.N.2. Inspections of the maintenance yard shall include all the following areas/activities:

III.N.2.a Storage areas for vehicles and equipment awaiting maintenance;

III.N.2.b Fueling areas (including mobile fueling);

III.N.2.c Indoor and outdoor vehicle/equipment maintenance areas;

III.N.2.d Material storage areas;

III.N.2.e Material source stockpile(s) to determine if piles are protected from run-on, run-off, if materials are contributing to off-site discharges;

III.N.2.f Vehicle/equipment cleaning areas and loading/unloading areas; and

III.N.2.g Onsite waste storage or disposal;

III.N.3. NDOT shall inspect and document all BMPs identified in the SWPPP along with areas inspected and the conditions found;

III.N.4. NDOT shall inspect discharge locations to determine whether BMPs are

effective in preventing significant impacts to waters of the U.S., where accessible;

III.N.5. Where discharge locations are inaccessible, NDOT shall inspect nearby downstream locations to the extent that the inspections are practicable; and

III.N.6. NDOT shall inspect locations where vehicles enter or exit the site for evidence of off-site sediment tracking.

III.N.7. Based on the results of the inspection, NDOT shall modify the SWPPP as necessary to include additional or modified BMPs designed to correct problems identified. NDOT shall complete revisions to the SWPPP and modify or add BMPs as necessary within thirty (30) calendar days following the inspection. NDOT shall implement tracking and follow-up procedures to ensure that appropriate action is taken in response to issues noted during inspections.

III.N.8. If sediment or other materials escape the site, NDOT shall remove the off-site accumulations of sediment or other materials at a frequency sufficient to minimize off-site impacts. The removal shall take place within seven (7) days of discovery unless precluded by legal, regulatory, or physical access constraints. NDOT shall use all reasonable efforts to obtain access, and in such instances, removal and stabilization shall take place within seven (7) days of obtaining access.

III.N.9. Inspections shall be performed by qualified personnel as defined in Part VI of this permit; and

III.N.10. NDOT shall retain a record of each inspection and of any actions taken as part of the SWPPP for at least five (5) years from the expiration date of this permit;

III.N.11. For existing BMPs that need to be modified or, if additional BMPs are necessary for any reason, implementation shall be completed within thirty (30) days, and before the next storm event;

III.N.12. All BMPs including erosion and sediment control BMPs identified in the SWPPP shall be maintained in effective operating condition. If site inspections identify BMPs that are not operating effectively, maintenance shall be performed within seven (7) days of discovery and before the next anticipated storm event to maintain the continued effectiveness of stormwater BMPs. If implementation before the next storm event is impracticable, the reason(s) for delay must be documented in the SWPPP and alternative BMPs must be implemented as soon as possible;

III.N.13. Facilities as requiring monitoring shall follow the requirements therein; and

III.N.14. NDOT shall develop or update its list of industrial facilities and maintenance yards subject to stormwater permitting requirements within their control. The list shall be included in the Annual Report.

III.O. Public Street Maintenance Program in Urbanized Areas

III.O.1. The revised SWMP shall discuss how NDOT intends to operate and maintain public streets and roads in urbanized areas that are under NDOT's jurisdiction in a manner so as to reduce the discharge of pollutants to the MEP (including those related to road repair, street sweeping, snow removal, sanding activities and herbicide application), in accordance with their present program. The program shall include the following information and measurable goals:

III.O.1.a Snow and ice management practices on streets, roads, and highways in urbanized areas shall be implemented in a manner consistent with NDOT's policies and guidelines. These guidelines shall include prescriptions for sand application rate, maximum salt concentrations, calibration of sand spreaders, and sweeping of sanded streets;

III.O.1.b Salt and sand storage practices shall be implemented as necessary to minimize, to the extent practicable, run-on, run-off and salt migration off-site;

III.O.1.c Leaf litter and debris on all streets in urbanized areas shall be swept a minimum of two times per year, once in the spring and once in the fall;

III.O.1.d Sweeping of sanded streets in urbanized areas shall be performed as soon as weather, logistics and site conditions permit after snow storms, but no later than four (4) days after the last snowfall;

III.O.1.e Sweeper wastes shall be disposed of properly. Recycling of sweeper wastes shall be considered. The amount of sweeper waste accumulated, recycled and/or disposed of shall be documented and included in the Annual Report.

III.O.1.f If magnesium chloride is used for snow management, application practices shall be used to minimize any negative effects to waters of the U.S. to the MEP. Results of any studies on magnesium chloride shall be considered when relevant.

III.O.1.g A narrative summary of the program will be included in the Annual Report.

III.P. Measures to Control Discharges from Roadways

III.P.1. NDOT shall continue to implement its programs of roadway and storm sewer system repair, maintenance and cleaning, vegetation management, and winter storm policies to reduce the release of pollutants to, and discharges of pollutants from, the storm sewer system. The revised SWMP shall include policies and procedures to prevent or reduce stormwater impacts to waters of the U.S. or the MS4 system while conducting operation and maintenance activities. The revised SWMP shall address the following programs:

III.P.1.a **Highway Maintenance Activities**

III.P.1.a.i Develop and implement runoff management programs and systems for existing roads, highways, and bridges to reduce runoff pollutant concentrations and volumes entering surface waters;

III.P.1.a.ii Identify priority and watershed pollutant reduction opportunities (e.g., improvements to existing urban runoff control structures);

III.P.1.a.iii Establish schedules for implementing appropriate controls; and

III.P.1.a.iv NDOT shall develop a system to identify, track, and prioritize timely stabilization and repairs to road segments where slopes are 3:1 or greater and actively eroding and sediment is leaving NDOT's right-of-way or discharging to a water of the U.S. This system shall be described in the revised SWMP, and each Annual Report thereafter shall summarize erosion abatement projects conducted during the year. NDOT shall identify road segments with slopes that are prone to erosion and discharge of sediment and stabilize these slopes to the MEP.

III.P.1.b **Snow and Ice Control**

III.P.1.b.i Where abrasives and/or de-icing agents are used on highways, the following shall be recorded:

III.P.1.b.i.1 Location of the source of abrasives materials;

III.P.1.b.i.2 Types and chemistry of de-icing agents;

III.P.1.b.i.3 Deicing salt shall be analyzed for: total phosphorus, total nitrogen, iron, and percent sodium chloride (NaCl);

III.P.1.b.i.4 Alternative deicers shall be analyzed for total nitrogen and total phosphorus;

III.P.1.b.i.5 Type and chemistry of abrasives with the gradation and percent organic matter. Gradation and percent organic matter shall be

determined from composite samples. The composite samples shall be taken from one stockpile that represents all deliveries from the originating source. Composite samples shall be taken from every new delivery from a new originating source;

III.P.1.b.i.6 Abrasives shall be analyzed for volatile solids, iron, total nitrogen, total phosphorus, and total reactive phosphorus; and

III.P.1.b.i.7 Volume of abrasives and deicing agents used on individual highway segments shall be documented in the Annual Report.

III.P.1.c **Storm Water Drainage System Facilities Maintenance**

III.P.1.c.i NDOT shall remove all debris and sediment from those inlets that pose a significant threat to water quality on an annual basis prior to the winter season each year. All debris and sediment removed from drain inlets shall be managed in accordance with all applicable laws and regulations. The amount of material removed shall be documented and included in the Annual Report; and

III.P.1.c.ii Drain inlets which contain significant materials must be considered for an IDDE investigation and considered for an enhanced BMP program focused on reducing the sources of the material found in the inlet.

III.Q. Storm Sewer System and Highway Maintenance

III.Q.1. NDOT shall implement the following BMPs for operating and maintaining roadways and drainage ways to minimize discharges to and from the storm sewer system in all the MS4 Permitted areas:

III.Q.1.a **Inventory Post-Construction Stormwater Pollution Control BMPs**

III.Q.1.a.i NDOT shall develop and maintain an inventory of its post-construction stormwater pollution control BMPs;

III.Q.1.a.ii The inventory shall categorize the post-construction stormwater pollution control BMPs by type and location; and

III.Q.1.a.iii NDOT shall include the inventory of stormwater retention/detention basins, constructed wetlands for water quality purposes, media filtration systems, oil/water separators, and other major post-construction stormwater pollution control BMPs statewide as part of the revised SWMP.

III.Q.1.b **Inspect Storm Sewer System**

III.Q.1.b.i The revised SWMP shall outline a program, including measurable goals, to inspect and record conditions of its storm sewer system including roadways used for stormwater conveyance, catch basins, storm drain inlets, open channels, washes, culverts, and retention/detention basins to identify potential sources of pollutants and determine maintenance needs; and

III.Q.1.b.ii NDOT shall maintain records of inspections and conditions found and shall present the number of inspections in each Annual Report.

III.Q.1.c **Develop Maintenance Schedules and Priorities**

III.Q.1.c.i NDOT shall identify routine maintenance schedules and maintenance priorities for its storm sewer system, including roadways to minimize pollutant discharges from the storm sewer system; and

III.Q.1.c.ii NDOT shall evaluate priorities and update the maintenance schedule annually.

III.Q.1.d **Perform Repair, Maintenance, and Cleaning**

III.Q.1.d.i NDOT shall continue to repair, maintain, and clean its roadways used for stormwater conveyance and its storm sewer system to minimize the discharge of pollutants to the MEP (including floatable debris) from the storm sewer system; and

III.Q.1.d.ii During repair, maintenance or cleaning activities, NDOT shall ensure that all storm drain inlets are assessed for evidence of illicit discharges or illegal dumping, such as significant loads of a specific pollutant(s) or material(s). Upon discovery, NDOT shall initiate an investigation to target likely sources and implement a BMP program to reduce the sources of the pollutant or material to the MEP.

III.Q.1.e **Implement BMPs for Repair, Maintenance, and Cleaning**

III.Q.1.e.i NDOT shall implement appropriate BMPs to reduce the potential for releases of pollutants to the storm sewer system or to waters of the U.S. when performing repair, maintenance, or cleaning of its storm sewer system, including roadways;

III.Q.1.e.ii NDOT shall implement BMPs to minimize the discharge of pollutants from unpaved roads, shoulders, and parking lots, such as permanent stabilization / erosion control BMPs and paving unpaved roads, and parking lots;

III.Q.1.e.iii NDOT shall properly dispose of waste removed from its storm sewer system and NDOT facilities, including dredge spoil, accumulated

sediments, and floatable or other debris. The amount removed and disposed of shall be documented and included in the Annual Report.

III.Q.1.f **Roadside Management Program**

III.Q.1.f.i NDOT shall continue to implement the BMPs described in its *Construction Site BMP Field Manual.*

III.R. Herbicide, Pesticide and Fertilizer Program

III.R.1. NDOT shall develop a program to reduce the discharge of pollutants related to the application of herbicides, pesticides and fertilizers to the MEP. This program shall include:

III.R.1.a **Implement Pesticide and Fertilizer Application Procedures**

III.R.1.a.i NDOT shall continue to implement practices and procedures for NDOT staff and commercial applicators to only use Federal Insecticide, Fungicide, and Rodenticide Act ("FIFRA")-approved pesticides/herbicides and fertilizers at NDOT facilities and roadside right-of-ways. NDOT shall design these practices to avoid chemical application when feasible and to minimize the amount of chemicals applied;

III.R.1.a.ii As part of the revised SWMP, NDOT shall develop BMPs to address the timing of applications in relation to expected precipitation events, proximity to water bodies, and other practices to minimize the runoff of pollutants. Applications of herbicides shall be performed during dry-weather periods to the extent possible, using methods to limit overspray;

III.R.1.a.iii If NDOT must apply pesticides in any area that is within, or directly adjacent to a water of the U.S., only pesticides approved for aquatic use shall be used;

III.R.1.a.iv NDOT shall review application practices annually and update procedures as needed to minimize runoff of pollutants;

III.R.1.a.v NDOT shall continue to require certification/licensing of staff and commercial applicators that apply pesticides at NDOT facilities, public areas, and right-of ways; and

III.R.1.a.vi A narrative summary of the program will be included in the Annual Report.

III.R.1.b **Vegetation Control**

III.R.1.b.i NDOT shall develop a Vegetative Control Program to reflect the following elements:

III.R.1.b.i.1 Enhancement of the use of appropriate native and adapted vegetation throughout all NDOT's rights-of way for the purpose of preventing erosion and removing pollutants in stormwater and non-stormwater runoff;

III.R.1.b.i.2 Application of herbicides in a manner that minimizes or eliminates the discharge of herbicides to receiving waters. Factors to be considered include timing in relation to expected precipitation events, proximity to water bodies, and the effects of using combinations of chemicals;

III.R.1.b.i.3 If application of nutrients is required, the application shall be at rates necessary to establish and maintain vegetation without causing significant nutrient runoff to surface water; and

III.R.1.b.i.4 In places where NDOT has already developed vegetation control management plans, NDOT shall continue to implement these plans and integrate them into their overall statewide plan. In instances where elements of these plans are to be changed or dropped, NDOT shall discuss any changes in the Annual Report.

III.S. NDOT Maintenance Yards Management Program

III.S.1. NDOT shall prepare SWPPPs for all its maintenance facilities. Because these facilities are considered municipal activities rather than industrial activities, these SWPPPs shall have BMP programs that reduce pollutants to the MEP;

III.S.2. Generic SWPPP elements can be used for activities that are performed at more than one maintenance facility; however, each site must be evaluated separately and provided with appropriate site specific BMPs.

III.S.3. NDEP staff has the authority to require the submittal of a SWPPP at any time, to require changes to a SWPPP, and to require the implementation of the provisions of a SWPPP. SWPPPs shall include the following elements:

III.S.3.a NDOT shall develop and implement runoff control plans for the following NDOT-owned and/or operated facilities that do not have independent NPDES Stormwater permits:

III.S.3.a.i Vehicle maintenance facilities (maintenance includes equipment rehabilitation, mechanical repairs, painting, fueling and lubrication);

III.S.3.a.ii Asphalt and concrete batch plants which are not already individually permitted;

III.S.3.a.iii Solid-waste transfer stations;

III.S.3.a.iv Exposed stockpiles of materials, including stockpiles of road deicing salt, salt and sand, sand, roto-mill material; and

III.S.3.a.v Sites used for snow dumps, and/or for temporary storage of sweeper tailings or other waste piles.

III.S.3.b NDOT shall provide a complete list of these facilities (including the address of the facility, type of operation, size of the facility, and receiving water drainage basin) as part of the revised SWMP. This list shall indicate which sites are considered "major" and which are considered "minor", and set out the reasons for the designations.

III.S.3.c Runoff control plans for "major" facilities shall contain the following:

III.S.3.c.i Activity description;

III.S.3.c.ii Facility site map; and

III.S.3.c.iii A description of potential pollutant sources, including an evaluation of that potential.

III.S.3.d Stormwater Management Controls

III.S.3.d.i The description of stormwater management controls shall address the following minimum components, including a schedule for implementing such controls:

III.S.3.d.i.1 Runoff control plan administrator;

III.S.3.d.i.2 Preventive maintenance;

III.S.3.d.i.3 Good housekeeping;

III.S.3.d.i.4 Spill prevention and response procedures;

III.S.3.d.i.5 BMPs for pollutant sources;

III.S.3.d.i.6 Evaluation for non-stormwater discharges;

III.S.3.d.i.7 Employee training;

III.S.3.d.i.8 Inspection procedures; and

III.S.3.d.i.9 A summary of compliance with the SWPPPs shall be submitted by each plan administrator to the NDOT's Carson City Office by September 1 of each year. Summaries of the separate SWPPPs shall be included in the Annual Report.

III.S.3.d.ii "Minor" facilities shall be grouped together by type, and one runoff control plan shall be developed for each group. Grouped runoff control plans shall contain:

III.S.3.d.iii A map showing the location of each facility in the group on a map of the city or state;

III.S.3.d.iv For each facility in the group include the address, type of operation, size of the facility, and receiving water drainage basin;

III.S.3.d.v A description of potential pollutant sources, including an evaluation of that potential;

III.S.3.d.vi A description of the standard operating procedures or stormwater management controls shall address the following components if appropriate:

III.S.3.d.vi.1 Preventive maintenance measures;

III.S.3.d.vi.2 Good housekeeping;

III.S.3.d.vi.3 Spill prevention and response procedures;

III.S.3.d.vi.4 BMPs;

III.S.3.d.vi.5 Evaluation for non-stormwater discharges; and

III.S.3.d.vi.6 Inspection Procedures.

III.S.3.e Copies of the "major" facility runoff control plans shall be kept on the facility site and on file with NDOT's main office. They shall be submitted to NDEP upon request.

III.S.3.f Copies of the "minor" facility group runoff control plans shall be kept on file with the Regional District Office. They shall be submitted to NDEP upon request;

III.S.3.g Both major and minor facilities shall be inspected by the Permittee at least one (1) time each year, after the SWPPP has been completed;

III.S.3.h NDOT shall implement the provisions of the runoff control plans required under this part as a condition of this MS4 permit. NDEP reserves the right

to review those plans, and to require additional measures to prevent and control pollution as needed;

III.S.3.i SWPPPs may be amended at any time and any amendments shall be described in the Annual Report; and

III.S.3.j The SWPPPs shall be completed and implemented according to the following schedule: 10 percent of the facilities within twelve (12) months of the effective date of this permit, another 40 percent within twenty-four (24) months of the effective date of this permit, and the remaining 50 percent within thirty-six (36) months of the effective date of this permit. A list of these facilities shall be submitted to NDEP at these times.

III.T. Sharing Responsibility

III.T.1. NDOT may either share responsibility or assign responsibility with one or more regulated MS4s, and may implement BMPs individually, as a group, or through consultants. The SWMP shall include a description of the BMP and how responsibility is being shared or assigned.

III.U. Annual Review and Updating the SWMP

III.U.1. NDOT must complete an annual review of the SWMP in conjunction with preparation of the Annual Report required under Part IV.C of this permit.

III.U.2. NDOT may change the SWMP during the life of the permit in accordance with the following procedures:

III.U.2.a Changes adding (but not subtracting or replacing) components, controls, or requirements to the SWMP may be made at any time upon written notification to NDEP.

III.U.2.b Requests for changes replacing an ineffective, unfeasible, or inappropriate BMP specifically identified in the SWMP with an alternate BMP may be submitted to NDEP for approval at any time. If request is denied, NDEP will send NDOT a written response giving a reason for the decision. NDOT's modification requests must include the following:

III.U.2.b.i An analysis of why the BMP is ineffective, infeasible (including cost prohibitive), or otherwise should be revised or replaced, and

III.U.2.b.ii An analysis of why the replacement BMP is expected to be more effective, feasible, or appropriate than the BMP to be replaced.

III.V. Updating NDOT's Manuals

III.V.1. NDOT shall annually review its *2006 Planning and Design Guide Manual* and its *2006 Construction Site BMP Manual* and update as needed. Erosion and sediment control BMP detail drawings shall also be updated as needed. NDOT shall describe all updates to these manuals in the Annual Report.

III.W. Characterization Data

III.W.1. The revised SWMP shall evaluate whether existing data collection programs should be modified to improve characterization of stormwater discharges, effects of different BMPs on water quality, or ambient water quality. This information shall be submitted for approval as part of the annual monitoring plan required in Part IV.A of this permit.

Part IV. Monitoring, Recordkeeping, and Reporting

IV.A. Stormwater Monitoring

IV.A.1. NDOT shall submit a stormwater monitoring plan to NDEP for the following year on or before October 1 each year. In developing the plan, NDOT shall evaluate and update as necessary how monitoring may assist in making decisions about program compliance, the appropriateness of identified best management practices, and progress toward achieving identified measurable goals. Pending submittal of the annual monitoring plan, NDOT shall continue to implement the existing monitoring plan.

IV.A.2. When NDOT conducts monitoring at NDOT's permitted MS4, NDOT is required to comply with the following:

IV.A.2.a Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. This requirement does not prevent NDOT from analyzing or reporting samples that are representative of a limited situation (e.g. concentration at peak flow);

IV.A.2.b Test procedures for the analysis of pollutants shall conform to regulations (40 CFR, Part 136) published pursuant to Section 304(h) of the CWA, unless other procedures are approved by NDEP.

IV.A.3. Records of monitoring information shall include:

IV.A.3.a The date, exact place, and time of sampling or measurements;

IV.A.3.b The names(s) of the individual(s) who performed the sampling or measurements;

IV.A.3.c The date(s) analyses were performed;

IV.A.3.d The names of the individuals who performed the analyses;

IV.A.3.e The analytical techniques or methods used; and,

IV.A.3.f The results of such analyses.

IV.A.4. Analyses shall be performed by a State of Nevada-certified laboratory. Laboratory reports shall be provided if requested by NDEP.

IV.A.5. If NDOT performs stormwater monitoring more frequently than required by the stormwater monitoring plan the results of such monitoring shall be reported. The monitoring results and analyses shall be submitted as part of the Annual Report.

IV.B. Record Keeping

IV.B.1. NDOT shall retain records of all monitoring information, including, all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, a copy of the NPDES permit, and records of all data used to complete the application for this permit, for a period of at least three (3) years from the termination date of this permit. This period may be extended at the direction of NDEP at any time.

IV.B.2. NDOT shall submit the records to NDEP upon request. NDOT shall retain a copy of the SWMP required by this permit (including a copy of the permit language) at a location accessible to NDEP. NDOT shall make the records, including a copy of the SWMP, available to the public if requested to do so in writing.

IV.B.3. For public requests of records, NDOT may impose a reasonable fee for personnel time and copying expenses.

IV.C. Annual Reports

IV.C.1. NDOT shall continue to submit Annual Reports to NDEP by October 1 of each year of the permit term. Each Annual Report shall cover the period beginning July 1st of the previous year through June 30th of the current year.

IV.C.2. Each year, NDOT shall review its SWMP and report to NDEP on the status of the program, whether NDOT has identified any modifications, and the plans for implementing those modifications.

IV.C.3. At a minimum the Annual Report shall include:

IV.C.3.a Status of NDOT's compliance with permit conditions;

IV.C.3.b An assessment of the appropriateness of the identified BMPs, and revisions to previous assessments, if appropriate;

IV.C.3.c Progress towards achieving the statutory goal of reducing the discharge of pollutants to the MEP;

IV.C.3.d Status of the achievement of measurable goals;

IV.C.3.e Results of information collected and analyzed, if any, during the reporting period, including monitoring data used to assess the success of the program at reducing the discharge of pollutants to the MEP, a description of any identified improvements to or degradation in water quality attributable to the program, and a description of any identified effects on attainment of water quality standards attributable to the program;

IV.C.3.f A summary of the stormwater activities NDOT plans to undertake during the next reporting cycle (including an implementation schedule and a fiscal analysis);

IV.C.3.g Changes to the SWMP, including changes to any BMPs or any identified measurable goals that apply to the program elements;

IV.C.3.h Notice that NDOT is relying on another government entity to satisfy some of the permit obligations, as applicable; and

IV.C.3.i Estimated reductions in loadings of pollutants from discharges of municipal storm sewer constituents from municipal storm sewer systems expected as the result of the municipal stormwater quality management program. The assessment shall also identify known impacts of stormwater controls on ground water.

IV.C.3.j A summary of inspections performed and enforcement activity taken during the report cycle.

IV.C.3.k A summary of public education and outreach activity performed during the report cycle.

IV.C.3.l Annual expenditures for the reporting period, with a breakdown for the major elements of the SWMP, and the budget for the year following each annual report.

IV.C.3.m An original signed copy of all reports and plans required herein shall be submitted to the NDEP at the following address:

Stormwater Coordinator
Bureau of Water Pollution Control
Nevada Division of Environmental Protection
901 S. Stewart St., Suite 4001
Carson City, NV 89701

IV.D. Annual Fee

IV.D.1. NDOT shall remit an annual review and services fee by July 1 of every year in accordance with Nevada Administrative Code ("NAC") 445A.232 until this permit is terminated.

IV.E. Continued Permit Coverage

IV.E.1. NDOT shall submit written correspondence to NDEP requesting continued permit coverage under the new NDOT MS4 Permit and signed in accordance with the signatory requirements of Part V.G of this permit, no later than 180 days before this permit expires.

IV.F. Changes by NDEP

IV.F.1. Formal changes requested by NDEP must be made in writing, set forth the time schedule for NDOT to develop the changes, and offer NDOT the opportunity to propose alternative program changes to meet the objective of the requested modification. If NDOT does not agree to the requested changes, changes required by NDEP will be made in accordance with 40CFR§124.5, 40CFR§122.62, or as appropriate 40CFR§122.63.

IV.F.2. NDEP may request formal changes to the SWMP as needed to:

IV.F.2.a Address impacts on receiving water quality caused, or contributed to, by discharges from the MS4;

IV.F.2.b Include more stringent requirements necessary to comply with new Federal statutory or regulatory requirements; and,

IV.F.2.c Include such other conditions deemed necessary by NDEP to comply with the requirements of the CWA.

IV.G. Responsibility for Stormwater Management Program Implementation

IV.G.1. NDOT must implement the SWMP on all new areas added to NDOT's portion of the MS4 (or for which NDOT become responsible for implementation of stormwater quality controls) no later than one (1) year from addition of the new areas; and

IV.G.2. Information on all new annexed areas and any resulting updates required to the SWMP must be included in the Annual Report.

Part V. Standard Permit Conditions

V.A. Duty to Comply

V.A.1. NDOT must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of CWA and is grounds for an enforcement action; permit termination; revocation and re-issuance; modification; or for denial of a permit renewal application.

V.B. Continuation of the Expired Permit

V.B.1. If this permit is not reissued or replaced prior to the expiration date, it will be administratively continued in accordance with the Administrative Procedures Act and remain in force and effect. NDOT will automatically remain covered by the continued permit until the earlier of:

V.B.1.a Re-issuance or replacement of this permit; or

V.B.1.b Issuance of another individual permit for NDOT discharges.

V.C. Need to Halt or Reduce Activity Not a Defense

V.C.1. It shall not be a defense for NDOT in an enforcement action that it would have been necessary to halt or reduce the permitted activity under NDOT's control in order to maintain compliance with the conditions of this permit.

V.D. Duty to Mitigate

V.D.1. NDOT must take all reasonable steps to minimize or prevent any discharge in violation of this permit that has a reasonable likelihood of adversely affecting human health or the environment.

V.E. Duty to Provide Information

V.E.1. NDOT must furnish to NDEP any information that is requested by NDEP and needed to determine compliance with this permit or other information.

V.F. Other Information

V.F.1. If NDOT becomes aware that it has failed to submit any relevant facts in its revised SWMP, Annual Report or in any other report to NDEP, NDOT must promptly submit such facts or information to NDEP.

V.G. Signatory Requirements

V.G.1. All applications, reports, certifications, or information submitted to NDEP, or that this permit requires be maintained by NDOT shall be signed and certified as follows:

V.G.1.a ***Applications.*** All applications shall be signed by a duly authorized representative of NDOT.

V.G.1.b ***Reports and Other Information.*** All reports required by the permit and other information requested by NDEP or the authorized representative of NDEP shall be signed by a person described above from NDOT or by a duly authorized representative of that person. A person is a duly authorized representative only if:

V.G.1.b.i ***Signed Authorization.*** The person described above submits the authorization in writing to NDEP.

V.G.1.b.ii ***Authorization with Specified Responsibility.*** The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of manager, operator, superintendent, or position of equivalent responsibility for environmental matter for the regulated entity.

V.G.1.c ***Changes to Authorization.*** If an authorization is no longer accurate because a different person has the responsibility for the overall operation of the MS4, a new authorization satisfying the requirement above must be submitted to NDEP prior to or together with any reports, information, or applications to be signed by an authorized representative.

V.H. Property Rights

V.H.1. The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege, nor does it authorize any injury to private property nor any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

V.I. Proper Operation and Maintenance

V.I.1. NDOT shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by NDOT to achieve compliance with the conditions of this permit.

V.J. Inspection and Entry

V.J.1. NDOT shall allow NDEP or an authorized representative (including an authorized contractor acting as a representative of the Administrator) upon the presentation of credentials and other documents as may be required by law, to do any of the following:

V.J.1.a Enter NDOT's premises where a regulated facility or activity is located or conducted or where records must be kept under the conditions of this permit;

V.J.1.b Have access to and copy at reasonable times, any records that must be kept under the conditions of this permit;

V.J.1.c Inspect at reasonable times any facilities or equipment (including monitoring and control equipment) practices, or operations regulated or required under this permit; and

V.J.1.d Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the CWA, any substances or parameters at any location.

V.K. Permit Actions

V.K.1. This permit may be modified, revoked and reissued, or terminated for cause. NDOT's filing of a request for a permit modification, revocation and re-issuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

V.L. Permit Transfers

V.L.1. This permit is not transferable to any person. NDEP may require modification or revocation and re-issuance of the permit to incorporate such other requirements as may be necessary under the CWA.

V.M. Anticipated Noncompliance

V.M.1. NDOT shall give advance notice to NDEP of any planned changes in the permitted MS4 or activity which may result in noncompliance with this permit.

V.N. State Environmental Laws

V.N.1. Nothing in this permit shall be construed to preclude the institution of any legal action or relieve NDOT from any responsibilities, liabilities, or penalties established pursuant to any applicable State law or regulation under authority preserved by Section 510 of the CWA.

V.N.2. No condition of this permit releases NDOT from any responsibility or requirements under other environmental statutes or regulations.

V.O. Severability

V.O.1. The provisions of this permit are severable, and if any provision of this permit or the application of any provision of this permit under any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit shall not be affected thereby.

V.P. Procedures for Modification or Revocation

V.P.1. Permit modification or revocation will be conducted according to 40CFR§122.62, 122.63, 122.64 and 124.5.

V.Q. Availability of Reports

V.Q.1. Except for data determined to be confidential under Nevada Revised Statutes ("NRS") 445A.665, all reports and plans submitted in accordance with the terms of this permit shall be available for public inspection at NDEP's office. As required by the CWA, effluent data shall not be considered confidential. Knowingly making any false statement on any such report may result in the imposition of criminal penalties as provided for in NRS 445A.710.

V.R. Furnishing False Information and Tampering with Monitoring Devices

V.R.1. Any person who knowingly makes any false statement, representation, or certification in any application, record, report, plan or other document submitted or required to be maintained by the provisions of NRS 445A.300 to 445A.730, inclusive, or by any permit, rule, regulation or order issued pursuant thereto, or who falsifies, tampers with or knowingly renders inaccurate any monitoring device or method required to be maintained under the provisions of NRS 445A.300 to 445A.730, inclusive, or by any permit, rule, regulation or order issued pursuant thereto, is guilty of a gross misdemeanor and shall be punished by a fine of not more than $10,000 or by imprisonment. This penalty is in addition to any other penalties, civil or criminal, pursuant to NRS 445A.300 to 445A.730, inclusive.

V.S. Penalty for Violation of Permit Conditions

V.S.1. NRS 445A.675 provides that any person who violates a permit condition is subject to administrative and judicial sanctions as outlined in NRS 445A.690 through 445A.710.

V.T. Permit Modification, Suspension or Revocation

V.T.1. After notice and opportunity for a hearing, this permit may be modified, suspended, or revoked in whole or in part during its term for cause including, but not limited to, the following:

V.T.1.a Violation of any terms or conditions of this permit;

V.T.1.b Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts;

V.T.1.c A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge; or

V.T.1.d To impose specific requirements for BMPs or annual reporting requirements in accordance with 40CFR§122.62 or §122.63.

V.T.2. NDOT may request that NDEP reopen and modify this permit.

Part VI. Definitions

VI.A. All definitions contained in Section 502 of the CWA and 40CFR§122 shall apply to this permit and are incorporated herein by reference. For convenience, simplified explanations of some regulatory/statutory definitions have been provided, but in the even of a conflict, the definition found in the Statute or Regulation takes precedence.

VI.B. ***Best Management Practices (BMPs)*** means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States. BMPs also include treatment requirements, operating procedures, and practices to control runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

VI.C. ***Control Measure*** as used in this Permit, refers to any BMP or other method used to prevent or reduce the discharge of pollutants to waters of the United States.

VI.D. ***CWA or The Act*** means the Clean Water Act (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972) Pub.L. 92-500, as amended Pub. L. 95-217, Pub. L. 95-576, Pub. L. 96-483 and Pub. L. 97-117, 33 U.S.C. 1251 et.seq.

VI.E. ***Discharge***, when used without a qualifier, refers to "discharge of a pollutant" as defined at 40CFR§122.2.

VI.F. ***Illicit Connection*** means any man-made conveyance connecting an illicit discharge directly to a municipal separate storm sewer.

VI.G. ***Illicit Discharge*** is defined at 40CFR§122.26(b)(2) and refers to any discharge to

a municipal separate storm sewer that is not entirely composed of stormwater, except discharges authorized under an NPDES permit (other than the NPDES permit for discharges from the MS4) and discharges resulting from fire fighting activities.

VI.H. ***MEP*** is an acronym for "Maximum Extent Practicable," the technology-based discharge standard for Municipal Separate Storm Sewer Systems to reduce pollutants in stormwater discharges that was established by CWA§402(p).

VI.I. ***MS4*** is an acronym for "Municipal Separate Storm Sewer System" and is used to refer to either a Large, Medium, or Small Municipal Separate Storm Sewer System (e.g. "the Las Vegas Valley MS4"). The term is used to refer to either the system operated by a single entity or a group of systems within an area that are operated by multiple entities (e.g., the Las Vegas Valley MS4 includes MS4s operated by the City of Las Vegas, the City of North Las Vegas, the City of Henderson, the Clark County Regional Flood Control District, and Clark County).

VI.J. ***Municipal Separate Storm Sewer*** is defined at 40CFR§122.26(b)(8) and means a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains): (i) Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to waters of the United States; (ii) Designed or used for collecting or conveying stormwater; (iii) Which is not a combined sewer; and (iv) Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40CFR§122.2.

VI.K. ***Outfall*** is defined at 40CFR§122.26 as: Major municipal separate storm sewer outfall (or "major outfall") means a municipal separate storm sewer ("MS4") outfall that discharges from a single pipe with an inside diameter of 36 inches or more or its equivalent (discharge from a single conveyance other than circular pipe which is associated with a drainage area of more than 50 acres); or for municipal separate storm sewers that receive stormwater from lands zoned for industrial activity (based on comprehensive zoning plans or the equivalent), an outfall that discharges from a single pipe with an inside diameter of 12 inches or more or from its equivalent (discharge from other than a circular pipe associated with a drainage area of 2 acres or more). Outfalls do not include cross-drain structures or culverts installed under a road that function only to maintain the natural flow of surface waters and drainage. However, a structure that collects or diverts drainage that has contacted the road surfaces for discharge into a water body is considered an outfall under this permit.

VI.L. ***Permitting Authority*** means the Nevada Division of Environmental Protection.

VI.M. ***Qualified Person*** means a person knowledgeable in the principles and practice of erosion and sediment controls and who possesses the skills to assess conditions at the site that could impact stormwater quality and the effectiveness of the BMPs selected to control the quality of the stormwater discharges.

VI.N. ***Small Municipal Separate Storm Sewer System*** is defined at 40CFR§122.26(b)(16) and refers to all separate storm sewers that are owned or operated by the United States, a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to waters of the United States, but is not defined as "large"' or "medium" MS4. This term includes systems similar to separate storm sewer systems in municipalities, such as systems at military bases, large hospital or prison complexes, and highways and other thoroughfares. The term does not include separate storm sewers in very discrete areas, such as individual buildings.

VI.O. ***Stormwater*** is defined at 40CFR§122.26(b)(13) and means stormwater runoff, snowmelt runoff, and surface runoff and drainage.

VI.P. ***Stormwater Management Program (SWMP)*** refers to a comprehensive program to manage the quality of stormwater discharged from the MS4.

ACRONYMS

BMP	Best Management Practice
CFR	Code of Federal Regulations
CWA	Clean Water Act
LA	Load Allocation
MEP	Maximum Extent Practicable
MS4	Municipal Separate Storm Sewer System
NAC	Nevada Administrative Code
NDEP	Nevada Division of Environmental Protection
NDOT	Nevada Department of Transportation
NPDES	National Pollutant Discharge Elimination System
NRS	Nevada Revised Statute
Permittee	Nevada Department of Transportation
SARA	Superfund Amendments and Reauthorization Act
SWMP	Stormwater Management Program
SWPPP	Stormwater Pollution Prevention Plan
TMDL	Total Maximum Daily Load
USC	United States Code
WLA	Wasteload Allocation

Nevada Department
of Transportation