

1. MCM 4. Pollution Prevention and Good Housekeeping for Municipal Operations

Requirement:

- A. Pollution Prevention and Good Housekeeping program: Within one year from date of permit issuance, the permittees shall implement a pollution prevention and good housekeeping MCM for municipal operations. The program must include the following:
 - 1) identification and implementation of good housekeeping and best management practices (BMPs) to reduce pollutant runoff from municipal operations such as street and highway maintenance, parks, municipal office buildings and water treatment plants;
 - 2) reduction of discharge of pollutants to the MEP from road repair, equipment yards, and material storage facilities, or maintenance facilities; and
 - 3) training for all employees responsible for municipal operations which includes information on preventing and reducing stormwater pollution from all municipal operations subject to this MCM.*
- B. Waste Handling: The permittees shall ensure proper disposal of waste that is removed from the MS4 or from other municipal operations.*
- C. Pesticide, Herbicide, and Fertilizer Application: The permittees shall implement controls to reduce the discharge of pollutants related to the storage and application of pesticides, herbicides, and fertilizers applied, by the permittees' employees or contractors, to public right-of-ways, parks, or other municipal property. The permittees, if they have jurisdiction over lands they do not directly own (e.g. incorporated city), shall implement programs to reduce the discharge of pollutants related to the application and distribution of pesticides, herbicides, and fertilizers on those lands.*
- D. List of Municipal Facilities: The SWMP must include a list of all municipal operations subject to the municipal operation, maintenance, and training programs listed under this program element and all municipally owned and operated industrial activities subject to TPDES or NPDES industrial stormwater regulations*

City of Fort Worth Program

A. Pollution Prevention and Good Housekeeping Program

Urban Sub watershed Restoration Manual No. 9, Municipal Pollution Prevention/Good Housekeeping Practices, published by the Center for Watershed Protection; Training materials developed by the North Central Texas Council of Governments; and other resources as appropriate will be used to evaluate pollution prevention potential of existing procedures, implement new good housekeeping measures and BMPs where needed, and develop targeted training programs for all employees responsible for municipal operations subject to this MCM.

- 1. Current street maintenance practices and street sweeping activities are described in with MCM 1. C. During the first year of the permit, these practices will be evaluated and good housekeeping practices and BMPs will be revised or updated as necessary to reduce pollutant runoff potential.

Minimum control measures also will be established for Parks and Community Services Department (PACS) park maintenance programs. PACS currently sponsors an Adopt-a-Park Program similar to TxDOT's adopt-a-Highway program.

The city maintains a contract for recycling of paper from municipal office buildings. Each week, the City publishes “Green Tips” in the City’s online employee newsletter, The Roundup. These “Green Tips”, a project spearheaded by Keep Fort Worth Beautiful and the Library Department’s Green Team will include items aimed at reducing pollutants from municipal operations in addition to other themes such as energy conservation.

2. Discharge of pollutants from road repair disturbing an area of one acre or a common plan of development that is an acre or greater will be controlled through BMPs established as part of the required construction permitting (TXR150000). For road repair disturbing less than an acre and for routing maintenance activities that do not require permitting, guidelines will be established to reduce the discharge of pollutants to the MEP. For equipment yards, material storage facilities, and maintenance facilities, site specific BMP manuals may be established to aid in reducing pollutant discharge to the MEP.
3. Employee training will likely be based primarily on materials, developed by the North Central Texas Council of Governments, which target specific municipal operations. This program may include web based instruction. Other commercially available programs or materials produced in-house may also be used.

B. Waste Handling

The procedures for storm drain system maintenance summarized in MCM 1 will be reviewed and revised as necessary to ensure proper disposal of wastes removed from the system

The City maintains a contract for recycling of used oil and other fluids collected as a result of equipment maintenance activities. Contracts are also held with waste disposal contractors for proper disposal of wastes including but not limited to hazardous, non-hazardous, special, and solid wastes; a variety of lights including high pressure sodium HID lamps, incandescent bulbs, fluorescent lamps and tubes, vapor lamps, and metal halide HID lamps; light ballasts that both contain PCBs and do not contain PCBs; e-waste; USDA regulated garbage; and biohazardous materials. Personnel from TPW-ENV oversee these waste disposal activities and ensure that wastes are properly stored to prevent discharge of pollutants prior to collection and disposal.

C. Pesticide, Herbicide, and Fertilizer Application

Currently, City staff from the Parks and Community Services Department applies pesticides, herbicides and fertilizers on City owned property. In addition, the Transportation and Public Works Department has a herbicide-spraying program to minimize vegetative growth in storm drainage channels. Selected ditches are sprayed once to twice per year. Plants such as cattails and young willow trees are specifically targeted, as they are especially disruptive to the flow of stormwater. To prevent contamination of these storm drains, only products that are EPA approved for application in and around waterways (e.g. Roundup™) are used. The main cause of pesticide/herbicide/fertilizer problems in waterways concerns proper use and disposal of the products. To assure that these products are used correctly, City staff and contractors must all be properly licensed by the State of Texas Structural Pest Control Board to participate in any spraying program.

D. List of Municipal Facilities

The City maintains a list of all City owned or leased properties. This list will serve as a basis for establishing a list of municipal facilities subject to the other components of this Minimum Control Measure. The list will be maintained in Microsoft Excel or Access format and may include tracking mechanisms for training, waste disposal, and other program elements.

TxDOT Program

The Pollution Prevention / Good Housekeeping minimum measure consists of Best Management Practices (BMPs) that focus on training and on the prevention or reduction of pollutants in runoff from District operations. The District has existing good housekeeping measures and non-structural BMPs that reduce the discharge of pollutants from TxDOT operations.

The Pollution Prevention and Good Housekeeping Program

The District has existing good housekeeping measures and non-structural BMPs that reduces the discharge of pollutants from the following TxDOT operations:

- a. Street, road and highway maintenance
- b. Fleet and building maintenance
- c. Storm sewer system maintenance
- d. New construction and land disturbances
- e. Vehicle and equipment maintenance and storage yards
- f. Sand and ice rock storage locations

Waste Handling

TxDOT ensures proper disposal of wastes that are removed from the MS4 or from other TxDOT operations.

Wash Wastes from Striping Trucks

TxDOT completed the transition from the use of oil base traffic paint to water base paint in April 1994. The only waste generated from TxDOT's traffic paint striping activities is waste water from flushing water-based paint from lines and spray nozzles. The residual from water based paint lends itself to reuse more so than oil based paint. Therefore the amount of waste generated is minimal. Waste that is not reused is disposed of into the publically owned treatment works, POTW. Any waste not suitable for disposal into the POTW will be disposed of through TxDOT's purchasing department. The use of lead based paint has been completely eliminated within TxDOT. Any paint containing lead that may have been previously stored in the Fort Worth District was sent to TxDOT-Austin for appropriate disposal in early 1995.

Unknowns Found on the Right-of-Way

The frequency of finding unknown substances on the highway is increasing. The quality and use or disposal usually results in costly testing to first classify the material. A waste can be classified as hazardous by the EPA because it is listed, it exhibits hazardous characteristics, or it is a

mixture of wastes that contains a listed waste, or a characteristic waste. The wastes may be saturating soils or within sediment encountered during a maintenance activity. Obviously, the problem becomes magnified when dealing with unlabeled waste drums improperly stored or appearing on the right-of-way. When the waste is an unknown waste or from an unknown source, the available options are usually limited to analytical testing before disposal.

TxDOT can best manage the removal of waste products threatening water quality on the right-of-way by:

- Checking the EPA list of hazardous chemical names if known. EPA also provides a list of sources that generate hazardous waste and should be checked.
- Understanding the process of identification and disposal.
- Testing the waste for hazardous characteristics.

Pesticide, Herbicide, and Fertilizer Application

TxDOT implements controls to reduce the discharge of pollutants related to the storage and application of pesticides, herbicides, and fertilizers, applied by TxDOT's employees or contractors, to public ROW, parks, or other TxDOT property.

TxDOT has created *Roadside Vegetation Management Manual*, June 2009, which includes vegetation management guidelines, as well as other vegetation management considerations. The purposes of the vegetation management guidelines are to:

- Enhance the safety of the traveling public;
- Enhance environmental protection;
- Promote and preserve native wildlife habitats and native flora throughout the state;
- Mitigate erosion while providing adequate drainage; and
- Promote coordination and efficiency in maintenance activities.

Within the *Roadside Vegetation Management Manual*, Section 3.0 contains TxDOT's Herbicide Operations Manual. The following information from the Herbicide Operations Manuals describes TxDOT's policy on herbicide application:

Vegetation management along the transportation system consists of propagation and control of vegetation. Control of vegetative growth may be accomplished by a combination of physical and chemical methods. Physical methods of vegetation control include hand-pulling, hoeing, plowing, cultivating, trimming and mowing. Chemical methods include the application of approved herbicides to control specific vegetation problems. TxDOT's herbicide program is based upon extensive research for chemicals which will provide the desired control of the target species while presenting the minimum possibility of harm to the environment, the applicator, or to the traveling public. The use of herbicides is a key element to be used in combination with physical vegetation control methods to

manage right of way vegetation. There are numerous chemicals being registered by the Environmental Protection Agency (EPA) for both agricultural (crop) and right-of-way (non-crop) situations. Some of these chemicals have proven to provide excellent benefits to the vegetation manager in over-coming and/or controlling specific vegetation problems along the transportation system.

The Herbicides Operations Manual further describes proper selection of herbicides, application rates, and various factors that contribute to proper usage. The Texas Agriculture Code requires TxDOT employees to possess a valid, non-commercial, pesticide applicator's license prior to applying herbicide on the transportation system ROW, or on the grounds of any TxDOT building. The training prepares TxDOT employees to test for a non-commercial pesticide applicator's license from the Texas Department of Agriculture (TDA) and introduces TxDOT employees to TxDOT's herbicide program. This course is offered to maintenance personnel. Once licensed, applicators must attend a TxDOT training session or watch continuing education videos on an annual basis. As also in accordance with TDA requirements, TxDOT maintains herbicide application records for two years after herbicide application.

Although numerous structural controls are available to maintenance and operations in the reduction of pollutant loading, TxDOT's management practices rely heavily on vegetation and re-vegetation management principles. The plan calls for strict coordination between mowing and herbicide operations. As an example, TxDOT does not apply overspray areas so the herbicide will translocate to the target species' root system.

Vegetative pests are addressed in the *Roadside Vegetation Management Manual* as described above. While not as common, for worker and public safety, TxDOT does require insect pesticide applications for Fire ant areas, bees and other insects nest in TxDOT ROW and operational areas including, rest stops and signal boxes.

TxDOT's Specifications for Construction and Maintenance of Highways, Streets, and Bridges, Item 166.2 specifies the use of a complete fertilizer containing Nitrogen (N), phosphoric acid (P), and potash (K) nutrients unless otherwise specified on the plans. At least 50% of the nitrogen component must be of a slow-release formulation. Ensure that fertilizer is in an acceptable condition for distribution in containers labeled with the analysis. Item 166.3 - Deliver and apply the complete fertilizer uniformly at a rate equal to 100 lb. of nitrogen per acre or at the analysis and rate specified on the plans.