

1.0 INTRODUCTION

The purpose of this Storm Water Management Program (SWMP) is to describe methods and procedures which will be implemented to reduce the discharge of pollutants, to the maximum extent practicable, to and from the Florida Department of Transportation's (FDOT) municipal separate storm sewer systems (MS4s). The SWMP has been prepared in support of the FDOT's several applications (including as a co-permittee) for Florida Department of Environmental Protection (FDEP) National Pollutant Discharge Elimination System (NPDES) - MS4 permits as described in Chapters 62-624, 62-621, 62-620, and 62-4, Florida Administrative Code (FAC). Section 403.0885, Florida Statutes, provides FDEP with the statutory authority for FDEP's NPDES MS4 permits. The SWMP has also been prepared in accordance with Section 62-624.440(2), FAC, Title 40 Code of Federal Regulation (CFR) 122.26(d)(2)(iv), and United States Environmental Protection Agency (EPA) publication 833-B-92-002 (Nov. 1992) *Guidance Manual For The Preparation Of Part 2 Of The NPDES-MS4 Permit Applications For Discharges From Municipal Separate Storm Sewer Systems*.

Section 62-624.440(2), FAC, provides that the SWMP is a fundamental element of the MS4 program and the required components of the SWMP are listed in Title 40 CFR 122.26(d)(2)(iv). Regulations in Title 40 CFR, Part 122.26(d)(2)(iv) Storm Water Discharges *Proposed Management Plan* state that pollutants are to be reduced "to the maximum extent practicable (MEP) using management practices, control techniques and system, design and engineering methods, and such other provisions which are appropriate." The regulations also require that the management program describe priorities for implementing controls. This SWMP describes how the FDOT intends to demonstrate compliance with Chapters 62-624, 62-621, 62-620, and 62-4, FAC, and Title 40 CFR 122.26(d)(2)(iv) in close association with its co-permittees.

Many management practices for source control and pollution prevention are already in use by the FDOT. This SWMP endeavors to tie these disparate rules, programs, guidelines, and policies which have already been established by the FDOT into a summary document and often includes them by reference. This document does not, in and of itself, rewrite or supersede existing requirements. In some cases these may need to be expanded or modified to meet the requirements of Section 62-624.440(2), FAC, and Title 40 CFR, Part 122.26(d)(2)(iv). In those cases, implementation elements are noted at the end of each section or sub-section.

1.1 FDOT Structure

The FDOT is divided into eight regional, semi-autonomous Districts under the direction of a District Secretary as shown on Figure 1.0 located at the end of this section. The Turnpike Enterprise District is principally located within the central and southern portions of the State and is solely responsible for the Florida Turnpike system. The Central FDOT office, which is located in Tallahassee, provides overall program guidance, training, statewide functions,

and also serves as a general clearing house for the Districts. Each District Secretary reports to the Assistant Secretary for Engineering and Operations in the Central Office.

Central Office

The responsibility for overseeing implementation of the NPDES-MS4 storm water permitting program will generally be placed under the State Highway Engineer. The Office of Design's Environmental Management Office has provided coordination oversight for the FDOT's NPDES-MS4 permitting efforts through the initial stages of federal rule compliance.

District Office

The organization of a given District's departments and responsibility of its staff varies significantly from District to District based on the unique characteristics of the municipalities and the roadway systems within each District.

Currently, a District may have from one to nine maintenance offices which vary greatly in size from approximately 20 to over 100 employees. These offices serve as the local maintenance yards and have a structure similar to the District Office. It is anticipated that some of the NPDES-MS4 tasks will be accomplished at the local maintenance office level. The Turnpike Enterprise District does not include any local maintenance offices and utilizes contracts for all field work.

1.2 FDOT Responsibilities

The FDOT's powers in abating pollution in storm water runoff are dissimilar to those of Florida municipalities in many ways. Those powers and duties defined in Chapter 334 FS, Transportation Administration: "to establish control, and prohibit points of ingress to, and egress from, the State Highway System (SHS), the turnpike, and other transportation facilities under the [FDOT's] jurisdiction as necessary to ensure the safe, efficient, and effective maintenance and operation of such facilities." Section 344.044(14), Florida Statutes. This is a reasonable limitation to place on a public transportation department.

1.3 FDOT Limitations

The FDOT is neither a traditional nor legal "municipality" in that it does not possess statutory taxing or enforcement powers. The FDOT does not regulate land use or zoning, issue building or development permits, or exercise any sort of similar controlling authority on lands beyond the linear Right-of-way associated with the SHS. Furthermore, the FDOT is not the State agency responsible for regulation of water policy and water quality criteria. That the FDOT could be called a municipality comes from the definitions in Section 62-624.200(8) and (11), FAC, and Title 40 CFR, Part 122.26(b)(8).

The FDOT's regulatory powers are delineated in Florida Administrative Code Rule Chapters

14-86, *Drainage Connections*, and 14-96, *State Highway System Connection Permits*. Both of those rules are derived from Riparian law foundations and essentially establish the FDOT as a lower order property owner seeking capacity protection from higher order owners (e.g. those who own property which abut the SHS). In other words, those who own property adjacent to the SHS can be granted access so long as they do not create a situation that exceeds the roadway traffic capacity and that they do not increase the runoff (drainage) to the FDOT. To this end, the FDOT intends to rely on the legislative and enforcement powers of its sister State agencies, the FDEP and the Water Management Districts (WMD) and, where applicable, its co-permittee municipalities to regulate storm water quality through State rules and local ordinances and codes.

The FDOT budgets are also legislatively approved on an annual basis. The FDOT also relies heavily on Federal funds in budgeting monies for proposed projects, although these funds cannot be used for maintenance. Therefore, full implementation of the SWMP within projected time frames is highly dependent on budget approval and funding appropriations by both the Florida Legislature and the U.S. Congress.

Certain portions of the SWMP may require revisions to extant rules or creation of new rules. Rule making is an administrative process which must proceed in full accord with Florida Statutes. Thus, the SWMP is subject to thorough legal review by FDOT Counsel prior to the FDOT implementing elements which require rule amendments or creation.

2.0 INTER-GOVERNMENT COORDINATION

EPA has emphasized that the cumulative discharges of storm water from industries and municipalities must all be considered and that the permitting of these dischargers will effect a complementary relationship. Such a situation exists for the municipalities, drainage control districts, WMDs, FDEP, EPA, and FDOT where a cooperative effort can aid in the attempt to control impacts of storm water discharges to U.S. Waters.

2.1 Coordinated SWMP Development

The FDEP's NPDES-MS4 permitting requirement affects all FDOT Districts as there is at least one qualifying municipality within each District's boundaries. Each FDOT District has its own organizational structure and budget and, therefore, varying degrees of participation in the permit application process depending on agreements reached with the coordinating local municipalities. The SWMP has the greatest impact on budgeting and consistency of management practices with the FDOT. Therefore, the FDOT has prepared this generic SWMP to be used by each District. It is anticipated that certain management practices unique to individual Districts may be developed and incorporated in this SWMP.

2.2 Other State Agency Considerations

Chapters 373 and 403 of the Florida Statutes designate the FDEP as the lead State agency having regulatory authority of water quality. The WMDs have similar authority and operate under the general supervision of the FDEP. Consistent with this authority, the FDEP and WMDs have developed policies, rules, standards, and criteria to regulate actions which could impact water quality. The FDOT will rely on these agencies to provide enforcement actions.

2.3 Lead Permittee/Co-Permittee Considerations

Although the FDOT has been designated a municipality by FDEP rule and must, therefore, comply with NPDES-MS4 regulations, the Districts may take a "co-permittee" status in other NPDES-MS4 applications. The FDOT will rely on the local ordinances of its co-permittees and other State agencies as referenced in Section 2.2 for regulation and enforcement powers. This co-application process has created a situation in which the responsibility of completing some of the SWMP components may not be the same for all co-permittees. The SWMP specifies a number of procedures which each District is proposing to accomplish. The District may initiate and complete these procedures or it may contract this work to the lead applicants or others, depending on individual Interlocal Agreements.

2.4 Interlocal Agreements

Numerous opportunities exist for incorporation of Interlocal Agreements into the permit application. In many respects, other entities are in a better position than the FDOT to provide

certain services. Additionally, their codes and ordinances provide a means for correcting pollutant source problems located within their jurisdiction, but which discharge to the FDOT. Finally, pooling of resources for a variety of SWMP components is a sound fiscal and resource-related practice.

2.5 Statewide Pollution Prevention Team

The coordinated effort will be provided by the Statewide Pollution Prevention Team. This Team consists of Central Office representatives and an NPDES-MS4 coordinator and appropriate staff from each District. The SWMP will subsequently refer to these individuals as a Statewide NPDES-MS4 Coordinator (SNC) and District NPDES-MS4 Staff Coordinators (DNSC).

The DNSC is the District's key staff member whose main job function is to ensure that the District successfully complies with the mandated requirements of the NPDES-MS4 storm water permitting program. This position requires knowledge of the NPDES-MS4 storm water rule as well as a basic understanding of hydrology, hydraulics, storm water modeling, regulatory agency permitting, data management, construction methods and others.

The DNSC will serve on the Lead Team in permit areas where Lead Teams are organized to jointly address water pollution prevention issues. The DNSC will lead the district in information sharing and coordinating storm water pollution prevention activities. Several of the issues which may be coordinated by the DNSC and/or the Lead Team are the following:

- General permit-related correspondence with the FDEP
- Priority plans for pollution reduction
- Illicit discharges - surveillance, compliance, enforcement
- Tracking of industrial dischargers and Notification of Intents (NOIs)
- Pollutant reduction assessments
- Annual Report to the FDEP
- Interlocal agreements relative to the application (monitoring logistics, database inventory, industry inspection, administrative, spill response, public education and others)

3.0 CONTROL OF STORM WATER RUNOFF

3.1 FDOT Best Management Practices, Policies, Procedures, and Regulations

In addition to Florida Administrative Code (FAC), statutes, and guidelines, and numerous municipal and county codes regulating storm water, the FDOT has specific policies, procedures, guidelines, and regulations for protecting surface water.

3.1.1 FDOT Storm Water Management Practices

All policies, procedures, and regulations must be followed to ensure proper storm water management. Current FDOT storm water management practices include:

Storm and Surface Water Management

It is the policy of the WMDs and FDEP to regulate and control the management and storage of surface waters pursuant to Chapters 373, FS, 62-302, and 62-40, FAC. The WMDs generally regulate construction of new facilities and alterations to existing systems. The water quality portion of the WMD permit requires the project be designed such that discharges meet water quality standards established in Chapter 62-4.242, FAC and 62-302, FAC. Chapter 14-86, FAC, *Drainage Connections*, provides standards and procedures for drainage connections from the properties adjacent to the FDOT Rights-of-way. It is important to note that approval of a “Drainage Connection Permit” does not necessarily approve of the passage of storm water from private property to FDOT right-of-way or FDOT storm water sewer system.

Hazardous Waste and Hazardous Materials Management at FDOT Maintenance Facilities

Each FDOT District (except the Turnpike Enterprise District) has maintenance facilities for storing equipment and materials used in highway and road maintenance. These facilities are typically Small Quantity Generators of hazardous waste. Those facilities that are Small Quantity Generators have Contingency Plans for handling and disposing of hazardous waste. All hazardous waste is managed according to applicable regulations in Chapter 62-701, FAC. Procedures for handling and disposal of excess asphalt material, and cleaning materials such as solvents, are also outlined in the FDOT's *Guide to Asphalt-Pavement Repair*. Hazardous materials are stored in bermed areas according to label or Material Safety Data Sheet ([MSDS](#)) recommendations. Inventories are kept of all materials at each facility.

Used oil at all facilities is properly stored in approved containment vessels until it can be recycled. All underground tanks at the facilities are monitored in accordance with the FDEP regulations for underground tanks as stated in Chapter 62-761, FAC,

Underground Storage Tank Systems. Above ground tanks are inspected and maintained in compliance with 62-762, FAC, *Above Ground Storage Tank Systems.*

Procedures for Reporting Spills and Emergencies on the Highways

The FDOT has established procedures for reporting spills and repairing damage to the roadway or Right-of-way resulting from spills. These procedures are outlined in *Reporting Incidents and Management of Damage Repair* (#850-005-001-j) and the *FDOT's Emergency Management Program* (#500-000-104-d). Each District has a Plan that works in concert with the State Plan, giving continuity of a well-organized Plan beginning with the Governor.

Schedules for Roadway Sweeping and Litter Control

Specific standards for roadway sweeping and litter control are rated by the FDOT *Maintenance Rating Plan Manual* and scheduled through the Maintenance Management System (MMS). Each District is responsible for complying with these standards and has schedules for road sweeping and litter control. The work is done by the FDOT maintenance crews, contractors, and through contracts with the municipality or county within the District, Adopt-A-Highway (Chapter 403.4131, FS), and Florida Department of Corrections work crews.

Standard Operating Procedures for Use and Handling of Herbicides on FDOT Rights-of-Way

The FDOT Central Office approves all non-restricted herbicides purchased on a statewide contract basis. The Districts have the option to purchase and use any non-restricted herbicide. The FDOT policy encourages the use of non-chemical control methods to reduce cost and environmental impact from chemical applications. This policy has resulted in gradual reduction of chemical herbicide application to control nuisance vegetation.

The application frequency of herbicides is determined by Engineered Work Needs or Routine Work Performance Standards. All herbicide application is in compliance with label and (MSDS) recommendations, and the FDOT *Roadway and Roadside Maintenance Procedure* and *Guide to Chemical Weed and Grass Control Handbook*. These documents are maintained by the FDOT State Maintenance Office and copies are available to all District maintenance facilities.

Copies of MSDSs for herbicides are available at each FDOT maintenance facility. All herbicides are used according to label and MSDS specifications. An inventory is kept for all herbicides stored at each maintenance facility. A daily log report is required for all herbicide application. Empty containers are triple rinsed and punctured prior to disposal, or returned to the manufacturer for recycling. Rinse

water is reused as a diluent and added to the chemical feed tank. Empty containers are not reused for any purpose.

Fertilizer Application Control

Fertilizer application is done according to guidelines established in the FDOT's *Turf Management Handbook*, the manufacturer's recommendation, or site specific soil testing. The *Handbook* is maintained by the FDOT State Maintenance Office and copies are available to all District maintenance facilities.

As part of routine maintenance, nurse crops such as clover are used in some Districts. Nurse crops enrich the soil by accumulating and restoring nitrogen, a nutrient essential for turf grass growth. This reduces the amount of fertilizer needed. In addition, soil aeration is used along roadways in some Districts. This also reduces the amount of fertilizer used without causing additional runoff.

3.1.2 Control Techniques and Systems

Formal Procedures for Scheduling Road Maintenance to Prevent Erosion

Roadway and Roadside Maintenance Procedure provides guidance for maintaining roads and highways in a safe and comfortable condition and to protect the public's investment in those facilities. In addition to protecting the roadway, the Maintenance Standards provide techniques for preventing soil erosion which impacts storm water. In addition to *Roadway and Roadside Maintenance Procedure*, the Maintenance Rating Plan (MRP) rates roadside features to determine if additional maintenance work is needed.

3.1.3 Design and Engineering Practices

Standards for Bridge and Road Construction to Prevent Erosion and Water Pollution

The FDOT's *Standard Specifications for Road and Bridge Construction*, Section 104 Prevention, Control, and Abatement of Erosion and Water Pollution, describes and specifies measures required to control erosion on construction projects. The purpose for these measures is to prevent pollution of water, detrimental effects to public or private property adjacent to the project right of way, and damage to work on the project. These measures consist of construction and maintenance of temporary erosion control features or, where practical, the construction and maintenance of permanent erosion control features as shown in the construction plans. The use of both temporary and permanent erosion control features is discussed in Section 3.3.7 Controlling Runoff from Construction Activities.

FDOT Drainage Manual

To protect water quality, the *FDOT Drainage Manual* stresses erosion control. Guidelines for maximum allowable velocities in various systems are provided to reduce the probability of erosion and scour. Additionally, guidelines for protection against shore and bank erosion are provided.

Project Development and Environmental (PD&E) Manual

In accordance with the National Environmental Policy Act (NEPA), the PD&E process requires the FDOT to coordinate with the respective WMD and FDEP office during preliminary environmental document preparation. The purpose of this coordination is to ensure the FDOT design complies with the regulatory agencies' requirements in order to facilitate permitting approvals from these agencies.

Roadway and Traffic Design Standards

The design standards incorporate various design principles from the FDOT manuals and provide specifications for such items as sediment and erosion control, scour protection, proper end treatment of drainage structures and others.

3.2 Pollution Prevention Goals

It is the goal of the FDOT to have all water discharged from MS4s meet or exceed Chapter 62-40, FAC. Preventing pollution will be accomplished by the FDOT primarily through the use of best management practices such as those outlined in:

(1) The EPA's Baseline Best Management Practices (BMPs):

- Good housekeeping
- Preventive maintenance
- Visual inspections
- Spill prevention and response
- Sediment and erosion control
- Management of runoff
- Employee training
- Record keeping and reporting

(2) The FDEP's *Florida Development Manual: A Guide to Sound Land and Water Management*:

- Fertilizer application control
- Herbicide use control

- Solid waste collection and disposal
- Source control on construction sites
- Street sweeping

The FDOT has a recycling effort represented in the following Plans:

- Recycling used oil from the FDOT maintenance facilities
- Mulching and blowing brush cut during roadway maintenance into the tree-line to aide in erosion control by some Districts
- As required by Florida Law, the FDOT is developing and implementing a five year Plan to use solid waste compost in State highway Rights-of-way
- Roadway milling operations to utilize milled and recycled asphalt in roadway repaving/resurfacing projects
- Recycling rubber, plastic, and glass in asphalt
- Using fence posts made from recycled plastics instead of wooden fence posts

The FDOT has an established “maximum extent practicable” treatment program based on adopted standards. Structural controls for water treatment include, but are not limited to:

- Use of natural and constructed wetlands
- Vegetated swales (grassed waterways)
- Seepage/recharge systems
- Retention/detention ponds

When prevention, recycling, or treatment programs are not available or not applicable, disposal is conducted in an environmentally safe manner, in accordance with applicable Federal, State, and local environmental laws and regulations.

3.3 Pollution Prevention Activities

In accordance with Chapter 62-624, FAC, this Storm Water Management Program includes (1) a comprehensive planning process designed to reduce the discharge of pollutants to the maximum extent practicable (MEP) to the FDOT-MS4, and (2) a description of staff and resources required to implement the SWMP.

3.3.1 Inventory Development and Maintenance

In accordance with Chapter 62-624, FAC, an inventory describing all existing controls and outfalls that discharge from the FDOT MS4s will be maintained and updated.

The FDOT will provide input to the inventory from substantial roadway improvements and new roadways.

3.3.1 a. The FDOT will continue, for the life of the Permit, to locate and identify all outfalls and structural controls owned or controlled by the FDOT in the permit area. The methodology for the continued inventory effort will include:

- (1) review of existing State Highway Plans,
- (2) review of proposed State Highway Plans, and
- (3) field reviews.

3.3.1 b. Owners of industrial facilities are required to obtain an Industrial NPDES Permit under Chapter 62-660, FAC, and Section 62-621.300(5), FAC, and to identify themselves to the FDEP and the operator of a MS4 through which they discharge.

3.3.2 Target Areas - Selection and Prioritization of Storm Water Outfalls

The following specific facilities are identified by FDEP and EPA as having the potential to be high priority storm water pollution sources:

- Operating and closed municipal landfills
- Hazardous waste treatment, disposal or recovery facilities
- SARA Title III Facilities identified from the Toxics Release Inventory (list obtained from the Local Emergency Planning Council)
- Industrial facilities listed by SIC code in Title 40 CFR, Part 122.26(b)(14)(i)-xi)

In addition to the facility classifications listed above, other facilities that are known, suspected, or discovered to be a contributor of storm water pollution to the MS4 are also considered to be high priority dischargers. Initially, the prioritization will be developed using available information and dry screening results. The selection process will begin as a coarse identification (i.e. system wide) of potential problem areas and will focus down in a systematic manner to a particular outfall or pollutant contributor.

3.3.3 Monitor and Control Illicit Inflow and Infiltration

In accordance with Chapter 62-624, FAC, the FDOT will concentrate on potential illicit discharges (as defined in Section 62-624.200(2), FAC) and will continue to identify additional existing discharges, new discharges, and improper disposals into FDOT-MS4s. The FDOT will coordinate with local cities, counties, co-permittees, or other appropriate authorities to facilitate public reporting of possible illicit discharges, accidental spills, or improper disposal into the MS4. The FDOT will maintain a record of all reported illicit discharges into the FDOT-MS4. The record will indicate corrective actions taken.

Florida Administrative Code Rule Chapter 14-86, *Drainage Connections*, requires owners who develop or improve properties that are adjacent to and drain to the State Highway System to obtain drainage permits from the FDOT. It also requires certification from the owner that water conveyed to the FDOT-MS4 meets all applicable water quality standards.

Illicit Discharges

Identification and inspection of illicit discharges may be accomplished through interlocal agreements. The investigative procedure will consist of:

1. Determining if the discharge is definitely an illicit discharge
2. Determining the source of the discharge
3. Notification to the FDEP or the coapplicant, when appropriate

3.3.4 Controlling Runoff from Commercial and Residential Areas and FDOT Facilities

New Development and Significant Redevelopment

FOR THE PURPOSE OF THIS DISCUSSION, NEW DEVELOPMENT AND SIGNIFICANT REDEVELOPMENT ARE CONSIDERED ANY "NON-FDOT" DEVELOPMENT THAT ADDS SIGNIFICANT IMPERVIOUS AREA.

The FDEP being the lead State agency for regulating water quality has established State water quality standards and design and performance standards. These standards are incorporated into the rules of the FDEP and the WMDs. Depending on the site location, new development will be required (through the permitting process) to meet the FDEP and/or WMD rules. Compliance with these rules is the assurance that new development meets the standards.

The FDOT does not have the authority or the rules to specify the water quality standards and design and performance standards but, the drainage connection permit process provides a secondary "check" that developments will meet the standards. The drainage connection permit requires that the quality of runoff from the connection meet all applicable water quality standards or design and performance standards.

Connecting entities are required to appropriately manage their storm water facilities to maintain the discharge of acceptable quality water for the duration of the connection permit. Connecting entities which are known to violate this requirement, will be reported to the FDEP or the appropriate WMD, and where applicable, the co-permittee having jurisdiction for enforcement action.

Existing Development

Existing development found to be discharging storm water which does not meet Chapter 62- 40, FAC, will be reported to the FDEP or the appropriate WMD, and where applicable, the co-permittee having jurisdiction for enforcement action.

Discharge From New and Existing FDOT Systems

The FDOT projects typically require permitting by other regulatory agencies including, the WMDs, FDEP, and USCOE. In addition to these permits and associated water quantity and quality requirements the FDOT is committed to incorporating structural and non-structural water quality controls into their new facilities to reduce the release of polluted storm water discharge to the maximum extent practicable. Maintenance of the FDOT roadways and facilities will be performed as described in Section 4.

To further ensure compliance, some WMD's require as a permit condition that certain FDOT storm water management facilities be periodically re-certified by a professional engineer to ensure that the systems are functioning as designed and permitted.

Pollution Prevention Controls

Acceptable non-structural controls which may be utilized by the FDOT or entities requesting FDOT drainage connection permits are as follows:

- Maintenance activities on roads and parking areas
- Maintenance, operation, inspection schedule
- Managing the use of chemicals (herbicides and fertilizers)
- Public education
- Street sweeping
- Litter control
- Used oil recycling Plan

Acceptable structural controls which may be utilized by the FDOT or by entities requesting FDOT drainage connection permits are as follows:

- Infiltration devices - filtration systems
- Detention
- Retention
- Porous pavement
- Vegetated swales
- Water Quality inlets - oil and trash skimmers

- Screens and trash racks
- Channel stabilization - geotextiles - riprap
- Habitat enhancement
- Buffer zones
- Wetland creation, restoration, and preservation
- Ground water recharge

3.3.5 Plan to Control Pollutants in Storm Water Discharges from Waste Handling Sites and Industrial Facilities

The storm water discharges from waste handling sites and industrial facilities priority industries identified in Chapter 62-660, FAC, and Section 62-621.300(5), FAC, are regulated by the FDEP through the NPDES Industrial Storm Water Permit program. The FDOT has no waste handling sites. The FDOT will accept BMPs required by the FDEP as adequate to maintain quality storm water discharge to the FDOT-MS4 unless the monitoring or other information indicates otherwise. FDOT will notify the appropriate regulatory agency when it has been determined that a waste handling site or priority industry is discharging to an FDOT- MS4 facility. Corrective and/or enforcement actions will be coordinated between the discharging facility and regulatory agency having jurisdiction over the activity.

3.3.6 Controlling Runoff from Construction Activities

Current FDEP requirements consist of reducing pollution at the source before degradation of the receiving water system occurs. The following section describes The FDOT's role in controlling runoff from construction activities.

Existing Requirements for Construction Activities

All construction projects which disturb land occurring within and adjacent to FDOT Rights-of-way are controlled under the jurisdiction of one of the State's WMDs through Chapters 40 (A through E)-4 and 40 (A through E)-40 FAC, and FDEP through Chapters 62-4, 62-25, 62-40, 62 -302, 62-330, 62-341, and 62-312, FAC. Permitting through these agencies require the developer, property owner, or authorized agent to submit construction plans and supporting documentation for review and approval. Construction plans must clearly identify erosion and sediment controls, storm water management practices, and provide details for all storm water facilities. In addition, the regulatory staff conduct periodic site visits during construction activities to ensure that the erosion controls are installed and functioning properly.

Off-system Construction Activities

Through Chapter 14-86, FAC, *Drainage Connection Permit*, the FDOT requires review of surface water connections to the FDOT drainage facilities. The purpose of the rule is to ensure safe conditions and integrity of the FDOT transportation facilities, to prevent an unreasonable burden on downstream properties, and to ensure that waters discharging from the site to the FDOT right-of-way meets Chapter 62-40, FAC.

On System Construction Activities

The FDOT has a procedure for SHS projects by which Storm Water Pollution Prevention Plans (SWPPPs) are prepared for all construction projects which meets permit criteria.

3.3.7 Controlling Improper Disposal

Identifying illegal dumping and spills of potentially hazardous materials occurs through the following mechanisms:

- Observation during routine maintenance activities
- Water quality screening activities
- Reporting from concerned or affected citizens and other public agencies

The procedures associated with the management of spills and illegal dumping sites will be consistent with the *Reporting Incidents and Management of Damage Repair*.

Implementation Elements for Controlling Improper Disposal

- Continue field screening activities
- Develop training program
- Develop a public reporting process

3.3.8 Flood Management Projects

Generally, the FDOT's roadway projects are not flood management projects in the sense that they usually do not reduce or lessen flooding conditions. The FDOT's storm water systems are designed to comply with Chapter 62-40, FAC, and are therefore required to maintain, to the maximum extent practical, during and after construction and development, the pre-development storm water characteristics.

Occasionally, the FDOT may develop projects that reduce or lessen flooding conditions in an area for the purpose of ensuring flood free roadways. These projects

would also be required to comply with Chapter 62-40, FAC, and therefore will assess and reduce, to the maximum extent practical, the impacts of stream channel erosion, siltation, sedimentation, and pollutant loading to waters of the State. This assessment will be reviewed and approved in the permitting of these projects through the FDEP or WMDs.

The WMD's have authority and responsibility for developing a long range comprehensive water management plan which will assess the flood protection and water quality management problems within each WMD. These plans include the WMD's strategies, priorities, and schedules to develop pollutant load reductions as necessary to maintain water quality consistent with Chapter 62-40, FAC. There may be occasions when the FDOT will participate with local agencies and WMDs to provide specific water quality improvements. The FDOT participation may range from providing data, research, joint funding, or other.

3.4 Record Keeping

Unless otherwise stated or required, the FDOT maintains all permitting records as specified in Chapters 62-624, 62-621, 62-620, and 62-4, FAC.

4.0 MAINTENANCE PLAN

Each FDOT District is subdivided into numerous maintenance areas to facilitate the efficient and effective use of equipment and staff. Each maintenance area is responsible for inspection and maintenance of facilities located within a specific geographic area. Maintenance and inspection activities are conducted in accordance with the references listed in Appendix A and this Section of the SWMP.

4.1 Assessment and Inspection of Maintenance Activities

The Maintenance Rating Plan (MRP) developed by the State Maintenance Office is used as a systematic and formal method of making strategic decisions for desired levels of maintenance on the FDOT roadways. The MRP uses a random generator method to select multiple 10th (.10) mile sections of roadway corridor for inspection as representative samples in the districts to determine maintenance needs.

The MRP identifies standards for the various characteristic elements by considering factors such as environment, safety, user comfort, protection of investment, and aesthetics. The primary purpose of the MRP is to evaluate the adequacy of the FDOT maintenance efforts and assist in determining future equipment, staffing, inspections and maintenance requirements.

4.2 Chemical Weed and Grass Control Handbook

The FDOT, through the *Chemical Weed and Grass Control Handbook*, has developed and implemented a Plan to reduce to the maximum extent practicable, pollutants in discharges from MS4s resulting from application of herbicides, and fertilizers. This is accomplished through personnel training and certification regarding the proper use of equipment and chemicals. The handbook emphasizes minimal use and proper application of chemicals to prevent damage to the environment. If FDOT decides to apply pesticides in the future, then FDOT will reduce to the maximum extent practicable, pollutants in discharges from MS4s resulting from application of pesticides.

Training Requirements

The FDOT requires all personnel involved in the chemical weed and grass control program be competent, able, and knowledgeable so as to implement a safe and effective program. In addition, employees must complete additional training regarding the proper use of equipment and disposal of chemicals.

Regional training classes are available to public and commercial applicators through the University system which issues Continued Educational Units (CEU) required to maintain a State certification.

Plan Management

In establishing a complete and effective chemical control Plan, the FDOT follows three principles of good management:

- Planning
- Organization
- Control

The planning process involves making decisions regarding timing, species identification, coordination with work crews, determination of required application rates and distribution, equipment requirements, and others. Factors that must be considered include weed types, soil conditions, application location, and weather conditions.

The organization process involves gathering of materials and tools, scheduling and calibration of application equipment. The FDOT recommends that an application area be identified in advance using the Maintenance Management Systems "Work Determination and Scheduling System. •

The final management process involves control. This is the process of checking the progress, effectiveness, efficiency, and quality of a particular job. Control requires that adjustments be made as field conditions change to ensure that proper chemical dosages are applied.

The FDOT and State regulations require that all herbicide applications be reported and that these reports be filed and maintained for a minimum of two years. Daily logs include the following information:

- Name of applicator
- Date and time of application
- Application equipment used
- Type of chemical used, trade name, formulation, manufacturer
- Amount of active ingredient and product used per acre
- Type of treatment
- Location and specific facilities treated
- Total area treated
- Weather, wind speed and direction
- Remarks
- Nozzle type, operating pressure, gallon per minute rating and application angle

The FDOT keeps and maintains a complete listing of approved chemicals as well as an inventory of chemicals kept at the maintenance facilities. The inventory includes the shelf life of chemicals used, MSDSs for approved chemicals, and disposal schedules. The FDOT also requires that their application contractors develop and maintain a similar chemical

inventory.

Application Guidelines

Following is a description of the procedures and guidelines used and required by the FDOT to reduce to the maximum extent practicable the contamination of storm water as a result of chemical usage.

- Fertilizer application shall be conducted in accordance with the *Turf Management Handbook*. The handbook recommends application rates per the manufacturer's recommendations and stresses the importance of proper application to avoid damage to the turf and the environment.
- The FDOT is now strongly encouraging the use of manual vegetation removal and the use of track driven roller wiper application methods over spray application to minimize the potential for environmental degradation.

- Storage and handling methods:
Chemicals are stored in a clean and dry location. The storage facility is protected from the weather, has a concrete floor, and is locked when not in use. Chemicals are handled in a manner so as to reduce uncontrolled spreading, drift, and spillage.

All herbicide and fertilizer containers are correctly labeled. The FDOT and State law requires that labels are cleared and registered through the EPA.

- Cleaning of equipment and container disposal:

Containers will be discarded in authorized disposal areas or as recommended by the manufacturer. The FDOT requires the rinsing of containers a minimum of three times with proper solvent prior to disposal. The solvent rinse is recovered and saved as the diluent for the next application. Under no circumstances shall an FDOT employee drain or wash equipment where wash water can discharge directly to a lake, stream, or storm sewer.
- When spraying near water bodies or other water sources extra care must be taken to ensure precise application to prevent harm to the environment.

4.3 Maintenance and Inspection Scheduling

The FDOT currently uses the Maintenance Management System (MMS) and Maintenance Rating Plan (MRP) for planning, organizing, controlling and prioritizing maintenance activities conducted within the SHS. Routine roadway related maintenance and inspection activities are identified and inventoried using the Work Determination and Organization Scheduling System (WDOSS). Maintenance activities are assigned in accordance with

detailed activity descriptions and specific performance standards on an as-needed basis.

Storm water control systems, as compared with more traditional conveyance systems, may fail to function properly if not consistently maintained. The FDOT has developed a Storm Water Facility Maintenance and Inspection Management System (SWFMIMS) specifically designed for prioritizing maintenance and inspection activities on the FDOT owned storm water facilities. As part of this database development process the FDOT has designated minimum required frequencies for storm water related maintenance activities similar to that depicted in Table 4.3-1. The SWFMIMS may become an additional means of scheduling maintenance and inspection activities of storm water related activities to supplement the MMS.

Maintenance Activities for FDOT Systems

Table 4.3-1 lists and describes recommended minimum frequencies for most of the storm water/drainage related maintenance and inspection activities that may be executed by the FDOT.

| TABLE 4.3-1: RECOMMENDED INSPECTION SCHEDULE FOR STRUCTURAL CONTROLS & ROADWAYS | | |
|--|----------------------------------|-------------------------------|
| Control Item | Recommended Inspection Frequency | Minimum Maintenance Frequency |
| Treatment swales | Inspect every 24 months | As needed per inspection |
| Stormwater Treatment Ponds | Inspect every 24 months | As needed per inspection |
| Pollution Control Boxes | Inspect every 24 months | As needed per inspection |
| Exfiltration Trench | Inspect every 24 months | As needed per inspection |
| Canals | MRP | As needed per inspection |
| Storm Sewer Inlets, Catch Basins, Grates, Ditches and Other Roadway Stormwater Collection Structures | MRP | As needed per inspection |

Notes
MRP- Maintenance Rating Program

5.0 MONITORING PROGRAM

A monitoring program for the duration of the permit is required by Chapters 62-624, 62-621, 62-620, 62-4, and 62-160, FAC. The goals of this proposed monitoring program are as follows:

- X Characterize discharges.
- X Determine sources of specified pollutants.
- X Evaluate the performance of the specific source controls.
- X Identify chemical, physical, and biological impacts

The FDOT's outfall and delineated drainage watersheds are interspersed and shared with the municipalities outfalls. The FDOT and co-permittees will share information about discharge characterization. This shared information will be provided in the annual report.

6.0 PUBLIC EDUCATION AND PARTICIPATION

Generation of public awareness and encouraging reports of water quality impacts on storm water requires a public education program. Examples of public education are:

- Explanations of what storm water is, how it is managed, and why
- Effects of improper waste disposal on storm water
- Definition of an illicit discharge
- The need to report illicit discharges and to whom

The FDOT will consider participating in public awareness programs developed by municipalities and environmental regulatory agencies within each District.

APPENDIX A

STATUTES, RULES, GUIDELINES, AND POLICIES REGULATING STORM WATER MANAGEMENT IN FLORIDA

FLORIDA ADMINISTRATIVE CODES

| | |
|----------------|---|
| Chapter 14-46 | <u>Utility Accommodation Guide</u> |
| Chapter 14-86 | <u>Drainage Connections</u> |
| Chapter 14-96 | <u>State Highway System Connection Permits</u> |
| Chapter 62-4 | <u>Permits</u> |
| Chapter 62-25 | <u>Regulations of Storm Water Discharge</u> |
| Chapter 62-40 | <u>Water Resource Implementation Rule</u> |
| Chapter 62-43 | <u>Surface Water Improvement and Management</u> |
| Chapter 62-302 | <u>Surface Water Quality Standards</u> |
| Chapter 62-312 | <u>Dredge and Fill</u> |
| Chapter 62-620 | <u>Wastewater Facility and Activities Permitted</u> |
| Chapter 62-621 | <u>Generic Permits</u> |
| Chapter 62-624 | <u>Municipal Separate Storm Sewer Systems</u> |
| Chapter 62-761 | <u>Underground Storage Tank Systems</u> |
| Chapter 40*-4 | <u>Management and Storage of Surface Waters (WMD)</u> |
| Chapter 40*-40 | <u>General Surface Water Management Permits (WMD)</u> |

FLORIDA STATUTES

| | |
|----------------|--|
| Chapter 89-279 | <u>Laws of Florida</u> |
| Chapter 163 | <u>County and Municipal Planning and Land Development Regulation</u> |
| Chapter 334 | <u>Transportation Administration</u> |
| Chapter 335 | <u>State Highway System</u> |
| Chapter 373 | <u>Water Resources</u> |
| Chapter 387 | <u>Pollution of Waters</u> |
| Chapter 403 | <u>Environmental Control</u> |

GUIDELINES

The Florida Development Manual: A Guide to Sound Land and Water Management

FDOT GUIDELINES, HANDBOOK, PROCEDURES, AND POLICY

Project Development and Environmental Manual

ETDM Manual

Roadway Plans Preparation Manual

Drainage Manual

Roadway and Traffic Design Standards

Emergency Management Program

Reporting Incidents and Management of Damage Repair

Environmental Permit Coordination Procedures

Standard Specifications for Road and Bridge Construction

Storm Water Management Manual

Roadway and Roadside Maintenance

Maintenance Rating Program Handbook

Chemical Weed and Grass Control

A Guide to Turf Management

A Guide to Non-Paved Shoulder Repair

A Guide to Asphalt-Pavement Repair

Hazardous Material/Petroleum Contamination Spills on the FDOT Right-of-Way

Hazardous Waste Contingency Plans